WAGO Automation Technology

Edition 2023/2024



WAGO Full Line Catalogs



WAGO Rail-Mount Terminal Blocks and Connectors

- Rail-Mount Terminal Blocks
- Rail-Mount Terminal Blocks with Pluggable Connector (X-COM®-SYSTEM)
- Patchboard Systems
- Terminal Strips
- PUSH WIRE® Connectors for Junction Boxes
- Lighting Connectors
- Shield Connecting System



WAGO PCB Terminal Blocks and Connectors

- PCB Terminal Blocks
- THR/SMD PCB Terminal Blocks
- *MULTI CONNECTION SYSTEM (MCS)*
- Pluggable PCB Terminal Blocks
- Feedthrough Terminal Blocks
- Specialty Connectors
- Empty Housings



WAGO Pluggable Connection System *WINSTA*®

- Pluggable Connectors
- Snap-In Device Connectors
- Pluggable PCB Connectors
- Distribution Connectors
- Cable Assemblies
- Flat Cable Systems
- Distribution Boxes



WAGO Automation Technology

- Solutions & Software
- Operating & Monitoring
- Controllers, Edge Devices
- Modular I/O-SYSTEM IP20, I/O-SYSTEM IP67
- Industrial Switches
- Radio Technology
- IP67 Sensor/Actuator Boxes, IP67 Cables and Connectors



WAGO Interface Electronics

- Relay and Optocoupler Modules
- Signal Conditioners and Isolation Amplifiers
- Current and Energy Measurement Technology
- Power Supplies
- Interface Modules and System Wiring
- Overvoltage Protection
- Empty Housings



WAGO Power Supplies

- Power Supplies
- DC/DC Converters
- Circuit Protection
- UPS-Charger and Capacitive Buffer Modules
- Redundancy Moduls
- Current and Energy Measurement Technology
- Overvoltage Protection



WAGO Marking

- Printer
- Software
- Terminal Block Marking
- Cable and Conductor Marking
- Device Marking
- Marker Carriers

Automation Technology

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WAGO Automation Technology

Solutions & Software

Solutions



- Cloud solutions
- Reusable, customizable software applications

1

Engineering Software



- PC and web-based software
- Customized tools for every automation task

Runtime Software



- Standard machine component
- Comprehensive, tested software modules for control, regulation, operation & monitoring

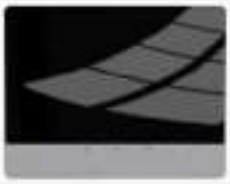
Operation & Monitoring Edge Computing

Touch Panel 600 Standard Line



- High-performance touch panels with resistive touch-screens
- 10.9 … 54.7 cm (4.3 … 21.5″)
- Models include Control, Visu or Web Panels for display of CODESYS visualizations

Touch Panel 600 Advanced Line



- High-performance touch panels with capacitive touch-screens and glass surfaces
- 18 … 54.7 cm (7 … 21.5")
- Models include Control or Visu Panels

Touch Panel 600 Marine Line



- High-performance touch panels with resistive touchscreens
- Ideal for marine applications
- 10.9 … 25.7 cm (4.3 … 10.1″)
- Models include Control or Visu Panels

3

Controllers

Compact Controller 100



5

Maximum performance in minimum space:
- Controller with a real-time Linux® operating system
- Compact controller with I/Os in a DIN-rail-mount enclosure
- Manufacturer-independent CODESYS V3 engineering environment

Controllers PFC100/PFC200

6.1



- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

Controllers PFC200 XTR

6.2



The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

I/O Systems

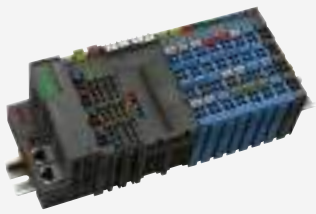
I/O System – 750 and 753 Series



7

- Highly versatile
- More than 500 modules available
- Functional Safety
- Ex i

I/O System – 750 XTR Series



8

For demanding applications where the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

I/O System Field



9

Automate and network modular machines for the future
- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link master and devices

Infrastructure

Industrial Switches



10

- Copper cable
- Fiber optic cable
- Ring redundancy

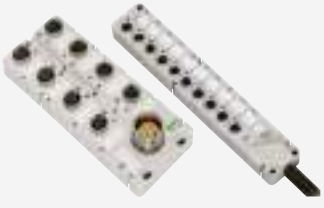
Radio Technology



11

- *Bluetooth*®
- WLAN
- EnOcean®

Sensor/Actuator Boxes



12

- M8 and M12 sensor/actuator boxes
- Passive signal acquisition and output at the machine level
- Fully encapsulated

Mobile Software (Apps)



- Machine operation and monitoring on tablet and smartphone

2

Edge Computing



- Versions include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

4

Basic Controllers 100

6.3



- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

Controllers 750

6.4



- Controllers for all prominent fieldbus systems
- Programmable to IEC 61131-3
- Readily combine with the modules of the WAGO I/O System 750

Controllers 750 XTR

6.5



For demanding applications where the following are criticat:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

6

Starter Kits



To get you up and running quickly, we offer starter kits to suit the most diverse applications:

- with Controller PFC100
- with Controller PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

IoT Boxes



6.6

- Ready to use
- Expandable, customizable hardware/ software
- Flexible connection via ETHERNET, WLAN or mobile network

Accessories Tools





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Infrastructure

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Power Supplies
Cables and Connectors (IP67)



Solutions

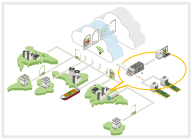
Cloud Solutions

- "Internet of Things" (IoT) applications

Software Applications

- Reusable, customizable solutions

Solutions
Cloud Solutions, Software Applications





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Solutions
General Product Information

1

We Make It Simple!

WAGO products are at home in many industries. Tailored solutions make it easy for the customer to accomplish the task using WAGO products – in the form of libraries and complete products, regardless of industry.

Cloud Solutions

Digitalization and networking offer great opportunities for every company. To use them, every company has to do its homework – in fact, the challenges are just as varied and diverse as the companies themselves. While there is no such thing as an all-in-one solution, smart products, methods and partners will help you advance digitalization in your business in a way that benefits all involved.

WAGO shapes the digital future with you. Cloud solutions have become popular industry staples. They link the real and digital worlds, allow efficient use of production-related data and simplify cross-site networking of global communication structures. This creates many new opportunities for the manufacturing industry – especially for plant availability and process optimization.

SOFTWARE M&M
BY PEOPLE WITH PASSION
Member of WAGO Group

Scalable Solution Thanks to Our Reliable Partner

With M&M as a member of the WAGO Group, WAGO has a partner for holistically developing industrial and technical software solutions, which also allows customer-specific applications to be implemented. We collaborate closely with Microsoft to implement corresponding solutions in the cloud and IoT, primarily using Azure.

Application Software

Prepared applications make it easy to use WAGO products. We offer a range of complete industry-specific solutions such as ***flex***ROOM®, that dramatically shorten time to completion. But also industry-independent universally usable solutions are available (closed or adaptable) and are optimally adapted to the respective hardware.

Standardized Applications

The better prepared, the easier it gets. For many applications, we offer configuration via web browser with a standard PC without special software. Thanks to a flexible software architecture, it is also possible to realize individual configurations. Here we combine the advantage of reusing a standardized and field-proven solution with customization via parameterization instead of individual programming. This saves costs by shortening the time required and makes commissioning easy!

Tailor-Made Applications

If a standard solution does not fit, we can create a highly tailored, customer-specific approach that's as unique as your application. Start by contacting us, we'll be happy to assist you.

Your Benefits:

- Solutions for digitalization
- Support for Industry 4.0/Internet of Things (IoT)
- Prepared field-tested applications for solving standard requirements in various industries
- Support with individual adjustments

Solutions
General Product Information

Cloud Solutions

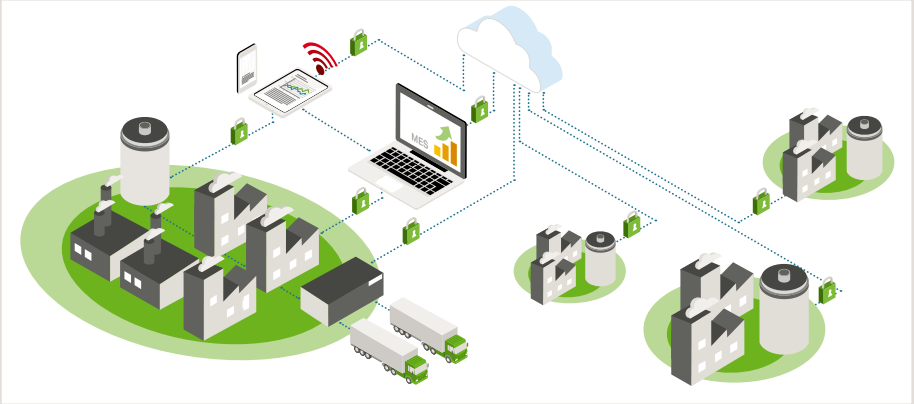
WAGO's universal cloud solutions are suitable for a wide variety of applications. These solutions offer:

WAGO Cloud:

- Collecting and saving data
- Setting up individual dashboards
- Central condition monitoring and alarm handling
- Central data visualization via location-independent access

Cloud Connectivity:

- Establishing connections
- Secure communication



Application Software – Industry-Independent Solutions

Many solutions can be used regardless of industry, such as our energy management. For our modular energy data acquisition, we rely on an open and flexible system that you can easily install and extend. It doesn't matter if you are looking for an individual solution or want to use our standard solution.



Building Automation

Whether you are planning lighting installations and automation in your office building, retrofitting a heating, ventilation and air-conditioning system or involved with room automation, WAGO helps implement your requirements in buildings, both in office and administrative buildings, as well as in production and warehouses, retail or infrastructure buildings.



Power Engineering

Energy suppliers need to change the way they think. Instead of merely selling green energy, they also need to organize and market the flexibility that is required for maintaining stability on the electrical grid. This means that the energy system needs to be controllable from production to consumption using intelligent communication networks. WAGO supports digitizing the energy sector and designing smart grids with state-of-the-art control and measurement technology, along with software solutions that enable a simple and secure connection to the cloud.



WAGO Cloud

1

Collect, Analyze and Manage Data Centrally

WAGO Cloud lets you collect and centrally manage data from various machines.

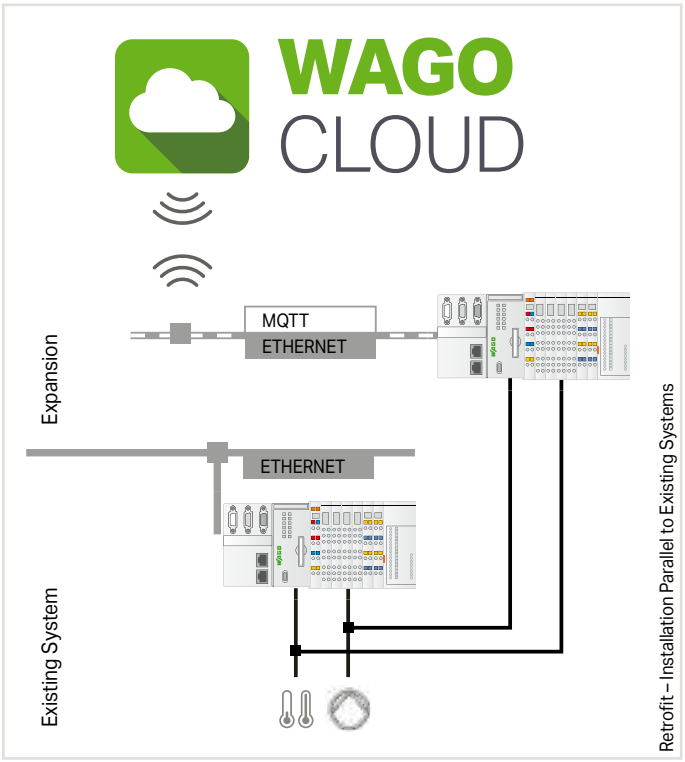
It also allows you to manage and monitor WAGO's controllers along with their data and applications. WAGO Cloud is hosted on Microsoft's Azure Cloud. Combining simplicity with usability, WAGO Cloud was designed so that people without IT experience can use it.

The cloud service is available online at https://cloud.wago.com/. After registering for free and linking to WAGO's controllers, you can get started in just a few minutes.

How does machine data get to WAGO Cloud?

A WAGO PFC Controller or Touch Panel acts as a gateway, collecting and sending data to WAGO Cloud. Users log into their user interface on the Web portal, where they can use various applications and access functions like visualizations, controller and user management and status monitoring. They can also activate alarm functions and use them to automatically send email notifications if defined limit values are exceeded, for example. Data can be graphically visualized, evaluated and exported as needed.

Do you need to restrict and select what data is sent to the cloud?
No problem! Configure the WAGO PFC Controller and specify what data to send to the cloud (or not) via IEC programming.





Illustrations: Data Transfer to WAGO Cloud
The WAGO PFC Controller acts as a gateway for existing systems that it can easily expand. Various protocols allow the controller to collect and transmit data to the WAGO Cloud via TLS-encrypted MQTT connection. If a new system is installed and the WAGO PFC Controller is used, it can send the data directly to the cloud.

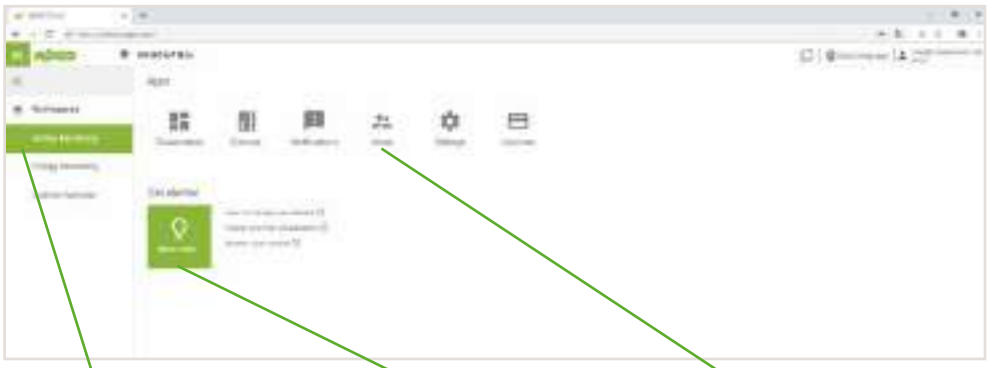
What advantages does WAGO Cloud offer?

- **Simplicity**
  The solution is intuitive thanks to a clear functional range. Within minutes, you can send data to the cloud, without extensive IT expertise.
- **Flexibility**
  Customize your cloud solution at any time and from any place. For instance, you can double your number of controllers from one day to the next without affecting performance and availability. Would you like a special expansion? We offer that as a project service through customized cloud expansions.
- **Everything from a Single Source**
  Take advantage of the benefits of WAGO Cloud – software as a service. Save time by leaving the tasks of infrastructure, security platform and application management to WAGO.

WAGO Cloud

App Overview:

All functions at a glance thanks to an intuitive app structure



Quick Access:

- Quickly discover what you are looking for – you have all your workspaces in view.

Easy to Use:

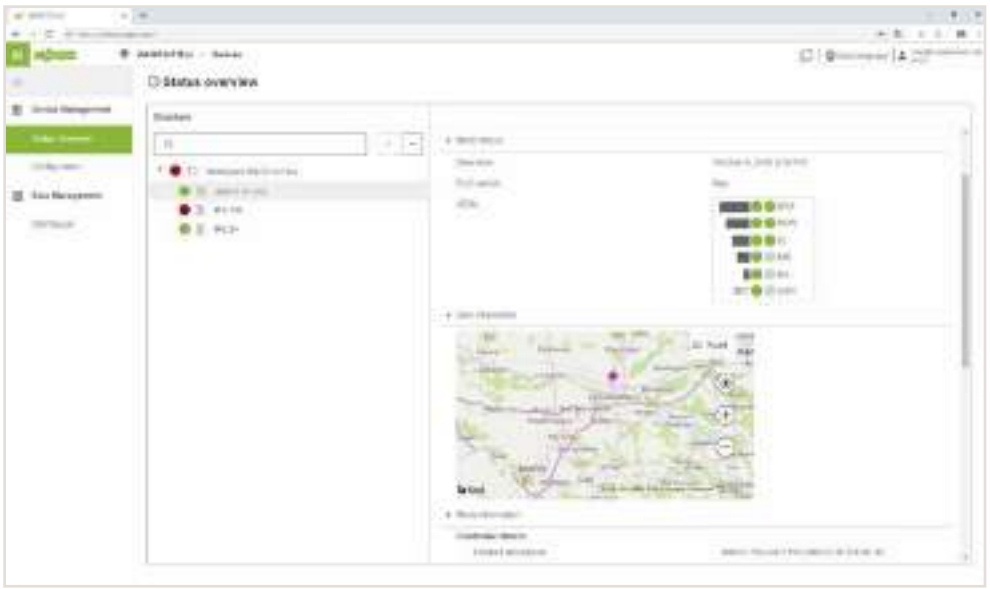
- Let us guide you in creating cloud projects.

Relevant Functions:

- Only see the features that you have access to.

Controller Status Overview:

See your connected and disconnected controllers, as well as relevant connection details.



Dashboard:

Create your own custom dashboard, use both graphics and trends.



WAGO Cloud

What kind of services can I use on WAGO Cloud?

WAGO Cloud is a universal, industrial-strength data logger with data visualization. It allows customizable dashboards and analyses to be created quickly and easily in the cloud. Use interfaces via REST and CSV data export for further processing of data, or use them as a data supplier to perform detailed analyses in other systems, for example. Monitor controller statuses and receive notifications if specified limit values are exceeded.

How can I use the functions?

Try WAGO Cloud for 30 days with no commitment to see if it's right for you.

The cloud service is available online at https://cloud.wago.com/. After registering for free and linking to WAGO's controllers, you can get started in just a few minutes.

After that, you book license points with a prepaid model, via our WAGO eShop for example, and simply redeem them in the cloud. Transparent billing management in the cloud allows you to fully monitor the current and anticipated scope of the functions used. When your license points are almost depleted, you will receive a notice to reload your points account soon.

You can find an overview of the functions we currently offer in the following table. There are various tiers for each individual function – depending on how many components you need – such as the number of connected controllers.

	Trial Period	• Try WAGO Cloud for free for 30 days (limited test points). • Points account may be exceeded after the trial period.

	Functions		
Data Management	Data Package	• Connect the WAGO PFC Controller to the cloud. • Transfer data from the controller to the cloud. • Mount devices and data. • Visualize data.	• Basic package, required for using WAGO Cloud • Minimum purchase: 50 license points/month • Volume-dependent, decreasing license point consumption
	Restful API	• Provide data for other cloud services and customer systems.	• Volume-dependent, decreasing license point consumption
Device Management	Firmware & Application Update	• Select/download firmware catalog. • Manage your own firmware application catalog. • Replace firmware on the device. • Install application updates.	• 1 license point/update
	Remote Visu Access	• Access local configurations and visualizations remotely (diagnostics, monitoring and remote maintenance).	• 10 license points/hour
	User Management	• In a customer area, up to 10 users have free access. More can be booked upon request.	

Item Description	
	Item No.
WAGO Cloud; 100 license points	**2759-1061/651-010**
WAGO Cloud; 500 license points	**2759-1061/651-050**
WAGO Cloud; 1000 license points	**2759-1061/651-100**

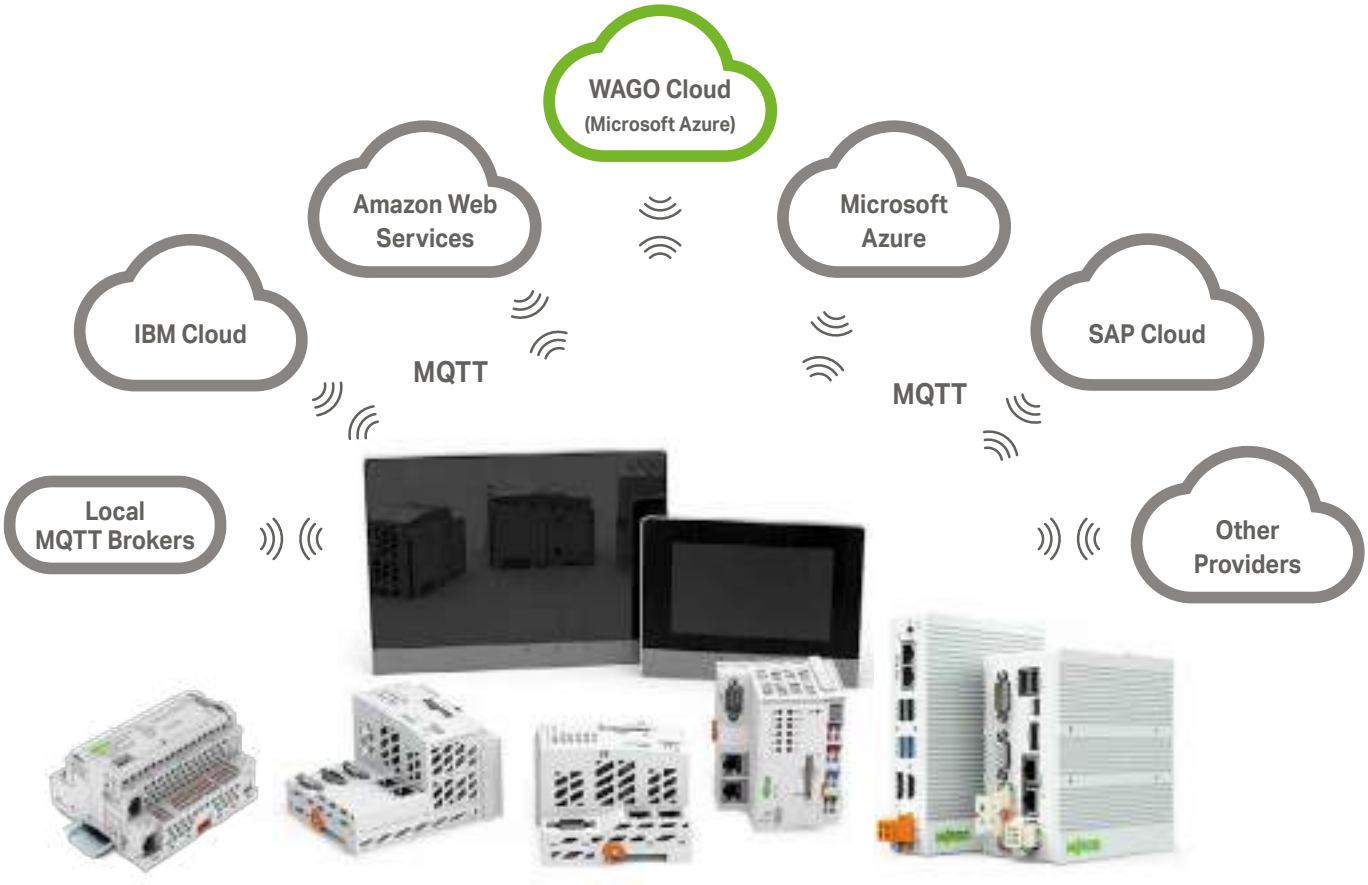
Redeem license points at: https://cloud.wago.com/

Cloud Connectivity via MQTT

Recording, digitizing and linking data profitably...

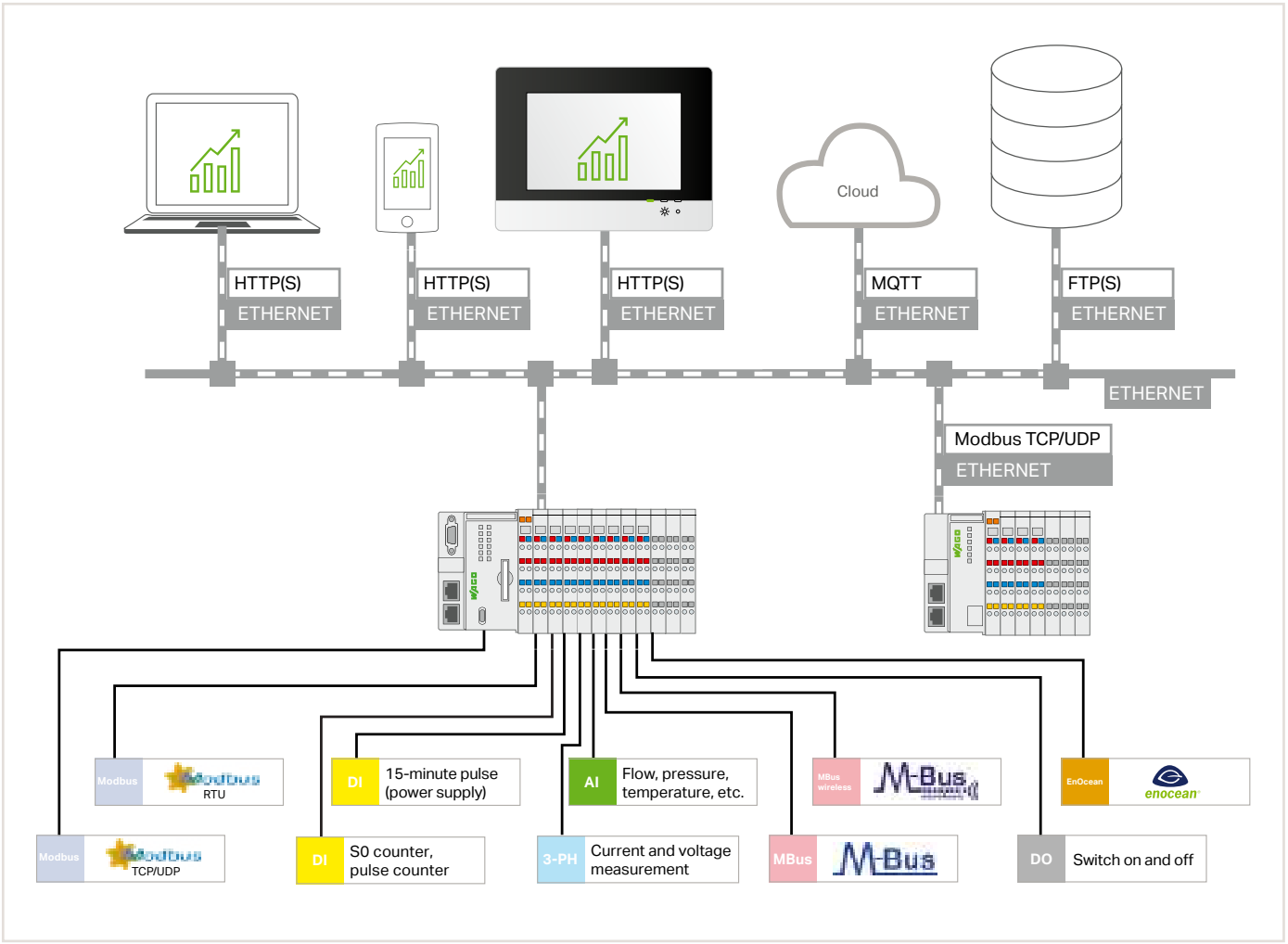
...this is the core concept behind Industry 4.0. Field level connection is established with the open WAGO I/O System 750, 750 XTR or Advanced, and a WAGO PFC Controller or Touch Panel 600 sends data to the cloud or a local MQTT broker. Once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services.
Existing systems also become IoT-ready, making them future-proof. Communication between PFCs and cloud suppliers is performed via the MQTT protocol and encrypted via TLS 1.2.
Cloud connection data is configured via Web-Based Management (WBM). WAGO Engineering includes appropriate libraries for specifying the variables for transfer to the cloud in the PLC program, allowing the PLC programmer to maintain complete control. Controller information, such as run/stop, connection status and device information, can also be transferred to a cloud solution with cloud connectivity or distributed via MQTT broker.

With a wide variety of interfaces, WAGO's controllers also provide the perfect foundation for an IoT gateway.
They can collect numerous field signals, communicate in many industrial protocols and even enable cloud connection of sensors and actuators that themselves have no Web interface. Thanks to the standardized MQTT protocol, it is possible to connect to cloud providers such as Microsoft Azure, Amazon Web Services, IBM Cloud and SAP Cloud. Of course, other MQTT brokers or solutions like WAGO Cloud can also be connected.



Cloud connectivity is possible with all PFC100 and PFC200 Controllers, Touch Panels 600, Compact Controller and Edge Devices.

WAGO Energy Data Management



With WAGO's Energy Data Management solution, you can record and visualize your measurement data for different media and influencing variables (as well as the key figures calculated from it) in no time. Continuous acquisition and monitoring provide the basis for resource-efficient energy usage – the environment will thank you, and your operating costs will be minimized. As an added bonus, conformity with DIN EN 50001 for energy evaluation is part of the package.
WAGO Energy Data Management consists of Web-based application software combined with a modular control system. It records measurement data for different media along with influencing variables for energy monitoring – all are processed for additional analysis, archiving and reporting. The software automatically detects different signals from the connected meters and sensors, making them available to additional energy analysis tools via simple parameter settings. This insight guides you in optimizing energy consumption in your building or production facility – either locally or across the globe.

Your Benefits:

- Ready to go in a few easy steps
- No programming experience required
- Integrated cloud connectivity

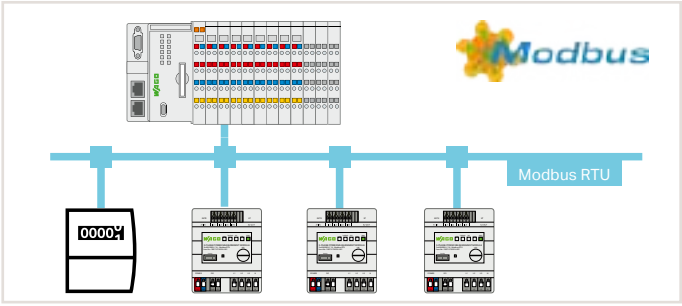
Item Description	
	Item No.
Energy Data Management Application; Single License; Online Activation	**2759-206/261-1000**
Energy Data Management Visualization; Single License; Online Activation	**2759-207/271-1000**
Compatible Controllers/Touch Panels	
Controller PFC200; G2	**750-821x**
Controller PFC200; G2; XTR	**750-821x/000-040**
Touch Panel 600 Standard Line; PIO3	**762-43xx/8000-002**
Touch Panel 600 Advanced Line; PIO3	**762-53xx/8000-002**

A single license allows installation on one controller/touch panel.
One license per controller/touch panel is required.

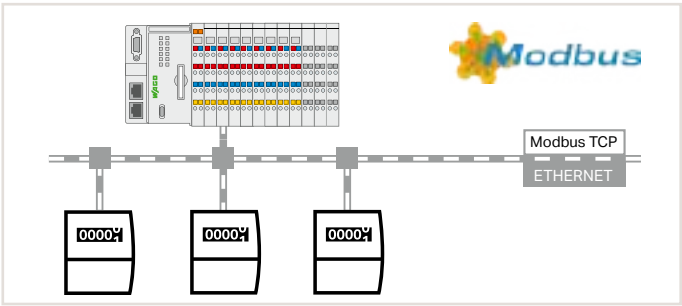
Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-206/261-1000 wago.com/2759-207/271-1000 wago.com/energy-data-management

The "Energy Data Management" software is a pre-programmed application based on the CODESYS Development Environment and can be used for both PFC200 G2 Controllers or Touch Panels 600.

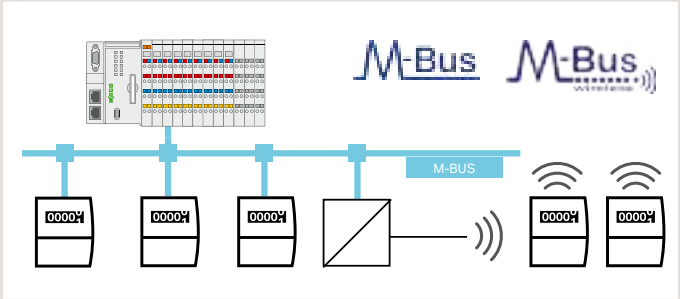
To download the application and license to the device, WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.



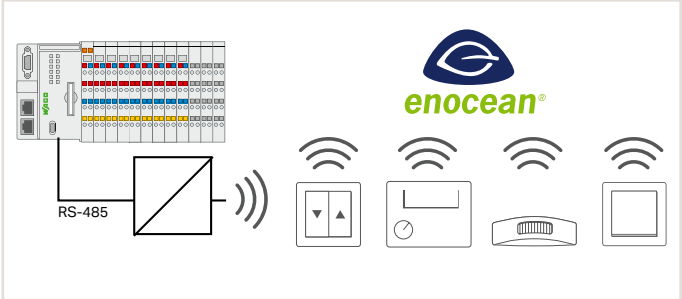
Energy Data Collection with Remote Devices via Modbus RTU



Energy Data Collection with Remote Devices via Modbus TCP



Measured Value Acquisition via M-Bus

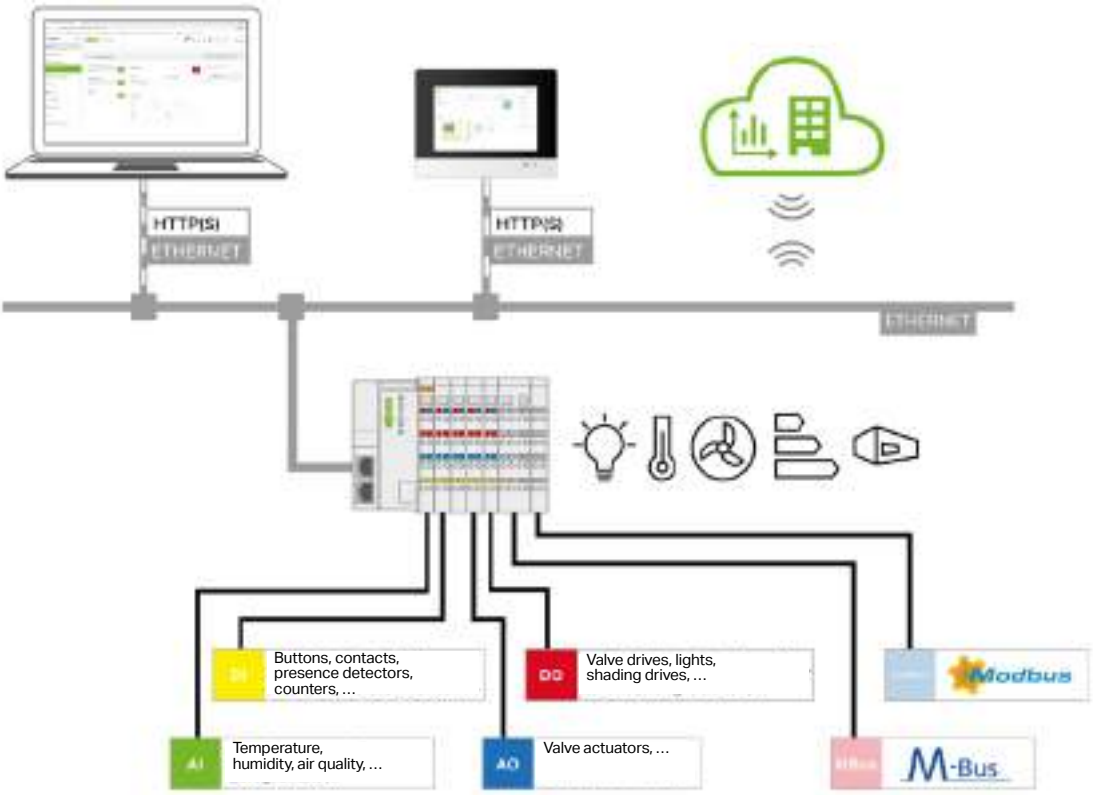


Data Acquisition via EnOcean®

The products listed below are typically used in conjunction with the "Energy Data Management" Application. Detailed information about the products, as well as other variants and accessories, can be found in our Full Line Catalog, Volume 3 or Volume 4.

Energy Data Management		
Required Products	**Description**	**Item No.**
Software Licenses		
WAGO Cloud; 100 license points	Licenses to use WAGO Cloud as a data collector with data visualization; the number of required license points depends on the functions used and the data volume (for details see www.wago.com/cloud).	2759-1061/651-010
WAGO Cloud; 500 license points		2759-1061/651-050
WAGO Cloud; 1000 license points		2759-1061/651-100
Digital I/O Modules		
4-Channel Digital Input; 24 VDC; 3 ms	E.g., for recording the PSC effective power pulse	750-402
4-Channel Digital Output; 24 VDC; 0.5 A	E.g., for switching outputs when alarm thresholds are reached	750-504
8-Channel Digital Output; 24 VDC; 0.5 A		750-530
Analog I/O Modules	Recording temperature, pressure, flow meters and other analog signals	
8-Channel Analog Input; Resistance Measurement; Adjustable		750-451
8-Channel Analog Input; 0/4 … 20 mA; Single-Ended		750-496
8-Channel Analog Input; 0 … 10 VDC/±10 V; Single-Ended		750-497
2-Channel Analog Input; 0 … 20 mA; Differential Input		750-452
4-Channel Analog Input; Voltage/Current; Differential Input; Electrically Isolated Channels		750-471
Power Measurement Modules	Power measurement directly connected to the controller	
3-Phase Power Measurement Module; 480 VAC; 1 A	With split-core or plug-in current transformers	750-494
3-Phase Power Measurement Module; 690 VAC; 1 A	With split-core or plug-in current transformers	750-495
3-Phase Power Measurement Module; 690 VAC; 0.5 A	With split-core or plug-in current transformers	750-495/000-001
3-Phase Power Measurement; 690 VAC; RTC	With Rogowski coils	750-495/000-002
Communication and Technology Modules		
M-Bus Master	Reading in separately recorded meter readings via M-Bus	753-649
RS-232/RS-485 Serial Interface	Reading in data via RS-232 or RS-485 gateways (e.g., EnOcean®)	750-652
2-Channel Up/Down Counter; 24 VDC; 16-bit; 500 Hz	Recording S0 and pulse counters	750-638
Power Supplies		
Compact Power Supply; Switched-Mode; 1-Phase	24 VDC output voltage; 2.5 A output current	787-1012
Pro 2 Power Supply; 1- or 3-Phase	24 VDC output voltage; 5 … 40 A output current	2787-2xxx
Distributed Power Measurement Modules	For distributed energy acquisition via Modbus RTU	
3-Phase Power Measurement Module; Input: Current Transformer (1 A)		2857-570/024-001
3-Phase Power Measurement Module; Input: Current Transformer (5 A)		2857-570/024-005
3-Phase Power Measurement Module; Input: Rogowski Coil		2857-570/024-000
Gateways		
STC65-RS-485 EVC EnOcean® Receiver/Sender with RS-485 EVC Interface	Gateway for the acquisition of EnOcean® signals	2852-7101
WLAN ETHERNET Gateway; 2.4 GHz	Gateway for creating wireless ETHERNET connections	758-916

WAGO Application Building Control



WAGO Application Building Control is a pre-programmed software solution for building automation applications.

- The application is ideal for virtually all building automation functions, such as lighting control, HVAC control, and energy data management.
- Despite pre-programming, it is possible to define almost any data points that can be linked together, put into dependency with each other or provided with control and regulating functions.
- The application has an integrated dashboard for advanced visualization options.
- Commissioning is performed through a configuration interface, following the design principle of "configuration instead of programming."

Advantages:
- Easy configuration, commissioning and operation without programming knowledge
- Highly versatile
- High flexibility and scalability for adapting to different needs
- Integrated monitoring, alarming for limit violation and status monitoring
- Optional connection to WAGO's "Cloud Building Operation and Control" cloud solution for access to all of the data from anywhere in the world

Benefits:
- High cost efficiency and profitability thanks to quick and easy commissioning
- User-friendly and intuitive visualization and operation
- High functional safety and reliability thanks to pre-programmed and tested functional units

Item Description	
	Item No.
WAGO Application Building Control; Single License; Online Activation	**2759-2120/261-1000**
Compatible Controllers	
Controller PFC200; G2; 2ETH RS	750-8212

A single license allows installation on one controller.
One license per controller is required.

Delivery type	License certificate by email (software available for download)
For data sheet and additional information, see:	wago.com/2759-2120/261-1000

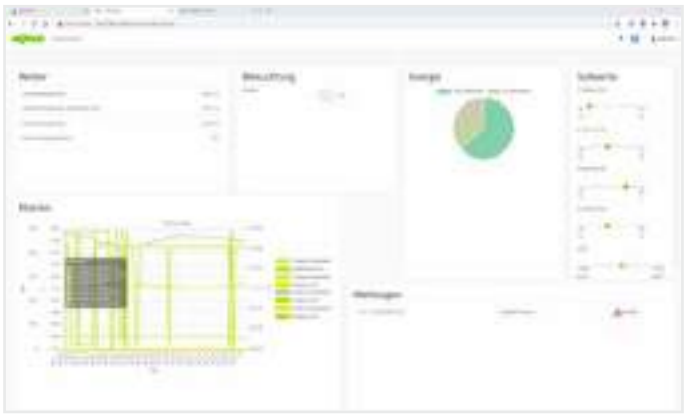
The "WAGO Application Building Control" software is a pre-programmed application based on the CODESYS Development Environment and can be used for PFC200 G2 Controllers.

To download the application and license to the device, WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.



Configuration Screen

Data point catalog
- Central list of all configured data points (inputs, outputs, functions, dashboard elements)
- The input value, e.g., for a function or an output is selected from the data point list.
- Search function for finding the desired data point (helpful for long lists of larger applications)



Dashboard

The integrated dashboard offers a freely configurable visualization interface for the display of current system values and states and the possibility of operator interventions

The I/O modules (type and number) connected via the local bus are automatically detected and displayed in the application for further configuration.

WAGO Application Building Control		
Supported I/O modules as interfaces for the connection of sensors and actuators		**Item No.**
Quantity	**Digital Input Modules**	
10	2-Channel Digital Input; 230 VAC	**750-405**
	4-Channel Digital Input; 24 VDC; 3 ms	**750-402**
	4-Channel Digital Input; 120/230 VAC	**753-440**
	8-Channel Digital Input; 24 VDC; 3 ms	**750-430**
	8-Channel Digital Input; 24 VDC; 3 ms; 2-Wire Connection	**750-1415**
	16-Channel Digital Input; 24 VDC; 3 ms	**750-1405**
	Analog Input Modules	
10	2-Channel Analog Input; for Pt100/RTD Resistance Sensors	**750-461**
	2-Channel Analog Input; 4 … 20 mA; Single-Ended	**750-466**
	2-Channel Analog Input; 0 … 10 VDC; Single-Ended	**750-467**
	4-Channel Analog Input; 4 … 20 mA; Single-Ended	**750-455**
	4-Channel Analog Input; 0 … 10 VDC; Single-Ended	**750-459**
	4-Channel Analog Input; Voltage/Current; Differential Input; 16 Bits; Diagnostics	**750-471**
	8-Channel Analog Input; 0 … 10 VDC/±10 V; Single-Ended	**750-497**
	Analog Temperature Input Modules	
10	8-Channel Analog Input; Resistance Measurement; Adjustable	**750-451**
	4-Channel Analog Input; Resistance Measurement; Adjustable	**750-450**
	Digital Output Modules	
10	4-Channel Digital Output; 24 VDC; 0.5 A	**750-504**
	2-Channel Relay Output; 250 VAC; 1 A; Potential-Free; 2 Changeover Contacts	**750-517**
	8-Channel Digital Output; 24 VDC; 0.5 A	**750-530**
	8-Channel Digital Output; 24 VDC; 0.5 A; 2-Wire Connection	**750-1515**
	16-Channel Digital Output; 24 VDC; 0.5 A	**750-1504**
	Analog Output Modules	
10	2-Channel Analog Output; 0 … 10 VDC	**750-550**
	2-Channel Analog Output; 0 … 10 VDC; 10 Bits; 100 mW/24 V	**750-560**
	4-Channel Analog Output; 0 … 10 VDC	**750-559**
	8-Channel Analog Output; 0 … 10 VDC/±10 V	**750-597**
	RS-232/485 Serial Interface Modules	
4	Serial Interface RS-232/485	**750-652**
	M-Bus Modules	
4	M-Bus Master	**753-649**

WAGO *flex*ROOM® Application
A Flexible Room Solution



Our Solution

Planning, commissioning and building operation must demonstrate maximum efficiency and a high degree of adaptability. Pre-configured programs and pre-defined hardware significantly streamline planning and commissioning. The more applications created within a project, the greater the benefit. Flexible building operation (e.g., conversions and room remodeling) via special maintenance programs eliminates external service costs because the user can make their own changes.
Install, commission and configure according to project specifications – WAGO *flex*ROOM® combines these strengths into a standard module. The integrated control unit and application software are precisely tailored to room requirements.

Parameter Setting

For each room, parameters can be individually stored for lighting, shading and room control. All parameters are cyclically saved either directly in the distribution box or on a separate computer via network connection. A higher-level management station accesses the distribution box parameters via the open Modbus TCP/IP protocol. This ensures that all modifications can be implemented on site or via the management station. BACnet or KNX IP systems can also be connected via Modbus TCP/IP.

Configuring – Not Programming

Each WAGO *flex*ROOM® Distribution Box has a Web interface. Both the commissioning technician and end user can configure the controls for each room via Web browser, regardless of the user's location and the distribution box in use. Complete wall relocations, room assignments, lighting and shading groups can be changed from the parameter interface. No additional software is required.

Item Description	
	Item No.
***flex*ROOM Application; Single License; Online Activation**	**2759-2110/261-1000**
Compatible Controller	
Controller PFC200; G2; 2ETH RS	750-8212

A single license allows installation on one controller.
One license per controller is required.

Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-2110/261-1000 wago.com/room-automation

The "***flex*ROOM**" software is a pre-programmed application based on the CODESYS Development Environment and can be used for PFC200 G2 Controllers.

To download the application and the license to the device, the WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.



Benefits:

The distribution box is delivered ready to operate and can be installed directly in a suspended ceiling or a sub-floor. Room segment configuration is performed directly in the distribution box via standard Web browser. No expert knowledge is required to configure rooms or convert them later. Several ***flex***ROOM® Distribution Boxes can be wired into a building automation network via ETHERNET to automate a building area, a floor or an entire office section. A standard Web browser also establishes communication between the distribution boxes. If electrical distribution boxes are present, ***flex***ROOM® components can also be installed or retrofitted during facility renovation. Space conversion costs are reduced with ***flex***ROOM® because expenses are transparent and predictable.

Room Automation Distribution Boxes

	Office Areas (Segments)				Special-Use Areas (Segments)				
Type	Quantity	Valves	Lighting	Sun Protection	Quantity	Valves	Lighting	Shading	Item No.
Type 1	16	8 (MP Bus)	64 (DALI)	16 (SMI)					2854-301/000-011
Type 2	16	8 (MP Bus)	64 (DALI)	16 (SMI)	8	8 (MP Bus)	64 (DALI)	16 (SMI)	2854-301/000-021
Type 3	16	8 (DO)	64 (DALI)	16 (relays)					2854-301/000-031
Type 4	16	8 (DO)	64 (DALI)	16 (relays)	4	4 (DO)	4 (relays)	4 (relays)	2854-301/000-041
Type 5	16	8 (DO)	64 (DALI)	16 (relays)	4	4 (DO)	64 (DALI)	4 (relays)	2854-301/000-051
Type 6	8	4 (DO)	64 (DALI)	8 (relays)					2854-301/000-061
Type 7	24	24 (MP Bus)	128 (DALI)	32 (SMI)	8	8 (MP Bus)	64 (DALI)	16 (SMI)	2854-301/000-071

All distribution boxes include an EnOcean® interface to accommodate room control units, sensors and buttons.

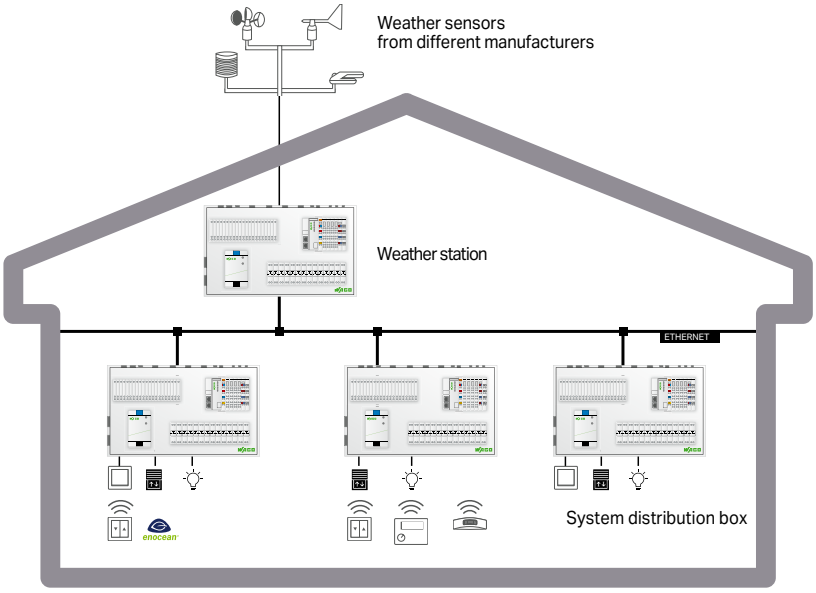
flexROOM® Application		
Required Products	**Description**	**Item No.**
Controllers		
Controller PFC200 G2 2ETH RS	Powerful IP controller, expandable with I/O modules and communication modules	750-8212
Serial Interface Module RS-232/RS-485	Connects to devices with a serial interface (e.g., weather sensors, EnOcean receivers)	750-652
End Module	Properly terminates the I/O bus	750-600
Power Supply 24 VDC, 2.5 A	Supplies both controllers and modules	787-1012
I/O Modules		
Digital Input Modules	Connect to push-buttons, switches and sensors with a potential-free contact	75x-4xx, 750-14xx
Digital Output Modules	Connect to digital actuators and relays	75x-5xx, 750-15xx
Relay Module	For lamp loads	788-354
Relay Module	For sunblind actuators	788-304
Analog Input Modules	Connect to sensors with analog output signal (0 … 10 V)	75x-4xx
Analog Output Modules	Connect to actuators with analog control signal (0 … 10 V)	750-5xx
DALI		
DALI Multi-Master Module	Connects to a maximum of 64 DALI actuators (ECGs) and a maximum of 16 DALI multi-sensors (max. 64 sensor addresses)	753-647
DALI Multi-Master DC/DC Converter	Supplies (24 VDC/18 VDC) one DALI Multi-Master Module	753-620
Power Supply to DALI Multi-Master	Supplies a maximum of five DALI Multi-Master Modules	787-1007
DALI-2 Certified Sensors and other DALI Sensors	DALI compatibility list available at www.wago.com/room-automation	
SMI		
SMI-Master	Connects to a maximum of 16 SMI drives (230 VAC)	753-1630
SMI-Master LoVo	Connects to a maximum of 16 SMI low-voltage drives (24 VDC)	753-1631
MP-Bus		
MP-Bus Master Module	For connecting valve and damper actuators with an MP-Bus interface	750-643
EnOcean		
EnOcean Receiver	Receiver with serial interface for EnOcean switches, sensors and room control units	2852-7101
EnOcean Repeater	Improves coverage – further information on planning can be found at www.enocean.com	2852-7102
EnOcean®-RS-485-Gateway		750-940
EnOcean Light Push-Button (2 Channels)	For one light circuit	758-940/001-000
EnOcean Light Push-Button (4 Channels)	For two light circuits	758-940/003-000
EnOcean Sunblind Button (2 Channels)	For one blind	758-940/002-000
EnOcean Sunblind Button (4 Channels)	For two blinds	758-940/004-000
EnOcean Room Control Unit, SR04 P	With integrated temperature sensor and rotary wheel for setpoint correction, for surface mounting	2852-7112
EnOcean Room Control Unit with LCD, SR06-LCD	With integrated temperature sensor and buttons for setpoint correction, for 55 x 55 switch programs	2852-7113
KNX		
KNX TP1 Module	Connects to KNX TP1 components (e.g., room control units and buttons)	753-646
M-Bus		
M-Bus Master Module	For connecting energy meters with an M-Bus interface	753-649

WAGO Application Weather Station

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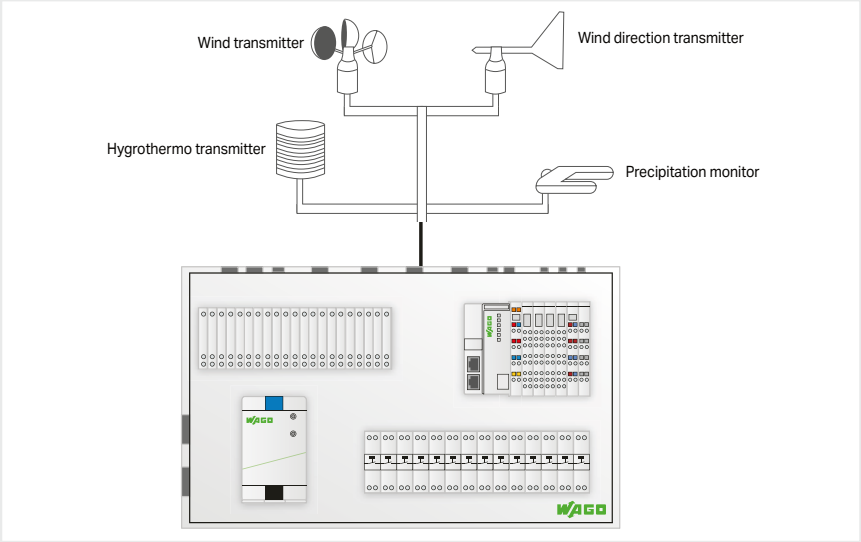
The WAGO Weather Station makes data from the connected weather sensors (e.g., temperature, precipitation, wind speed and light intensity) available on a network for further processing and display in a visualization or a management system.

It also provides central functions such as weather protection and automated glare protection.



Weather protection prevents damage to exterior sun protection fixtures (e.g., blinds, awnings, curtains) due to wind, rain or ice formation. Dynamic wind monitoring is available as an option, which selectively ensures and improves protection against wind damage according to an existing object-specific wind analysis.

The glare protection automation based on the position of the sun (slat tracking) simultaneously ensures that the maximum amount of daylight is allowed into the rooms and also avoids glare. For this purpose, the WAGO Weather Station calculates the exact position of the sun, records its intensity with the help of connected light intensity sensors and cyclically adjusts the position of the blinds. Additional optimization of the daylight supply is provided by the optional shading correction. It takes the shading caused by surrounding buildings and vegetation into account according to an existing shading analysis for the specific property.



The WAGO Weather Station solution consists of a web-based application software and a modular I/O system. In addition to simple commissioning, the system distribution box design paired with the WAGO WINSTA® Pluggable Connection System guarantees fast and safe installation.

Weather Distribution Box

Description	Equipment	Signals (Inputs)												Item No.
		Digital (24 VDC)			Analog (4 ... 20 mA)								Serial Interface	
		Precipitation monitor	Sun protection (central (UP))	Real-time clock	Temperature	Relative humidity	Wind sensor (central)	Additional wind sensors	Wind direction	Brightness sensor (single)	Twilight sensor	Global radiation (pyranometer)	Modbus® interface (combi sensor connection)	
Weather distribution box (type 1)	Analog and digital inputs	1	1	1	1	1	1	8	1	1	1	1		2854-302/000-011
Weather distribution box (type 2)	Modbus®, digital inputs		1										x	2854-302/000-021
Weather distribution box (type 3)	Modbus®, analog and digital inputs		1					3				1	x	2854-302/000-031

Item Description	Item No.
Application Weather Station; Single License; Online activation	**2759-241/261-1000**
Compatible Controllers	
Controller PFC200; G2; 2ETH RS	**750-8212**

A single license allows installation on one controller.
One license per controller is required.

Delivery type	License certificate by email (software available for download)
For data sheet and additional information, see:	wago.com/2759-241/261-1000

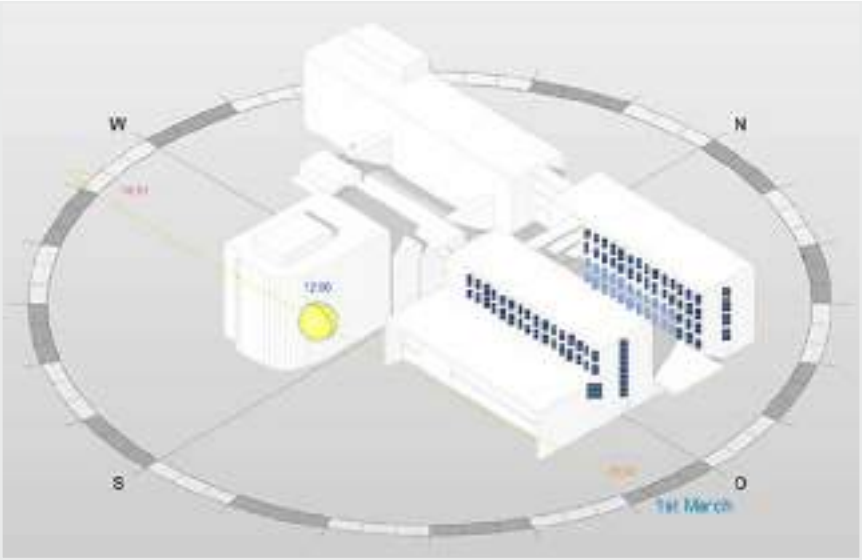
The „Application Weather Station" software is a pre-programmed application based on the CODESYS Development Environment and can be used for PFC200 G2 Controllers.

To download the application and license to the device, WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.

WAGO Application Weather Station

The “Shadow Correction” function extends the sun position-dependent slat tracking and additionally optimizes the supply of daylight in the rooms. It takes the shading caused by surrounding buildings and vegetation into account according to an existing shading analysis for the specific property. As a result, only the blinds that are actually in the sun are adjusted to the sun's position. Blinds of the shaded windows can be raised, or their slats can be set in a horizontal position, to improve the supply of sunlight in the room, increasing workplace comfort.

Note:
This is an additional function for the WAGO Application Weather Station.
A license is required for productive use of the “Shadow Correction” function without time restriction. The full scope of this function can be used for evaluation without a license for 30 days.



Item Description	
	Item No.
Application Weather Station; Shadow Correction; Single License; Online activation	**2759-242/261-1000**
Compatible Controllers	
Controller PFC200; G2; 2ETH RS	**750-8212**

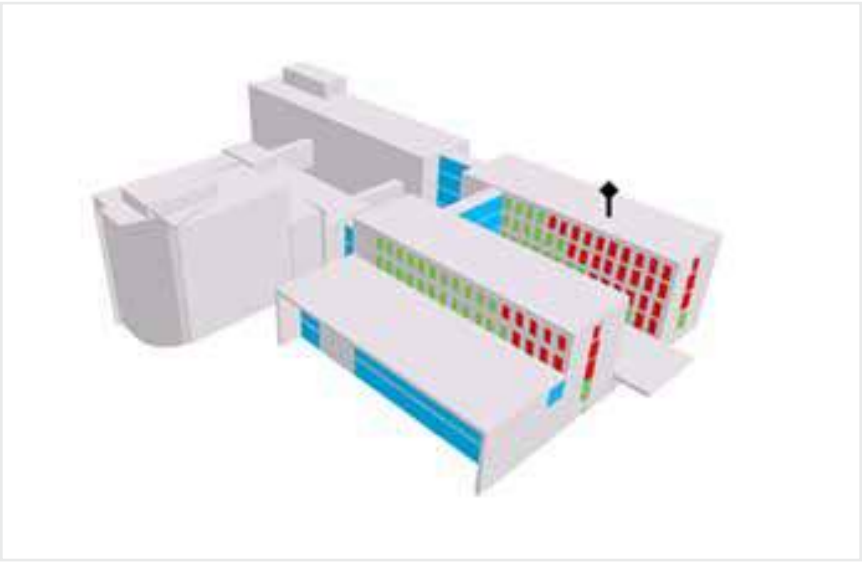
A single license allows installation on one controller.
One license per controller is required.

Delivery type	License certificate by email (software available for download)
For data sheet and additional information, see:	wago.com/2759-242/261-1000

The “Application Weather Station; Shadow Correction” software is a pre-programmed application based on the CODESYS Development Environment and can be used for PFC200 G2 Controllers.

To download the application and license to the device, WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.

Typical weather protection functions move all the building’s shades into a safe position and lock them there when there is a risk of damage; in contrast, the “Dynamic Wind Monitoring” function allows selective weather protection. In the presence of strong winds, it only protects the shades that are actually at risk of damage according to a wind analysis. This means the slat tracking for glare-free operation and the automatic thermal control for reducing cooling loads can remain active for the remaining blinds, for example. That way, they can continue to maximize comfort and optimize energy efficiency and CO2 savings. Taking local wind profiles into account also provides better protection against damage.



Item Description	
	Item No.
Application Weather Station, Dynamic Wind Protection; Single License; Online activation	**2759-243/261-1000**
Compatible Controllers	
Controller PFC200; G2; 2ETH RS	**750-8212**

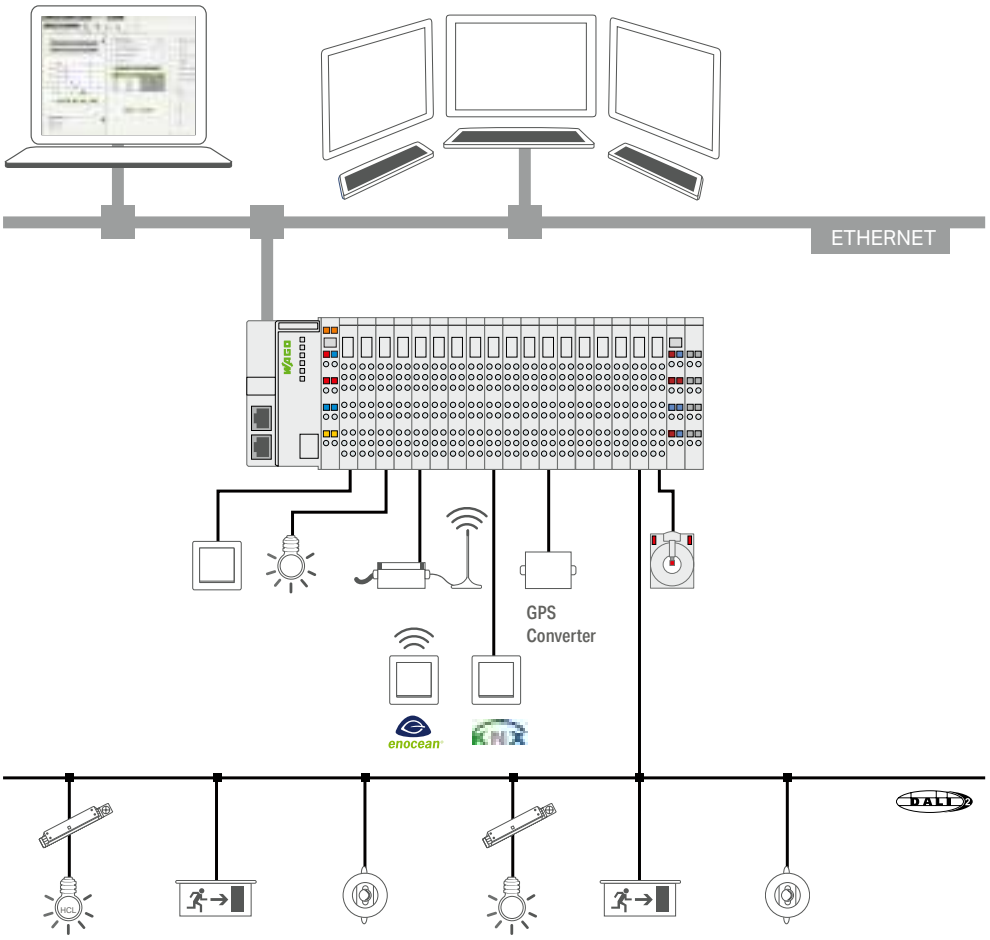
A single license allows installation on one controller.
One license per controller is required.

Delivery type	License certificate by email (software available for download)
For data sheet and additional information, see:	wago.com/2759-243/261-1000

The „Application Weather Station, Dynamic Wind Protection“ software is a pre-programmed application based on the CODESYS Development Environment and can be used for PFC200 G2 Controllers.

To download the application and license to the device, WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.

WAGO Lighting Management Application



WAGO Lighting Management is a proven solution based on predefined hardware and preconfigured software, which greatly simplifies planning, commissioning and operation.
The basic idea: WAGO Lighting Management is ready for the vastly different light requirements of warehouses and production facilities. For example, a production facility is divided into virtual rooms in which the light can be flexibly adapted. Each virtual room receives signals from sensors and actuators in order to automatically set the appropriate light intensity. Virtual rooms allow both conversions and remodeling to be implemented quickly and simply via Web configuration.
A separate HTML5 user interface is available for convenient and intuitive operation of WAGO Lighting Management. Operation is optimized for display on different end devices, such as tablets, smartphones and touch panels.



Item Description		
		Item No.
Lighting Management Application; Single License; Online Activation		**2759-204/261-1000**
Lighting Management Visualization; Single License; Online Activation		
Visualization – S	1 controller	**2759-2101/271-1000**
Visualization – M	up to 3 controllers	**2759-2102/271-1000**
Visualization – L	up to 10 controllers	**2759-2103/271-1000**
Compatible Controllers/Touch Panels		
Controller PFC200; G2; 2ETH RS		**750-8212**
Touch Panel 600 Advanced Line; PIO3		**762-53xx/8000-002**

A single license allows installation on one controller/touch panel.
One license per controller/touch panel is required.

Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-204/261-1000 wago.com/2759-210x/271-1000 wago.com/lighting-management

The "Lighting Management" software is a pre-programmed application based on the CODESYS Development Environment and can be used for both PFC200 G2 Controllers or Touch Panels 600.

To download the application and the license to the device, the WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.

The products listed below are typically used in conjunction with the "Lighting Management" Application. Detailed information about the products, as well as other variants and accessories, can be found in our Full Line Catalog, Volume 3 or Volume 4.

Lighting Management Application		
Required Products	**Description**	**Item No.**
Base Unit		
DALI Multi-Master	In addition to 64 DALI actuators (ECGs), a DALI Multi-Master Module supports up to 16 DALI Multi-sensors (max. 64 sensor addresses); max. 10 DALI modules per base package.	753-647
End Module	An end module must be snapped onto the assembly at the end of a fieldbus node.	750-600
Power Supply to I/O Node	24 VDC power supply to controllers and additional modules	787-1012
Power Supply to DALI Multi-Master	Supplies a maximum of five DALI Multi-Master modules	787-1007
Extension for Inputs/Buttons		
16-Channel Digital Input; 24 VDC; 3 ms	For 1...16 light button/switch inputs; max. 4 extensions per base package	750-1405
Extension for Outputs/Actuators		
16-Channel Digital Output; 24 VDC; 0.5 A	For 1 … 16 actuators/lamps/relays/ECG control; max. 2 extensions per base package	750-1504
Socket with Relay and Status Indicator; 1 Make Contact; 24 VDC	Light switching via relay	788-357
Extension for EnOcean Radio		
RS-232/-485 Serial Interface	Serial interface connects to STC65-RS-485 EVC EnOcean Radio Transmitter/Receiver (for 1 … 64 rocker switches)	750-652
EnOcean Receiver/Transmitter	Receives EnOcean radio signals and transmits them to the I/O node	2852-7101
EnOcean Repeater	Extends the transmission range (for more planning information, visit the EnOcean website)	2852-7102
Radio Transmitter; EnOcean easyfit PTM 250; 2-Channel Lighting Control	1 … 2 or 1 … 4 signals; range of 30 meters from the radio receiver in buildings	758-940/001-000
Radio Transmitter; EnOcean easyfit PTM 250; 4-Channel Lighting Control		758-940/003-000
Extension for External Time Request		
GPS DCF Converter	Converter/external receiver for time synchronization	2852-7901
Extension for Energy Data Measurement		
3-Phase Power Measurement; 690 VAC	The 3-Phase Power Measurement Module (750-495) measures electrical data in a three-phase supply network.	750-495/xxx-xxx
Current and Voltage Connections	Pre-assembled terminal block assemblies for easy connection and short-circuiting of current transformers (for current transformers, see Full Line Catalog, Volume 4)	2007-8874; 2007-8877
Extension for KNX Buttons		
KNX/EIB/TP1 Interface	Connects KNX buttons to the I/O node; max. 1 module per base package	753-646
Extension for Sensors (DALI-2)		
DALI Sensor; PD11-BMS-FLAT	LOW BAY Sensor for offices (2 … 5 m)	2852-7210
DALI Sensor; PD4-BMS-GH	HIGH BAY Sensor for warehouses (5 … 16 m)	2852-7213
DALI Sensor; PD4N-BMS	MID BAY Sensor for open-plan offices, underground garages, entrance halls, production facilities (2 … 10 m)	2852-7214
Adapter; AP Assembly Kit IP54; Accessories for 2852-7214	Accessories for surface mounting of the PD4N-BMS (B.E.G.)	2852-7215
DALI Sensor; MSensor G3 SRC 30 PIR 5DPI WH	LOW BAY Sensor for offices (up to 5 m)	2852-7220
DALI Sensor; MSensor G3 SSM 30 10DPI WH	MID BAY Sensor for high-ceiling rooms (up to 10 m)	2852-7221
DALI Sensor; IR Quattro HD DALI-2	LOW/MID BAY Sensor for offices (2.5 … 10 m)	2852-7230
DALI Sensor; IR Quattro SLIM XS DALI-2	LOW BAY Sensor for offices, slim design (2.5 … 4 m)	2852-7231
DALI Sensor; IS3360 MX HIGH BAY DALI-2	HIGH BAY Sensor for industrial buildings, circular detection range (4 … 14 m)	2852-7232
DALI Sensor; IS345 MX HIGH BAY DALI-2	HIGH BAY Sensor for industrial buildings, rectangular detection range (4 … 14 m)	2852-7233
DALI XC G3 (DALI-2)	Push-button coupler connects 4 conventional push-buttons to DALI	2852-7225
DALI Sensors		
DALI Multi-Sensor Kit	Brightness measurement and motion sensor: Kit connects to a DALI bus system	2851-8201
DALI Sensor Coupler	Sensor coupler connects MULTI-3-CI Sensors to DALI (max. 16 DALI Sensor Couplers per 753-647 DALI Multi-Master)	2851-8202
DALI HIGHBAY ADAPTER + HIGH BAY	Brightness measurement and motion sensor for large installation heights (3 … 13 m)	2852-7207, 2852-7201
DALI HIGHBAY ADAPTER + VISION	Motion sensor for large areas, open offices, hallways or warehouses	2852-7207, 2852-7202
DALI LS/PD LI	Motion sensor for office lighting (1 … 5 m)	2852-7203
DALI Sensor Coupler HF LS LI +	Light and recessed ceiling sensor: combined daylight and motion detection, motion detection via radar	2852-7205
Radar Sensor HF LS LI		2852-7206
4p4c Connection Cable, 50 cm		2852-7208
DALI XC	Push-button coupler connects 4 conventional push-buttons to DALI	2852-7301
DALI Sensor Coupler E	Sensor coupler connects standard sensors to DALI	2852-7204

WAGO Application Grid Gateway



Setting application parameters via HTML-5 WEB visualization



Example: Grid Gateway Distribution Box

WAGO Grid Gateway Application supports power distribution grid operators in assessing the grid performance. This application allows grid operators to use their existing distribution grid more efficiently, while avoiding unnecessary grid expansion. The measurement technology required in the substation for both the transformer and low-voltage outputs can be easily retrofitted.

The measurement values of the medium voltage, transformer, low-voltage outputs, valve positions and temperatures are transmitted to the grid control system via IEC 60870-5-104. Commands and setpoints can also be received and processed. External measurement systems such as short-circuit/ground-fault direction indicators can be easily parametrized via Modbus RTU. The entire parameterization can be stored in a clear manner and, if necessary, added to other stations. The option of simulating measured data makes it possible to commission new substations at the station builder's location from the grid control system without the field side being connected.

All data, for example the measured values from the low-voltage outputs, can be communicated via MQTT to a cloud.

Asset managers can more accurately plan substation maintenance cycles by accessing both stored data and digital drag indicators. Grid managers are prepared for local situations, having remote access for maintenance and errors in the grid.
Remote updates for software modules and extensions are possible, eliminating unnecessary in-the-field service.
Upon request, WAGO will provide you a hardware solution tailored to your customers' substations.

Patch and device management is available for the administration of a large number of distributed telecontrol devices with the WAGO Application Grid Gateway. This enables application updates, configuration changes, security patches and firmware upgrades, among other things.

Item Description	
	Item No.
Application Grid Gateway; Single License; Online activation	**2759-2015/261-1000**
Application Grid Gateway; Single License	**2759-2015/260-1000**
Accessories	
Custom/tailored system distribution boxes (e.g., for use in substations) are available	**upon request**
Compatible devices	
PFC200; G2; 4ETH	**750-8210**
PFC200; G2; 4ETH; T	**750-8210/025-000**
PFC200; G2; 4ETH; XTR	**750-8210/040-000**
PFC200; G2; 2ETH 2SFP	**750-8211**
PFC200; G2; 2ETH 2SFP; XTR	**750-8211/040-000**
PFC200; G2; 2ETH RS	**750-8212**
PFC200; G2; 2ETH RS; TELE; T	**750-8212/025-001**
PFC200; G2; 2ETH RS; TELE; T; ECO	**750-8212/025-002**
PFC200; G2; 2ETH RS; XTR	**750-8212/040-000**
PFC200; G2; 2ETH RS; Tele; XTR	**750-8212/040-001**
PFC200; G2; 2ETH M12; RS; XTR	**750-8212/040-010**
PFC200; G2; 2ETH RS; 4G	**750-8217**
PFC200; G2; 2ETH RS; 4G; T	**750-8217/025-000**

Technical Data	
Number of LV outputs	Up to 17 LV outputs
Firmware	Hardening in compliance with BDEW White Paper
Patch/device management	Application updates, configuration changes, security patches and firmware upgrades
Communication to the grid control system	IEC 60870-5-104
Communication to the office network	HTTPS, MQTT
Memory required on the SD card	Less than 2 MB measurement data per day for 15 LV outputs
Authentication	Local, LDAP
User groups	Grid manager, grid technician, grid planner, asset manager, administrator
Network interfaces	Secure separation between SCADA and office networks
Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-2015/261-1000

A single license allows installation on one controller.
One license per controller is required.

WAGO Application Medium Voltage Calculation
Add-on Application for WAGO Application Grid Gateway



Setting the individual transformer values



View of the current measured values and the calculated medium voltage values

It is becoming increasingly important for network operators to precisely monitor the medium-voltage values in transformer stations. For example, these values are required for calibrating the short-circuit/ground-fault indicators and are essential for wide-range control.
Until now, accurate medium-voltage measurement has required expensive resistive couplers or ohmic medium-voltage sensors.
With the WAGO Application Medium Voltage Calculation (additional application), highly precise medium voltage values can be calculated without resistive couplers based on precisely measured low voltages. Through this, an accuracy class of 1.5 percent is achieved.
The add-on application for medium-voltage calculation runs on a Docker® container. Data exchange between the "WAGO Application Grid Gateway" basic application and the container occurs via the Modbus TCP protocol. The necessary transformer parameters can be conveniently entered via the Web visualization or CSV file upload. Electrical variables are measured on the low-voltage side either with WAGO's 3-Phase Power Measurement Modules (Item No. 750-495/040-010) or third-party devices that transmit their values via the Modbus® protocol, for example.
The mean voltage is calculated by accounting for various parameters such as winding ratios, loads and temperatures. The calculation also incorporates individual transformer parameters, such as the short-circuit voltage, no-load losses or the losses in the event of a short circuit.
The higher-level WAGO Application Grid Gateway transmits the calculated, measured values to the process control systems or the grid operators' data clouds, for example.

Item Description	
WAGO Application Medium Voltage	**Item No.**
Single license	2759-2016/261-1000
Requirement	
WAGO Application Grid Gateway	2759-2015/26x-1000
Compatible Devices	
PFC200; G2; 4ETH	750-8210
PFC200; G2; 4ETH; T	750-8210/025-000
PFC200; G2; 4ETH; XTR	750-8210/040-000
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH 2SFP; XTR	750-8211/040-000
PFC200; G2; 2ETH RS	750-8212
PFC200; G2; 2ETH RS; TELE; T	750-8212/025-001
PFC200; G2; 2ETH RS; TELE; T; ECO	750-8212/025-002
PFC200; G2; 2ETH RS; XTR	750-8212/040-000
PFC200; G2; 2ETH RS; Tele; XTR	750-8212/040-001
PFC200; G2; 2ETH M12; RS; XTR	750-8212/040-010
PFC200; G2; 2ETH RS; 4G	750-8217
PFC200; G2; 2ETH RS; 4G; T	750-8217/025-000

Technical Data
Accuracy class of up to 1.5 percent, depending on the available transformer parameters
Delivery type
License certificate by email (software available for download)

A single license allows installation on one controller.
One license per controller is required.

WAGO Application Customer Substation



WAGO Application Customer Substation allows customer systems to communicate with the regional grid operator (control technology) in compliance with the IEC 60870-5-101 or IEC 60870-5-104 guidelines.
Measured values like voltage, reactive power, active power and station parameters (position messages) are determined and monitored.
The application enables automatic mapping of the respective data points according to the TAB (Technische Anschlussbedingung) technical connection requirement (TCR) of the selected grid operator.

The station can be customized depending on the number of sections.
The application connects all relevant measurement and protection systems.
For standard devices, communication templates are stored for easy configuration.

Optionally, data can also be transmitted to a cloud (MQTT).
A direct marketer interface is also available.
Available options:
A certified EZA controller (Item No. 2759-203/211-1000) can be activated and connected to various actuators if desired.

The WagoAppRTU_Slaves library on which the application is based provides simple function blocks for use with specific power system operators. They enable customer systems to communicate with the grid operator per IEC 60870-5-101 or IEC 60870-5-104.
Supported grid operators: E.ON (Avacon Netz, Bayernwerk Netz, Schleswig Holstein Netz, E.DIS Netz); EWE NETZ; Netze BW; Westnetz, VSE; WEMAG; Mitnetz and SachsenNetze. Note: Additional information available upon request

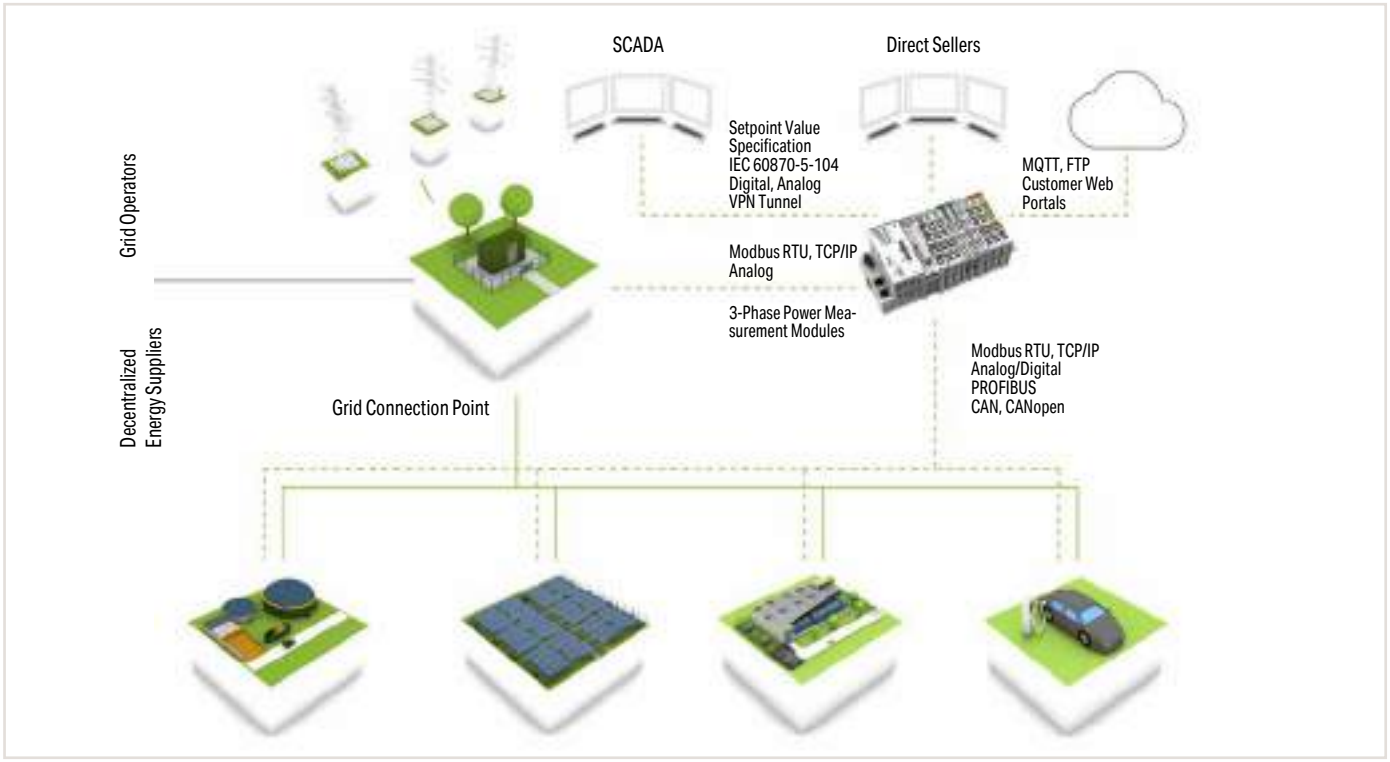
Item Description	
WAGO Application Customer Substation	**Item No.**
Single license; online activation	2759-2018/261-1000
WAGO Cloud	
WAGO Cloud; 100 license points	2759-1061/651-010
WAGO Cloud; 500 license points	2759-1061/651-050
WAGO Cloud; 1000 license points	2759-1061/651-100
Compatible Devices	
PFC200; G2; 4ETH	750-8210
PFC200; G2; 4ETH; T	750-8210/025-000
PFC200; G2; 4ETH; XTR	750-8210/040-000
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH 2SFP; XTR	750-8211/040-000
PFC200; G2; 2ETH RS	750-8212
PFC200; G2; 2ETH RS; TELE; T	750-8212/025-001
PFC200; G2; 2ETH RS; TELE; T; ECO	750-8212/025-002
PFC200; G2; 2ETH RS; XTR	750-8212/040-000
PFC200; G2; 2ETH RS; Tele; XTR	750-8212/040-001
PFC200; G2; 2ETH M12; RS; XTR	750-8212/040-010
PFC200; G2; 2ETH RS; 4G	750-8217
PFC200; G2; 2ETH RS; 4G; T	750-8217/025-000

Functions	
Control sections	Input panel (1-n) Transfer panel/network connection point Metering panel Disconnectors, HH fuses Generation plants (various energy types) Additional generation units
Delivery type	License certificate by email (software available for download)
For data sheet and additional information, see:	wago.com/2759-2018/261-1000

A single license allows installation on one controller.
One license per controller is required.

Complete Solutions	Item No.
Control cabinet customer substation – standard Design according to the TCR of the grid territories of E.ON and grid subsidiaries (AVACON, E.DIS, SH Netz, Bayernwerk), Westnetz, Wemag Netz, NetzeBW, EWE	8007-100/1000-247
Control cabinet customer substation – comb., including protection Design according to the TCR of the grid territories of E.ON and grid subsidiaries (AVACON, E.DIS, SH Netz, Bayernwerk), Westnetz, Wemag Netz, NetzeBW, EWE Includes protective devices: - SEG MRA4; - NA-protection Ziehl UFR1001E Note: Other protective devices upon request!	8007-100/1000-270

WAGO Power Plant Control Library



The WAGO Power Plant Control Library is an CODESYS library with a control algorithm for the active and/or reactive power in energy generation plants.

The control algorithm for active and/or reactive power and corresponding setpoint specifications required by the operator can be adjusted during operation per IEC 60870 by, e.g., telecontrol technology.
The controller compares the specified setpoint values with the actual values measured at the network connection point and provides the calculated correction variables for the energy generation plant.

This library can be used on second-generation PFC200 Controllers and is certified per VDE-AR-N 4110 or 4120.

The library can be used for a 30 day trial period at no cost, after which a license for the respective controller is required.
The license can be separately purchased under Item Number 2759-203/211-1000.

Functions:

- Pfix, Qfix: Fixed active/reactive power specifications
- P(f): Frequency-dependent active power regulation
- P(Uoff): Active power ramp – restart after network failure
- Q(P): Reactive power control per active power characteristic
- Q(U): Reactive power control per voltage characteristic
- Q(Udb): Reactive power control per voltage characteristic with voltage limiting function
- cosφfix: Fixed displacement factor specification
- PSM, QSM: Slave mode, looping through the external active/reactive power specifications

Item Description	
WAGO Power Plant Control Library	**Item No.**
Single License; Online Activation	**2759-203/211-1000**
Compatible Controllers	
Controller PFC200; G2; 2ETH RS; Tele; T	**750-8212/025-001**
Controller PFC200; G2; 2ETH RS; Tele; T; ECO	**750-8212/025-002**
Controller PFC200; G2; 2ETH RS CAN DPS; Tele; T	**750-8216/025-001**

A single license allows installation on one controller.
One license per controller is required.

Certification	VDE-AR-N 4110 / 4120
Delivery type	License certificate per email
Data sheet and additional information, see:	wago.com/2759-203/211-1000

Internet connection may be required for license activation.

Controller Redundancy Master Library

1

Description:
Increase availability in central ship alarm systems with WAGO's Application-Based Controller Redundancy (ACR).
The licensed software library (2759-245/211-1000) and an CODESYS redundancy framework allows you to easily program and operate redundant master PLCs in single point of failure (SPOF) tolerant systems.
A large number of the available 750 Series I/O Modules can be integrated into the system via Smart Couplers. These decentralized PLCs automatically recognize the input and output modules, which makes commissioning easy. The redundant communication of the two Master PLCs and the Smart Couplers is performed either via two separate networks (Dual-LAN) or a ring topology.
These Master PLCs (2nd generation PFC200) communicates with higher-level SCADA systems, for example, via the Modbus TCP protocol.
The application notes (a2020003 and a2020004) describe the practical use of the library and define the application area and the maximum number of participants within the system.

Advantages:
- Easy commissioning of the entire system with WAGO's standard hardware
- Simple/slow control loops can be mapped (Alarm & Monitoring, Data Acquisition, Slow Running Processes)
- Low switchover time (per marine classification society requirements)
- Use of complex modules such as HART or DALI

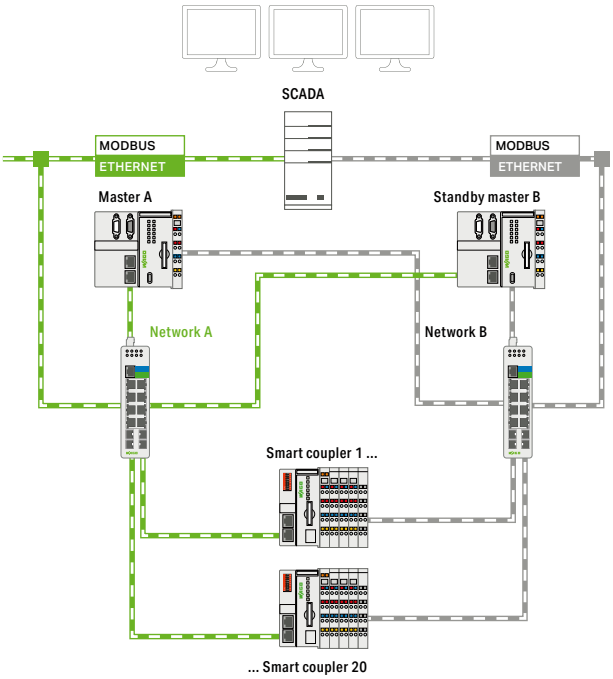
Benefits:
- With the application redundancy concept, WAGO provides you with a redundant framework for simple and economical system integration in ship technology.
- You save engineering effort and can focus on your application.

Licensing:
To use the "WagoAppRedundancyMaster.library," a "Controller Redundancy Master Library" license (2759-245/211-1000) must be purchased for each Master PLC. An SD card image in the redundancy framework is available for the Smart Couplers.

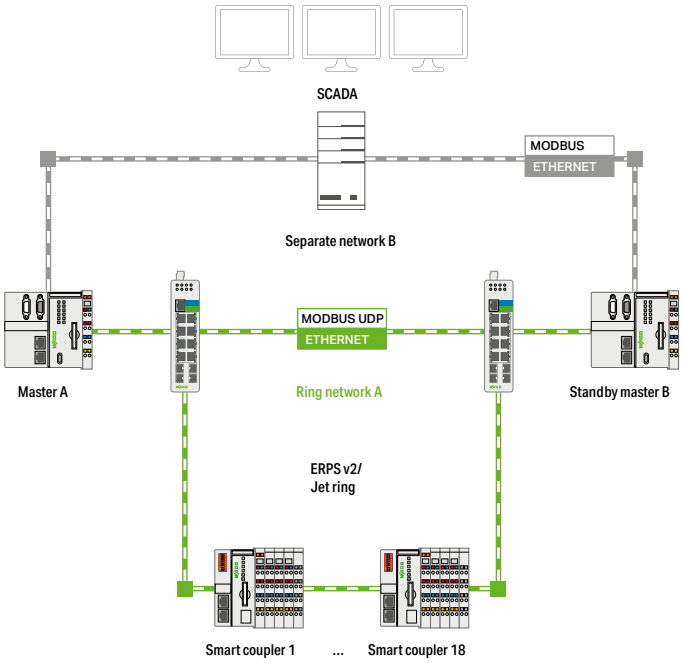
Use:
The license is registered with WAGO Upload and loaded onto a device. No other installation steps are required.

Note:
Register here to download the redundancy framework and test ACR free of charge for 30 days.

Controller Redundancy in the DUAL LAN



Controller Redundancy in the SINGLE LAN



Item Description	
Controller Redundancy Master Library	**Item No.**
Single License; Online Activation	2759-245/211-1000
Recommended Controller	
PFC200; G2; 2ETH RS	750-8212

Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-245/211-1000

Internet connection may be required for license activation.
A single license allows installation on one computer.

WAGO Gateway Application

With the new WAGO Gateway Application, it is possible to implement information exchange between different bus systems. This is supported by a user-friendly interface, so no programming is necessary – nothing but configuring connections.

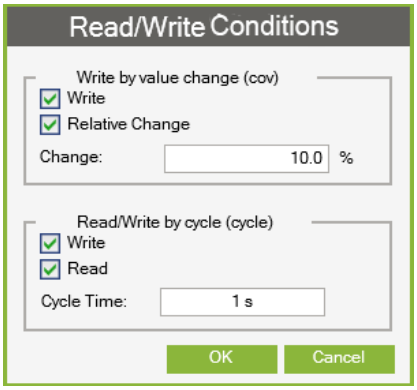


Benefits:

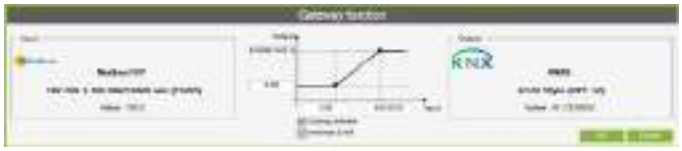
- Exchange of information between the bus systems:
  - Modbus TCP
  - Modbus UDP
  - Modbus RTU
  - KNX
- Commissioning time reduced through interface-supported configuration instead of programming
- Easily manage up to 255 KNX data points per KNX module via ETS import and export

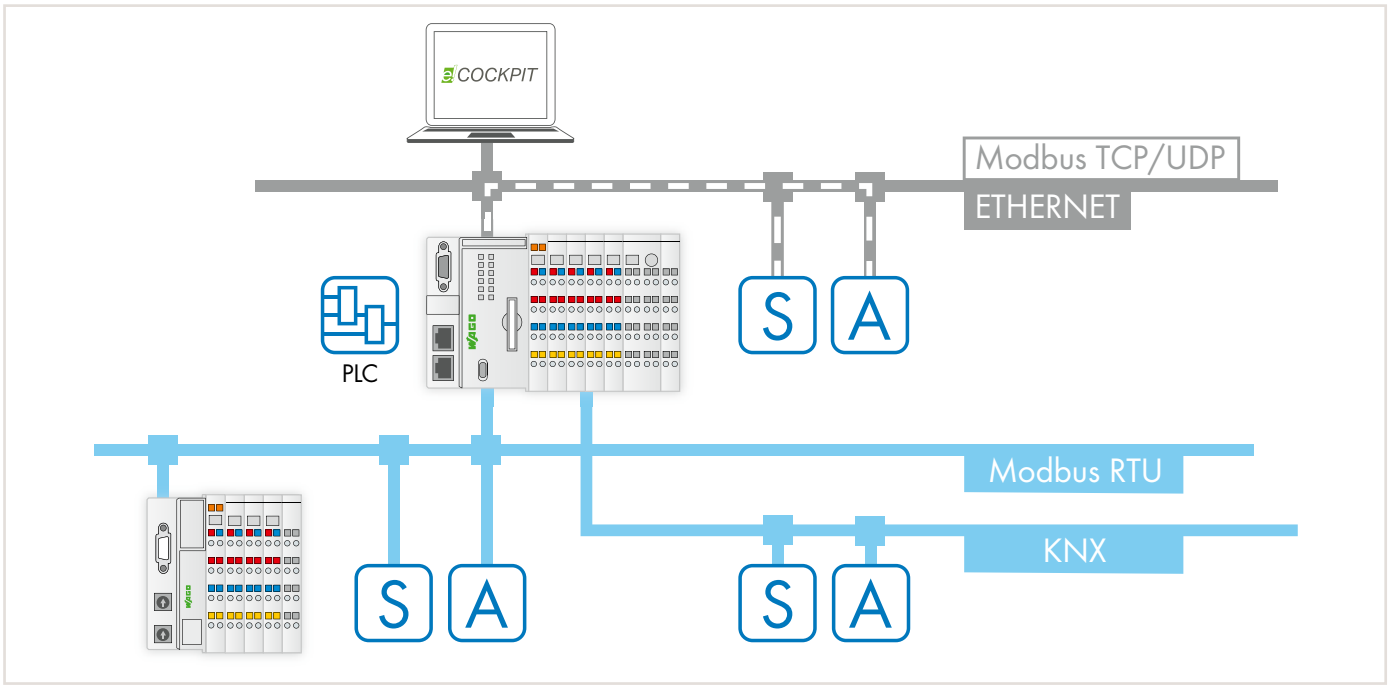
Function in Detail:

- Automatic detection of station structure
- Display of the available interfaces
- Creation of data points
- Import/export of ETS files (KNX)
- Linking of data points
- Conditional reading/writing



- Functional coupling

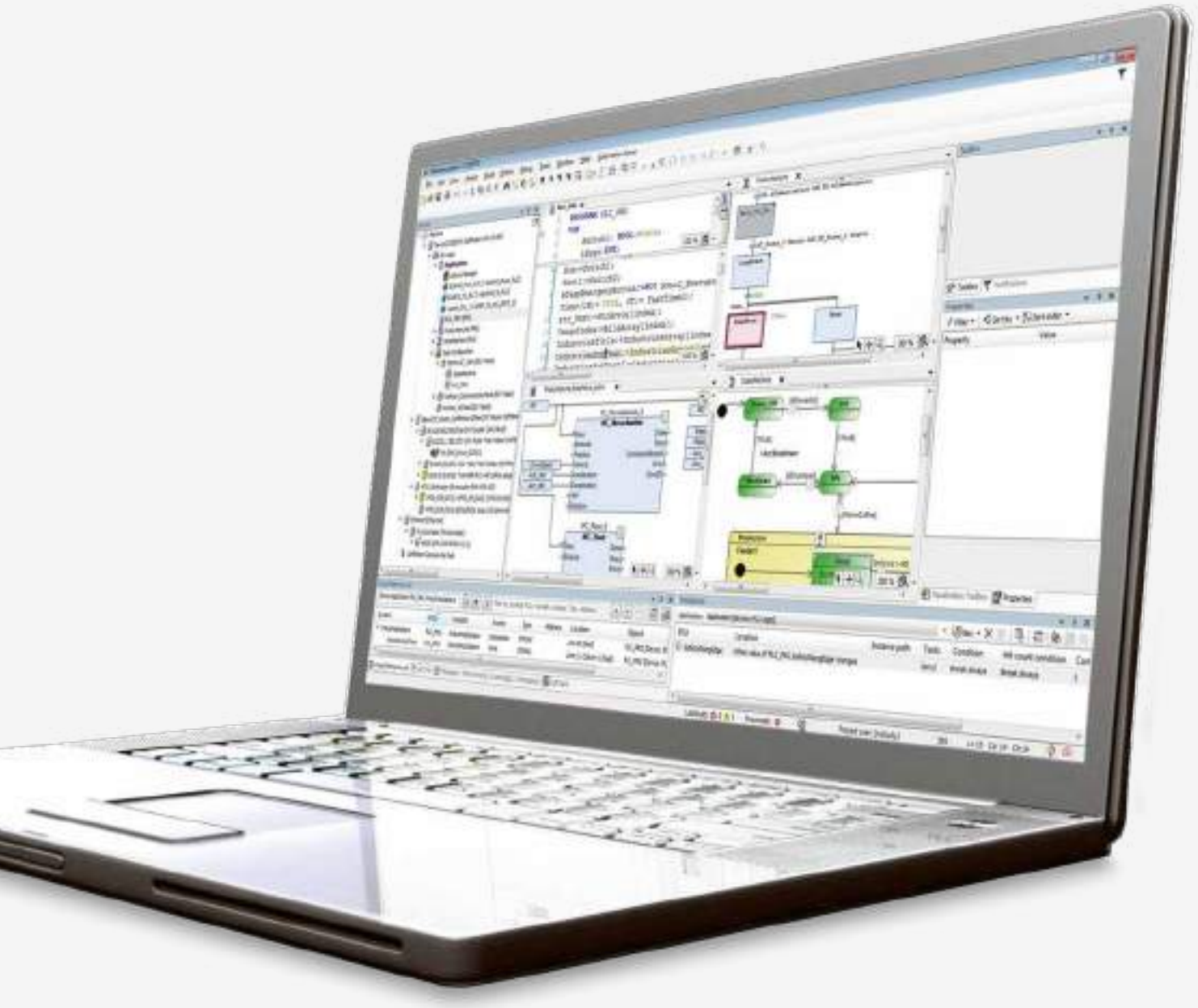




Item Description	
	Item No.
WAGO Gateway Application	Download

Delivery type	Closed application Download at www.wago.com
Compatible Controller	
PFC200; G2; 2ETH RS	750-8212

You can find detailed information on the controllers in Section Controller PFC200.



Software

Engineering Software

- PC and web-based software
- Customized tools for every automation task

Runtime Software

- Standard machine component
- Comprehensive, tested software modules for control, regulation, operation and monitoring

Mobile Software (Apps)

- Machine operation and monitoring via tablet and smartphone

Solutions

- Cloud solutions
- Reusable, customizable software applications

◂ Section 1

Software
Engineering Software, Runtime Software and Mobile Software

			Page
General Product Information			30
	Description	**Item No.**	
Engineering Software			
Designing and marking	smartDATA Engineering	Online	
Programming and configuration software	CODESYS V3	Download	32
	Solution Builder	Download	34
	WAGO-I/O-*PRO*	**759-333**	36
	WAGO-I/O-*CHECK*	**759-302**	37
	IO-Link Configurator	**2759-106/1121-1000**	38
	SMI Configurator	Download	39
	BACnet Configurator	Download	40
	DALI Configurator	Download	41
	LON® configurator	Download	42
Plug-ins	Device- and Industry-Specific Configurators		
	WAGO ETS Plug-in	Download	43
Runtime Software			
Libraries	based on CODESYS V3	Download	44
	WAGO-I/O-*PRO* (based on CODESYS V2.3)	Download	45
Runtime	Multi Cloud Connectivity	**2759-248/211-1000**	48
	Sparkplug	**2759-247/211-1000**	49
	MicroBrowser	**2759-230/211-1000**	50
	BACnet/IP	**2759-283/211-1000, 2759-286/211-1000 2759-2273/211-1000, 2759-2276/211-1000**	51
	OPC UA Server Extended	**2759-2233/211-1000, 2759-2236/211-1000**	52
	OPC UA Mapping Editor	**Download**	53
	OPC UA Client	**2759-2230/211-1000**	54
	IEC-60870 Slave	**2759-290/211-1000**	56
	IEC-60870 Master	**2759-293/211-1000, 2759-296/211-1000**	57
	IEC-61850 Client	**2759-2243/211-1000, 2759-2246/211-1000**	58
	IEC-61850 Server	**2759-2240/211-1000**	59
	DNP3 Slave	**2759-2290/211-1000**	60
	DNP3 Master	**2759-2293/211-1000, 2759-2296/211-1000**	61
Mobile Software (Apps)			
	WAGO WebVisu App	Download	62
	WAGO I/O Field App	Download	63
Accessories			
Configuration Cable, USB Communication Cable			64

Software
General Product Information

Software Factors into Success

Projects in production, process and building automation are characterized by shorter and shorter implementation times, ever more complex structures and the increasing role of software as part of the overall solution. In fact, software is becoming an essential factor that influences the success of a project.

Engineering software is used for both machine and system development, as well as the implementation of building automation projects. Runtime software controls the devices during operation.

Customized Software Tools

Significant challenges must be overcome to develop, operate and maintain modern machines and systems, as well as program, configure and commission building automation applications. Customized software tools are available as needed for every task. With these, specialized automation tools for specific user groups are now available, giving users exactly the features they need for their applications. Wherever possible and appropriate, standards are used in engineering, such as CODESYS V3. Thus the automation environment is becoming more and more open.

CODESYS as an Integrated Environment

All WAGO Controllers are equipped with the high-performing CODESYS industry-standard development environment. This enables software development in both IEC 61131-3 PLC programming languages (ST, FBD, LD, IL, SFC) and CFC. As a trusted programming environment, CODESYS guides developers, enabling them to reuse and further develop existing projects without relearning software. This means that advanced paradigms, such as object-oriented programming (OOP), or modern visualization technologies, are available.

Pre-Made Software Solutions

Pre-made software solutions and applications simplify automation. Such solutions involve reusable software that can be used for a specific application by making simple adjustments. This approach saves time and money.
WAGO's pre-made software solutions can be found in Section 1.

Open to Proven Standards

WAGO Software is open to well-established standards and supports all prominent fieldbuses, making it an investment in the future. This allows all of WAGO's components to be seamlessly integrated into engineering software via standardized device description files. Furthermore, connecting controllers to fieldbus systems via WAGO Engineering Software is incredibly simple, opening up all the advantages of existing field devices. Ultimately, WAGO Software is based on modern IT standards and development methods for long-term viability.

Extensive Import and Export Functionality

WAGO's software tools demonstrate an impressive ability to exchange project data with the external software tools involved in the development process – preventing costly, error-prone double entry.

Industry-Specific Configurators

Whether industry, process or building automation, every sector and industry has specific requirements. Therefore, plug-ins specifically customized for the needs of individual industries are available in addition to WAGO's software portfolio. For example, these plug-ins can be used to measure energy or easily configure a DALI network.

Your Benefits:

- Customized software for every automation task
- Extensive import functions from external design tools
- Plug-ins for industry-specific development environments
- Comprehensive software solutions for various industries
- Simple and secure licensing

Software
General Product Information

Software for Mechanical Engineering

WAGO Software is used in every phase of machine and system automation – from design to successful machine operation.

Design	Software Development	Commissioning	Machine Operation
• CAD and ECAD • Component selection	• Configuration • Parameterization • Programming • Simulation • Visualization	• Testing • Diagnostics	• Updating • (Remote) maintenance • Monitoring • Controlling, regulating, operating and monitoring

Engineering Software

Quickly implementing complex machine functions is critical in modern mechanical engineering applications. WAGO's PC-based engineering software supports all development activities. The focus is on simple configuration, timely programming and efficient commissioning of automation network components.

Engineering tools are typically not permanently linked to the machine – they only communicate with the machine during startup and maintenance.

Design | Software Development | Commissioning | Machine Operation





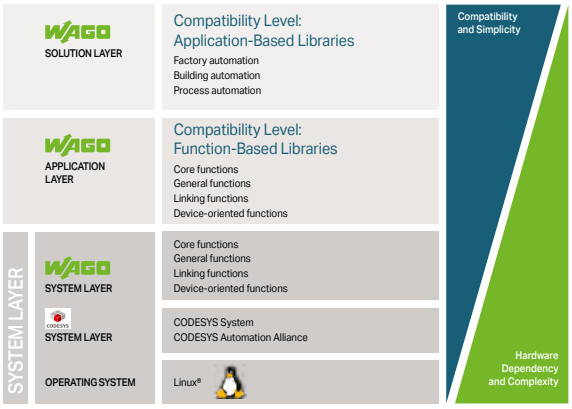
Runtime Software

Machines are controlled by runtime software that determines behavior, while enabling both operation and current status monitoring for the user. It also transmits operating data to higher-level systems. With comprehensive, tried-and-tested software function blocks (IEC libraries), development goals are reached more quickly.

Unlike engineering software, runtime software operates continuously – it is a part of the machine and ensures correct operation.

Design | Software Development | Commissioning | Machine Operation





Mobile Software (Apps)

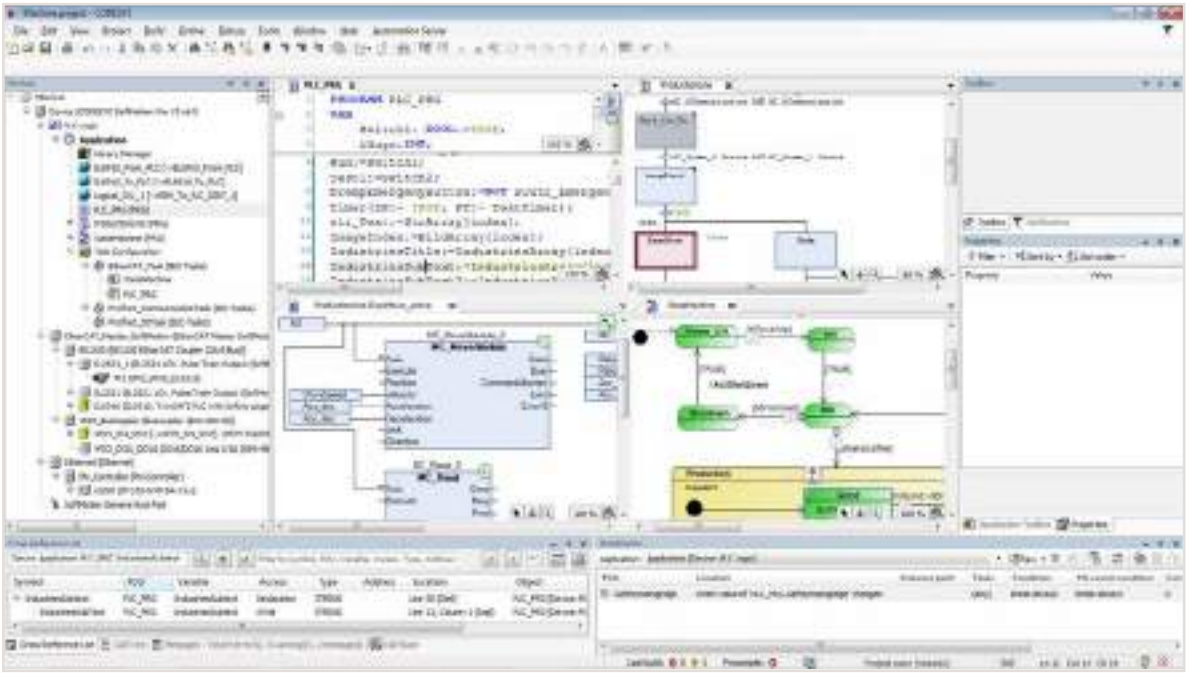
Software on mobile devices offers productivity advantages in an industrial environment as well. This integration enables users to quickly and easily operate and monitor automation processes via smartphone or tablet – from virtually anywhere.

Mobile software typically communicates only with the machine's controller for a specific application.

Design | Software Development | Commissioning | Machine Operation



CODESYS V3



The CODESYS open automation software opens up flexible engineering possibilities based on an open industry standard that many different manufacturers use.

It offers a wide variety of integrated connectivity options, such as conventional fieldbuses, but also modern communication standards like OPC UA.

From controller configuration to programming, visualization and diagnostics, all functions are combined in one tool.

The basic programming environment is available for free and includes multiple built-in functions. WAGO also offers add-ons and an extensive collection of libraries, which are partly subject to a fee.

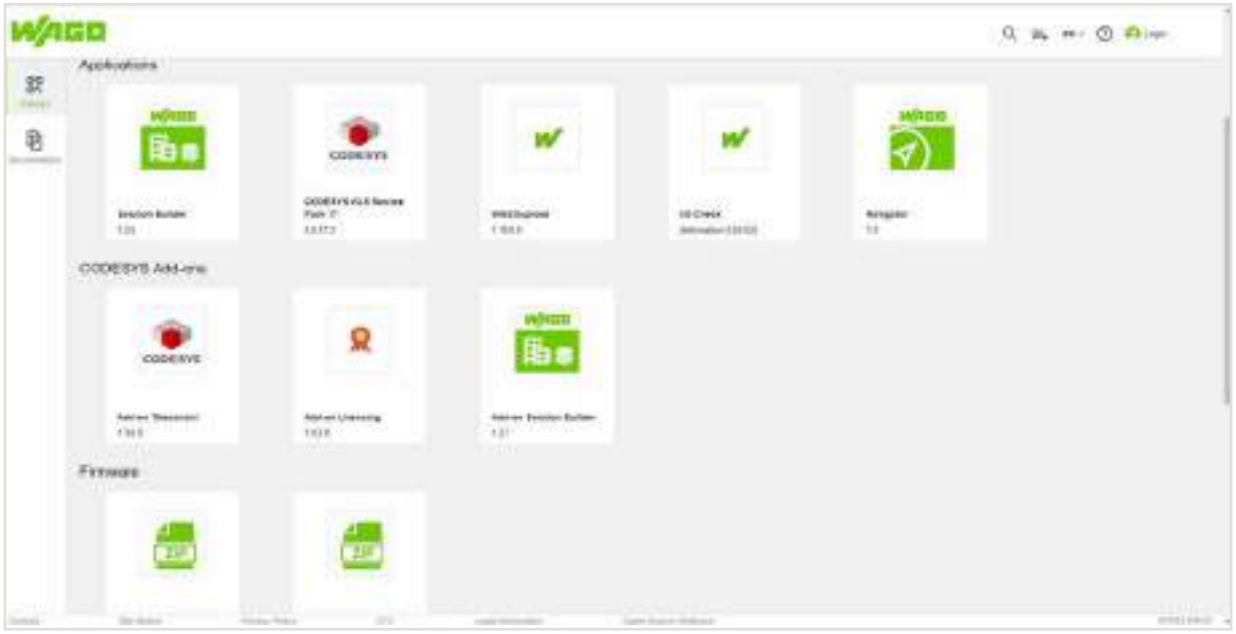
CODESYS users also benefit from the CODESYS community's broad-base expertise.

CODESYS V3
Via WAGO Download Center (Link: https://downloadcenter.wago.com/)

Supported operating systems	Windows 10 (64-bit); Windows 11 (64-bit)
System Requirements	
Processor	2.5 GHz
Memory	8 GB RAM
Hard disk space	12 GB
Supported devices	WAGO PFC200 G2; WAGO Edge Controller; WAGO Touch Panel 600 (Control Panel); WAGO Compact Controller; WAGO Basic Controller
Supported fieldbuses (depending on the devices and the respective firmware version)	CANopen; Modbus TCP/UDP; Modbus RTU; EtherCAT® Master; EtherNet/IP™ Scanner/Adapter; PROFIBUS® Slave; PROFINET Device
Paid options	BACnet® (see page 51) Telecontrol (see pages 56 … 61)
More information about CODESYS:	https://store.codesys.com/codesys.html

Windows® is a registered trademark of Microsoft Corporation.

WAGO Navigator and Download Center



Always using the latest software version is very important, especially for cybersecurity. That goes without saying for a PC's operating system, but it's increasingly important within automation too.

To ensure no update is missed, the Download Center provides central access to all updates, for example, for the two engineering tools WAGO Solution Builder and CODESYS V3, along with libraries, firmware, etc.

In addition, the Navigator enables central notification of new WAGO software product versions.

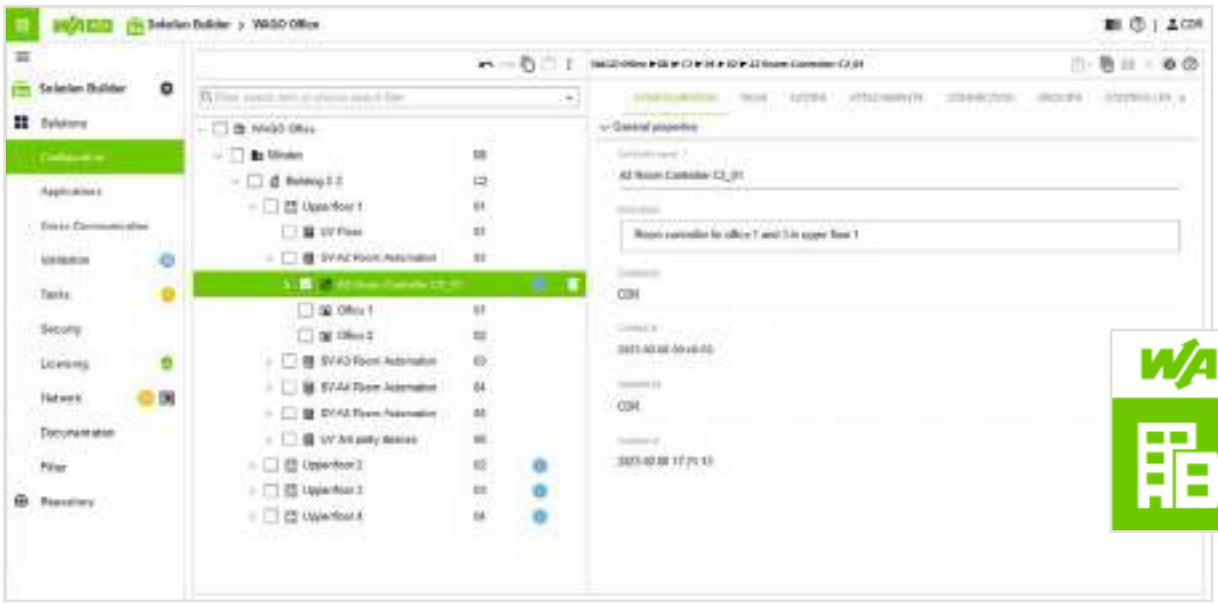
After installation, the Navigator is fully integrated into Windows messaging. This means that the user no longer misses updates. A direct interface to the Download Center makes the update process particularly easy – with just a mouse click!

WAGO Navigator and Download Center
https://downloadcenter.wago.com

Supported browsers	Google Chrome; Microsoft Edge; Mozilla Firefox
Navigator supply channel	Via WAGO Download Center
Supported operating systems	Windows 10 (64-bit), Version 1809; Windows 11
System Requirements	
Hard disk space	120 MB (+210 MB for .NET 6 Runtime)

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WAGO Solution Builder
Efficient Engineering of Multi-Controller Projects



WAGO Solution Builder is an integrated and efficient software solution that optimally supports designers with hundreds of devices – especially in building automation.
The workflow is streamlined to separate full project creation in the office (offline) and commissioning on-site (online). All the project documentation can be generated with one mouse click. Applications can also be saved as templates for reuse. All user groups work together through the new software solution's central Web-based interface. This ensures a consistent workflow and lets you keep an eye on the whole building project.
The option of bulk data processing, even for projects with several controllers, also saves time and money.
The solution provides native support for customizable addressing systems for the project tree and the description of data points, so they are a fixed component of the project organization. That eliminates the need to create them later, which would take more time and money and be prone to errors.

Benefits at a glance:
- A clearly organized representation of the system on a Web interface
- An efficient workflow to save engineering time
- Intelligent bulk processing of data and devices helps prevent errors
- Comprehensive project documentation with one mouse click
- Efficient organization of (large) projects into solutions
- Working on a project in parallel
- Easy data transfer between employees
- Device management for many controllers, even for maintenance and service
- Complete controller commissioning workflow
- Configure applications without a programming background (IEC know-how) and transfer them to the device
- Easy basic cybersecurity protection for the controllers

WAGO Solution Builder			
Order Text	**License Type**	**Description**	**Item No.**
WAGO Solution Builder; User License; 1 year	Single license	Allows use on one PC by one user with any number of solutions (projects).	2759-132/1119-1012
WAGO Solution Builder; Site License; 1 year	Site license	Allows use on one server by any number of users, limited to one solution.	2759-132/1119-3012
WAGO Solution Builder; Server License; 1 year	Server license	Allows use on one server by any number of users with any number of solutions.	2759-132/1119-6012

The software can be used for free during its launch until October 2023. After that, you can activate WAGO Solution Builder by purchasing a license key.

Supported operating systems	Windows 10 (x86, 64-bit) Windows 11 (64-bit)
System Requirements	minimum/recommended
Processor	4 / 8 CPU cores
Memory	8 / 16 GB RAM
Hard disk space	50 / 100 GB
Graphics resolution	1366 x 768 / 1920 x 1080 pixels
Supported devices	PFC200 G2 (750-821x/xxxx-xxxx) Touch Panel 600 (762-xxxx/8000-0002) Edge Controller (752-8303/8000-0002) Compact Controller 100 (751-9301)
Sales channel/delivery type	Via WAGO Download-Center (Link: https://downloadcenter.wago.com/)
Additional information	https://www.wago.com/us/automation-technology/discover-software/solution-builder

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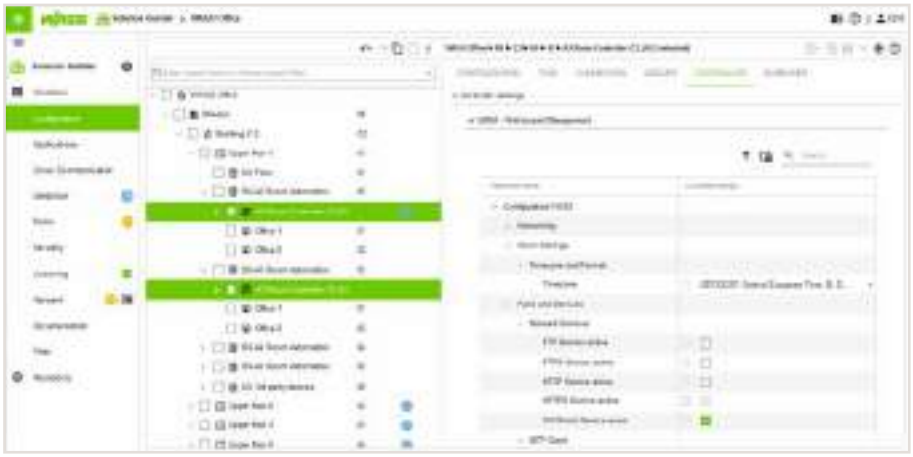
WAGO Solution Builder

A Holistic Multi-Project Approach

WAGO Solution Builder supports your project, from winning the contract, to commissioning, execution and documentation, all the way to periodic servicing and hardware and software maintenance. The software lets you create multiple building automation solutions in parallel and makes all the data available at all times.

Additional advantages:
- Easy data sharing between WAGO Solution Builder components through interfaces optimized for the workflow
- In addition to automation solutions, couplers, switches, field devices and third-party devices can be integrated into the cross-communication and documented as part of the solution.





Offline Project Configuration – with Bulk Processing

WAGO Solution Builder was developed for processing large data volumes in building automation.

This has clear advantages for users:
- Set up pattern structures in detail; when reproducing them, you then benefit from clever inheritance mechanisms and logical groupings.
- A solution can contain just a few automation stations or hundreds with thousands of data points.
- Many devices can be set in one step via multiple selection.

Bidirectional Synchronization of the Project Data with the Controllers

When you create a solution with controllers offline, it is transferred to the devices on a job-by-job basis, including your settings and applications. The jobs are processed asynchronously in an outsourced service. What that means is:

- During the transfer process, you can continue to use WAGO Solution Builder without restrictions.
- If parameters on the controllers have been modified during operation, they can be read back in during the next synchronization.

This bidirectionality ensures that no settings get lost.



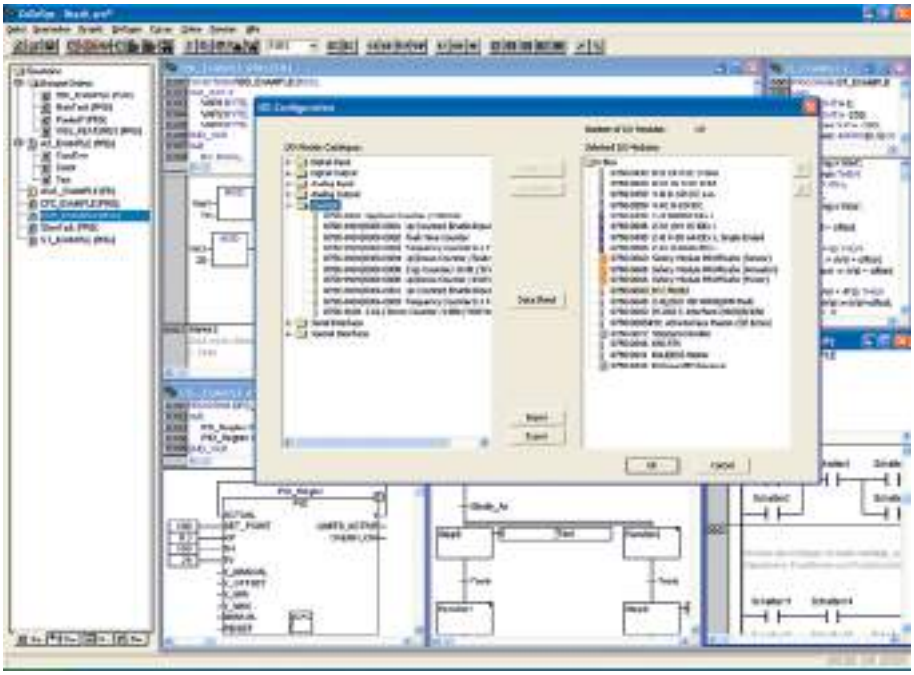


Project Documentation in One Click

WAGO Solution Builder automatically creates the required project documentation with just one mouse click. You benefit from clear organization:

- All the information entered into the solution, such as IP addresses, applications, firmware versions or the hardware used, is output as a PDF in the project documentation.
- The project documentation layout and degree of detail are easy to customize.

WAGO-I/O-*PRO*
Engineering Software based on CODESYS V2.3



WAGO-I/O-*PRO* is a programming and visualization tool for control programs. This software is used to develop PLC applications for the WAGO I/O System 750's controllers.

WAGO-I/O-*PRO* runs in compliance with the IEC 61131-3 standard, which specifies the requirements for a programming system. The IL, SFC, LD, FBD and ST programming languages are supported. The optimal programming language can be chosen for each application.

With extensive programming functions, the software readily meets the increasing demands on control program development, e.g., reusability and modularization.
- Efficiently translate between programming languages
- Automatic variable declaration
- Library management

Integrated test and diagnostic functions also streamline and accelerate the steps for implementing PLC projects.
- Online status display using the program code
- Offline simulation
- Integrated process visualization
- Record and graphically display project variables

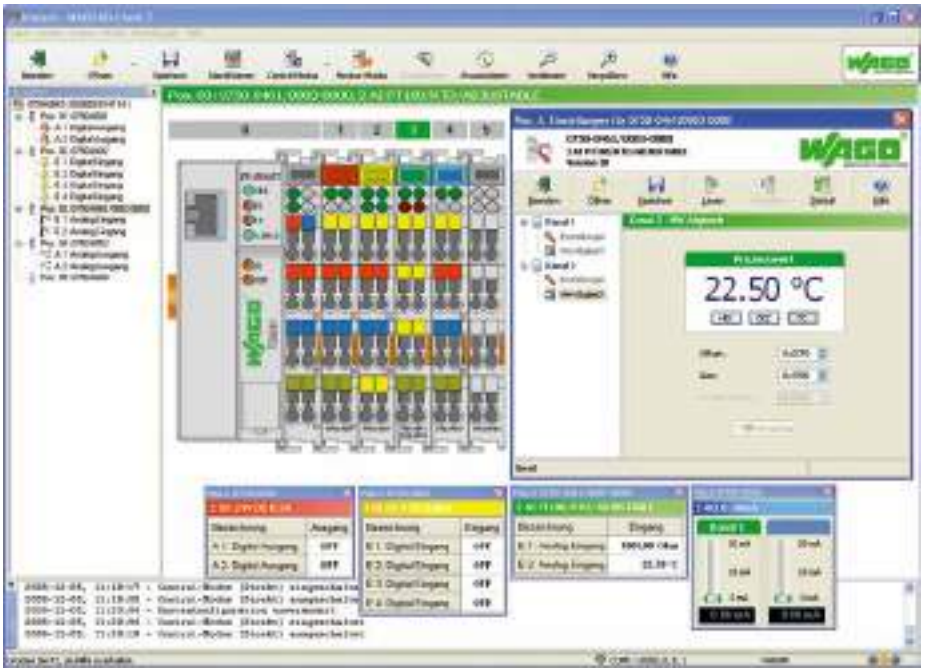
WAGO-I/O-*PRO* also offers the option of programming your existing products from other manufacturers within the CODESYS automation alliance in addition to WAGO's standard programmable CODESYS automation alliance products.

WAGO-I/O-*PRO*		
Version	**Delivery Type**	**Item No.**
RS-232 Set	CD-ROM and serial communication cable	759-333
USB Set	CD-ROM and USB communication cable	759-333/000-923

Supported operating systems	Windows 7; Windows 10
System Requirements	
Processor	1 GHz or higher; 32-bit (x86) or 64-bit (x64)
Memory	1 GB of RAM (min.)
Hard disk space	300 MB (min.)
Graphics resolution	1024 x 786 (min.)
Other system requirements	Open serial interface
Delivery type	Installation file (CD-ROM) or download link via WAGO Support possible
For data sheet and additional information, see:	wago.com/759-333
	wago.com/759-333/000-923

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WAGO-I/O-*CHECK*



WAGO-I/O-*CHECK* is an easy-to-use Windows application for operating and displaying a WAGO I/O System 750's node without connecting to a fieldbus system.
The software reads the configuration from the node and displays it graphically on the screen. This graphic can be printed together with a configuration list as documentation.

With WAGO-I/O-*CHECK*, it is possible to display and specify the process data of the I/O modules. The field wiring, including all sensors and actuators, can thus be checked before startup.

For some types of interface, Pt100 and thermocouple modules, application-specific settings can be made, such as the baud rate or sensor types.

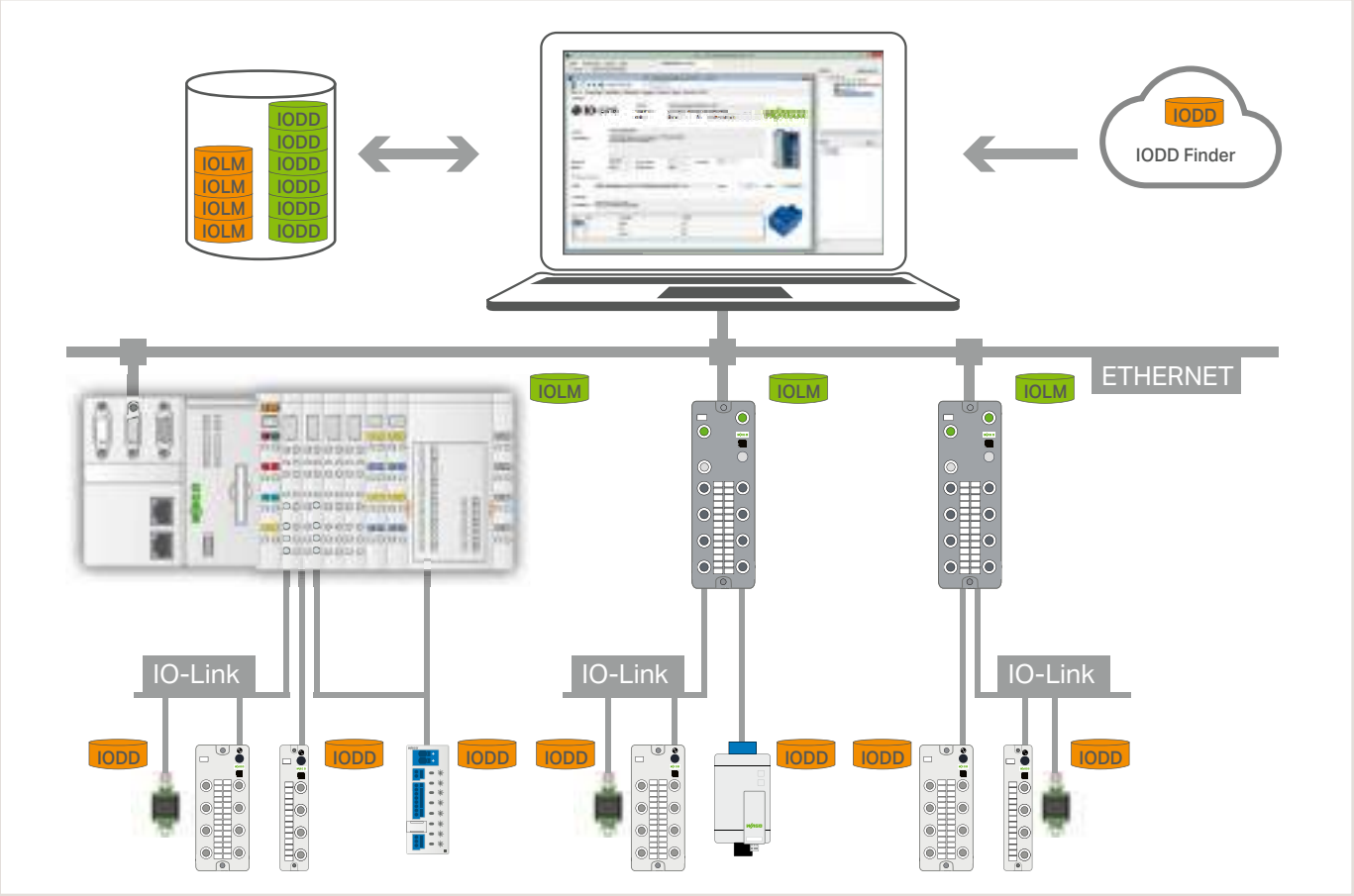
The coupler must be connected to a free serial or USB port of the PC using the communication cable supplied in the set with the system to enable communication between WAGO-I/O-*CHECK* and the node.

WAGO-I/O-*CHECK*		
Version	**Delivery Type**	**Item No.**
RS-232 Set	CD-ROM and serial communication cable	759-302
USB Set	CD-ROM and USB communication cable	759-302/000-923

Supported operating systems	Windows 7; Windows 10
System Requirements	
Processor	1 GHz or higher; 32-bit (x86) or 64-bit (x64)
Memory	1 GB of RAM (min.)
Hard disk space	150 MB (min.)
Graphics resolution	1024 x 786 (min.)
Other system requirements	CD-ROM and mouse required
Delivery type	Installation file (CD-ROM)
For data sheet and additional information, see:	wago.com/759-302

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WAGO IO-Link Configurator, WAGO-I/O-*CHECK*



The WAGO IO-Link Configurator enables configuration and parameterization, as well as operation and monitoring of WAGO IO-Link Masters in the WAGO I/O System 750 and WAGO I/O System Field and, in particular, the WAGO IO-Link devices connected to them.

Additionally, IO-Link devices from all third-party manufacturers can be completely configured and operated via the WAGO IO-Link Configurator, as long as they comply with the IO-Link specification.
The process data of a product can be graphically visualized and stored in trend curves. Up to eight elements can be selected for visualization, and the data can be recorded for up to 24 hours.

Device description files for the IO-Link Masters (IOLM) or IO-Link Devices (IODD) can be used to integrate new devices into the tool at any time. Convenient access to the IODD finder of the IO-Link user organization is available for the IODDs. It allows an automated and selective download of IODDs when integrating new IO-Link devices.

WAGO IO-Link Configurator can be used either as a standalone program or integrated into engineering systems with a TCI interface and WAGO-I/O-*CHECK*.

An integrated IODD viewer allows detailed insight into the IODD device description.

The license is assigned to the respective PC on which it is installed (workstation license).

Item Description	
WAGO IO-Link Configurator	**Item No.**
Single License; Online Activation	2759-106/1121-1000

A single license allows installation on one device.

Every additional device requires its own license.

Operating system	Windows 7 or higher
Memory	2 GB or larger
Processor	1 GHz with 32 bits or 64 bits
Free hard disk space	150 MB
Screen resolution	800 x 600 pixels
Delivery type	License certificate by email
For data sheet and additional information, see:	wago.com/2759-106/1121-1000

Internet connection is required for license activation.

WAGO SMI Configurator



The WAGO SMI Configurator is a parameterization software for SMI master modules. You can use the software to commission SMI drives that are connected to SMI master modules.

The SMI Configurator offers functions for commissioning and configuring SMI drives. Besides the online mode, in which you can control the SMI drives directly, you have the option of using the SMI Configurator in offline mode. This includes offline configuration of all SMI drives connected to available SMI master modules within a node, as well as saving and restoring SMI drive configurations from existing CSV addressing files.

You can directly transfer all module settings of an SMI master module to any number of additional SMI master modules with the "Transfer settings" function. Furthermore, you have the option of using the SMI Configurator to generate project documentation and display the log data of a selected SMI master module.

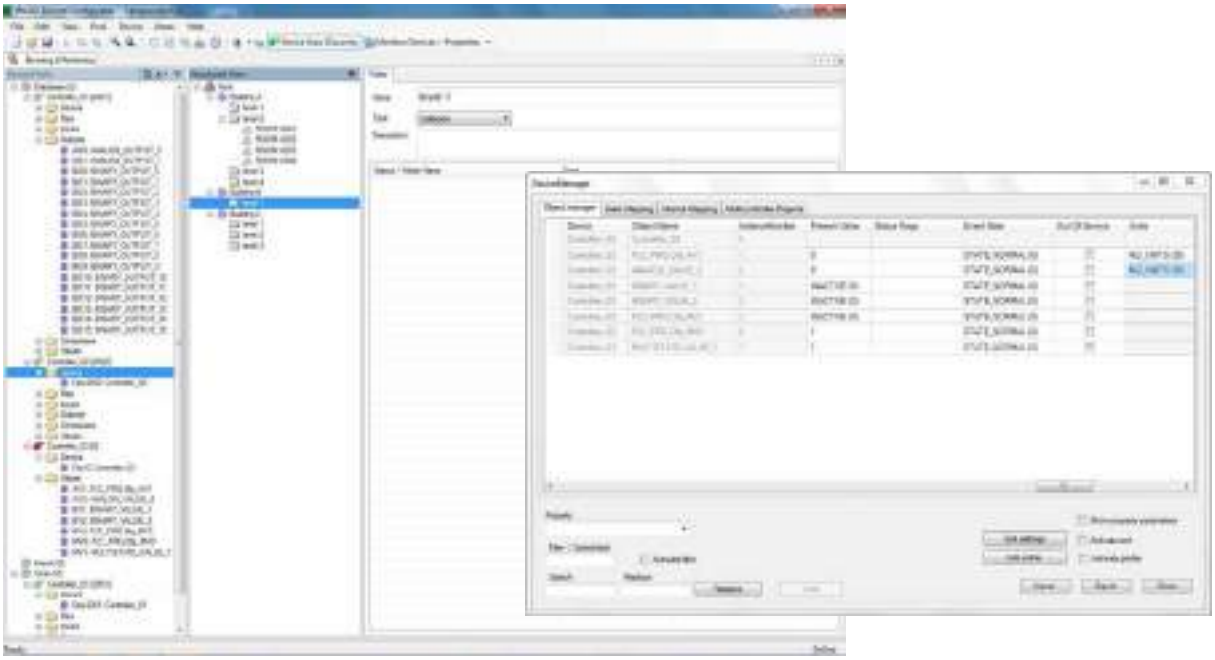
A scan function makes it possible to identify the SMI drives connected to an SMI master module and display the settings in the SMI Configurator. If SMI addresses are missing or there is an address conflict, you can use automatic addressing to assign a new SMI address to all drives automatically, or alternatively use system extension to resolve the address conflict and delete any missing SMI drives.

WAGO SMI Configurator
Download: www.wago.com

Supported operating systems	Windows 7; Windows 10
System Requirements	
Processor	1 GHz (min.)
Memory	1 GB (min.)
Hard disk space	20 MB (min.) for the SMI Configurator and 60 MB for the .NET Framework 4.0
Other system requirements	.NET Framework 4.0
Delivery type	Download

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WAGO BACnet Configurator



The WAGO BACnet Configurator is an independent commissioning, configuration and management software program. The configurator fully supports the BACnet-specific functions of WAGO's 750-829, 750-830, 750-831 and 750-832, as well as the BACnet/IP PFC200 Controller (750-8212/000-100), which is programmed via ***e!****COCKPIT*.

The configurator creates and configures WAGO BACnet Controllers and sets up data exchange between the IEC application and BACnet objects. Import and export functions allow further processing of the configuration data.

For integration into existing BACnet networks, the BACnet devices available can be scanned and displayed in a browser; also, data exchange can be implemented for WAGO devices.

Among the configurator's capabilities are the logical structuring of the project and network, addressing of the controller and client/server configuration in every WAGO BACnet Controller.
The devices, objects and configuration data are displayed in a logical, structured network and browser view.

Depending on the function used, both online and offline operation is possible.

The configurator displays all configuration data. To edit BACnet objects, the configurator offers specific table views in which the corresponding properties of the object can be modified. Typical table editing functions, e.g., search/replace, sort, filter and show/hide, are available. The user can upload the updated configuration data to one or more controllers and save as a project.

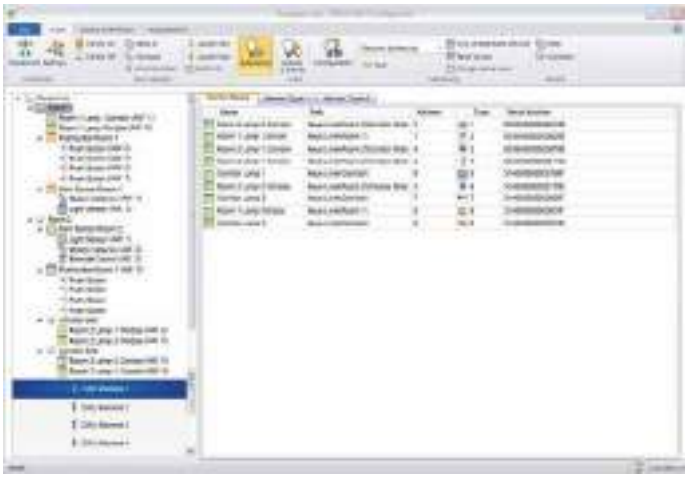
The configurator provides a browser to view the BACnet object properties and modify current parameters (communicate value changes, write property values, utilize BACnet services, etc.). Additionally, a transaction log window is available for client services.

WAGO BACnet Configurator
The WAGO BACnet Configurator can be downloaded for free at: www.wago.com

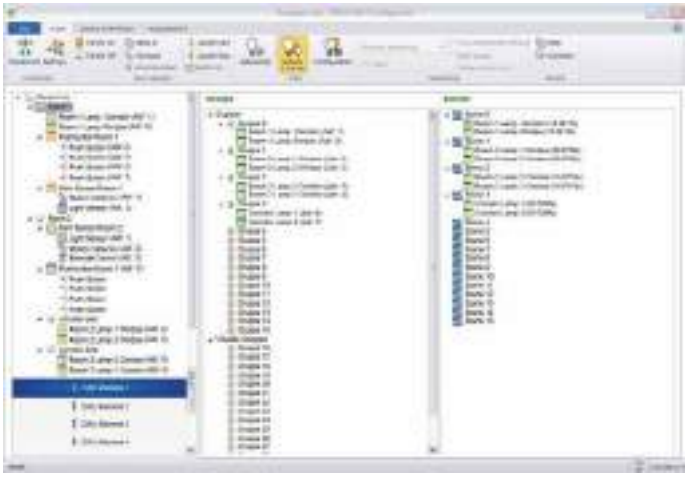
Supported operating systems	Windows 7; Windows 10

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WAGO DALI Configurator







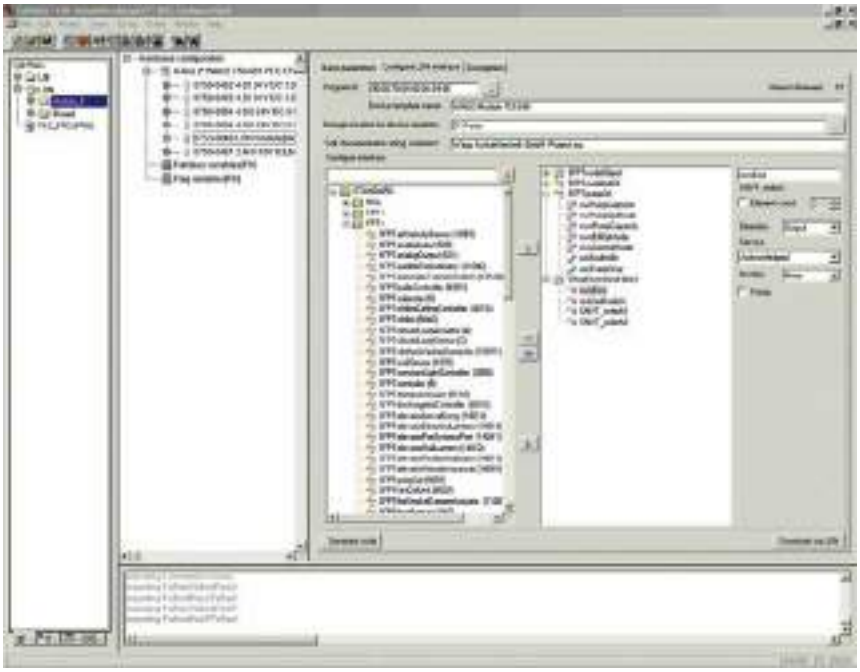
The WAGO DALI Configurator simplifies commissioning of a DALI network via 753-647 DALI Multi-Master. The configurator is available as a stand-alone Windows application or for use with WAGO-I/O-CHECK Software.

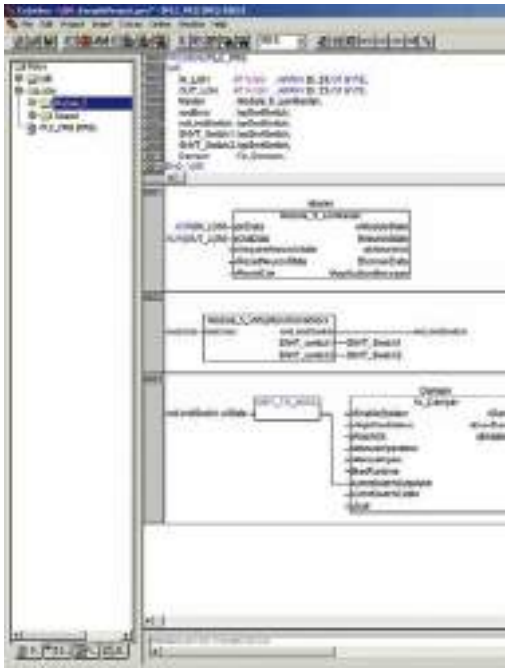
It provides the following functions: easy commissioning, configuration, service, support and maintenance of a DALI network.
Comprehensive backup & restore features, as well as an offline configuration option for the entire DALI network (including ECGs and sensors) are available.

WAGO DALI Configurator
The WAGO DALI Configurator is available as part of WAGO-I/O-*CHECK* (Version 3.5.1 or higher) or as a stand-alone version (www.wago.com).

Features	Stand-alone software or for use with WAGO-I/O-*CHECK*
Commissioning function	Addressing, scenes and group formation; control gear configuration, optional offline configuration, import and export functions, project documentation
Service, support and maintenance functions	Backup & restore, reporting ECG illuminant failures, identification of doubled addresses, diagnostics report
Windows-compliant user interface	Multiple selection for time-optimized configuration and a clearly organized network display with tree structure support different commissioning workflows

WAGO LON® Configurator





The WAGO LON® Configurator is an integral part of the WAGO-I/O-PRO IEC-61131-3 Programming Environment. The configurator supports both the 753-648 LON® Module's LonWorks® network interface configuration and WAGO-I/O-PRO project integration.

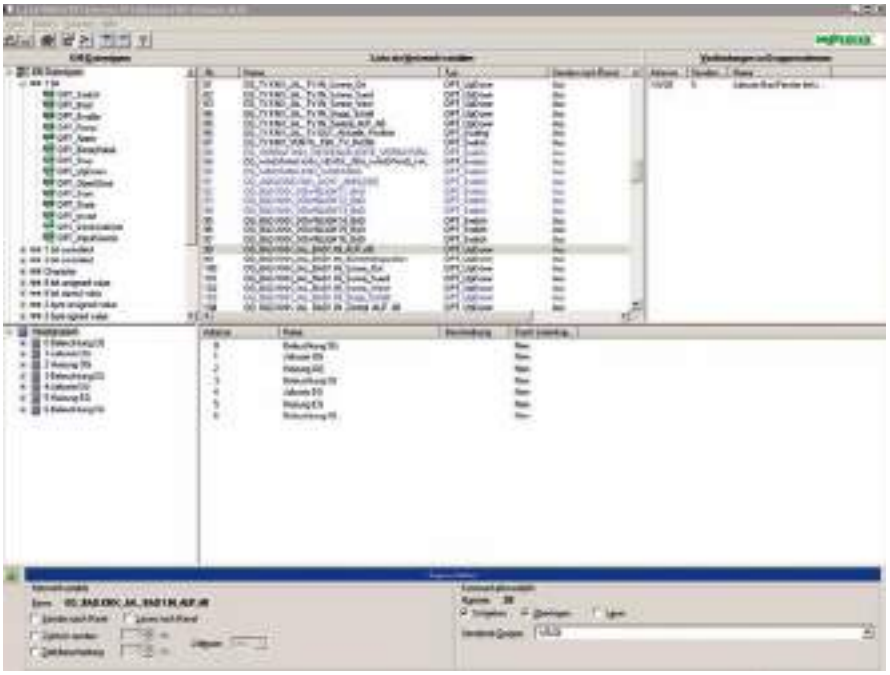
Network variables of any type can be defined. In addition to standard network variable types (SNVTs) and standard configuration property types (SCPTs), user-defined types (UNVTs/UCPTs) and LonMark® functional profiles (FPTs) are also supported. Network variables are defined using the types and objects of the LonMark® resources installed on your computer.

IEC-61131-3 function blocks are automatically created in the IEC application, simplifying operation. The function blocks represent the LON® network interface in the IEC application. When starting the controller, both network variable interface and configuration data are automatically downloaded into the I/O module.
An external interface file (XIF) is created for offline configuration in a network management tool.

WAGO LON® Configurator
The WAGO LON® Configurator is available as part of WAGO-I/O-*PRO* (Version 2.3.9.34 or higher)

- Integral part of WAGO-I/O-*PRO* programming software
- Defines and implements a LON® network interface
- Automatically generates IEC 61131-3 function blocks to represent the LON® network interface within an IEC application
- Downloads both network interface and configuration data when controller is started
- Configuration check and test
- Generates XIF files

WAGO ETS Plug-in



The WAGO ETS Plug-in is a WAGO ETS product database extension that allows the use of WAGO devices, such as the 753-646 KNX/EIB/TP1 Interface, 750-889 KNX IP Controller and KNXnet/IP Router (consisting of KNX/EIB/TP1 Interface and KNX IP Controller).

The software's enhanced structure offers intuitive navigation – providing both new and experienced ETS users with exceptional usability.

The WAGO ETS Plug-in provides three clearly structured user interfaces for the various devices. Depending on the mode selected, either the KNX/EIB/TP1 Module, KNX IP Controller or the KNXnet/IP Router (IP Controller with KNX/EIB/TP1 Module in first position) are supported.

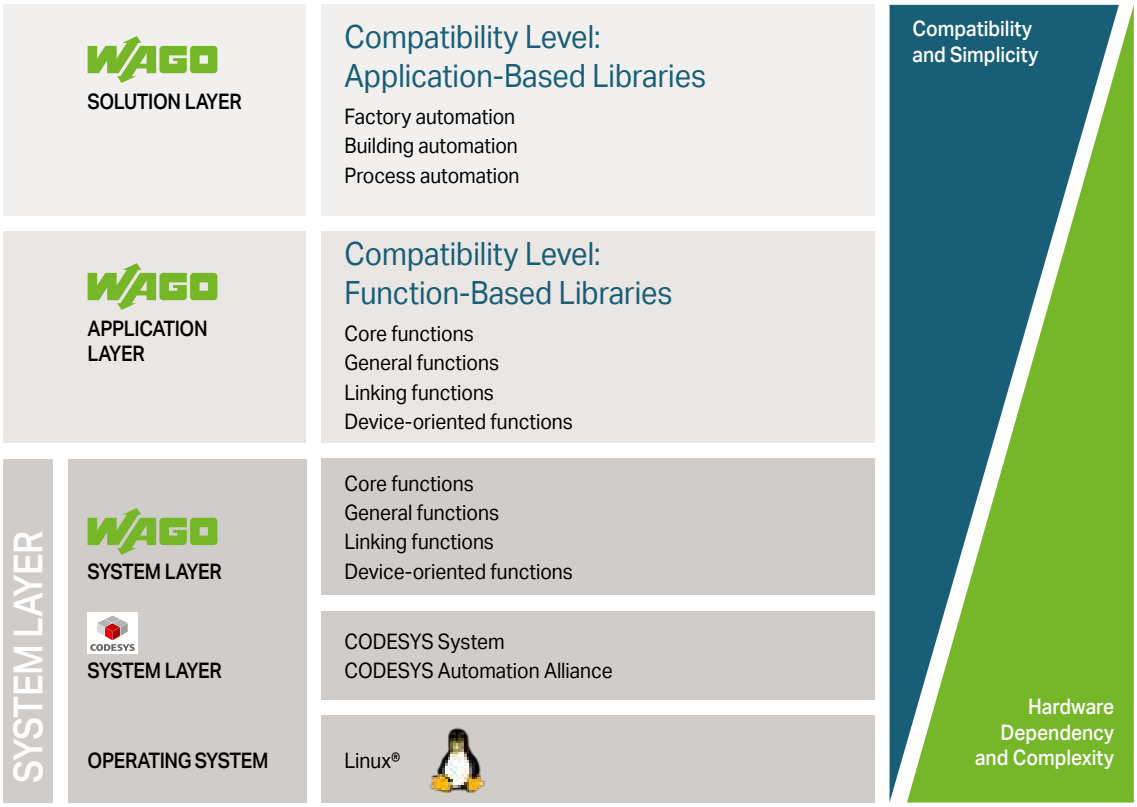
In the graphical interfaces, device parameters are easy to configure. Only the options pertaining to the selected device are displayed.
During software development, creating a convenient and time-saving graphical user interface was heavily emphasized – and this is beneficial when assigning communication objects to group addresses. Two different drag-and-drop options and a context menu with automatic filter function are available allowing users to select their favorite procedure.

WAGO ETS Plug-in
The WAGO ETS Plug-in can be downloaded for free at: www.wago.com

Supported operating systems	Windows 7; Windows 10
Other	The plug-in requires the ETS product database.
Configuration	
KNX/EIB/TP1 Module	Load/assign IEC variables (communication objects); Create/configure group addresses
KNX IP Controller	Allocate IP addresses; Download IEC application to controller; Load/assign IEC variables (communication objects); Create/configure group addresses
KNXnet/IP Router	Allocate IP addresses; Set routing multicast addresses; Filter/transmit telegrams

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Runtime Software – Libraries based on CODESYS V3



Runtime Software Controls the Machine

Machines and systems are controlled by runtime software that determines behavior, while enabling both operation and current status monitoring for the user. It also transmits operating data to higher-level systems. Unlike engineering software, runtime software operates continuously – it is a part of the machine and ensures correct operation.

Ready-to-Use Function Blocks Save Development Time

Comprehensive, tried-and-tested software function blocks (IEC libraries) expedite development. Thus, CODESYS is supplemented with comprehensive IEC libraries.

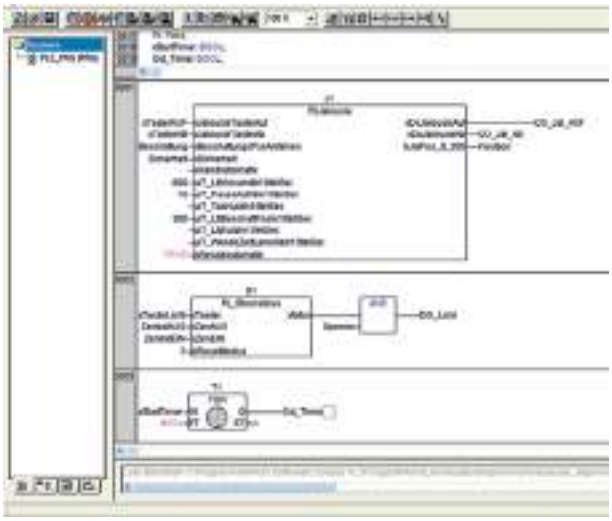
Essentially, the libraries are divided into three abstraction layers:
The solution layer primarily contains complete, easy-to-use software solutions for production, building and process automation.

The application layer contains technology functions, e.g., for communication, that are ideal for convenient, easy application. The system layer provides experts with complete system access.

The upper layers are separated by compatibility levels. Essentially, this enables software to be developed independently of the hardware it will be used on. This provides the greatest degree of flexibility in selecting the right device for the right application, while retaining a uniform software base. It also provides investment security.

Function Modules and Libraries
available in the WAGO Download Center

Runtime Software – Libraries
WAGO-I/O-*PRO* (based on CODESYS V2.3)





Room Applications

Integrated into WAGO-I/O-*PRO* Software

This library contains custom function blocks for building automation, which accelerate the programming of building applications.

- Lighting
- Dimming
- Lighting scenes
- Constant light control
- Sun protection
- Shading
- Other applications



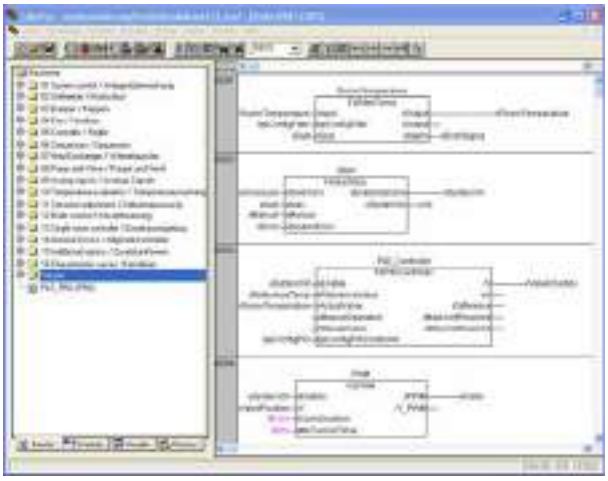
Application Notes

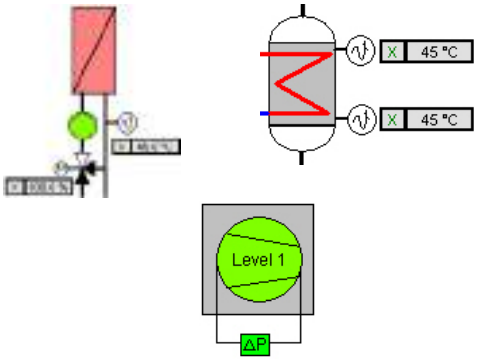
Download: Current application notes available at:
www.wago.com

The application notes contain function blocks (FBs) for communication applications.

- KNX/EIB
- DALI
- EnOcean Radio Technology
- Modbus
- M-Bus
- MP-Bus
- SMI
- LonWorks®
- Email
- SMS
- Other applications

Runtime Software – Libraries
WAGO-I/O-*PRO* (based on CODESYS V2.3)





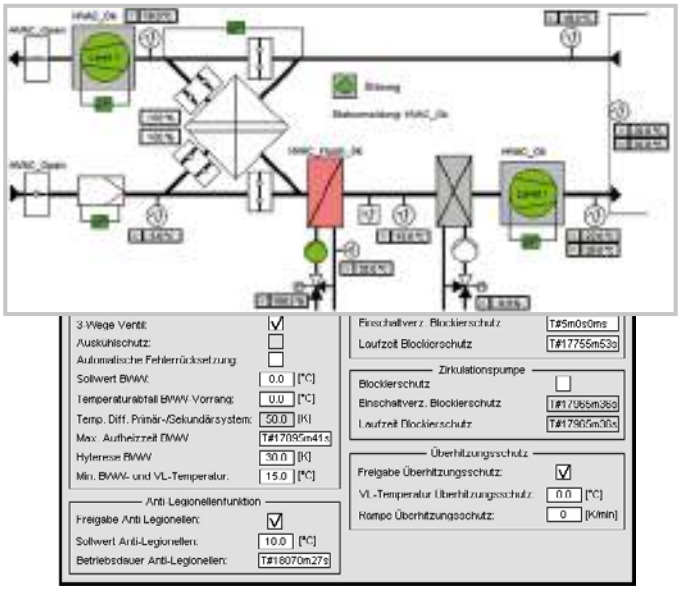
Graphical elements for HVAC applications

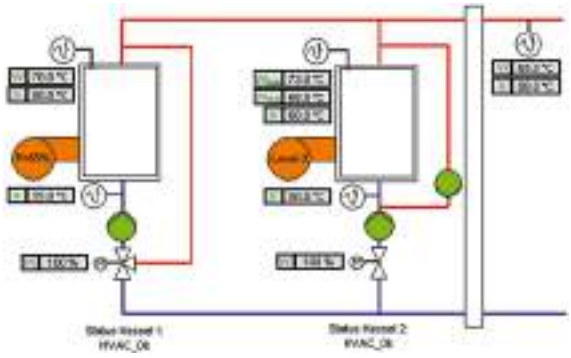
Heating, Ventilation, Air Conditioning

Integrated into WAGO-I/O-*PRO* Software

This library contains function blocks (FBs) to create automation applications for complex heating, ventilation and air-conditioning (HVAC) systems.

These include: fault monitoring, starter circuits, monitoring frost protection systems, fan control (stepped/continuous), air mixture valve control, air heater/cooler control, cascade control of room/feed air temperature, free night cooling, summer/winter compensators, enthalpy calculations, PID controllers, filter monitoring, blockage protection, heating circuit control, heat recovery control, boiler control (stepped/continuous), boiler sequence, domestic hot water control, start/stop optimization, humidification and dehumidification (climate) and more.





Boiler sequence control

System Macros

Download: Current application notes available at:
www.wago.com

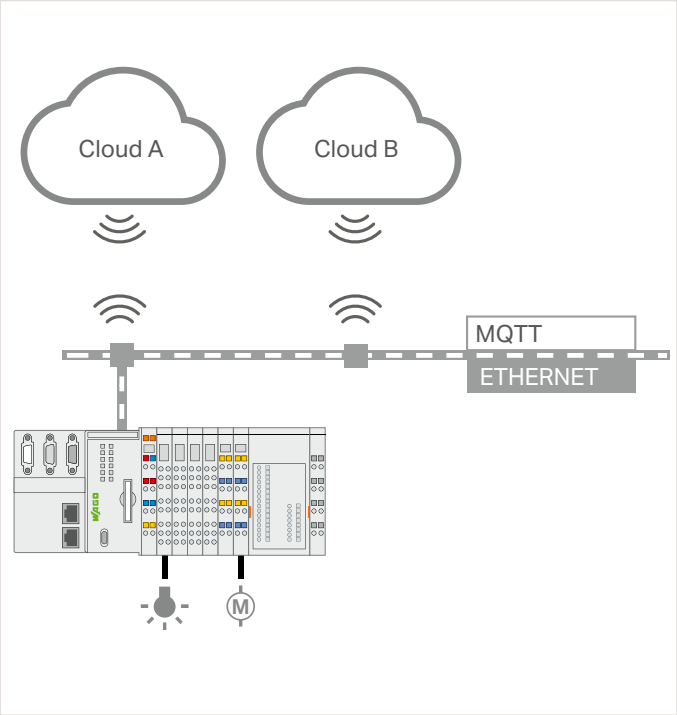
- District heating transfer station macros
- Boiler macros
- Heating circuit macros
- Drinking water heating macros
- Ventilation macros

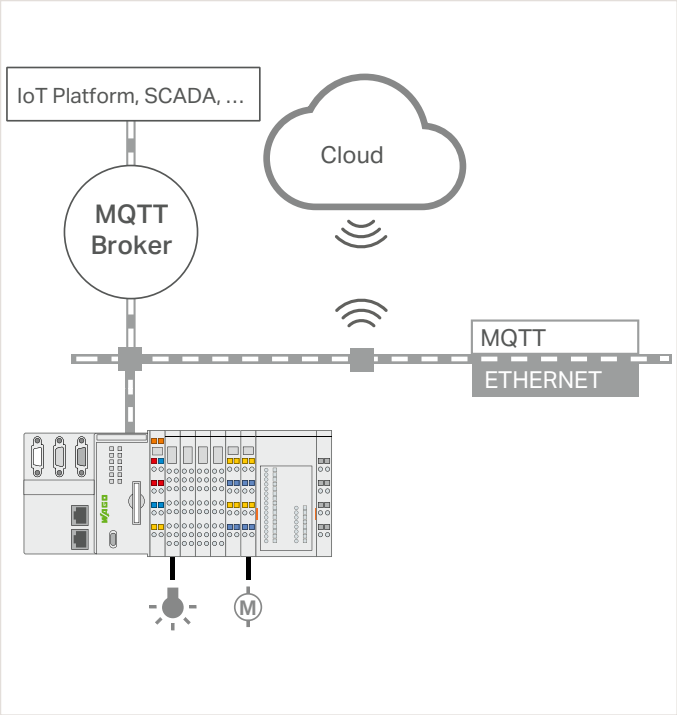
Runtime; Multi-Cloud Connectivity

Function:
MQTT is a powerful IoT protocol that has become standard in many industrial automation applications. Both PFC200 Controller (Generation 2) and Touch Panel 600 support an MQTT connection by default. "Multi-Cloud Connectivity" enables the parallel connection of a device to two different cloud systems, IoT platforms or MQTT brokers, allowing different tasks to be implemented in the appropriate cloud application. For example, device management can be performed within WAGO Cloud. At the same time, specific tasks can be implemented in another cloud-based solution, e.g., IBM Watson, Amazon Web Services (AWS) or other specialized IoT platform. Data can also be split up, allowing critical data to go to a local MQTT broker and less critical data to a cloud.

Your Benefits:
- More options and flexibility
- Simple error analysis via configuration in WBM, programming in CODESYS
- Taking advantage of two cloud solutions/IoT platforms

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.





Item Description	
Runtime; Multi-Cloud Connectivity	**Item No.**
Single License; Online Activation	2759-248/211-1000
Compatible Devices	
Controller PFC200; G2	750-821x
Compact Controller 100	751-9301
Touch Panel 600; Control Panel	762-x3xx/8000-002
Edge Controller	752-8303/8000-002

Besides the basic controller variants listed here, the license can also be used on these controllers' variants. For details, see the product information of the corresponding controller.
For detailed information on the controllers and touch panels, go to: www.wago.com/item-numbers

Minimum firmware version	17
Delivery type	License certificate by email
For data sheet and additional information, see:	wago.com/2759-248/211-1000

An Internet connection to the PC that's equipped with CODESYS or the WAGOupload tool may be required for license activation.
A single license allows installation on one device.
One license per device is required.

Runtime; Sparkplug

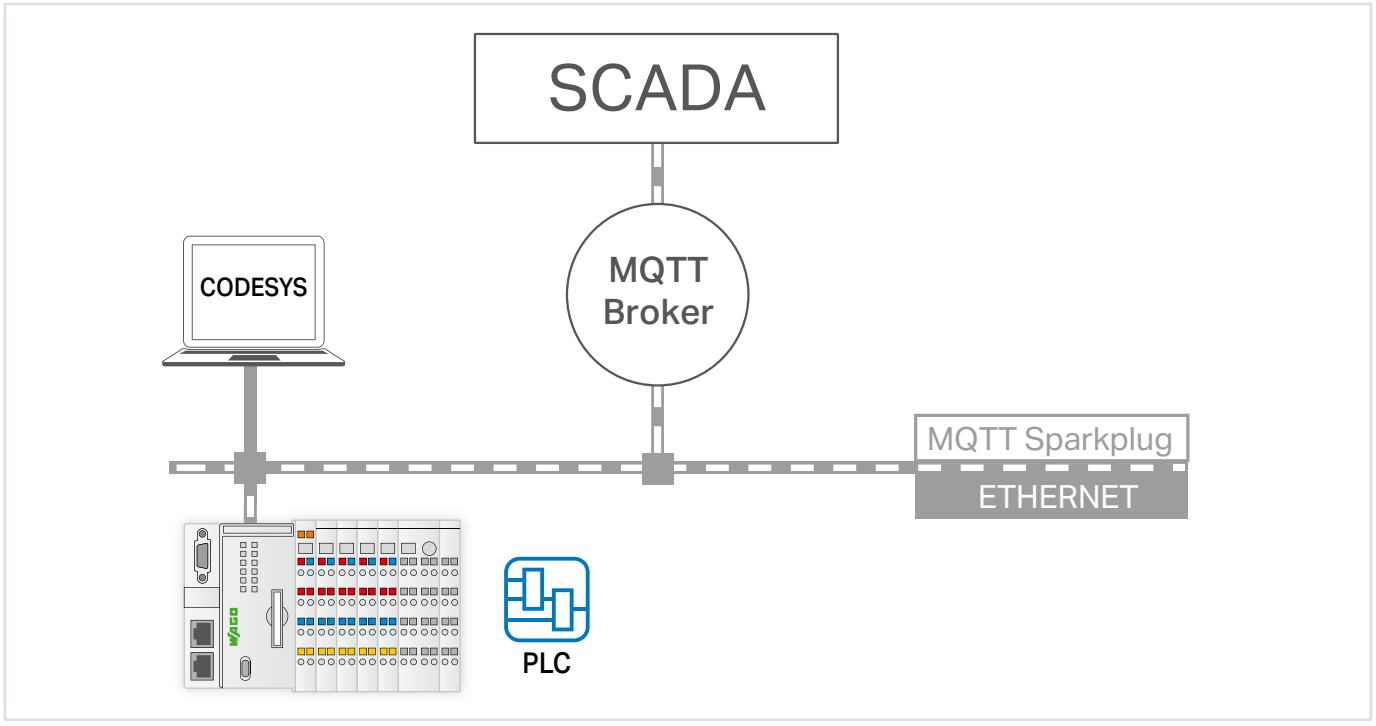
Function:
MQTT is a powerful IoT protocol that has become standard in many industrial automation applications. WAGO's PFC200 Controller (Generation 2) supports the MQTT protocol and the Sparkplug specification that defines both topic and payload, allowing the controller to exchange data directly with Sparkplug-enabled systems (e.g., SCADA). This requires a license for the controller.

Configuration is performed via the controller's Web-Based Management and the variables to be transmitted or received are defined by the CODESYS Engineering Software and its library.

Benefits:
- The PFC200 communicates directly with Sparkplug-enabled systems (e.g., SCADA) without requiring any additional gateway.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
- Sparkplug B payload
- Publish data
- Subscribe to data



Item Description	
Runtime; Sparkplug	**Item No.**
Single License; Online Activation	2759-247/211-1000
Compatible Devices	
Controller PFC200; G2	750-821x
Compact Controller 100	751-9301
Touch Panel 600; Control Panel	762-x3xx/8000-002
Edge Controller	752-8303/8000-002

Besides the basic controller variants listed here, the license can also be used on these controllers' variants. For details, see the product information of the corresponding controller.
For detailed information on the controllers and touch panels, go to: www.wago.com/item-numbers

Minimum firmware version	12
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-247/211-1000

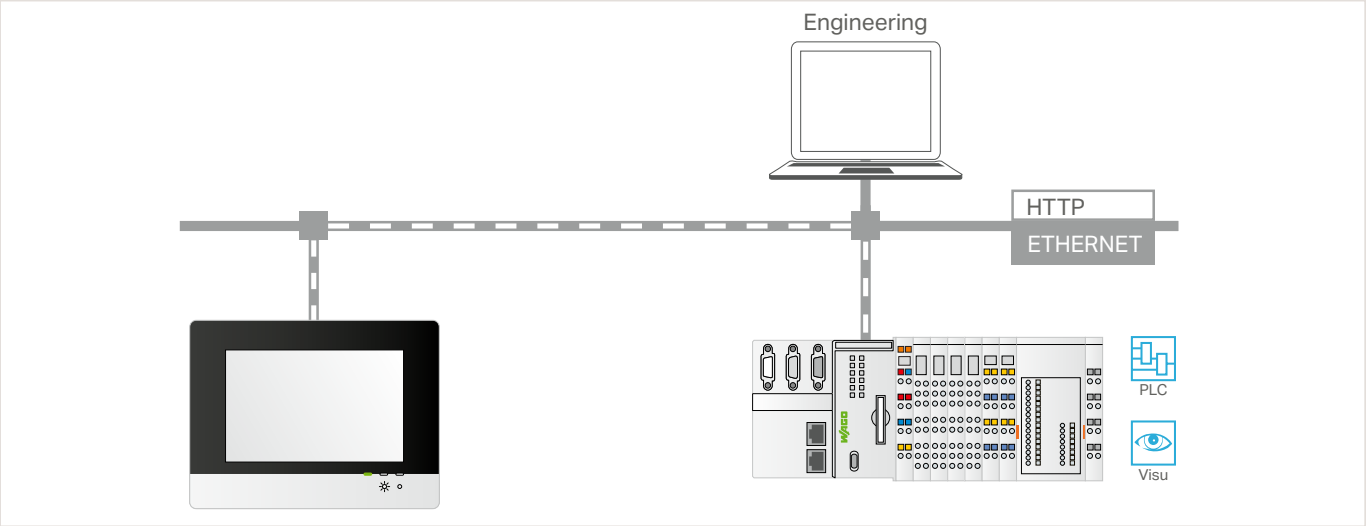
An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

Runtime; MicroBrowser

Function:
The MicroBrowser extends the application range of the Touch Panels 600. With the Runtime MicroBrowser license, each Touch Panel can also now display the Java-based visualization of CS2.3 Controllers.

Benefits:
- MicroBrowser integration also allows the customer to use the powerful Touch Panel 600 in previous systems.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.



Item Description	
Runtime; MicroBrowser	**Item No.**
Single License; Online Activation	2759-230/211-1000
Compatible Devices	
Touch Panel 600 Standard Line	762-4xxx/xxxx-xxxx
Touch Panel 600 Advanced Line	762-5xxx/xxxx-xxxx
Touch Panel 600 Marine Line	762-6xxx/xxxx-xxxx

xx is a wildcard; the license applies to all Touch Panel sizes.

Other required software	Firmware version 18 or higher (Touch Panel 600)
Delivery type	License certificate via email (the firmware already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-230/211-1000

An Internet connection to the PC that's equipped with CODESYS or the WAGOupload tool may be required for license activation.
A single license allows installation on one device.
One license per device is required.

Runtime; BACnet/IP

Function:
"Building Automation and Control Networks" (BACnet) is a data transfer protocol for building automation that simplifies communication between products from different manufacturers.
The PFC200 Controller (2nd generation) or WAGO Touch Panel can be operated as a BACnet building controller and supports the B-BC device profile with all major BACnet objects and interoperability building blocks (BIBBs).
The device communicates via BACnet/IP and offers the functionality of a BACnet Client and BACnet Server.

To use BACnet/IP, it is necessary to equip the device with a license.

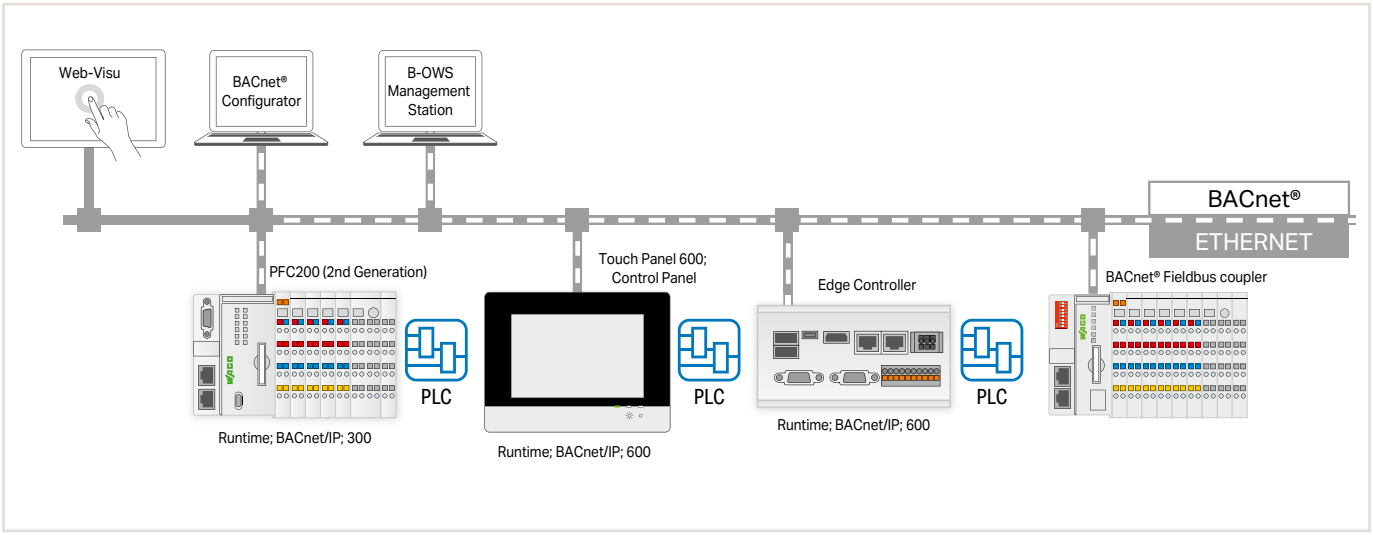
The BACnet network is configured using the WAGO BACnet Configurator and the Engineering Software.

Benefits:
- Use the device as a BACnet Building Controller (B-BC)
- Control and detect distributed I/O signals from WAGO BACnet/IP Couplers via BACnet Fieldbus Protocol
- Data exchange with other BACnet Devices as a BACnet Client or Server

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See "Protocol Implementation Conformance Statement" (PICS)

2



Item Description	
Runtime; BACnet/IP; 300; without limitation of the BACnet objects*	**Item No.**
Single License; Online Activation	2759-283/211-1000
Runtime; BACnet/IP; 300; M; up to 256 BACnet objects	
Single License; Online Activation	2759-2283/211-1000
Runtime; BACnet/IP; 300; S; up to 48 BACnet objects	
Single License; Online Activation	2759-2273/211-1000
Compatible Controllers	
PFC200; G2; 4ETH	750-8210
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH RS	750-8212
PFC200; G2; 2ETH CAN	750-8213
PFC200; G2; 2ETH RS CAN DPS	750-8216
PFC200; G2; 2ETH RS; 4G	750-8217

Item Description	
Runtime; BACnet/IP; 600; without limitation of the BACnet objects*	**Item No.**
Single License; Online Activation	2759-286/211-1000
Runtime; BACnet/IP; 600; M; up to 256 BACnet objects	
Single License; Online Activation	2759-2286/211-1000
Runtime; BACnet/IP; 600; S; up to 48 BACnet objects	
Single License; Online Activation	2759-2276/211-1000
Compatible Devices	
Touch Panel 600 Standard Line	762-43xx/8000-002
Touch Panel 600 Advanced Line	762-53xx/8000-002
Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller	752-8303/8000-002

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.

Minimum firmware version	Firmware (16), 2759-x283/211-1000, 2759-x286/211-1000 Firmware (18), 2759-x283/211-1000, 2759-x286/211-1000
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-0283/211-1000 wago.com/2759-0286/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
One license per device is required.

BACnet® is a registered trademark of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE).

*Number of BACnet objects: without limitation – but depends on the application used

Runtime; OPC UA Server Extended

Function:
"OPC Unified Architecture" (OPC UA) is a platform-independent and service-oriented architecture. It is used to describe and transport data. Because the services are independent, devices from different manufacturers can be interconnected.

The OPC UA server can release PFC200 Series, Touch Panel 600 and Edge Controller runtime data to a product in the network when it meets the required preconditions. The device must have an ETHERNET interface that can be used for communication and have the memory capacity and processing time required by the server.

The "OPC UA Server Extended" license activates an extended range of functions for the OPC UA server.

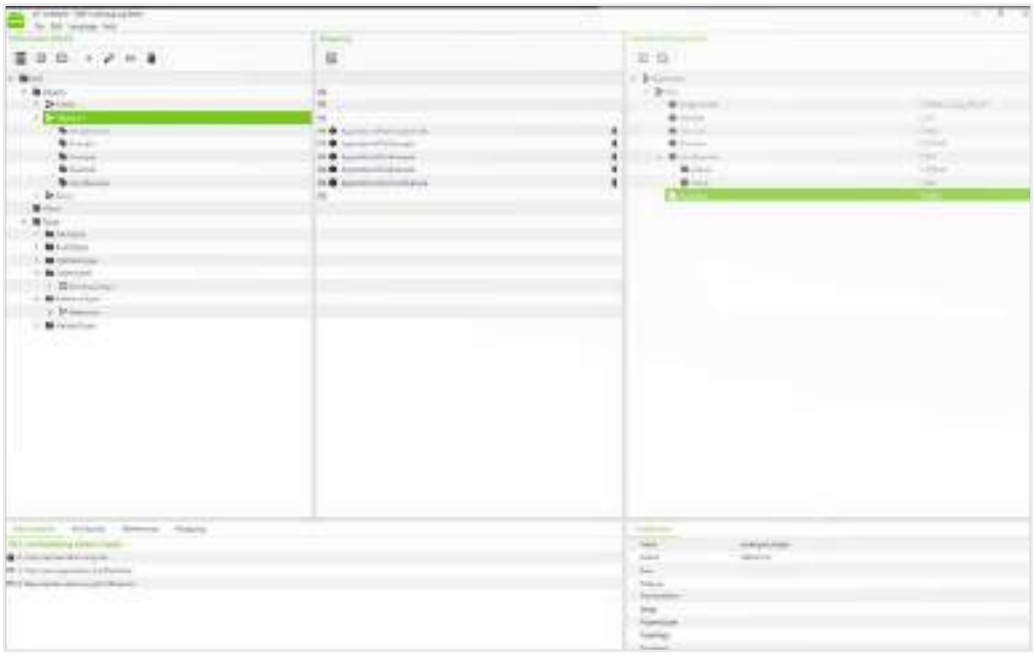
Extended functional range:
Mapping the "PLCopen" information model to any other information model.

By default, WAGO controllers use the "PLCopen" information model to provide data for other applications. The OPC UA Mapping Editor can be used to map this information model to any other OPC UA model, for example, to OPC UA base models such as "Robotics" or "Euro-map77".

To use other, arbitrary information models, it is necessary to equip the device with a license.

Mapping to other, arbitrary information models is performed via the WAGO OPC UA Mapping Editor.

Benefits:
Mapping the "PLCopen" information model to any other information models



Item Description	
Runtime; OPC UA Server Extended; 300	**Item No.**
Single License; Online Activation	**2759-2233/211-1000**
Compatible Controllers	
PFC200; G2	**750-821x/xxxx-xxxx**
Item Description	
Runtime; OPC UA Server Extended; 600	**Item No.**
Single License; Online Activation	**2759-2236/211-1000**
Compatible Devices	
Touch Panel 600 Standard Line	**762-43xx/8000-002**
Touch Panel 600 Advanced Line	**762-53xx/8000-002**
Touch Panel 600 Marine Line	**762-63xx/8000-002**
WAGO Edge Controller	**752-8303/8000-002**

xx is a wildcard; the license applies to all Touch Panel sizes.

Minimum firmware version	Firmware (18) Patch 3
Delivery type	License certificate per email
For data sheet and additional information, see:	wago.com/2759-2233/211-1000
	wago.com/2759-2236/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

OPC UA is a registered trademark of the OPC Foundation.

OPC UA Mapping Editor



Functions:
The OPC UA Mapping Editor for WAGO's Linux®-based controllers offers even greater flexibility for leveraging the benefits of OPC UA communication. These "companion specifications" have been defined to cope with the demands of different industries having similar products and machines. These specifications primarily describe information models.
The OPC UA Mapping Editor allows you to modify the information model that specifies how the WAGO OPC UA server provides the data; you can also map the data onto any information model. For this purpose, a symbol configuration is generated with CODESYS. After the symbol configuration is loaded, the variables are mapped to the newly created information model. Once the resulting mapping is loaded onto the controller, it's easy to implement OPC UA communication for different applications and performance demands. Customer-specific adaptations are also possible, even if they don't correspond to any particular specification.

Operation on the controller requires an "Extended" Runtime license for the WAGO OPC UA Server (2759-2233/211-1000 or 2759/2236/211-1000) on the device. Mapping Editor, which is creates the information model, is free of charge.

Benefits:
- Adaptation of the information model provided by the OPC UA Server to any information model
- Flexible use of OPC UA

Use:
The OPC UA Mapping Editor has been developed for use on Windows 10-based systems.

Item Description	
OPC UA Mapping Editor	
Download: www.wago.com	
Supported Controllers	**Item No.**
2nd Generation PCF200	**750-821x**
TP600 Control Panels	**752-430x**
Edge Controller	**752-8303/8000-002**

System Requirements	
Operating system	Windows 10
Memory	4 GB
Free hard disk space	800 MB
Processor	Dual-core CPU
Screen resolution	Minimum: 1,366 x 768 pixels Recommended: 1,920 x 1,080 pixels
Minimum firmware version	FW18 patch 3
Delivery type	Download

OPC UA Mapping Editor is free of charge. However, running it on a controller requires an "Extended " Runtime license for the WAGO OPC UA Server.

Runtime; OPC UA Client

Function:

OPC Unified Architecture allows you to exchange data securely between different devices. OPC UA is a manufacturer-independent communication protocol that defines semantic annotation in addition to data transmission. The WAGO OPC UA Client allows data from an OPC UA Server to be included in the IEC application. The interface to your application is a function block library, which is implemented according to PLCopen.
To use the OPC UA client, it is necessary to license the device.

Benefits:

- Use the device as an OPC UA client
- Read/write OPC UA data points of an OPC UA server via the IEC application

Use:

The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:

The following PLCopen modules are supported:

- Connect and Disconnect
- namespaceGetIndexList
- NodeGetHandleList and NodeReleaseHandleList
- ReadList and WriteList

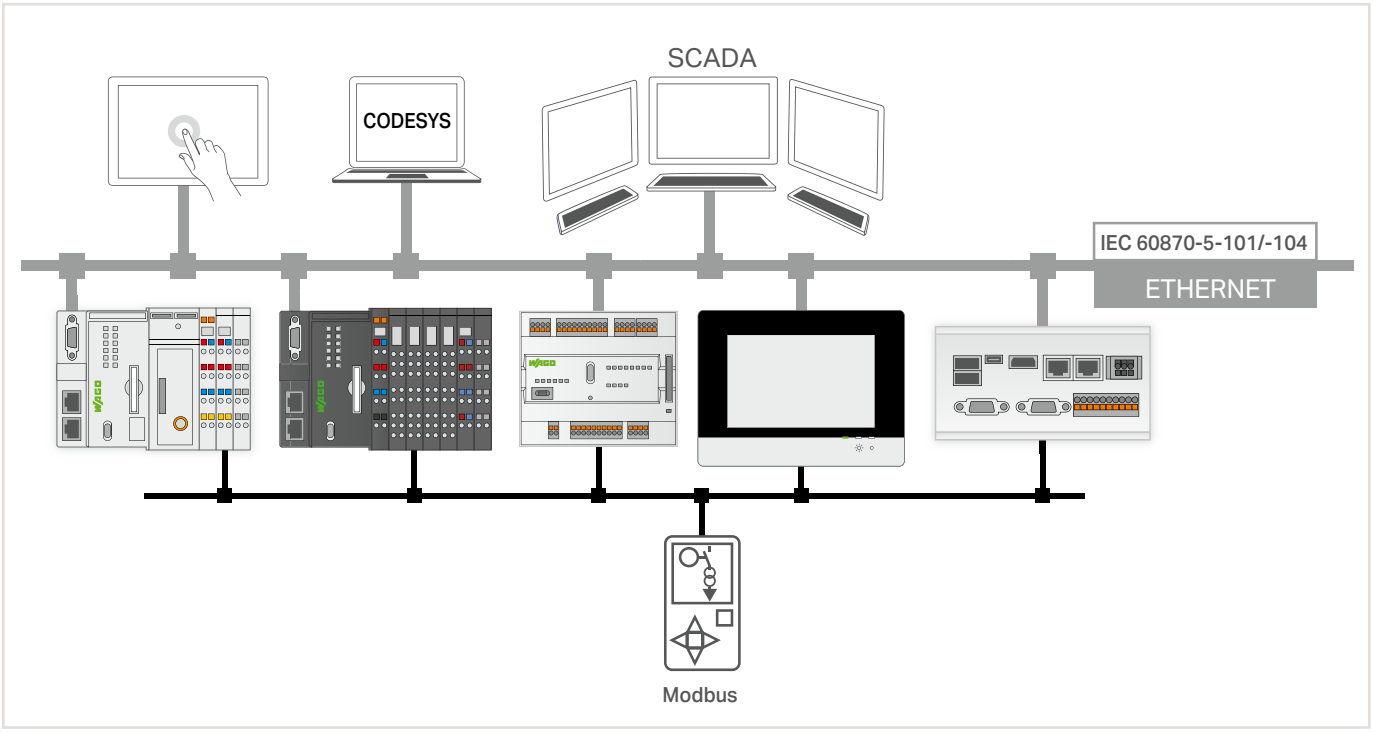
Item Description	
Runtime; OPC UA Client	**Item No.**
Single License; Online Activation	**2759-2230/211-1000**
Compatible Controllers	
Controller PFC200; G2	**750-821x/xxxx-xxxx**
Controller PFC200; G2; XTR	**750-821x/0040-0000**

Delivery type	License certificate per email
For data sheet and additional information, see:	wago.com/2759-2230/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

OPC UA is a registered trademark of the OPC Foundation.

Runtime; IEC 60870 Slave



Function:
Communication according to the IEC 60870 protocol can be conveniently parameterized with the configurator. For this purpose, the CODESYS development environment is extended by the WAGO Telecontrol Package.
The configurator sets up IEC 60870 objects, while configuring data exchange to the PLC application or I/O modules. Import and export functions in CSV format allow configured data to be transmitted to other engineering tools.
With this license, the IEC 60870-5-101 and -104 Protocols can be activated on the slave. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 60870-5-103 and data to be transmitted to the network control system via IEC 60870-5-104.
The time on the telecontrol substation (slave) can be directly synchronized via either the IEC 60870 Protocol with object 103 or via (S)NTP.
IEC 60870-5-101/-104 Information Objects can be used to monitor the direction of single, double and step messages – bit patterns, counter values, as well as normalized, scaled and floating-point measurement values can also be used. All information objects can be transmitted with or without a time stamp. This also applies to information objects in the control direction.

An IEC 60870-5-104 Slave can simultaneously maintain up to four connections to the control system (master).

Your Benefits:
- Use the Controller as a telecontrol substation (slave) on an IEC 60870-5-101/-104 Control System (master).
- Create a gateway application to transfer data from IEC 60870-5-103 Protection Devices to an IEC 60870-5-101/-104 Control System.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See Section "Functionality of the WAGO Protocol Library according to IEC 60870-5-101, and -104" in Product Manual "Planning IEC 60870 with the Telecontrol Configurator"

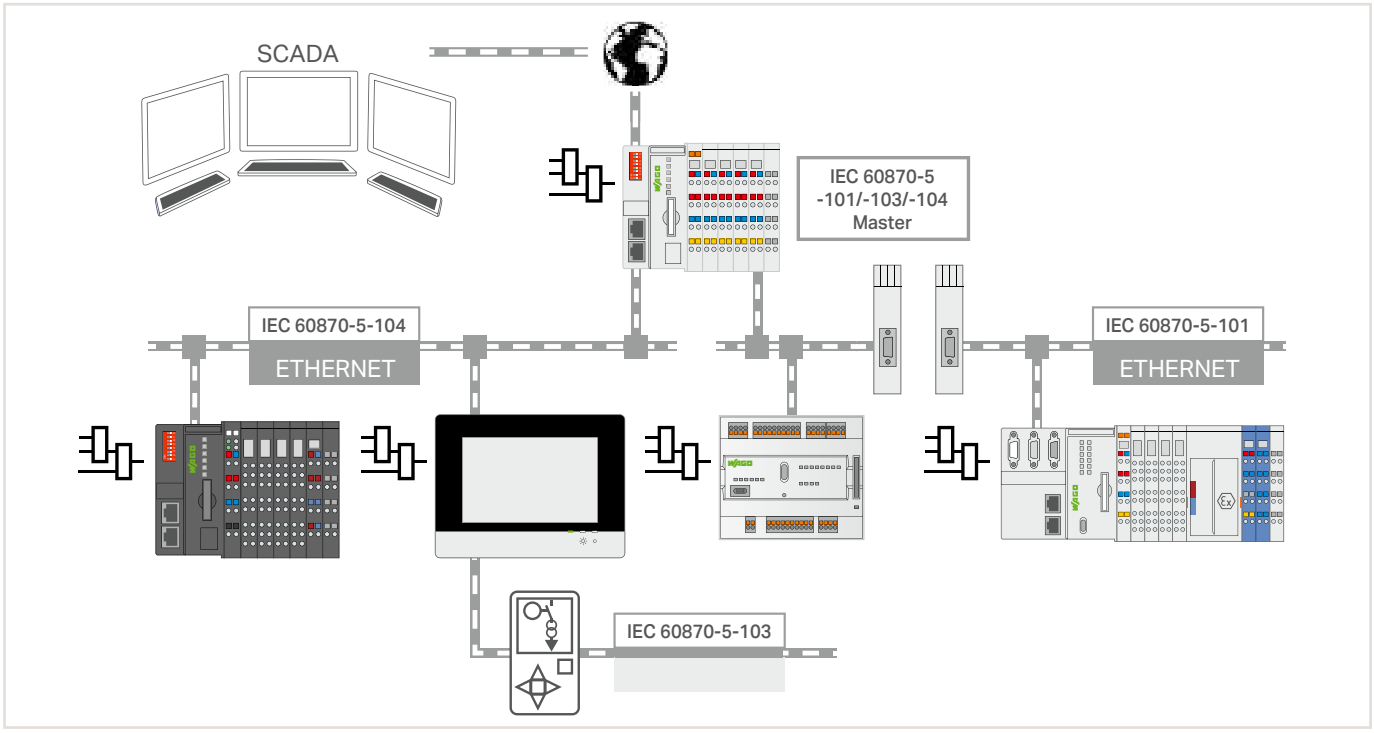
Item Description	
Runtime; IEC 60870 Slave	**Item No.**
Single License; Online Activation	2759-290/211-1000
Compatible Controllers	
Controller PFC200; G2	750-821x/xxxx-xxxx
Controller PFC200; G2; XTR	750-821x/0040-000x
Compact Controller 100	751-9301
Touch Panel 600 Standard Line	762-43xx/8000-002
Touch Panel 600 Advanced Line	762-53xx/8000-002
Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller	752-8303/8000-002

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.
The controllers 750-8212/025-001, 750-8212/025-002, 750-8212/040-001 and 750-8216/025-001 include the telecontrol licenses as delivered.

Other required software	CODESYS V3.5 SP16 and higher
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-290/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

Runtime; IEC 60870 Master



Function:
Communication according to the IEC 60870 protocol can be conveniently parameterized with the configurator. For this purpose, the CODESYS development environment is extended by the WAGO Telecontrol Package.
The configurator sets up IEC 60870 objects while configuring data exchange to the PLC application or I/O modules. Import and export functions in CSV format allow configured data to be transmitted to other engineering tools.
With this license, the IEC 60870-5-101, -103 and -104 Protocols can be activated on the master. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 60870-5-103 and data to be transmitted to the network control system via IEC 60870-5-104.

IEC 60870-101/-104 Information Objects can be used to monitor the direction of single, double and step messages – bit patterns, counter values, as well as normalized, scaled and floating-point measurement values can also be used. All information objects can be received with or without a time stamp. This also applies to information objects in the control direction.

The IEC 60870-5 Master L can support connections to up to 16 IEC 60870-5 Slave Devices.

Your Benefits:
- Use the WAGO controller as a telecontrol master to read data from IEC-60870-5-101/-104 Field Devices or IEC-60870-5-103 Protection Devices (slaves) and process it locally in the controller.
- Create a gateway application to use this master function to forward read data to a higher-level control system or cloud. This may require additional software licenses, such as the WAGO IEC 60870 Slave, DNP 3 Slave, Sparkplug or WAGO Cloud.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See Section "Functionality of the WAGO Protocol Library according to IEC 60870-5-101, and -104" in Product Manual "Planning the IEC 60870 Protocol with the Telecontrol Configurator"

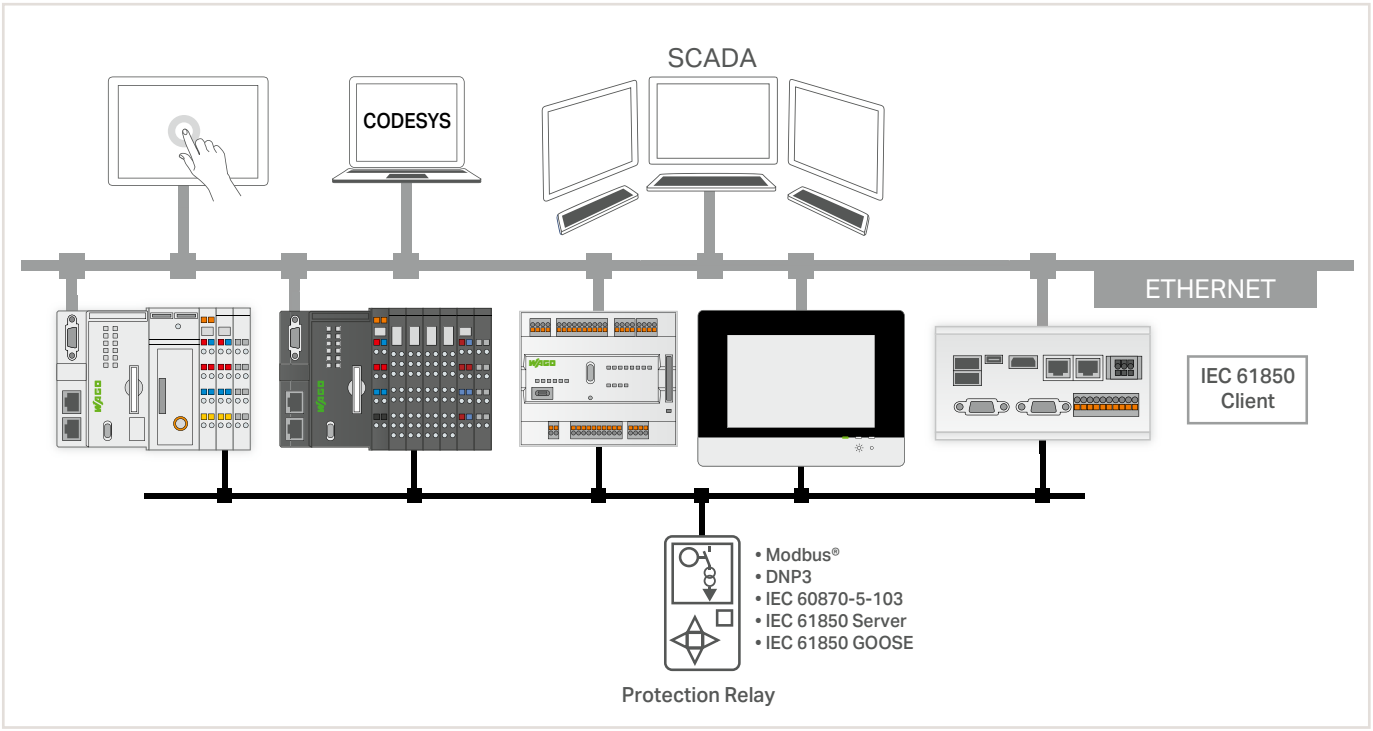
Item Description	
Runtime; IEC 60870 Master M	**Item No.**
Single License; Online Activation	2759-293/211-1000
Compatible Controllers	
Controller PFC200; G2	750-821x/xxxx-xxxx
Controller PFC200; G2; XTR	750-821x/0040-000x
Compact Controller 100	751-9301
Item Description	
Runtime; IEC 60870 Master L	**Item No.**
Single License; Online Activation	2759-296/211-1000
Compatible Devices	
Touch Panel 600 Standard Line	762-43xx/8000-002
Touch Panel 600 Advanced Line	762-53xx/8000-002
Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller	752-8303/8000-002

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.
The controllers 750-8212/025-001, 750-8212/025-002, 750-8212/040-001 and 750-8216/025-001 include the telecontrol licenses as delivered.

Other required software	CODESYS V3.5 SP16 and higher
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-296/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

Runtime; IEC 61850 Client



Function:
Communication according to the IEC 61850 protocol can be conveniently parameterized with the configurator. For this purpose, the CODESYS development environment is extended by the WAGO Telecontrol Package.

The configurator sets up the reading of IEC 61850 object data from protection devices, for example. If the configuration of the third-party device is available in IEC-61850 SCL exchange format, it can be read in using the configurator's import functions. Alternatively, it is also possible to read the configuration from the third-party device using the configurator's online browsing function.

With this license, the IEC 61850 Protocol can be activated on the client. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 61850 and data to be transmitted to the network control system via IEC 60870-5-104.

The IEC 61850 Client processes data from up to four servers with each 10 requests.

Your Benefits:
- Use the controller as a telecontrol master (client) to read data from IEC 61850 Protection Devices (servers) and process it locally in the controller.
- Create a gateway application to use this client function to forward read data to a higher-level control system or cloud. This may require additional software licenses, such as the WAGO IEC 60870 Slave, DNP 3 Slave, Sparkplug or WAGO Cloud.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See Product Manual "Planning the IEC 61850 Protocol with the Telecontrol Configurator"

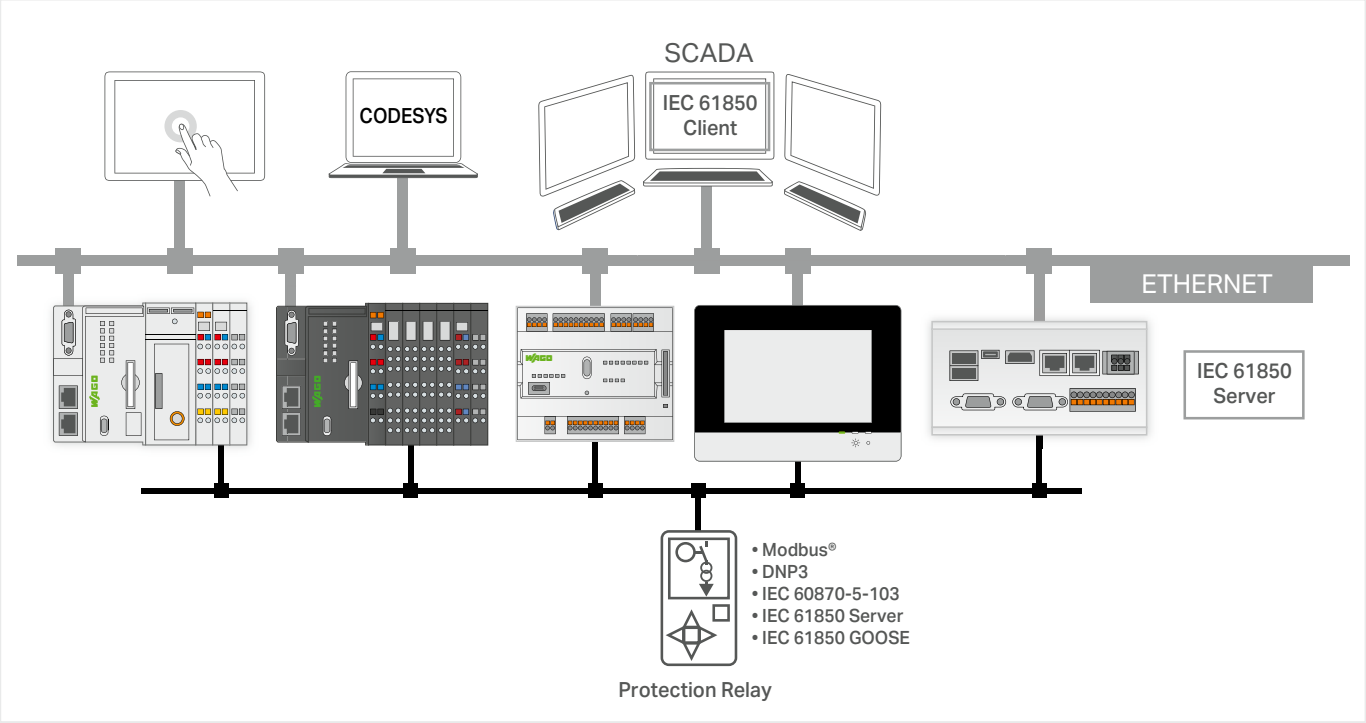
Item Description	
Runtime; IEC 61850 Client M	**Item No.**
Single License; Online Activation	2759-2243/211-1000
Compatible Controllers	
Controller PFC200; G2	750-821x/xxxx-xxxx
Controller PFC200; G2; XTR	750-821x/0040-000x
Compact Controller 100	751-9301
Item Description	
Runtime; IEC 61850 Client L	**Item No.**
Single License; Online Activation	2759-2246/211-1000
Compatible Devices	
Touch Panel 600 Standard Line	762-43xx/8000-002
Touch Panel 600 Advanced Line	762-53xx/8000-002
Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller	752-8303/8000-002

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.
The controllers 750-8212/025-001, 750-8212/025-002, 750-8212/040-001 and 750-8216/025-001 include the telecontrol licenses as delivered.

Other required software	CODESYS V3.5 SP16 and higher
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-2246/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

Runtime; IEC 61850 Server



Function:
Communication according to the IEC 61850 protocol can be conveniently parameterized with the configurator. For this purpose, the CODESYS development environment is extended by the WAGO Telecontrol Package.

The user can create the IEC 61850 object structure in the configurator or alternatively import it from a file in IEC 61850 SCL format. The created configuration can be re-exported in the SCL file format so that it can be read in the remote station of an IEC 61850 client. This saves time during engineering and avoids errors. For online communication, the IEC 61850 Server supports (un)buffered reporting in MMS* format and GOOSE* Publishing.

This license enables the IEC 61850 protocol on the server side. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 60870-103 and data to be transmitted to the network control system via IEC 61850.

Your Benefits:
- Create a gateway application to pass data from local I/Os or data read with other protocols to a higher-level IEC 61850 management system
- Transmission of the control information of a higher-level IEC 61850 control system to protective devices via GOOSE Publishing, IEC 60870-5-103 or DNP3 This may require additional software licenses, such as the WAGO IEC 60870 Master, DNP3 Master.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See the product manual "Configuring the IEC-61850 Protocol."

*MMS = Manufacturing Messaging Specification
*GOOSE = Generic Object Oriented Substation Event

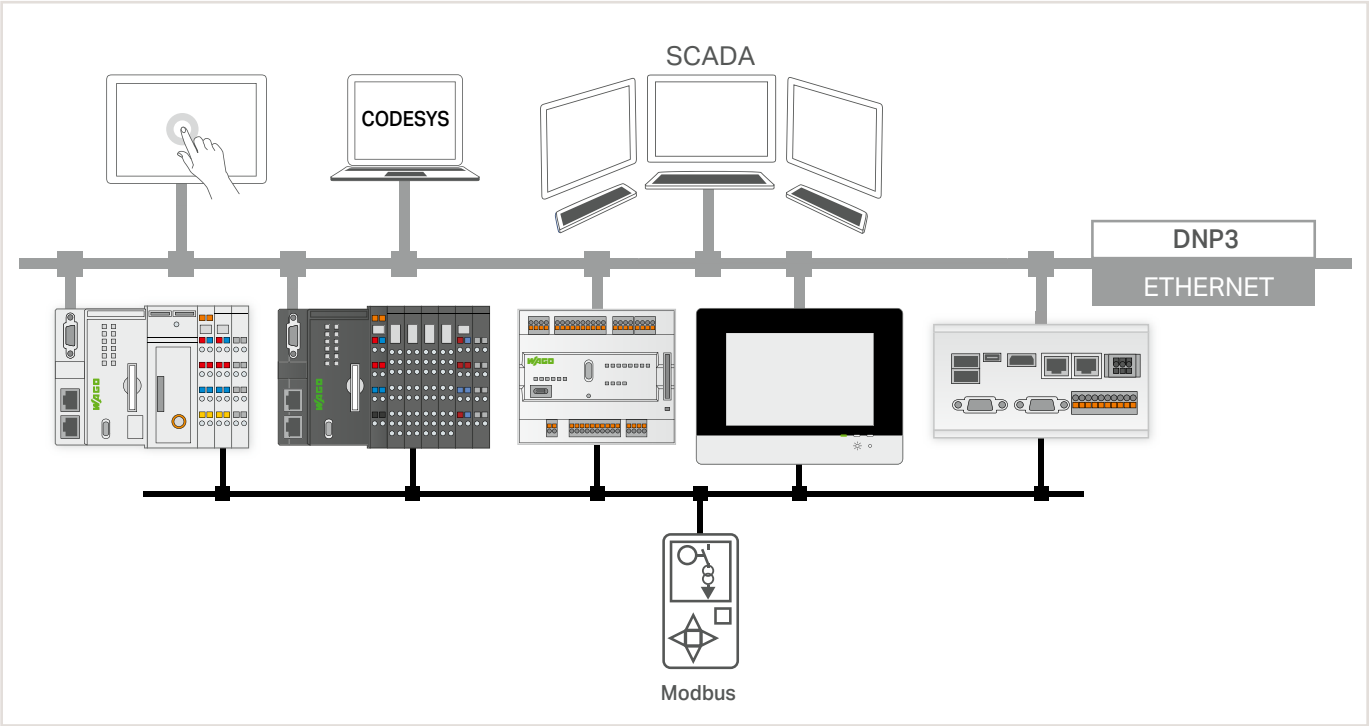
Item Description	
Runtime; IEC 61850 Server	**Item No.**
Single License; Online Activation	**2759-2240/211-1000**
Compatible Devices	
Controller PFC200; G2	**750-821x/xxxx-xxxx**
Controller PFC200; G2; XTR	**750-821x/0040-000x**
Compact Controller 100	**751-9301**
Touch Panel 600 Standard Line	**762-43xx/8000-002**
Touch Panel 600 Advanced Line	**762-53xx/8000-002**
Touch Panel 600 Marine Line	**762-63xx/8000-002**
WAGO Edge Controller	**752-8303/8000-002**

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.
The controllers 750-8212/025-001, 750-8212/025-002, 750-8212/040-001 and 750-8216/025-001 include the telecontrol licenses as delivered.

Other required software	CODESYS V3.5 SP16 and higher
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-2240/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

Runtime; DNP3 Slave



Function:
Communication according to the DNP3 protocol can be conveniently parameterized with the configurator. For this purpose, the CODESYS development environment is extended by the WAGO Telecontrol Package.
With this license, the DBP3 Protocol can be activated on the slave. The configurator fully supports the DNP3-specific functions of all WAGO telecontrollers.
The configurator sets up DNP3 objects, while configuring data exchange to the PLC application or I/O modules. The settings can be imported and exported in DNP3 XML device profile format.
WAGO's telecontrollers can work as TCP, UDP and serial DNP3 slaves.
Cyclical time synchronization of the telecontrol substation (slave) can be performed by the master according to DNP3 Device Profile 1.7.2.

In the monitoring direction, the WAGO DNP3 Slave can send digital, analog and count values to the master. Both digital and analog values can be received in the control direction. Analog values can be processed in 16-bit, 32-bit or FLOAT format. Count values can be processed in 16-bit or 32-bit format.

Your Benefits:
- Use the Controller as a telecontrol substation (slave) on an DNP3 Control System (master) via TCP, UDP or serially.
- Create a gateway application to transfer data, e.g., from Modbus® Field Devices to a DNP3 Control System.

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See the document "Runtime; DNP3 Slave Device Profile" on www.wago.com.

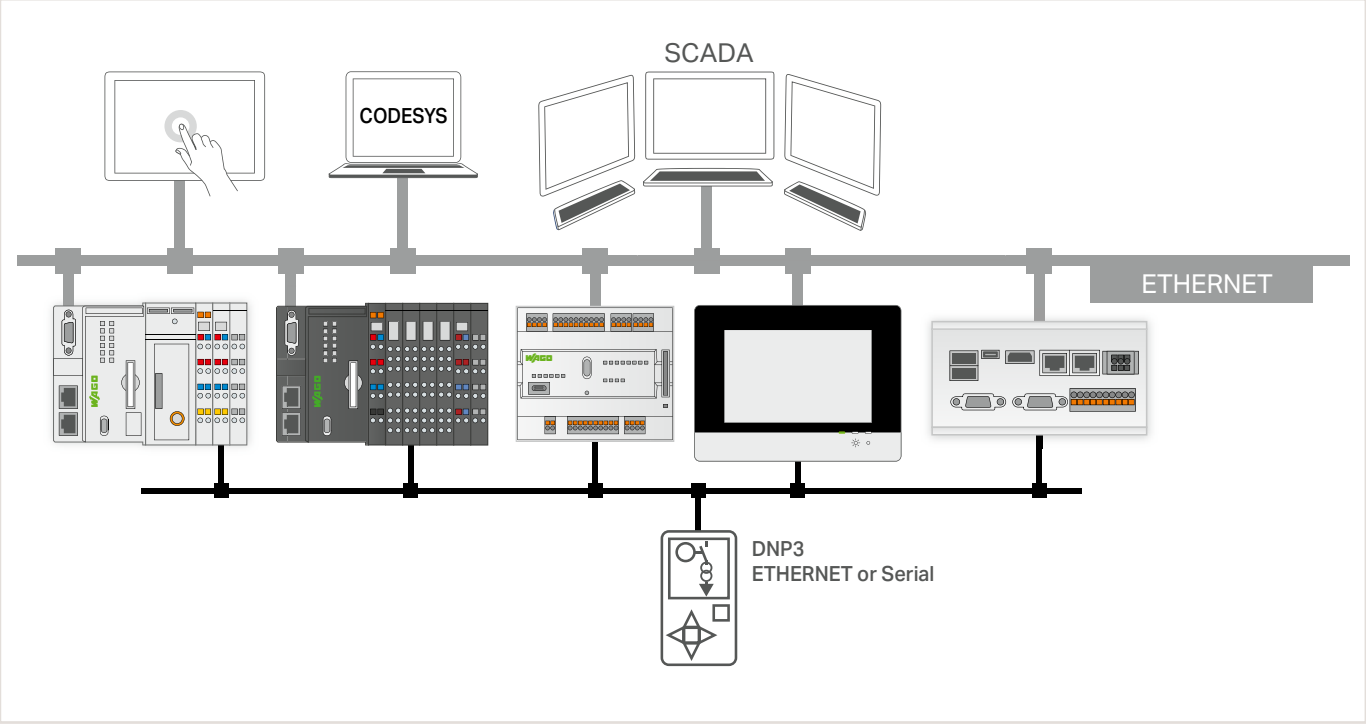
Item Description	
Runtime; DNP3 Slave	**Item No.**
Single License; Online Activation	2759-2290/211-1000
Compatible Devices	
Controller PFC200; G2	750-821x/xxxx-xxxx
Controller PFC200; G2; XTR	750-821x/0040-000x
Compact Controller 100	751-9301
Touch Panel 600 Standard Line	762-43xx/8000-002
Touch Panel 600 Advanced Line	762-53xx/8000-002
Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller	752-8303/8000-002

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.
The controllers 750-8212/025-001, 750-8212/025-002, 750-8212/040-001 and 750-8216/025-001 include the telecontrol licenses as delivered.

Other required software	CODESYS V3.5 SP16 and higher
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-2290/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

Runtime; DNP3 Master



Function:
Communication according to the DNP3 protocol can be conveniently parameterized with the configurator. For this purpose, the CODESYS development environment is extended by the WAGO Telecontrol Package.
With this license, the DNP3 Protocol can be activated on the master. The configurator fully supports the DNP3-specific functions of all WAGO telecontrollers.
The configurator sets up DNP3 objects while configuring data exchange to the PLC application or I/O modules. As an alternative to manually configuring connections to DNP3 Slaves, it is also possible to use a description file to import the configurations in the standard DNP3 XML device profile format.

In performance class L, the master can maintain connections for up to four DNP3 Slaves, thereby working as TCP or serial DNP3 Master. Up to 10,000 events from connected DNP3 Slaves can be saved in the controller's internal RAM or on the SD card.

In the monitoring direction, the WAGO DNP3 Master L can receive digital, analog and count values from the slave. Both digital and analog values can be sent in the control direction. Analog values can be processed in 16-bit, 32-bit or FLOAT format. Count values can be processed in 16-bit or 32-bit format.

Your Benefits:
- Use of the WAGO controller as a DNP3 Master to read and process data from DNP3 Slaves (field devices) via TCP, UDP or serially.
- Create a gateway application to transfer data from DNP3 Slaves (field devices) and other protocols (e.g., IEC 60870, Modbus®).

Use:
The license is registered in WAGO Upload and loaded onto a device. No other installation steps are required.

Technical Data:
See the document "Runtime DNP3 Master Device Profile" on www.wago.com.

Item Description	
Runtime; DNP3 Master M	**Item No.**
Single License; Online Activation	2759-2293/211-1000
Compatible Controllers	
Controller PFC200; G2	750-821x/xxxx-xxxx
Controller PFC200; G2; XTR	750-821x/0040-000x
Compact Controller 100	751-9301
Item Description	
Runtime; DNP3 Master L	**Item No.**
Single License; Online Activation	2759-2296/211-1000
Compatible Devices	
Touch Panel 600 Standard Line	762-43xx/8000-002
Touch Panel 600 Advanced Line	762-53xx/8000-002
Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller	752-8303/8000-002

x/xxxx-xxxx or x/0040-000x is a placeholder, the license is also applicable for variants of the controllers and touch panels.
The controllers 750-8212/025-001, 750-8212/025-002, 750-8212/040-001 and 750-8216/025-001 include the telecontrol licenses as delivered.

Other required software	CODESYS V3.5 SP16 and higher
Delivery type	Licence certificate via email
For data sheet and additional information, see:	wago.com/2759-2293/211-1000
	wago.com/2759-2296/211-1000

An Internet connection to the PC that's equipped with CODESYS may be required for license activation.
A single license allows installation on one device.
Every additional device requires its own license.

WAGO WebVisu App
For Mobile System Operation/Monitoring



With the WAGO WebVisu App, you can visualize web pages created for WAGO Controllers via CODESYS V2 or CODESYS V3. The app features both automated management and routing capabilities, allowing the website to be simply accessed via URL entry. The system or machine to be monitored can then be operated and monitored at any time on the go. You can define up to 100 controllers for direct and quick access via the URL.

The free WAGO WebVisu App is available in iOS for iPhones and iPads in the "Apple Store," and in Android for smartphones and tablets in the "Google Store."

Note: An overview of the supported WAGO Controllers, operating manuals and application notes can be found on our website.

QR Code for WebVisu App:

Simply scan the QR code with your mobile device, and you will automatically be directed to the WebVisu app in "Apple Store" or "Google Play™."

Trademarks:

Apple, the Apple logo, iPhone, iPad and iPod touch are registered trademarks of Apple Inc. registered in the USA and other countries. "App Store" is a service mark of Apple Inc.

Google Play™ is a registered trademark of Google Inc.

WAGO WebVisu App
Download: Apple Store or Google Store

System Requirements	
Operating system	iOS version 11 or late;, iPadOS 11.0 or later; Android version 5.0 or later
Compatibility	iPhone; iPad and iPod touch; Android smartphones and tablets
For additional information, see:	wago.com/webvisu

WAGO I/O Field App

For Maintenance, Diagnostics, Operation and Monitoring of Installed WAGO I/O System Field Modules

I/O Field



The WAGO I/O Field App allows you to display product information, make settings and adjust parameters for both fieldbus modules and IO-Link hubs.

Communication is performed via the *Bluetooth*® interface of a WAGO I/O System Field Module once a Data Matrix code has been scanned to select the product.

The current measured values of a port can be displayed (temperature, voltage, current and states) and configured (e. g., operating mode, filters).

- Identification via Data Matrix codes
- Communication via *Bluetooth*®
- Download of IODDs (IODD finder)
- Access to all process and parameter data
- Simulating inputs
- Forcing outputs (DO)
- Management of datasheets, manuals etc.
- User and rights management

Trademarks:

Download on the App Store

Apple, the Apple logo, iPhone, iPad and iPod touch are registered trademarks of Apple Inc. registered in the USA and other countries. "App Store" is a service mark of Apple Inc.

GET IT ON Google play

Google Play™ is a registered trademark of Google Inc.

WAGO I/O Field App
Download: Apple Store or Google Store

System Requirements	
Operating system	iOS version 11.0 or later, Android version 6.0 or later
Compatibility	iPhone; iPad and iPad Air; Android smartphones and tablets
For additional information, see:	wago.com/IOField

Accessories



USB Communication Cable; USB-A; WAGO I/O System 750 Service Interface		
Length	Item No.	PU
2.5 m	750-923	1
5 m	750-923/000-001	1



RS-232 Communication Cable; RS-232 (D-Sub 9-Pole); WAGO I/O System 750 Service Interface		
Length	Item No.	PU
1 m	750-920	1



Operation and Monitoring

Touch Panels 600 Standard Line

- High-performance Touch Panels with resistive touchscreens
- 10.9 … 54.7 cm (4.3 … 21.5″)
- Models include Control, Visu or Web Panels for display of CODESYS visualizations

Touch Panels 600 Advanced Line

- High-performance Touch Panels with capacitive touchscreens and glass surfaces
- 18 … 54.7 cm (7 … 21.5″)
- Models include Control or Visu Panels

Touch Panels 600 Marine Line

- High-performance Touch Panels with resistive touchscreens
- Ideal for marine applications
- 10.9 … 25.7 cm (4.3 … 10.1″)
- Models include Control or Visu Panels

Edge Computing

- Models include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

Section 4 ►

Compact Controller 100

Maximum Performance in Minimum Space:

- Controller with a real-time Linux® operating system
- Compact controller with I/Os in a DIN-rail-mount enclosure
- Manufacturer-independent CODESYS V3 engineering environment

Section 5 ►►

Controllers

- Scalable controller family with various interfaces
- Microcontrollers
- Readily combines with the modules of the WAGO I/O System 750

Section 6 ►►►

Operation and Monitoring
Contents

	Page
General Product Information	68
Functional Variants	69
Interfaces and Types	70
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Item Number Key	73
Standards and Rated Conditions	73
Approvals	73

	CPU	Web Browser	Modbus (TCP, UDP)	EtherNet/IP	EtherCAT	CANopen	BACnet/IP	OPC UA	Telecontrol Protocols	IoT Protocols	Hardware	Display Diagonal	Item No.	
 **Touch Panels 600 Standard Line** Display: Resistive touch-screen	Cortex A9	x	M/S	M/S	M	M/S	x*	x	x*	x	PIO3; Control Panel	10.9 cm (4.3″)	762-4301/8000-002	74
												14.5 cm (5.7″)	762-4302/8000-002	75
												18 cm (7.0″)	762-4303/8000-002	76
												25.7 cm (10.1″)	762-4304/8000-002	77
												39.6 cm (15.6″)	762-4305/8000-002	78
												54.7 cm (21.5″)	762-4306/8000-002	79
		x	M	S*	M*			x*	x*	x	PIO2; Visu Panel	10.9 cm (4.3″)	762-4201/8000-001	74
												14.5 cm (5.7″)	762-4202/8000-001	75
												18 cm (7.0″)	762-4203/8000-001	76
												25.7 cm (10.1″)	762-4204/8000-001	77
												39.6 cm (15.6″)	762-4205/8000-001	78
												54.7 cm (21.5″)	762-4206/8000-001	79
		x								x	PIO1; Web Panel	10.9 cm (4.3″)	762-4101	74
												14.5 cm (5.7″)	762-4102	75
												18 cm (7.0″)	762-4103	76
												25.7 cm (10.1″)	762-4104	77
 **Touch Panels 600 Advanced Line** Display: Capacitive touchscreen with a glass surface	Cortex A9	x	M/S	M/S	M	M/S	x*	x	x*	x	PIO3; Control Panel	18 cm (7.0″)	762-5303/8000-002	80
												25.7 cm (10.1″)	762-5304/8000-002	81
												39.6 cm (15.6″)	762-5305/8000-002	82
												54.7 cm (21.5″)	762-5306/8000-002	83
		x	M	S*	M*			x*	x*	x	PIO2; Visu Panel	18 cm (7.0″)	762-5203/8000-001	80
												25.7 cm (10.1″)	762-5204/8000-001	81
												39.6 cm (15.6″)	762-5205/8000-001	82
												54.7 cm (21.5″)	762-5206/8000-001	83
 **Touch Panels 600 Marine Line** Display: Resistive touch-screen, marine version	Cortex A9	x	M/S	M/S	M	M/S	x*	x	x*	x	PIO3; Control Panel	10.9 cm (4.3″)	762-6301/8000-002	84
												14.5 cm (5.7″)	762-6302/8000-002	85
												18 cm (7.0″)	762-6303/8000-002	86
												25.7 cm (10.1″)	762-6304/8000-002	87
		x	M	S*	M*			x*	x*	x	PIO2; Visu Panel	10.9 cm (4.3″)	762-6201/8000-001	84
												14.5 cm (5.7″)	762-6202/8000-001	85
												18 cm (7.0″)	762-6203/8000-001	86
												25.7 cm (10.1″)	762-6204/8000-001	87
 **Accessories** Memory Cards; Mounting Set; Flush-Mount and Wall-Mount Housings														88

M: Master; S: Slave; *requires an additional license

Operation and Monitoring
General Product Information

Operate, observe, visualize and diagnose in production and the process industry: WAGO's Touch Panels with various hardware configurations are available for small- to mid-sized control and visualization tasks. Focus on saving time with perfect usability and quickly created visualizations.

Adapted Versions

The right version is available for every application:
Devices with resistive touchscreens for standard control cabinet applications
Multi-touch devices with a glass surface for advanced requirements
Devices for marine applications

Touch Panels that Merge Aesthetics with High Performance

Underneath a contemporary design, WAGO's Touch Panels pack some of the industry's most powerful equipment, allowing you to solidify the high-tech image of your machine through high-quality visualizations from both CODESYS V3 and CODESYS V2 Engineering Software. The Web-Based Management feature of WAGO's controllers may also be operated using the stylish Web Panels. When configuring with CODESYS, visualizations are created based on modern technologies such as HTML5.

Industry 4.0/IoT

Recording, digitizing and linking data profitably – these are the core ideas of Industry 4.0. Using a dedicated library, WAGO's Control Panels become IoT controllers that send data from the field level to the cloud. Once in the cloud, this data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services. Existing systems also become IoT-ready, making them future-proof.

Quick Installation via Unique Mounting Design

WAGO's Touch Panel directly latches onto the control cabinet via mounting clips for quick and easy tool-free installation. Thanks to custom-developed clamps, the front of the display meets lofty IP65 protection standards. This design flexibility makes the display extremely versatile and suitable for a wide variety of applications. Furthermore, the VESA mount allows installation on a swivel arm or stand outside of the control cabinet.

Easy to Use – Directly on the Display

All WAGO's Touch Panels have status LEDs that indicate operating status and provide operational feedback. A customized configuration interface is available for customizing and commissioning the Touch Panels. All important settings are made here via Web-Based Management. For quick and easy custom settings, the display brightness can also be manually adjusted via front-mount button.

Energy-Saving Sensors Ensure Safety

WAGO's Touch Panels have an integrated proximity sensor, allowing the visualization to be automatically re-displayed from the energy-saving screensaver. An integrated sensor simultaneously detects ambient lighting levels for automatic brightness control.

Integrated PLC

In the "Control Panel" function, the devices offer an integrated PLC functionality, which is configured via CODESYS. This makes them programmable in five standardized languages. In addition to pure programming, CODESYS is also used for offline simulation, fieldbus configuration, recipe management and much more.

Scaled Visualization Functions

Displaying a visualization in a Web browser makes flexible options available. In addition to the Web Panels, visualizations can be displayed on nearly any device with a browser, including smartphones and tablets by using the WebVisu app.

When greater performance is required, devices are used as Visu Panels. In the process, all operating functions are evaluated within the device without a delay and can affect the visualization directly. Data to be displayed is read in via standardized bus systems (e.g., Modbus TCP).

Open-Source Software and Linux®

We unite what belongs together: High-performance WAGO Hardware and the future-proof Linux® Operating System. For complex tasks, you can choose between programming in IEC 61131 or directly under Linux®. WAGO's "Embedded Linux" Controllers impress with base images that are expandable via open-source packages. As a "Gold Member" of the Open Source Automation Development Lab (OSADL), WAGO supports both financing and further development of Linux® in the industrial sector. The controller firmware itself is available as a "Board Support Package" (BSP).
If you are interested, simply contact our AUTOMATION technical support.

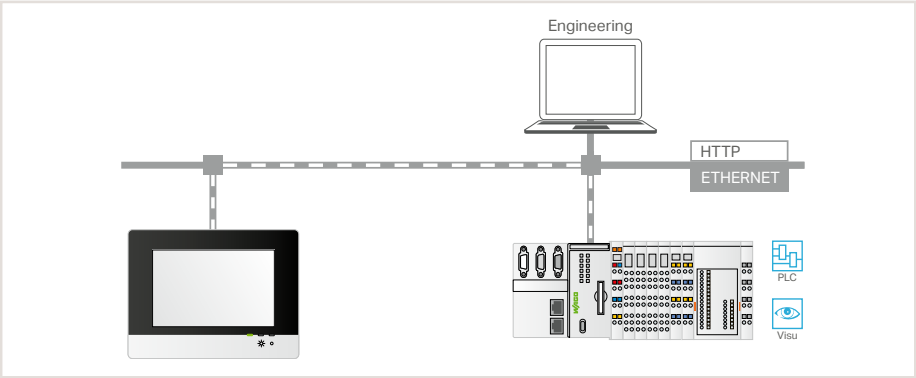
Benefits:

- An aesthetic design meets high performance
- Scaled portfolio in design and functionality
- Easy to use – directly on the display
- Quick installation via unique mounting design
- IoT-ready

Operation and Monitoring
Functional Variants

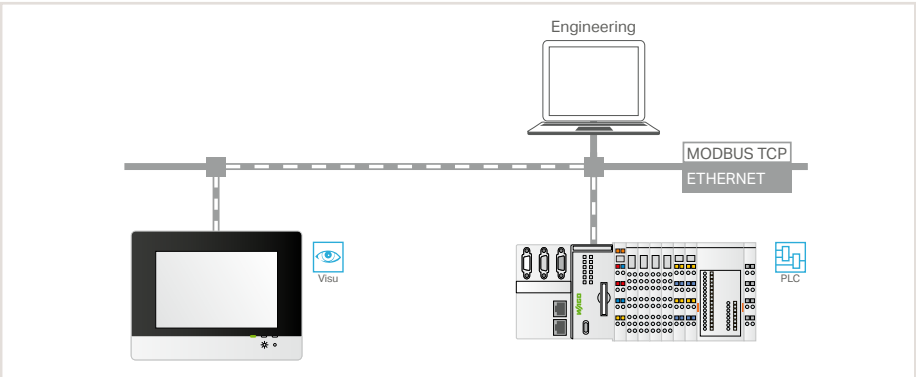
Web Panels

The operating and display devices in the "Web Panel" software configuration are provided with a Web browser for accessing and displaying controllers with integrated Web visualization via standard Web protocols. Depending on the type of execution, Web visualizations that are created with CODESYS V3 and/or with CODESYS V2 can be displayed. Web visualizations have the advantage of being displayed not only on special Visu Panels, but also on standard commercial mobile devices.



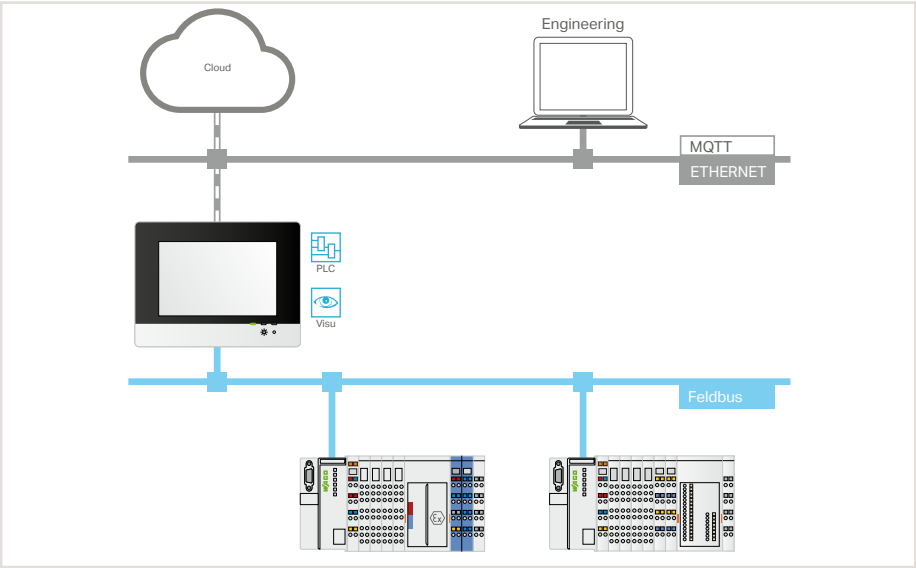
Visu Panels

Operating and display devices in the "Visu Panel" software configuration are suitable for displaying a visualization generated with CODESYS V3 and obtaining the data referenced in it from any field devices via TCP, e.g., from PFC200 Controllers. In contrast to Web Panels, the computing power required here is divided between two devices, so the computing necessary for displaying the visualization is basically performed by the Visu Panel, offloading the controller. The Visu Panel can also provide a Web visualization via the integrated Webserver.



Control Panels

Operating and display devices in the "Control Panel" software configuration allow control and visualization to be performed simultaneously, providing a very compact automation solution.
WAGO's Control Panels handle all the usual tasks that would otherwise be performed by a separate controller, including establishing a connection to the cloud, for example.

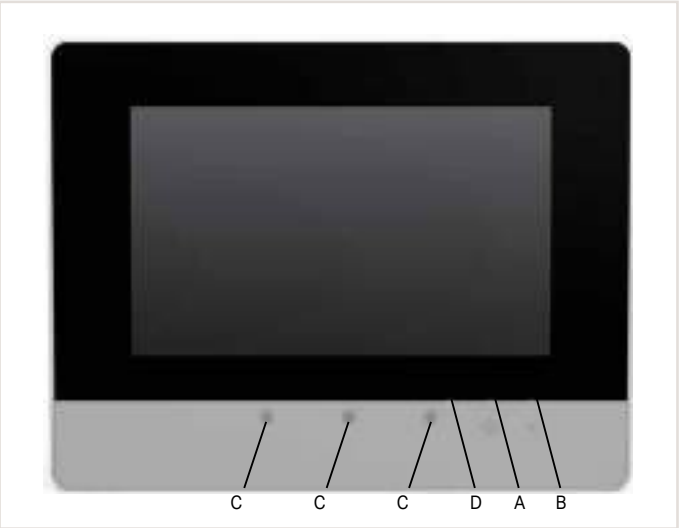


Operation and Monitoring
Interfaces and Types

Touch Panels Standard Line

By default, WAGO's Touch Panels are equipped with resistive touchscreens. In addition, they have two capacitive buttons (A and B) for on-device brightness settings. A 3-color LED (D) indicates the device status. An integrated motion and brightness sensor (C) detects when a person is approaching and automatically turns off the screensaver. In addition, it can be used for automatic brightness change (day/night).

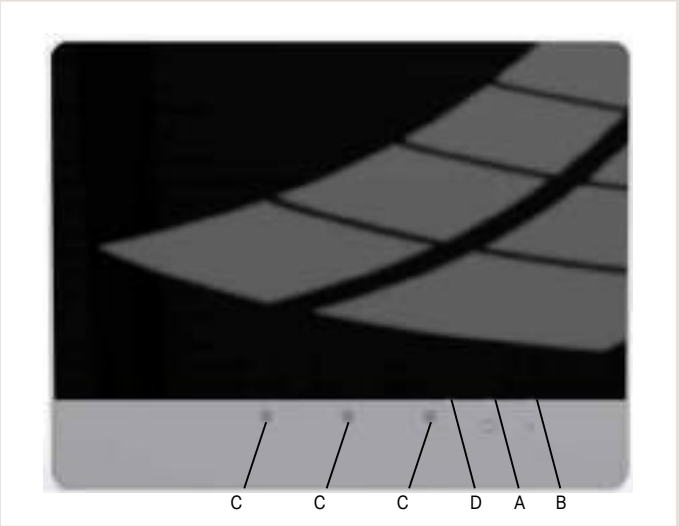
Available sizes:
- 10.9 cm (4.3″)
- 14.5 cm (5.7″)
- 18 cm (7.0″)
- 25.7 cm (10.1″)
- 39.6 cm (15.6″)
- 54.7 cm (21.5″)



Touch Panels Advanced Line

In contrast to the standard version, these devices are equipped with a capacitive touchscreen and a glass surface. This allows gesture recognition, e.g., swiping for turning pages or enlarging. In addition, the glass front features greater mechanical and chemical resistance. Operation while wearing gloves is also possible.

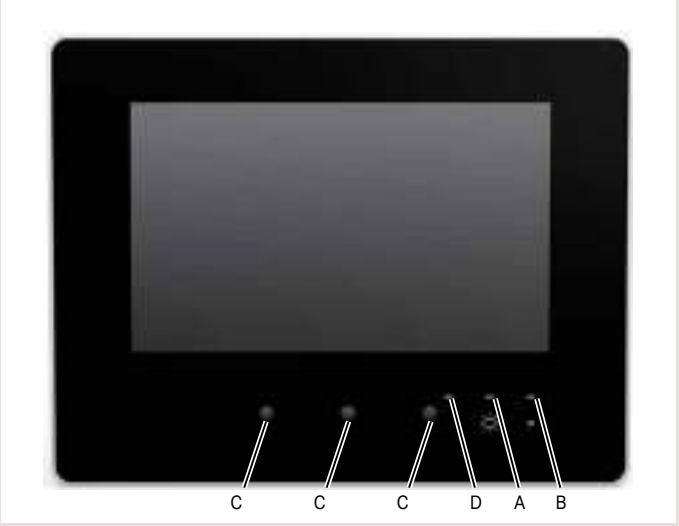
Available sizes:
- 18 cm (7.0″)
- 25.7 cm (10.1″)
- 39.6 cm (15.6″)
- 54.7 cm (21.5″)



Touch Panels Marine Line

In this version, WAGO's Touch Panels are ideal for shipbuilding applications and have special marine approvals. The matte black surface prevents disturbing reflections.

Available sizes:
- 10.9 cm (4.3″)
- 14.5 cm (5.7″)
- 18 cm (7.0″)
- 25.7 cm (10.1″)

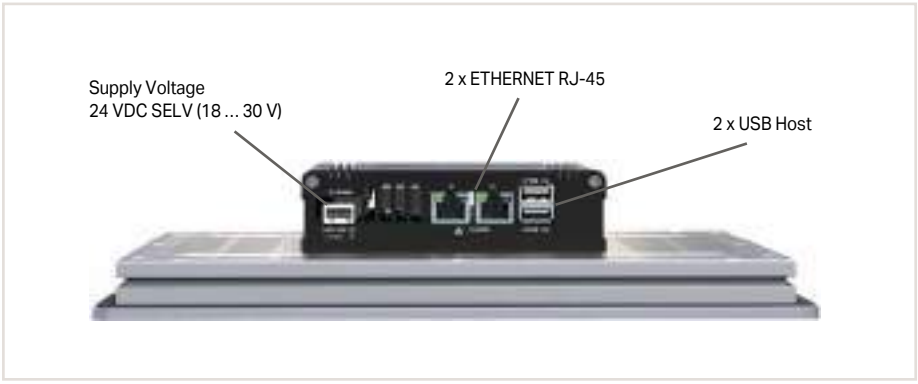


Operation and Monitoring
Interfaces and Types

Hardware Configuration PIO1

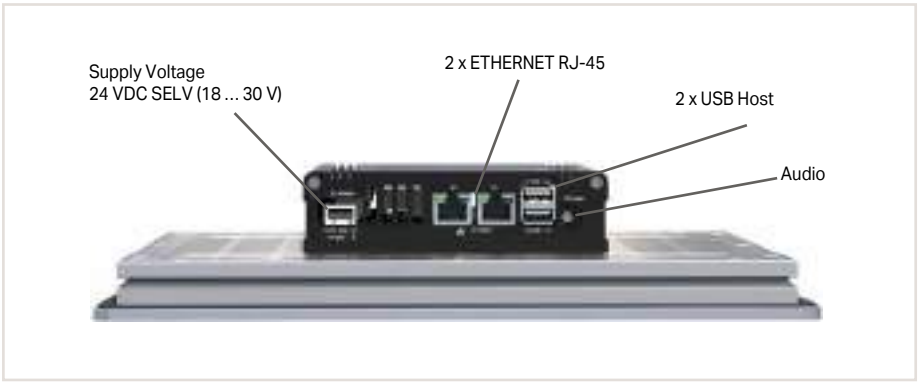
Besides the power supply connection, devices with the PIO1 hardware configuration provide:
- 2 x ETHERNET port for connecting to field devices and the engineering tool
- 2 x USB port for optional connection of a USB stick, mouse or keyboard

Devices of this type are primarily used as Web Panels.



Hardware Configuration PIO2

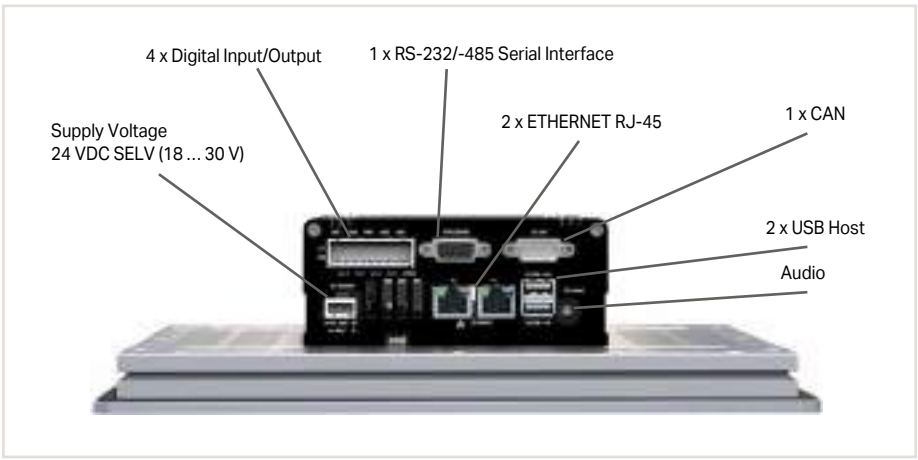
The PIO2 hardware configuration contains the same connections as PIO1 hardware. In addition, the devices are equipped with an audio interface for connecting headphones or a loudspeaker. Devices of this type are primarily used as Visu Panels.



Hardware Configuration PIO3

Devices of this type are primarily used as Control Panels. Besides the interfaces of the PIO2 configuration, they also have the following interfaces:
- 1 x CAN for controlling field devices
- 1 x RS-232/485 interface for controlling field devices with a serial interface
- 4 x digital input/output for reading/triggering digital signals

In addition, this hardware configuration has a rapid, power-failure-proof storage component that can back up retain variables of the controller without additional UPS features.



Common Control Elements

The following control elements are provided on the side of all devices:

- Run/Stop switch (only relevant for Control Panels)
- Service Switch
- 5 x LED for signaling:
  - General device states
  - Special states of the PLC runtime environment
  - States of the fieldbus connections
- 1 x microSD card for data exchange



Operation and Monitoring
Application and Installation Instructions

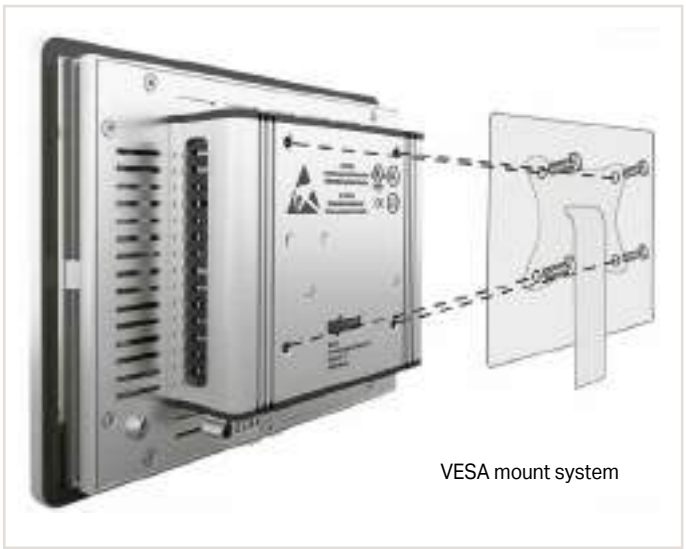


Two brightness adjustment keys are located directly on the front of the device, along with three diagnostics LEDs.



Mounting

WAGO's Touch Panel directly latches onto the control cabinet via mounting spring clips for quick and easy tool-free installation. IP65 levels of protection can be achieved for the front of the display via additional clamping screws. This design flexibility makes the display extremely versatile and suitable for a wide variety of applications.

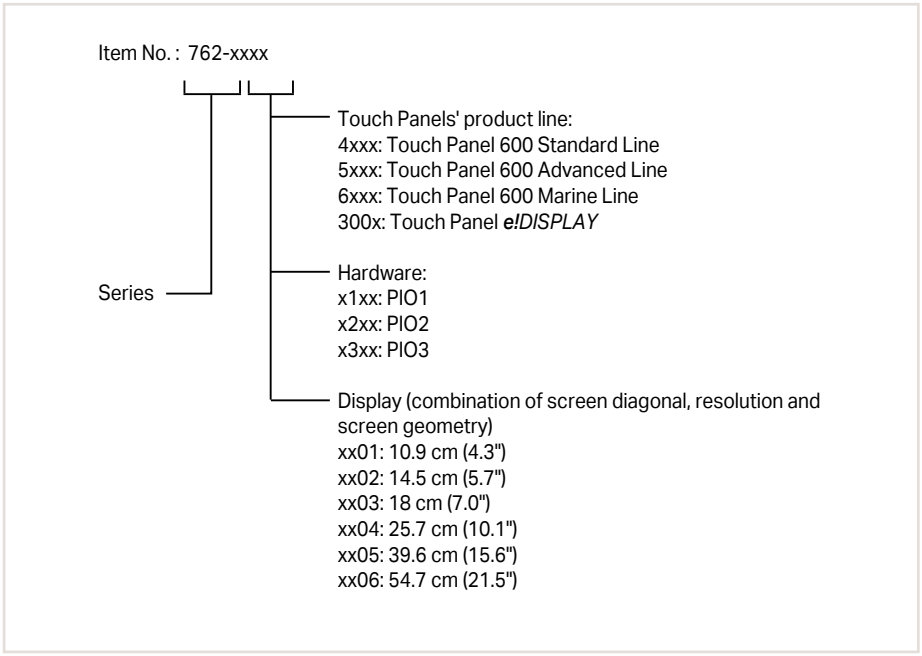


VESA mount system

The VESA mount (VESA 75 standard, 75 mm hole spacing) allows universal mounting accessories to be conveniently used outside of the control cabinet.

Operation and Monitoring
Item Number Key

Explanation of an item number key's components



3

Standards and Rated Conditions

General Technical Data	
Operating system	Real-time Linux® (with RT-Preempt patch)
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor
Supply voltage	24 VDC, SELV (−25 … +30 %) with reverse voltage protection
Indicators	Diagnostic indication (LED)
Surrounding air temperature (operation)	−20 … +55 °C
Surrounding air temperature (storage)	−20 … +80 °C
Relative humidity	10 … 90 %; non-condensing
Protection type	IP65 (front side); IP20 (rear side)

Approvals

For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Touch Panels ▶ Standard Line ▶ 10.9 cm (4.3 inches)



3

Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel	Hardware configuration PIO1; Web Panel
Item no.	**762-4301/8000-002**	**762-4201/8000-001**	**762-4101**
Order Text	**TP600; 4.3; 480x272; PIO3; CP**	**TP600; 4.3; 480x272; PIO2; VP**	**TP600; 4.3; 480x272; PIO1; WP**
Technical data			
Display	Resistive touchscreen		
Display diagonal	10.9 cm (4.3 inches)		
Contrast ratio	600:1		
Aspect	16:9		
Display colors	16 million colors		
Graphics resolution	(480 x 272) px		
Viewing angle (horizontal/vertical)	80° / 80°		
Brightness	500 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)	-
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -	-
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	-
Dimensions W x H x D	(155 x 135 x 78) mm	(155 x 135 x 58) mm	
Panel cutout (W x H)	(140 x 120) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	310 mA, without USB load; 575 mA, with USB load	290 mA, without USB load; 555 mA, with USB load	
Operating power	6.0 W, without USB load; 11.5 W, with USB load	5.8 W, without USB load; 11.3 W, with USB load	
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
For data sheet and additional information, see:	wago.com/762-4301/8000-002	wago.com/762-4201/8000-001	wago.com/762-4101
Product Expansions	**Item no.**	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000	2759-230/211-1000
Accessories	**Item no.**	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Standard Line ▶ 14.5 cm (5.7 inches)



Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel	Hardware configuration PIO1; Web Panel
Item no.	**762-4302/8000-002**	**762-4202/8000-001**	**762-4102**
Order Text	**TP600; 5.7; 640x480; PIO3; CP**	**TP600; 5.7; 640x480; PIO2; VP**	**TP600; 5.7; 640x480; PIO1; WP**
Technical data			
Display	Resistive touchscreen		
Display diagonal	14.5 cm (5.7 inches)		
Contrast ratio	300:1		
Aspect	4:3		
Display colors	262,000 colors		
Graphics resolution	(640 x 480) px		
Viewing angle (horizontal/vertical)	80° / 80°		
Brightness	630 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)	-
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -	-
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	-
Dimensions W x H x D	(172 x 163 x 78) mm	(172 x 163 x 58) mm	
Panel cutout (W x H)	(157 x 148) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	360 mA, without USB load; 640 mA, with USB load	340 mA, without USB load; 620 mA, with USB load	
Operating power	7.0 W, without USB load; 12.0 W, with USB load	6.8 W, without USB load; 11.8 W, with USB load	
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
For data sheet and additional information, see:	wago.com/762-4302/8000-002	wago.com/762-4202/8000-001	wago.com/762-4102
Product Expansions	**Item no.**	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000	2759-230/211-1000
Accessories	**Item no.**	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Standard Line ▶ 17.8 cm (7 inches)



3

Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel	Hardware configuration PIO1; Web Panel
Item no.	**762-4303/8000-002**	**762-4203/8000-001**	**762-4103**
Order Text	**TP600; 7.0; 800x480; PIO3; CP**	**TP600; 7.0; 800x480; PIO2; VP**	**TP600; 7.0; 800x480; PIO1; WP**
Technical data			
Display	Resistive touchscreen		
Display diagonal	17.8 cm (7 inches)		
Contrast ratio	800:1		
Aspect	16:9		
Display colors	16 million colors		
Graphics resolution	(800 x 480) px		
Viewing angle (horizontal/vertical)	89° / 89°		
Brightness	450 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)	-
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -	-
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	-
Dimensions W x H x D	(213 x 167 x 78) mm	(213 x 167 x 58) mm	
Panel cutout (W x H)	(198 x 152) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	460 mA, without USB load; 760 mA, with USB load	420 mA, without USB load; 720 mA, with USB load	
Operating power	8.8 W, without USB load; 13.9 W, with USB load	8.6 W, without USB load; 13.7 W, with USB load	
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
For data sheet and additional information, see:	wago.com/762-4303/8000-002	wago.com/762-4203/8000-001	wago.com/762-4103
Product Expansions	**Item no.**	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000	2759-230/211-1000
Accessories	**Item no.**	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Standard Line ▶ 25.7 cm (10.1 inches)



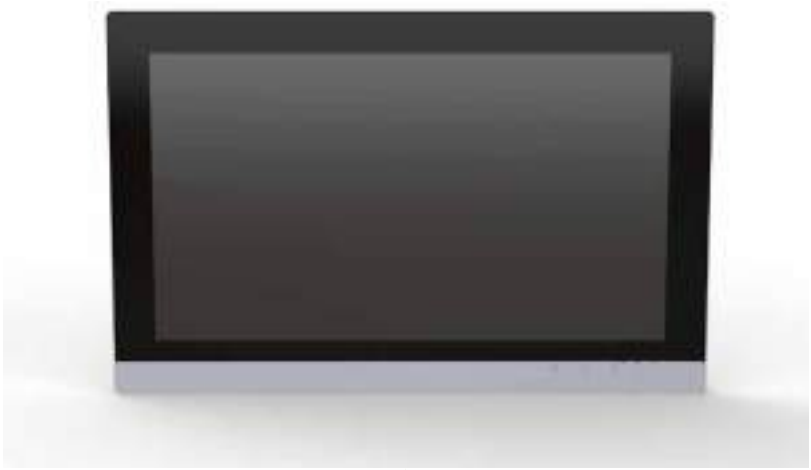
Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel	Hardware configuration PIO1; Web Panel
Item no.	**762-4304/8000-002**	**762-4204/8000-001**	**762-4104**
Order Text	**TP600; 10.1; 1280x800; PIO3; CP**	**TP600; 10.1; 1280x800; PIO2; VP**	**TP600; 10.1; 1280x800; PIO1; WP**
Technical data			
Display	Resistive touchscreen		
Display diagonal	25.7 cm (10.1 inches)		
Contrast ratio	800:1		
Aspect	16:9		
Display colors	16 million colors		
Graphics resolution	(1280 x 800) px		
Viewing angle (horizontal/vertical)	85° / 85°		
Brightness	800 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)	-
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -	-
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	-
Dimensions W x H x D	(293 x 223 x 78) mm	(293 x 223 x 58) mm	
Panel cutout (W x H)	(278 x 208) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	640 mA, without USB load; 940 mA, with USB load	620 mA, without USB load; 920 mA, with USB load	
Operating power	11.8 W, without USB load; 17.0 W, with USB load	11.6 W, without USB load; 16.8 W, with USB load	
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
For data sheet and additional information, see:	wago.com/762-4304/8000-002	wago.com/762-4204/8000-001	wago.com/762-4104
Product Expansions	**Item no.**	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000	2759-230/211-1000
Accessories	**Item no.**	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Standard Line ▶ 39.6 cm (15.6 inches)



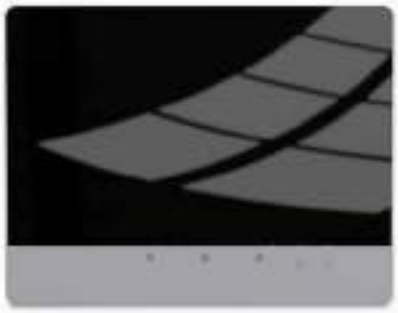
Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-4305/8000-002**	**762-4205/8000-001**
Order Text	**TP600; 15.6; 1920x1080; PIO3; CP**	**TP600; 15.6; 1920x1080; PIO2; VP**
Technical data		
Display	Resistive touchscreen	
Display diagonal	39.6 cm (15.6 inches)	
Contrast ratio	800:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	500 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(420 x 283 x 78) mm	(420 x 283 x 58) mm
Panel cutout (W x H)	(406 x 268) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	450 mA; without USB load; 679 mA; with USB load	430 mA; without USB load; 658 mA; with USB load
Operating power	10.8 W, without USB load; 16.3 W, with USB load	10.3 W, without USB load; 15.8 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
For data sheet and additional information, see:	wago.com/762-4305/8000-002	wago.com/762-4205/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Standard Line ▶ 54.7 cm (21.5 inches)



Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-4306/8000-002**	**762-4206/8000-001**
Order Text	**TP600; 21.5; 1920x1080; PIO3; CP**	**TP600; 21.5; 1920x1080; PIO2; VP**
Technical data		
Display	Resistive touchscreen	
Display diagonal	54.7 cm (21.5 inches)	
Contrast ratio	1000:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	350 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(554 x 358 x 78) mm	(554 x 358 x 58) mm
Panel cutout (W x H)	(540 x 344) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	350 mA; without USB load; 579 mA; with USB load	330 mA; without USB load; 558 mA; with USB load
Operating power	8.4 W, without USB load; 13.9 W, with USB load	7.9 W, without USB load; 13.4 W, with USB load
Ambient temperature (operation)	0 … +45 °C (when mounted vertically; −0 … +40 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
For data sheet and additional information, see:	wago.com/762-4306/8000-002	wago.com/762-4206/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

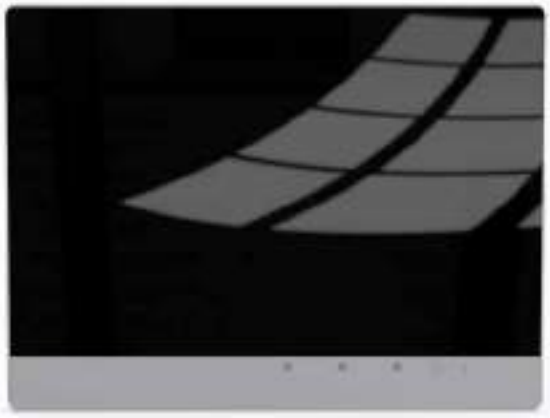
Touch Panels ▶ Advanced Line ▶ 17.8 cm (7 inches)



3

Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-5303/8000-002**	**762-5203/8000-001**
Order Text	**TP600; 7.0; 800x480; PIO3; CP**	**TP600; 7.0; 800x480; PIO2; VP**
Technical data		
Display	Multitouch glass front; capacitive touchscreen with a glass surface	
Display diagonal	17.8 cm (7 inches)	
Contrast ratio	800:1	
Aspect	16:9	
Display colors	16 million colors	
Graphics resolution	(800 x 480) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	450 cd/m²	
Controls	capacitive (glass), 2 capacitive keys, proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(213 x 167 x 78) mm	(213 x 167 x 58) mm
Panel cutout (W x H)	(198 x 152) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	460 mA, without USB load; 760 mA, with USB load	420 mA, without USB load; 720 mA, with USB load
Operating power	8.8 W, without USB load; 13.9 W, with USB load	8.6 W, without USB load; 13.7 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; –20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/762-5303/8000-002	wago.com/762-5203/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Advanced Line ▶ 25.7 cm (10.1 inches)



Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-5304/8000-002**	**762-5204/8000-001**
Order Text	**TP600; 10.1; 1280x800; PIO3; CP**	**TP600; 10.1; 1280x800; PIO2; VP**
Technical data		
Display	Multitouch glass front; capacitive touchscreen with a glass surface	
Display diagonal	25.7 cm (10.1 inches)	
Contrast ratio	800:1	
Aspect	16:9	
Display colors	16 million colors	
Graphics resolution	(1280 x 800) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	800 cd/m²	
Controls	capacitive (glass), 2 capacitive keys, proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(293 x 223 x 78) mm	(293 x 223 x 58) mm
Panel cutout (W x H)	(278 x 208) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	640 mA, without USB load; 940 mA, with USB load	620 mA, without USB load; 920 mA, with USB load
Operating power	11.8 W, without USB load; 17.0 W, with USB load	11.6 W, without USB load; 16.8 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/762-5304/8000-002	wago.com/762-5204/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

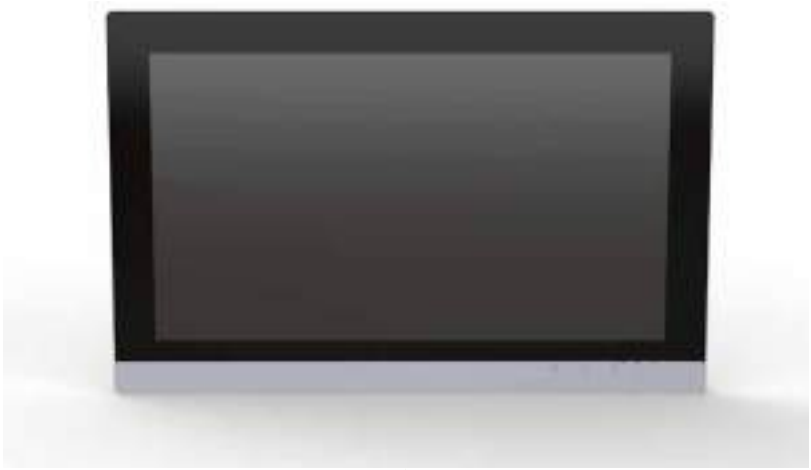
Touch Panels ▶ Advanced Line ▶ 39.6 cm (15.6 inches)



3

Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-5305/8000-002**	**762-5205/8000-001**
Order Text	**TP600; 15.6; 1920x1080; PIO3; CP**	**TP600; 15.6; 1920x1080; PIO2; VP**
Technical data		
Display	Multitouch glass front; capacitive touchscreen with a glass surface	
Display diagonal	39.6 cm (15.6 inches)	
Contrast ratio	800:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	500 cd/m²	
Controls	capacitive (glass), 2 capacitive keys, proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(420 x 283 x 78) mm	(420 x 283 x 58) mm
Panel cutout (W x H)	(406 x 268) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	450 mA; without USB load; 679 mA; with USB load	430 mA; without USB load; 658 mA; with USB load
Operating power	10.8 W, without USB load; 16.3 W, with USB load	10.3 W, without USB load; 15.8 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
For data sheet and additional information, see:	wago.com/762-5305/8000-002	wago.com/762-5205/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Advanced Line ▶ 54.7 cm (21.5 inches)



Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-5306/8000-002**	**762-5206/8000-001**
Order Text	**TP600; 21.5; 1920x1080; PIO3; CP**	**TP600; 21.5; 1920x1080; PIO2; VP**
Technical data		
Display	Multitouch glass front; capacitive touchscreen with a glass surface	
Display diagonal	54.7 cm (21.5 inches)	
Contrast ratio	1000:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	350 cd/m²	
Controls	capacitive (glass), 2 capacitive keys, proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(554 x 358 x 78) mm	(554 x 358 x 58) mm
Panel cutout (W x H)	(540 x 344) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	350 mA; without USB load; 579 mA; with USB load	330 mA; without USB load; 558 mA; with USB load
Operating power	8.4 W, without USB load; 13.9 W, with USB load	7.9 W, without USB load; 13.4 W, with USB load
Ambient temperature (operation)	0 … +45 °C (when mounted vertically; −0 … +40 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
For data sheet and additional information, see:	wago.com/762-5306/8000-002	wago.com/762-5206/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Marine Line ▶ 10.9 cm (4.3 inches)



3

Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-6301/8000-002**	**762-6201/8000-001**
Order Text	**TP600; 4.3; 480x272; PIO3; CP**	**TP600; 4.3; 480x272; PIO2; VP**
Technical data		
Display	Resistive touchscreen (black front)	
Display diagonal	10.9 cm (4.3 inches)	
Contrast ratio	600:1	
Aspect	16:9	
Display colors	16 million colors	
Graphics resolution	(480 x 272) px	
Viewing angle (horizontal/vertical)	80° / 80°	
Brightness	500 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(155 x 135 x 78) mm	(155 x 135 x 58) mm
Panel cutout (W x H)	(140 x 120) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	310 mA; without USB load; 575 mA; with USB load	290 mA, without USB load; 555 mA, with USB load
Operating power	6.0 W, without USB load; 11.5 W, with USB load	5.8 W, without USB load; 11.3 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; –20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/762-6301/8000-002	wago.com/762-6201/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Marine Line ▶ 14.5 cm (5.7 inches)



Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-6302/8000-002**	**762-6202/8000-001**
Order Text	**TP600; 5.7; 640x480; PIO3; CP**	**TP600; 5.7; 640x480; PIO2; VP**
Technical data		
Display	Resistive touchscreen (black front)	
Display diagonal	14.5 cm (5.7 inches)	
Contrast ratio	300:1	
Aspect	4:3	
Display colors	262,000 colors	
Graphics resolution	(640 x 480) px	
Viewing angle (horizontal/vertical)	80° / 80°	
Brightness	630 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	32 MB / 128 MB / -
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(172 x 163 x 78) mm	(172 x 163 x 58) mm
Panel cutout (W x H)	(157 x 148) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	360 mA; without USB load; 640 mA; with USB load	340 mA, without USB load; 620 mA, with USB load
Operating power	7.0 W, without USB load; 12.0 W, with USB load	6.8 W, without USB load; 11.8 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/762-6302/8000-002	wago.com/762-6202/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Marine Line ▶ 17.8 cm (7 inches)



3

Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-6303/8000-002**	**762-6203/8000-001**
Order Text	**TP600; 7.0; 800x480; PIO3; CP**	**TP600; 7.0; 800x480; PIO2; VP**
Technical data		
Display	Resistive touchscreen (black front)	
Display diagonal	17.8 cm (7 inches)	
Contrast ratio	800:1	
Aspect	16:9	
Display colors	16 million colors	
Graphics resolution	(800 x 480) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	450 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / -	
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(213 x 167 x 78) mm	(213 x 167 x 58) mm
Panel cutout (W x H)	(198 x 152) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	460 mA; without USB load; 760 mA; with USB load	420 mA, without USB load; 720 mA, with USB load
Operating power	8.8 W, without USB load; 13.9 W, with USB load	8.6 W, without USB load; 13.7 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; –20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/762-6303/8000-002	wago.com/762-6203/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Touch Panels ▶ Marine Line ▶ 25.7 cm (10.1 inches)



Version	Hardware configuration PIO3; Control Panel	Hardware configuration PIO2; Visu Panel
Item no.	**762-6304/8000-002**	**762-6204/8000-001**
Order Text	**TP600; 10.1; 1280x800; PIO3; CP**	**TP600; 10.1; 1280x800; PIO2; VP**
Technical data		
Display	Resistive touchscreen (black front)	
Display diagonal	25.7 cm (10.1 inches)	
Contrast ratio	800:1	
Aspect	16:9	
Display colors	16 million colors	
Graphics resolution	(1280 x 800) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	800 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**; MicroBrowser (Visualization of CODESYS V2.3), requires an additional license	EtherNet/IP™ adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP master/slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	CODESYS V3.5, from firmware release 24; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22	***e!****COCKPIT* (based on CODESYS V3)
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex® A9 Quadcore 1.0 GHz	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / -	
Type of memory card	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(293 x 223 x 78) mm	(293 x 223 x 58) mm
Panel cutout (W x H)	(278 x 208) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VSELV DC (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	640 mA; without USB load; 940 mA; with USB load	620 mA, without USB load; 920 mA, with USB load
Operating power	11.8 W, without USB load; 17.0 W, with USB load	11.6 W, without USB load; 16.8 W, with USB load
Ambient temperature (operation)	-20 … +55 °C (when mounted vertically; –20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/762-6304/8000-002	wago.com/762-6204/8000-001
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 600; Single License; Online activation	2759-286/211-1000	-
Runtime; MicroBrowser; Single License; Online activation	2759-230/211-1000	2759-230/211-1000
Runtime; EtherCAT Master; 600; Single License; Online activation	-	2759-266/211-1000
Runtime; IEC 61131 runtime environment; 600; Single License; Online activation	-	2759-216/211-1000
Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108	758-879/000-3108

Accessories





Item Description	microSD Memory Card; Temperature range: −40 … +90 °C	microSD Memory Card; Temperature range: −40 … +90 °C
Version	SLC-NAND; 2 GB	pSLC-NAND; 8 GB
Item No.	758-879/000-3102	758-879/000-3108
Technical Data		
Memory	2 GB (SLC)	8 GB (pSLC)
Read/write cycles (max.)	20 MB/s / 17 MB/s	48 MB/s / 45 MB/s
MTBF	4,000,000 h	2,000,000 h
Service life	100,000 write cycles (per cell)	20,000 write cycles (per cell)
Data storage	10 years	10 years
Surrounding air temperature (operation)	−40 … +90 °C	−40 … +90 °C
Surrounding air temperature (storage)	−40 … +90 °C	−40 … +90 °C
Relative humidity	95 %, non-condensing	95 %, non-condensing
Dimensions W x H x D	15 x 11 x 1 mm	15 x 11 x 1 mm
Vibration resistance	15g	15g
Shock resistance	50g	50g



Connection Cable		
USB A-B	Item No.	PU
3 m	758-879/000-101	1



Clamping Element; for Touch Panels		
	Item No.	PU
4 pcs	762-9001	1

Flush-Mount Housing for Touch Panels 600





Item Description	WAGO Flush-Mount Housing for Touch Panels 600
Version	25.7 cm (10.1") 80.0 mm
Item No.	762-9324

Technical Data

Dimensions W x H x D (mm)	293 x 223 x 80
Panel cutout W x H (mm)	281 x 211
Weight	1330 g
Surrounding air temperature (operation)	–20 … +40 °C





Item Description	WAGO Flush-Mount Housing for Touch Panels 600
Version	39.6 cm (15.6") 80.0 mm
Item No.	762-9325

Technical Data

Dimensions W x H x D (mm)	420 x 282 x 80
Panel cutout W x H (mm)	409 x 271
Weight	2120 g
Surrounding air temperature (operation)	–20 … +40 °C

Surface-Mounted Housing for Touch Panel 600; Visu Panel





3

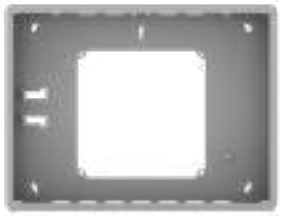
Item Description	Surface-Mounted Housing for Touch Panel 600; 25.7 cm (10.1"); 52.5 mm; Visu Panel
Item No.	762-9214
Technical Data	
Dimensions W x H x D (mm)	292.8 x 222.6 x 52.5
Weight	1300 g



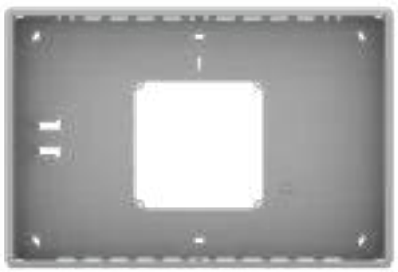


Item Description	Surface-Mounted Housing for Touch Panel 600; 39.6 cm (15.6"); 52.5 mm; Visu Panel
Item No.	762-9215
Technical Data	
Dimensions W x H x D (mm)	420 x 282 x 52.5
Weight	2500 g

Surface-Mounted Housing for Touch Panel 600; Control Panel


Item Description	Surface-Mounted Housing for Touch Panel 600; 25.7 cm (10.1"); 72.0 mm; Control Panel
Item No.	762-9314
Technical Data	
Dimensions W x H x D (mm)	292.8 x 222.6 x 72
Weight	1600 g


Item Description	Surface-Mounted Housing for Touch Panel 600; 39.6 cm (15.6"); 72.0 mm; Control Panel
Item No.	762-9315
Technical Data	
Dimensions W x H x D (mm)	420 x 282 x 72
Weight	3000 g



Edge Computing

Touch Panels 600; Control Panel Hardware Configuration

- Merging of control and visualization
- 10.9 … 54.7 cm (4.3 … 21.5″)

◄ Section 3

Edge Computing

- Models include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

Compact Controller 100

Maximum Performance in Minimum Space:

- Controller with a real-time Linux® operating system
- Compact controller with I/Os in a DIN-rail-mount enclosure
- Manufacturer-independent CODESYS V3 engineering environment

Section 5 ►

Controllers

- Scalable controller family with various interfaces
- Microcontrollers
- Readily combines with the modules of the WAGO I/O System 750

Section 6 ►►

Edge Computing
Contents

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Edge Devices, General Product Information		95

	CPU	Modbus (TCP, UDP)	EtherNet/IP	EtherCAT	CANopen	BACnet/IP	Telecontrol Protocols	IoT Protocols	Description	Item No.	Page
	ARM® Cortex A9; 1 GHz	**M/S**	**M/S**	**x**	**x**	**x***	**x***	**x**	Edge Controller; 2 x ETHERNET, 2 x USB, 1 x USB-C, HDMI, CAN, DI/DO, RS-232/485, Audio; Control	**752-8303/8000-002**	96
	Intel® Atom Quad Core E3845 1.91 GHz							**x**	Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP; 4GB RAM; 64GB FLASH	**752-9400**	98
								x	Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP; 8GB RAM; 64GB FLASH	**752-9401**	98
	Intel® i7-7600U 2.8 GHz							**x**	Edge Computer; 4 x ETHERNET, 4 x USB, HDMI, DP; 16 GB RAM, 256 GB Flash	**752-9800**	99

M: Master, S: Slave; *requires an additional license

4

Edge Computing
General Product Information

Edge Computing

In many cases, transferring data from machines and systems directly to a cloud solution is resource-intensive and infeasible due to the low latency required in industrial environments. Edge computing has established itself because it combines the advantages of decentralized cloud architectures with those of a local network architecture.

Perfectly Use Data in the Field

Intelligent processes are requiring more and more computing power, and this places corresponding demands on databases directly in the field. WAGO offers the right hardware for any edge application.

Where real-time data is involved, data processing is becoming increasingly important. More and more computing power is needed, and this places corresponding demands on databases, as well as analysis and optimization algorithms, directly in the field. WAGO offers solutions in the form of the Edge Controller and Edge Computer. These devices process applications right on the machine, offloading the controllers so they can focus on their actual control duties with low latency and a high level of determinism.

Easy Cloud Connection

Collected data can be evaluated directly, displayed graphically and made available to WAGO Cloud, for example. Transfer may be appropriate for especially critical data, for instance. Both of the devices have additional advantages when data needs to be buffered temporarily, for instance in mobile applications. They are based on cabinet-compatible hardware and can be powered with 24 V, making them a perfect fit for the automation environment.

Equipped for High Security

With a large share of open source software, the devices are well equipped for cybersecurity because the large open-source community continually reviews the source code and provides bug fixes. Besides the standard VPN applications, the devices are open for special security solutions such as Tosibox and Hooc. Thus, in addition to WAGO's own VPN solution, users can also access other remote maintenance solutions with a high degree of security, in line with the #openandeasy principle. The Edge Computer also offers a TPM 2.0 chip, which provides encryption generators as well as a safe haven for certificates and keys.



docker OPC UA

WAGO Edge Devices
General Product Information



WAGO Edge Controller

The Edge Controller features an ARM Cortex-A9 quad-core processor and offers an extensive selection of interfaces, including two ETHERNET ports, one CANopen port and two USB ports. It also has a serial interface and four digital inputs/outputs for connecting local devices or sensors.

Your Benefits:

- Easy integration into existing systems
- Space-saving installation
- Can be configured in the familiar CODESYS environment



WAGO Edge Computer

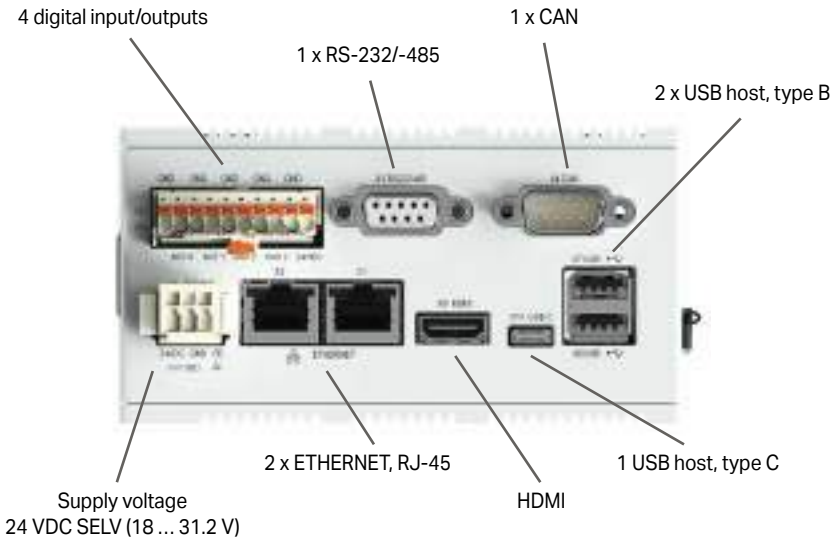
Where demands on computing power and memory are high, WAGO offers the perfect solution with the Edge Computer. It features a 1.91 GHz quad-core Atom processor or Intel® i7-7600U with 2.8 GHz and is equipped with standard Debian Linux. Users can draw on abundant resources and model entire automation processes on them.

Your Benefits:

- Features high computing power and scalable storage
- Compact and low-maintenance
- Allows use of standard software

Edge Controller; 2 x ETHERNET, 2 x USB, 1 x USB-C, HDMI, CAN, DI/DO, RS-232/485, Audio; Control





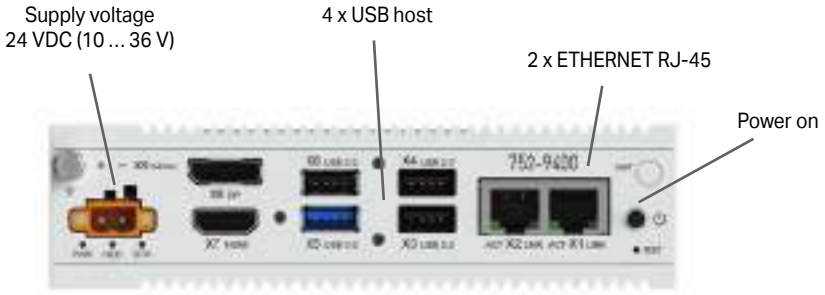
4

Item Description	**Edge Controller; 2 x ETHERNET, 2 x USB, 1 x USB-C, HDMI, CAN, DI/DO, RS-232/485, Audio; Control**
Item No.	**752-8303/8000-002**
Order Text	Edge Controller

Technical Data	
Communication	Web browser; Web browser (HTML5); Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; CANopen; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, requires an additional license; Telecontrol protocols, requires an additional license
Visualization	Web Visu; Target Visu
ETHERNET protocols	DHCP, DNS, FTP, FTPS, HTTP, HTTPS, SSH
Operating system	Real-time Linux (with RT-Preempt patch)
Processor	ARM®Cortex® A9
Main memory (RAM)	2 GB, DDR3 SDRAM
Internal memory (flash)	4 GB, eMMC
Non-volatile memory (hardware)	128 kB
Memory expansion	microSD (max. 2 GB), microSDHC (max. 32 GB)
RTC (Real-Time Clock)	Maintenance-free, buffering: min. 6 weeks
Connection technology: communication/fieldbus	ETHERNET: 2 x RJ-45 socket; CAN: D-sub 9 plug; RS-232/-485: D-sub 9 socket
Baud rate	ETHERNET: 10/100 Mbit/s; CAN: 1 Mbaud
Interfaces	2 x USB 2.0 socket, type A; 1 x USB OTG socket, type C; HDMI; Audio
Onboard I/Os	4 x DIO, configurable
Indicators	3-color LED – red, green, blue; 4 x red/green LED
Supply voltage	SELV 24 VDC (−25 … +30 %), LPS; with reverse voltage protection
Input current (24 V)	120 mA; without USB load; 390 mA; with USB load
Operating power	2.9 W; without USB load; 9.4 W; with USB load
Dimensions (W x H x D)	65 × 123 × 115 mm
Weight	815 g
Housing material	Aluminum, powder-coated
Mounting type	DIN-35-rail mount
Surrounding air temperature (operation)	−20 … +60 °C
Surrounding air temperature (storage)	−20 … +80 °C
Protection type	IP20
Relative humidity (without condensation)	90 %
Approvals	CE
For data sheet and additional information, see:	wago.com/752-8303/8000-002

Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP; 4 or 8 GB RAM, 64 GB Flash





- 2 x ETHERNET interface for connecting to field devices and IT networks
- 4 x USB interface for optional connection of a USB stick, mouse or keyboard
- HDMI and display port interfaces for connecting a display

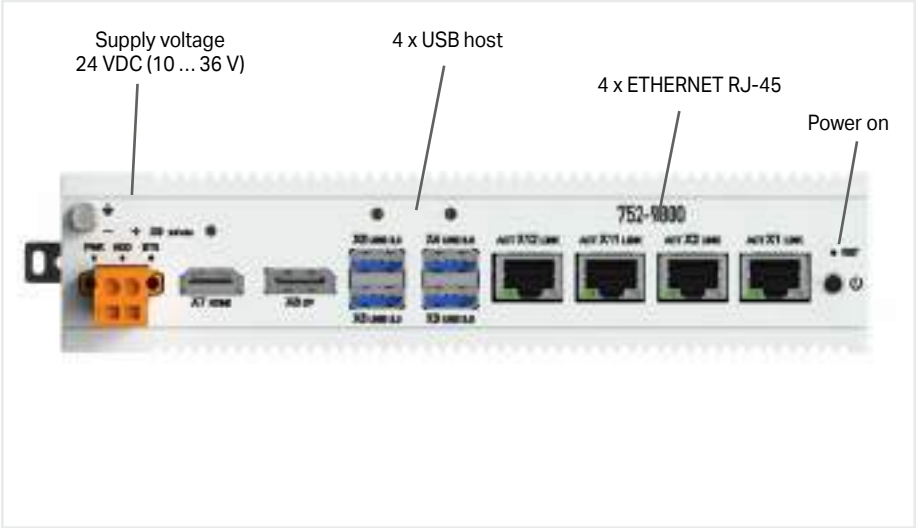
4

Item Description	Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP	
Version	4 GB RAM, 64 GB Flash	8 GB RAM, 64 GB Flash
Item No.	752-9400	752-9401
Order Text	EC; 2ETH, 4USB, HDMI, DP; 4GB RAM, 64GB Flash	EC; 2ETH, 4USB, HDMI, DP; 8GB RAM, 64GB Flash

Technical Data		
Communication	Web browser	
Visualization	Web server	
ETHERNET protocols	DHCP; DNS; HTTP; HTTPS; SSH; SCP; SFTP	
Operating system	Debian Linux 10.9	
Processor	Intel® Atom Quadcore E3845 1.91 GHz	
Main memory (RAM)	4 GB; DDR3L 1333 MHz	8 GB; DDR3L 1333 MHz
Internal memory (flash)	64 GB; mSATA SSD	
Memory expansion	Full-size mPCIe slot; Drive mount for a 2.5" SSD HDD memory card (height: 9.5 mm)	
RTC (Real-Time Clock)	Battery type BR2032; 3 VDC	
Connection technology: communication/fieldbus	ETHERNET: 2 x RJ-45 socket	
Baud rate	ETHERNET: 10/100/1000 Mbit/s	
Interfaces	1 x USB 3.0 socket, Type A; 3 x USB 2.0 socket, Type A; 1 x HDMI v1.4, 1920 x 1080p @60Hz; 1 x DisplayPort 1.2, 2560 x 440p	
Indicators	3 x LED	
Supply voltage	24 VDC (10 … 36 V)	
Input current (24 V)	1250 mA (typ.); 1750 mA (max.)	
Operating power	30 W (typ.); 42 W (max.)	
Dimensions (W x H x D)	40 x 150 x 105 mm	
Weight	809 g	
Housing material	Aluminum, powder-coated	
Mounting type	DIN-35-rail mount	
Surrounding air temperature (operation)	–20 … +60 °C	
Surrounding air temperature (storage)	–40 … +85 °C	
Protection type	IP40	
Relative humidity (without condensation)	95 %	
Approvals	E482462 Ordinary Locations, UL62368	
For data sheet and additional information, see:	wago.com/752-9400	wago.com/752-9401

Edge Computer; 4 x ETHERNET, 4 x USB, HDMI, DP; 16 GB RAM, 256 GB Flash





- 4 ETHERNET interfaces for connecting to field devices and IT network
- 4 USB ports for the optional connection of a USB stick, mouse or keyboard
- HDMI and display port interfaces for connecting a display

4

Item Description	**Edge Computer; 4 x ETHERNET, 4 x USB, HDMI, DP; 16 GB RAM, 256 GB Flash**
Item No.	**752-9800**
Order Text	EPC; 4ETH, 4USB, HDMI, DP; 16GB RAM, 256GB Flash

Technical Data	
Communication	Web browser
Visualization	Web server
ETHERNET protocols	DHCP; DNS; HTTP; HTTPS; SSH; SCP; SFTP
Operating system	Debian Linux 10.9
Processor	Intel® i7-7600U 2.8 GHz (max. 3.90 GHz)
Main memory (RAM)	16 GB; DDR4 2133 MHz
Internal memory (flash)	256 GB; SATA 2.5" SSD
Memory expansion	Full-size mPCIe slot; Drive slot for one 2.5" SSD HDD memory card (height 9.5 mm)
RTC (Real-Time Clock)	Battery type BR2032; 3 VDC
Connection technology: communication/fieldbus	ETHERNET: 4 x RJ-45 1000BASE-T
Baud rate	ETHERNET: 10/100/1000 Mbit/s
Interfaces	4 x USB 3.0 (Type A); 1 x HDMI v1.4, 1920 x 1080p @60Hz; 1 x DisplayPort 1.2, 2560 x 440p
Indicators	3 LEDs
Supply voltage	24 VDC (10 … 36 V)
Input current (24 V)	2292 mA typ.; 3967 mA max.
Operating power	55 W typ.; 95.2 W max.
Dimensions (W x H x D)	45 x 200 x 140 mm
Weight	1810 g
Housing material	Aluminum, powder-coated
Mounting type	DIN-35-rail mount
Surrounding air temperature (operation)	-20 … +60 °C
Surrounding air temperature (storage)	-40 … +85 °C
Protection type	IP40
Relative humidity (without condensation)	95 %
Approvals	CE*, FCC*, UL*; *pending
For data sheet and additional information, see:	wago.com/752-9800



Compact Controller 100

Touch Panels 600; Control Panel Hardware Configuration

- Merging of control and visualization
- 10.9 … 54.7 cm (4.3 … 21.5″)

◄◄ Section 3

Edge Computing

- Models include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

◄ Section 4

Compact Controller 100

Maximum Performance in Minimum Space:

- Controller with a real-time Linux® operating system
- Compact controller with I/Os in a DIN-rail-mount enclosure
- Manufacturer-independent CODESYS V3 engineering environment

Controllers

- Scalable controller family with various interfaces
- Microcontrollers
- Readily combines with the modules of the WAGO I/O System 750

Section 6 ►

Compact Controller 100
Contents

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Interfaces and Types	103
Installation Instructions	104
Standards and Rated Conditions	105
Approvals	105

	CPU	Modbus (TCP, UDP)	EtherNet/IP™	EtherCAT	Modbus RTU	Telecontrol Protocols	IoT Protocols	Description	Item No.	
	Cortex A7; 650 MHz	M/S	M/S	M	x	x*	x	Compact Controller 100; 2 x ETHERNET, RS-485; 8DI, 4DO, 2Ai, 2AO, 2NI1K/PT1K	751-9301	106

M: Master, S: Slave; *requires an additional license

5

Compact Controller 100
General Product Information

**Compact Controller 100:
Maximum Performance in Minimum Space**

The new WAGO Compact Controller 100 with integrated I/Os offers maximum performance in minimum space.
WAGO's Compact Controller 100 (751-9301) is an attractive solution for various applications that can adapt rapidly to users' needs. The new controller also allows WAGO to solidify its automation portfolio downstream of the proven PFC200. Typical of the WAGO controller family, this Compact Controller runs a real-time Linux operating system and supports standard fieldbus protocols – a clear commitment to openness and interoperability.

Quick and Easy Implementation of IoT Applications

This compact device is freely programmable with CODESYS V3, but can also be used with IEC 61131-independent software, for example, Node-RED, Python or C++. Subsequent installation of Docker® as a virtualization environment is also straightforward. This addition makes the Compact Controller 100 a full-fledged IIoT device with gateway functionality. In this way, WAGO perfectly combines the requirements of two different domains into one device, bringing its expertise to bear where "automation meets IT."

Embedded Linux

Embedded Linux is available for users who prefer to use a lean, secure operating system directly. This real-time Linux® provides a wide range of advantages, including the flexibility of being able to adapt open-source code to your specific needs at any time. Furthermore, this robust operating system ensures a high level of stability and is subject to continuous optimization by the active open-source community. This keeps users both up to date and ready to adapt to what's next – especially when it comes to security.

Engineering with CODESYS V3

The future of automation lies in strong partnerships and co-creation of products and solutions. That's why WAGO offers the Compact Controller 100 with the manufacturer-independent CODESYS V3 automation software. It offers the functions and technologies used in modern automation today, has an active community that keeps it completely up to date and offers users many new options thanks to its manufacturer-independence and interoperability.

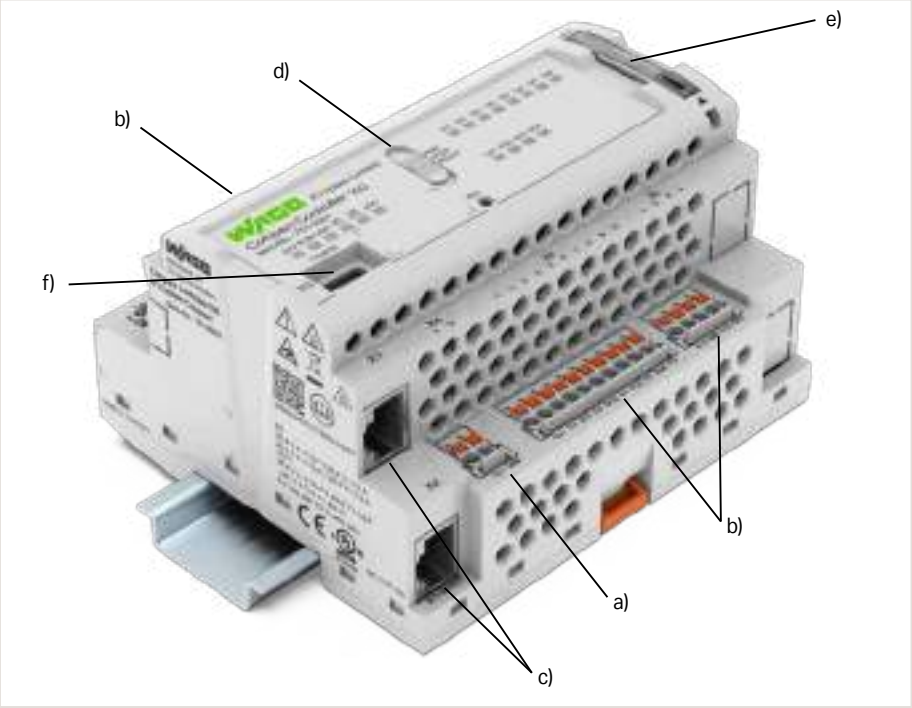
Compact Design

Thanks to its design as a DIN-rail built-in installation device (per DIN 43880), the new controller can also be mounted on small distribution boards. The I/O unit is housed in a compact enclosure along with the controller, so no additional space is required for extra control components. The removable wiring interface makes installation and device replacement easier.

Advantages:

- Compact controller with I/Os in a DIN-rail mountable device housing
- Controller with real-time Linux® operating system
- Manufacturer-independent CODESYS V3 engineering environment

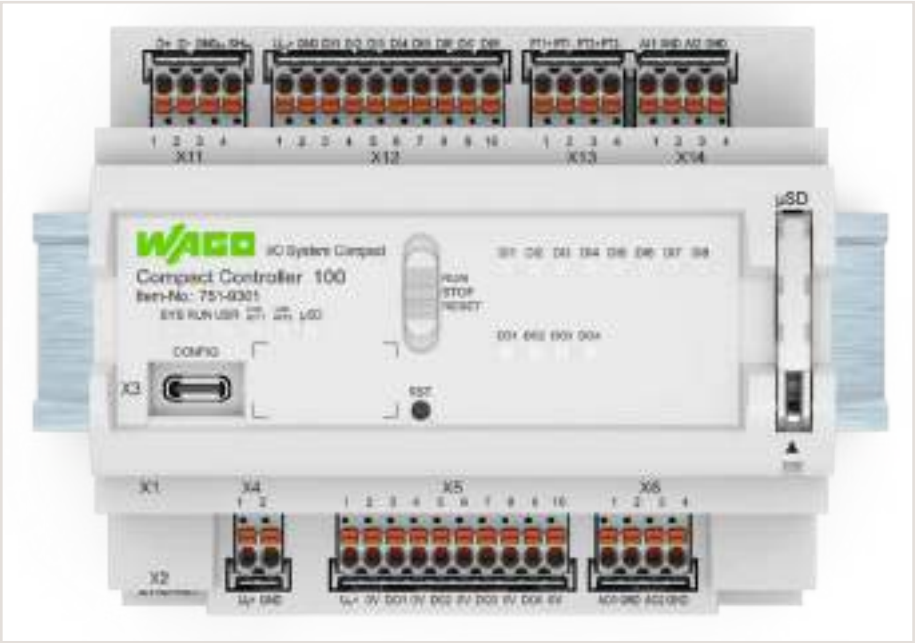
Compact Controller 100
Interfaces and Types



DIN-rail mountable device housing

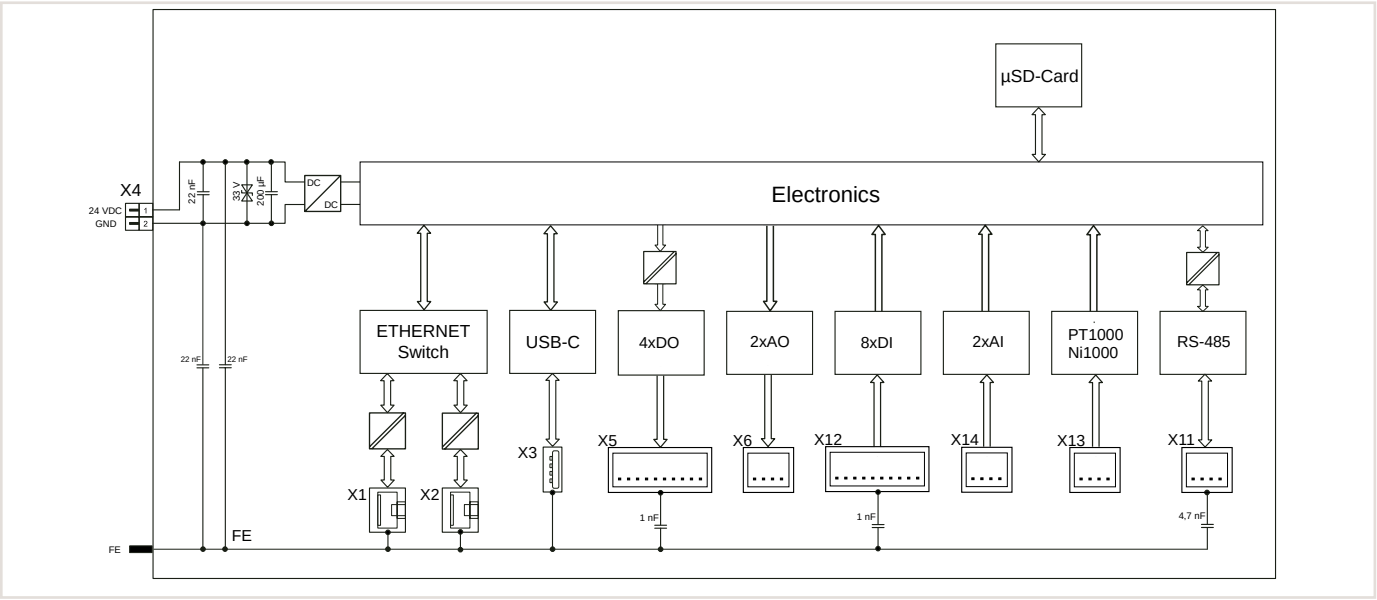
- Supply voltage (system) (a), Inputs/Outputs and Serial interface (b); Connection technology: picoMAX® 3.5; Push-in CAGE CLAMP®; Conductor range: 0.2 … 1.5 mm² / 24 … 14 AWG
- ETHERNET 2 x RJ-45 (c)
- Operating mode switch (d)
- microSD card slot for external storage media (e)
- Service interface USB-C (f)

Compact Controller 100
General Product Information



- Communication interface RS-485 – "X11"
- Supply voltage (field) U_{OUT}, GND; Digital inputs DI1 ... DI8 – "X12"
- Analog temperature sensors PT1 ... PT2 – "X13"
- Analog inputs AI1 ... AI2 – "X14"

- Network connections ETHERNET – "X1", "X2"
- Service interface – "X3"
- Supply voltage system – "X4"
- Supply voltage (field) U_{IN}, 0 V; Digital outputs DO1 ... DO4 – "X5"
- Analog outputs AO1 ... AO2 – "X6"



5

Compact Controller 100
Standards and Rated Conditions

General Specifications	
Programming languages per IEC 61131-3	Instruction List (IL); Ladder Diagram (LD); Function Block Diagram (FBD); Continuous Function Chart (CFC); Structured Text (ST); Sequential Function Chart (SFC)
Programming environment	CODESYS V3.5; Node RED
Configuration options	CODESYS V3.5; ETHERNET Settings; Web-Based Management; WAG-Ouploa; WAGO Solution Builder
Baud rate	ETHERNET: 10/100 Mbit/s
Transmission medium (communication/ fieldbus)	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Type of memory card	microSD up to 32 GB (all guaranteed properties only valid with WAGO's memory card)
Memory card slot	Push-push mechanism
Indicators	LED (SYS, RUN), red/green: Status of system; LED (USR) red/green: User programmable status (can be used via CODESYS library); LED (SD) orange: Status of µSD; LED (LNK/ACT) green: Network connection via ports 1 … 2; LED (DI1 … 8) green: Status of inputs; LED (DO1 … 4) green: Status of outputs
Controls	Operating mode switch (RUN, STOP, RESET); reset button
Isolation	1250 V (DC 1 min., between system and field level)

Physical Data	
Width	108 mm / 4.252 inch
Height	90 mm / 3.543 inch
Depth from upper-edge of DIN-rail	55 mm / 2.165 inch

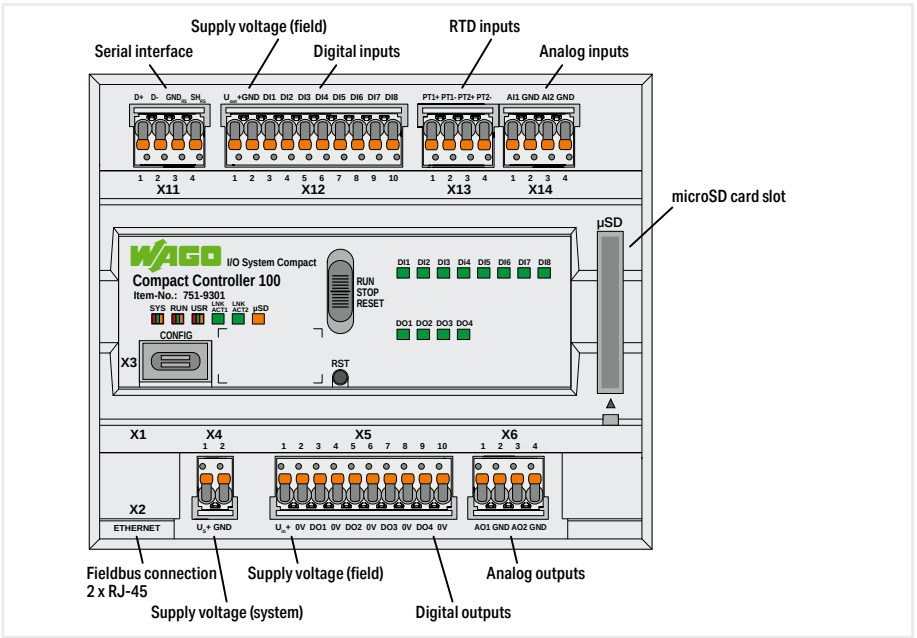
Mechanical Data	
Weight	348 g
Housing material	Polycarbonate, polyamid

Environmental Requirements	
Ambient temperature (operation)	-25 … +60 °C
Ambient temperature (storage)	-40 … +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	0 … 2000 m / 0 … 6562 ft
Relative humidity (without condensation)	95 %
Mounting position	any
Mounting type	DIN-35 rail
Vibration resistance	1g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per EN 61000-6-3

Compact controller ▶ 2 x ETHERNET, RS-485; 8DI, 4DO, 2Ai, 2AO, 2NI1K/PT1K



751-9301



Version	Standard
Item no.	**751-9301**
Order Text	**Compact Controller 100**

Technical data	
Communication	Modbus (TCP, UDP); EtherCAT® Master; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; Modbus® RTU; RS-485 interface; MQTT; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web-Visu
Programming environment	CODESYS V3.5; Node RED
CPU	Cortex A7; 650 MHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)	512 MB
Internal memory (flash)	4096 MB
Non-volatile hardware memory	128 KB
Data memory	128 MB
Program memory	32 MB
Non-volatile software memory	128 KB
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (*picoMAX*® 3.5; Push-in CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-15 … +20 %); via pluggable connector (*picoMAX*® 3.5; Push-in CAGE CLAMP® connection)
Current consumption (system) max.	500 mA
Current consumption (field) max.	2000 mA
Signal type	Voltage; Resistance measurement
Number of digital inputs	8
Input characteristic	Type 3 (per EN 61131-2)
Number of digital outputs	4
Output current (per channel)	500 mA (DC)
Output current	short-circuit-protected
Signal type (voltage)	0 … 10 VDC
Number of analog inputs	2
Resolution of analog inputs	16 bits
Number of analog outputs	2
Resolution of analog outputs	12 bits
Load impedance (voltage output)	≥ 5 kΩ
Number of measurement inputs	2
Temperature range	−60 °C … 350 °C, PT1000, Ni1000
Ambient temperature (operation)	-25 … +60 °C
Approvals	CE; UKCA; cULus OrdLoc
For data sheet and additional information, see:	wago.com/751-9301

Accessories	**Item no.**
Memory Card SD Micro; 2 GB	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB	758-879/000-3108

5



Controllers

Touch Panels 600; Control Panel Hardware Configuration

- Merging of control and visualization
- 10.9 … 54.7 cm (4.3 … 21.5")

◄◄◄ Section 3

Edge Computing

- Models include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

◄◄ Section 4

Compact Controller 100

Maximum Performance in Minimum Space:

- Controller with a real-time Linux® operating system
- Compact controller with I/Os in a DIN-rail-mount enclosure
- Manufacturer-independent CODESYS V3 engineering environment

◄ Section 5

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

Section 6.1 ►

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

Section 6.2 ►►

Basic Controllers 100

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

Section 6.3 ►►►

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Section 6.4 ►►►►

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 6.5 ►►►►►

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

Section 6.6 ►►►►►►

Controllers
Overview

		Section	Page
	**Touch Panels 600; Control Panel Hardware Configuration** Combining controller and visualization into one device	3	67
	**Edge Computing** Edge Controller	4	93
	**Compact Controller 100** Compact controller with I/Os in a DIN-rail-mount enclosure	5	101
	**Controllers PFC100 and PFC200** Scalable IP20 controller family with various interfaces	6.1	111
	**Controllers PFC200 XTR** Scalable IP20 controllers with various interfaces for eXTReme environmental conditions	6.2	131
	**Basic Controllers 100** IP20 microcontrollers; programmable with CODESYS V3	6.3	143
	**Controllers 750** IP20 microcontrollers	6.4	151
	**Controllers 750 XTR** IP20 microcontrollers for eXTReme environments	6.5	173
	**Starter Kits** For the entry into the most diverse application possibilities **IoT Boxes** Integrating machines and plants into the Internet of Things	6.6	181

Benefits:

- Fieldbus-independent – compatible with all prominent fieldbus protocols and ETHERNET standards
- Scalable performance – Controllers, Control Panels, PFC100 and PFC200
- Programming per IEC 61131-3
- Flexible platform adapts to diverse applications and environments
- Combinable with the WAGO I/O System 750 – modular, compact, versatile



Controllers PFC100/PFC200

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

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Section 6.3 ►►

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Section 6.4 ►►►

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Section 6.5 ►►►►

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

Section 6.6 ►►►►►

Controllers PFC100/PFC200
Contents

	Page
General Product Information	112
Variants	113
Interfaces and Types	113
Installation Instructions	114
Item Number Key	114
Standards and Rated Conditions	115
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	CPU	Modbus (TCP, UDP)	EtherNet/IP™	EtherCAT	PROFINET	PROFIBUS	CANopen	BACnet/IP	OPC UA	Modbus RTU	Telecontrol Protocols	IoT Protocols	Description	Item No. Standard	Item No. Extended Temperature	Page
	Cortex A8; 600 MHz	M/S	S									x	Controller PFC100; 2 x ETHERNET; Eco	750-8100		116
	Cortex A8; 600 MHz	M/S	S									x	Controller PFC100; 2 x ETHERNET	750-8101	750-8101/025-000	117
		M/S	S							x		x	Controller PFC100; 2 x ETHERNET, RS-232/-485	750-8102	750-8102/025-000	118
	Cortex A8; 1 GHz	M/S	M/S	M				x*	x	x	x*	x	Controller PFC200; 2nd Generation; 4 x ETHERNET	750-8210	750-8210/025-000	119
	Cortex A8; 1 GHz	M/S	M/S	M				x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, 2 x SFP-Ports	750-8211		120
	Cortex A8; 1 GHz	M/S	M/S	M				x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485	750-8212	750-8212/025-000	121
		M/S	M/S	M				x*	x	x	x	x	Telecontrol Technology		750-8212/025-001 750-8212/025-002	121
		M/S	M/S	M				x	x	x	x*	x	BACnet/IP	750-8212/000-100		122
	Cortex A8; 1 GHz	M/S	M/S	M			M/S	x*	x		x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, CAN, CANopen	750-8213		123
	Cortex A8; 1 GHz	M/S	M/S	M			M/S		x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen	750-8214		124
	Cortex A8; 1 GHz	M/S	M/S	M	S		M/S		x		x*	x	Controller PFC200; 2nd Generation; 4 x ETHERNET, CAN, CANopen, USB	750-8215		125
	Cortex A8; 1 GHz	M/S	M/S	M		S	M/S	x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave	750-8216	750-8216/025-000	126
		M/S	M/S	M		S	M/S	x*	x	x	x	x	Telecontrol Technology		750-8216/025-001	126
	Cortex A8; 1 GHz	M/S	S	M*				x*		x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, Mobile Radio Module 4G	750-8217	750-8217/025-000	127
													Global Variant	750-8217/600-000	750-8217/625-000	128
	Cortex A8; 600 MHz	M/S	S			M				x		x	Controller PFC200; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Master	750-8208	750-8208/025-000	129
		M/S	S			M				x	x	x	Telecontrol Technology		750-8208/025-001	129

M: Master, S: Slave; *requires an additional license

Controllers PFC100/PFC200
General Product Information

PFC100/PFC200:
Maximum Performance in a Minimum Space

As a member of the WAGO control family, the PFC100/PFC200 Controllers with CODESYS V3 excel with high processing speed and multiple interfaces for parallel communication. All variants feature at least two ETHERNET ports and – depending on the model – additional interfaces. The CANopen, PROFIBUS DP, Modbus TCP/UPD/RTU, PROFINET, EtherNet/IP and EtherCAT protocols provide a flexible connection to fieldbus systems and external input/output devices. These fieldbus systems can be easily configured directly in the development environment.
The ETHERNET interfaces with an integrated switch also support all major IT protocols. In addition to multiple interfaces, the PFC100/PFC200 Controllers offer ample memory for your applications provided by the internal flash memory and an integrated interface for memory cards.

Industry 4.0 / IoT

Recording, digitizing and linking data profitably – these are the core ideas of Industry 4.0. Using a dedicated library, WAGO's PFC100/PFC200 Controllers become IoT controllers that send data from the field level to the cloud. Once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services. Existing systems also become IoT-ready, making them future-proof. The WAGO PFC family of controllers thus forms the basis for a sustainable corporate world.

Telecontrol Technology

Standardized telecontrol protocols according to IEC 60870-5, IEC 61850, IEC 61400-25 or DNP3 ensure use of the PFC Controllers in telecontrol technology.

Starter Kits

For a quick start, WAGO offers every customer the unique opportunity to purchase a starter kit that already contains all the components needed to begin programming and getting to know the controllers. For starter kits, see Section 6.6.

Link between Process Data and IT Application

The PFC100/PFC200 Controllers ideally combine real-time requirements with IT functionality. They support both Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP, SNTP, SNMP, FTP, BootP, DHCP, DNS, Telnet, SSH and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Security on Board

The topics of ETHERNET communication and security are closely linked. To provide PFC Controller users with a high level of security, mechanisms for secure connections such as VPN, integrated firewall, HTTPS, FTPS, SSH and SSL/TLS are standard.

Demand-Oriented Extensibility

Some controllers offer the option of activating functions that go beyond the standard via runtime licenses, making it possible to price as needed. This also offers the advantage that with the same exact controller, different functions can be realized and also combined, which otherwise would only be replicated via additional variants. The licenses are simply loaded into the controller together with the project. The additional licenses available for each controller are specified by the controller and described in detail in the "Software" section.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use – even under harsh operating conditions. These recognitions include: ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous marine certifications.

Modular and Expandable

With the WAGO I/O System 750, the PFC100/PFC200 Controllers can be expanded to almost any input/output interface. A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools. The straightforward design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O modules' granularity, the field level can be directly wired using 1-, 2-, 3- or 4-conductor technology.

Maximum Reliability and Ruggedness

The PFC100/PFC200 Controllers are engineered and tested for use in the most demanding environments (e.g., temperature cycling, shock/vibration loading and ESD) according to the highest standards. Spring pressure connection technology guarantees continuous operation. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Open-Source Software and Linux®

We unite what belongs together: High-performance WAGO Hardware and future-ready Linux® Operating System. For complex tasks, you can choose between programming in IEC 61131 or directly under Linux®. WAGO's "Embedded Linux" Controllers impress with base images that are expandable via open-source packages. As a "Gold Member" of the Open Source Automation Development Lab (OSADL), WAGO supports both financing and further development of Linux® in the industrial sector. The controller firmware itself is available as a "Board Support Package" (BSP). If you are interested, simply contact our AUTOMATION technical support.

Benefits:

- Programming per IEC 61131-3
- Applications with higher-level languages
- Linux® real-time operating system
- Rugged and maintenance-free
- Integrated cybersecurity packages
- IoT ready

Controllers PFC100/PFC200
Variants

Extended Temperature Range

Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, there are applications like telecontrol technology that require an extended temperature range. Select controllers are available in an extended temperature range of –20°C to +60°C.



Eco

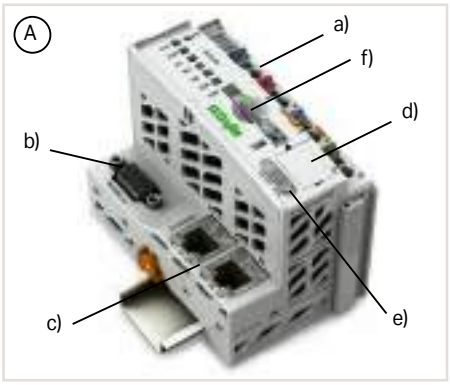
The Eco version of the PFC200 limits the number of I/O modules to four.

Telecontrol Technology

The PFC200 models for telecontrol technology integrate the following standardized telecontrol protocols:

- IEC 60870-5
- IEC 61850
- IEC 61400-25
- DNP3

Interfaces and Types



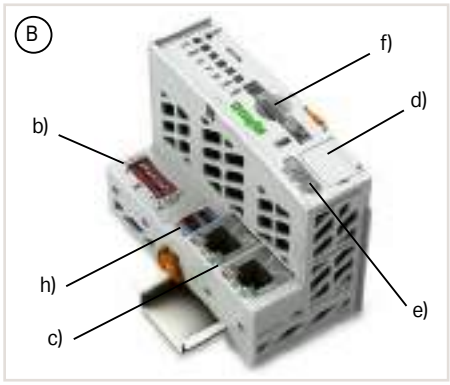
- Includes a supply module (a) to power downstream I/O modules; Connection technology (system/field supply): CAGE CLAMP®; Conductor range: 0.08 … 2.5 mm²/28 … 14 AWG
- Technical differences on the connection level (b)
- ETHERNET 2 x RJ-45 (c)
- Service interface (d)
- Start/stop switch (e)

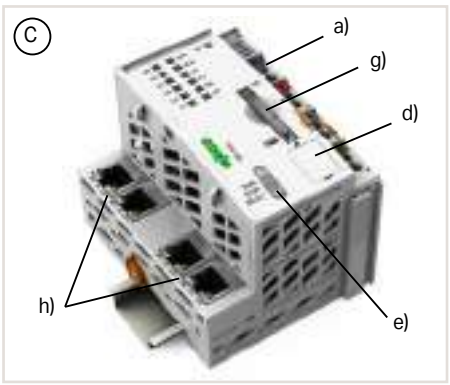
Housing Design PFC100 (A, B)

- microSD card slot for external storage media (f)

Housing Design PFC200 (C, D, E, F, G, H)

- SD card slot for external storage media (g)



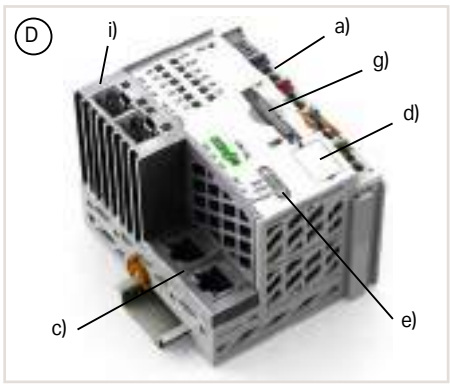


Housing Design (A)

- W x H x D (mm): 61.5 x 100 x 71.9

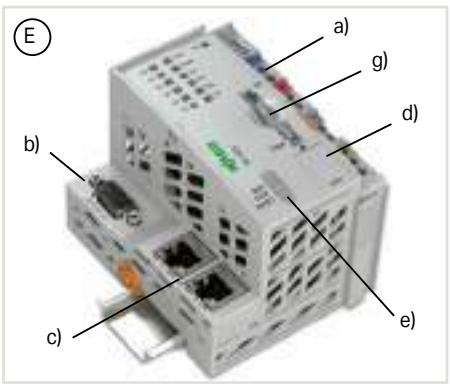
Housing Design (B)

- W x H x D (mm): 49.5 x 96.8 x 71.9
- Supply system connection technology (h): CAGE CLAMP®; Conductor range: 0.08 … 1.5 mm²/28 … 16 AWG



Housing Design (C)

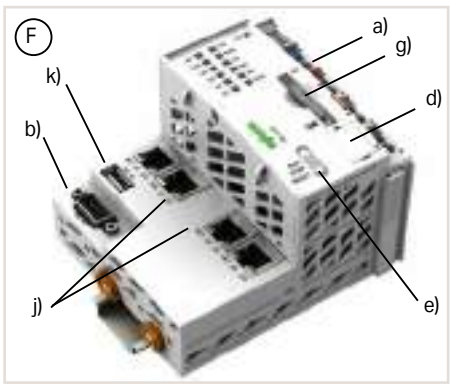
- ETHERNET 4 x RJ-45 (h)
- W x H x D (mm): 78.6 x 100 x 71.9



Housing Design (D)

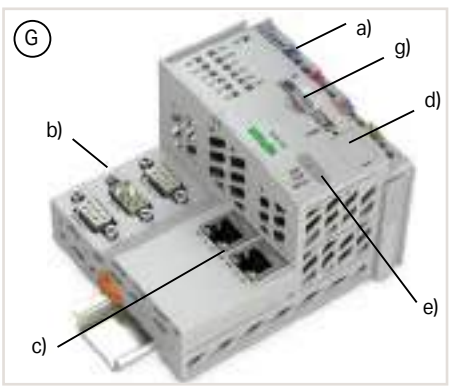
- 2 x SFP port; 100BASE-FX, LC, fiber optic (SFP type) (i)

W x H x D (mm): 78.6 x 100 x 71.9



Housing Design (E)

- W x H x D (mm): 78.6 x 100 x 71.9

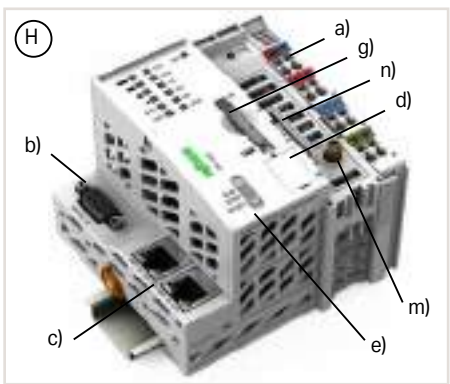


Housing Design (F)

- ETHERNET 4 x RJ-45 (j)
- USB interface (k)
- W x H x D (mm): 112 x 100 x 71.9

Housing Design (G)

- W x H x D (mm): 112 x 100 x 71.9



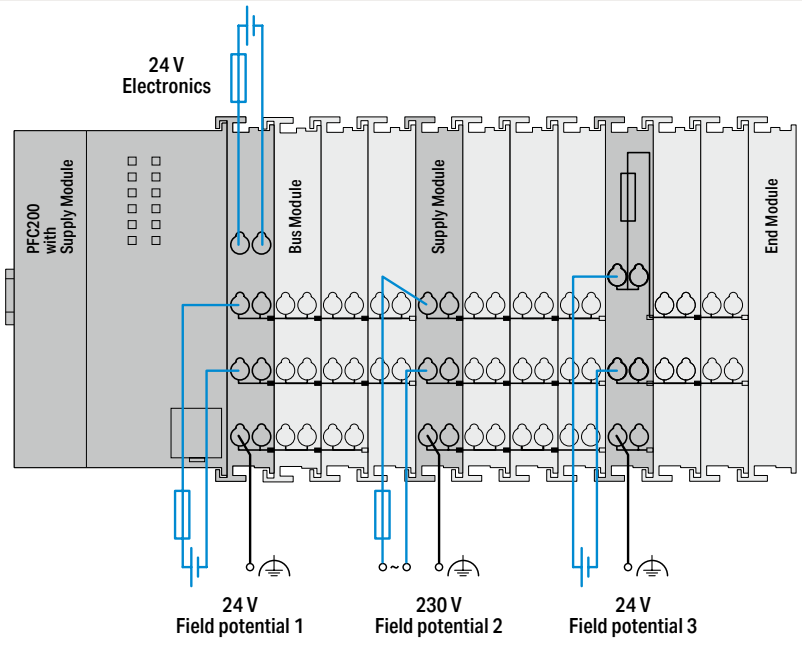
Housing Design (H)

- GSM antenna connection (m)
- SIM card slot (n)
- W x H x D (mm): 102.5 x 100 x 71.9

Controllers PFC100/PFC200
Installation Instructions

Power Supply

The internal electronics are powered by the controller. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node. Power supply to the electronics is limited by a maximum value. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Notes

Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.
A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both a supply module and a field-side power supply filter are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.
When operating safety-related I/O modules, PELV/SELV power supply units must be used for 24 VDC supply of electronics and field. Futhermore, specific power and field-side power supply filters (750-626) must be provided.

Please refer to the manual for details about the power supply's design.

Item Number Key

Explanation of an item number key's components

6.1

Item No.: 750-81xx = PFC100

00:	2 x ETHERNET, Eco
01:	2 x ETHERNET
02:	2 x ETHERNET, RS-232/-485

Item No.: 750-82xy = PFC200

0y:	Generation 1
1y:	Generation 2
x0:	4 x ETHERNET
x1:	2 x ETHERNET, 2 x SFP Port
x2:	2 x ETHERNET, RS-232/-485
x3:	2 x ETHERNET, CAN
x4:	2 x ETHERNET, RS-232/-485, CAN
x5:	4 x ETHERNET, CAN, CANopen, USB
x6:	2 x ETHERNET, RS-232/-485, CAN, PROFIBUS DP Slave
x7:	2 x ETHERNET, RS-232/-485, Mobile Radio Module
x8:	2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Master

.../025-yyy: Extended Temperature Range (–20 ... +60 °C)

000: Standard
001: Telecontrol Technology
002: Telecontrol Eco

Standards and Rated Conditions

General technical data	
Isolation	500 V system/field
Relative humidity (without condensation)	95 %
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree	2 per IEC 61131-2
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2, marine applications
Protection type	IP20
Mounting position	any
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®

Approvals

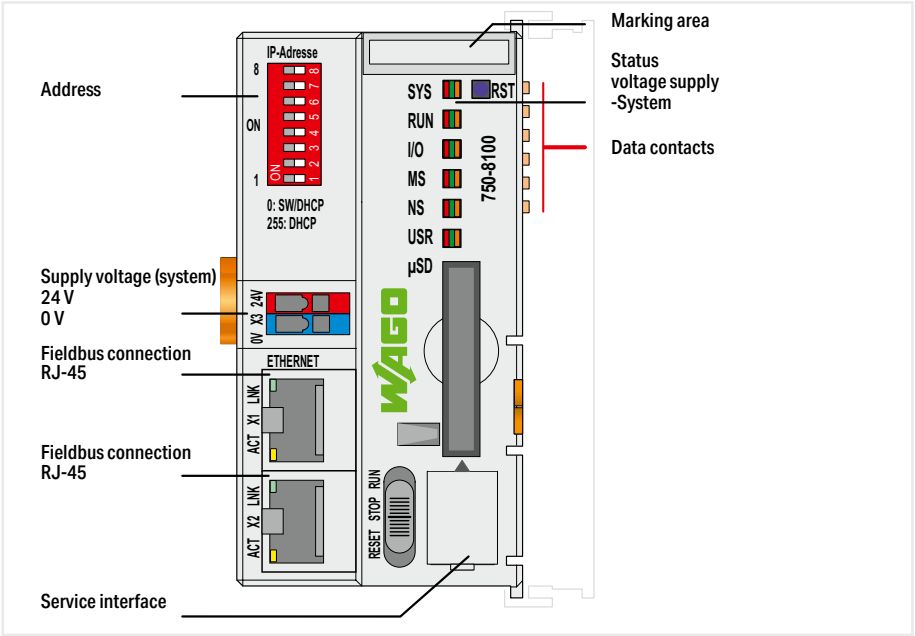
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Antenna	Page 630
Cables and connectors	Page 680
Communication	Page 678
DIN-rail	Page 716
Marking	Page 714
Shield termination	Page 708
Software	Page 51
System enclosure	Page 693

Controller PFC100 ▶ 2 x ETHERNET; ECO



750-8100



Version	**Standard**
Item no.	**750-8100**
Order Text	**PFC100; 2ETH; ECO**

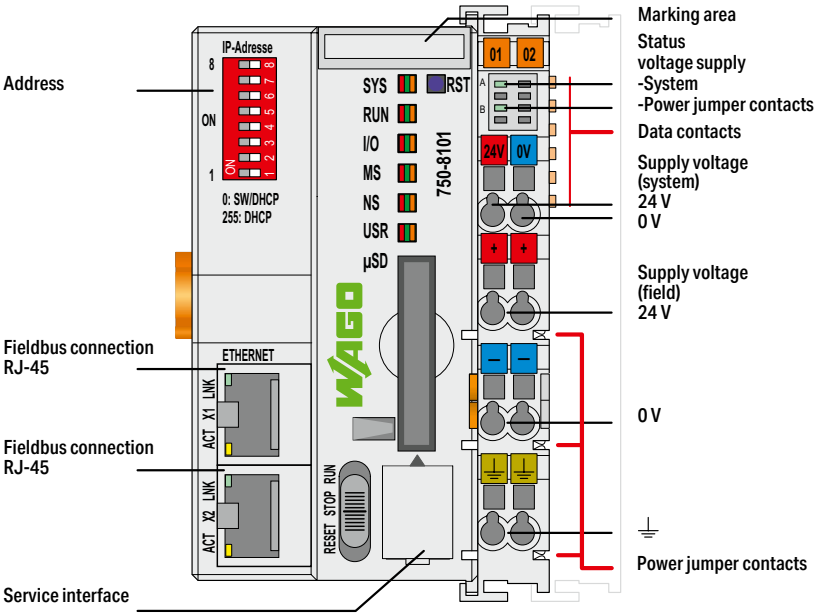
Technical data	
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; MQTT
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web-Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3)
CPU	Cortex A8; 600 MHz
Operating system	Real-time Linux 3.18 (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 64 KB
Program memory/data memory/non-volatile memory (software)	10 MB / 10 MB / 64 KB (Program and data memory (dynamically distributed))
Number of modules per node (max.)	250
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Total current (system supply)	700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-8100
Accessories	**Item no.**
Memory Card SD Micro; 2 GByte	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108

6.1

Controller PFC100 ▶ 2 x ETHERNET



750-8101



Version	Standard	ext. temperature
Item no.	**750-8101**	**750-8101/025-000**
Order Text	**PFC100; 2ETH**	**PFC100; 2ETH; T**

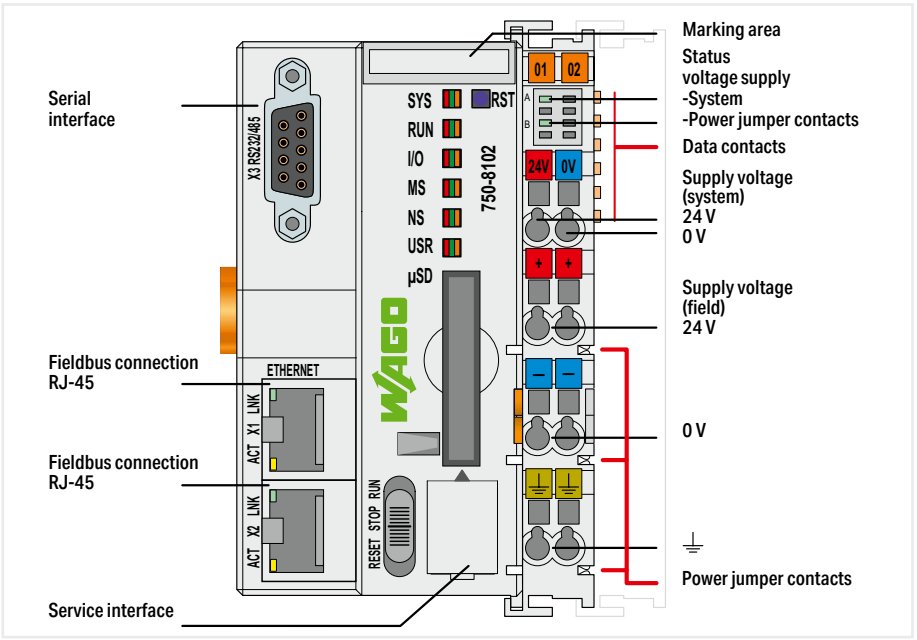
Technical data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; MQTT	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Visualization	Web-Visu	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
CPU	Cortex A8; 600 MHz	
Operating system	Real-time Linux 3.18 (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 64 KB	
Program memory/data memory/non-volatile memory (software)	12 MB / 12 MB / 64 KB (Program and data memory (dynamically distributed))	
Number of modules per node (max.)	250	
Input and output process image (internal) max.	1000 words/1000 words	
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-8101	

Accessories	**Item no.**	**Item no.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108

Controller PFC100 ▶ 2 x ETHERNET, RS-232/-485



750-8102



Version	Standard	ext. temperature
Item no.	**750-8102**	**750-8102/025-000**
Order Text	**PFC100; 2ETH RS**	**PFC100; 2ETH RS; T**

Technical data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 interface; MQTT	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Visualization	Web-Visu	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
CPU	Cortex A8; 600 MHz	
Operating system	Real-time Linux 3.18 (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 128 KB	
Program memory/data memory/non-volatile memory (software)	12 MB / 12 MB / 128 KB (Program and data memory (dynamically distributed))	
Number of modules per node (max.)	250	
Input and output process image (internal) max.	1000 words/1000 words	
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-8102	

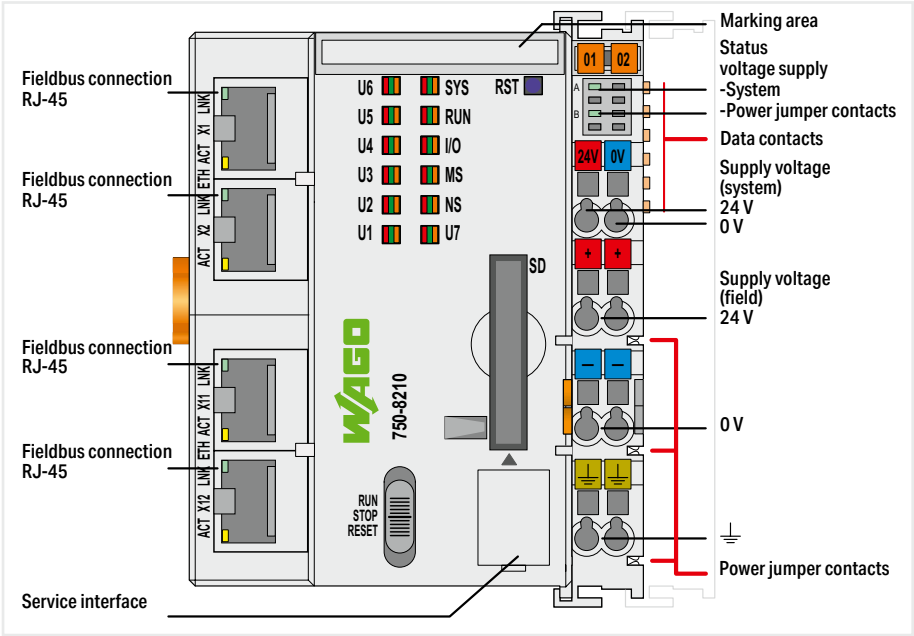
Accessories	Item no.	Item no.
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108

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Controller PFC200 ▶ 4 x ETHERNET



750-8210



Version	Standard	ext. temperature
Item no.	**750-8210**	**750-8210/025-000**
Order Text	**PFC200; G2; 4ETH**	**PFC200; G2; 4ETH; T**

Technical data		
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)	
Visualization	Web-Visu	
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22	
CPU	Cortex A8; 1 GHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB	
Number of modules per node (max.)	250	
Input and output process image (internal) max.	1000 words/1000 words	
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/750-8210	

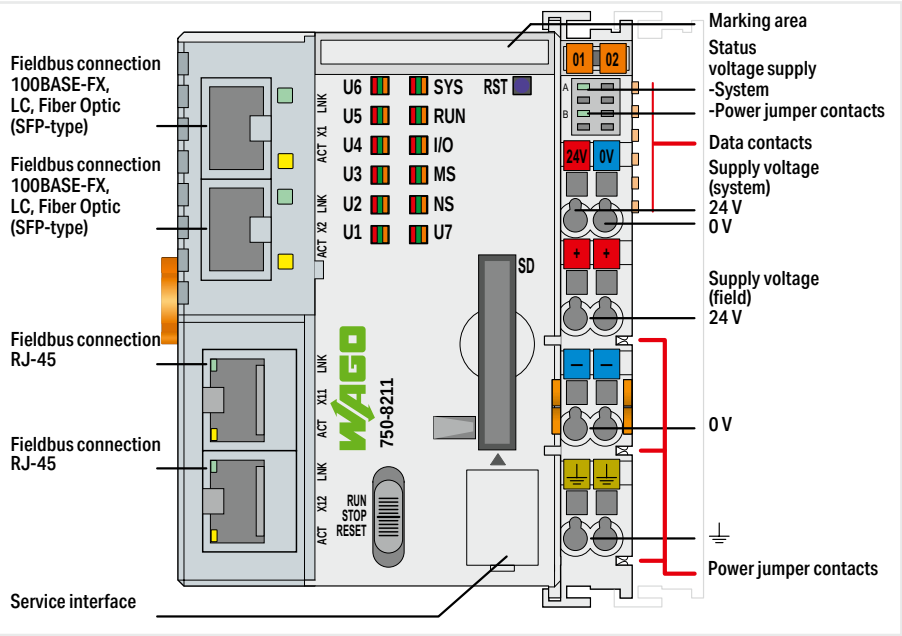
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 300; Single License; Online activation	2759-283/211-1000	2759-283/211-1000
Runtime; DNP3 Master; M; Single License; Online activation	2759-2293/211-1000	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License; Online activation	2759-290/211-1000	2759-290/211-1000
Runtime; DNP3 Slave; Single License; Online activation	2759-2290/211-1000	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License; Online activation	2759-293/211-1000	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License; Online activation	2759-2243/211-1000	2759-2243/211-1000
Runtime; IEC61850 Server; Single License; Online activation	2759-2240/211-1000	2759-2240/211-1000

Accessories	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, 2 x SFP port



750-8211



Version	Standard
Item no.	**750-8211**
Order Text	**PFC200; G2; 2ETH 2SFP**

Technical data	
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!COCKPIT*** (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc
For data sheet and additional information, see:	wago.com/750-8211

Product Expansions	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000

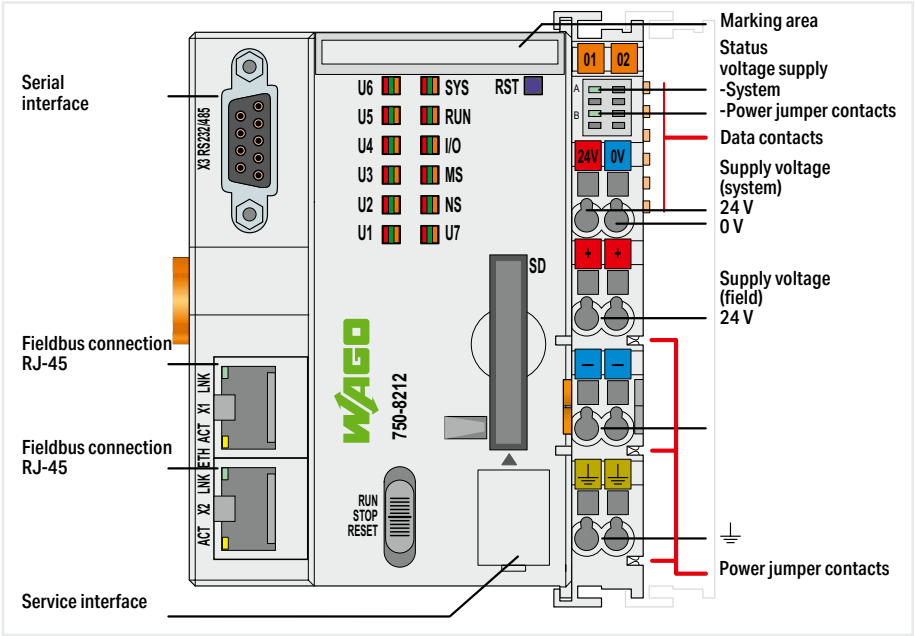
Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; DDM; Extreme; silver-colored	852-202
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

6.1

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485



750-8212

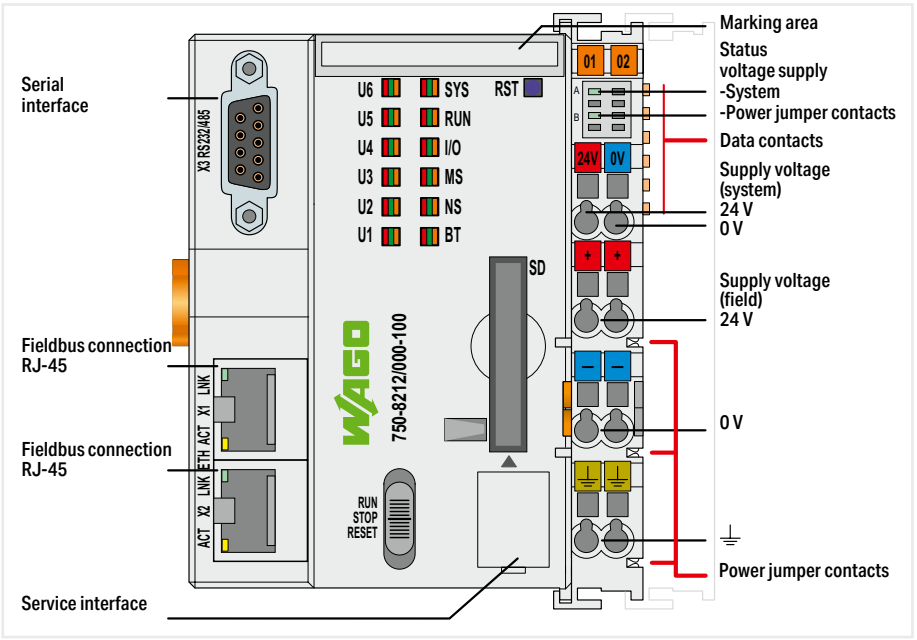


Version	Standard	ext. temperature	Telecontrol technology; ext. temperature	Telecontrol technology; ext. temperature; ECO
Item no.	**750-8212**	**750-8212/025-000**	**750-8212/025-001**	**750-8212/025-002**
Order Text	**PFC200; G2; 2ETH RS**	**PFC200; G2; 2ETH RS; T**	**PFC200; G2; 2ETH RS; Tele; T**	**PFC200; G2; 2ETH RS; Tele; T; ECO**
Technical data				
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**		Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; Telecontrol protocols; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH			
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)		IEC 60870; IEC 61850; DNP3	
Visualization	Web-Visu			
Programming environment	CODESYS V3.5, from firmware release 23; ***e!COCKPIT*** (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22			
CPU	Cortex A8; 1 GHz			
Operating system	Real-time Linux (with RT-Preempt patch)			
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB			
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB			
Number of modules per node (max.)	250			6
Input and output process image (internal) max.	1000 words/1000 words			
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words			
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts			
Input current (typ.) at nominal load (24 V)	550 mA			
Total current (system supply)	1700 mA			
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C		
Dimensions W x H x D	(78.6 x 100 x 71.9) mm			
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-8212			
Product Expansions	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000	2759-283/211-1000	2759-283/211-1000	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000	2759-2293/211-1000	-	-
Runtime; IEC60870 Slave; Single License	2759-290/211-1000	2759-290/211-1000	-	-
Runtime; DNP3 Slave; Single License	2759-2290/211-1000	2759-2290/211-1000	-	-
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000	2759-293/211-1000	-	-
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000	2759-2243/211-1000	-	-
Runtime; IEC61850 Server; Single License	2759-2240/211-1000	2759-2240/211-1000	-	-
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, BACnet/IP



750-8212/000-100



Version	BACnet/IP
Item no.	**750-8212/000-100**
Order Text	**PFC200; G2; 2ETH RS; BACnet/IP**

Technical data	
Communication	BACnet/IP; Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Device-specific	BACnet/IP protocol: ISO 16484-5; BACnet device profiles: B-BC (BACnet Building Controller); BACnet revision: 14
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!COCKPIT*** (based on CODESYS V3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Approvals (pending)	BACnet approvals: WSPCert certification; BTL listing
For data sheet and additional information, see:	wago.com/750-8212/000-100

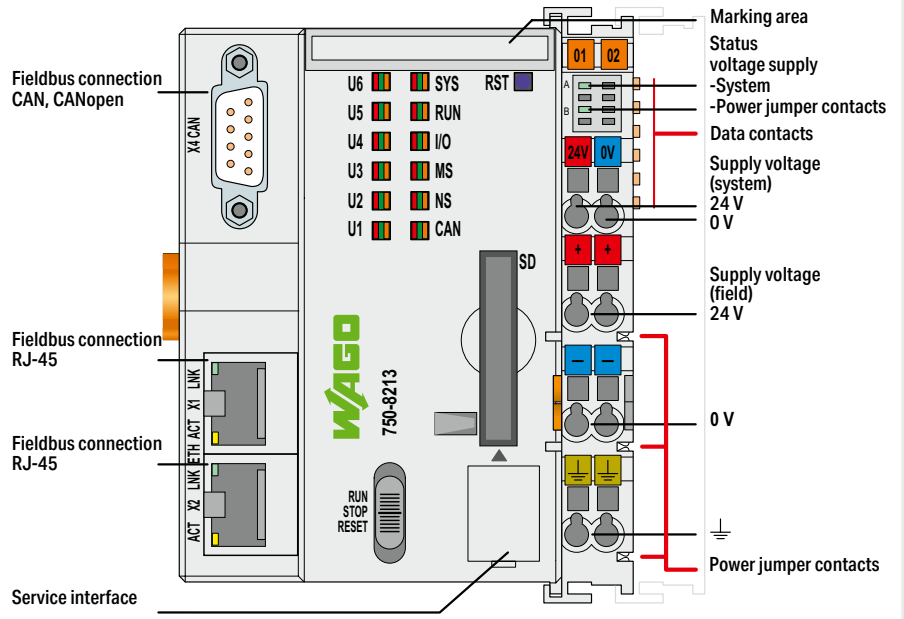
Product Expansions	**Item no.**
Runtime; DNP3 Master; M; Single License; Online activation	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License; Online activation	2759-290/211-1000
Runtime; DNP3 Slave; Single License; Online activation	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License; Online activation	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License; Online activation	2759-2243/211-1000
Runtime; IEC61850 Server; Single License; Online activation	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, CAN, CANopen



750-8213



Version	Standard
Item no.	**750-8213**
Order Text	**PFC200; G2; 2ETH CAN**

Technical data	
Communication	CANopen; Modbus TCP master/slave; Modbus (UDP); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Input and output process image (CAN) max.	2000 words/2000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-8213

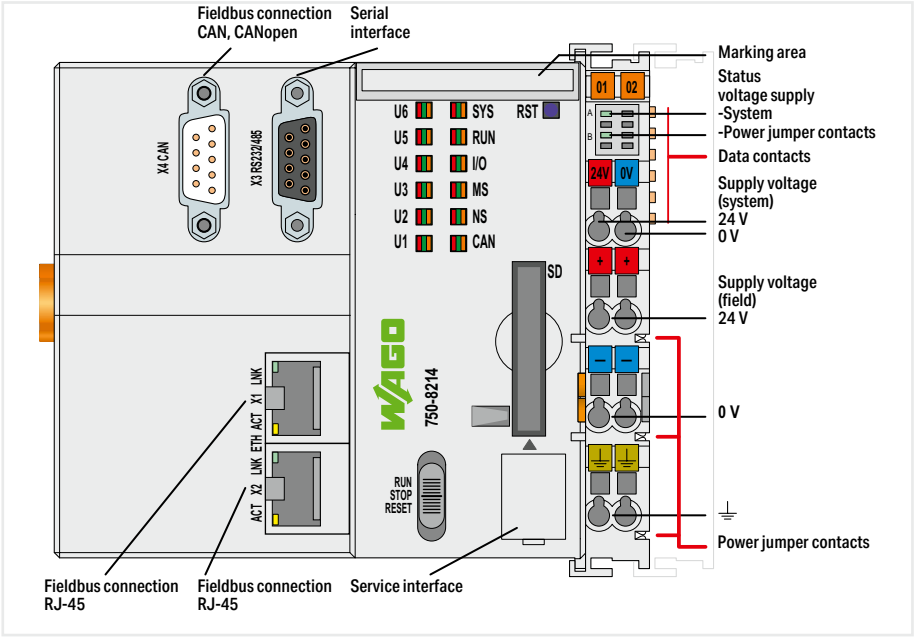
Product Expansions	**Item no.**
Runtime; BACnet; 300; Single License; Online activation	2759-283/211-1000
Runtime; DNP3 Master; M; Single License; Online activation	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License; Online activation	2759-290/211-1000
Runtime; DNP3 Slave; Single License; Online activation	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License; Online activation	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License; Online activation	2759-2243/211-1000
Runtime; IEC61850 Server; Single License; Online activation	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen



750-8214



Version	Standard
Item no.	**750-8214**
Order Text	**PFC200; G2; 2ETH RS CAN**

Technical data	
Communication	CANopen; Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!COCKPIT*** (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Input and output process image (CAN) max.	2000 words/2000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-8214

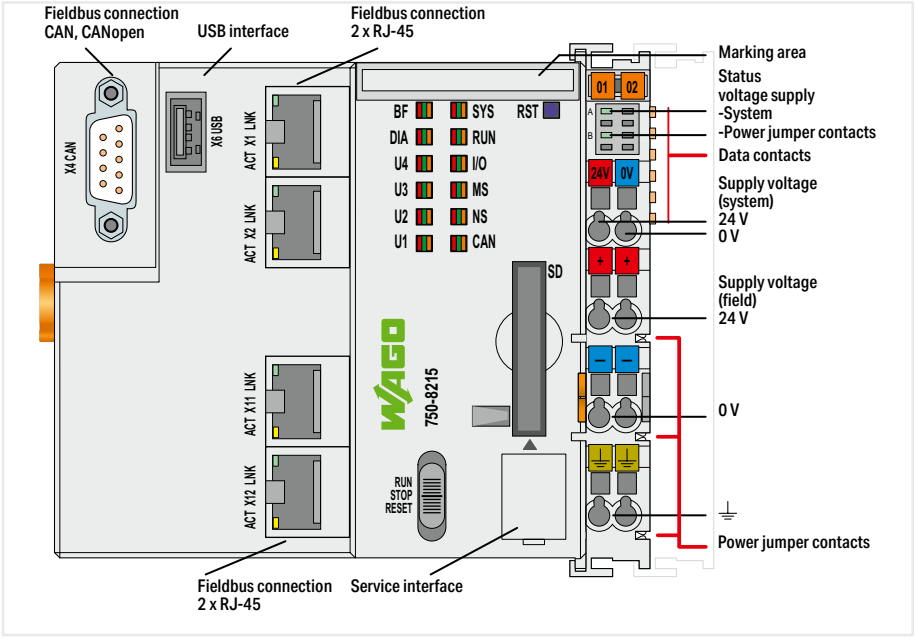
Product Expansions	**Item no.**
Runtime; DNP3 Master; M; Single License; Online activation	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License; Online activation	2759-290/211-1000
Runtime; DNP3 Slave; Single License; Online activation	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License; Online activation	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License; Online activation	2759-2243/211-1000
Runtime; IEC61850 Server; Single License; Online activation	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 4 x ETHERNET, CAN, CANopen, USB



750-8215



Version	**Standard**
Item no.	**750-8215**
Order Text	**PFC200; G2; 4ETH CAN USB**

Technical data	
Communication	PROFINET RT; CANopen; Modbus TCP master/slave; Modbus (UDP); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Device-specific	PROFINET IO features: PROFINET IO V2.3; Media redundancy (MRP); Shared device
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words
Input and output process image (CAN) max.	2000 words/2000 words
Input and output process image (PROFINET) max.	1024 bytes/1024 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-8215

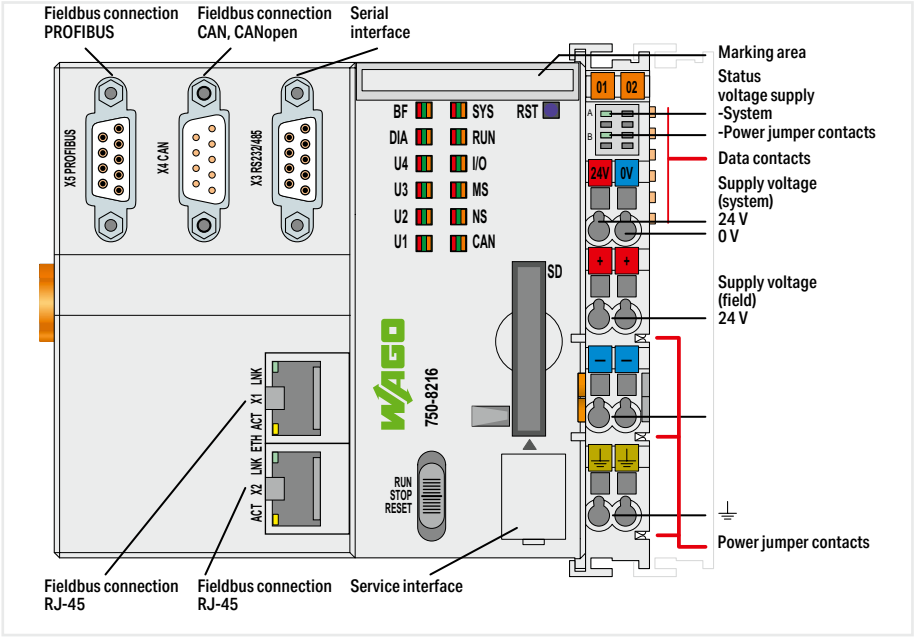
Product Expansions	**Item no.**
Runtime; DNP3 Master; M; Single License; Online activation	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License; Online activation	2759-290/211-1000
Runtime; DNP3 Slave; Single License; Online activation	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License; Online activation	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License; Online activation	2759-2243/211-1000
Runtime; IEC61850 Server; Single License; Online activation	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS slave



750-8216

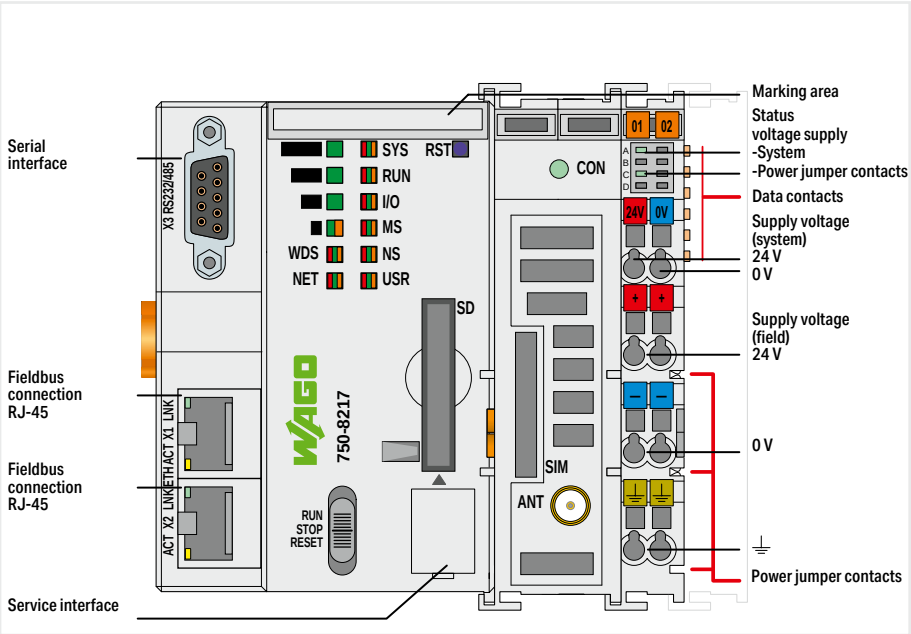


Version	Standard	ext. temperature	Telecontrol technology; ext. temperature
Item no.	**750-8216**	**750-8216/025-000**	**750-8216/025-001**
Order Text	**PFC200; G2; 2ETH RS CAN DPS**	**PFC200; G2; 2ETH RS CAN DPS; T**	**PFC200; G2; 2ETH RS CAN DPS; Tele; T**
Technical data			
Communication	PROFIBUS; CANopen; Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**		PROFIBUS; CANopen; Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; Telecontrol protocols; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH		
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)		IEC 60870; IEC 61850; DNP3
Visualization	Web-Visu		
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22		
CPU	Cortex A8; 1 GHz		
Operating system	Real-time Linux (with RT-Preempt patch)		
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB		
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB		
Number of modules per node (max.)	250		
Input and output process image (internal) max.	1000 words/1000 words		
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words		
Input and output process image (PROFIBUS) max.	244 bytes/244 bytes		
Input and output process image (CAN) max.	2000 words/2000 words		
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts		
Input current (typ.) at nominal load (24 V)	550 mA		
Total current (system supply)	1700 mA		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	
Dimensions W x H x D	(112 x 100 x 71.9) mm		
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-8216		
Product Expansions	**Item no.**	**Item no.**	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000	2759-283/211-1000	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000	2759-2293/211-1000	-
Runtime; IEC60870 Slave; Single License	2759-290/211-1000	2759-290/211-1000	-
Runtime; DNP3 Slave; Single License	2759-2290/211-1000	2759-2290/211-1000	-
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000	2759-293/211-1000	-
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000	2759-2243/211-1000	-
Runtime; IEC61850 Server; Single License	2759-2240/211-1000	2759-2240/211-1000	-
Accessories	**Item no.**	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GB	758-879/000-001	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB	758-879/000-2108	758-879/000-2108	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, mobile radio module 4G



750-8217



Version	Standard	ext. temperature
Item no.	**750-8217**	**750-8217/025-000**
Order Text	**PFC200; 2ETH RS 4G; EU**	**PFC200; 2ETH RS 4G; EU; T**

Technical data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 interface; MQTT; BACnet/IP, **requires an additional license**; EtherCAT® master (**requires an additional license**); Telecontrol protocols, **requires an additional license**	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)	
Radio technology	GSM/UMTS/LTE	
Frequency band	GSM dual band (B3; B8); E-UTRA bands (B1; B3; B5; B7; B8; B20; B38; B40; B41)	
Services	SMS (bidirectional); GPRS connection to Internet	
Security encryption	OpenVPN, IPsec, firewall	
Visualization	Web-Visu	
Programming environment	***e!COCKPIT*** (based on CODESYS V3)	
CPU	Cortex A8; 1 GHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	
Number of modules per node (max.)	250	
Input and output process image (internal) max.	1000 words/1000 words	
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(102.5 x 100 x 71.9) mm	
Approvals	CE; Marine	
For data sheet and additional information, see:	wago.com/750-8217	

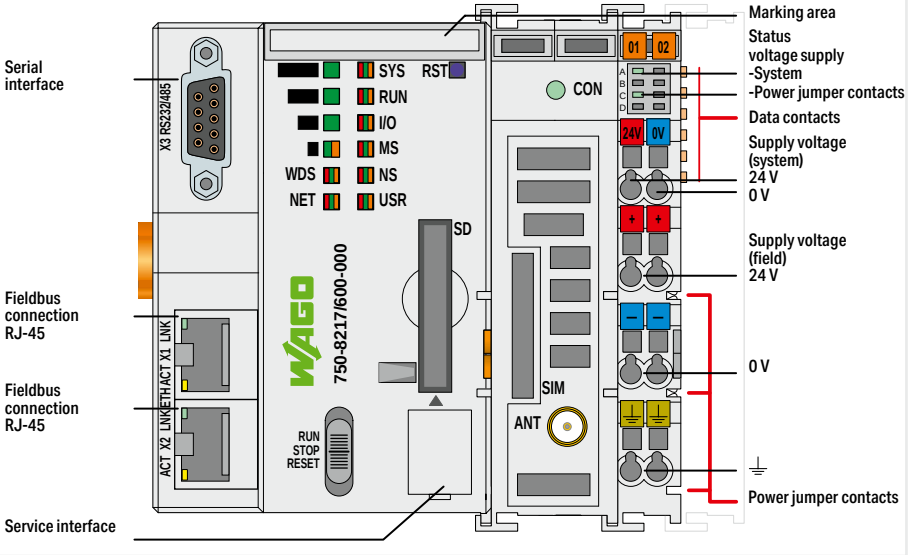
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000	2759-2240/211-1000

Accessories	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108
Magnetic foot antenna; with 2.5m cable and SMA plug; GSM/ UMTS/ LTE/ Bluetooth®/ WLAN; 698-960, 1710-6000 MHz	758-975	758-975

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, mobile radio modulel 4G; global variant



750-8217



Version	Standard	ext. temperature
Item no.	**750-8217/600-000**	**750-8217/625-000**
Order Text	**PFC200; 2ETH RS 4G; Global**	**PFC200; 2ETH RS 4G; Global; T**
Technical data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 interface; MQTT; BACnet/IP, **requires an additional license**; EtherCAT® master (**requires an additional license**); Telecontrol protocols, **requires an additional license**	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)	
Radio technology	GSM/Edge/UMTS/HSPA+; LTE	
Frequency band	GSM: B2/B3/B5/B8; WCDMA: B1/B2/B4/B5/B6/B8/B19; LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/B20/B25/ B26/B28; LTE-TDD: B38/B39/B40/B41	
Services	GPRS connection to Internet	
Security encryption	OpenVPN, IPsec, firewall	
Visualization	Web-Visu	
Programming environment	***e!COCKPIT*** (based on CODESYS V3)	
CPU	Cortex A8; 1 GHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB	
Program memory/data memory/non-volatile memory (software)	32 MB / 128 MB / 128 KB	
Number of modules per node (max.)	250	
Input and output process image (internal) max.	1000 words/1000 words	
Input and output process image (Modbus®) max.	CODESYS V3: 32000 words/32000 words	
Supply voltage (system)	24 VSELV/PELV DC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VSELV/PELV DC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(102.5 x 100 x 71.9) mm	
Approvals	CE; Marine; OrdLoc	
For data sheet and additional information, see:	wago.com/750-8217/600-000	

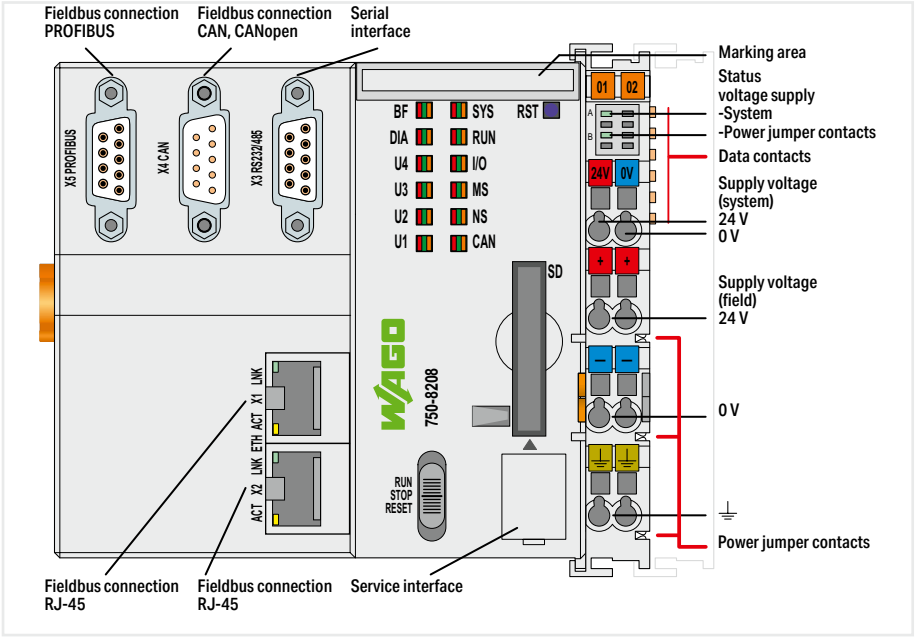
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000	2759-2240/211-1000

Accessories	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108
Magnetic foot antenna; with 2.5m cable and SMA plug; GSM/ UMTS/ LTE/ Bluetooth®/ WLAN; 698-960, 1710-6000 MHz	758-975	758-975

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS master



750-8208



Version	Standard	ext. temperature	Telecontrol technology; ext. temperature
Item no.	**750-8208**	**750-8208/025-000**	**750-8208/025-001**
Order Text	**PFC200; 2ETH RS CAN DPM**	**PFC200; 2ETH RS CAN DPM; T**	**PFC200; 2ETH RS CAN DPM; Tele; T**
Technical data			
Communication	PROFIBUS DP master; CANopen; Modbus (TCP, UDP); ETHERNET; Modbus® RTU; RS-232 serial interface; RS-485 interface; MQTT		PROFIBUS DP master; CANopen; Modbus (TCP, UDP); ETHERNET; Modbus® RTU; RS-232 serial interface; RS-485 interface; MQTT; Telecontrol protocols
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH		
Telecontrol protocols	-		IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3
Visualization	Web-Visu		
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)		
CPU	Cortex A8; 600 MHz		
Operating system	Real-time Linux (with RT-Preempt patch)		
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 128 KB		
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB		
Number of modules per node (max.)	250		
Input and output process image (internal) max.	1000 words/1000 words		
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words		
Input and output process image (PROFIBUS) max.	5000 bytes/5000 bytes		
Input and output process image (CAN) max.	2000 words/2000 words		
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts		
Input current (typ.) at nominal load (24 V)	670 mA		
Total current (system supply)	1700 mA		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	
Dimensions W x H x D	(112 x 100 x 71.9) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-8208		
Accessories	**Item no.**	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108



Controllers PFC200 XTR

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

◄ Section 6.1

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

Basic Controllers 100

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

Section 6.3 ►

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Section 6.4 ►►

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 6.5 ►►►

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

Section 6.6 ►►►►

Controllers PFC200 XTR
Contents

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Interfaces and Types	133
Item Number Key	133
Installation Instructions	134
Standards and Rated Conditions for Railway Applications (EN 50155)	134
Standards and Rated Conditions	135
Approvals	135

	CPU	Modbus (TCP, UDP)	EtherNet/IP™	EtherCAT	PROFIBUS	CANopen	BACnet/IP	OPC UA	Modbus RTU	Telecontrol Protocols	IoT Protocols	Description	Item No.	Page
	Cortex A8; 1 GHz	M/S	M/S	M			x*	x	x	x*	x	Controller PFC200; 2nd Generation; 4 x ETHERNET; Extreme	750-8210/040-000	136
	Cortex A8; 1 GHz	M/S	M/S	M			x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, 2 x 100Base-FX; Extreme	750-8211/040-000	137
	Cortex A8; 1 GHz	M/S	M/S	M			x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485; Extreme	750-8212/040-000	138
		M/S	M/S	M			x*	x	x	x	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485; Telecontrol Technology; Extreme	750-8212/040-001	138
	Cortex A8; 1 GHz	M/S	M/S	M			x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET M12, RS-232/-485; Extreme	750-8212/040-010	139
	Cortex A8; 1 GHz	M/S	M/S	M		M/S	x*	x		x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET M12, CAN, CANopen; Extreme	750-8213/040-010	140
	Cortex A8; 1 GHz	M/S	M/S	M	S	M/S	x*	x	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave; Extreme	750-8216/040-000	141

M: Master, S: Slave; *requires an additional license

Controller PFC200 XTR
General Product Information

PFC200 XTR:

Taking It to the eXTReme – the Standard for 750 XTR

With the dark gray XTR version of the PFC200 Controller, you will benefit from the unique added value of this fast and highly communicative multi-talented controller for applications that are subjected to extreme environments.
The PFC200 XTR Controller excels with high processing speed and multiple interfaces for parallel communication. All variants of this controller feature two ETHERNET ports and – depending on the model – additional interfaces. The CANopen, PROFIBUS DP and Modbus TCP/UDP/RTU protocols allow flexible connection to fieldbus systems and external input/output devices. These fieldbus systems can be easily configured directly in the development environment. The ETHERNET interfaces with an integrated switch also support all major IT protocols. In addition to multiple interfaces, the PFC200 XTR offers ample memory for your applications provided by the internal flash memory and an integrated interface for SD/SDHC cards.

Extremely temperature-resistant, immune to interference, as well as unfazed by vibrations and impulse voltages – the WAGO I/O System 750 XTR is the first choice for demanding applications including:
- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical processing
- Water and wastewater treatment systems
- Custom machines
- Railway systems

Industry 4.0 / IoT

Recording, digitizing and linking data profitably – these are the core ideas of Industry 4.0. Using a dedicated library, WAGO's PFC100/PFC200 Controllers become IoT controllers that send data from the field level to the cloud. Once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services. Existing systems also become IoT-ready, making them future-proof. The WAGO PFC family of controllers thus forms the basis for a sustainable corporate world.

Link between Process Data and IT Application – Even under eXTReme Conditions

The PFC200 XTR ideally combines real-time requirements with IT functionality. It supports both Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controller incorporates library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Security on Board

The topics of ETHERNET communication and security are closely linked. To provide PFC Controller users with a high level of security, mechanisms for secure connections such as HTTPS, FTPS, SSH and SSL/TLS are standard.

Worldwide Approvals

International approvals for industrial automation, building technology, shipbuilding and onshore/offshore applications guarantee worldwide use – even under harsh operating conditions, e.g., Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale and Polski Rejestr Stratkow.

Superior Reliability in Extreme Climates

Engineered for freezing cold, extreme heat and high humidity, the WAGO I/O System 750 XTR provides absolute dependability in virtually any weather. The XTR version of the PFC200 is unfazed by both freezing cold down to –40°C and scorching heat up to +70°C. And this applies equally for both start-up and ongoing operation. The maximum approved operating altitude of 5,000 m is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

Additional Protection against Interference Pulses

The WAGO I/O System 750 XTR provides greater isolation up to 5 kV of impulse voltage, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths ensure trouble-free operation.

High Mechanical Performance

Automation systems must be incredibly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples of the many applications that can stress automation systems. The WAGO I/O System 750 XTR continues to set new standards here. Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

Modular and Expandable

With the WAGO I/O System 750 XTR, the PFC200 Controllers can be expanded to almost any input/output interface. Using an industry-leading platform, the 750 XTR boasts the same proven benefits.

Open-Source Software and Linux®

We unite what belongs together: High-performance WAGO Hardware and future-ready Linux® Operating System. For complex tasks, you can choose between programming in IEC 61131 or directly under Linux®. WAGO's "Embedded Linux" Controllers impress with base images that are expandable via open-source packages. As a "Gold Member" of the Open Source Automation Development Lab (OSADL), WAGO supports both financing and further development of Linux® in the industrial sector. The controller firmware itself is available as a "Board Support Package" (BSP). If you are interested, simply contact our AUTOMATION technical support.

Benefits:

- Controllers for eXTReme environmental conditions
  - No air conditioning required
  - Can be used in unshielded areas
  - Install close to vibrating and shock-generating system components
- Programming per IEC 61131-3
- Can be combined with high-level languages
- Linux® real-time operating system
- Rugged and maintenance-free
- Integrated IT security standards
- IoT ready

Controller PFC200 XTR
Variants

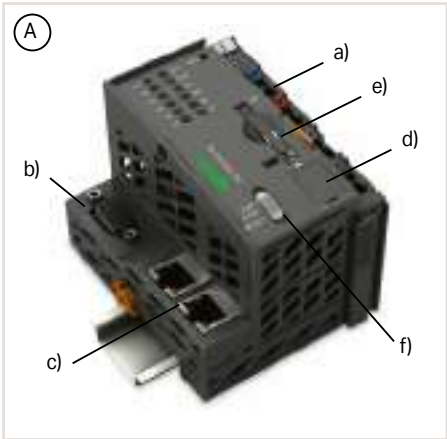
Telecontrol Technology

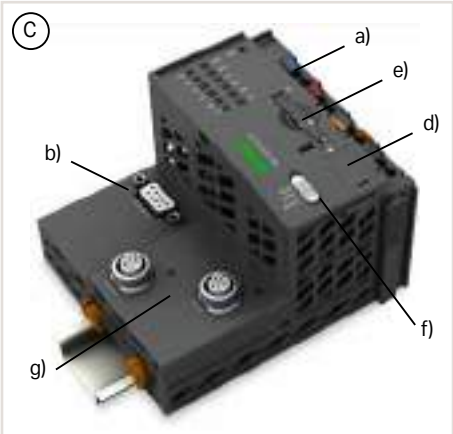
The PFC200 models for telecontrol technology integrate the following standardized telecontrol protocols:
- IEC 60870-5
- IEC 61850
- IEC 61400-25
- DNP3

These controllers also meet stricter requirements for immunity to impulse voltages and electromagnetic interference according to EN 60870-2-1.



Interfaces and Types





- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level (b)
- ETHERNET 2 x RJ-45 (c)
- Service interface (d)
- SD card slot for external storage media (e)
- Start/stop switch (f)

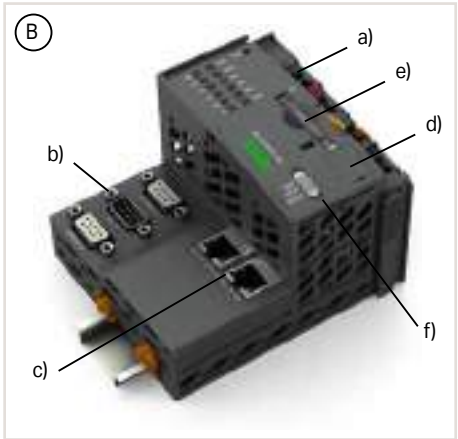
Housing Design (A)

- W x H x D (mm): 78.6 x 100 x 71.9

Housing Design (B)

- W x H x D (mm): 112 x 100 x 71.9

Housing Design (C)
- ETHERNET 2 x M12 connector (g)
- W x H x D (mm): 112 x 100 x 71.9



Item Number Key

Explanation of an item number key's components

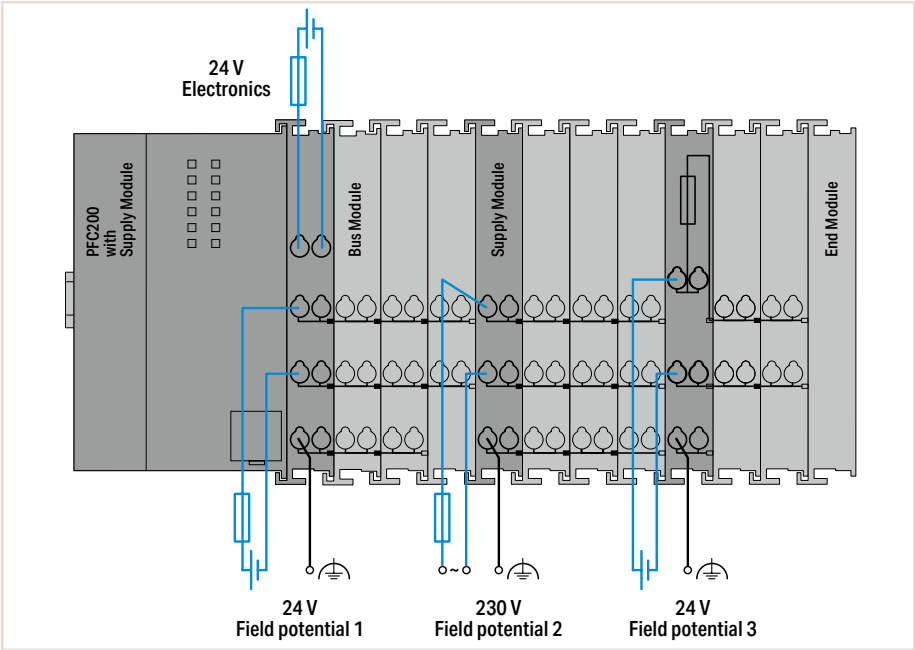
Item No. : 750-82xy/040-000

0y:	Generation 1
1y:	Generation 2
x0:	4 x ETHERNET
x1:	2 x ETHERNET, 2 x SFP port
x2:	2 x ETHERNET, RS-232/-485
x3:	2 x ETHERNET, CAN
x6:	2 x ETHERNET, RS-232/-485, CAN, CANopen
	.../040-000: Standard
	.../040-001: Telecontrol technology
	.../040-010: M12 connector

Controller PFC200 XTR
Installation Instructions

Power Supply

The internal electronics are powered by the controller. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node. Power supply to the electronics is limited by a maximum value. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Notes

Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624/040-001 or 750-626/040-000) are ready for marine and onshore/offshore applications, as well as in telecontrol and rail technology.

Please refer to the manual for details about the power supply's design.

Mixed Operation

Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply). This combination may be useful, for example, when there are only increased requirements for immunity to impulse voltages and interference, but the surrounding air temperature is not critical.

Standards and Rated Conditions for Rail Applications (EN 50155)

Railway Applications (EN 50155)	Class/Standard Compliance
4.1 Rated operating conditions	
4.1.1 Altitude above sea level	AX (EN 50125-1)
4.1.2 Surrounding air temperature	TX
4.1.3 Shock and vibration	1A and 1B (EN 61373)
4.1.4 Relative humidity	95 % (coated PCBs)
5.1 Power supply	
5.1.1.1 Voltage fluctuations	
Minimum voltage	0.725 x Un
Maximum voltage	1.3 x Un
5.1.1.2 Power interruptions	S1
5.4 Surge, ESD, burst tests	**EN 50121-3-2**
5.5 EMC (emission of interference, immunity to interference)	**EN 50121-3-2, EN 50121-4, -5**
Fire behavior: per EN 45545-2 hazard level HL3	

WAGO is certified in accordance with the IRIS quality standard.

Controller PFC200 XTR
Standards and Rated Conditions

General technical data	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Ambient temperature (operation)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +85 °C
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree	2 per IEC 61131-2
Vibration resistance	per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
Protection type	IP20
Mounting position	horizontal (standing/lying); vertical
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	4 x CAGE CLAMP®
Solid conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Current carrying capacity (power jumper contacts)	10 A

Approvals

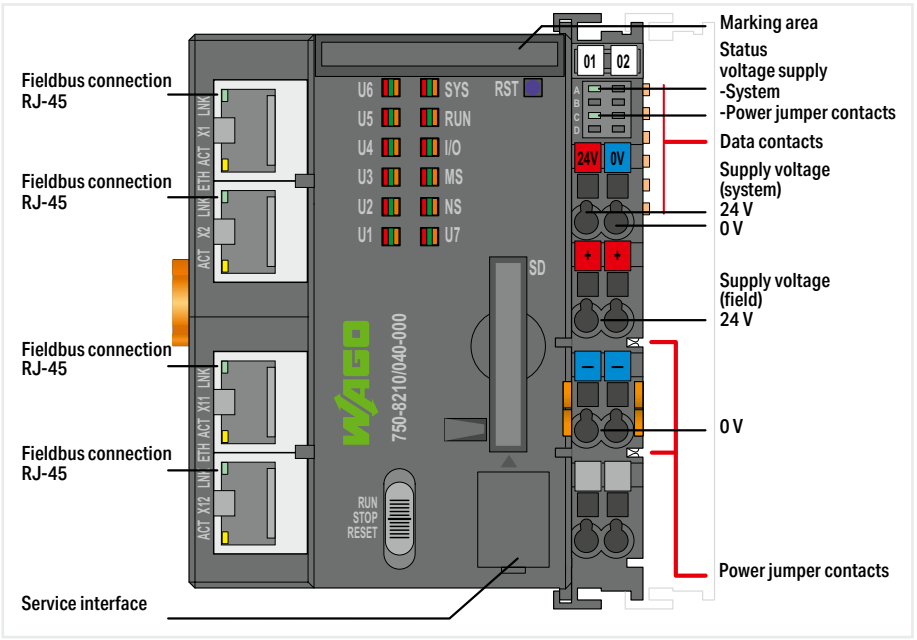
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Cables and connectors	Page 680
Communication	Page 678
DIN-rail	Page 716
Marking	Page 714
Shield termination	Page 708
Software	Page 12
System enclosure	Page 693

Controller PFC200 XTR ▶ 4 x ETHERNET



750-8210/040-000



Version	extreme
Item no.	**750-8210/040-000**
Order Text	**PFC200; G2; 4ETH; XTR**

Technical data	
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/750-8210/040-000

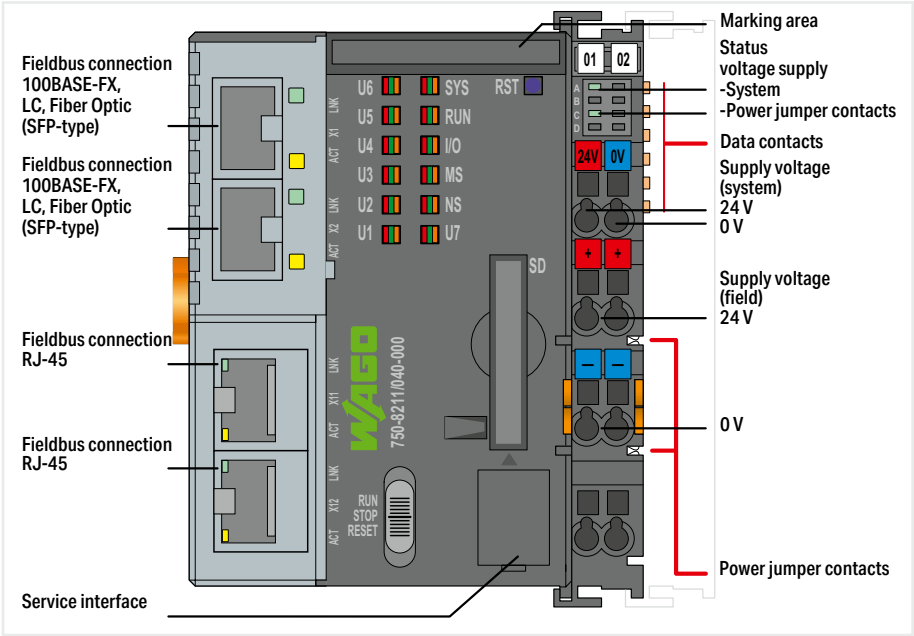
Product Expansions	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 XTR ▶ 2 x ETHERNET, 2 x SFP port



750-8211/040-000



Version	extreme
Item no.	**750-8211/040-000**
Order Text	**PFC200; G2; 2ETH, 2SFP; XTR**

Technical data	
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!COCKPIT*** (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc
For data sheet and additional information, see:	wago.com/750-8211/040-000

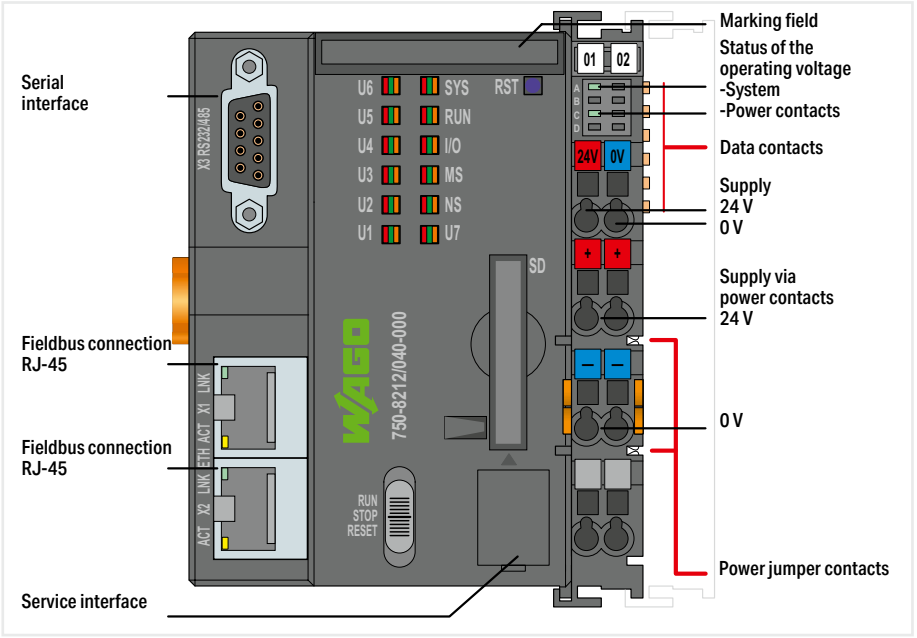
Product Expansions	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; DDM; Extreme; silver-colored	852-202
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 XTR ▶ 2 x ETHERNET, RS-232/-485



750-8212/040-000

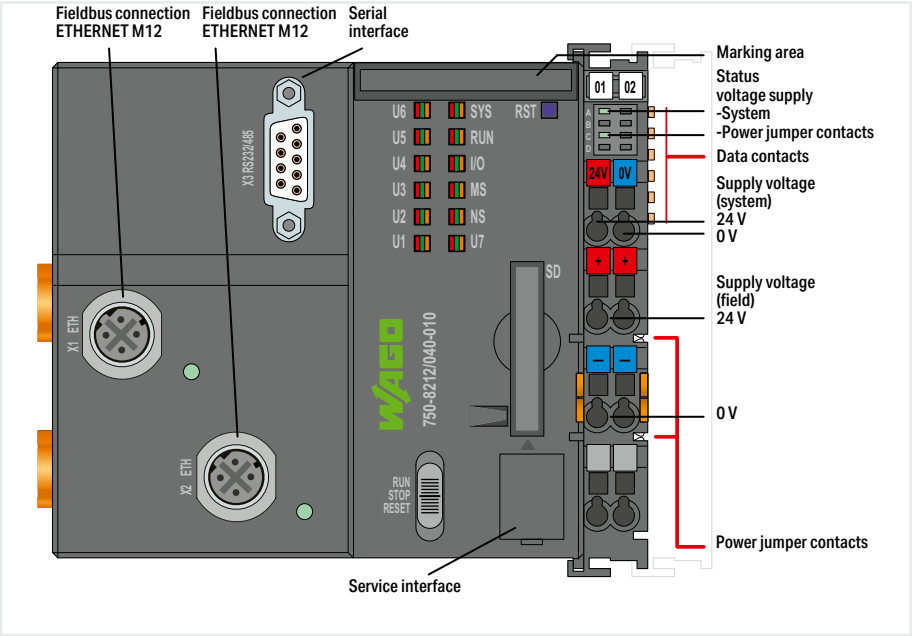


Version	extreme	Telecontrol technology; extreme
Item no.	**750-8212/040-000**	**750-8212/040-001**
Order Text	**PFC200; G2; 2ETH RS; XTR**	**PFC200; G2; 2ETH RS; Tele; XTR**
Technical data		
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; Telecontrol protocols; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)	IEC 60870; IEC 61850; DNP3
Visualization	Web-Visu	
Programming environment	CODESYS V3.5, from firmware release 23; ***e!COCKPIT*** (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22	
CPU	Cortex A8; 1 GHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB	
Number of modules per node (max.)	64	
Input and output process image (internal) max.	1000 words/1000 words	
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!	
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!	
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Ambient temperature (operation)	-40 … +70 °C	
Dimensions W x H x D	(78.6 x 100 x 71.9) mm	
Approvals	CE; Marine; OrdLoc/HazLoc	
For data sheet and additional information, see:	wago.com/750-8212/040-000	
Product Expansions	**Item no.**	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000	-
Runtime; IEC60870 Slave; Single License	2759-290/211-1000	-
Runtime; DNP3 Slave; Single License	2759-2290/211-1000	-
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000	-
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000	-
Runtime; IEC61850 Server; Single License	2759-2240/211-1000	-
Accessories	**Item no.**	**Item no.**
Memory Card SD; SLC-NAND; 2 GB	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB	758-879/000-2108	758-879/000-2108

Controller PFC200 XTR ▶ 2 x ETHERNET M12, RS-232/-485



750-8212/040-010



Version	M12; extreme
Item no.	**750-8212/040-010**
Order Text	**PFC200 G2 2ETH M12 RS; XTR**

Technical data	
Communication	Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-8212/040-010

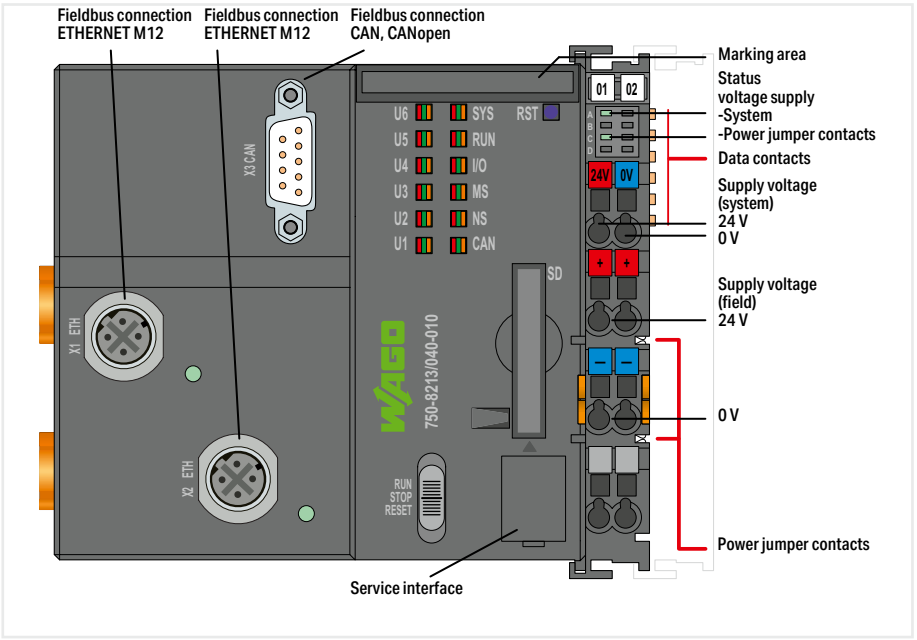
Product Expansions	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 XTR ▶ 2 x ETHERNET M12, CAN, CANopen



750-8213/040-010



Version	M12; extreme
Item no.	750-8213/040-010
Order Text	PFC200 G2 2ETH M12 CAN; XTR

Technical data	
Communication	CANopen; Modbus TCP master/slave; Modbus (UDP); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Input and output process image (CAN) max.	2000 words/2000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-8213/040-010

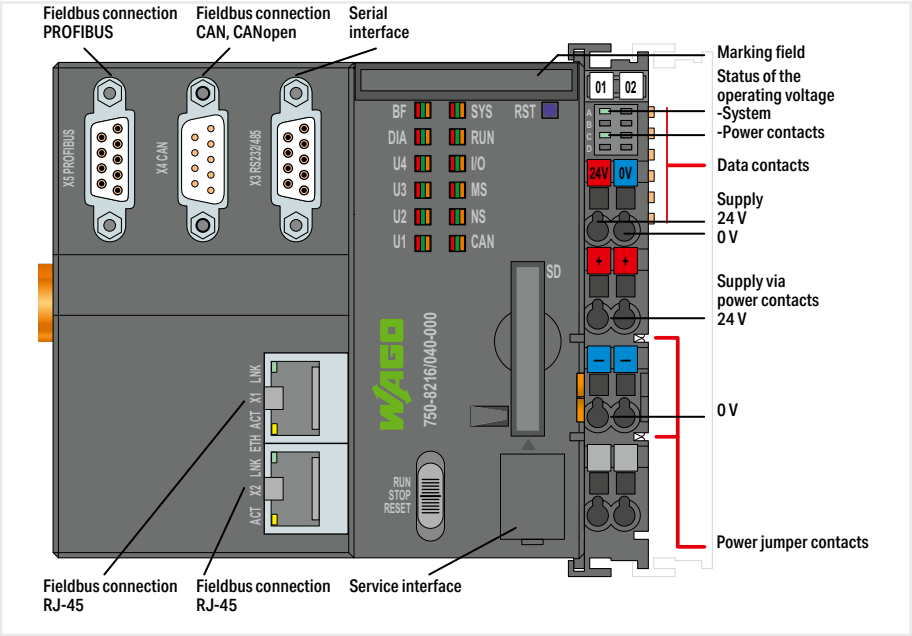
Product Expansions	Item no.
Runtime; BACnet; 300; Single License	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000

Accessories	Item no.
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 XTR ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS slave



750-8216/040-000



Version	extreme
Item no.	**750-8216/040-000**
Order Text	**PFC200; G2; 2ETH RS CAN DPS; XTR**

Technical data	
Communication	PROFIBUS; CANopen; Modbus TCP master/slave; Modbus (UDP); Modbus (RTU); ETHERNET; EtherNet/IP™ Adapter (slave); EtherNet/IP™ Scanner; EtherCAT® Master; OPC UA Server/Client; OPC UA Pub/Sub (can be installed later); MQTT; RS-232 serial interface; RS-485 interface; BACnet/IP, **requires an additional license**; Telecontrol protocols, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870 (additional license as slave or master); IEC 61850 (additional license as Client or Server); DNP3 (additional license as Slave or Master)
Visualization	Web-Visu
Programming environment	CODESYS V3.5, from firmware release 23; ***e!****COCKPIT* (based on CODESYS V3), up to firmware release 22; WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3), up to firmware release 22
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; CODESYS V3: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output process image (internal) max.	1000 words/1000 words
Input and output process image (Modbus®) max.	CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words
Input and output process image (PROFIBUS) max.	244 bytes/244 bytes
Input and output process image (CAN) max.	2000 words/2000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-8216/040-000

Product Expansions	**Item no.**
Runtime; BACnet; 300; Single License	2759-283/211-1000
Runtime; DNP3 Master; M; Single License	2759-2293/211-1000
Runtime; IEC60870 Slave; Single License	2759-290/211-1000
Runtime; DNP3 Slave; Single License	2759-2290/211-1000
Runtime; IEC60870 Master; M; Single License	2759-293/211-1000
Runtime; IEC61850 Client; M; Single License	2759-2243/211-1000
Runtime; IEC61850 Server; Single License	2759-2240/211-1000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108



Basic Controllers 100

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

◄◄ Section 6.1

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

◄ Section 6.2

Basic Controllers 100

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Section 6.4 ►

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 6.5 ►►

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

Section 6.6 ►►►

Basic Controllers 100
Contents

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Interfaces and Types	145
Item Number Key	145
Installation Instructions	146
Standards and Rated Conditions	147
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	CPU	Modbus (TCP, UDP)	Description	Item No.	
	32 bits	M/S	Basic Controller 100; 2 x ETHERNET	750-8001	148
		M/S	Basic Controller 100; 2 x ETHERNET; ECO	750-8000	149

M: Master, S: Slave

Basic Controllers 100
General Product Information

Basic Controllers 100:

The Basic Controllers 100 primarily use the manufacturer-independent IEC 61131-3 engineering system CODESYS V3.
Integrated standard editors (FBD, LD, ST, AS) make it easy to create extensive applications. All the advantages of object-oriented programming can be used to their full extent.

Seamlessly integrated communication protocols (OPC UA Client/Server/PubSub, Modbus TCP Master/Slave, EtherNet/IP™ Scanner/Adapter and MQTT) are supported, along with advanced HTML5-based web visualization.

The Basic Controllers 100 feature a new role-based user management and support the TLS1.3 encryption protocol.
Both RFC 5424-compliant syslog and the SFTP encrypted transfer protocol – along with https – are standard features.

Link between Process Data and IT Application

WAGO's controllers ideally combine real-time requirements with IT functionality. They support Modbus/TCP and EtherNet/IP™ for use in industrial environments. HTTP; HTTPS, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use. These approvals even include the harsh operating conditions that ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous other marine certifications cover.

Modular and Expandable

With the WAGO I/O System 750, the Basic Controllers can expand to almost any input/output interface. A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools.
The straightforward design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O modules' granularity, the field level can be directly wired using 1-, 2-, 3- or 4-conductor technology.

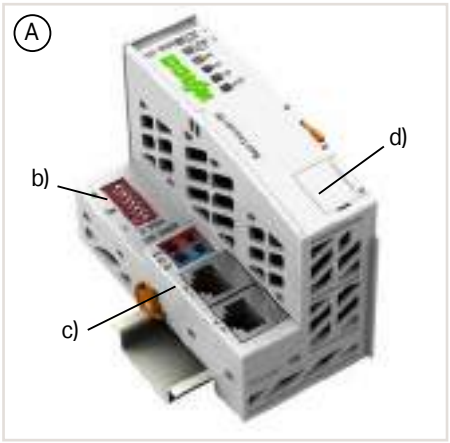
Maximum Reliability and Ruggedness

The WAGO I/O System is engineered and tested for use in the most demanding environments (e.g., temperature cycling, shock/vibration loading and ESD) according to the highest standards. Spring pressure connection technology guarantees continuous operation. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Advantages:

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC)
- Large amount of memory for projects and data

Basic Controllers 100
Interfaces and Types



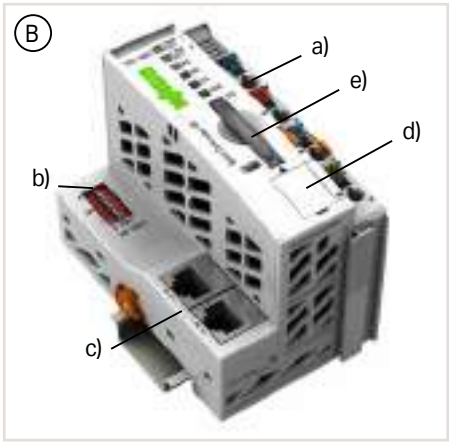
- Technical differences on the connection level; optional addressing switch (b) and fieldbus interface (c)
- Service interface (d)

Housing Design Eco (A)

- W x H x D (mm): 49.5 x 96.8 x 71.9

Housing Design (B)

- Includes a supply module (a) to power downstream I/O modules
- SD card slot for external storage media (e)
- W x H x D (mm): 61.5 x 100 x 71.9



Item Number Key

Explanation of an item number key's components:

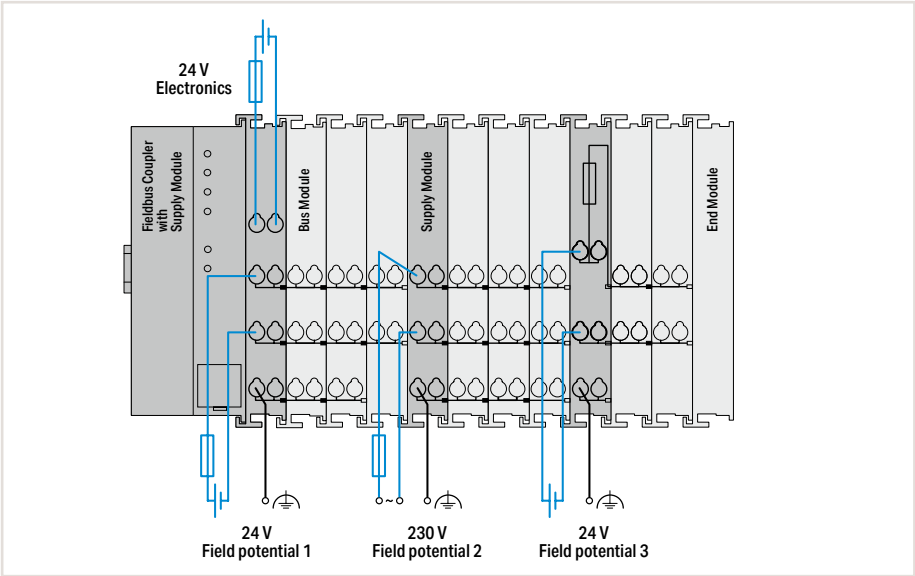
Item No. : 750-800x

0:	32 bits	ETHERNET; Modbus TCP; Eco
1:	32 bits	ETHERNET; Modbus TCP; SD card slot

Basic Controllers 100
Installation Instructions

Power Supply

The internal electronics are powered by the controller. The field-side power supply is electrically isolated via the supply module on the controller or a separate power supply module. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages (system power supply 5 VDC via the data contacts and field supply via the optional power jumper contacts). Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value is dependent on the controller used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs.
In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

Some modules are designed to provide interference-free safety functionality. These modules comply with safety requirements up to Category 4 of DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

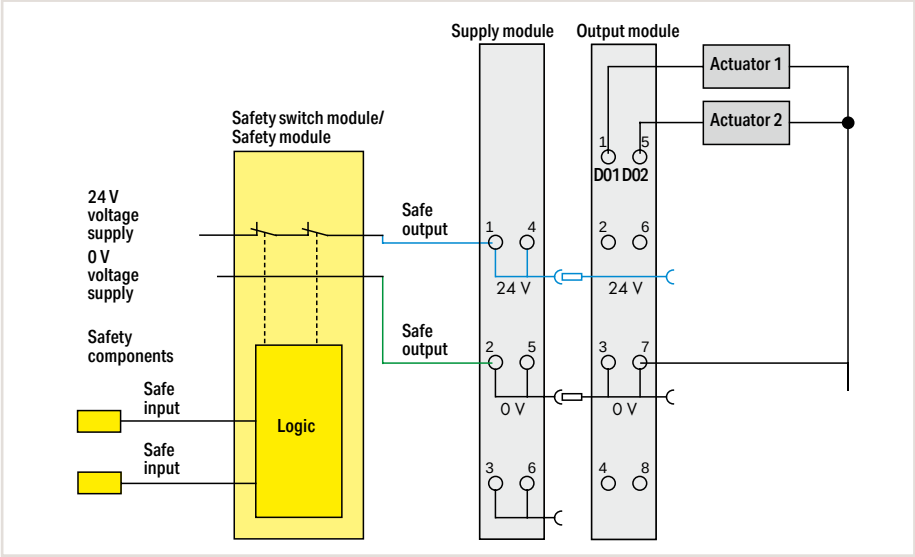
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.

A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both a supply module and a field-side power supply filter are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.
When operating safety-related I/O modules, PELV/SELV power supply units must be used for 24 VDC supply of electronics and field. Futhermore, specific power and field-side power supply filters (750-626) must be provided.

Please refer to the manual for details about the power supply's design.



Example: 2-channel, double-pole power supply disconnection

Basic Controllers 100
Standards and Rated Conditions

General Technical Data	
System supply voltage	24 VDC (−25 % … +30 %); via pluggable connector (CAGE CLAMP® connection)
Isolation	500 V (system/supply)
Surrounding air temperature (operation)	0 … +55 °C
Surrounding air temperature (storage)	−25 … +85 °C
Relative humidity	95 % (non-condensing)
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree	2 per IEC 61131-2
Vibration resistance	04g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	Per EN 61000-6-2; marine applications
EMC emission of interference	Per EN 61000-6-3; marine applications
Protection class	IP20
Mounting position	any
Mounting type	DIN-35 rail mounting
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO2 contaminant concentration at a relative humidity < 75 %	25 ppm
Permissible H2S contaminant concentration at a relative humidity < 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Current carrying capacity (power jumper contacts)	10 A

Approvals

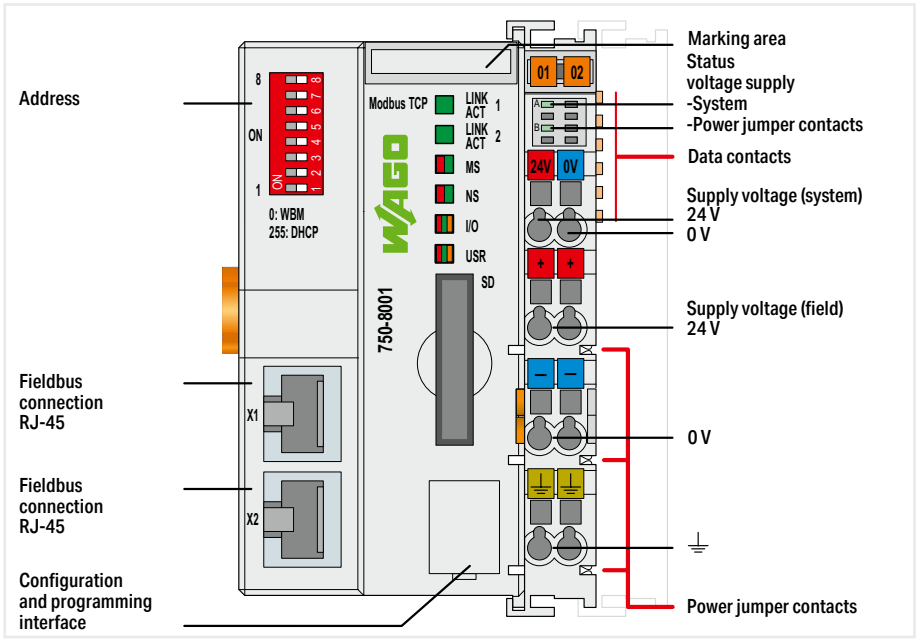
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Cables and connectors	Page 680
Communication	Page 678
DIN-rail	Page 716
Marking	Page 714
Shield termination	Page 708
Software	Page 36
System enclosure	Page 693

Basic Controller 100 ▸ Modbus TCP; SD card slot



750-8001



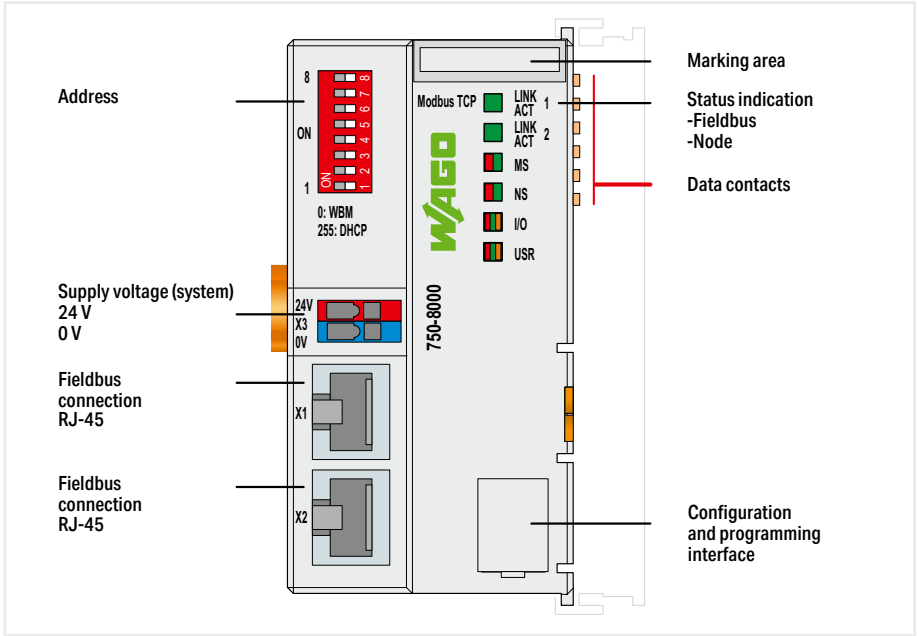
Version	Standard
Item no.	750-8001
Order Text	Basic Controller 100; 2ETH

Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; SFTP; SNMP (V2 & V3); TLS1.3 Syslog
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Webserver mit integrierten RBAC (Role Based Access Control)
Programming environment	CODESYS V3.5
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Program memory/data memory/non-volatile memory (software)	16 MB / 32 MB / 128 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE
For data sheet and additional information, see:	wago.com/750-8001

Basic Controller 100 ▶ Modbus TCP; ECO



750-8000



Version	**Standard**
Item no.	**750-8000**
Order Text	**Basic Controller 100; 2ETH; ECO**

Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; SFTP; SNMP (V2 & V3); TLS1.3 Syslog
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Webserver mit integrierten RBAC (Role Based Access Control)
Programming environment	CODESYS V3.5
Program memory/data memory/non-volatile memory (software)	16 MB / 16 MB / 64 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Current consumption (5 V system supply)	390 mA
Total current (system supply)	700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE
For data sheet and additional information, see:	wago.com/750-8000



Controllers 750

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

◄◄◄ Section 6.1

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

◄◄ Section 6.2

Basic Controllers 100

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

◄ Section 6.3

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 6.5 ►

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

Section 6.6 ►►

Controllers 750
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	CPU	ETHERNET: Modbus (TCP, UDP)	ETHERNET: EtherNet/IP™	ETHERNET: BACnet/IP	ETHERNET: KNX IP	Modbus RTU	Telecontrol Protocols	BACnet MS/TP	DeviceNet	PROFIBUS	CANopen	Description	Item No. Standard	Item No. Extended Temperature	
	32 bits	M/S										Controller Modbus TCP; 4th Generation; 2 x ETHERNET, SD Card Slot	750-890	750-890/025-000	156
		M/S					x					Controller Modbus TCP; 4th Generation; 2 x ETHERNET, SD Card Slot; Telecontrol Technology; Ext. Temperature		750-890/025-001 750-890/025-002	156
 	32 bits	M/S										Controller Modbus TCP; 4th Generation; 2 x ETHERNET	750-891		157
		M/S										Controller Modbus TCP; 4th Generation; ECO	750-862		158
 	32 bits	M/S	S									Controller EtherNet/IP™; 4th Generation; 2 x ETHERNET, SD Card Slot	750-893		159
		M/S	S									Controller EtherNet/IP™; 4th Generation; 2 x ETHERNET; ECO	750-823		160
	16 bits	M/S										Controller ETHERNET; 1 st Generation	750-842		161
		M/S										Controller ETHERNET; 1 st Generation; ECO	750-843		162
	32 bits	M/S		x								Controller BACnet/IP	750-832		163
		M/S		x								Controller BACnet/IP; ECO	750-832/000-002		163
	32 bits	M/S						x				Controller BACnet MS/TP	750-829		164
	32 bits	M/S			x							Controller KNX/IP	750-889		165
	16 bits					x						Controller MODBUS; RS-485; 115.2 kBd	750-815/300-000	750-815/325-000	166
						x						Controller MODBUS; RS-232; 115.2 kBd	750-816/300-000		167
	16 bits									S		Controller PROFIBUS Slave	750-833	750-833/025-000	168
	16 bits								x			Controller DeviceNet	750-806		169
	16 bits										M/S	Controller CANopen; 128/64 KB Program/ RAM; *MCS*	750-837		170
												Controller CANopen; 640/832 KB Program/ RAM; *MCS*	750-837/021-000		170
											M/S	Controller CANopen; 128/64 KB Program/ RAM; D-Sub	750-838		171
												Controller CANopen; 640/832 KB Program/ RAM; D-Sub	750-838/021-000		171

M: Master, S: Slave

Controllers 750
General Product Information

Controllers 750:
Open – Flexible – Compact

WAGO's controllers are ideal for a wide variety of applications ranging from industrial, process and building automation to measurement and data collection. Based on the fieldbus couplers for all standard fieldbus systems, they are programmable to IEC 61131-3. Direct connection to a wide range of I/O modules from the WAGO I/O System 750 provides perfect adaptation to any application.

Building Automation

Dedicated controllers for the BACnet/IP and KNX IP bus systems are ideal for building automation applications. The wide range of I/O modules allows integration of external systems such as lighting control (DALI), sun protection (SMI), wireless switches (EnOcean) and much more.

Marine and Onshore/Offshore Industries

International approvals coupled with industry-specific features permit use in marine applications and other harsh sectors. Addressing requirements inherent in specific industries and operating environments has enabled use on marine diesels and in the EMC-sensitive area of a vessel's bridge. Because the requirements are significantly greater for both interference immunity and emission, along with superior mechanical performance in these sensitive areas, the WAGO I/O System will readily meet the needs of other industries.

Telecontrol Technology

Standardized IEC 60870-5, IEC 61850, IEC 61400-25 and DNP3 Telecontrol Protocols allow the Controllers 750 to be used in telecontrol applications.

Starter Kits

For a quick start, WAGO offers every customer the unique opportunity to purchase a starter kit that already contains all the components needed to begin programming and getting to know the controllers. For starter kits, see Section 6.6.

Link between Process Data and IT Application

WAGO's controllers ideally combine real-time requirements with IT functionality. They support Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP; HTTPS, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use – even under harsh operating conditions. These recognitions include: ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous marine certifications.

Modular and Expandable

With the WAGO I/O System 750, the Controllers 750 can be expanded to almost any input/output interface. A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools.
The straightforward design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O modules' granularity, the field level can be directly wired using 1-, 2-, 3- or 4-conductor technology.

Maximum Reliability and Ruggedness

The WAGO I/O System is engineered and tested for use in the most demanding environments (e.g., temperature cycling, shock/vibration loading and ESD) according to the highest standards. Spring pressure connection technology guarantees continuous operation. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Benefits:

- Controllers for all prominent fieldbus systems
- Industry-specific features
- Programmable via CODESYS 3 (IEC 61131-3)
- Expandable with the WAGO I/O System 750's comprehensive product range
- Extensive IT integration possibilities
- Tested and approved worldwide
- Maintenance-free

Controllers 750
Variants

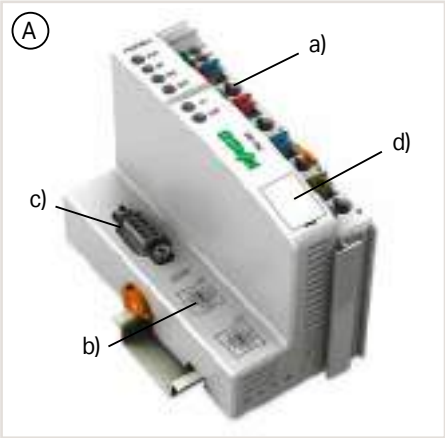
Extended Temperature Range

Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, there are applications that require an extended temperature range. Select controllers are available in an extended temperature range of –20°C to +60°C.



For extreme applications, where even this extended temperature range is not sufficient, the WAGO I/O System 750 XTR is available.

Interfaces and Types



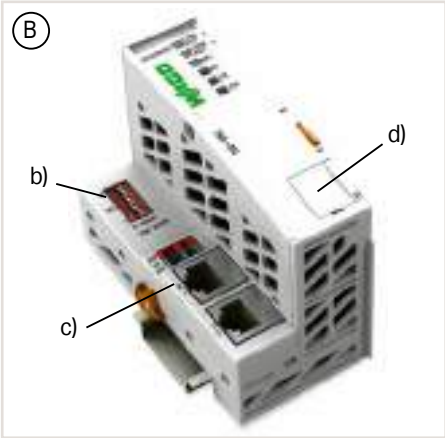
- Technical differences on the connection level; optional addressing switch (b) and fieldbus interface (c)
- Service interface (d)

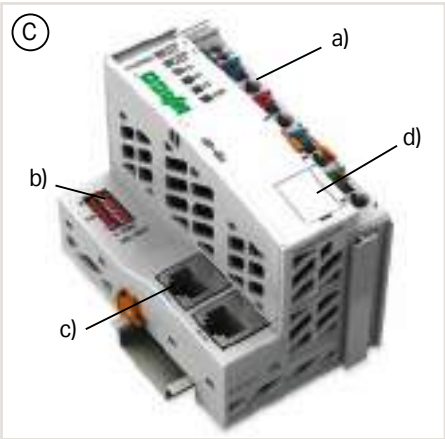
Housing Design (A)

- Includes a supply module (a) to power downstream I/O modules
- W x H x D (mm): 50.5 x 100 x 71.1

Housing Design Eco (B)

- W x H x D (mm): 49.5 x 96.8 x 71.9



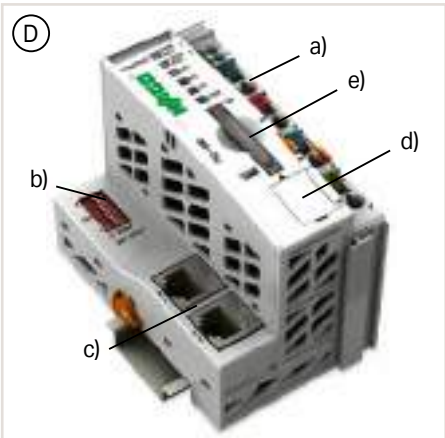


Housing Design (C)

- Includes a supply module (a) to power downstream I/O modules
- W x H x D (mm): 61.5 x 100 x 71.9

Housing Design (D)

- Includes a supply module (a) to power downstream I/O modules
- SD card slot for external storage media (e)
- W x H x D (mm): 61.5 x 100 x 71.9



Item Number Key

Explanation of an item number key's components

Item No. : 750-8xx

0x, 1x:	16-bit CPU	INTERBUS, DeviceNet, Modbus
3x, 4x:	16-bit CPU	BACnet, PROFIBUS, CANopen, ETHERNET
6x:	32 bits	ETHERNET Eco
2x, 7x, 8x:	32-bit multitasking	ETHERNET, telecontrol technology, media redundancy, BACnet, KNX IP

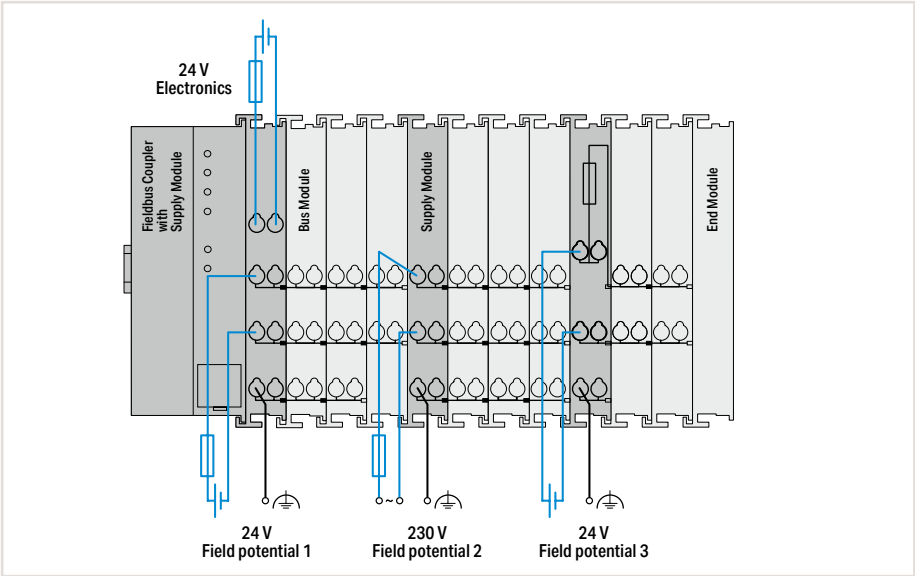
.../025-yyy: Extended temperature range (–20 ... +60 °C)

000: Standard, 001: Telecontrol technology, 002: Telecontrol technology Eco

Controllers 750
Installation Instructions

Power Supply

The internal electronics are powered by the controller. The field-side power supply is electrically isolated via the supply module on the controller or a separate power supply module. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages (system power supply 5 VDC via the data contacts and field supply via the optional power jumper contacts). Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value is dependent on the controller used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs.
In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

Some modules are designed to provide interference-free safety functionality. These modules comply with safety requirements up to Category 4 of DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

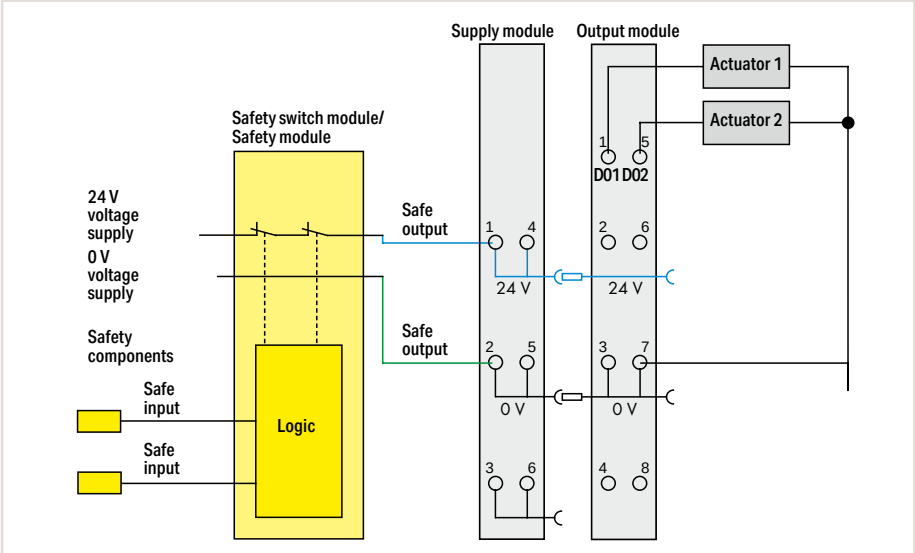
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.

A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both a supply module and a field-side power supply filter are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.
When operating safety-related I/O modules, PELV/SELV power supply units must be used for 24 VDC supply of electronics and field. Futhermore, specific power and field-side power supply filters (750-626) must be provided.

Please refer to the manual for details about the power supply's design.



Example: 2-channel, double-pole power supply disconnection

Controller 750
Standards and Rated Conditions

General technical data	
Relative humidity (without condensation)	95 %
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree	2 per IEC 61131-2
Shock resistance	15g per IEC 60068-2-27
Protection type	IP20
Mounting position	any
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches

Approvals

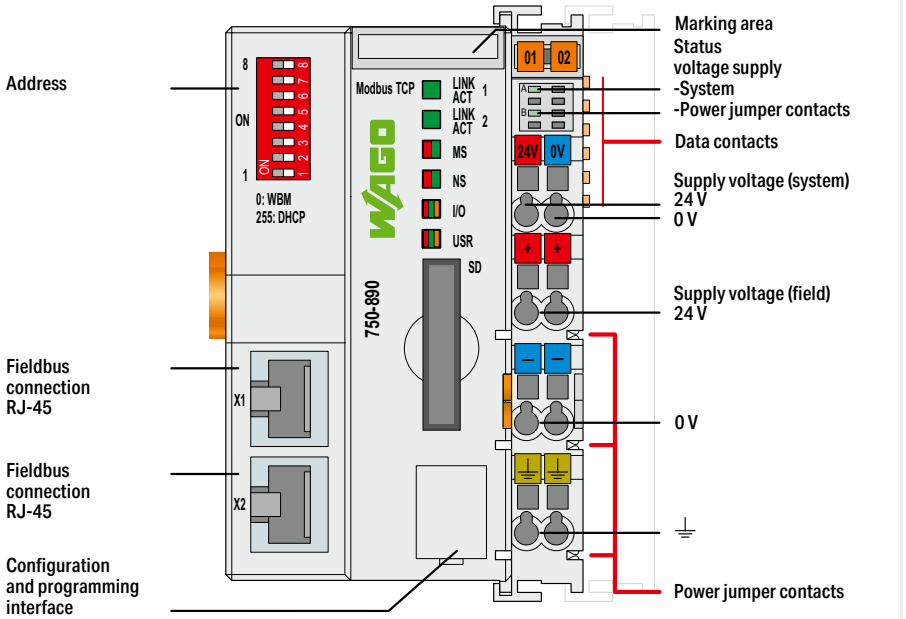
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Cables and connectors	Page 680
Communication	Page 678
DIN-rail	Page 716
Marking	Page 714
Shield termination	Page 708
Software	Page 36
System enclosure	Page 693

Controller 750 ▶ Modbus TCP; SD card slot



750-890



Version	Standard	ext. temperature	Telecontrol technology; ext. temperature	Telecontrol technology; ext. temperature; ECO
Item no.	750-890	750-890/025-000	750-890/025-001	750-890/025-002
Order Text	Controller Modbus TCP; G4; 2ETH SD	Controller Modbus TCP; G4; 2ETH SD; T	Controller Modbus TCP; G4; 2ETH SD; Tele; T	Controller Modbus TCP; G4; 2ETH SD; Tele; T; ECO

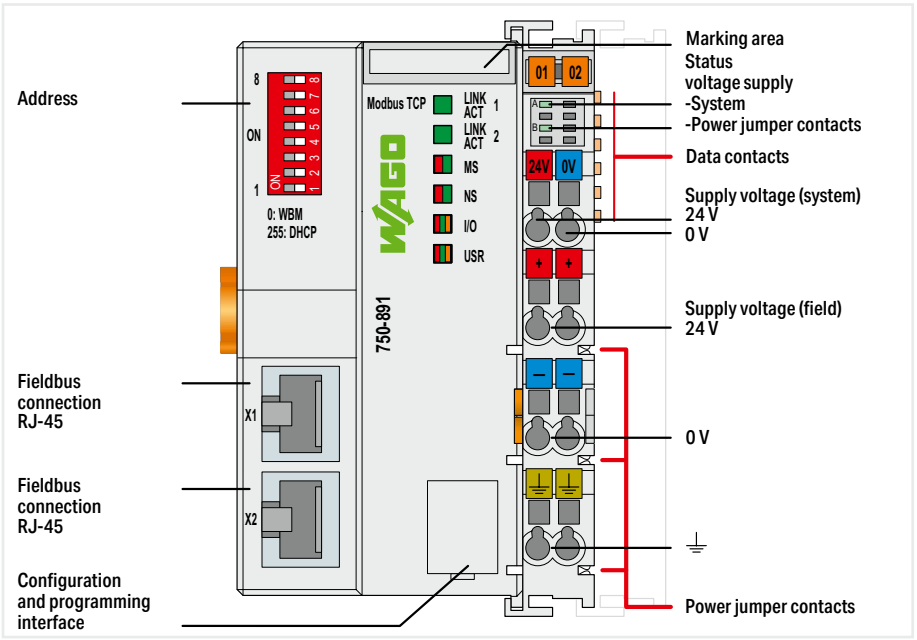
Technical data				
Communication	Modbus (TCP, UDP)		Modbus (TCP, UDP); Telecontrol protocols	
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP			
Telecontrol protocols	-		IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3	
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45		Modbus (TCP, UDP): 2 x RJ-45; Telecontrol protocol IEC 60870-5-101/-103: 1 x Serial interface via I/O module; Telecontrol protocol IEC 60870-5-104: 1 x RJ-45; Telecontrol protocol IEC 61850: 1 x RJ-45; Telecontrol protocol DNP3: 1 x RJ-45	
Baud rate	10/100 Mbit/s			
Visualization	Web-Visu			
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)			
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)			
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB			
Number of modules per node (max.)	250			4
Input and output process image (fieldbus) max.	1020 words/1020 words			
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts			
Input current (typ.) at nominal load (24 V)	500 mA			
Current consumption (5 V system supply)	440 mA			
Total current (system supply)	1700 mA			
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C		
Dimensions W x H x D	(61.5 x 100 x 71.9) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-890			

Accessories	Item no.	Item no.	Item no.	Item no.
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108	758-879/000-2108

Controller 750 ▶ Modbus TCP



750-891



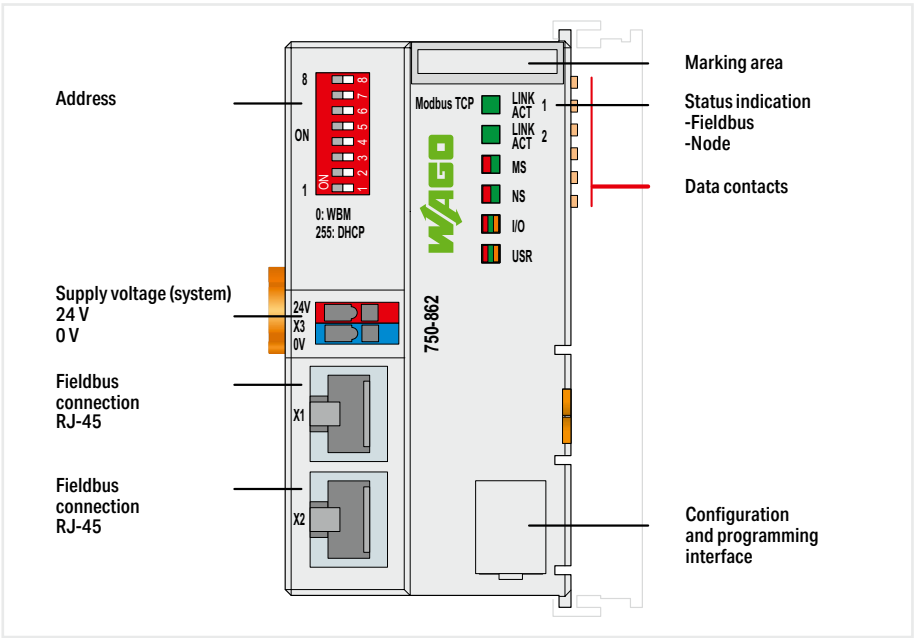
Version	**Standard**
Item no.	**750-891**
Order Text	**Controller Modbus TCP; G4; 2ETH**

Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web-Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 4 MB / 4 MB / 32 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	390 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-891

Controller 750 ▶ Modbus TCP; ECO



750-862



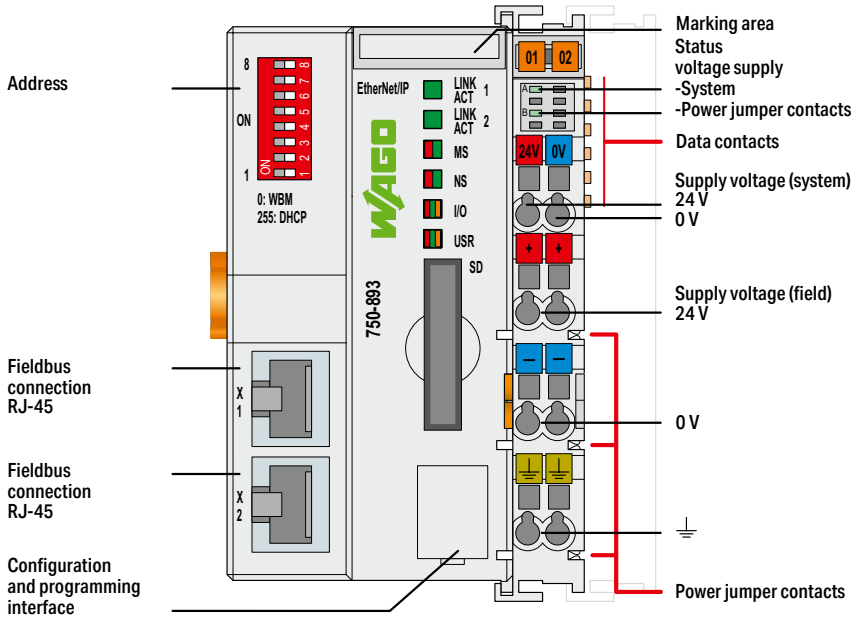
Version	Standard
Item no.	750-862
Order Text	Controller Modbus TCP; G4; 2ETH; ECO

Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web server
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 2 MB / 2 MB / 16 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Current consumption (5 V system supply)	390 mA
Total current (system supply)	700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-862

Controller 750 ▶ EtherNet/IP™; SD card slot



750-893



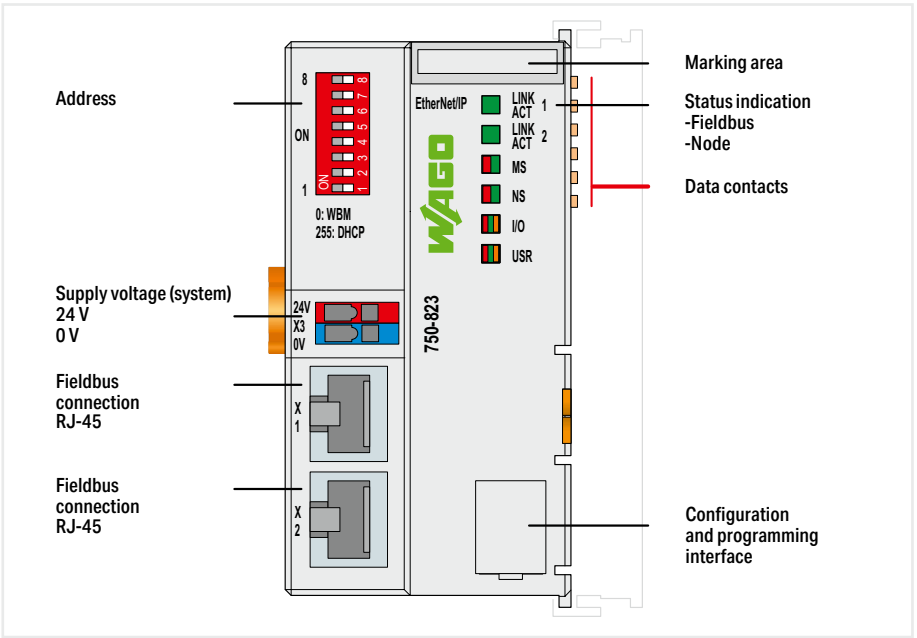
Version	**Standard**
Item no.	**750-893**
Order Text	**Controller EtherNet/IP; SD**

Technical data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web-Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-893
Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller 750 ▶ EtherNet/IP™; ECO



750-823



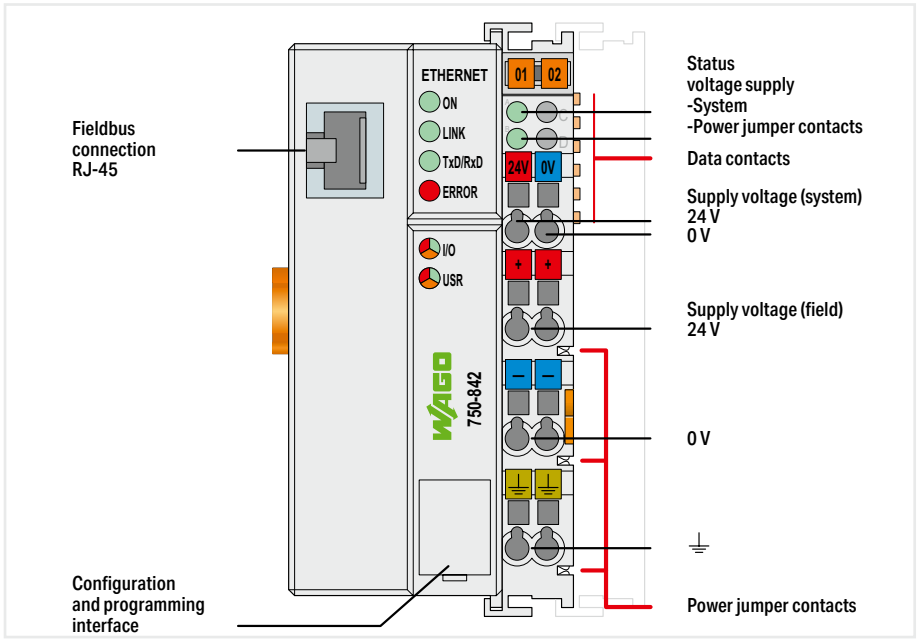
Version	**Standard**
Item no.	**750-823**
Order Text	**Controller EtherNet/IP; ECO**

Technical data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web-Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 2 MB / 2 MB / 32 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Current consumption (5 V system supply)	390 mA
Total current (system supply)	700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-823

Controller 750 ▶ ETHERNET



750-842



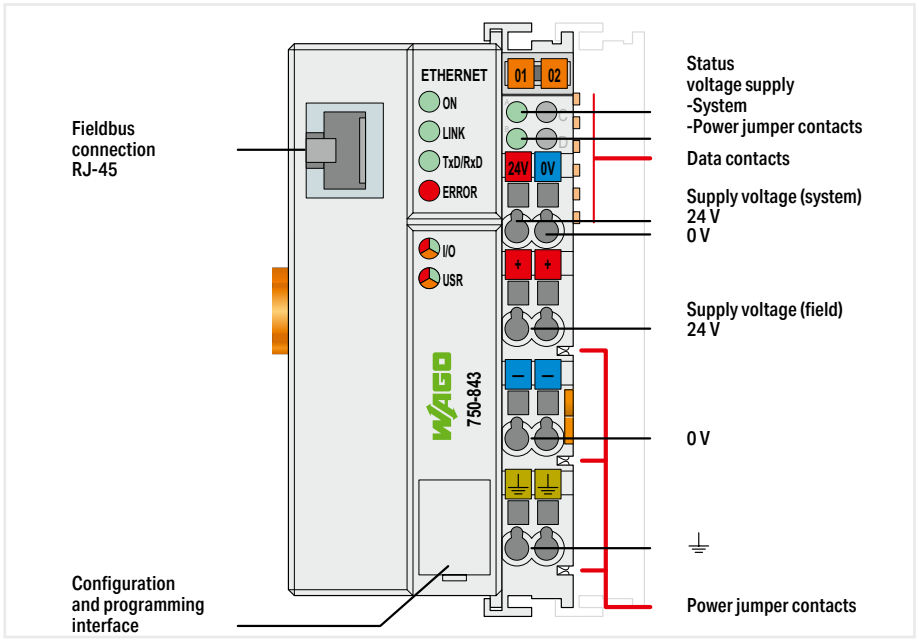
Version	**Standard**
Item no.	**750-842**
Order Text	**Controller ETHERNET; G1**

Technical data	
Communication	Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 1 x RJ-45
Bus segment length (max.)	100 m
Baud rate	10 Mbit/s
Visualization	none
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 KB / 64 KB / 8 KB
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-842

Controller 750 ▶ ETHERNET ECO



750-843



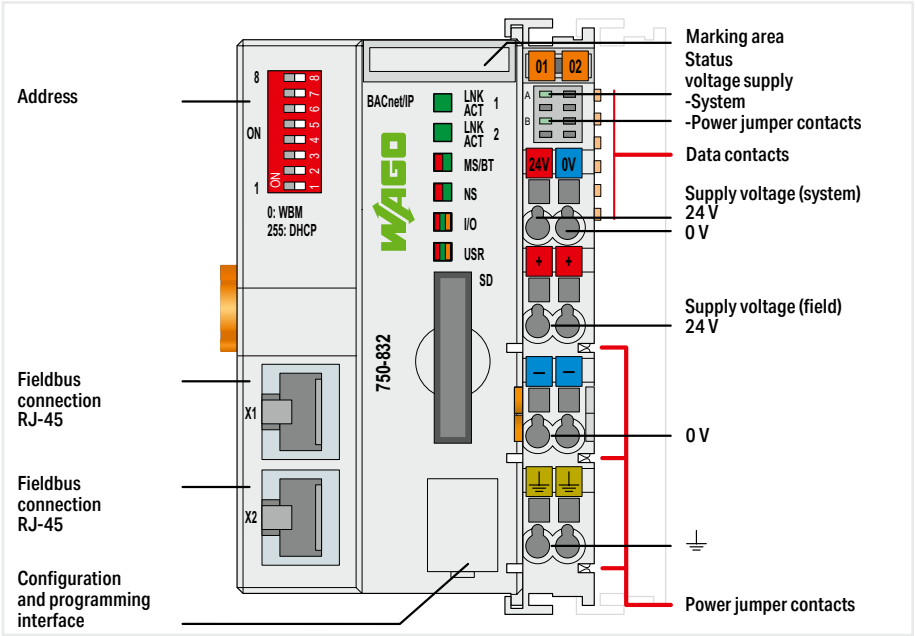
Version	**Standard**
Item no.	**750-843**
Order Text	**Controller ETHERNET; G1; ECO**

Technical data	
Communication	Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 1 x RJ-45
Bus segment length (max.)	100 m
Baud rate	10 Mbit/s
Visualization	none
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 64 KB / 64 KB / 8 KB
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-843

Controller 750 ▶ BACnet/IP; SD card slot



750-832



Version	Standard	ECO
Item no.	**750-832**	**750-832/000-002**
Order Text	**Controller BACnet/IP; G4; 2xETH; SD**	**Controller BACnet/IP; G4; 2xETH; SD; ECO**

Technical data		
Communication	BACnet/IP; Modbus (TCP, UDP)	
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP	
Connection technology: communication/fieldbus	BACnet/IP: 2 x RJ-45; Modbus (TCP, UDP): 2 x RJ-45	
Baud rate	10/100 Mbit/s	
Visualization	Web-Visu	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)	
Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 12	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB	
Number of modules per node (max.)	250	
Input and output process image (fieldbus) max.	1020 words/1020 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	440 mA	
Total current (system supply)	1700 mA	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx; BACnet approvals: WSPCert certification; BTL listing	
For data sheet and additional information, see:	wago.com/750-832	

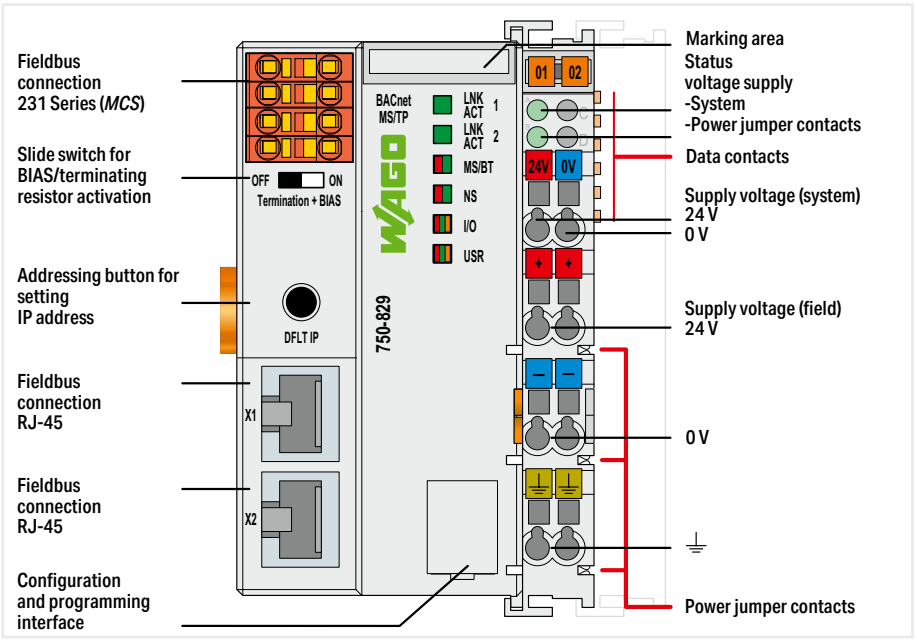
Accessories	Item no.	Item no.
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108

750-832/000-002 Controllers support a maximum of 256 BACnet objects.

Controller 750 ▶ BACnet MS/TP



750-829



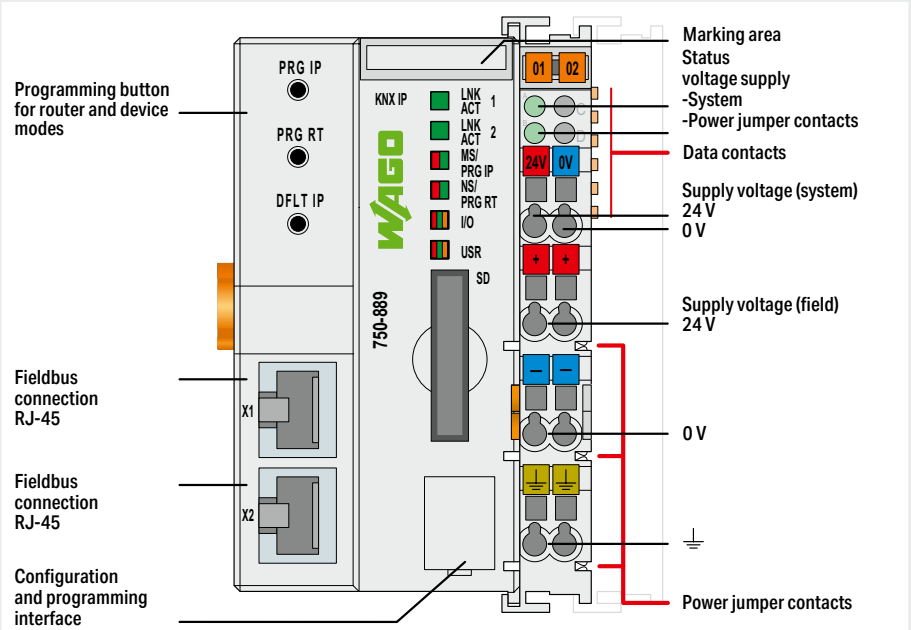
Version	Standard
Item no.	750-829
Order Text	Controller BACnet MS/TP

Technical data	
Communication	BACnet MS/TP; Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP; DHCP; DNS; SNTP; FTP; SNMP; SMTP
Connection technology: communication/fieldbus	BACnet MS/TP: 1 x Male connector; 4-pole; Modbus (TCP, UDP): 2 x RJ-45
Bus segment length (max.)	BACnet MS/TP: 1200 m; Depends on baud rate/cable (per BACnet standard) 1200 m at ≤ 76800 baud; 1000 m at > 76800 baud; ETHERNET: 100 m
Baud rate	BACnet MS/TP: 38.4 kBd (9600, 19200, 38400*, 57600, 76800, 115200 Bd (per BACnet standard); * Factory setting)
Visualization	Web-Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 1.7
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 KB / 1024 KB / 32 KB
Number of modules per node (max.)	99
Input and output process image (fieldbus) max.	1020 words/1020 words
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	450 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-829

Controller 750 ▶ KNX/IP



750-889



Version	**Standard**
Item no.	**750-889**
Order Text	**Controller KNX/IP**

Technical data	
Communication	KNX IP; Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP; DHCP; DNS; AutoIP; SNTP; FTP; SNMP V3; SMTP
Connection technology: communication/fieldbus	KNX IP: 2 x RJ-45; Modbus (TCP, UDP): 2 x RJ-45
Bus segment length (max.)	100 m
Baud rate	10/100 Mbit/s
Visualization	Web-Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Device specification	KNX/TP1 Bus Specification: 1.0
Device-specific	Number of group addresses: 254; Number of communication objects: 253
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 KB / 1024 KB / 32 KB
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	450 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
KNX certified	IP Controller: 61/8316/08; IP Router: 61/8317/08
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-889

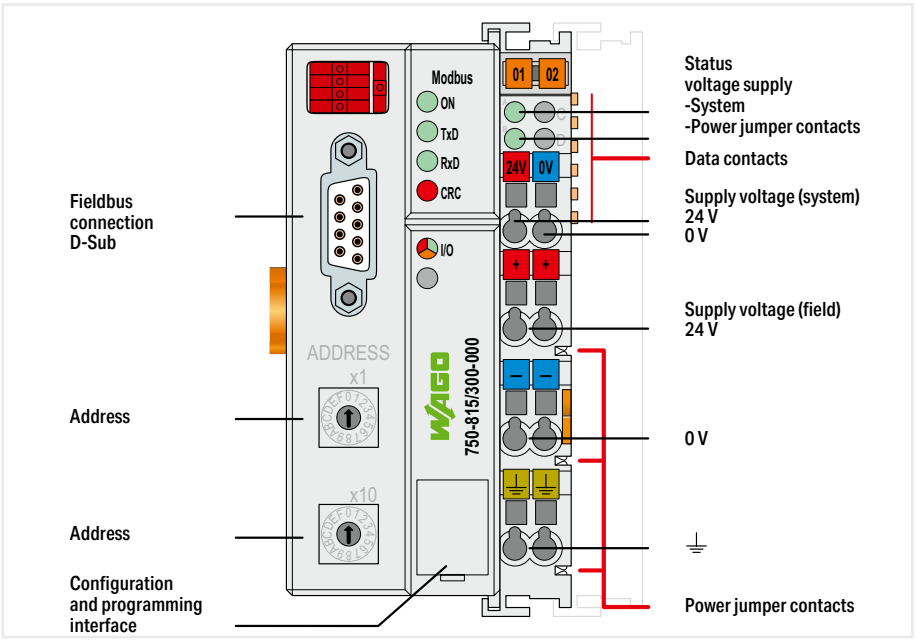
Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

This controller can accommodate two KNX logic devices at the same time: programmable controller or KNX router in conjunction with KNX/EIB/TP1 module. Commissioning (KNX-side): via ETS plug-in, 2 programming buttons

Controller 750 ▶ MODBUS; RS-485; 115.2 kBd



750-815/300-000



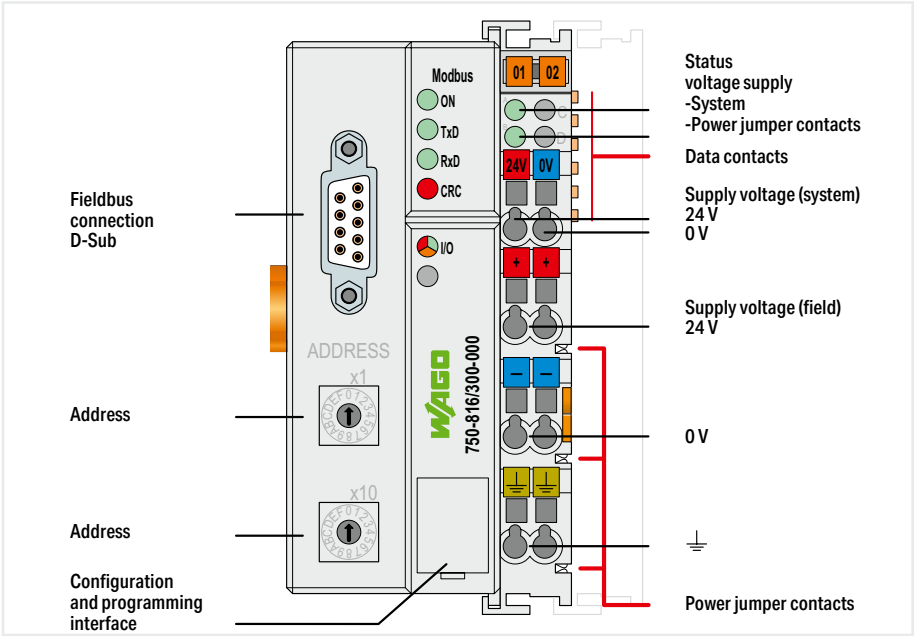
Version	Standard	ext. temperature
Item no.	750-815/300-000	750-815/325-000
Order Text	Controller MODBUS; RS485; 115.2kBd	Controller MODBUS; RS485; 115.2kBd; T

Technical data		
Communication	Modbus® RTU	
Connection technology: communication/fieldbus	Modbus® RTU: 1 x D-sub 9 socket	
Bus segment length (max.)	1200 m	
Baud rate	150 Bd ... 115.2 kBd	
Number of fieldbus nodes on master (max.)	247	
Visualization	none	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 32 KB / 32 KB / 8 KB	
Number of modules per node (max.)	64	
Input and output process image (fieldbus) max.	1024 bytes/1024 bytes	
Memory for fieldbus input variables (max.)	512 bytes	
Memory for fieldbus output variables (max.)	512 bytes	
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Ambient temperature (operation)	0 ... +55 °C	-20 ... +60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-815/300-000	

Controller 750 ▶ MODBUS; RS-232; 115.2 kBd



750-816/300-000



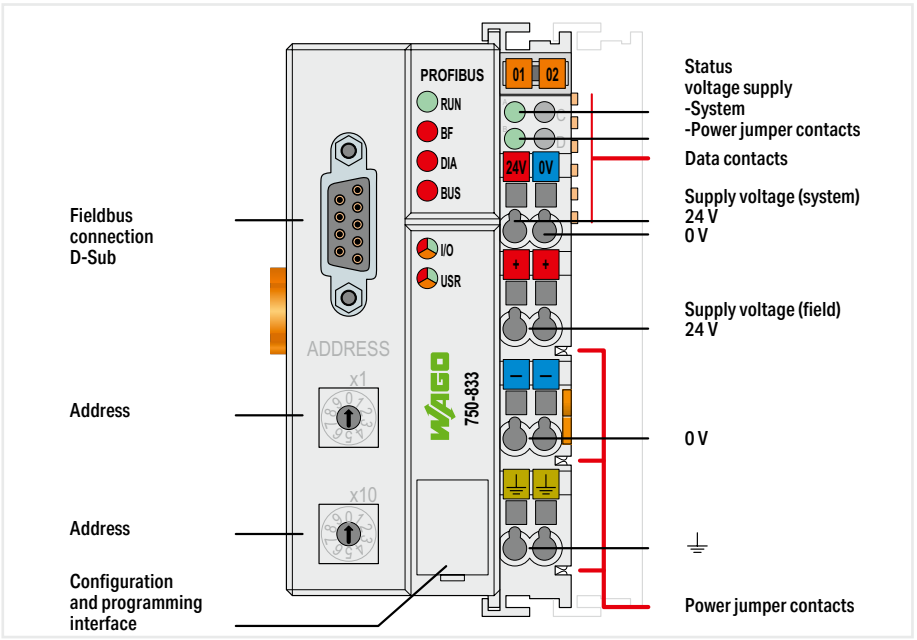
Version	**Standard**
Item no.	**750-816/300-000**
Order Text	**Controller MODBUS; RS232; 115.2kBd**

Technical data	
Communication	Modbus® RTU
Connection technology: communication/fieldbus	Modbus® RTU: 1 x D-sub 9 socket
Bus segment length (max.)	1200 m
Baud rate	150 Bd … 115.2 kBd
Number of fieldbus nodes on master (max.)	247
Visualization	none
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 32 KB / 32 KB / 8 KB
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1024 bytes/1024 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-816/300-000

Controller 750 ▶ PROFIBUS slave



750-833



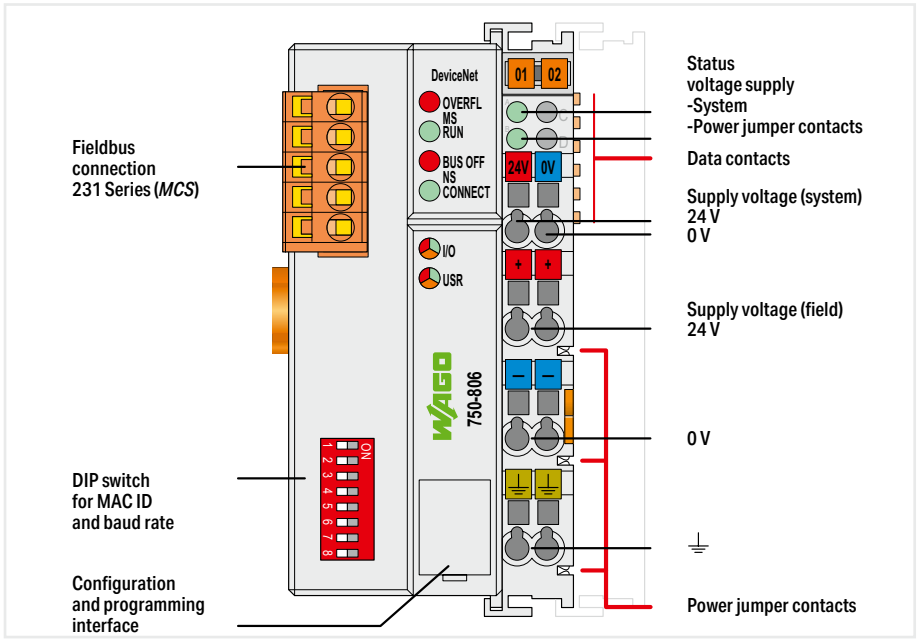
Version	Standard	ext. temperature
Item no.	**750-833**	**750-833/025-000**
Order Text	**Controller PROFIBUS Slave**	**Controller PROFIBUS Slave; T**

Technical data		
Communication	PROFIBUS	
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket	
Bus segment length (max.)	1200 m	
Baud rate	9.6 kBd … 12 MBd	
Number of fieldbus nodes on master (max.)	96	
Visualization	none	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 KB / 64 KB / 8 KB	
Number of modules per node (max.)	63	
Input and output process image (fieldbus) max.	244 bytes/244 bytes	
Memory for fieldbus input variables (max.)	244 bytes	
Memory for fieldbus output variables (max.)	244 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	200 mA	
Total current (system supply)	1800 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-833	

Controller 750 ▶ DeviceNet



750-806



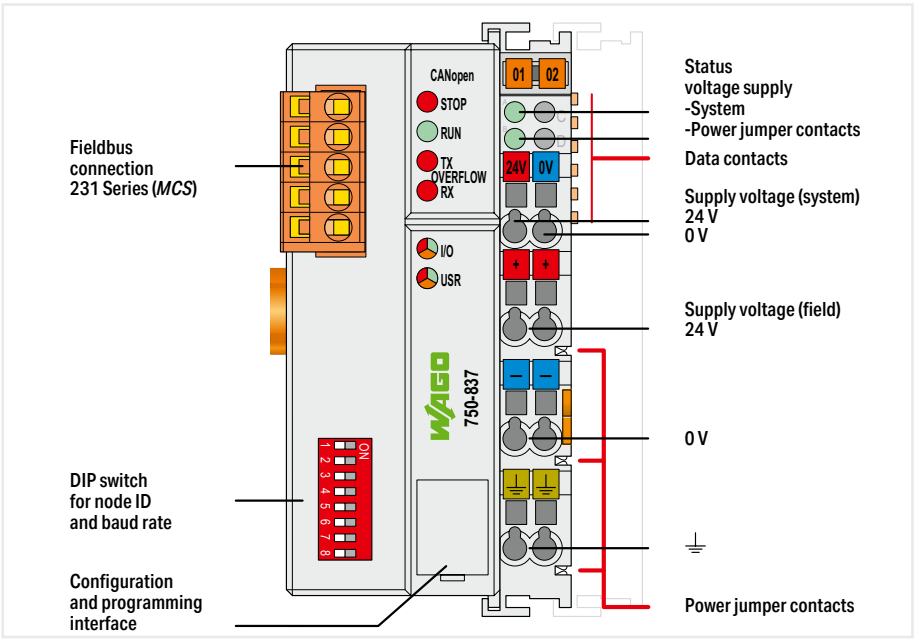
Version	**Standard**
Item no.	**750-806**
Order Text	**Controller DeviceNet**

Technical data	
Communication	DeviceNet
Connection technology: communication/fieldbus	DeviceNet: 1 x Male connector; 5-pole
Bus segment length (max.)	500 m
Baud rate	500 kBd (125 kBd, 250 kBd, 500 kBd)
Number of fieldbus nodes on master (max.)	64
Visualization	none
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 KB / 64 KB / 8 KB
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1024 bytes/1024 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Input current via DeviceNet interface at 11 V	120 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-806

Controller 750 ▶ CANopen; MCS



750-837



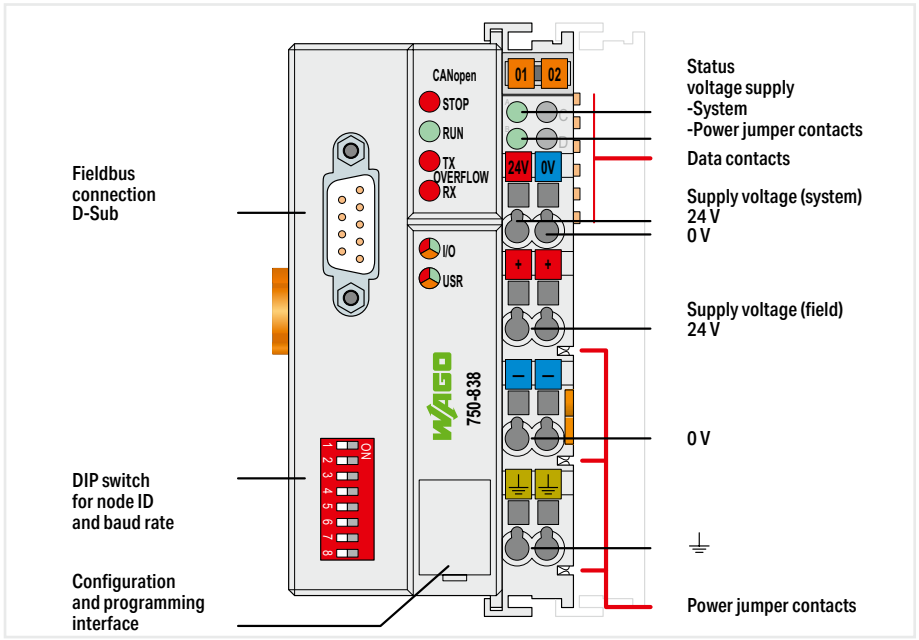
Version	Standard	640/832 KB program/RAM
Item no.	750-837	750-837/021-000
Order Text	Controller CANopen; M1; MCS	Controller CANopen; M3; MCS

Technical data		
Communication	CANopen	
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole	
Bus segment length (max.)	1000 m	
Baud rate	10 kBd ... 1 MBd	
Number of fieldbus nodes on master (max.)	110	
Visualization	none	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 KB / 64 KB / 8 KB	CODESYS V2: 640 KB / 832 KB / 8 KB
Number of modules per node (max.)	64	
Input and output process image (fieldbus) max.	512 bytes/512 bytes	
Memory for fieldbus input variables (max.)	512 bytes	
Memory for fieldbus output variables (max.)	512 bytes	
Communication profile	DS-301 V4.01	
Device profile	DS-401 V2.0; Limit value monitoring; Edge-triggered PDOs; Configurable response in the event of an error; DSP 405; NMT master can be programmed using function blocks	
Number of PDOs	32 Tx / 32 Rx	
Number of SDOs	2 SDO servers / 16 SDO clients	
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Ambient temperature (operation)	0 ... +55 °C	
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-837	

Controller 750 ▶ CANopen; D-Sub



750-838



Version	Standard	640/832 KB program/RAM
Item no.	750-838	750-838/021-000
Order Text	Controller CANopen; M1; DSub	Controller CANopen; M3; DSub

Technical data		
Communication	CANopen	
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug	
Bus segment length (max.)	1000 m	
Baud rate	10 kBd ... 1 MBd	
Number of fieldbus nodes on master (max.)	110	
Visualization	none	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 KB / 64 KB / 8 KB	CODESYS V2: 640 KB / 832 KB / 8 KB
Number of modules per node (max.)	64	
Input and output process image (fieldbus) max.	512 bytes/512 bytes	
Memory for fieldbus input variables (max.)	512 bytes	
Memory for fieldbus output variables (max.)	512 bytes	
Communication profile	DS-301 V4.01	
Device profile	DS-401 V2.0; Limit value monitoring; Edge-triggered PDOs; Configurable response in the event of an error; DSP 405; NMT master can be programmed using function blocks	
Number of PDOs	32 Tx / 32 Rx	
Number of SDOs	2 SDO servers / 16 SDO clients	
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Ambient temperature (operation)	0 ... +55 °C	
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-838	



Controllers 750 XTR

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

◄◄◄◄ Section 6.1

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

◄◄◄ Section 6.2

Basic Controllers 100

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

◄◄ Section 6.3

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

◄ Section 6.4

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

Section 6.6 ►

Controllers 750 XTR
Contents

	Page
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Interfaces and Types	175
Item Number Key	175
Standards and Rated Conditions for Railway Applications (EN 50155)	175
Installation Instructions	176
Standards and Rated Conditions	177
Approvals	177

		ETHERNET				
	CPU	Modbus (TCP, UDP)	CANopen	Description	Item No.	
	32 bits	M/S		Controller Modbus TCP; 4th Generation; 2 x ETHERNET, SD Card Slot; Extreme	750-890/040-000	178
	32 bits		M/S	Controller CANopen; 640/832 KB Program/RAM; D-Sub; Extreme	750-838/040-000	179

M: Master, S: Slave

Controllers 750 XTR
General Product Information

6.5

**Controllers 750 XTR:
Taking It to the eXTReme – The Standard for 750 XTR**

With the dark gray XTR version of the Controllers 750, you will benefit from the unique added value of this system for applications that are subjected to extreme environments.

Extremely temperature-resistant, immune to interference, as well as unfazed by vibrations and impulse voltages – the WAGO I/O System 750 XTR is the first choice for demanding applications including:

- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical processing
- Water and wastewater treatment systems
- Custom machines
- Railway systems

Marine and Onshore/Offshore Industries

International approvals coupled with industry-specific features permit use in marine applications and other harsh sectors. Addressing requirements inherent in specific industries and operating environments has enabled use on marine diesels and in the EMC-sensitive area of a vessel's bridge. Because the requirements are significantly greater for both interference immunity and emission, along with superior mechanical performance in these sensitive areas, the WAGO I/O System will readily meet the needs of other industries.

Telecontrol Technology

Standardized IEC 60870-5, IEC 61850, IEC 61400-25 and DNP3 Telecontrol Protocols allow the Controllers 750 XTR to be used in telecontrol applications. These controllers also meet stricter requirements for immunity to impulse voltages according to EN 60870-2-1.
The result is a tailor-made solution for demanding telecontrol applications that readily meets all requirements.

Link between Process Data and IT Application – Even under eXTReme Conditions

WAGO's controllers ideally combine real-time requirements with IT functionality. They support Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Modular and Expandable

With the WAGO I/O System 750 XTR, the Controllers 750 XTR can be expanded to almost any input/output interface. Using an industry-leading platform, the 750 XTR boasts the same proven benefits.

Worldwide Approvals

International approvals for industrial automation, building technology, shipbuilding and onshore/offshore applications guarantee worldwide use – even under harsh operating conditions, e.g., Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale and Polski Rejestr Stratkow.

Superior Reliability in Extreme Climates

Engineered for freezing cold, extreme heat and high humidity, the WAGO I/O System 750 XTR provides absolute dependability in virtually any weather. The XTR version of the Controllers 750 is unfazed by both freezing cold down to −40°C and scorching heat up to +70°C. And this applies equally for both start-up and ongoing operation. The maximum approved operating altitude of 5,000 m is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

Additional Protection against Interference Pulses

The WAGO I/O System 750 XTR provides greater immunity to impulse voltages up to 5 kV, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths ensure trouble-free operation.

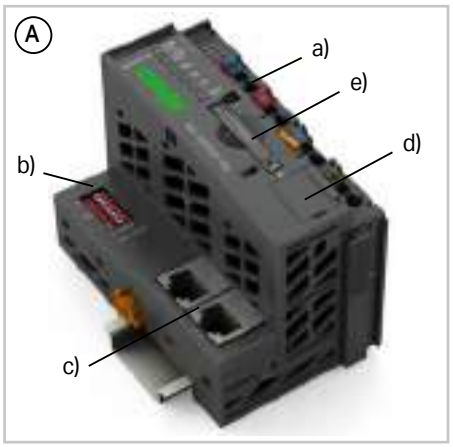
High Mechanical Performance

Automation systems must be incredibly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples of the many applications that can stress automation systems. The WAGO I/O System 750 XTR continues to set new standards here. Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

Benefits:

- Controllers for eXTReme environmental conditions
  - No air conditioning required
  - Can be used in unshielded areas
  - Install close to vibrating and shock-generating system components
- Extensive IT integration possibilities
- Expandable with the WAGO I/O System 750 XTR's comprehensive product range
- Maintenance-free
- Vibration-proof, fast and maintenance-free CAGE CLAMP® spring connections

Controllers 750 XTR
Interfaces and Types



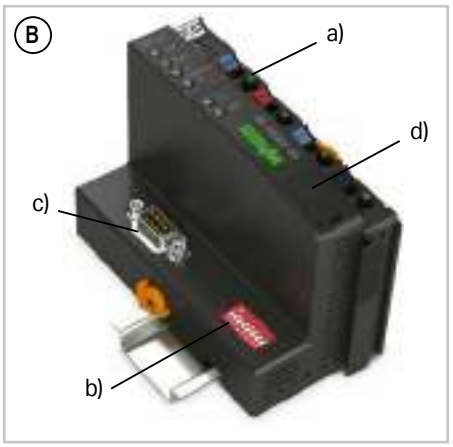
- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level; addressing switch (b) and fieldbus interface (c)
- Service interface (d)

Housing Design (A)

- SD card slot for external storage media (e)
- W x H x D (mm): 61.5 x 100 x 71.9

Housing Design (B)

- W x H x D (mm): 50.5 x 100 x 71.1



Item Number Key

Explanation of an item number key's components

Item No. : 750-8xx/040-00y

3x: 16 bits	CANopen
8x, 9x: 32-bit multitasking	ETHERNET
001:	Telecontrol Technology

Standards and Rated Conditions for Rail Applications (EN 50155)

Railway Applications (EN 50155)	Class/Standard Compliance
4.1 Rated operating conditions	
4.1.1 Altitude above sea level	AX (EN 50125-1)
4.1.2 Surrounding air temperature	TX
4.1.3 Shock and vibration	1A and 1B (EN 61373)
4.1.4 Relative humidity	95 % (coated PCBs)
5.1 Power supply	
5.1.1.1 Voltage fluctuations	
Minimum voltage	0.725 x Un
Maximum voltage	1.3 x Un
5.1.1.2 Power interruptions	S1
5.4 Surge, ESD, burst tests	**EN 50121-3-2**
5.5 EMC (emission of interference, immunity to interference)	**EN 50121-3-2, EN 50121-4, -5**
Fire behavior: per EN 45545-2 hazard level HL3	

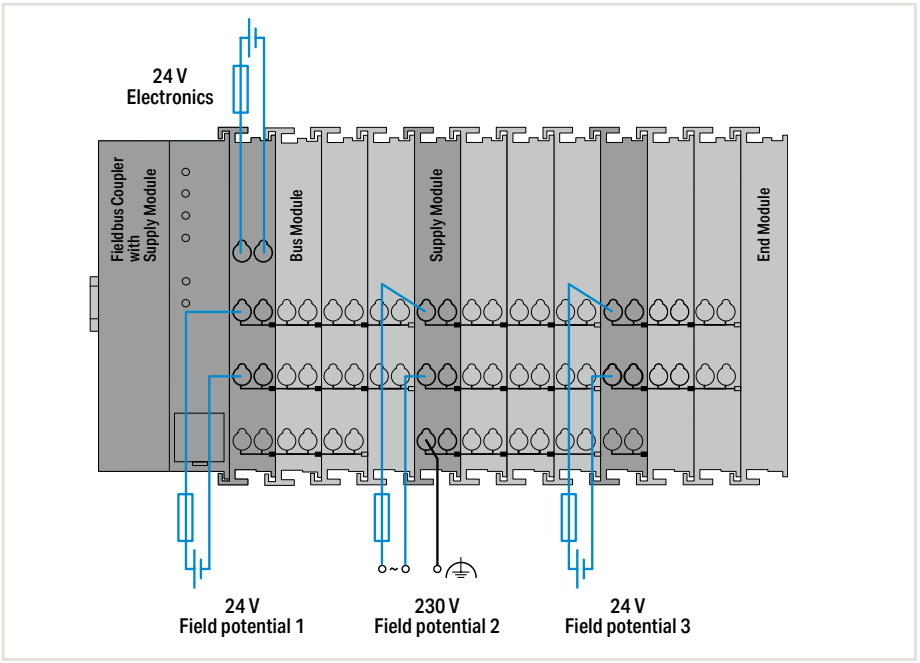
WAGO is certified in accordance with the IRIS quality standard.

Controllers 750 XTR
Installation Instructions

6.5

Power Supply

The internal electronics are powered by the controller. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value is dependent on the controller used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs.
In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

All 750 XTR Series Digital Output Modules are designed to provide interference-free safety functionality. The modules can be used in safety applications up to category 4 per DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules have no active influence on the safety function, they are not an active part of the safety application and are not a substitute for the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

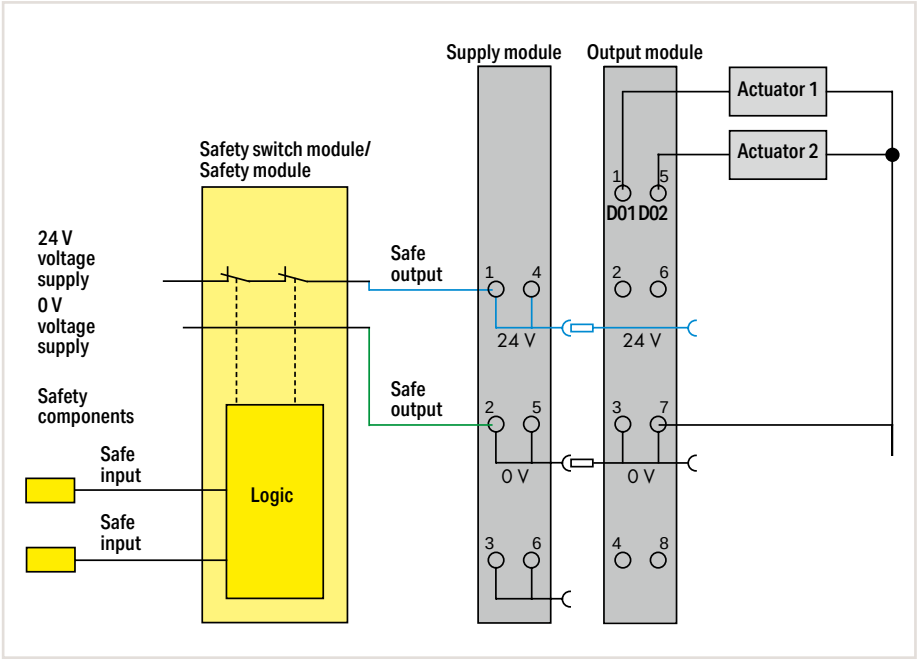
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624/040-001 or 750-626/040-000) are required for marine and onshore/offshore applications, as well as in telecontrol and rail technology.

Please refer to the manual for details about the power supply's design.

Mixed Operation

Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply). This combination may be useful, for example, when there are only increased requirements for immunity to impulse voltages and interference, but the surrounding air temperature is not critical.



Controller 750 XTR
Standards and Rated Conditions

General technical data	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Ambient temperature (operation)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +85 °C
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree	2 per IEC 61131-2
Vibration resistance	per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC emission of interference	per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
Protection type	IP20
Mounting position	horizontal (standing/lying); vertical
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	4 x CAGE CLAMP®
Solid conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Current carrying capacity (power jumper contacts)	10 A

Approvals

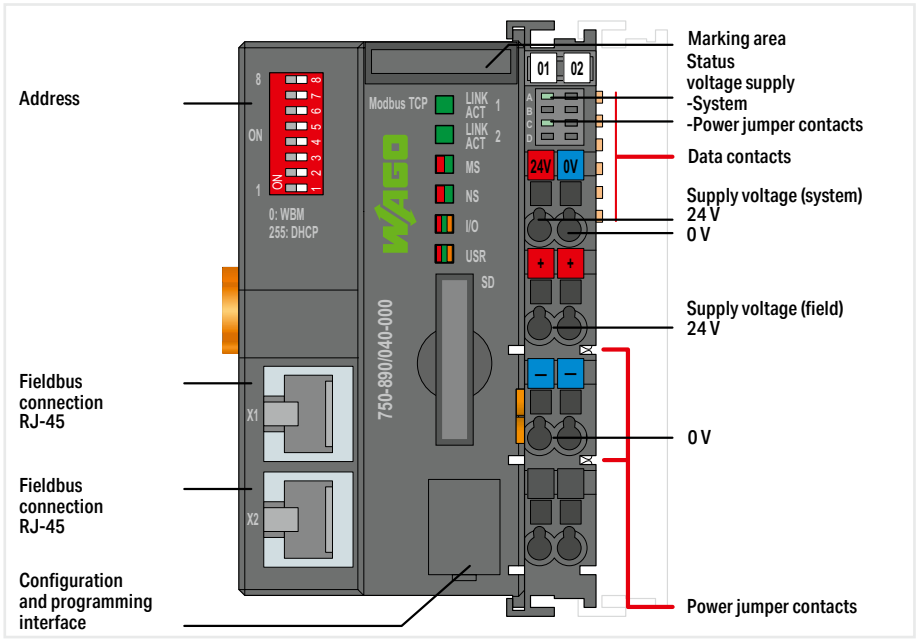
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

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Controller 750 XTR ▶ Modbus TCP; SD card slot



750-890/040-000



Version	extreme
Item no.	**750-890/040-000**
Order Text	**Controller Modbus TCP; G4; SD; XTR**

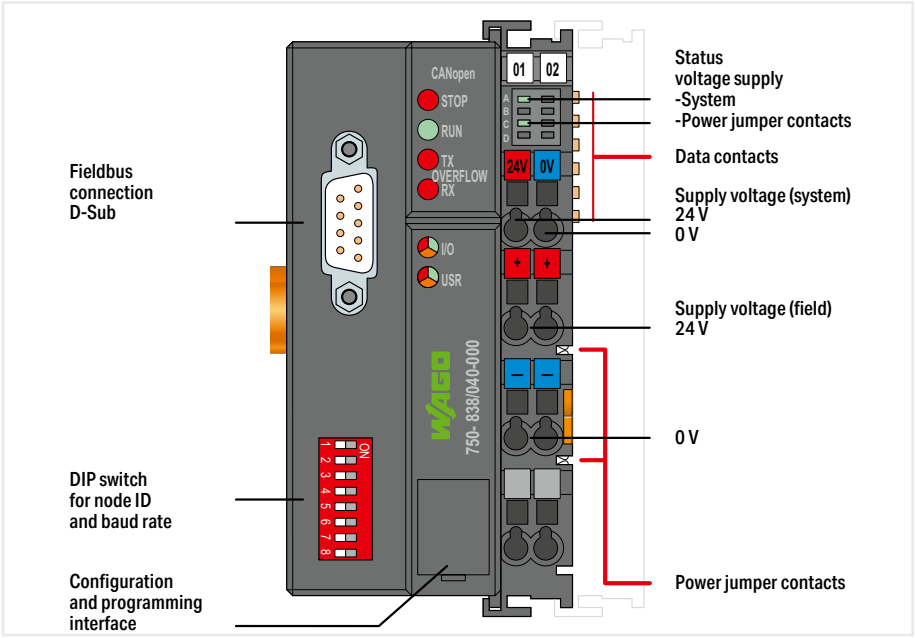
Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web-Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-890/040-000

Accessories	**Item no.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller 750 XTR ▶ CANopen; D-Sub



750-838/040-000



Version	extreme
Item no.	**750-838/040-000**
Order Text	**Controller CANopen; M3; DSub; XTR**

Technical data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Bus segment length (max.)	1000 m
Baud rate	10 kBd ... 1 MBd
Number of fieldbus nodes on master (max.)	110
Visualization	none
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 640 KB / 832 KB / 8 KB
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Communication profile	DS-301 V4.01
Device profile	DS-401 V2.0; Limit value monitoring; Edge-triggered PDOs; Configurable response in the event of an error; DSP 405; NMT master can be programmed using function blocks
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers / 16 SDO clients
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Total current for system supply: 1650 mA (ambient (operating) temperature < 60 °C; 1250 mA (ambient (operating) temperature: 60 ... 70 °C); Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 ... +30 %); for −40 ... +55 °C: 24 V (−25 ... +20 %); for +55 ... +70 °C: 24 V (−25 ... +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-838/040-000



Starter Kits and IoT Boxes

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V3

◂◂◂◂◂ Section 6.1

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

◂◂◂◂ Section 6.2

Basic Controllers 100

- Freely programmable per IEC 61131-3 with CODESYS V3
- HTML-5-based Web visualization
- Syslog in compliance with RFC 5424 and role-based user management (RBAC))
- Large amount of memory for projects and data

◂◂◂ Section 6.3

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

◂◂ Section 6.4

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

◂ Section 6.5

Starter Kits

For the entry into the most diverse application possibilities

IoT Boxes

Integrating machines and plants into the Internet of Things

WAGO Starter Kits and IoT Boxes
Contents

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M: Master, S: Slave; *requires an additional license

Starter Kit; *e!COCKPIT* with Controller PFC100; 2 x ETHERNET; Eco



The PFC100 Controller can be seamlessly integrated into WAGO's ***e!COCKPIT*** Engineering Software, which can be used for hardware configuration, programming, simulation and visualization of complex control tasks.

Tightly integrated automation software and controller hardware provide the ideal platform for advanced and intuitive CODESYS V3-based engineering.

Item Description	Item No.
Starter Kit; *e!COCKPIT*	**8003-099/750-8100**

The WAGO Starter Kit *e!COCKPIT* includes:	
Controller PFC100; 2 x ETHERNET; Eco	**750-8100**
Supply Module; 24 VDC	**750-602**
2-Channel Digital Input; 24 VDC; 3 ms	**750-400**
2-Channel Digital Output; 24 VDC; 0.5 A	**750-501**
End Module	**750-600**
Power Supply Classic; 24 VDC output voltage; 1 A	**787-1602**
Switching Module; 2-way DI simulator	**288-863**
Development Environment ***e!COCKPIT***; Licence for 1 PC	**2759-0101/1111-5000**
USB Communication Cable; 2.5 m	**750-923**
Memory Card microSD; 2 GB	**758-879/000-3102**
Operating Tool; Type 1; (3.5 x 0.5) mm blade	**210-720**
Operating Tool; Type 1; (2.5 x 0.4) mm blade	**210-719**
Patch Cable; 1.0 m	

Starter Kit; Linux®
with Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485



With the PFC200 Controller as its central component, the Linux® Starter Kit provides an entry to the world of open programming. In addition to its scalability through the open-source community, the primary advantage of having a controller with an open-source operating system is that it is continually developed and maintained.

Besides the PFC200, other components of the starter kit include input and output modules, a power supply, a switching module and the accessories needed to start programming immediately with Linux®.

Additional information on Linux® is available at:
wago.com/linux

Item Description	Item No.
Starter Kit; Linux®	**8003-099/750-8212**
The WAGO Starter Kit Linux® includes:	
Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485	**750-8212**
2-Channel Digital Input; 24 VDC; 3 ms	**750-400**
2-Channel Digital Output; 24 VDC; 0.5 A	**750-501**
End Module	**750-600**
Power Supply Classic; 24 VDC output voltage; 1 A	**787-1602**
Switching Module; 2-way DI simulator	**288-863**
Operating Tool; Type 1; (3.5 x 0.5) mm blade	**210-720**
Operating Tool; Type 1; (2.5 x 0.4) mm blade	**210-719**
Patch Cable; 1.0 m	

Starter Kit; Touch Panel 600, Advanced Line, Control Panel







The WAGO Starter Kit Touch Panel 600 contains an Advanced Control Panel 17.8 cm (7.0") with a full single-user license of the ***e!COCKPIT*** Engineering Software (based on CODESYS V3).
Required accessories for power supply, assembly and installation of the panel are included for easy commissioning.

Demo applications, which illustrate the extensive possibilities of visualization, web connectivity and programming with ***e!COCKPIT***, can be started directly from the SD card.
Additionally, a Docker® application demonstrates another option for creating applications under Linux® via open-source software.

After a successful start, both the open operating system and the full version of the engineering software are available for the free creation of applications.
WAGO's Touch Panel has 2 x LAN, 1 x RS, 1 x CAN, DI/O interfaces and supports communication protocols such as Modbus/UDP/TCP/RTU, CANopen, CAN2.0, OPC UA, MQTT.
Additional protocols, such as BACnet/IP or EtherCAT® (Master), can be licensed optionally.

Item Description	Item No.
Starter Kit; Touch Panel 600, Advanced Line, Control Panel	**8003-099/762-5303**
The WAGO Starter Kit Touch Panel 600 includes:	
Touch Panel 600; 17.8 cm (7.0"); 800 x 480 pixels; 2 x ETHERNET, 2 x USB, CAN, DI/DO, RS-232/485, Audio; Control Panel	**762-5303/8000-002**
Power Supply Classic; 24 VDC output voltage; 1 A	**787-1602**
Development Environment ***e!COCKPIT***; Licence for 1 PC	**2759-0101/1111-5000**
Memory Card microSD; pSLC-NAND; 8 GB	**758-879/000-3108**
Operating Tool; Type 1; (2.5 x 0.4) mm blade	**210-719**
Allen Wrench	
Cable; black/red; 2 x 0.5; 0.3 m	
Power Cable; 230 V	
Aluminum Feet; with groove	
Product Display; with cutout for 7" Touch Panel	
Mounting Accessories (Locking Clips, Mounting Brackets, M4×8 Screws)	
Patch Cable F/UTP; 1.0 m	

Starter Kit; KNX IP with Controller KNX IP



The WAGO Starter Kit KNX IP is available for those new to KNX IP. This starter kit is particularly well-suited to users seeking to:

- Expand existing KNX/EIB networks via the KNX/EIB/TP1 Interface to include the functionality of the modular WAGO I/O System and program applications themselves (IEC 61131-3)
- Have remote access to their KNX/EIB/TP1 network via the router
- Exploit the advantages of an ETHERNET network with KNX/EIB projects via the IP controller

Item Description	Item No.
Starter Kit; KNX IP	**8003-001/K999-9999/000-901**
The WAGO Starter Kit KNX IP includes:	
Controller KNX IP	**750-889**
4-Channel Digital Input; 24 VDC; 3 ms	**750-402**
4-Channel Digital Output; 24 VDC; 0.5 A	**750-504**
End Module	**750-600**
KNX/EIB/TP1 Interface	**753-646**
Switched-Mode Power Supply; 24 VDC output voltage; 1.3 A	**787-602**
Development Environment, incl. USB Communication Cable; WAGO-I/O-*PRO*; USB Kit	**759-333/000-923**
Patch Cable; Cross-Over	

WAGO IoT Box; Energy Data with Controller PFC200 (750-8212)



Integrating machines and systems into the "Internet of Things" is incredibly quick and easy with the WAGO IoT Box Energy Data. This IoT Box features power and energy measurement functionality and is ready for immediate use. It also offers all the functions required for digitalization, from signal acquisition to cloud connectivity.
The IoT Box was designed as a plug-and-play device – no hardware engineering is needed. Collected data is transferred to the desired IoT application with just a few parameter settings.

The hardware includes a controller with its own communication interface, I/O modules with analog and digital inputs/outputs, a 3-phase power measurement module and a 24 V power supply unit.

Depending on the application, additional I/O modules can be added later to adapt the system to specific requirements.

Item Description	Item No.
IoT Box; Energy Data	**2854-099/000-001**
This IoT Box includes:	
Controller PFC200; 2nd generation; 2 x ETHERNET, RS-232/-485	**750-8212**
Switched-Mode Power Supply; Classic; 1-phase; Output voltage: 24 VDC; Output current: 2 A; NEC Class 2; DC OK signal	**787-1606**
8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection	**750-1415**
8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection	**750-1515**
8-Channel Analog Input; Resistance measurement; Adjustable	**750-451**
4-Channel Analog Input; Voltage/current; Differential input; 16 bits; Diagnostics	**750-471**
3-Phase Power Measurement; 690 VAC 1 A	**750-495**
Rogowski Coil; Primary rated current: 4000 A; Output signal: 22.5 mV per kA; Cable length: 1.5 m; Feedthrough for measurement conductor: 70 mm	**855-9150/2000-701**
End Module	**750-600**
SD Memory Card; pSLC-NAND; 8 GB Temperature range: –40 … +90 °C	**758-879/000-2108**
IoT Box application (installed and licensed)	
Circuit breaker; 1-pole; C 10 A; 10 kA	
Electrical circuit breaker; 1-pole; 24 VDC; 1 … 8 A	
Set of wall-mount lugs	
Cable grips M16; M20; M25	
Connectors (plug and socket) for power supply	

Communication	ETHERNET; RS-232 interface; RS-485 interface; MQTT
ETHERNET protocols	DHCP, DNS, FTP, FTPS, HTTP, HTTPS, SSH
Transmission rate	ETHERNET: 10/100 Mbit/s
Visualization	Web-Visu
Dimensions W x H x D	300 x 300 x 210
Power supply (AC)	230 VAC (L/N/GND); 50 Hz
Weight	7.5 kg
Color	Light gray (RAL7035)
Housing material	Metal
Conformity marking	CE
Surrounding air temperature (operation)	0 … 45 °C
Surrounding air temperature (storage)	–40 … +85 °C
Protection type	IP20/IP65; (IP65 only applies when both power and LAN cables are locked)
Pollution degree	I
Relative humidity (without condensation)	95 %
Mounting type	Wall-mount

WAGO IoT Box; MES with Controller PFC200 (750-8212)



Integrating machines and systems into the "Internet of Things" is incredibly quick and easy with the WAGO IoT Box MES. This IoT Box also offers a wide range of communication and bus protocols for communicating with production control systems. The complete system is ready for immediate use and offers all the functions required for digitalization, from signal acquisition to cloud connectivity.
The IoT Box was designed as a plug-and-play device – no hardware engineering is needed. Collected data is transferred to the desired IoT application with just a few parameter settings.

The hardware includes a controller with its own communication interface, I/O modules with analog and digital inputs/outputs and a 24 V power supply unit.

Depending on the application, additional I/O modules can be added later to adapt the system to specific requirements.

Manufacturing Execution Systems (MES)

Item Description	Item No.
IoT Box; MES	**2854-099/000-002**
This IoT Box includes:	
Controller PFC200; 2nd generation; 2 x ETHERNET, RS-232/-485	750-8212
Switched-Mode Power Supply; Classic; 1-phase; Output voltage: 24 VDC; Output current: 2 A; NEC Class 2; DC OK signal	787-1606
8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection	750-1415
8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection	750-1515
8-Channel Analog Input; resistance measurement; adjustable	750-451
4-Channel Analog Input; Voltage/current; Differential input; 16 bits; Diagnostics	750-471
End Module	750-600
SD Memory Card; pSLC-NAND; 8 GB Temperature range: –40 … +90 °C	758-879/000-2108
Energy Data Management (EDM) application (installed and licensed)	
Circuit breaker; 1-pole; C 10 A; 10 kA	
Electrical circuit breaker; 1-pole; 24 VDC; 1 … 8 A	
Set of wall-mount lugs	
Cable grips M16; M20; M25	
Connectors (plug and socket) for power supply	

Communication	ETHERNET; Modbus (TCP, UDP); Modbus RTU; RS-232 interface; RS-485 interface; MQTT
ETHERNET protocols	DHCP, DNS, FTP, FTPS, HTTP, HTTPS, SSH
Transmission rate	ETHERNET: 10/100 Mbit/s
Visualization	Web-Visu
Dimensions W x H x D	300 x 300 x 210
Power supply (AC)	230 VAC (L/N/GND); 50 Hz
Weight	7.5 kg
Color	Light gray (RAL7035)
Housing material	Metal
Conformity marking	CE
Surrounding air temperature (operation)	0 … 45 °C
Surrounding air temperature (storage)	–40 … +85 °C
Protection type	IP20/IP65; (IP65 only applies when both power and LAN cables are locked)
Pollution degree	I
Relative humidity (without condensation)	95 %
Mounting type	Wall-mount

WAGO IoT Box; Energy Data 4G with Controller PFC200 (750-8217)



Integrating machines and systems into the "Internet of Things" is incredibly quick and easy with the WAGO IoT Box Energy Data 4G.
This IoT Box features power and energy measurement functionality and is ready for immediate use. It also offers all the functions required for digitalization, from signal acquisition to cloud connectivity.
The IoT Box was designed as a plug-and-play device – no hardware engineering is needed. Collected data is transferred to the desired IoT application with just a few parameter settings.

The hardware includes a controller with its own communication interface, I/O modules with analog and digital inputs/outputs, a 3-phase power measurement module and a 24 V power supply unit.

The integrated 4G cellular modem provides a wireless connection to the Internet and includes a radio license for EU countries.

Depending on the application, additional I/O modules can be added later to adapt the system to specific requirements.

Item Description	Item No.
IoT Box; Energy Data 4G	**2854-099/000-003**
This IoT Box includes:	
Controller PFC200; 2nd generation; 2 x ETHERNET, RS-232/-485, 4G cellular module	750-8217
Magnetic-Mount Antenna; with 2.5 m cable and SMA plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1400-1518, 1710-2700 MHz	758-975
Switched-Mode Power Supply; Classic; 1-phase; Output voltage: 24 VDC; Output current: 2 A; NEC Class 2; DC OK signal	787-1606
8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection	750-1415
8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection	750-1515
8-Channel Analog Input; Resistance measurement; Adjustable	750-451
4-Channel Analog Input; Voltage/current; Differential input; 16 bits; Diagnostics	750-471
3-Phase Power Measurement; 690 VAC 1 A	750-495
Rogowski Coil; Primary rated current: 4000 A; Output signal: 22.5 mV per kA; Cable length: 1.5 m; Feedthrough for measurement conductor: 70 mm	855-9150/2000-701
End Module	750-600
SD Memory Card; pSLC-NAND; 8 GB Temperature range: −40 … +90 °C	758-879/000-2108
IoT Box application (installed and licensed)	
Circuit breaker; 1-pole; C 10 A; 10 kA	
Electrical circuit breaker; 1-pole; 24 VDC; 1 … 8 A	
Set of wall-mount lugs	
Cable grips M16; M20; M25	
Connectors (plug and socket) for power supply	

Communication	ETHERNET; RS-232 interface; RS-485 interface; MQTT
ETHERNET protocols	DHCP, DNS, FTP, FTPS, HTTP, HTTPS, SSH
Transmission rate	ETHERNET: 10/100 Mbit/s
Visualization	Web-Visu
Services	GPRS connection to Internet
Wireless technology	GSM/UMTS/LTE
Frequency band	GSM dual band (B3; B8); E-UTRA bands (B1; B3; B5; B7; B8; B20; B38; B40; B41)
Dimensions W x H x D	300 x 300 x 210
Power supply (AC)	230 VAC (L/N/GND); 50 Hz
Weight	7.5 kg
Color	Light gray (RAL7035)
Housing material	Metal
Conformity marking	CE
Surrounding air temperature (operation)	0 … 45 °C
Surrounding air temperature (storage)	−40 … +85 °C
Protection type	IP20/IP65; (IP65 only applies when both power and LAN cables are locked)
Pollution degree	I
Relative humidity (without condensation)	95 %
Mounting type	Wall-mount

WAGO IoT Box; MES 4G with Controller PFC200 (750-8217)



Integrating machines and systems into the "Internet of Things" is incredibly quick and easy with the WAGO IoT Box MES 4G. This IoT Box also offers a wide range of communication and bus protocols for communicating with production control systems. The complete system is ready for immediate use and offers all the functions required for digitalization, from signal acquisition to cloud connectivity.
The IoT Box was designed as a plug-and-play device – no hardware engineering is needed. Collected data is transferred to the desired IoT application with just a few parameter settings.

The hardware includes a controller with its own communication interface, I/O modules with analog and digital inputs/outputs and a 24 V power supply unit.

The integrated 4G cellular modem provides a wireless connection to the Internet and includes a radio license for EU countries.

Depending on the application, additional I/O modules can be added later to adapt the system to specific requirements.

Manufacturing Execution Systems (MES)

Item Description	Item No.
IoT Box; MES 4G	**2854-099/000-004**
This IoT Box includes:	
Controller PFC200; 2nd generation; 2 x ETHERNET, RS-232/-485, 4G cellular module	750-8217
Magnetic-Mount Antenna; with 2.5 m cable and SMA plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1400-1518, 1710-2700 MHz	758-975
Switched-Mode Power Supply; Classic; 1-phase; Output voltage: 24 VDC; Output current: 2 A; NEC Class 2; DC OK signal	787-1606
8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection	750-1415
8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection	750-1515
8-Channel Analog Input; Resistance Measurement; Adjustable	750-451
4-Channel Analog Input; Voltage/current; Differential input; 16 bits; Diagnostics	750-471
End Module	750-600
SD Memory Card; pSLC-NAND; 8 GB Temperature range: −40 … +90 °C	758-879/000-2108
Energy Data Management (EDM) application (installed and licensed)	
Circuit breaker; 1-pole; C 10 A; 10 kA	
Electrical circuit breaker; 1-pole; 24 VDC; 1 … 8 A	
Set of wall-mount lugs	
Cable grips M16; M20; M25	
Connectors (plug and socket) for power supply	

Communication	ETHERNET; Modbus (TCP, UDP); Modbus RTU; RS-232 interface; RS-485 interface; MQTT
ETHERNET protocols	DHCP, DNS, FTP, FTPS, HTTP, HTTPS, SSH
Transmission rate	ETHERNET: 10/100 Mbit/s
Visualization	Web-Visu
Services	GPRS connection to Internet
Wireless technology	GSM/UMTS/LTE
Frequency band	GSM dual band (B3; B8); E-UTRA bands (B1; B3; B5; B7; B8; B20; B38; B40; B41)
Dimensions W x H x D	300 x 300 x 210
Power supply (AC)	230 VAC (L/N/GND); 50 Hz
Weight	7.5 kg
Color	Light gray (RAL7035)
Housing material	Metal
Conformity marking	CE
Surrounding air temperature (operation)	0 … 45 °C
Surrounding air temperature (storage)	−40 … +85 °C
Protection type	IP20/IP65; (IP65 only applies when both power and LAN cables are locked)
Pollution degree	I
Relative humidity (without condensation)	95 %
Mounting type	Wall-mount



I/O System – 750 and 753 Series

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

I/O System – 750 XTR Series

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 8 ►

I/O System Field

Automate and Network Modular Machines for the Future

- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

Section 9 ►►

I/O System – 750 and 753 Series
Contents

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Fieldbus Couplers (FC)	PROFINET IO, PROFIBUS, Modbus/TCP, EtherNet/IP™, BACnet/IP, EtherCAT®, DeviceNet, CANopen, MODBUS, INTERBUS, CC-Link	7.1	201
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	Digital Output Modules (DO)	7.3	277
	Analog Input Modules (AI)	7.4	311
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Accessories Marking and Mounting Accessories		Section 13	

I/O System – 750 and 753 Series — One System for Every Application
General Product Information

One System for Every Application

The WAGO I/O System 750/753 is distinguished by its universal use and extensive product portfolio. With more than 500 different modules, it is versatile and flexible enough to cover virtually any requirement in a huge variety of industries.

Industrial Automation

The comprehensive selection of I/O modules for different potentials and signal types saves time and money because the sensors/actuators can be wired directly – even in safety-related applications.

Building Automation

The broad portfolio enables flexible, cellar-to-ceiling solutions with conventional I/O modules, standardized industry-specific fieldbus protocols and subsystems for typical applications in lighting, shading, HVAC and much more.

Marine and Onshore/Offshore Automation

International approvals coupled with industry-specific features permit use in marine applications and other harsh sectors. Addressing requirements inherent in specific industries and operating environments has enabled use on marine diesels and in the EMC-sensitive area of a vessel's bridge. Because the requirements are significantly greater for both interference immunity and emission, along with superior mechanical performance in these sensitive areas, the WAGO I/O System will readily meet the needs of other industries.

Process Automation

Even under the harshest environmental conditions, use is possible with special approvals. Potential hazardous area applications include oil and gas production, the chemical industry and power generation. The WAGO I/O System can be installed in Zone 2/22 with its intrinsically safe I/O modules, making it possible to connect sensors/actuators in Zones 1/21 and 0/20.

Maximum Fieldbus Independence

The system's modularity is also reflected in its support for numerous fieldbus systems and ETHERNET standards. Depending on the application, it is possible to choose between fieldbus couplers and communication modules for different protocols.

Easy to Use

A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools. The streamlined design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O module's granularity, field peripherals can be directly wired using 1-, 2-, 3- or 4-wire technology.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use. These approvals even include the rigorous operating conditions that ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous other marine certifications apply to.

Extremely Compact

WAGO's patented mechanical design leads to extremely compact I/O nodes. In fact, it can accommodate up to 16 channels in a module width of 12 mm (1/2").

- Finely granular I/O modules provide node customization.
- Space-saving design permits high-density wiring and direct connection.

Maximum Reliability and Ruggedness

The WAGO I/O System is engineered and tested for use in the most demanding environments and to the highest standards, e.g., those required in marine applications. The system differs from other products that are solely intended for industrial use through its:

- Greatly increased vibration rating
- Significantly greater immunity to interference (ESD)
- Lower emission of interference
- Larger voltage fluctuation range
- Greater durability for continuous operation in upper temperature ranges

In addition, CAGE CLAMP® spring pressure connections ensure superior reliability. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Clear Identification

Module functionality is identified via marker carriers (integrated or optional). Terminal assignment and technical data are printed onto the side of the I/O module. WAGO's WSB Marking System also allows for module- and channel-related identification.

Advantages:

- Fieldbus-independent – compatible with all prominent fieldbus protocols and ETHERNET standards
- Flexible platform adapts to diverse applications and environments
- Tested and approved worldwide
- Extensive range of accessories for marking systems and connection technologies
- Vibration-proof, fast and maintenance-free CAGE CLAMP® connections

I/O System – 750 and 753 Series
Variants

Pluggable Connector



The pluggable connectors of the WAGO I/O System 753 allow quick and safe replacement. Optional coding pins prevent plugging a connector into the wrong I/O module. Replacing and connecting the I/O module requires no further action and eliminates possible errors – essentially serving as permanent wiring.

Alternatively, field wiring is possible via interface modules that can be connected to the WAGO I/O System using a ribbon cable (see "Types").

Extended Temperature Range



Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, some applications require an extended temperature range.
For these applications, WAGO offers a line of WAGO I/O System 750 products for temperatures ranging from –20°C to +60°C.
For extreme applications, where even this extended temperature range is not sufficient, the WAGO I/O System 750 XTR is available.

Functional Safety



In the European Union, the machinery directive defines the requirements for machine and system safety. This ensures a uniform standard for protecting the "life and limb" of workers within a machine's operating area.

The required risk assessment is based on harmonized standards (e.g., EN 13849) and identifies existing risks and required risk reduction (SIL or PL quality). Based on the risk assessment, safety functions can be implemented, e.g., by presence detection or protection zone violations, using secure switches or light arrays to shut down the "risk" immediately. For this purpose, the safety signals are detected by the "yellow" safety modules and transmitted via "PROFIsafe" to the fail-safe PLC for additional processing. The result is then executed via safe actuator (e.g., output module or controller).

The unique safety characteristics of the WAGO modules facilitate calculation of the final safety function up to Cat. 4/PLe according to EN 13849, or SIL3 according to EN 62061 or IEC 61511.

The mixed operation of safe and conventional I/O modules streamlines system configuration. For increased electromagnetic immunity (EMC standard), WAGO offers compact power supply filter modules. Specific power supply features must be considered, which are described in the corresponding manuals.

Use in Hazardous Areas



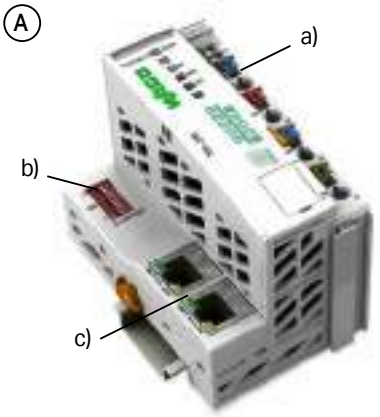
In many plants across the chemical and petrochemical industries, as well as in the production and process automation sectors, installations are operated that process explosive gas- or dust-air mixtures. This is why electrical equipment must be explosion-proof to avoid injuries to personnel and damage to facilities.

The modules within the WAGO I/O System 750 are designed for use in both non-hazardous and hazardous areas.

The direct application of fieldbus technology in hazardous areas is typically resource-intensive. When used in hazardous areas of Zone 2/22, the I/O System 750 offers a safe, easy and economical connection to the sensors/actuators of Zones 0/20 and 1/21. The "blue" Ex i I/O modules were specially developed for this purpose. They form an intrinsically safe section that can be integrated into a standard fieldbus node, offering all the advantages of state-of-the-art fieldbus technology. The WAGO I/O System 750 is also approved for mining applications.

I/O System – 750 and 753 Series
Interfaces and Types

A



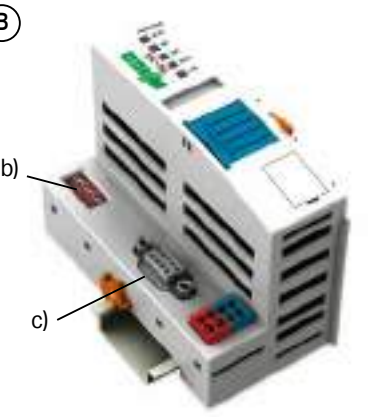
Housing Design: Fieldbus Coupler (A)

- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level; optional addressing switch (b) and fieldbus interface (c)
- W x H x D (mm) 50.5 x 100 x 71.1 or
- W x H x D (mm): 61.5 x 100 x 71.9

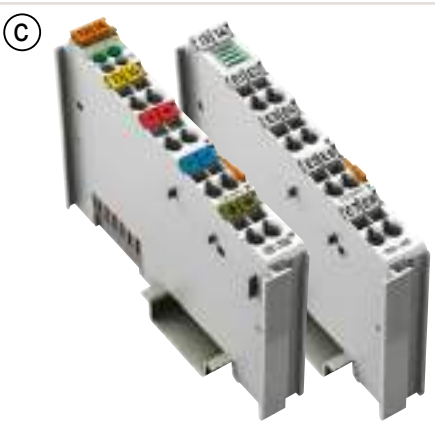
Housing Design: Fieldbus Coupler Eco (B)

- Restriction on power supply and data width
- W x H x D (mm): 49.5 x 96.8 x 71.9

B



C



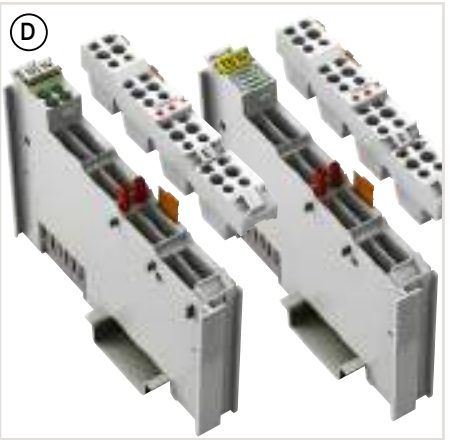
Housing Design: 750 (C)

- 8 connection points (CAGE CLAMP®)
- W x H x D (mm) 12 x 69.8 x 100 (4 LEDs)
- W x H x D (mm) 12 x 67.8 x 100 (8 LEDs)

Housing Design: 753 (D)

- Pluggable connector
- 8 connection points (CAGE CLAMP®)
- W x H x D (mm) 12 x 100 x 69.8 (4 LEDs)
- W x H x D (mm) 12 x 100 x 69 (8 LEDs)
- Pluggable connectors and coding fingers are not included.

D



E



Housing Design: 750 (E)

- 16 connection points (Push-in CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 69

Housing Design (F)

- For time-saving wiring between I/O system and interface modules
- Ribbon cable connection to interface modules (289 and 704 Series) and interface adapter
- W x H x D (mm): 12 x 100 x 74.1

F



G



Housing Design: Double Width (G)

- Some modules are integrated into a double housing to address specific technological needs. Despite utilizing the same standardized housing, these modules are twice as wide.
- W x H x D (mm): 24 x 100 x 69.8

Specialty Housing Design (H)

- Some modules are integrated into a specialty housing with a specific width and pluggable connectors. The dimensions are specified on the respective catalog pages.

H



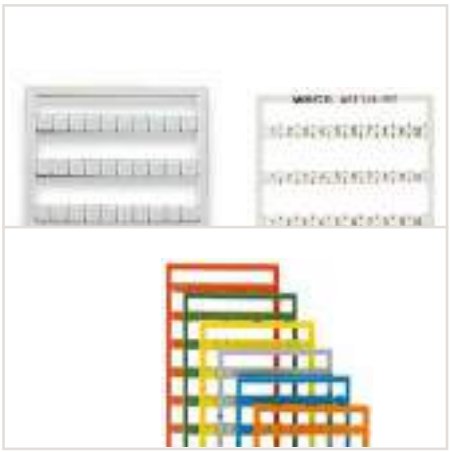
I/O System – 750 and 753 Series
Marking and Mounting Accessories



Transparent group marker carriers indicate module type by color.



Removable group marker carriers are available for all 750 and 753 Series I/O Modules with a maximum of four LEDs, as well as all fieldbus couplers with a supply module.



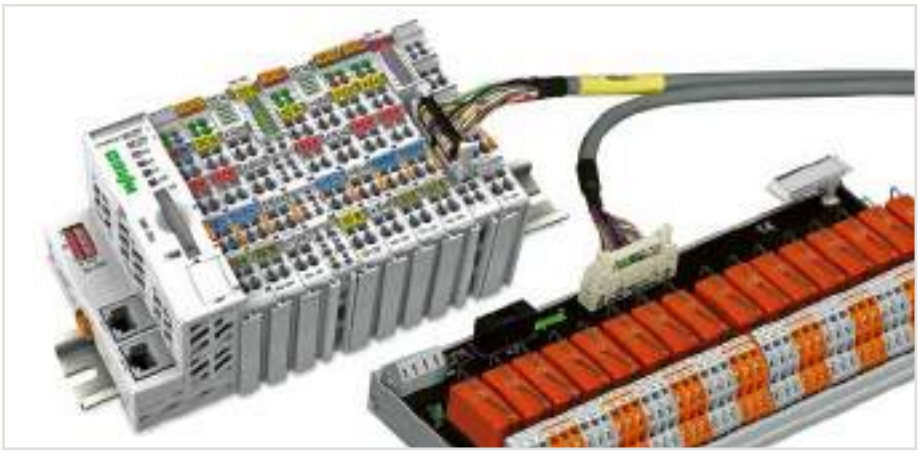
Mini-WSB marking cards (blank, pre-marked or colored) are suitable for all 750 and 753 Series I/O Modules.



Marker carrier for a single I/O module (suitable for all 750 and 753 Series I/O Modules); the marker carrier can be accommodated in the upper Mini-WSB marker slot.



Marker carrier for one I/O node; both models (750-106 and 750-107) permit continuous marking regardless of the I/O module housing used.



Interface modules for system wiring



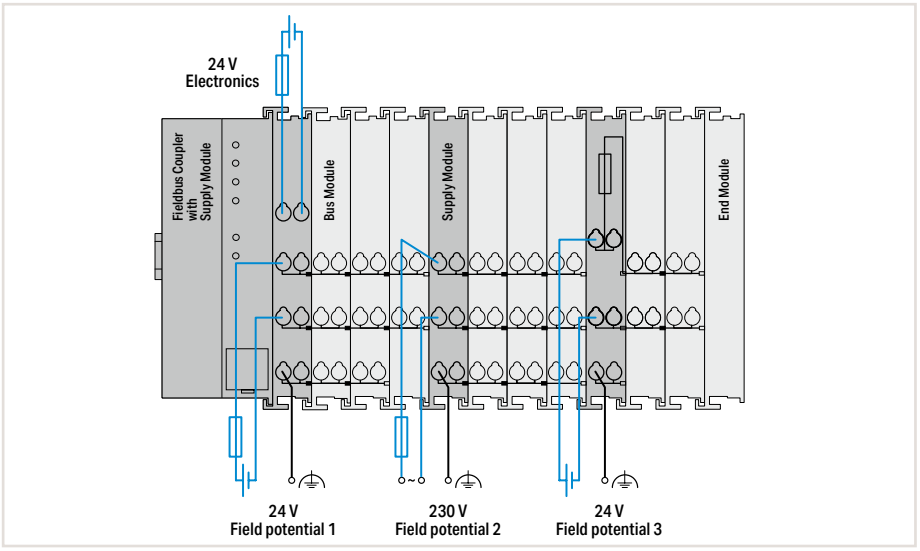
WAGO system cables

I/O System – 750 and 753 Series
Application and Installation Instructions

Power Supply

The fieldbus coupler powers the internal electronics. The field-side power supply is electrically isolated via the supply module on the coupler or a separate power supply module. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages (system power supply 5 VDC via the data contacts and field supply via the optional power jumper contacts). Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.

Power supply to the electronics is limited by a maximum value. This value depends on the fieldbus coupler used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs. In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

Some modules are designed to provide interference-free safety functionality. These modules comply with safety requirements up to Category 4 of DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

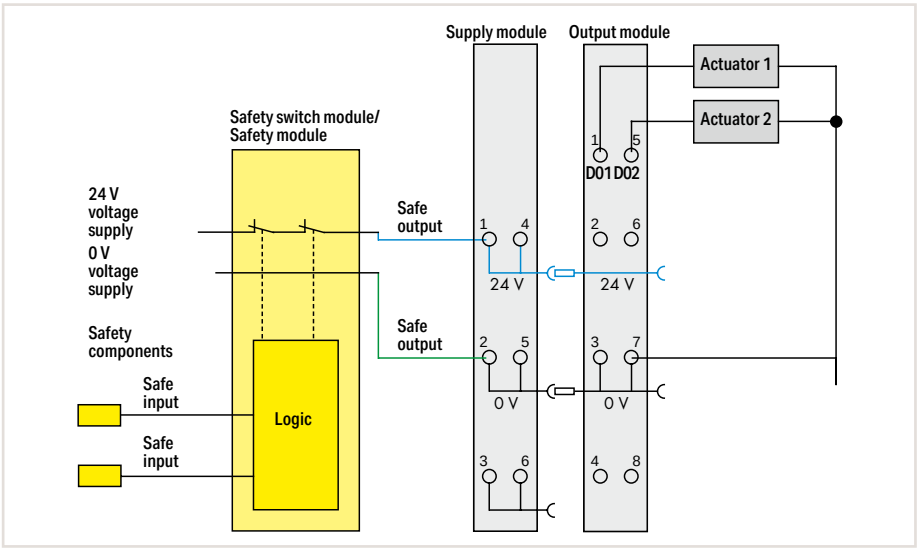
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.

A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both supply modules and field-side power supply filters are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.

For the 24 VDC power supply of electronics and field, PELV/SELV power supply units are recommended. As part of safety-related applications, they are mandatory. The mixed operation of safe and conventional I/O modules streamlines system configuration. For increased electromagnetic immunity (EMC standard), WAGO offers compact power supply filter modules.
Please refer to the manual for details about the power supply's design.

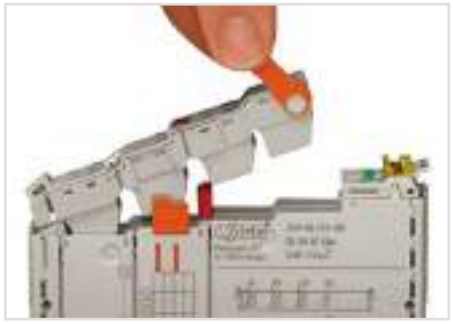


Example: 2-channel, double-pole power supply disconnection

I/O System – 750 and 753 Series
Application and Installation Instructions



Securing/removing a module from the DIN-rail



Removing a pluggable connector



Optional protection against mismating of a pluggable connector via coding elements



Service interface for configuring the fieldbus coupler; connectivity via configuration cable or radio adapter

Notice:

Some I/O modules do not provide all power jumper contacts. Therefore, a module with three power jumper contacts (e.g., 2-channel digital input) cannot be connected to a module that does not have all power jumper contacts.

To increase electromagnetic compatibility (EMC), some components are connected to the DIN-rail via a discharge contact. The DIN-rail must always have a low-resistance connection to the ground potential.



Wide range of accessories available for EMC-compliant installation, including shield connection



Secure, automatic power supply connection via self-cleaning blade contacts



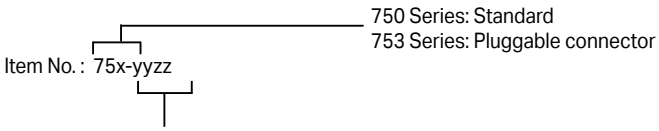
Secure, automatic data and electronics power supply connection via gold-plated pressure contacts



Securing a cable to the connector

I/O System – 750 and 753 Series
Item Number Key

Explanation of an item number key's components:



01zz: Marker
03zz: Fieldbus coupler
zz: Consecutive number

1yzz: 16 connection points or ribbon cable
y4zz: Input
00 ... 49 = Digital input
50 ... 99 = Analog input
04: Counter
y5zz: Output
00 ... 49 = Digital output
50 ... 99 = Analog input
11: PWM
y6zz: Function/technology/communication/system module
0z: Power supply, field-side connection, end module
1z: Power supply, field-side connection, spacer module
2z: Power supply, bus extension, filter, spacer module
3z: Distance and angle measurement, DC drive controller, counter
4z: Communication (building), radio, RTC, vibration monitoring
5z: Serial interfaces, communication
6z: Functional safety
.../000-003: PROFIsafe V2 iPar
.../000-004: PROFIsafe V2
7z: Stepper

09zz: Accessories

.../025-000: Extended temperature range (-20 ... +60 °C)
.../000-800: Interference-free
.../040-000: 750 XTR Series (see Section 8)

I/O System – 750 and 753 Series
Standards and Rated Conditions

General Technical Data	
System supply voltage	24 VDC (−25 % ... +30 %)*; *for all marine-certified fieldbus couplers and I/O modules
Isolation	500 V (system/supply)
Surrounding air temperature (operation)	0 ... +55 °C
Surrounding air temperature (operation) for versions with an extended temperature range	−20 ... +60 °C
Surrounding air temperature (storage)	−25 ... +85 °C
Surrounding air temperature (storage) for versions with an extended temperature range	−40 ... +85 °C
Relative humidity	95 % (non-condensing)
Relative humidity for versions with an extended temperature range	Max. 95 %; short-term condensation per Class 3K6 / IEC EN 60721-3-3 and E DIN 40046-721-3, taking a temperature range of −20 to +60 °C into consideration (except wind-driven precipitation, water and ice formation)
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Pollution degree	2 per IEC 61131-2
Vibration resistance	0.5g (4g for all marine-certified fieldbus couplers and I/O modules) per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	Per EN 61000-6-2
EMC emission of interference	Per EN 61000-6-3; EN 61000-6-4
Protection class	IP20
Mounting type	DIN-35 rail mounting
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO2 contaminant concentration at a relative humidity < 75 %	25 ppm
Permissible H2S contaminant concentration at a relative humidity < 75 %	10 ppm
Connection technology	CAGE CLAMP®
Conductor cross-section; strip length for:	
Standard modules and couplers	0.08 ... 2.5 mm²/28 ... 14 AWG; 8 ... 9 mm/0.31 ... 0.35 inch
I/O modules (753 Series)	0.08 ... 2.5 mm²/28 ... 14 AWG; 9 ... 10 mm/0.35 ... 0.39 inch
Fieldbus couplers (ECO)	0.08 ... 1.5 mm²/28 ... 16 AWG; 5 ... 6 mm/0.2 ... 0.24 inch
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section; strip length for: I/O modules with 16 connection points	Solid: 0.08 ... 1.5 mm²/28 ... 16 AWG, Fine-stranded: 0.25 ... 1.5 mm²/22 ... 16 AWG; 8 ... 9 mm/0.31 ... 0.35 inch
Current carrying capacity (power jumper contacts)	10 A

Approvals

For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Fieldbus Couplers

Housing Design I with Field Supply	
Dimensions W x H x D	50.5 x 100 x 71.1 mm
Height from upper edge of DIN-rail	63.9 mm
Connection technology (system supply and field supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



Housing Design II with Field Supply	
Dimensions W x H x D	61.5 x 100 x 71.9 mm
Height from upper edge of DIN-rail	64.7 mm
Connection technology (system supply and field supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



Housing Design without Field Supply	
Dimensions W x H x D	49.5 x 96.8 x 71.9 mm
Height from upper edge of DIN-rail	64.7 mm
Connection technology (system supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 16 AWG
Strip length	5 … 6 mm / 0.22 inch



Housing Design "Eco" (without Field Supply)	
Dimensions W x H x D	49.5 x 96.8 x 71.9 mm
Height from upper edge of DIN-rail	64.7 mm
Connection technology (system supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 16 AWG
Strip length	5 … 6 mm / 0.22 inch



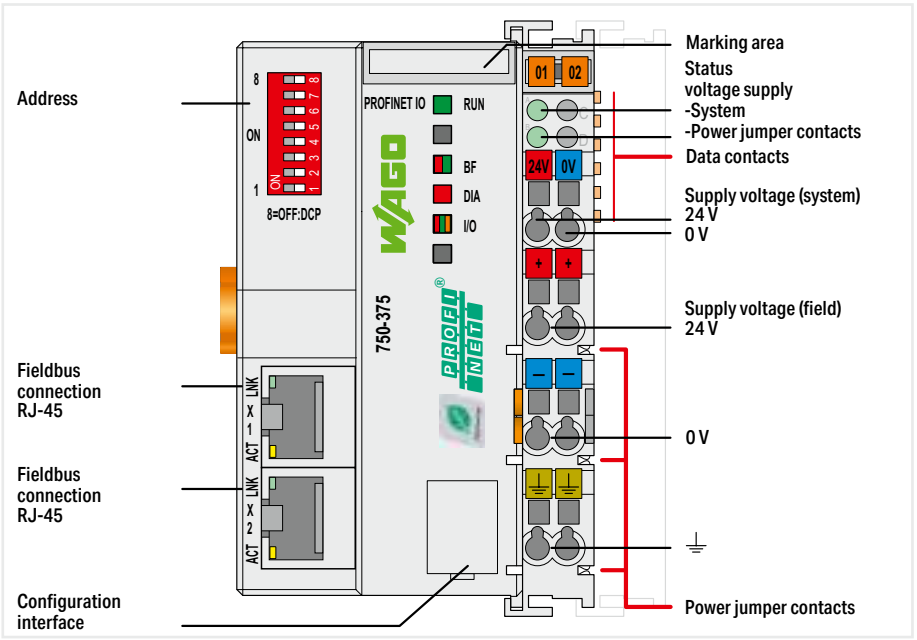
I/O System – 750 and 753 Series, Fieldbus Couplers
Contents

Fieldbus System	Housing Design: With Field Supply		Housing Design: Without Field Supply	Housing Design: Eco	Description	Item No.	Page
							
PROFINET		☐			PROFINET IO; 3rd Generation; Advanced	750-375	202
		☐			PROFINET IO; 3rd Generation; Ext. Temperature; Advanced	750-375/025-000	202
			☐		PROFINET IO; 3rd Generation; Eco Advanced	750-377	203
			☐		PROFINET IO; 3rd Generation; Ext. Temperature; Eco Advanced	750-377/025-000	203
PROFIBUS	☐				PROFIBUS DP; 1st Generation; 12 MBd	750-303	204
	☐				PROFIBUS DP; 2nd Generation; 12 MBd	750-333*	205
	☐				PROFIBUS DP; 2nd Generation; 12 MBd; Ext. Temperature	750-333/025-000	205
				☐	PROFIBUS DP; 12 MBd; Eco	750-343	206
	☐				PROFIBUS DP; Fiber-Optic Connection; 1.5 MBd	750-331	207
MODBUS/TCP			☐		Modbus TCP; 4th Generation	750-362*	208
					Modbus TCP; 4. Generation	750-362/000-001	208
EtherNet/IP		☐			EtherNet/IPTM; 4th Generation; Device Level Ring	750-366	209
			☐		EtherNet/IPTM; 4th Generation; ECO	750-363*	210
	☐				ETHERNET; 1st Generation	750-342	211
BACnet		☐			BACnet/IP	750-332	212
EtherCAT			☐		EtherCAT®	750-354	213
			☐		EtherCAT®; ID Switch	750-354/000-001	214
			☐		EtherCAT®; ID Switch; Diagnostics	750-354/000-002	214
Modbus®	☐				Modbus®; RS-485; 115.2 kBd	750-315/300-000	215
	☐				Modbus®; RS-232; 115.2 kBd	750-316/300-000	216
DeviceNet	☐				DeviceNet	750-306	217
				☐	DeviceNet; Eco	750-346	218
CANopen	☐				CANopen; *MCS*	750-337	219
	☐				CANopen; MCS; Ext. Temperature	750-337/025-000	219
	☐				CANopen; D-Sub	750-338*	220
				☐	CANopen; *MCS*; Eco	750-347	221
				☐	CANopen; D-Sub; Eco	750-348	222
INTERBUS	☐				INTERBUS	750-304	223
				☐	INTERBUS; 500 kbit/s; Eco	750-344	224
CC-Link	☐				CC-Link	750-310	225
		☐			CC-Link; 156 kBd ... 10 MBaud	750-325	226
*This coupler is also available as a 750 XTR Series variant.						See Section 8	

Fieldbus couplers ▶ PROFINET IO; Advanced



750-375



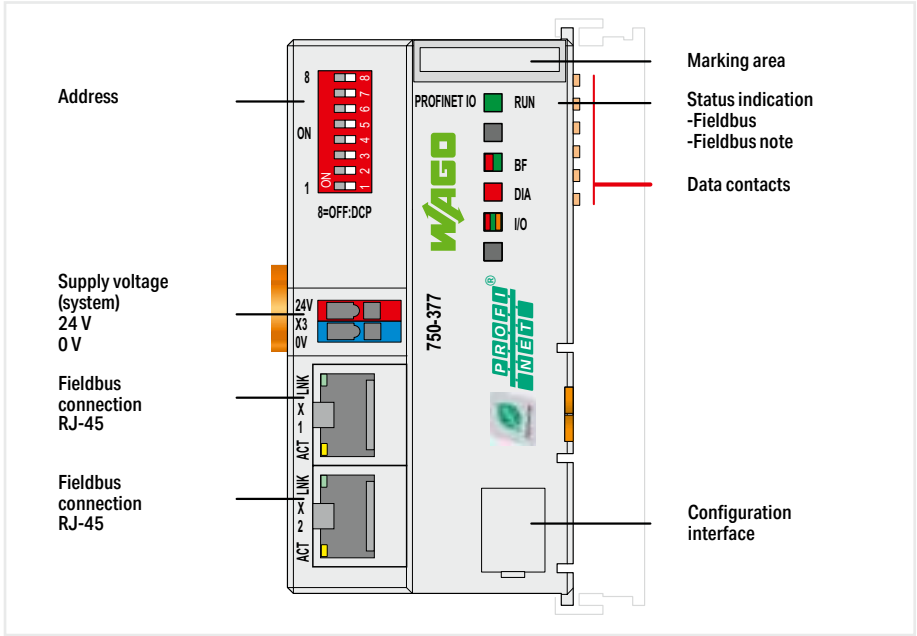
Version	Standard	ext. temperature
Item no.	750-375	750-375/025-000
Order Text	FC PROFINET; G3; Adv	FC PROFINET; G3; T; Adv

Technical data		
Communication	PROFINET IO	
Protocols	PROFINET IO V2.3 (conformity class C); Topology detection / LLDP; Network diagnostics / SNMP / MIB-2; Media redundancy / MRP; Webserver / HTTP;Shared device	
Connection technology: communication/fieldbus	PROFINET IO: 2 x RJ-45	
PROFINET IO features	Integrierter 2-Port-Switch; Autonegotiation; Auto-MDIX; isochrone Echtzeitkommunikation; Sendetakt: 1 ms (RT); 1, 2, 4 ms (IRT); Gerätetausch ohne Programmiergerät	
Device-specific	Supported profiles: PROFIsafe V2, PROFIenergy V1.0; ID code: Vendor ID: 0x011D; Device ID: 0x02EE; Module ID: 0x01000177 (firmware version 01, 02), 0x02000177 (from firmware version 03)	
Baud rate	10/100 Mbit/s (10 Mbit/s (ETHERNET protocols), 100 Mbit/s full duplex (PROFINET IO))	
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5	
Number of modules per node (max.)	250	
Input and output process image (fieldbus) max.	512 bytes/512 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	450 mA	
Total current (system supply)	1700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-375	

Fieldbus couplers ▶ PROFINET IO; ECO Advanced



750-377



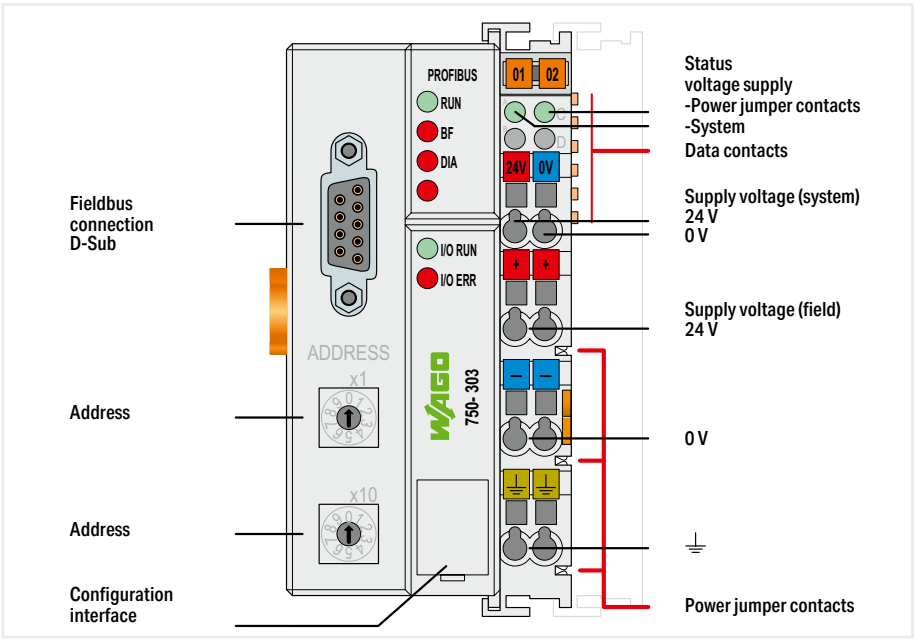
Version	Standard	ext. temperature
Item no.	**750-377**	**750-377/025-000**
Order Text	**FC PROFINET; G3; ECO Adv**	**FC PROFINET; G3; T; ECO Adv**

Technical data		
Communication	PROFINET IO	
Protocols	PROFINET IO V2.3 (conformity class C); Topology detection / LLDP; Network diagnostics / SNMP / MIB-2; Media redundancy / MRP; Webserver / HTTP	
Connection technology: communication/fieldbus	PROFINET IO: 2 x RJ-45	
PROFINET IO features	Integrierter 2-Port-Switch; Autonegotiation; Auto-MDIX; isochrone Echtzeitkommunikation; Sendetakt: 1 ms (RT); 1, 2, 4 ms (IRT); Gerätetausch ohne Programmiergerät	
Device-specific	Supported profiles: PROFIsafe V2, PROFIenergy V1.0; ID code: Vendor ID: 0x011D; Device ID: 0x02EE; Module ID: 0x01000177 (firmware version 01, 02), 0x02000177 (from firmware version 03)	
Baud rate	10/100 Mbit/s (10 Mbit/s (ETHERNET protocols), 100 Mbit/s full duplex (PROFINET IO))	
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5	
Number of modules per node (max.)	64	
Input and output process image (fieldbus) max.	256 bytes/256 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector	
Input current (typ.) at nominal load (24 V)	280 mA	
Current consumption (5 V system supply)	450 mA	
Total current (system supply)	700 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-377	

Fieldbus couplers ▶ PROFIBUS DP; 1st generation



750-303



7.1

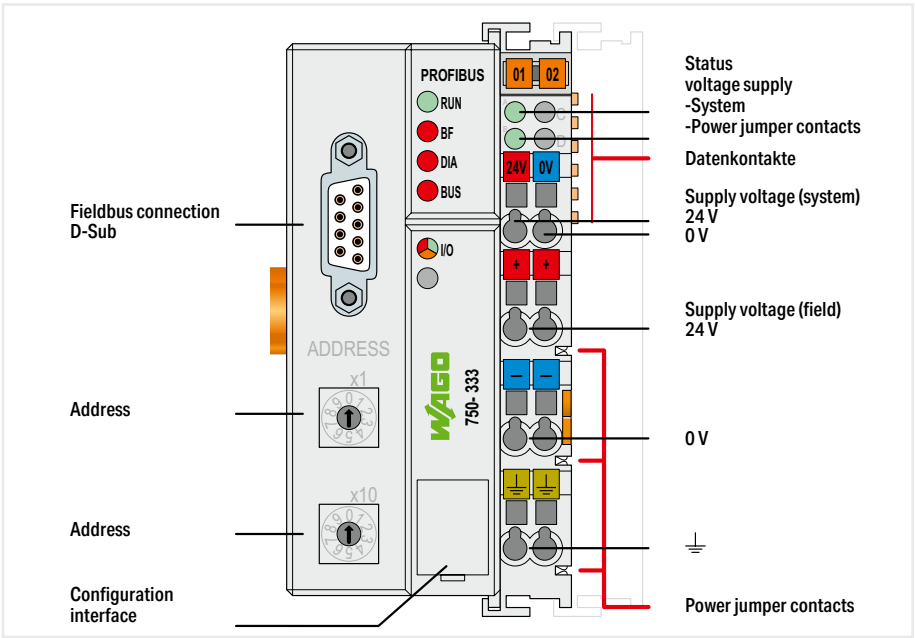
Version	Standard
Item no.	750-303
Order Text	FC PROFIBUS; G1; 12MBd

Technical data	
Communication	PROFIBUS
Protocols	PROFIBUS DP/FMS
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	96
Baud rate	9.6 kBd ... 12 MBd
Transmission medium (communication/fieldbus)	Cu cable per EN 50170
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	128 bytes/128 bytes
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-303

Fieldbus couplers ▶ PROFIBUS DP; 2nd generation



750-333



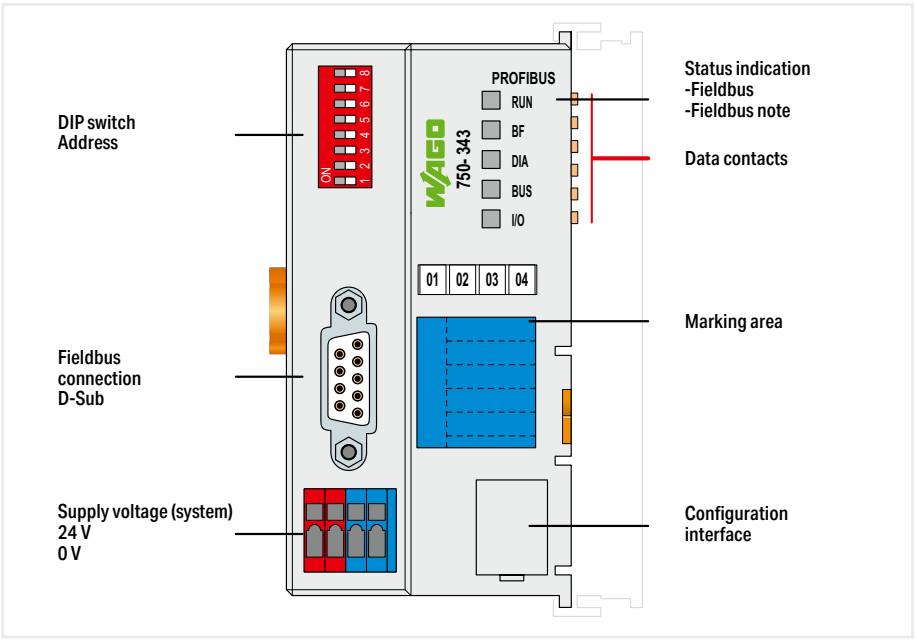
Version	Standard	ext. temperature
Item no.	**750-333**	**750-333/025-000**
Order Text	**FC PROFIBUS; G2; 12MBd**	**FC PROFIBUS; G2; 12MBd; T**

Technical data		
Communication	PROFIBUS	
Protocols	PROFIBUS DP/V1	
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket	
Number of fieldbus nodes on master (max.)	96	
Baud rate	9.6 kBd … 12 MBd	
Transmission medium (communication/fieldbus)	Cu cable per EN 50170	
Number of modules per node (max.)	63	
Input and output process image (fieldbus) max.	244 bytes/244 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	200 mA	
Total current (system supply)	1800 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-333	

Fieldbus couplers ▶ PROFIBUS DP; ECO



750-343



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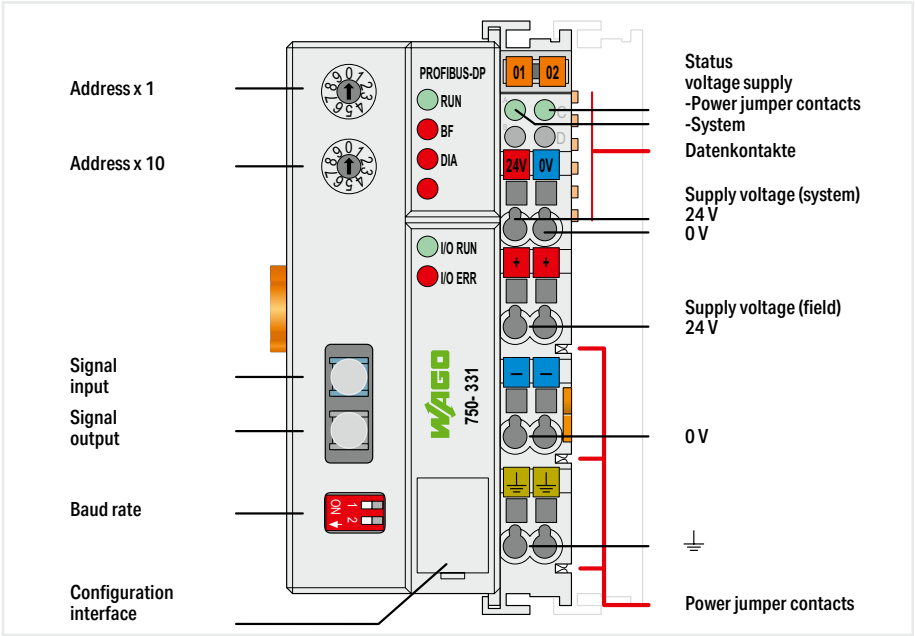
Version	**Standard**
Item no.	**750-343**
Order Text	**FC PROFIBUS; 12MBd; ECO**

Technical data	
Communication	PROFIBUS
Protocols	PROFIBUS DP
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	125
Baud rate	9.6 kBd … 12 MBd
Transmission medium (communication/fieldbus)	Cu cable per EN 50170
Number of modules per node (max.)	63
Input and output process image (fieldbus) max.	32 bytes/32 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-343

Fieldbus couplers ▶ PROFIBUS DP; fiber-optic connection



750-331



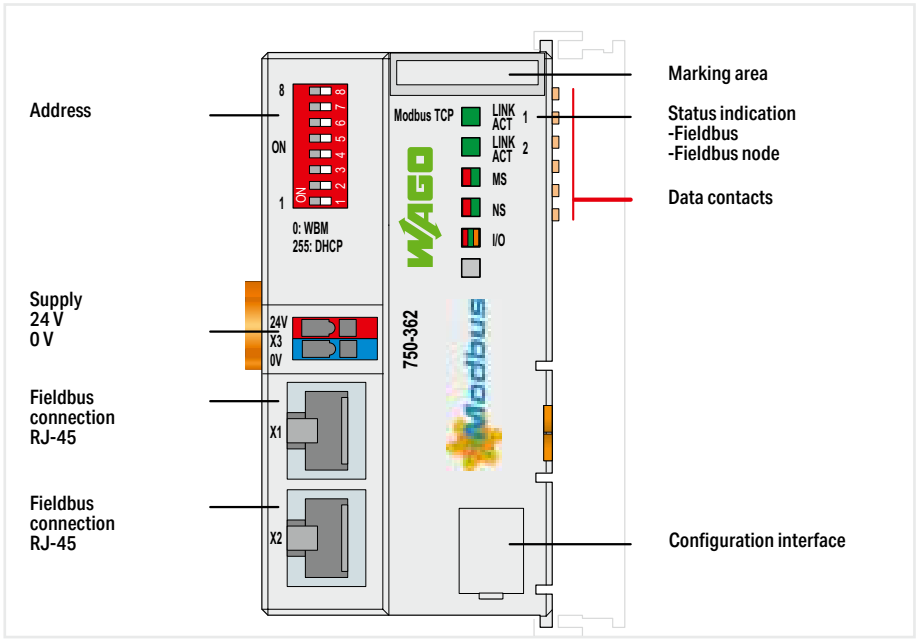
Version	**Standard**
Item no.	**750-331**
Order Text	**FC PROFIBUS; FOC; 1.5MBd**

Technical data	
Communication	PROFIBUS
Protocols	PROFIBUS DP
Connection technology: communication/fieldbus	PROFIBUS: 1 x HP Simplex, FOC plug included with delivery
Number of fieldbus nodes on master (max.)	10
Baud rate	93.75 kBd … 1.5 MBd
Transmission medium (communication/fieldbus)	APF (All Plastic Fiber) (1000 µm)
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	128 bytes/128 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE, KC, cULus OrdLoc
For data sheet and additional information, see:	wago.com/750-331

Fieldbus couplers ▶ Modbus TCP; ECO



750-362



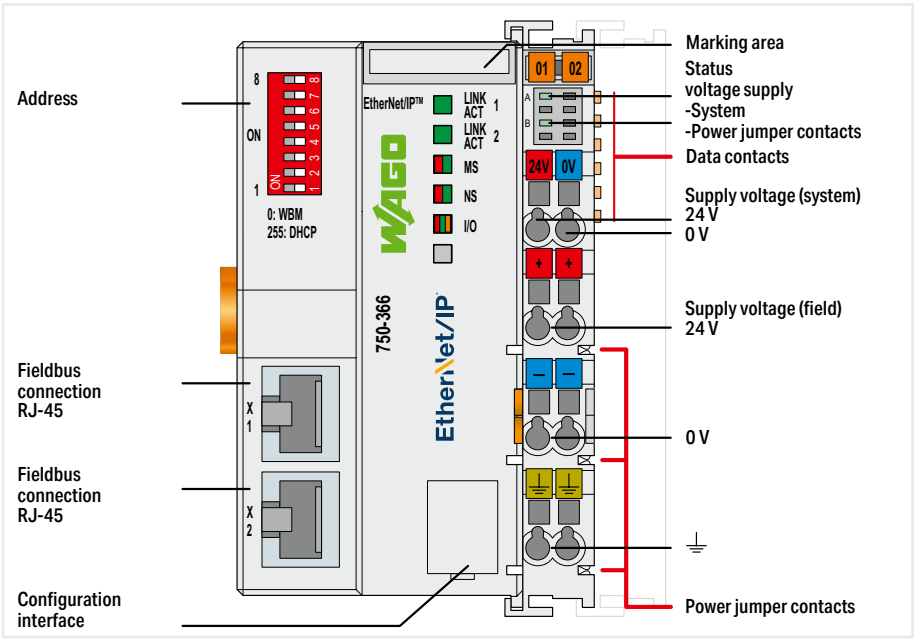
Version	Standard	BootP is preset
Item no.	**750-362**	**750-362/000-001**
Order Text	**FC Modbus TCP; G4**	

Technical data		
Communication	Modbus (TCP, UDP)	
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP	
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45	
Baud rate	10/100 Mbit/s	
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length	
Transmission performance	Class D per EN 50173	
Number of modules per node (max.)	250	
Input and output process image (fieldbus) max.	1020 words/1020 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector	
Input current (typ.) at nominal load (24 V)	280 mA	
Current consumption (5 V system supply)	350 mA	
Total current (system supply)	700 mA	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx	-
For data sheet and additional information, see:	wago.com/750-362	

Fieldbus couplers ▶ EtherNet/IP™



750-366



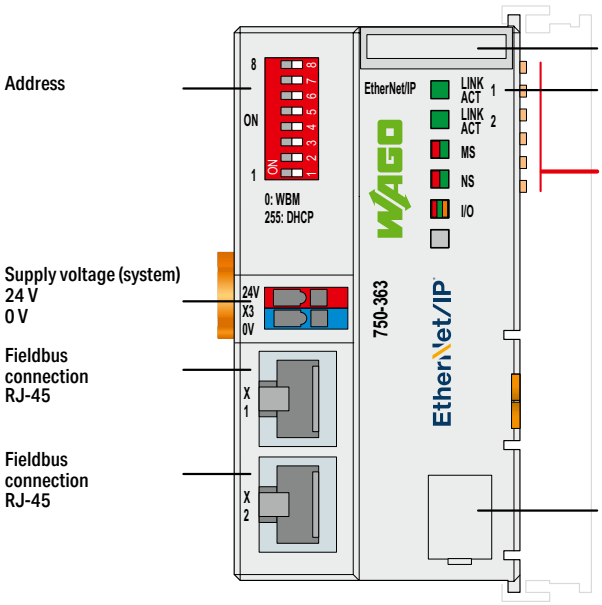
Version	**Standard**
Item no.	**750-366**
Order Text	**FC EtherNet/IP™; G4; DLR**

Technical data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	480 mA
Current consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(62 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-366

Fieldbus couplers ▶ EtherNet/IP™; ECO



750-363



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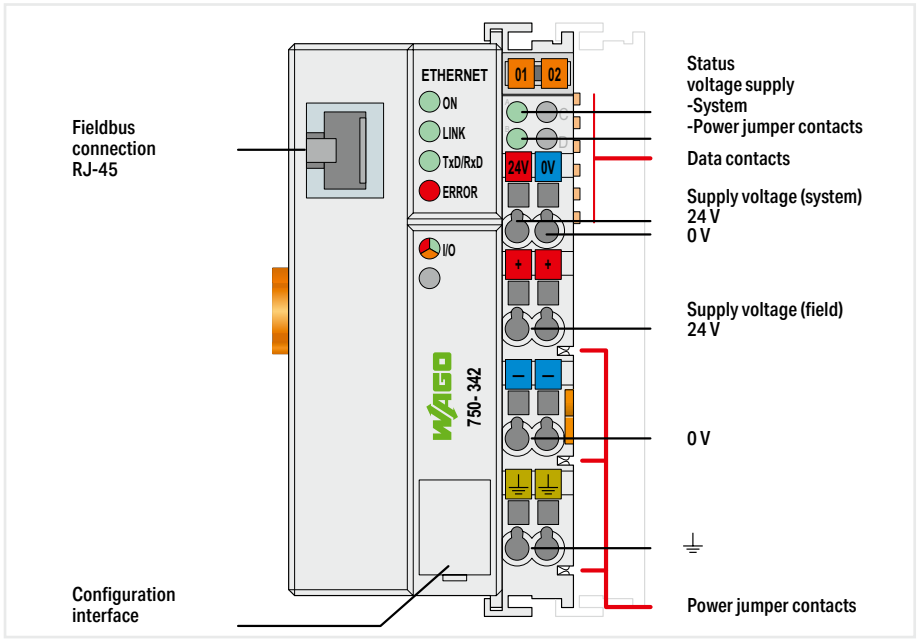
Version	Standard
Item no.	750-363
Order Text	FC EtherNet/IP™

Technical data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	280 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-363

Fieldbus couplers ▶ ETHERNET



750-342



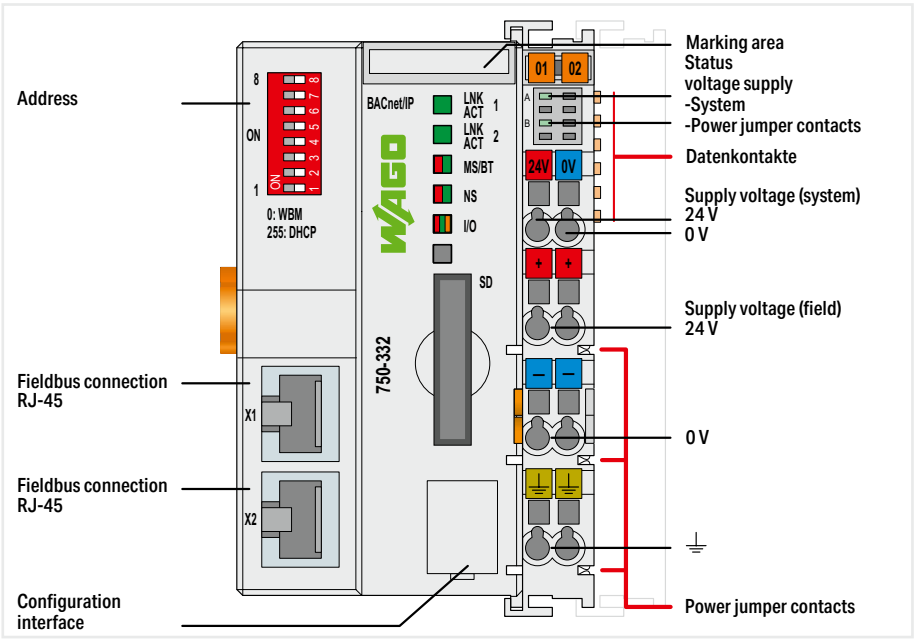
Version	**Standard**
Item no.	**750-342**
Order Text	**FC ETHERNET; G1**

Technical data	
Communication	Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 1 x RJ-45
Baud rate	10 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-342

Fieldbus couplers ▶ BACnet/IP; SD card slot



750-332



7.1

Version	Standard
Item no.	750-332
Order Text	FC BACnet/IP

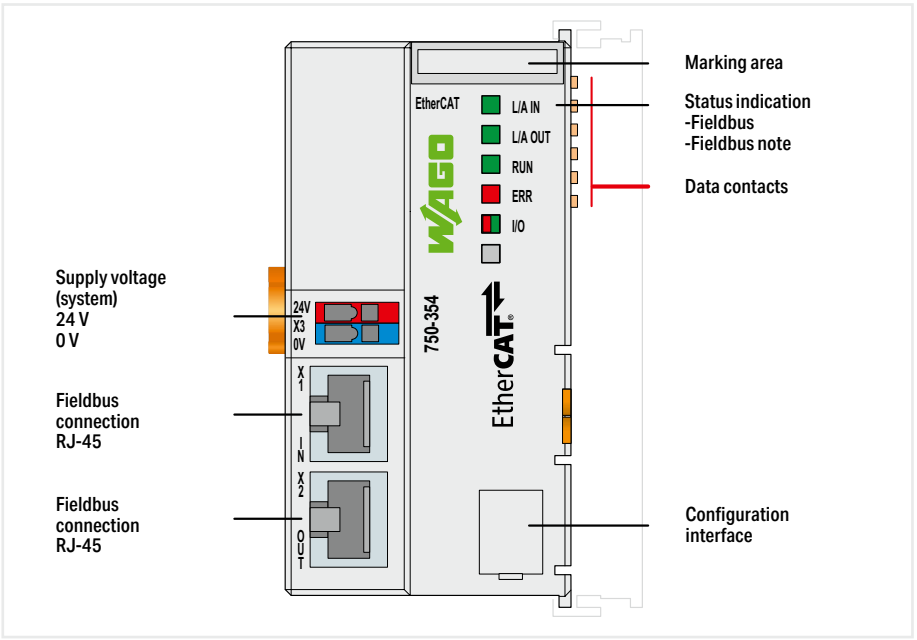
Technical data	
Communication	BACnet/IP; Modbus (TCP, UDP)
Protocols	HTTP(S), BootP, DHCP, DNS, (S)FTP, SNMP
Connection technology: communication/fieldbus	BACnet/IP: 2 x RJ-45; Modbus (TCP, UDP): 2 x RJ-45
Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 12
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Number of modules per node (max.)	250
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-332

Accessories	Item no.
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Fieldbus couplers ▶ EtherCAT



750-354



7.1

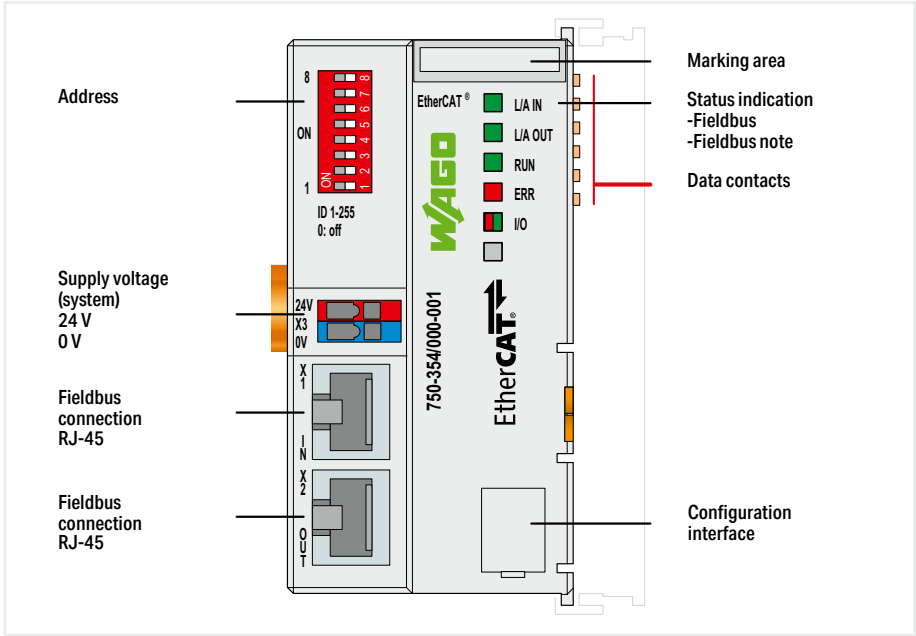
Version	**Standard**
Item no.	**750-354**
Order Text	**FC EtherCAT**

Technical data	
Communication	EtherCAT®
Protocols	EtherCAT® (direct mode)
Connection technology: communication/fieldbus	EtherCAT: 2 x RJ-45
Baud rate	100 Mbit/s
Transmission medium (communication/fieldbus)	Shielded twisted pair S/FTP, F/FTP or SF/FTP; 100 Ω; Cat. 6
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1024 bytes/1024 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	250 mA
Current consumption (5 V system supply)	300 mA
Total current (system supply)	700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-354

Fieldbus couplers ▶ EtherCAT®; ID switch



750-354/000-001



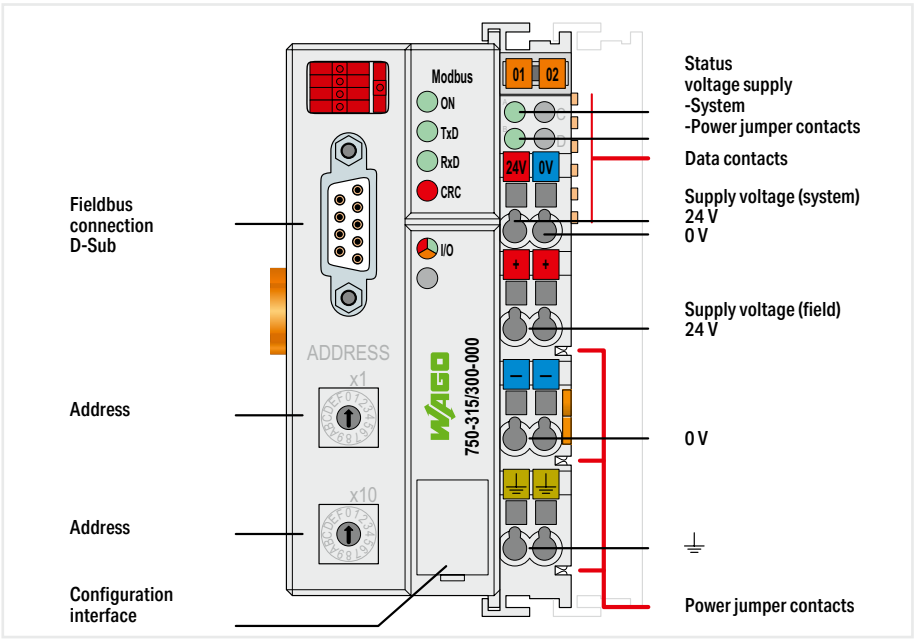
Version	Standard	Diagnostics
Item no.	**750-354/000-001**	**750-354/000-002**
Order Text	**FC EtherCAT; ID-Switch**	**FC EtherCAT; ID-Switch; 100Mbit/s; Diagn**

Technical data		
Communication	EtherCAT®	
Protocols	EtherCAT® (direct mode)	
Connection technology: communication/fieldbus	EtherCAT: 2 x RJ-45	
Baud rate	100 Mbit/s	
Transmission medium (communication/fieldbus)	Shielded twisted pair S/FTP, F/FTP or SF/FTP; 100 Ω; Cat. 6	
Transmission performance	Class D per EN 50173	
Number of modules per node (max.)	64	
Input and output process image (fieldbus) max.	1024 bytes/1024 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector	
Input current (typ.) at nominal load (24 V)	250 mA	
Current consumption (5 V system supply)	300 mA	
Total current (system supply)	700 mA	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-354/000-001	

Fieldbus couplers ▶ MODBUS; RS-485; 115.2 kBd



750-315/300-000



Version	Standard
Item no.	750-315/300-000
Order Text	FC MODBUS; RS485; 115.2kBd

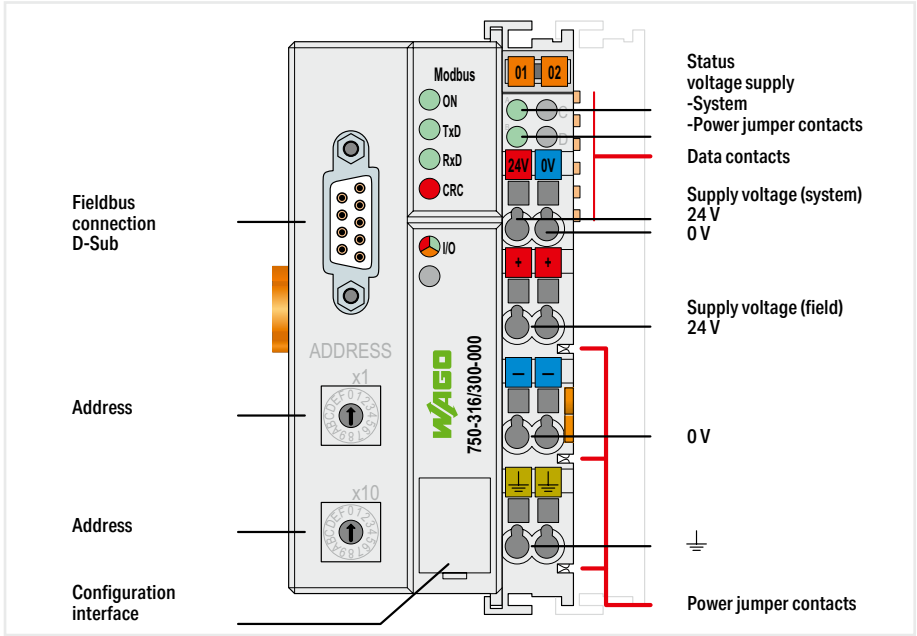
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Technical data	
Communication	Modbus® RTU
Connection technology: communication/fieldbus	Modbus® RTU: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	247
Baud rate	150 Bd ... 115.2 kBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 (4) x 0.25 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-315/300-000

Fieldbus couplers ▶ MODBUS; RS-232; 115.2 kBd



750-316/300-000



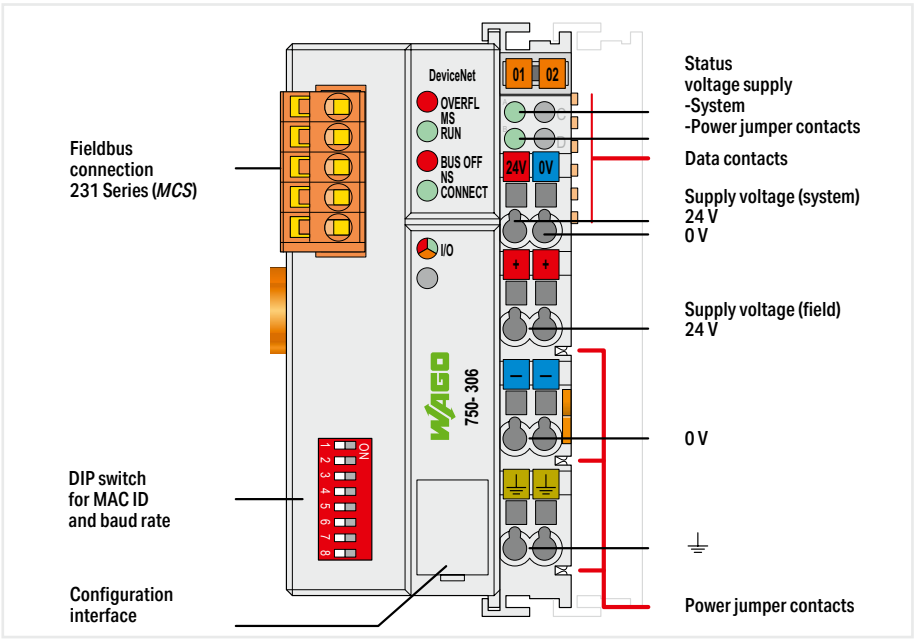
Version	**Standard**
Item no.	**750-316/300-000**
Order Text	**FC MODBUS; RS232; 115.2kBd**

Technical data	
Communication	Modbus® RTU
Connection technology: communication/fieldbus	Modbus® RTU: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	247
Baud rate	150 Bd … 115.2 kBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 (4) x 0.25 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-316/300-000

Fieldbus couplers ▶ DeviceNet



750-306



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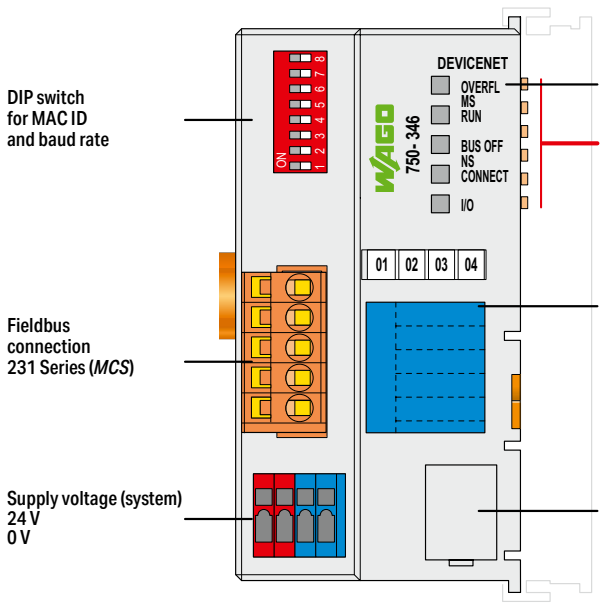
Version	Standard
Item no.	750-306
Order Text	FC DeviceNet

Technical data	
Communication	DeviceNet
Connection technology: communication/fieldbus	DeviceNet: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	64
Number of I/O points	6000
Bus segment length (max.)	500 m
Baud rate	500 kBd (125 kBd, 250 kBd, 500 kBd)
Transmission medium (communication/fieldbus)	Shielded Cu cable; Remote bus cable: 2 x 0.82 mm² + 2 x 1.7 mm²; Drop cable: 2 x 0.2 mm² + 2 x 0.32 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Input current via DeviceNet interface at 11 V	120 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-306

Fieldbus couplers ▶ DeviceNet; ECO



750-346



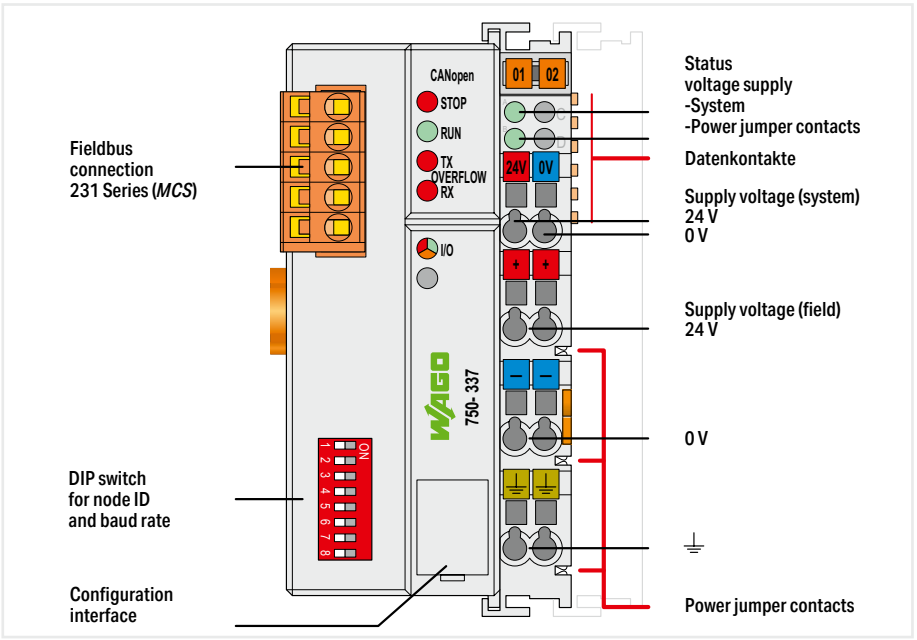
Version	Standard
Item no.	**750-346**
Order Text	**FC DeviceNet; ECO**

Technical data	
Communication	DeviceNet
Connection technology: communication/fieldbus	DeviceNet: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	64
Number of I/O points	6000
Bus segment length (max.)	500 m
Baud rate	500 kBd (125 kBd, 250 kBd, 500 kBd)
Transmission medium (communication/fieldbus)	Shielded Cu cable; Remote bus cable: 2 x 0.82 mm² + 2 x 1.7 mm²; Drop cable: 2 x 0.2 mm² + 2 x 0.32 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	32 bytes/32 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Input current via DeviceNet interface at 11 V	120 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-346

Fieldbus couplers ▶ CANopen; MCS



750-337



7.1

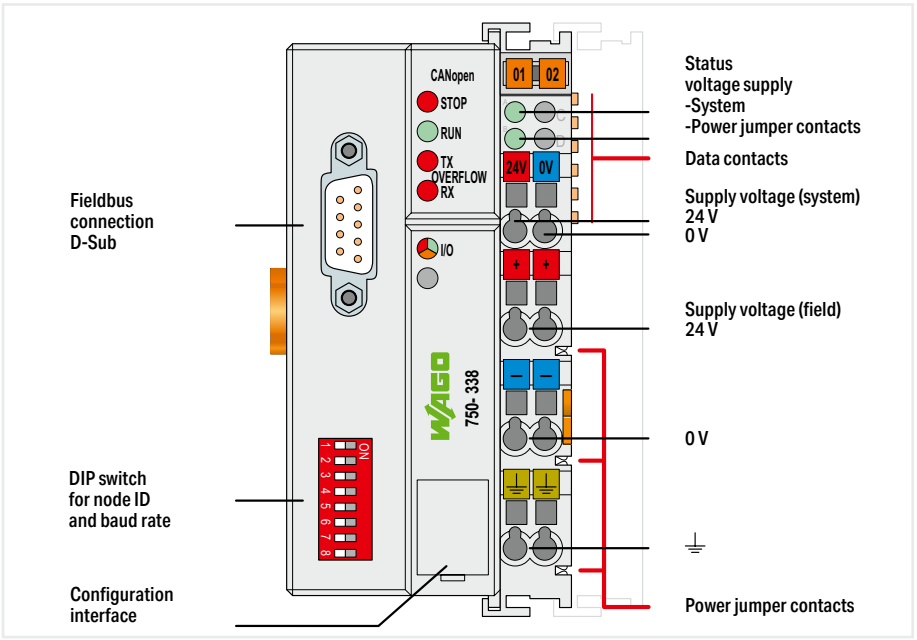
Version	Standard	ext. temperature
Item no.	**750-337**	**750-337/025-000**
Order Text	**FC CANopen; MCS**	**FC CANopen; MCS; T**

Technical data		
Communication	CANopen	
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole	
Number of fieldbus nodes on master (max.)	110	
Bus segment length (max.)	1000 m	
Baud rate	10 kBd … 1 MBd	
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²	
Number of modules per node (max.)	64	
Input and output process image (fieldbus) max.	512 bytes/512 bytes	
Number of PDOs	32 Tx / 32 Rx	
Number of SDOs	2 SDO servers	
Communication profile	DS-301 V4.1	
Device profile	DS-401 V2.0; Limit value monitoring ; Edge-triggered PDOs; Configurable response in the event of an error	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Current consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-337	

Fieldbus couplers ▶ CANopen; D-Sub



750-338



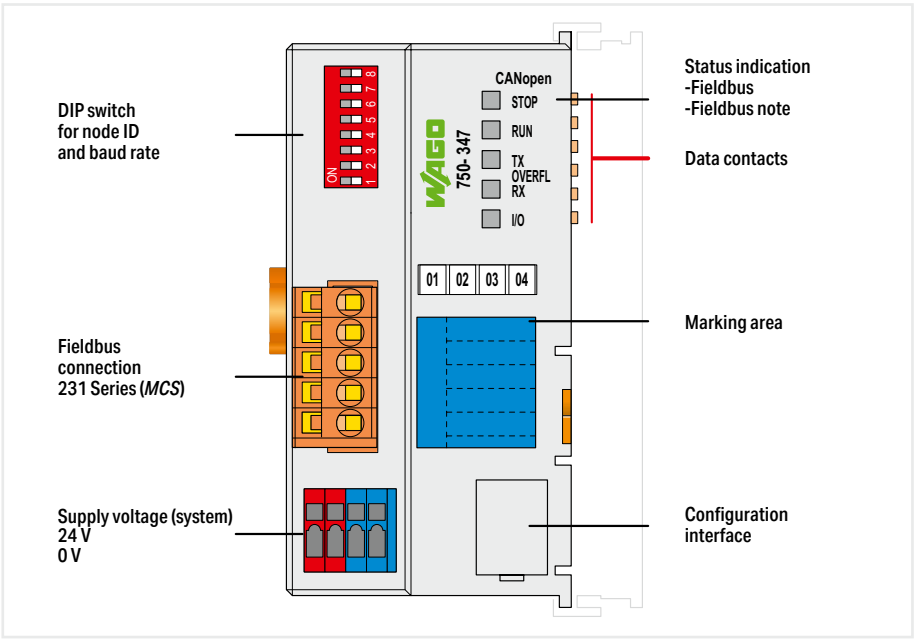
Version	**Standard**
Item no.	**750-338**
Order Text	**FC CANopen; DSub**

Technical data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Limit value monitoring ; Edge-triggered PDOs; Configurable response in the event of an error
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-338

Fieldbus couplers ▶ CANopen; MCS; ECO



750-347



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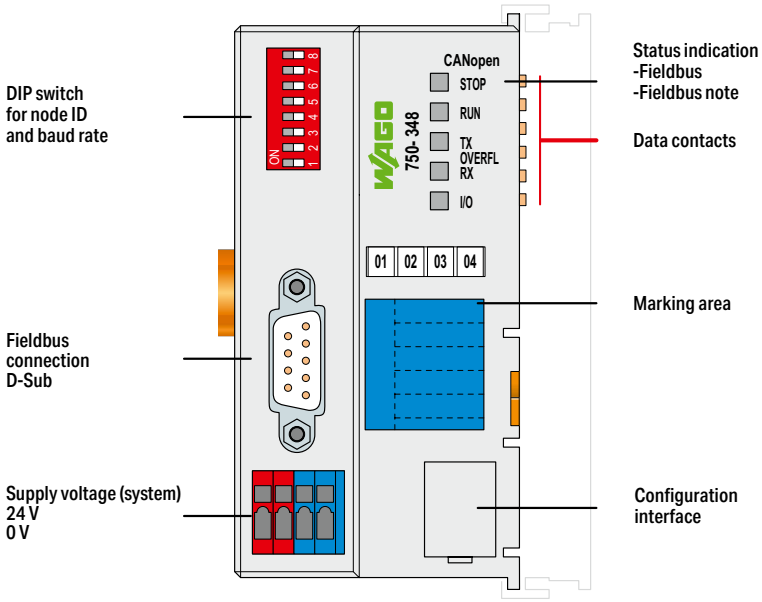
Version	Standard
Item no.	750-347
Order Text	FC CANopen; MCS; ECO

Technical data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	32 bytes/32 bytes
Number of PDOs	5 Tx / 5 Rx
Number of SDOs	1 SDO server
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Configurable response in the event of an error
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-347

Fieldbus couplers ▶ CANopen; D-Sub; ECO



750-348



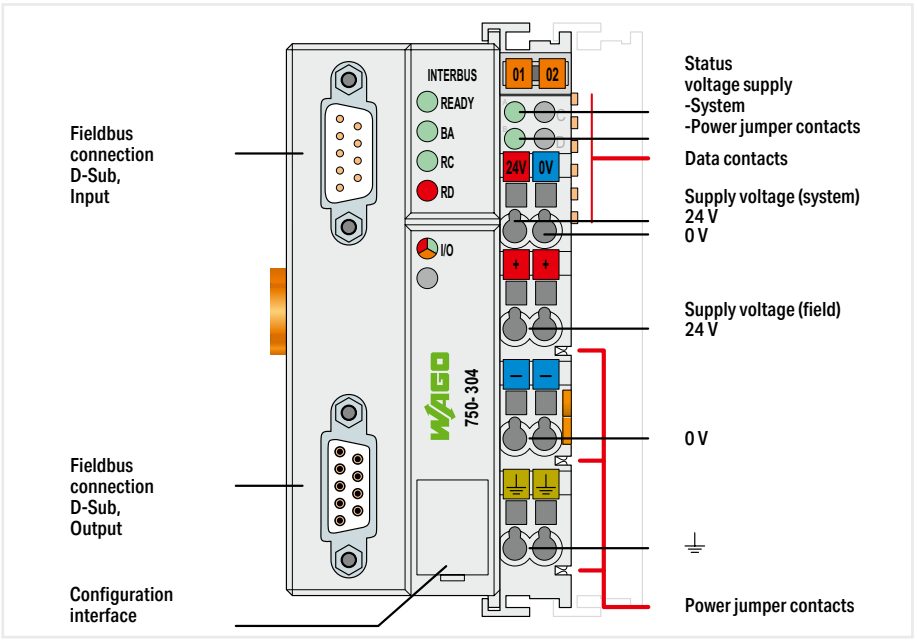
Version	**Standard**
Item no.	**750-348**
Order Text	**FC CANopen; DSub; ECO**

Technical data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	32 bytes/32 bytes
Number of PDOs	5 Tx / 5 Rx
Number of SDOs	1 SDO server
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Configurable response in the event of an error
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-348

Fieldbus couplers ▶ INTERBUS



750-304



Version	Standard
Item no.	750-304
Order Text	FC INTERBUS

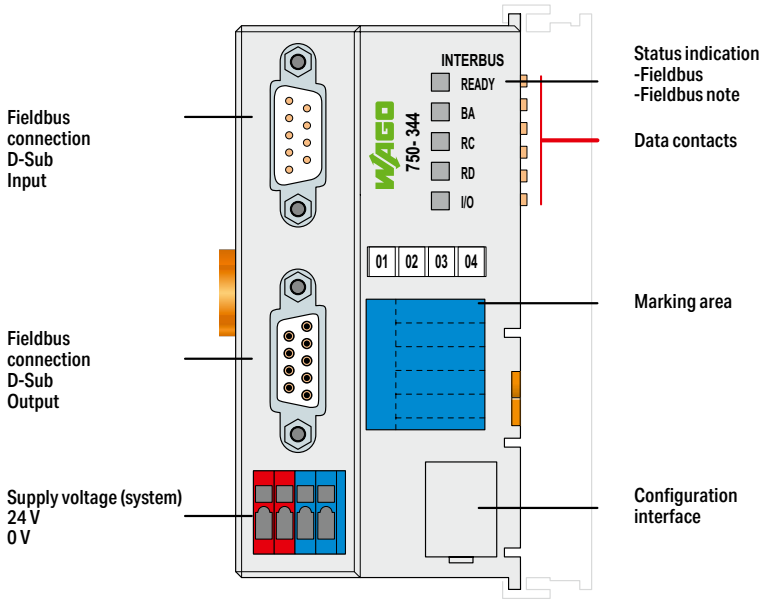
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Technical data	
Communication	INTERBUS
Connection technology: communication/fieldbus	INTERBUS: 1 x D-sub 9 plug/socket
Number of fieldbus nodes on master (max.)	256
Number of I/O points	4096
Bus segment length (max.)	400 m
Baud rate	500 kBd
Transmission medium (communication/fieldbus)	Certified Cu cable
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	64 bytes/64 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-304

Fieldbus couplers ▶ INTERBUS; ECO



750-344



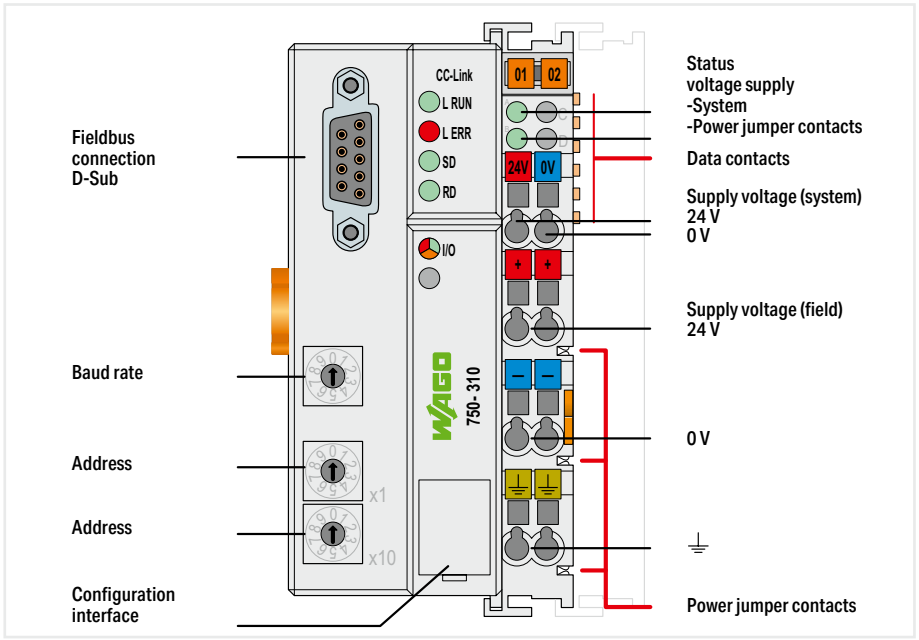
Version	**Standard**
Item no.	**750-344**
Order Text	**FC INTERBUS; 500kbit/s; ECO**

Technical data	
Communication	INTERBUS
Connection technology: communication/fieldbus	INTERBUS: 1 x D-sub 9 plug/socket
Number of fieldbus nodes on master (max.)	256
Number of I/O points	4096
Bus segment length (max.)	400 m
Baud rate	500 kBd
Transmission medium (communication/fieldbus)	Certified Cu cable
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	20 bytes/20 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-344

Fieldbus couplers ▶ CC-Link; D-Sub



750-310



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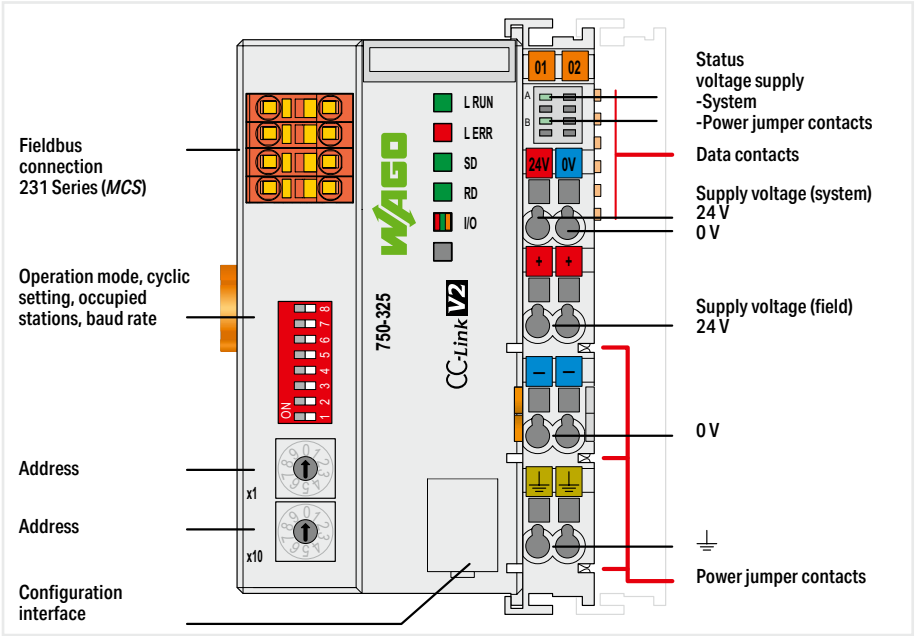
Version	**Standard**
Item no.	**750-310**
Order Text	**FC CC-Link**

Technical data	
Communication	CC-Link
Connection technology: communication/fieldbus	CC-Link: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	64
Baud rate	156 kBd ... 10 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 / 3 x 0.5 mm²
Number of modules per node (max.)	64
Station addresses	4/1 ... 4
Input and output process image (fieldbus) max.	48 bytes/48 bytes
Input process image (note)	14-byte digital, 2-byte system, 32-byte analog
Output process image (note)	14-byte digital, 2-byte system, 32-byte analog
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-310

Fieldbus couplers ▶ CC-Link; MCS



750-325



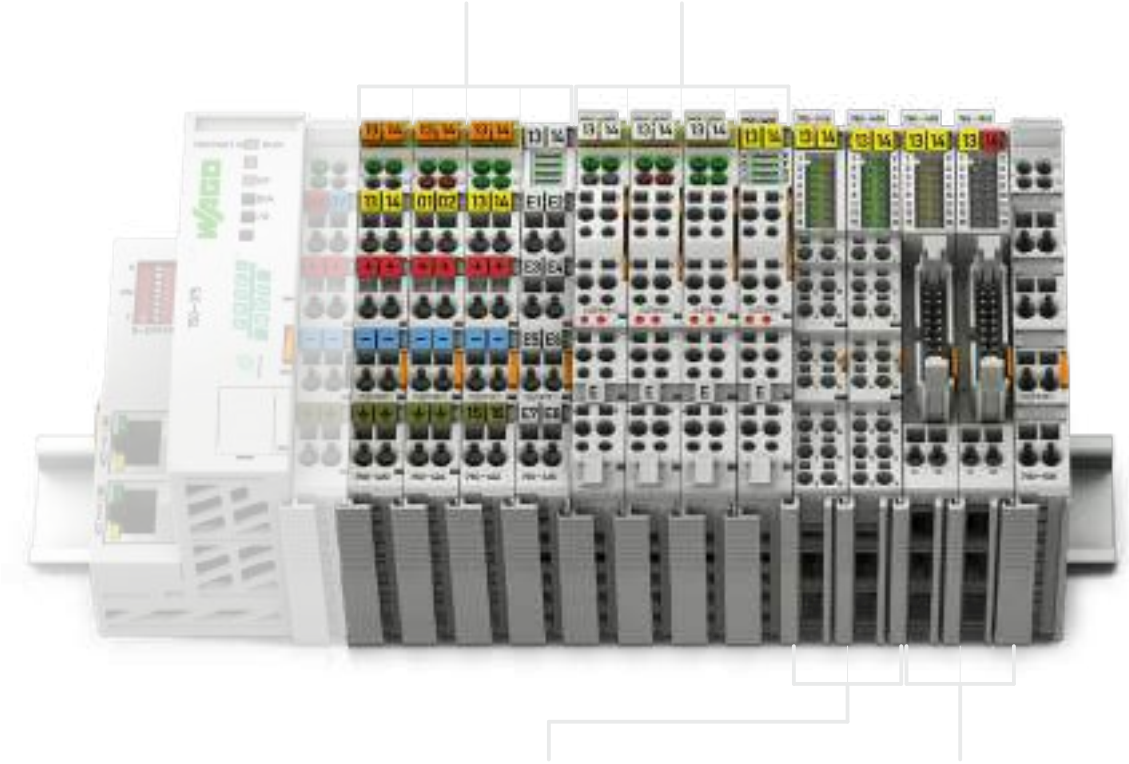
Version	**Standard**
Item no.	**750-325**
Order Text	**FC CC-Link**

Technical data	
Communication	CC-Link
Connection technology: communication/fieldbus	CC-Link: 1 x Male connector; 4-pole
Device-specific	Operating mode: CC-Link V2.0 (default setting)/V1.1; Advanced cycle setting: 1, 2, 4 (default setting), 8 cycles
Number of fieldbus nodes on master (max.)	64
Baud rate	156 kBd … 10 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 / 3 x 0.5 mm²
Number of modules per node (max.)	64
Station addresses	1 … 4 / 4 (default setting)
Input process image (note)	RX (digital inputs): V1.1: 16, 48, 80, 112 bits; V2.0: 16, 48, 80, 112 bits (1 cycle); V2.0: 16, 80, 144, 208 bits (2 cycles); V2.0: 48, 176, 304, 432 bits (4 cycles); V2.0: 112, 368, 624, 880 bits (8 cycles) and 16 bits per system area; RWr (analog inputs): V1.1: 4, 8, 12, 16 words (16 bits); V2.0: 4, 8, 12, 16 words (1 cycle); V2.0: 8, 16, 24, 32 words (2 cycles); V2.0: 16, 32, 48, 64 words (4 cycles); V2.0: 32, 64, 96, 128 words (8 cycles)
Output process image (note)	RY (digital outputs): V1.1: 16, 48, 80, 112 bits; V2.0: 16, 48, 80, 112 bits (1 cycle); V2.0: 16, 80, 144, 208 bits (2 cycles); V2.0: 48, 176, 304, 432 bits (4 cycles); V2.0: 112, 368, 624, 880 bits (8 cycles) and 16 bits per system area; RWw (analog outputs): V1.1: 4, 8, 12, 16 words (16 bits); V2.0: 4, 8, 12, 16 words (1 cycle); V2.0: 8, 16, 24, 32 words (2 cycles); V2.0: 16, 32, 48, 64 words (4 cycles); V2.0: 32, 64, 96, 128 words (8 cycles)
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	600 mA
Current consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-325

Digital Input Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (750 Series), with Ribbon Cable Connection	
Dimensions W x H x D	12 x 100 x 74.1 mm
Depth from upper edge of DIN-rail	66.9 mm
Connection technology	20-pole male connector + 2 x CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch











I/O System –
750 XTR Series

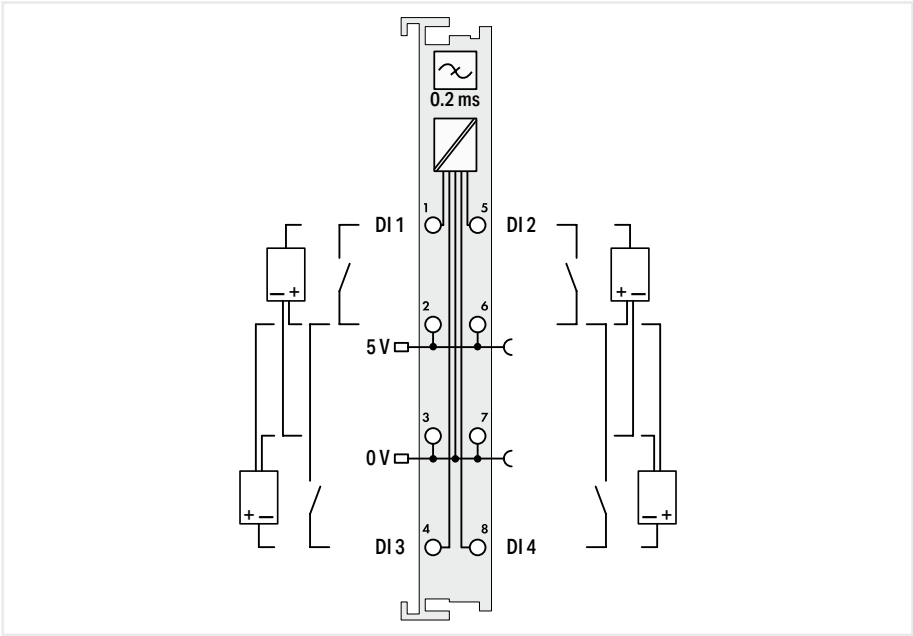
I/O System – 750 and 753 Series, Digital Input Modules
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Ex i										See Section 7.9
*This module is also available as a variant of the 750 XTR Series.										See Section 8

Digital input ▶ 5 VDC ▶ high-side switching ▶ 0.2 ms



750-414



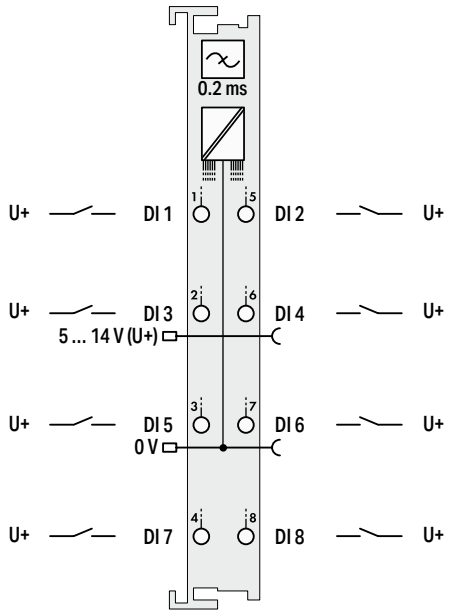
Item description	**4-Channel Digital Input; 5 VDC; 0.2 ms**
Version	**Standard**
Item no.	**750-414**
Order Text	**4DI; 5 VDC; 0.2ms**

Technical data	
Pluggable connector	fixed
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	5 VDC
Voltage range for signal (0)	0 … 0.8 VDC
Voltage range for signal (1)	2.4 … 5 VDC
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.
Input characteristic	high-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) typ.	0.05 mA
Supply voltage (sensor)	5 VDC
Supply voltage (field)	5 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	5 mA
Input data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-414
	Notice: An additional supply module must be added for 5 VDC supply!

Digital input ▶ 5 VDC ▶ high-side switching ▶ 0.2 ms



753-434



Item description	**8-Channel Digital Input; 5/12 VDC; 0.2 ms**
Version	**pluggable (delivery without connector)**
Item no.	**753-434**
Order Text	**8DI; 5/12 VDC; 0.2ms**

Technical data	
Pluggable connector	pluggable
Number of digital inputs	8
Signal type	Digital
Signal type (voltage)	5 VDC; 12 VDC
Voltage range for signal (0)	−3 ... 0.2 x U_V DC
Voltage range for signal (1)	0.5 x U_V ... 1.1 x U_V DC
Sensor connection	8 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	0.2 ms
Input current at specific input voltage	0.06 mA at 12 V
Supply voltage (field)	14 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	4 mA
Input data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/753-434

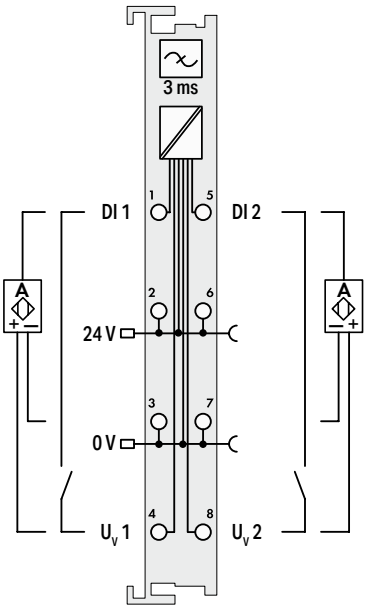
Accessories	**Item no.**
Plug	753-110

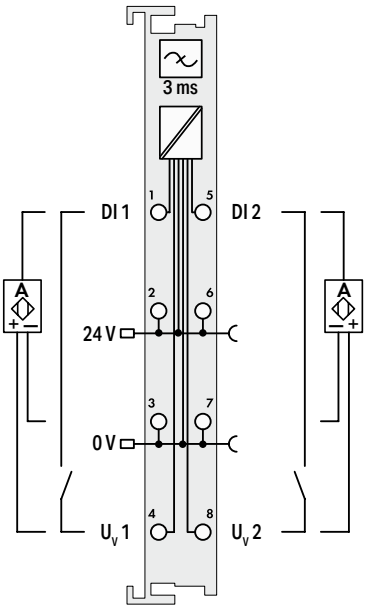
Notice: An additional supply module must be added for 5–14 VDC supply!

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-418





Diagnostics	Short circuit, active acknowledgment after error rectified		Short circuit, automatic acknowledgment after error rectified	
Item description	2-Channel Digital Input; 24 VDC; 3 ms; Acknowledgement; Diagnostics		2-Channel Digital Input; 24 VDC; 3 ms; Diagnostics	
Version	Standard	pluggable (delivery without connector)	Standard	pluggable (delivery without connector)
Item no.	**750-418**	**753-418**	**750-421**	**753-421**
Order Text	**2DI; 24 VDC; 3ms; Acknol; Diagn**	**2DI; 24 VDC; 3ms; Acknol; Diagn**	**2DI; 24 VDC; 3ms; Diagn**	**2DI; 24 VDC; 3ms; Diagn**

7.2

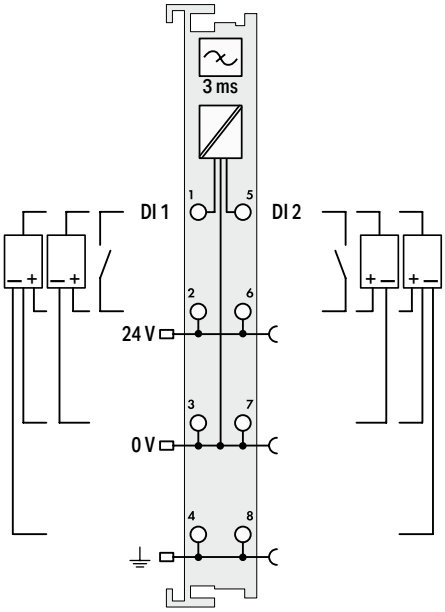
Technical data

Pluggable connector	fixed	pluggable	fixed	pluggable
Number of digital inputs	2		2	
Signal type	Digital		Digital	
Signal type (voltage)	24 VDC		24 VDC	
Voltage range for signal (0)	−3 … +5 VDC		−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC		15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire)		2 x (2-wire, 3-wire)	
Input characteristic	high-side switching		high-side switching	
Input filter (digital)	3 ms		3 ms	
Input current per channel for signal (1) typ.	3.7 mA		3.7 mA	
Output current per channel	0.5 A		0.5 A	
Diagnostics	Short circuit, active acknowledgment after error rectified		Short circuit, automatic acknowledgment after error rectified	
Supply voltage (sensor)	24 VDC; Each channel is supplied separately with a short-circuit-protected voltage. A short circuit to ground is indicated as an error/fieldbus failure and a message is sent to the supervisory control. The error is canceled via the controller after it has been rectified (active acknowledgment by a user).		24 VDC; Each channel is supplied separately with a short-circuit-protected voltage. A short circuit to ground is indicated as an error/fieldbus failure and a message is sent to the supervisory control. The error is canceled automatically after it has been rectified.	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	12 mA		12 mA	
Input data width (internal) max.	4 bits		4 bits	
Output data width (internal) max.	4 bits		-	
Isolation	500 V system/field		500 V system/field	
Ambient temperature (operation)	0 … +55 °C		0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm		(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-418	wago.com/753-418	wago.com/750-421	wago.com/753-421
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-400



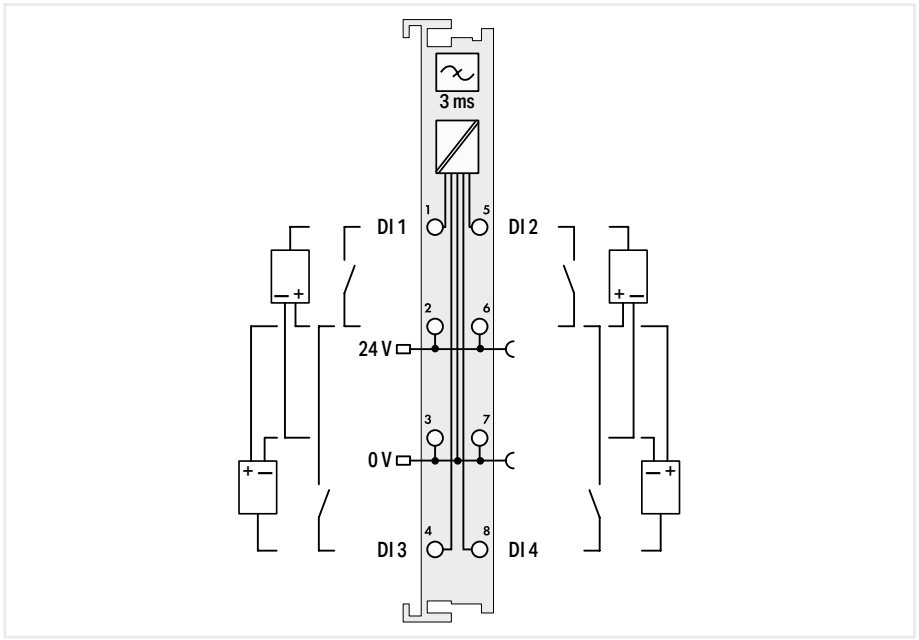
Item description	2-Channel Digital Input; 24 VDC; 3 ms		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-400**	**750-400/025-000**	**753-400**
Order Text	**2DI; 24 VDC; 3ms**	**2DI; 24 VDC; 3ms; T**	**2DI; 24 VDC; 3ms**

Technical data			
Pluggable connector	fixed		pluggable
Number of digital inputs	2		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Voltage range for signal (0)	−3 … +5 VDC		
Voltage range for signal (1)	15 … 30 VDC		
Sensor connection	2 x (2-wire, 3-wire, 4-wire)		
Input characteristic	high-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (1) typ.	4.5 mA		
Supply voltage (sensor)	24 VDC		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	3.7 mA		
Input data width (internal) max.	2 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-400		wago.com/753-400
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-402



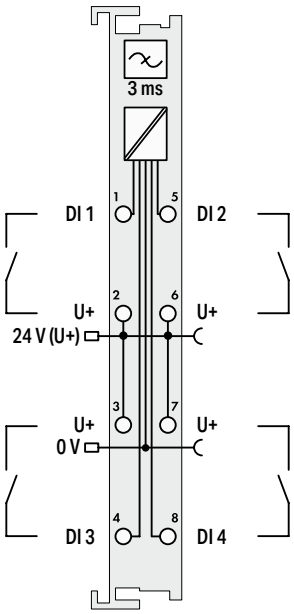
Item description	4-Channel Digital Input; 24 VDC; 3 ms		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-402**	**750-402/025-000**	**753-402**
Order Text	**4DI; 24 VDC; 3ms**	**4DI; 24 VDC; 3ms; T**	**4DI; 24 VDC; 3ms**

Technical data			
Pluggable connector	fixed		pluggable
Number of digital inputs	4		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Voltage range for signal (0)	−3 … +5 VDC		
Voltage range for signal (1)	15 … 30 VDC		
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.		
Input characteristic	high-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (1) typ.	4.5 mA		
Supply voltage (sensor)	24 VDC		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	7.5 mA		
Input data width (internal) max.	4 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-402		wago.com/753-402
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-432



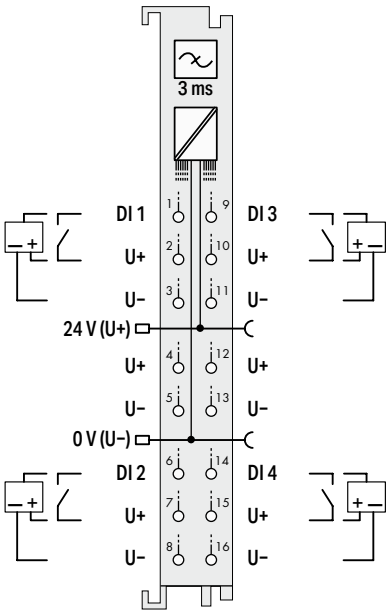
Item description	4-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection	
Version	Standard	pluggable (delivery without connector)
Item no.	750-432	753-432
Order Text	4DI; 24 VDC; 3ms; 2-wire	4DI; 24 VDC; 3ms; 2-wire

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	4 x (2-wire)	
Input characteristic	high-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (1) typ.	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	5.5 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-432	wago.com/753-432
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-1420



Item description	**4-Channel Digital Input; 24 VDC; 3 ms; 3-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1420**
Order Text	**4DI; 24 VDC; 3ms; 3-wire**

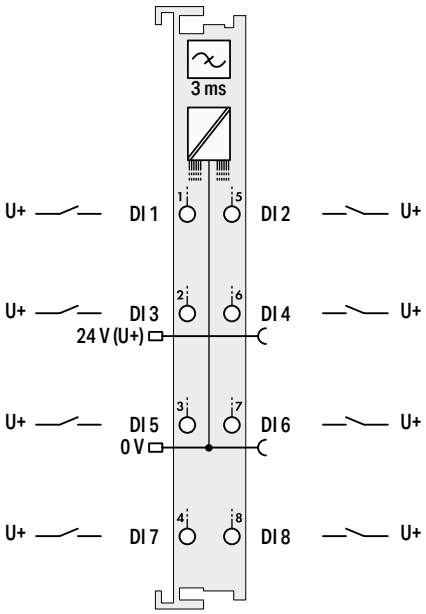
Technical data

Pluggable connector	fixed
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	4 x (3-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	4.5 mA
Input current per channel for signal (0) typ.	1.6 mA
Current consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	4 mA
Input data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1420

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-430



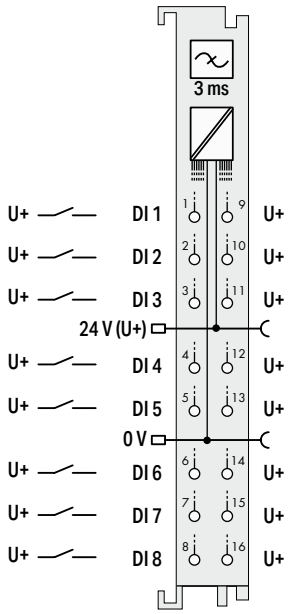
Item description	8-Channel Digital Input; 24 VDC; 3 ms		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-430**	**750-430/025-000**	**753-430**
Order Text	**8DI; 24 VDC; 3ms**	**8DI; 24 VDC; 3ms; T**	**8DI; 24 VDC; 3ms**

Technical data			
Pluggable connector	fixed		pluggable
Number of digital inputs	8		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Voltage range for signal (0)	−3 … +5 VDC		
Voltage range for signal (1)	15 … 30 VDC		
Sensor connection	8 x (1-wire)		
Input characteristic	high-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (1) typ.	2.8 mA		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	17 mA		
Input data width (internal) max.	8 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-430		wago.com/753-430
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-1415



Item description	**8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1415**
Order Text	**8DI; 24 VDC; 3ms; 2-wire**

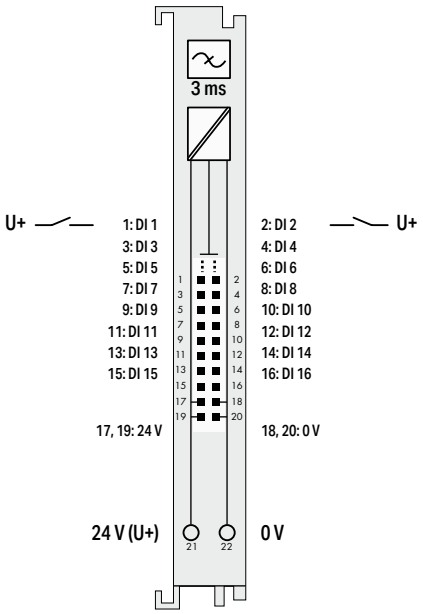
Technical data

Pluggable connector	fixed
Number of digital inputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	8 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	4.5 mA
Input current per channel for signal (0) typ.	1.6 mA
Current consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	6 mA
Input data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1415

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-1400



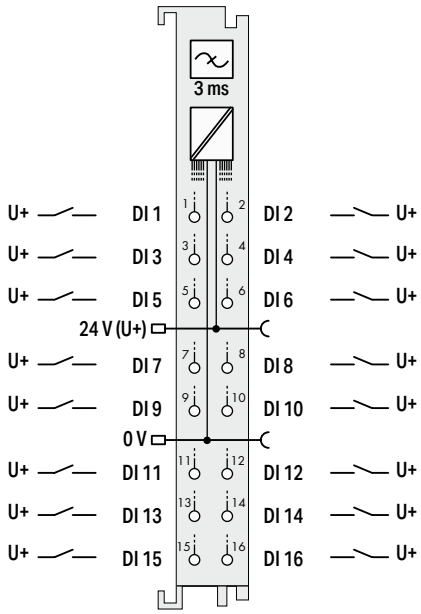
Item description	**16-Channel Digital Input; 24 VDC; 3 ms; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item no.	**750-1400**
Order Text	**16DI; 24 VDC; 3ms; Ribbon Cable**

Technical data	
Pluggable connector	fixed
Number of digital inputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	16 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.3 mA
Input current per channel for signal (0) typ.	0.6 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Current consumption (5 V system supply)	25 mA
Input data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1400

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-1405



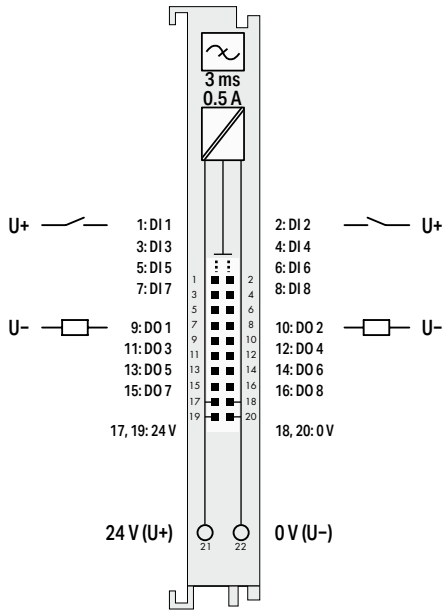
Item description	16-Channel Digital Input; 24 VDC; 3 ms
Version	Standard with 16 connectors
Item no.	**750-1405**
Order Text	**16DI; 24 VDC; 3ms**

Technical data	
Pluggable connector	fixed
Number of digital inputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	16 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.3 mA
Input current per channel for signal (0) typ.	0.6 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	25 mA
Input data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1405

Digital input; Digital output ► 24 VDC ► high-side switching ► 3 ms



750-1502



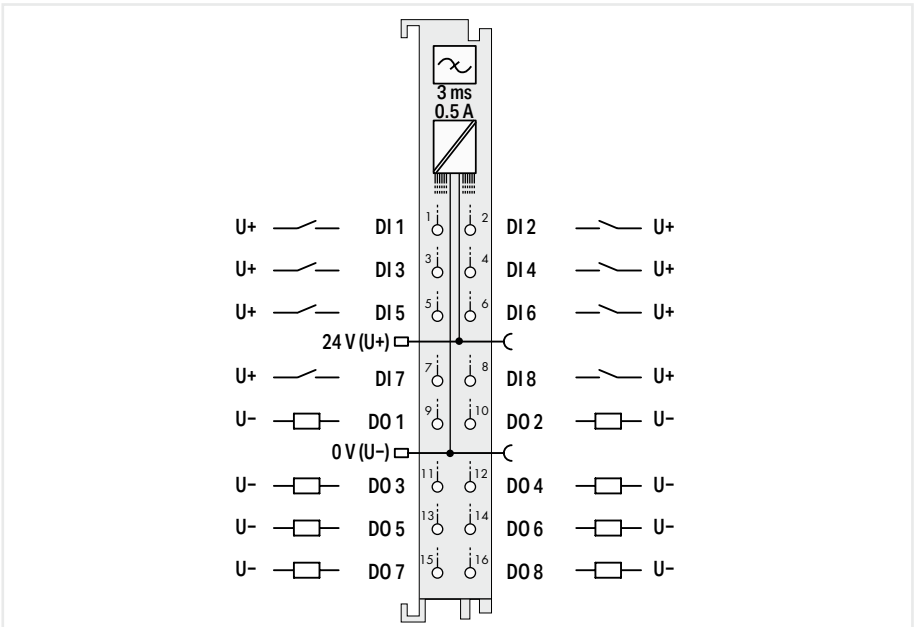
Item description	**8-Channel Digital Input/Output; 24 VDC; 0.5 A; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item no.	**750-1502**
Order Text	**8DIO; 24 VDC; 0.5A; Ribbon Cable**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.4 mA
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Current consumption, field supply (module with no external load)	16 mA
Current consumption (5 V system supply)	30 mA
Input data width (internal) max.	8 bits
Output data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1502

Digital input; Digital output ► 24 VDC ► high-side switching ► 3 ms



750-1506



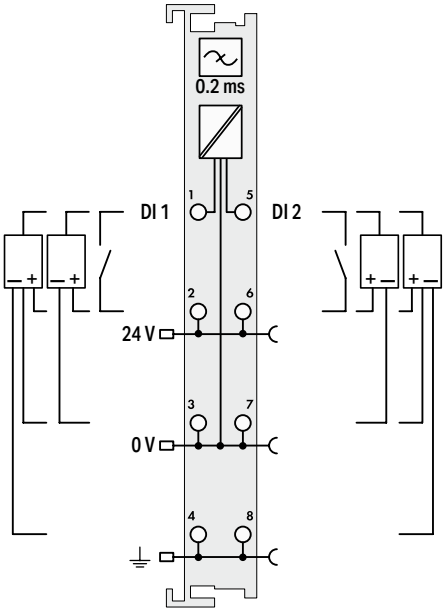
Item description	8-Channel Digital Input/Output; 24 VDC; 0.5 A
Version	Standard with 16 connectors
Item no.	**750-1506**
Order Text	**8DIO; 24 VDC; 0.5A**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Voltage range for signal (0)	–3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.4 mA
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	16 mA
Current consumption (5 V system supply)	30 mA
Input data width (internal) max.	8 bits
Output data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1506

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-401



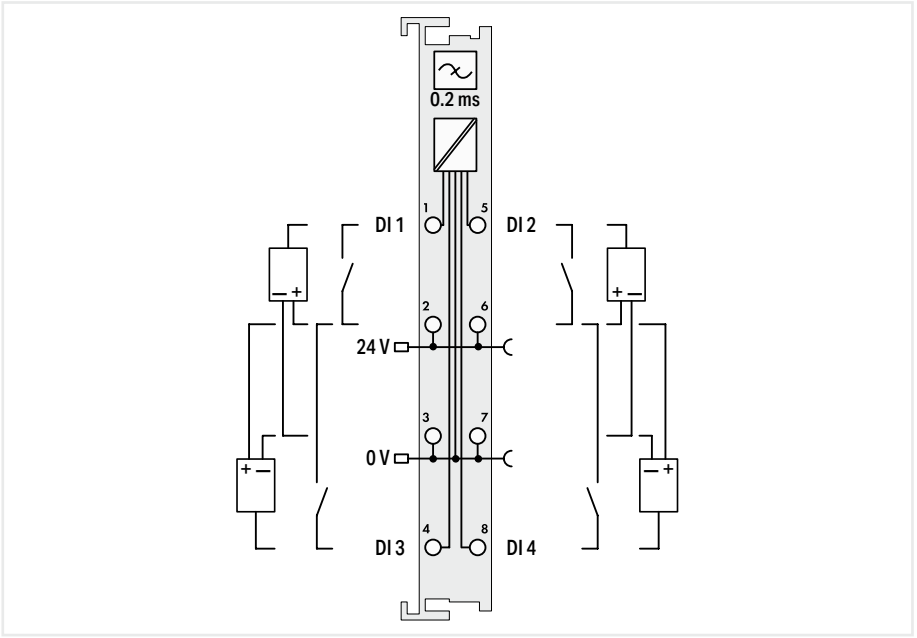
Item description	2-Channel Digital Input; 24 VDC; 0.2 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-401**	**753-401**
Order Text	**2DI; 24 VDC; 0.2ms**	**2DI; 24 VDC; 0.2ms**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	high-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) typ.	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	3.7 mA	
Input data width (internal) max.	2 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; Ex ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-401	wago.com/753-401
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-403



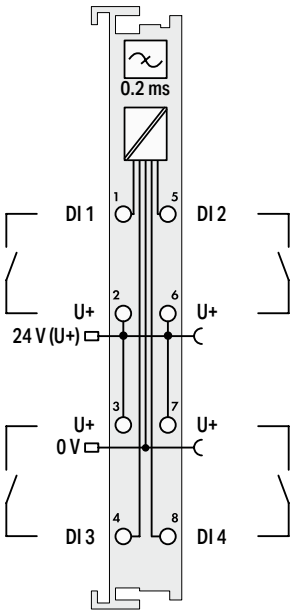
Item description	4-Channel Digital Input; 24 VDC; 0.2 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-403**	**753-403**
Order Text	**4DI; 24 VDC; 0.2ms**	**4DI; 24 VDC; 0.2ms**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	high-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) typ.	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	7.5 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-403	wago.com/753-403
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-433



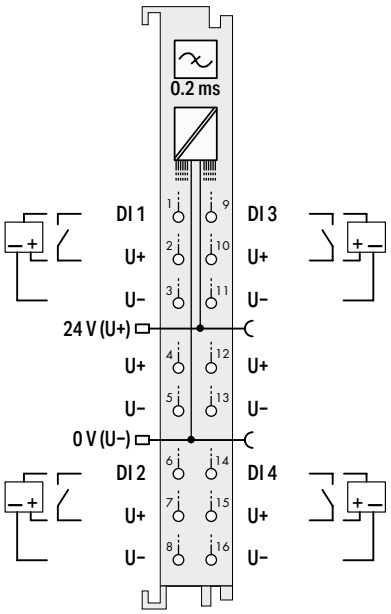
Item description	4-Channel Digital Input; 24 VDC; 0.2 ms; 2-wire connection	
Version	Standard	pluggable (delivery without connector)
Item no.	750-433	753-433
Order Text	4DI; 24 VDC; 0.2ms; 2-wire	4DI; 24 VDC; 0.2ms; 2-wire

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	4 x (2-wire)	
Input characteristic	high-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) typ.	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	5.5 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-433	wago.com/753-433
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-1421



Item description	**4-Channel Digital Input; 24 VDC; 0.2 ms; 3-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1421**
Order Text	**4DI; 24 VDC; 0.2ms; 3-wire**

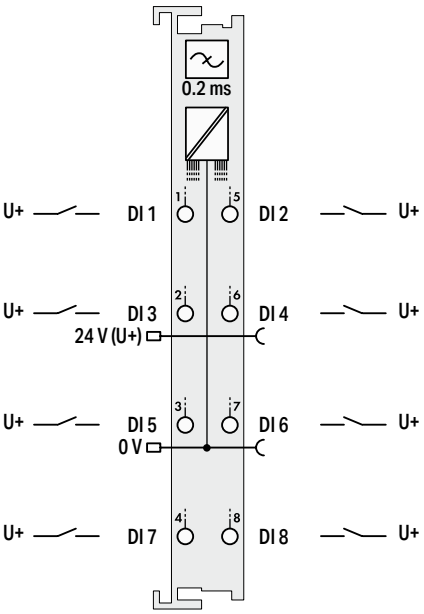
Technical data

Pluggable connector	fixed
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	4 x (3-wire)
Input characteristic	high-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) typ.	4.5 mA
Input current per channel for signal (0) typ.	1.6 mA
Current consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	4 mA
Input data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1421

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-431



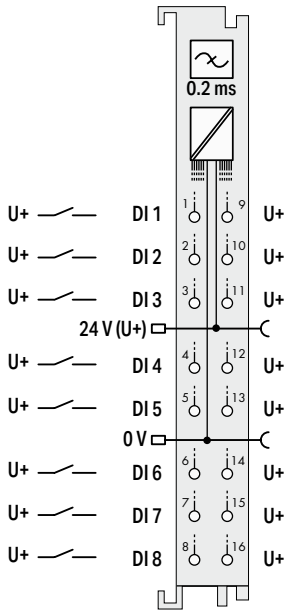
Item description	8-Channel Digital Input; 24 VDC; 0.2 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-431**	**753-431**
Order Text	**8DI; 24 VDC; 0.2ms**	**8DI; 24 VDC; 0.2ms**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	8	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	8 x (1-wire)	
Input characteristic	high-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) typ.	2.8 mA	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	17 mA	
Input data width (internal) max.	8 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-431	wago.com/753-431
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-1416



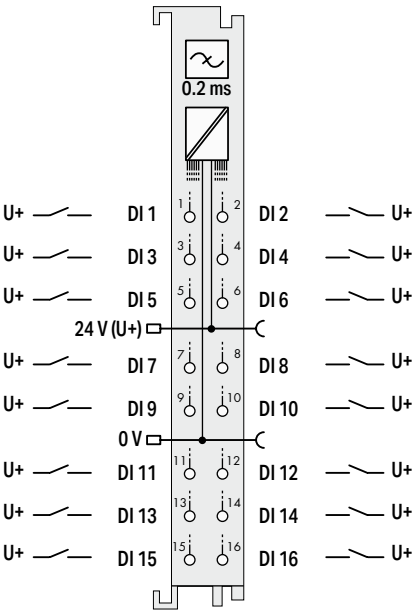
Item description	**8-Channel Digital Input; 24 VDC; 0.2 ms; 2-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1416**
Order Text	**8DI; 24 VDC; 0.2ms; 2-wire**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	8 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) typ.	4.5 mA
Input current per channel for signal (0) typ.	1.6 mA
Current consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	6 mA
Input data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1416

Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-1406



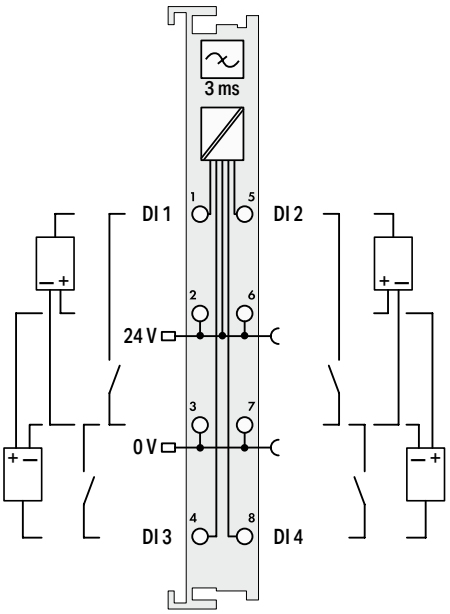
Item description	16-Channel Digital Input; 24 VDC; 0.2 ms
Version	Standard with 16 connectors
Item no.	**750-1406**
Order Text	**16DI; 24 VDC; 0.2ms**

Technical data	
Pluggable connector	fixed
Number of digital inputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	16 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) typ.	2.3 mA
Input current per channel for signal (0) typ.	0.6 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	25 mA
Input data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1406

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-408



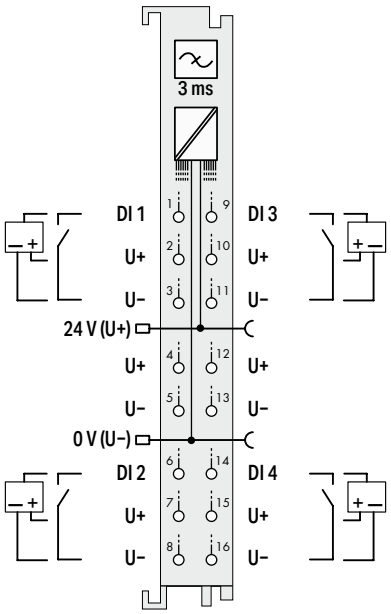
Item description	4-Channel Digital Input; 24 VDC; 3 ms; Low-side switching		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-408**	**750-408/025-000**	**753-408**
Order Text	**4DI; 24 VDC; 3ms; LSS**	**4DI; 24 VDC; 3ms; LSS; T**	**4DI; 24 VDC; 3ms; LSS**

Technical data			
Pluggable connector	fixed		pluggable
Number of digital inputs	4		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC		
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)		
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.		
Input characteristic	low-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (0) typ.	7 mA		
Supply voltage (sensor)	24 VDC		
Supply voltage (field)	24 VDC (-15 ... +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	5 mA		
Input data width (internal) max.	4 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 ... +55 °C	-20 ... +60 °C	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-408		wago.com/753-408
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-1422



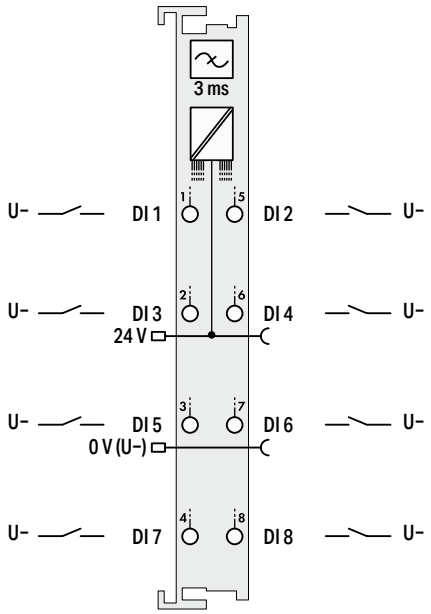
Item description	**4-Channel Digital Input; 24 VDC; 3 ms; Low-side switching; 3-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1422**
Order Text	**4DI; 24 VDC; 3ms; LSS; 3-wire**

Technical data	
Pluggable connector	fixed
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	4 x (3-wire)
Input characteristic	low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	-0.6 mA
Input current per channel for signal (0) typ.	-2.5 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	7 mA
Input data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1422

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-436



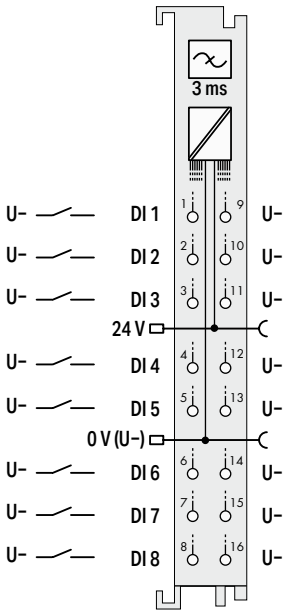
Item description	8-Channel Digital Input; 24 VDC; 3 ms; Low-side switching	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-436**	**753-436**
Order Text	**8DI; 24 VDC; 3ms; LSS**	**8DI; 24 VDC; 3ms; LSS**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	8	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	15 … 30 VDC	
Voltage range for signal (1)	−3 … +5 VDC	
Sensor connection	8 x (1-wire)	
Input characteristic	low-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (0) typ.	2.8 mA	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	13 mA	
Input data width (internal) max.	8 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-436	wago.com/753-436
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-1417



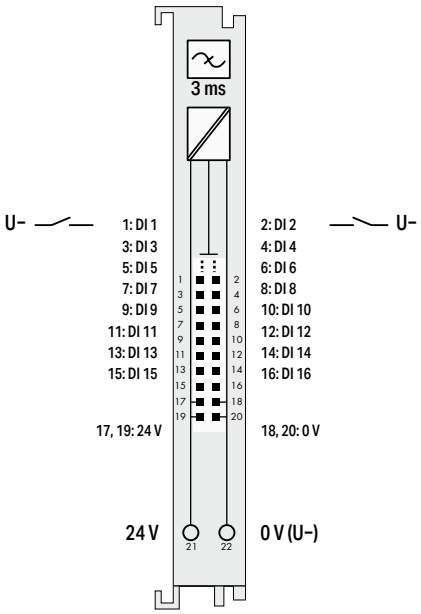
Item description	**8-Channel Digital Input; 24 VDC; 3 ms; Low-side switching; 2-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1417**
Order Text	**8DI; 24 VDC; 3ms; LSS; 2-wire**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	8 x (2-wire)
Input characteristic	low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	-0.6 mA
Input current per channel for signal (0) typ.	2.4 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	12 mA
Input data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1417

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-1402



Item description	**16-Channel Digital Input; 24 VDC; 3 ms; Low-side switching; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item no.	**750-1402**
Order Text	**16DI; 24 VDC; 3ms; LSS; Ribbon Cable**

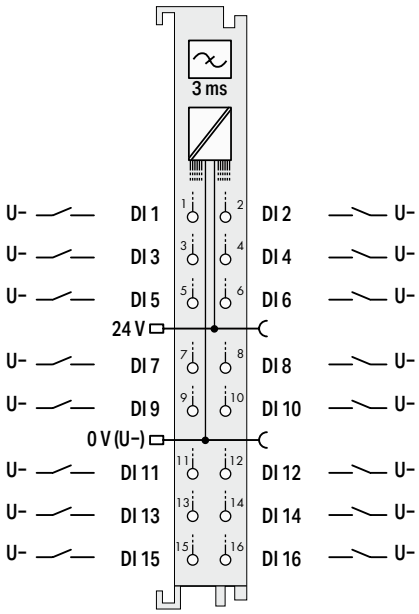
Technical data

Pluggable connector	fixed
Number of digital inputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	16 x (1-wire)
Input characteristic	low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	-0.6 mA
Input current per channel for signal (0) typ.	2.3 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Current consumption (5 V system supply)	25 mA
Input data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1402

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-1407



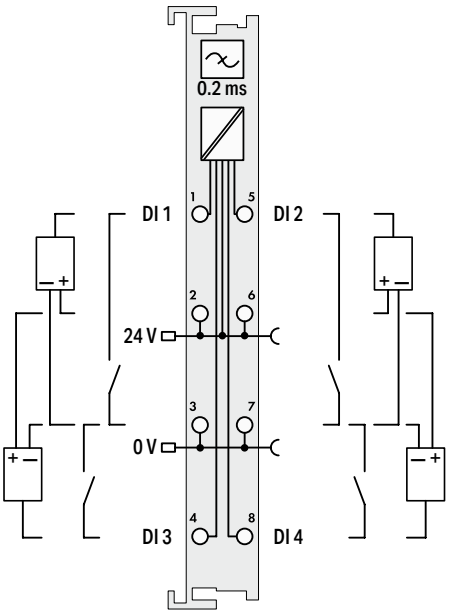
Item description	**16-Channel Digital Input; 24 VDC; 3 ms; Low-side switching**
Version	**Standard with 16 connectors**
Item no.	**750-1407**
Order Text	**16DI; 24 VDC; 3ms; LSS**

Technical data	
Pluggable connector	fixed
Number of digital inputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	16 x (1-wire)
Input characteristic	low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	-0.6 mA
Input current per channel for signal (0) typ.	2.3 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	25 mA
Input data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1407

Digital input ▶ 24 VDC ▶ low-side switching ▶ 0.2 ms



750-409



Item description	4-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-409**	**753-409**
Order Text	**4DI; 24 VDC; 0.2ms; LSS**	**4DI; 24 VDC; 0.2ms; LSS**

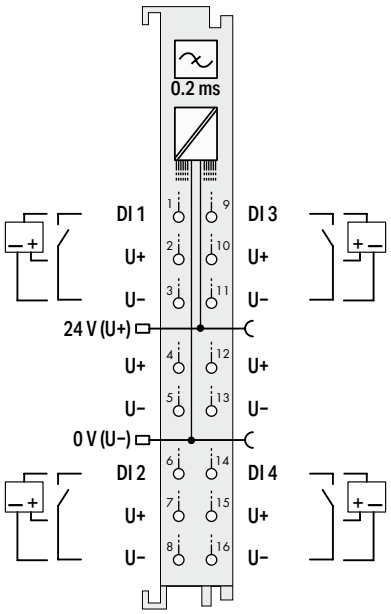
Technical data

Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC	
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	low-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (0) typ.	7 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-15 ... +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	5 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 ... +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-409	wago.com/753-409
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ low-side switching ▶ 0.2 ms



750-1423



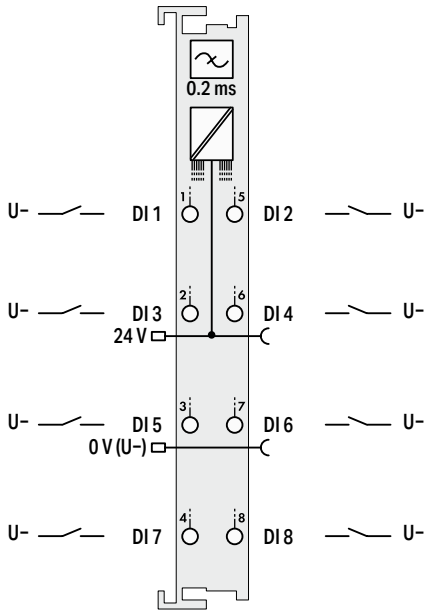
Item description	**4-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching; 3-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1423**
Order Text	**4DI; 24 VDC; 0.2ms; LSS; 3-wire**

Technical data	
Pluggable connector	fixed
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	4 x (3-wire)
Input characteristic	low-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) typ.	-0.6 mA
Input current per channel for signal (0) typ.	2.5 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	7 mA
Input data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1423

Digital input ▶ 24 VDC ▶ low-side switching ▶ 0.2 ms



750-437



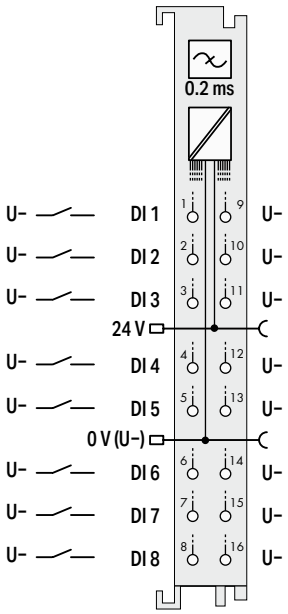
Item description	8-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-437**	**753-437**
Order Text	**8DI; 24 VDC; 0.2ms; LSS**	**8DI; 24 VDC; 0.2ms; LSS**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	8	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	15 … 30 VDC	
Voltage range for signal (1)	−3 … +5 VDC	
Sensor connection	8 x (1-wire)	
Input characteristic	low-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (0) typ.	2.8 mA	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	13 mA	
Input data width (internal) max.	8 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-437	wago.com/753-437
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC ▶ low-side switching ▶ 0.2 ms



750-1418



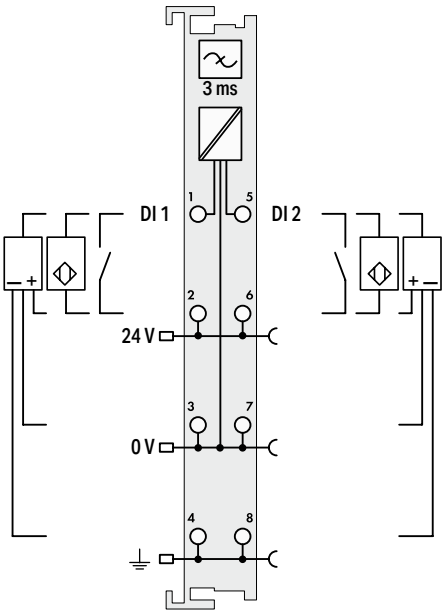
Item description	**8-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching; 2-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1418**
Order Text	**8DI; 24 VDC; 0.2ms; LSS; 2-wire**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	8 x (2-wire)
Input characteristic	low-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) typ.	-0.6 mA
Input current per channel for signal (0) typ.	2.4 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	12 mA
Input data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1418

Digital input ▶ 24 VDC; proximity sensor ▶ high-side switching ▶ 3 ms



750-410



Item description	2-Channel Digital Input; 24 VDC; 3 ms; Proximity sensor	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-410**	**753-410**
Order Text	**2DI; 24 VDC; 3ms; Proxi Sensor**	**2DI; 24 VDC; 3ms; Proxi Sensor**

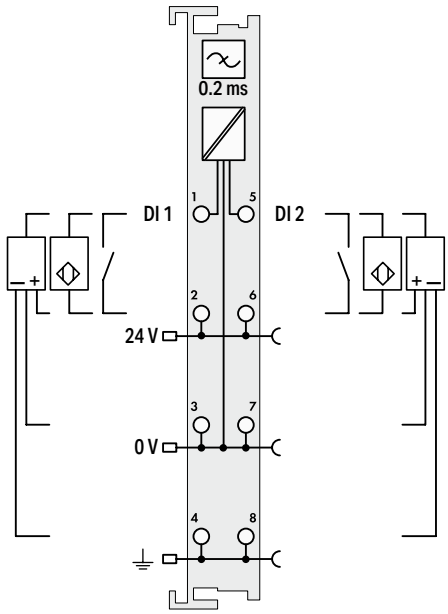
Technical data

Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire); 2-wire proximity sensor	
Input characteristic	high-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (1) typ.	8 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	2.5 mA	
Input data width (internal) max.	2 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-410	wago.com/753-410
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VDC; proximity sensor ▶ high-side switching ▶ 0.2 ms



750-411



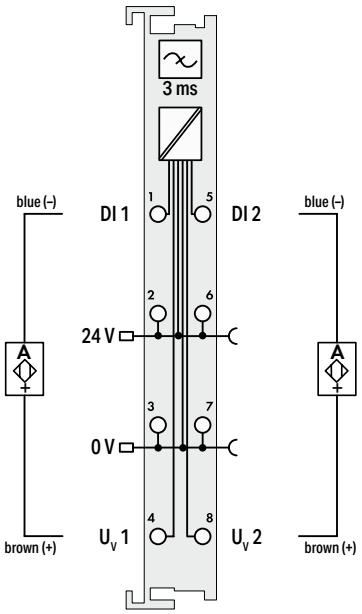
Item description	2-Channel Digital Input; 24 VDC; 0.2 ms; Proximity sensor	
Version	Standard	pluggable (delivery without connector)
Item no.	750-411	753-411
Order Text	2DI; 24 VDC; 0.2ms; Proxi Sensor	2DI; 24 VDC; 0.2ms; Proxi Sensor

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire); 2-wire proximity sensor	
Input characteristic	high-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) typ.	8 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	2.5 mA	
Input data width (internal) max.	2 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-411	wago.com/753-411
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ NAMUR ▶ high-side switching ▶ 3 ms



750-425



Diagnostics	Short circuit, wire break	
Item description	2-Channel Digital Input; NAMUR	
Version	Standard	pluggable (delivery without connector)
Item no.	750-425	753-425
Order Text	2DI; NAMUR	2DI; NAMUR

Technical data

Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	NAMUR	
Signal current (0) NAMUR	≤1.2 mA	
Signal current (1) NAMUR	≥2.1 mA	
Sensor connection	2 x (2-wire)	
Input characteristic	high-side switching	
Input filter (digital)	3 ms	
Protection against incorrect wiring	Short circuit monitoring: > 6.5 mA; Wire break monitoring: < 0.2 mA	
Open-circuit voltage	8.2 V	
Diagnostics	Short circuit, wire break	
Supply voltage (sensor)	8.2 VDC; short-circuit-protected, each channel supplied separately	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	5 mA	
Data width	4-bit input: 2-bit data, 2-bit error (short circuit/wire break)	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-425	wago.com/753-425
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

This digital input module receives control signals from NAMUR proximity sensors (per DIN EN 60947-5-6) from the field side.
Each channel of the sensors is supplied with a short-circuit-protected voltage of 8.2 V. A short circuit or a line break is indicated in the process image (1 bit) and via the red LED.
The green LED indicates the input status:

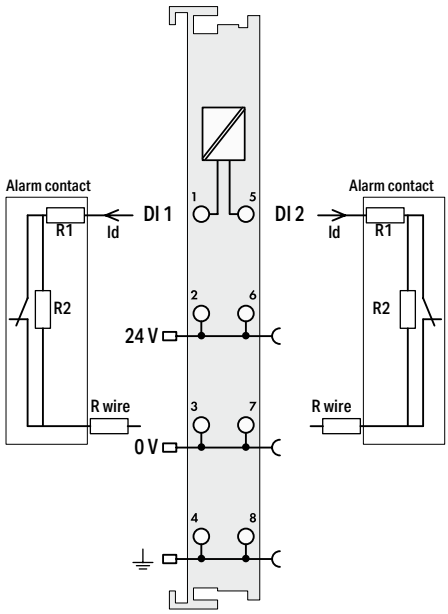
- Signal current (0): LED off
- Signal current (1): LED on

Field and system levels are electrically isolated.

Digital input ▶ Current loop (intruder detection)



750-424



Item description	2-Channel Digital Input; Intruder detection	
Version	Standard	pluggable (delivery without connector)
Item no.	750-424	753-424
Order Text	2DI; Intruder Detection	2DI; Intruder Detection

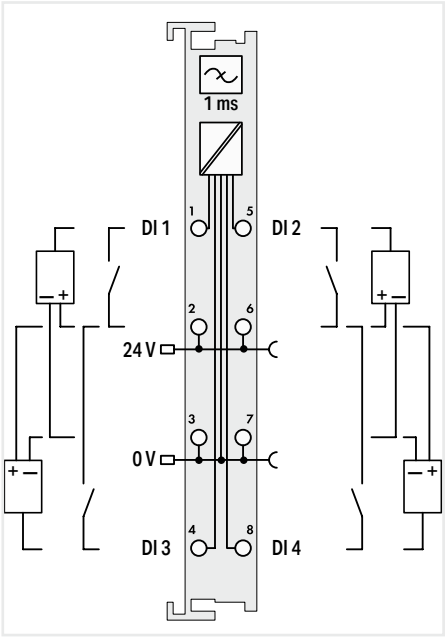
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Current loop (intruder detection)	
Sensor connection	2 x (2-wire)	
Specific sensor properties	Alarm contact: R1 = 1.5 kΩ (±5 %); R2 = 2.2 kΩ (±5 %); Conductor resistance (R wire): 200 Ω (max.)	
Output current per channel	0.001 A	
Current consumption, field supply (module with no external load)	16 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	6 mA	
Data width	4-bit input: 2-bit data, 2-bit error (short circuit/wire break)	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-424	wago.com/753-424
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

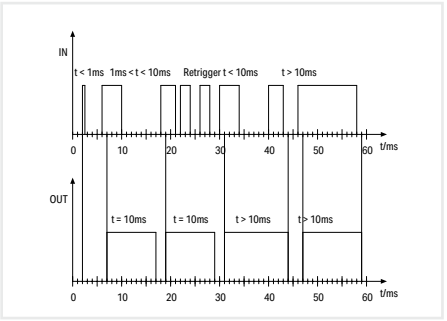
This I/O module incorporates a current loop, which makes it possible to monitor alarm contacts (window contacts) with a fixed resistance ratio (R1, R2), for intruder detection. The module indicates the status of the connected contact via LEDs and status bits in the process image.

Digital input ▶ 24 VDC; pulse extension ▶ high-side switching ▶ 1 ms



750-422





The I/O module extends input signals to at least 10 ms. Only signals ≥ 1 ms will be acquired. Input signals > 10 ms will not be extended (without fall delay). Field and system levels are electrically isolated.

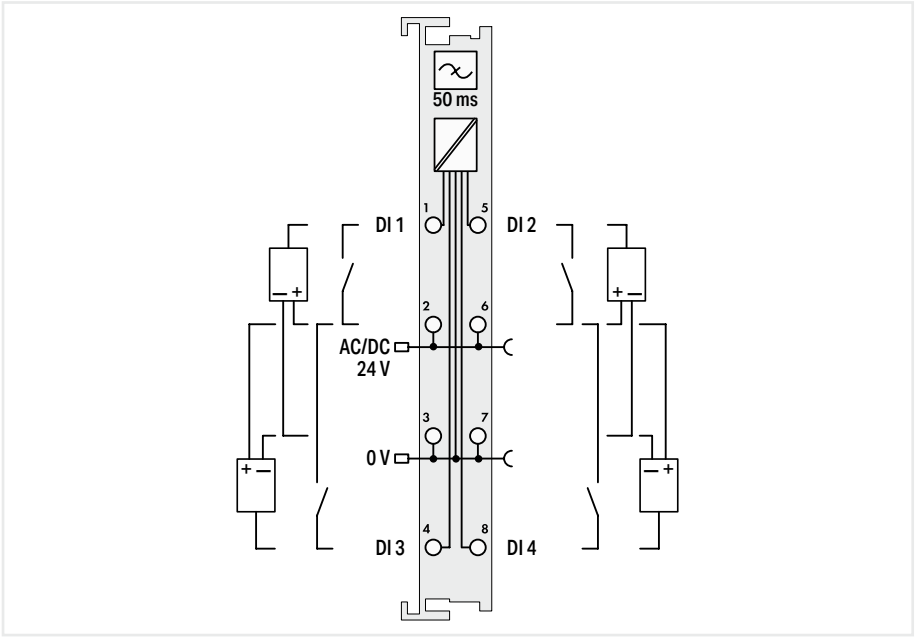
Item description	4-Channel Digital Input; 24 VDC; Pulse extension	
Version	**Standard**	**pluggable (delivery without connector)**
Item no.	**750-422**	**753-422**
Order Text	**4DI; 24 VDC; Pulse Extention**	**4DI; 24 VDC; Pulse Extention**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	high-side switching	
Input filter (digital)	1 ms	
Input current per channel for signal (1) typ.	4 mA	
Signal frequency (max.)	80 Hz	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	9 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-422	wago.com/753-422
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 24 VAC/DC ▶ high-side switching ▶ 50 ms



750-423



Item description	4-Channel Digital Input; 24 V AC/DC; 50 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-423**	**753-423**
Order Text	**4DI; 24 VAC/VDC; 50ms**	**4DI; 24 VAC/VDC; 50ms**

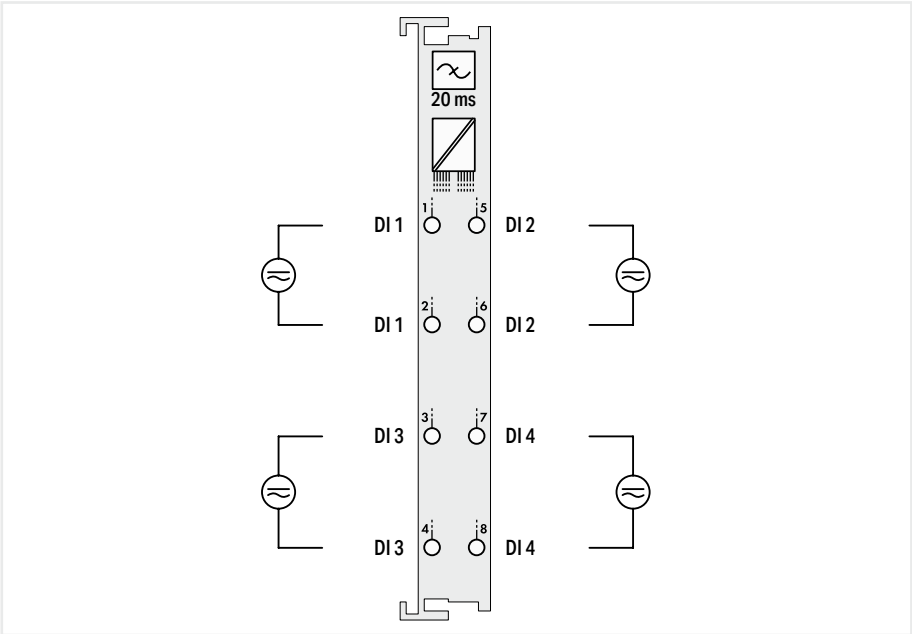
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VAC/DC	
Voltage range for signal (0)	−3 … +5 VDC; 0 … 5 VAC	
Voltage range for signal (1)	11 … 30 VDC; 10 … 27 VAC	
Input current (typ.)	7.5 mA (AC); 9.5 mA (DC)	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	high-side switching	
Input filter (digital)	50 ms	
Supply voltage (sensor)	24 VAC/DC	
Supply voltage (field)	24 VAC/DC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	10 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-423	wago.com/753-423
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 24 VAC supply!

Digital input ▶ 24 VAC/DC ▶ high-side switching ▶ 20 ms



750-415



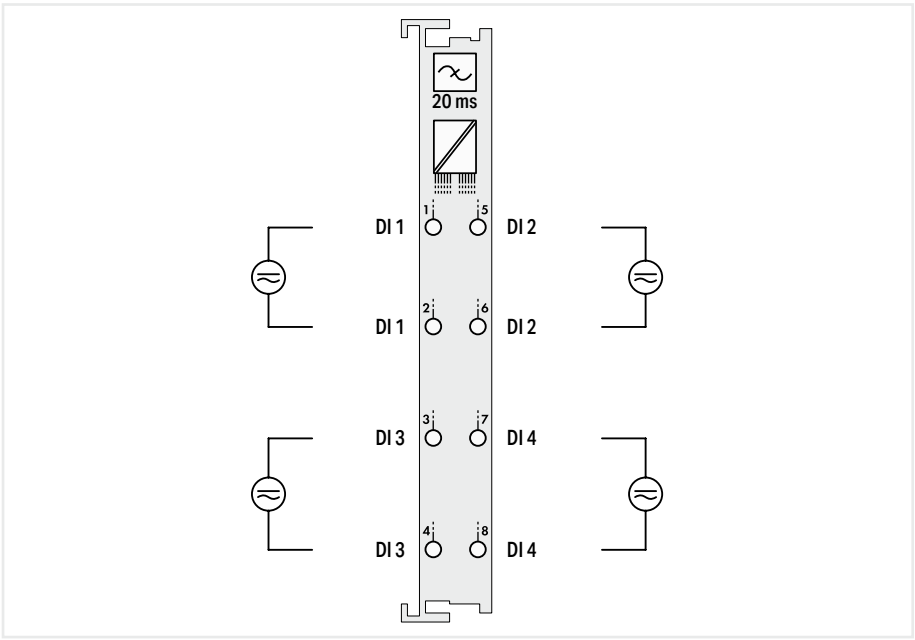
Item description	4-Channel Digital Input; 24 V AC/DC; 20 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-415**	**753-415**
Order Text	**4DI; 24 VAC/VDC; 20ms**	**4DI; 24 VAC/VDC; 20ms**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	24 VAC/DC	
Voltage range for signal (0)	−3 … +5 VDC; 0 … 5 VAC	
Voltage range for signal (1)	11 … 30 VDC; 10 … 27 VAC	
Input current (typ.)	7.5 mA (AC); 9.5 mA (DC)	
Sensor connection	4 x (2-wire)	
Input characteristic	high-side switching	
Input filter (digital)	20 ms	
Current consumption (5 V system supply)	10 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-415	wago.com/753-415
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 42 VAC/DC ▶ high-side switching ▶ 20 ms



750-428



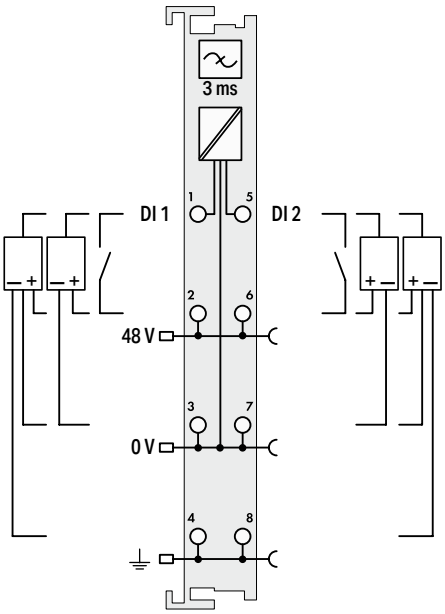
Item description	4-Channel Digital Input; 42 VAC/VDC; 20 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	750-428	753-428
Order Text	4DI; 42 VAC/VDC; 20ms	4DI; 42 VAC/VDC; 20ms

Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Signal type	Digital	
Signal type (voltage)	42 VAC/DC	
Voltage range for signal (0)	−3 … +10 VDC; 0 … 10 VAC	
Voltage range for signal (1)	30 … 53 VDC; 30 … 53 VAC	
Input current (typ.)	3.6 mA (AC); 6.0 mA (DC)	
Sensor connection	4 x (2-wire)	
Input characteristic	high-side switching	
Input filter (digital)	20 ms	
Current consumption (5 V system supply)	5 mA	
Input data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-428	wago.com/753-428
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital input ▶ 48 VDC ▶ high-side switching ▶ 3 ms



750-412



Item description	2-Channel Digital Input; 48 VDC; 3 ms	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-412**	**753-412**
Order Text	**2DI; 48 VDC; 3ms**	**2DI; 48 VDC; 3ms**

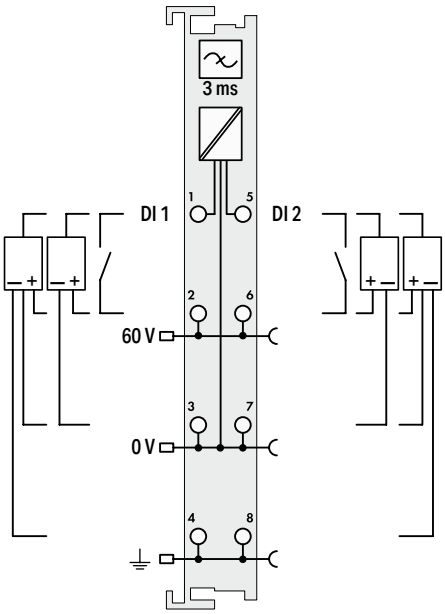
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	48 VDC	
Voltage range for signal (0)	−6 … +10 VDC	
Voltage range for signal (1)	34 … 60 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	high-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (1) typ.	3.8 mA	
Supply voltage (sensor)	48 VDC	
Supply voltage (field)	48 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	2.5 mA	
Input data width (internal) max.	2 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-412	wago.com/753-412
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 48 VDC supply!

Digital input ▶ 60 VDC ▶ high-side switching ▶ 3 ms



753-429



Item description	2-Channel Digital Input; 60 VDC; 3 ms
Version	pluggable (delivery without connector)
Item no.	**753-429**
Order Text	**2DI; 60 VDC; 3ms**

Technical data	
Pluggable connector	pluggable
Number of digital inputs	2
Signal type	Digital
Signal type (voltage)	60 VDC
Voltage range for signal (0)	−7.5 … +12 VDC
Voltage range for signal (1)	44 … 75 VDC
Sensor connection	2 x (2-wire, 3-wire, 4-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.9 mA
Supply voltage (sensor)	60 VDC
Supply voltage (field)	60 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	2.5 mA
Input data width (internal) max.	2 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/753-429

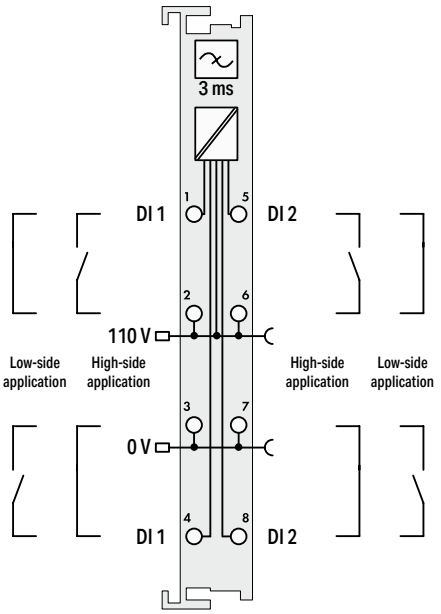
Accessories	**Item no.**
Plug	753-110

Notice: An additional supply module must be added for 60 VDC supply!

Digital input ▶ 110 VDC ▶ high-side/low-side switching, configurable ▶ 3 ms



750-427



Item description	2-Channel Digital Input; 110 VDC	
Version	Standard	pluggable (delivery without connector)
Item no.	750-427	753-427
Order Text	2DI; 110 VDC	2DI; 110 VDC

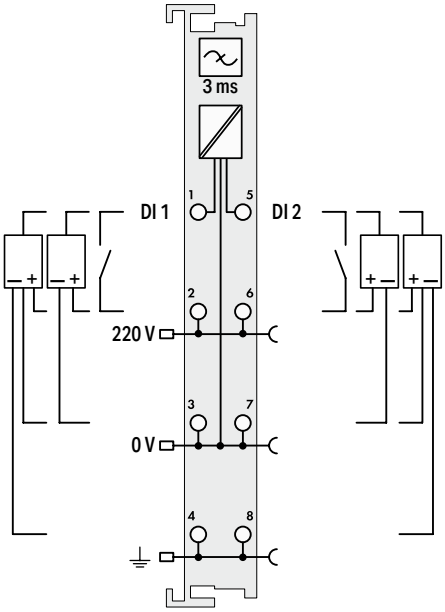
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	110 VDC	
Voltage range for signal (0)	−14 … +50 VDC	
Voltage range for signal (1)	70 … 143 VDC	
Sensor connection	2 x (2-wire)	
Input characteristic	high-side/low-side switching, configurable	
Input filter (digital)	3 ms	
Input current per channel for signal (1) typ.	2.5 mA	
Supply voltage (sensor)	110 VDC	
Supply voltage (field)	110 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	2.5 mA	
Input data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-427	wago.com/753-427
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 110 VDC supply!

Digital input ▶ 220 VDC ▶ high-side switching ▶ 3 ms



750-407



Item description	2-Channel Digital Input; 220 VDC
Version	Standard
Item no.	750-407
Order Text	2DI; 220 VDC

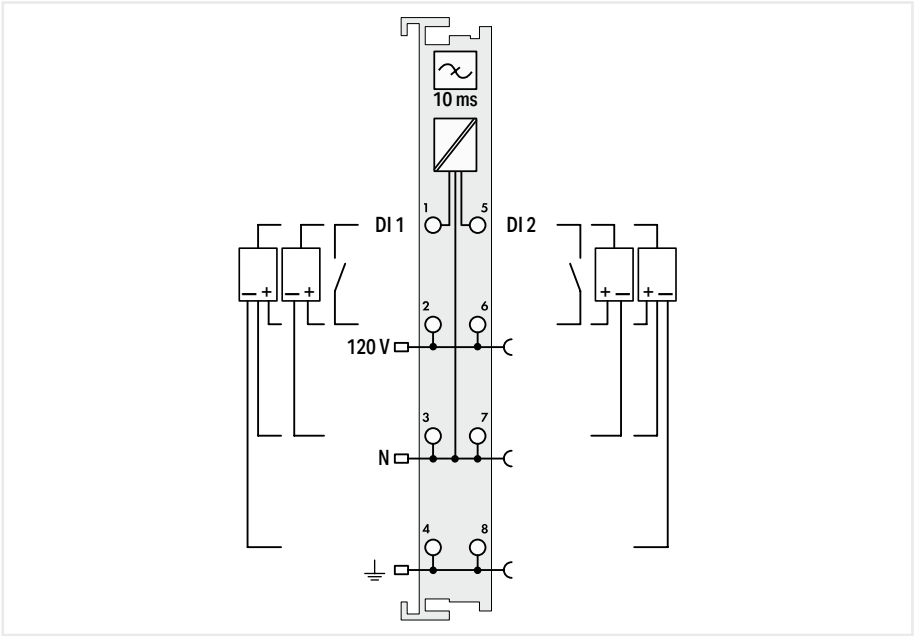
Technical data	
Pluggable connector	fixed
Number of digital inputs	2
Signal type	Digital
Signal type (voltage)	220 VDC
Voltage range for signal (0)	−3 … +100 VDC
Voltage range for signal (1)	160 … 286 VDC
Sensor connection	2 x (2-wire, 3-wire, 4-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	1.2 mA
Supply voltage (sensor)	220 VDC
Supply voltage (field)	220 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	5 mA
Input data width (internal) max.	2 bits
Isolation	2500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE;
For data sheet and additional information, see:	wago.com/750-407

Notice: An additional supply module must be added for 220 VDC supply!

Digital input ▶ 120 VAC ▶ high-side switching ▶ 10 ms



750-406



Item description	2-Channel Digital Input; 120 VAC	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-406**	**753-406**
Order Text	**2DI; 120 VAC**	**2DI; 120 VAC**

Technical data

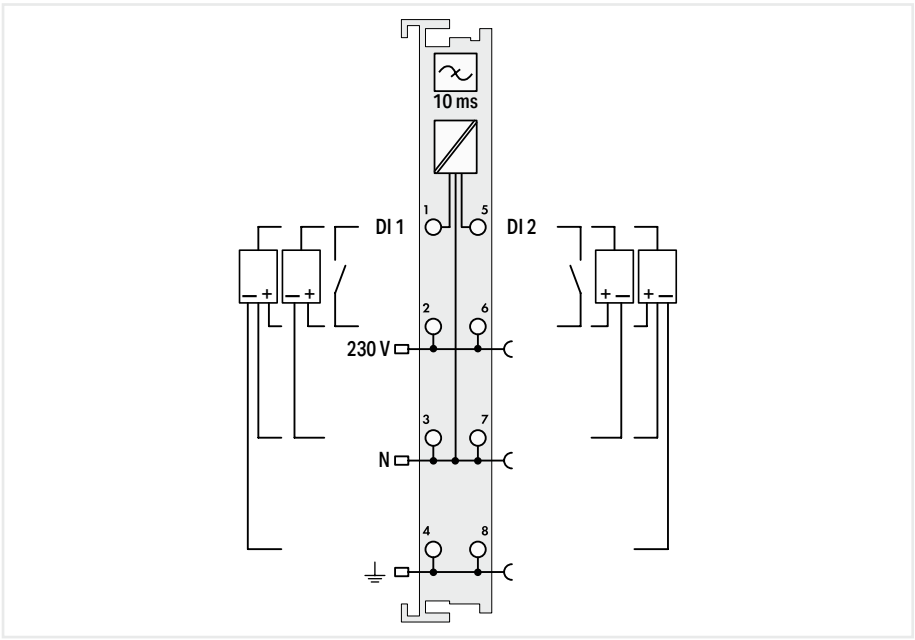
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	120 VAC	
Voltage range for signal (0)	0 … 20 VAC	
Voltage range for signal (1)	79 VAC … 1.1 x U_N	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	high-side switching	
Input filter (digital)	10 ms	
Input current per channel for signal (1) typ.	4.5 mA	
Signal frequency (min.)	45 Hz	
Signal frequency (max.)	65 Hz	
Supply voltage (sensor)	120 VAC	
Supply voltage (field)	120 VAC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	2 mA	
Input data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-406	wago.com/753-406
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 120 VAC supply!

Digital input ▶ 230 VAC ▶ high-side switching ▶ 10 ms



750-405



Item description	2-Channel Digital Input; 230 VAC	
Version	**Standard**	**pluggable (delivery without connector)**
Item no.	**750-405**	**753-405**
Order Text	**2DI; 230 VAC**	**2DI; 230 VAC**

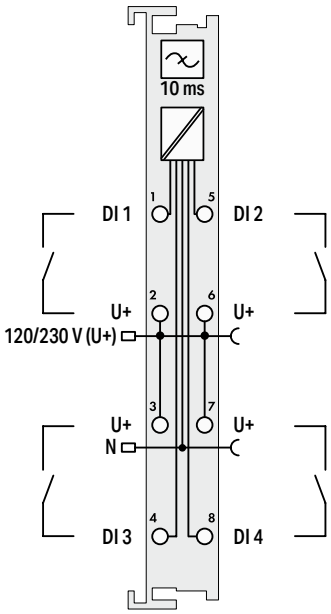
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	2	
Signal type	Digital	
Signal type (voltage)	230 VAC	
Voltage range for signal (0)	0 … 40 VAC	
Voltage range for signal (1)	164 VAC … 1.1 x U_N	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	high-side switching	
Input filter (digital)	10 ms	
Input current per channel for signal (1) typ.	6.5 mA	
Signal frequency (min.)	45 Hz	
Signal frequency (max.)	65 Hz	
Supply voltage (sensor)	230 VAC	
Supply voltage (field)	230 VAC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	2 mA	
Input data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-405	wago.com/753-405
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 230 VAC supply!

Digital input ▶ 120/230 VAC ▶ high-side switching ▶ 10 ms



753-440



Item description	**4-Channel Digital Input; 120/230 VAC**
Version	**pluggable (delivery without connector)**
Item no.	**753-440**
Order Text	**4DI; 120/230 VAC**

Technical data

Pluggable connector	pluggable
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	120 VAC
Voltage range for signal (0)	0 … 40 VAC
Voltage range for signal (1)	79 … 230 VAC (–15 … +10 %)
Sensor connection	4 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	10 ms
Input current at specific input voltage	2.3 mA at 120 V
Input current at specific input voltage (2)	4.7 mA bei 230 V
Signal frequency (min.)	45 Hz
Signal frequency (max.)	65 Hz
Protection against incorrect wiring	Overvoltage protection (275 V) via varistor
Supply voltage (sensor)	230 VAC
Supply voltage (field)	230 VAC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	15 mA
Input data width (internal) max.	4 bits
Isolation	1500 V (system/field)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/753-440

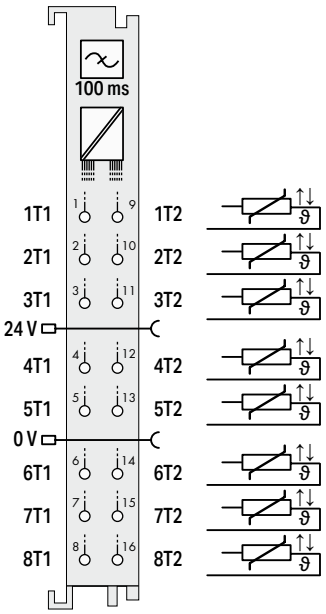
Accessories	**Item no.**
Plug	753-110

Notice: An additional supply module must be added for 120/230 VAC supply!

Digital input ▶ PTC, thermistor per DIN 44081/44082 ▶ 100 ms



750-1425



Item description	**8-Channel Digital Input; PTC**
Version	**Standard with 16 connectors**
Item no.	**750-1425**
Order Text	**8DI; PTC**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Signal type	PTC, thermistor per DIN 44081/44082
Sensor connection	8 x (2-wire)
Specific sensor properties	Sensor voltage: ≤ 2.5 V / ≤ 7.5 V (based on resistance value); Number of PTCs per channel: max. 6 PTCs in series; Operating value (status bit "1" to "0"): R ≥ 3 kΩ; Return value (status bit "0" to "1"): ≤ 1.5 kΩ; Hysteresis: R = 1.5 kΩ; Wire break value: R ≥ 8 kΩ; Short circuit value: R ≤ 20 Ω
Input filter (digital)	100 ms
Output current per channel	0.001 A
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	52 mA
Data width	16-bit input: 8-bit data, 8-bit error (short circuit/wire break)
Input data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1425

The PTC module is used to connect PTC thermistors according to DIN 44081 and DIN 44082 for thermal monitoring (overload protection) of motors, machinery, bearings, etc. Up to six PTC thermistors can be connected in series per channel. If the nominal response temperature (ϑnat) is exceeded, a bit is set in the module's input process image. In addition, wire breaks and short circuits are monitored for each channel. If an error occurs, a bit is also set in the input process image. The module features one green and one red status LED per channel to indicate excessive temperatures or wiring errors.

Digital Output Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch

Specialty Housing (750 Series)	
Dimensions W x H x D	24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (750 Series), with Ribbon Cable Connection	
Dimensions W x H x D	12 x 100 x 74.1 mm
Depth from upper edge of DIN-rail	66.9 mm
Connection technology	20-pole male connector + 2 x CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch











I/O System –
750 XTR Series

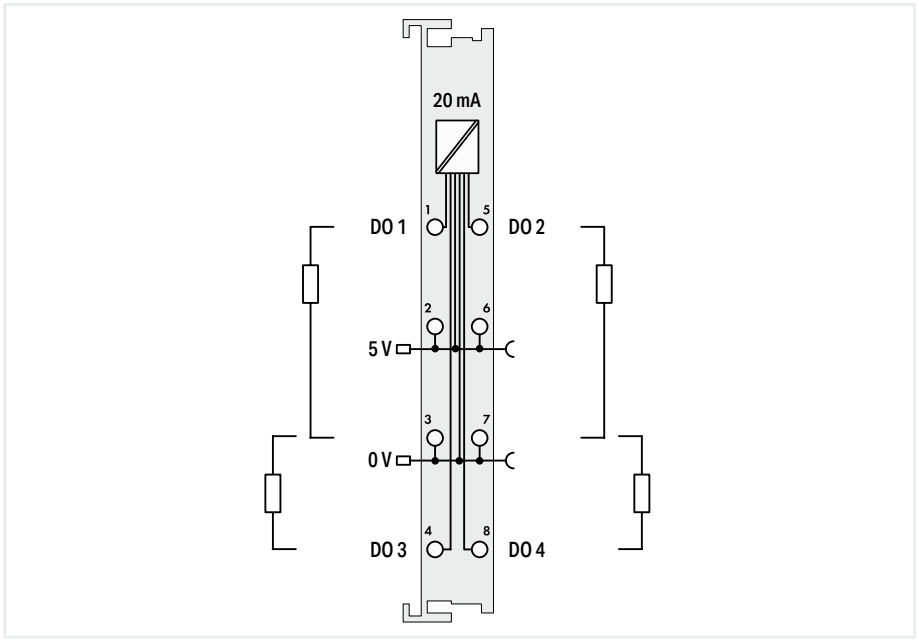
I/O System – 750 and 753 Series, Digital Output Modules
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Functional Safety								See Section 7.8			
Ex i								See Section 7.9			
*This module is also available as a variant of the 750 XTR Series.								See Section 8			

Digital output ► 5 VDC ► high-side switching ► 0.02 A



750-519



Item description	4-Channel Digital Output; 5 VDC; 20 mA
Version	Standard
Item no.	**750-519**
Order Text	**4DO; 5 VDC; 20mA**

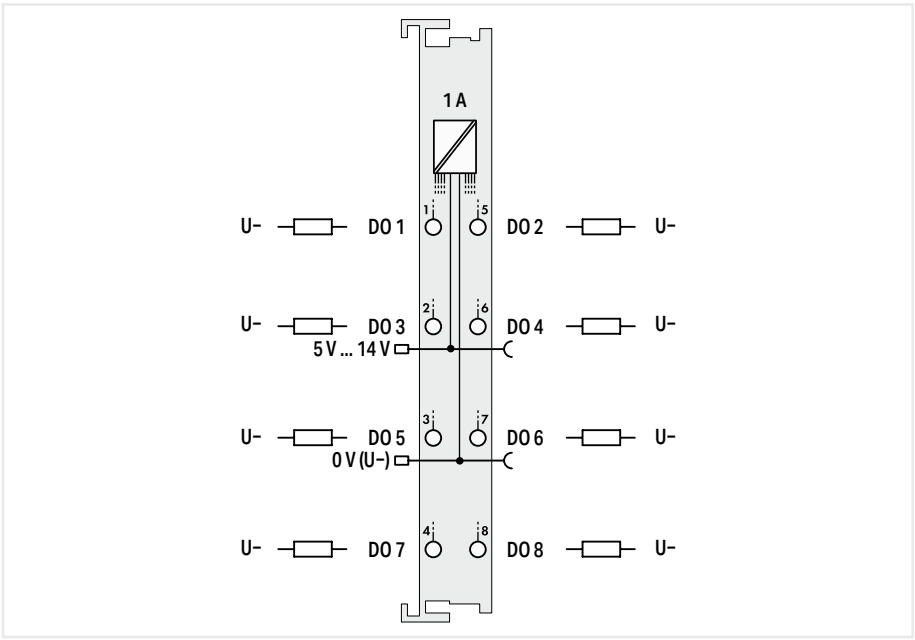
Technical data	
Pluggable connector	fixed
Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	5 VDC
Output characteristic	high-side switching
Output current per channel	0.02 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other actuators.
Switching frequency (max.)	5 kHz
Supply voltage (field)	5 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	14 mA
Current consumption (5 V system supply)	10 mA
Output data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-519

Notice: An additional supply module must be added for 5 VDC supply!

Digital output ► 5 VDC ► high-side switching ► 1 A



750-534



Item description	8-Channel Digital Output; 12 VDC; 1 A	
Version	Standard	pluggable (delivery without connector)
Item no.	750-534	753-534
Order Text	8DO; 12 VDC; 1A	8DO; 12 VDC; 1A

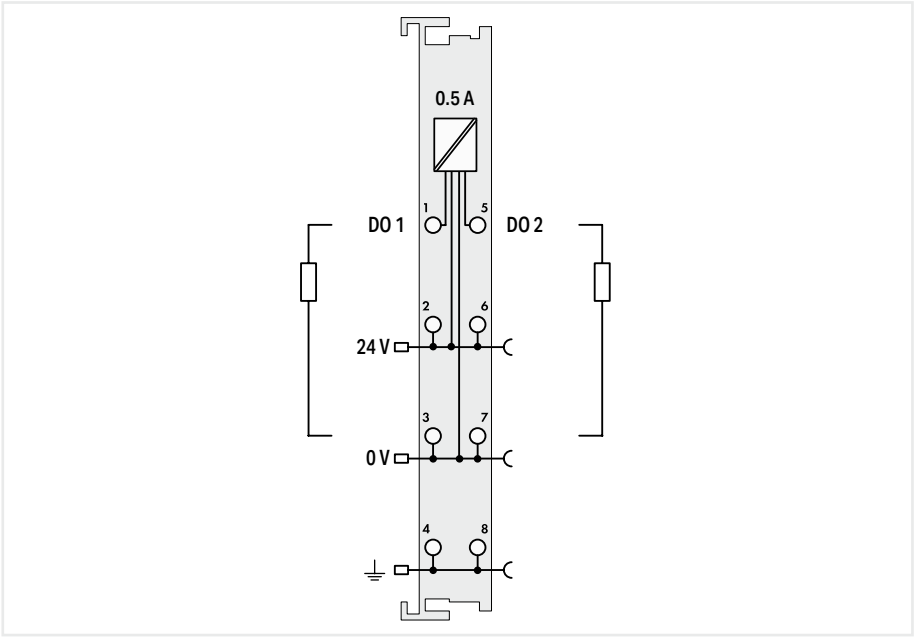
Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	8	
Signal type	Digital	
Signal type (voltage)	5 VDC; 12 VDC	
Output characteristic	high-side switching	
Output current per channel	1 A	
Output current	short-circuit-protected	
Load type	Resistive, inductive	
Actuator connection	8 x (1-wire)	
Switching frequency (max.)	2 kHz	
Supply voltage (field)	14 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption, field supply (module with no external load)	25 mA	
Current consumption (5 V system supply)	20 mA	
Output data width (internal) max.	8 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-534	wago.com/753-534
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 5–14 VDC supply!

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-501



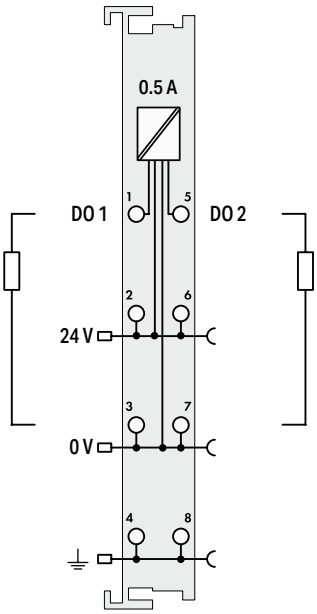
Item description	2-Channel Digital Output; 24 VDC; 0.5 A			
Version	Standard	interference-free	pluggable (delivery without connector)	pluggable (delivery without connector); Interference-free
Item no.	**750-501**	**750-501/000-800**	**753-501**	**753-501/000-800**
Order Text	**2DO; 24 VDC; 0.5A**	**2DO; 24 VDC; 0.5A; IF**	**2DO; 24 VDC; 0.5A**	**2DO; 24 VDC; 0.5A; IF**
Technical data				
Pluggable connector	fixed		pluggable	
Interference-free with safety function	-	Yes	-	Yes
Number of digital outputs	2			
Signal type	Digital			
Signal type (voltage)	24 VDC			
Output characteristic	high-side switching			
Output current per channel	0.5 A			
Output current	short-circuit-protected			
Load type	Resistive, inductive, lamp load			
Actuator connection	2 x (2-wire, 3-wire, 4-wire)			
Switching frequency (max.)	5 kHz			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption, field supply (module with no external load)	15 mA			
Current consumption (5 V system supply)	3.5 mA			
Output data width (internal) max.	2 bits			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-501		wago.com/753-501	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110	753-110

7.3

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-506



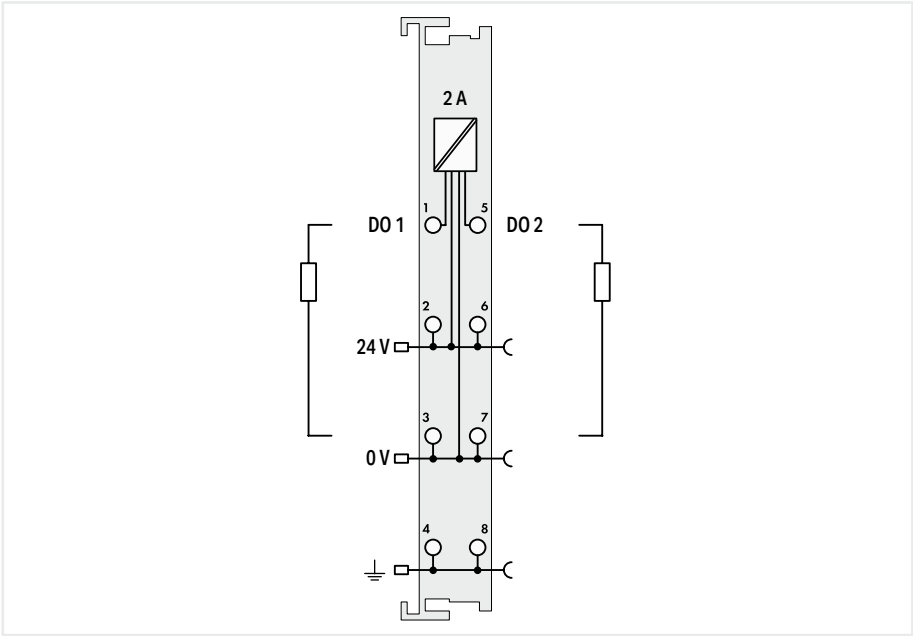
Item description	2-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics		
Version	Standard	interference-free	pluggable (delivery without connector)
Item no.	750-506	750-506/000-800	753-506
Order Text	2DO; 24 VDC; 0.5A; Diagn	2DO; 24 VDC; 0.5A; IF; Diagn	2DO; 24 VDC; 0.5A; Diagn

Technical data			
Pluggable connector	fixed		pluggable
Interference-free with safety function	-	Yes	-
Number of digital outputs	2		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Output characteristic	high-side switching		
Output current per channel	0.5 A		
Output current	short-circuit-protected		
Load type	Resistive, inductive, lamp load		
Actuator connection	2 x (2-wire, 3-wire, 4-wire)		
Switching frequency (max.)	5 kHz		
Diagnostics	Open circuit, short circuit, overload		
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption, field supply (module with no external load)	15 mA		
Current consumption (5 V system supply)	15 mA		
Input data width (internal) max.	4 bits		
Output data width (internal) max.	4 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-506		wago.com/753-506
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital output ▶ 24 VDC ▶ high-side switching ▶ 2 A



750-502



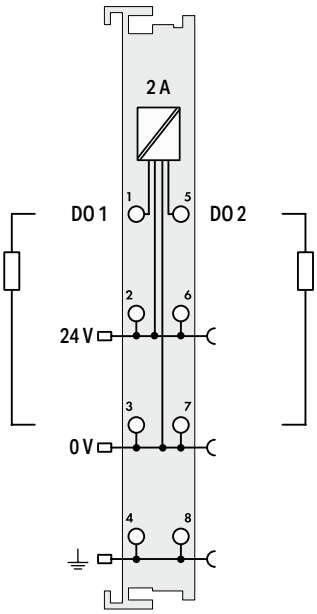
Item description	2-Channel Digital Output; 24 VDC; 2.0 A			
Version	Standard	interference-free	pluggable (delivery without connector)	pluggable (delivery without connector); Interference-free
Item no.	**750-502**	**750-502/000-800**	**753-502**	**753-502/000-800**
Order Text	**2DO; 24 VDC; 2A**	**2DO; 24 VDC; 2A; IF**	**2DO; 24 VDC; 2A**	**2DO; 24 VDC; 2A; IF**
Technical data				
Pluggable connector	fixed		pluggable	
Interference-free with safety function	-	Yes	-	Yes
Number of digital outputs	2			
Signal type	Digital			
Signal type (voltage)	24 VDC			
Output characteristic	high-side switching			
Output current per channel	2 A			
Output current	short-circuit-protected			
Load type	Resistive, inductive, lamp load			
Actuator connection	2 x (2-wire, 3-wire, 4-wire)			
Switching frequency (max.)	2.5 kHz			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption, field supply (module with no external load)	15 mA			
Current consumption (5 V system supply)	3.5 mA			
Output data width (internal) max.	2 bits			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-502		wago.com/753-502	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110	753-110

7.3

Digital output ▶ 24 VDC ▶ high-side switching ▶ 2 A



750-508



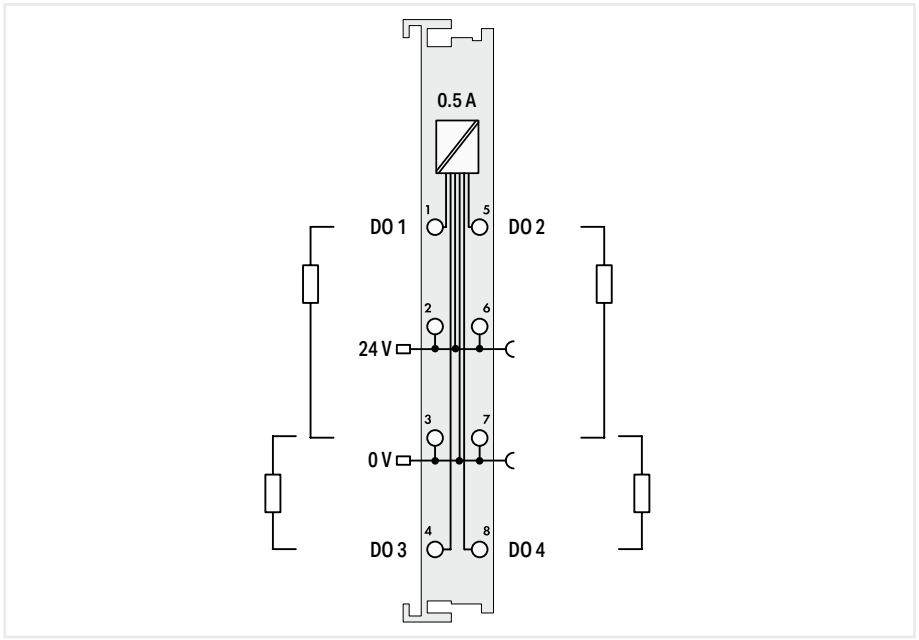
Item description	2-Channel Digital Output; 24 VDC; 2.0 A; Diagnostics		
Version	Standard	interference-free	pluggable (delivery without connector)
Item no.	750-508	750-508/000-800	753-508
Order Text	2DO; 24 VDC; 2A; Diagn	2DO; 24 VDC; 2A; IF; Diagn	2DO; 24 VDC; 2A; Diagn

Technical data			
Pluggable connector	fixed		pluggable
Interference-free with safety function	-	Yes	-
Number of digital outputs	2		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Output characteristic	high-side switching		
Output current per channel	2 A		
Output current	short-circuit-protected		
Load type	Resistive, inductive, lamp load		
Actuator connection	2 x (2-wire, 3-wire, 4-wire)		
Switching frequency (max.)	1 kHz		
Diagnostics	Open circuit, short circuit, overload		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption, field supply (module with no external load)	7 mA		
Current consumption (5 V system supply)	14 mA		
Input data width (internal) max.	2 bits		
Output data width (internal) max.	2 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-508		wago.com/753-508
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-504

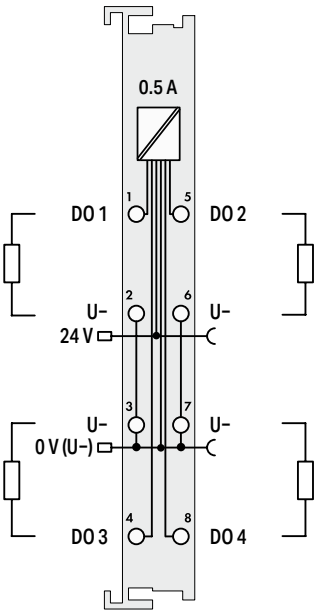


Item description	4-Channel Digital Output; 24 VDC; 0.5 A				
Version	Standard	ext. temperature	interference-free	pluggable (delivery without connector)	interference-free; extended temperature
Item no.	**750-504**	**750-504/025-000**	**750-504/000-800**	**753-504**	**750-504/025-800**
Order Text	**4DO; 24 VDC; 0.5A**	**4DO; 24 VDC; 0.5A; T**	**4DO; 24 VDC; 0.5A; IF**	**4DO; 24 VDC; 0.5A**	**4DO; 24 VDC; 0.5A; IF; T**
Technical data					
Pluggable connector	fixed			pluggable	fixed
Interference-free with safety function	-		Yes	-	Yes
Number of digital outputs	4				
Signal type	Digital				
Signal type (voltage)	24 VDC				
Output characteristic	high-side switching				
Output current per channel	0.5 A				
Output current	short-circuit-protected				
Load type	Resistive, inductive, lamp load				
Actuator connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other actuators.				
Switching frequency (max.)	1 kHz				
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Current consumption, field supply (module with no external load)	30 mA				
Current consumption (5 V system supply)	10 mA				
Output data width (internal) max.	4 bits				
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C		-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-504			wago.com/753-504	wago.com/750-504/025-800
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	-	753-110	-

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-531

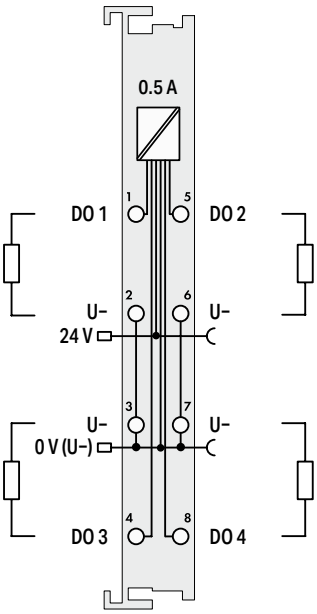


Item description	4-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection			
Version	Standard	interference-free	pluggable (delivery without connector)	pluggable (delivery without connector); Interference-free
Item no.	**750-531**	**750-531/000-800**	**753-531**	**753-531/000-800**
Order Text	**4DO; 24 VDC; 0.5A; 2-wire**	**4DO; 24 VDC; 0.5A; IF; 2-wire**	**4DO; 24 VDC; 0.5A; 2-wire**	**4DO; 24 VDC; 0.5A; IF; 2-wire**
Technical data				
Pluggable connector	fixed		pluggable	
Interference-free with safety function	-	Yes	-	Yes
Number of digital outputs	4			
Signal type	Digital			
Signal type (voltage)	24 VDC			
Output characteristic	high-side switching			
Output current per channel	0.5 A			
Output current	short-circuit-protected			
Load type	Resistive, inductive, lamp load			
Actuator connection	4 x (2-wire)			
Switching frequency (max.)	1 kHz			
Short-circuit current	1.7 A			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption, field supply (module with no external load)	30 mA			
Current consumption (5 V system supply)	10 mA			
Output data width (internal) max.	4 bits			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-531		wago.com/753-531	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110	753-110

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-532



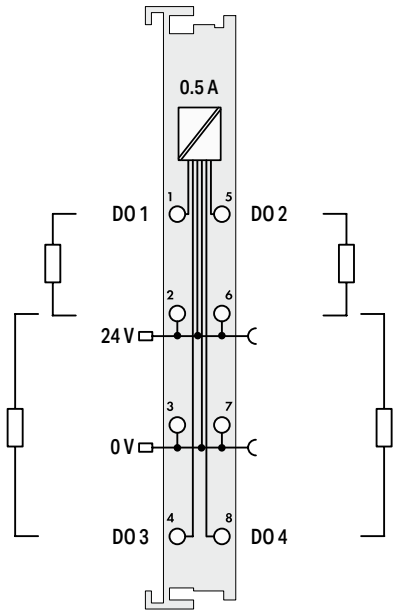
Item description	**4-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics**
Version	**Standard**
Item no.	**750-532**
Order Text	**4DO; 24 VDC; 0.5A; Diagn**

Technical data	
Pluggable connector	fixed
Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	4 x (2-wire)
Switching frequency (max.)	2 kHz
Diagnostics	Open circuit, short circuit, overload
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	13 mA
Current consumption (5 V system supply)	10 mA
Input data width (internal) max.	4 bits
Output data width (internal) max.	4 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-532

Digital output ▶ 24 VDC ▶ low-side switching ▶ 0.5 A



750-516



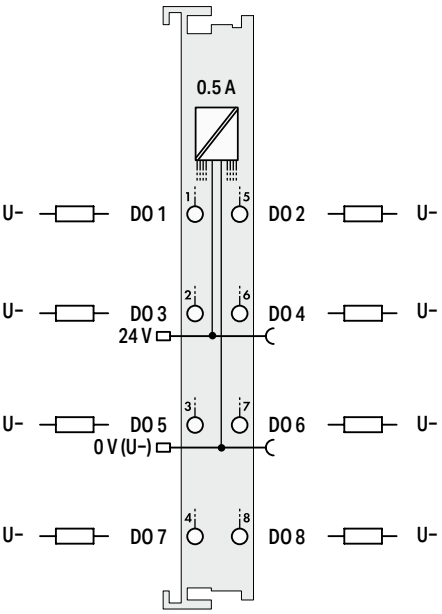
Item description	4-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-516**	**753-516**
Order Text	**4DO; 24 VDC; 0.5A; LSS**	**4DO; 24 VDC; 0.5A; LSS**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	4	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Output characteristic	low-side switching	
Output current per channel	0.5 A	
Output current	short-circuit-protected	
Load type	Resistive, inductive, lamp load	
Actuator connection	2 x (2-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other actuators.	
Switching frequency (max.)	5 kHz	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption, field supply (module with no external load)	30 mA	
Current consumption (5 V system supply)	7 mA	
Output data width (internal) max.	4 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-516	wago.com/753-516
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-530



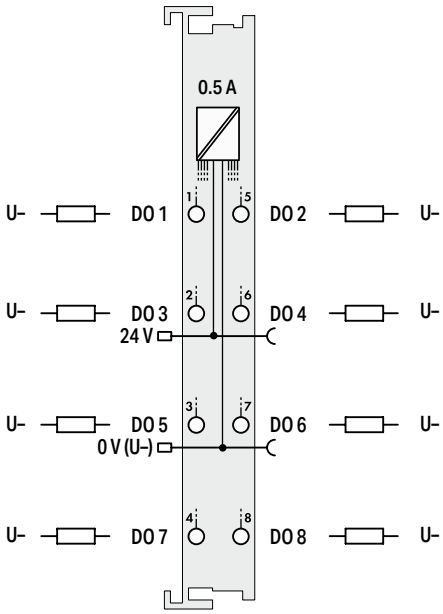
Item description	8-Channel Digital Output; 24 VDC; 0.5 A		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-530**	**750-530/025-000**	**753-530**
Order Text	**8DO; 24 VDC; 0.5A**	**8DO; 24 VDC; 0.5A; T**	**8DO; 24 VDC; 0.5A**

Technical data			
Pluggable connector	fixed		pluggable
Number of digital outputs	8		
Signal type	Digital		
Signal type (voltage)	24 VDC		
Output characteristic	high-side switching		
Output current per channel	0.5 A		
Output current	short-circuit-protected		
Load type	Resistive, inductive, lamp load		
Actuator connection	8 x (1-wire)		
Switching frequency (max.)	2 kHz		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption, field supply (module with no external load)	15 mA		
Current consumption (5 V system supply)	25 mA		
Output data width (internal) max.	8 bits		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-530		wago.com/753-530
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-537



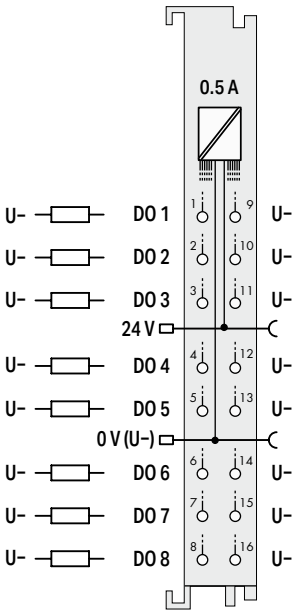
Item description	8-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics	
Version	Standard	pluggable (delivery without connector)
Item no.	750-537	753-537
Order Text	8DO; 24 VDC; 0.5A; Diagn	8DO; 24 VDC; 0.5A; Diagn

Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	8	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Output characteristic	high-side switching	
Output current per channel	0.5 A	
Output current	short-circuit-protected	
Load type	Resistive, inductive, lamp load	
Actuator connection	8 x (1-wire)	
Switching frequency (max.)	1 kHz	
Diagnostics	Open circuit, short circuit, overload	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption, field supply (module with no external load)	16 mA	
Current consumption (5 V system supply)	50 mA	
Input data width (internal) max.	8 bits	
Output data width (internal) max.	8 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-537	wago.com/753-537
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-1515



Item description	**8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection**
Version	**Standard with 16 connectors**
Item no.	**750-1515**
Order Text	**8DO; 24 VDC; 0.5A; 2-wire**

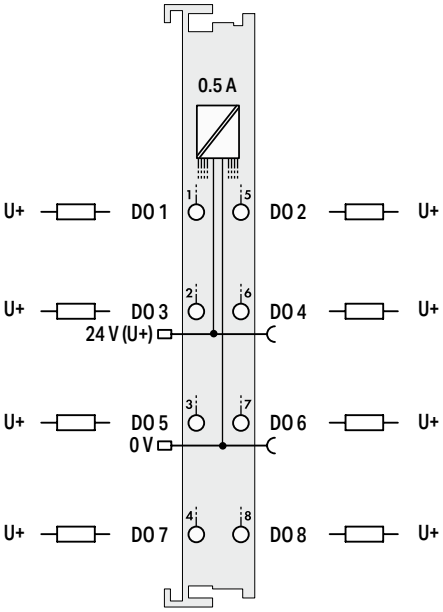
Technical data	
Pluggable connector	fixed
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	15 mA
Current consumption (5 V system supply)	20 mA
Output data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1515

7.3

Digital output ▶ 24 VDC ▶ low-side switching ▶ 0.5 A



750-536



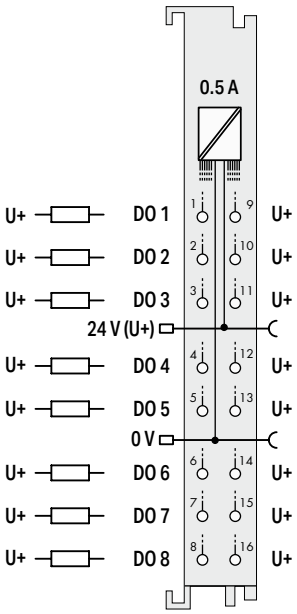
Item description	8-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching	
Version	Standard	pluggable (delivery without connector)
Item no.	750-536	753-536
Order Text	8DO; 24 VDC; 0.5A; LSS	8DO; 24 VDC; 0.5A; LSS

Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	8	
Signal type	Digital	
Signal type (voltage)	24 VDC	
Output characteristic	low-side switching	
Output current per channel	0.5 A	
Output current	short-circuit-protected	
Load type	Resistive, inductive, lamp load	
Actuator connection	8 x (1-wire)	
Switching frequency (max.)	2 kHz	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption, field supply (module with no external load)	12 mA	
Current consumption (5 V system supply)	25 mA	
Output data width (internal) max.	8 bits	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-536	wago.com/753-536
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital output ▶ 24 VDC ▶ low-side switching ▶ 0.5 A



750-1516



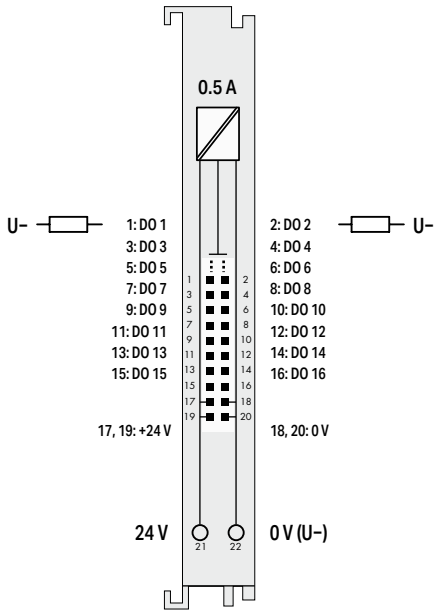
Item description	8-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching; 2-wire connection
Version	Standard with 16 connectors
Item no.	**750-1516**
Order Text	**8DO; 24 VDC; 0.5A; LSS; 2-wire**

Technical data	
Pluggable connector	fixed
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	low-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	8 mA
Current consumption (5 V system supply)	20 mA
Output data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1516

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-1500



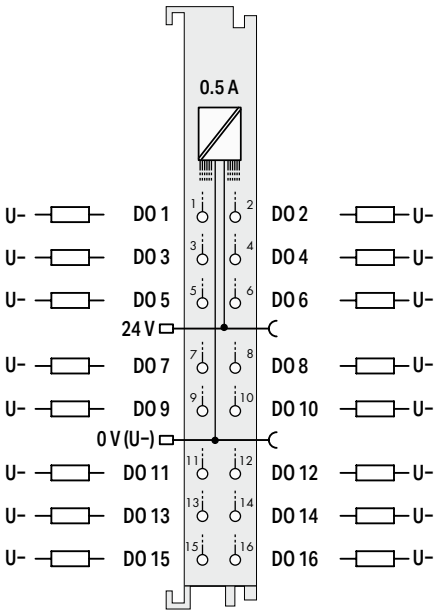
Item description	**16-Channel Digital Output; 24 VDC; 0.5 A; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item no.	**750-1500**
Order Text	**16DO; 24 VDC; 0.5A; Ribbon Cable**

Technical data	
Pluggable connector	fixed
Number of digital outputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Current consumption, field supply (module with no external load)	29 mA
Current consumption (5 V system supply)	40 mA
Output data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1500

Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-1504



Item description	**16-Channel Digital Output; 24 VDC; 0.5 A**
Version	**Standard with 16 connectors**
Item no.	**750-1504**
Order Text	**16DO; 24 VDC; 0.5A**

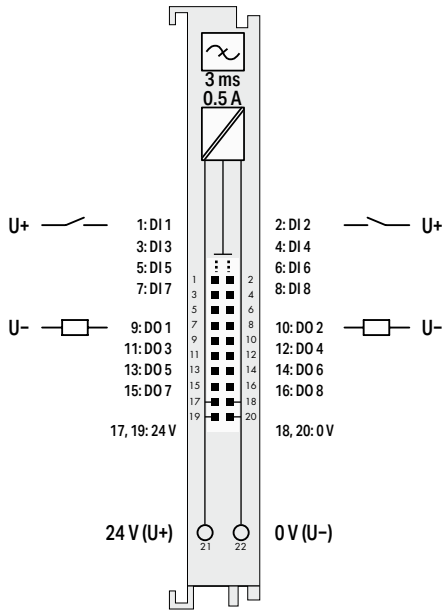
Technical data	
Pluggable connector	fixed
Number of digital outputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	29 mA
Current consumption (5 V system supply)	40 mA
Output data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1504

7.3

Digital input; Digital output ► 24 VDC ► high-side switching ► 0.5 A



750-1502



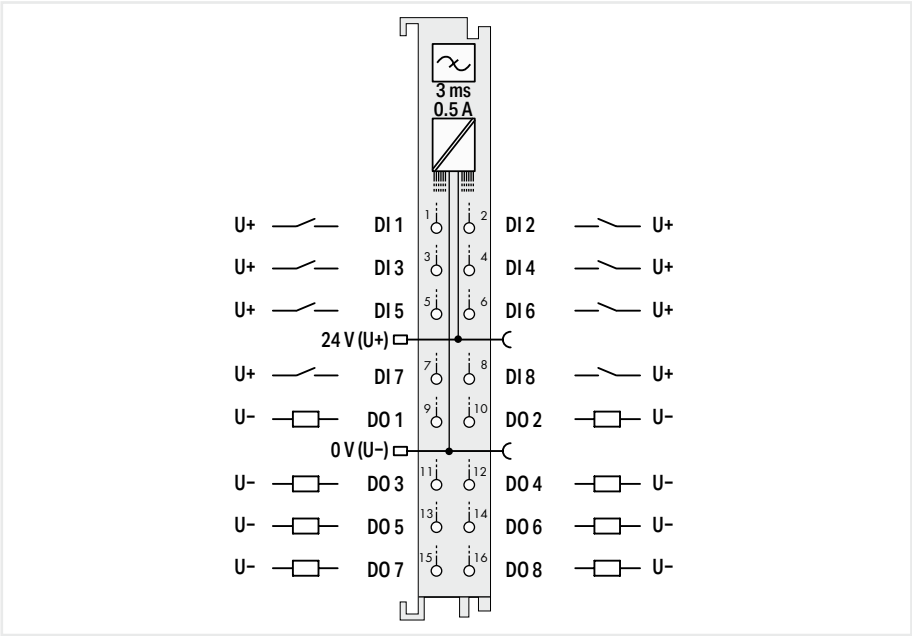
Item description	8-Channel Digital Input/Output; 24 VDC; 0.5 A; Ribbon cable
Version	Standard with ribbon cable connector
Item no.	**750-1502**
Order Text	**8DIO; 24 VDC; 0.5A; Ribbon Cable**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.4 mA
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Current consumption, field supply (module with no external load)	16 mA
Current consumption (5 V system supply)	30 mA
Input data width (internal) max.	8 bits
Output data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1502

Digital input; Digital output ▶ 24 VDC ▶ high-side switching ▶ 0.5 A



750-1506



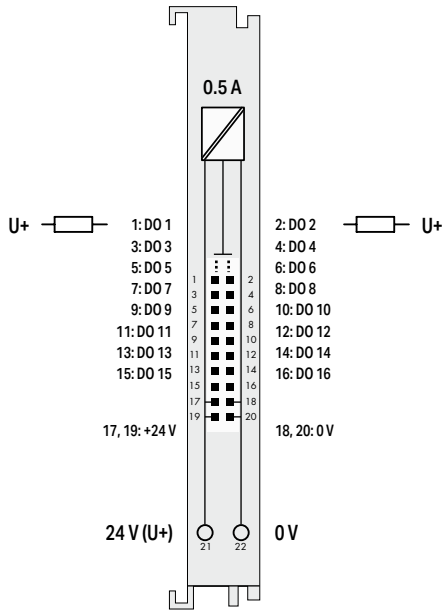
Item description	8-Channel Digital Input/Output; 24 VDC; 0.5 A
Version	Standard with 16 connectors
Item no.	**750-1506**
Order Text	**8DIO; 24 VDC; 0.5A**

Technical data	
Pluggable connector	fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.4 mA
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	16 mA
Current consumption (5 V system supply)	30 mA
Input data width (internal) max.	8 bits
Output data width (internal) max.	8 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1506

Digital output ▶ 24 VDC ▶ low-side switching ▶ 0.5 A



750-1501



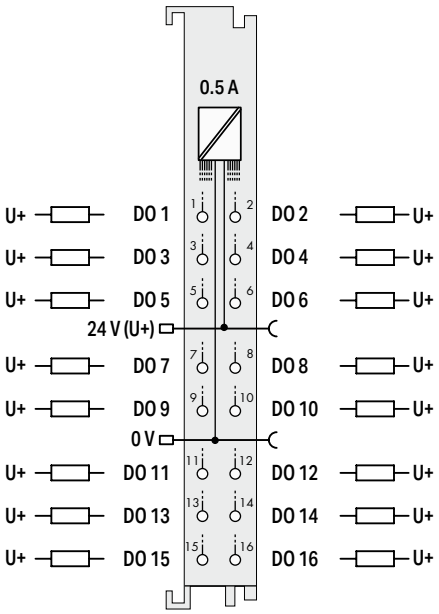
Item description	16-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching; Ribbon cable
Version	Standard with ribbon cable connector
Item no.	**750-1501**
Order Text	**16DO; 24 VDC; 0.5A; LSS; Ribbon Cable**

Technical data	
Pluggable connector	fixed
Number of digital outputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	low-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Current consumption, field supply (module with no external load)	11 mA
Current consumption (5 V system supply)	40 mA
Output data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1501

Digital output ▶ 24 VDC ▶ low-side switching ▶ 0.5 A



750-1505



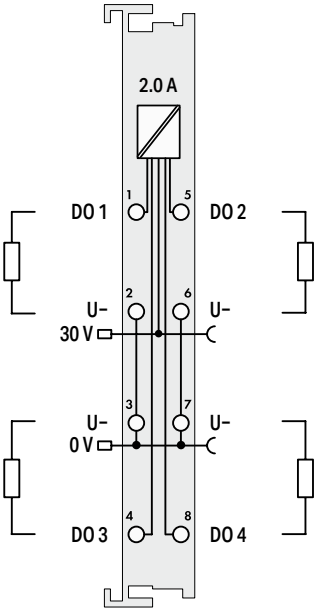
Item description	**16-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching**
Version	**Standard with 16 connectors**
Item no.	**750-1505**
Order Text	**16DO; 24 VDC; 0.5A; LSS**

Technical data	
Pluggable connector	fixed
Number of digital outputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	low-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	11 mA
Current consumption (5 V system supply)	40 mA
Output data width (internal) max.	16 bits
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1505

Digital output ► 30 VAC/DC ► high-side switching ► 2 A



750-527



Item description	**4-Channel Digital Output; 30 VAC/VDC; 2.0 A; Solid-state**
Version	**Standard**
Item no.	**750-527**
Order Text	**4DO; 30V AC/DC; 2.0A; SSR**

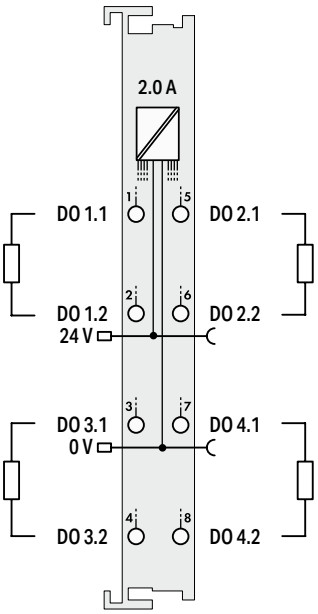
Technical data	
Pluggable connector	fixed
Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	30 VAC/DC
Output characteristic	high-side switching
Output current per channel	2 A
Output current (module)	8 A
Output current	requires external fuses
Delay time T_off from 1 to 0	20000 µs
Delay time T_on from 0 to 1	1000 µs
Load type	Resistive; inductive (Limit induction voltage peaks externally.)
Actuator connection	4 x (2-wire)
Switching frequency (max.)	1 Hz
Supply voltage (field)	30 VSELV AC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	0 mA
Current consumption (5 V system supply)	57 mA
Output data width (internal) max.	4 bits
Isolation	500 V system/field
Overvoltage category	II
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-527

Notice: A suitable supply module (e.g., 750-612) must be provided for AC operation or when using DC voltages >31.2 V!

Digital output ▶ 30 VAC/DC; isolated ▶ high-side switching ▶ 2 A



750-528



Item description	**4-Channel Digital Output; 30 VAC/VDC; 2.0 A; Solid-state; isolated**
Version	**Standard**
Item no.	**750-528**
Order Text	**4DO; 30V AC/DC; 2.0A; SSR; Isolated**

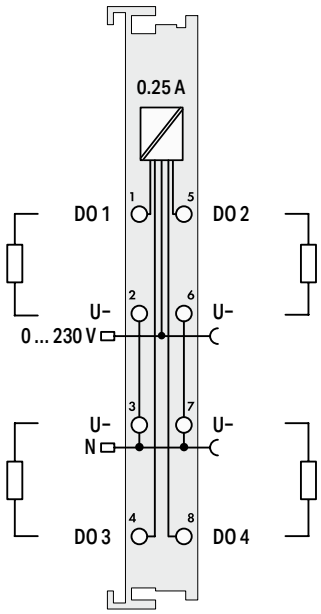
Technical data	
Pluggable connector	fixed
Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	30 VAC/DC
Output characteristic	high-side switching
Output current per channel	2 A
Output current (module)	8 A
Output current	requires external fuses
Delay time T_off from 1 to 0	20000 µs
Delay time T_on from 0 to 1	1000 µs
Load type	Resistive; inductive (Limit induction voltage peaks externally.)
Actuator connection	4 x (2-wire)
Switching frequency (max.)	1 Hz
Supply voltage (field)	30 VSELV AC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	0 mA
Current consumption (5 V system supply)	57 mA
Output data width (internal) max.	4 bits
Isolation	500 V system/field or channel/channel
Overvoltage category	II
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-528

Notice: A suitable supply module (e.g., 750-612) must be provided for AC operation or when using DC voltages >31.2 V!

Digital output ► 5 … 250 VAC ► high-side switching ► 0.25 A



753-540



Item description	**4-Channel Digital Output; 230 VAC; 0.25 A; Solid-state**
Version	**pluggable (delivery without connector)**
Item no.	**753-540**
Order Text	**4DO; 230 VAC; 0.25A; SSR**

Technical data	
Pluggable connector	pluggable
Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	5 … 250 VAC
Output characteristic	high-side switching
Output current per channel	0.25 A
Output current	short-circuit-protected
Load type	Resistive, inductive
Actuator connection	4 x (2-wire)
Protection against incorrect wiring	Overvoltage protection (275 V) via varistor
Short-circuit current	max. 10 A (16 ms)
Supply voltage (field)	230 VAC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	18 mA
Output data width (internal) max.	4 bits
Isolation	1500 V (system/field)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/753-540

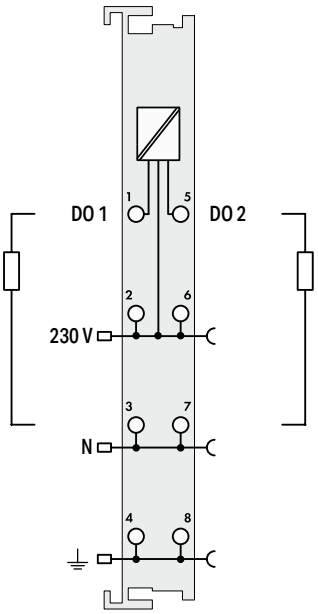
Accessories	**Item no.**
Plug	753-110

Notice: An additional supply module must be added for 0–250 VAC supply!

Digital output ► 0 … 250 VAC/DC ► non-floating ► 0.3 A



750-509



Item description	2-Channel Digital Output; 230 VAC; 0.3 A; Solid-state	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-509**	**753-509**
Order Text	**2DO; 230 VAC; 0.3A; SSR**	**2DO; 230 VAC; 0.3A; SSR**

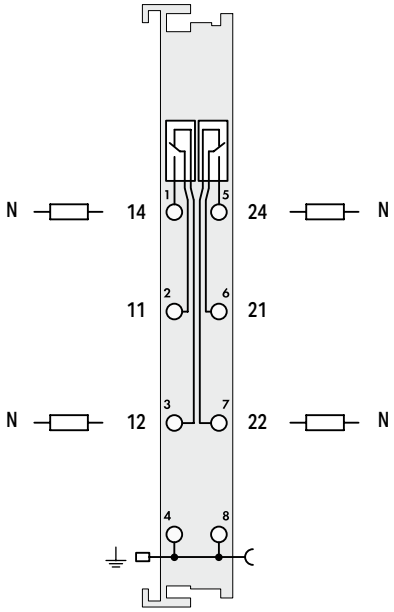
Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	2	
Signal type	Digital	
Signal type (voltage)	0 … 250 VAC/DC	
Output circuit design	Solid-state load relays	
Output characteristic	non-floating	
Output current per channel	0.3 A	
Load type	Resistive, inductive	
Actuator connection	2 x (2-wire, 3-wire)	
Switching frequency (max.)	5 Hz; 24 V; 0.3 A; DF = 50 %	
Protection against incorrect wiring	Overvoltage protection (275 V) via varistor	
Supply voltage (field)	250 VAC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	10 mA	
Output data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-509	wago.com/753-509
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Notice: An additional supply module must be added for 0–230 VAC/DC supply!

Digital output; Relay output ▶ Switching voltage: 125 VAC; 30 VDC ▶ potential-free



750-514



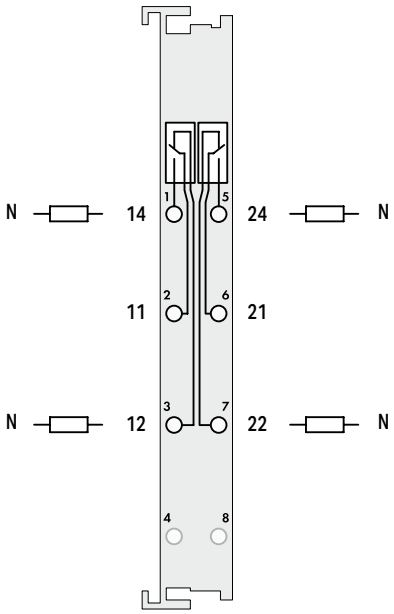
Item description	2-Channel Relay Output; 125 VAC; 0.5 A; Potential-free; 2 changeover contacts	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-514**	**753-514**
Order Text	**2RO; 125 VAC; 0.5A; Pot-free; Relay2NO**	**2RO; 125 VAC; 0.5A; Pot-free; Relay2NO**

Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	2	
Signal type	Digital	
Switching voltage (max.)	125 VAC, 30 VDC	
Output circuit design	2 changeover contacts; Relay	
Output characteristic	potential-free	
Switching current (max.)	0.5 A	
Switching current (note)	0.5 A at 125 VAC; 1 A at 30 VDC	
Switching current (min.)	0.01 mA	
Actuator connection	2 x (1-wire)	
Switching frequency (max.)	0.33 Hz	
Mechanical switching operations (min.) (at max. resistive load)	100 x 10^6 switching operations	
Electrical switching operations (min.) (at max. resistive load)	100 x 10^3 switching operations	
Supply voltage (field)	Transmission of ground potential via power jumper contact	
Current consumption (5 V system supply)	70 mA	
Output data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc	
For data sheet and additional information, see:	wago.com/750-514	wago.com/753-514
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Digital output; Relay output ▶ Switching voltage: 250 VAC; 300 VDC ▶ potential-free



750-517



Item description	2-Channel Relay Output; 250 VAC; 0.5 A; Potential-free; 2 changeover contacts	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-517**	**753-517**
Order Text	**2RO; 250 VAC; 1A; Pot-free; Relay2CO**	**2RO; 250 VAC; 1A; Pot-free; Relay2CO**

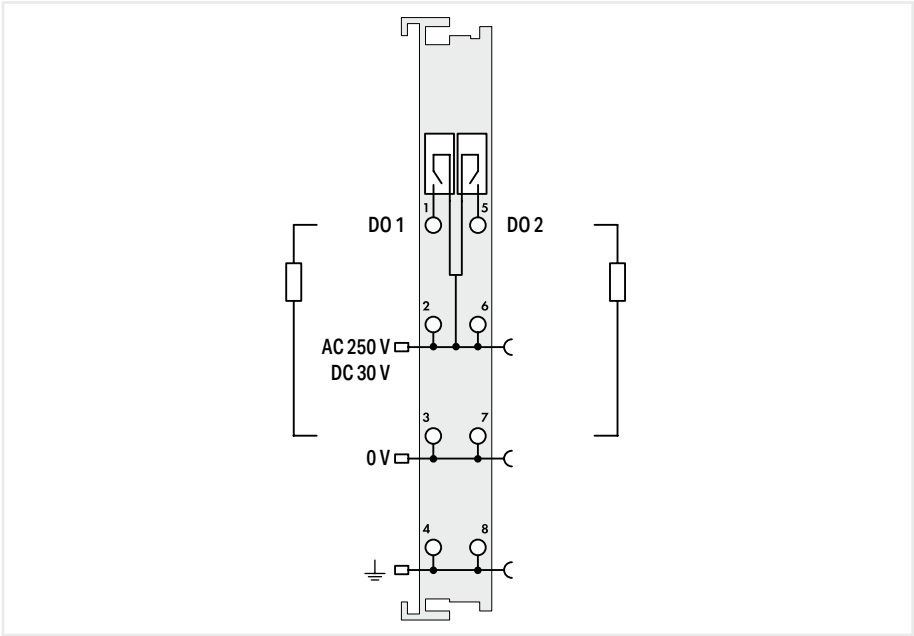
Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	2	
Signal type	Digital	
Switching voltage (max.)	250 VAC, 300 VDC	
Output circuit design	2 changeover contacts; Relay	
Output characteristic	potential-free	
Switching current (max.)	1 A	
Switching current (note)	1 A at 250 VAC and 40 VDC; 0.15 A at 300 VDC	
Switching current (min.)	100 mA	
Actuator connection	2 x (1-wire)	
Switching frequency (max.)	0.1 Hz; Nominal load	
Mechanical switching operations (min.) (at max. resistive load)	5 x 10^6 switching operations	
Electrical switching operations (min.) (at max. resistive load)	1 x 10^6 switching operations	
Current consumption (5 V system supply)	90 mA	
Output data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-517	wago.com/753-517
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

7.3

Digital output; Relay output ▶ Switching voltage: 250 VAC; 30 VDC ▶ non-floating



750-512



Item description	2-Channel Relay Output; 250 VAC; 2.0 A; 2 make contacts	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-512**	**753-512**
Order Text	**2RO; 250 VAC; 2A; Relay2NO**	**2RO; 250 VAC; 2A; Relay2NO**

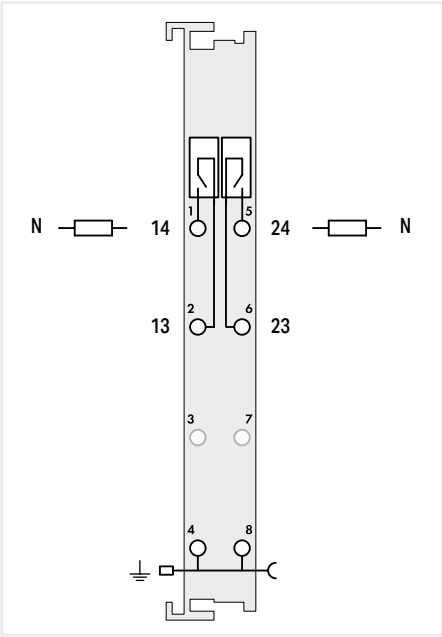
Technical data		
Pluggable connector	fixed	pluggable
Number of digital outputs	2	
Signal type	Digital	
Switching voltage (max.)	250 VAC, 30 VDC	
Output circuit design	2 make contacts; Relay	
Output characteristic	non-floating	
Switching current (max.)	2 A	
Switching current (min.)	10 mA	
Actuator connection	2 x (2-wire, 3-wire)	
Switching frequency (max.)	0.5 Hz; Nominal load	
Mechanical switching operations (min.) (at max. resistive load)	20 x 10^6 switching operations	
Electrical switching operations (min.) (at max. resistive load)	300 x 10^3 switching operations	
Supply voltage (field)	250 VAC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	100 mA	
Output data width (internal) max.	2 bits	
Isolation	1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-512	wago.com/753-512
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

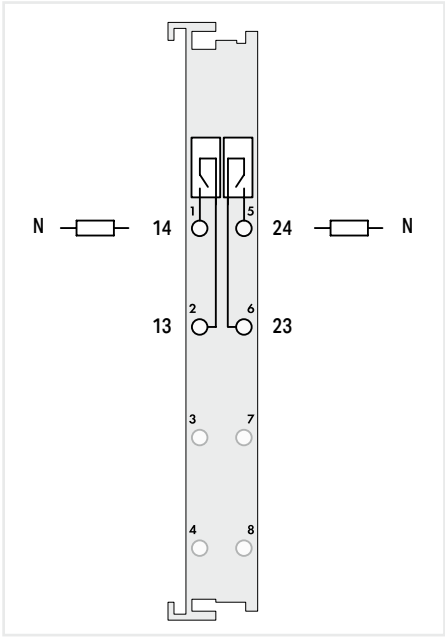
Notice: An additional supply module must be added for 0–250 VAC/0–30 VDC supply!

Digital output; Relay output ▶ Switching voltage: 250 VAC; 30 VDC ▶ potential-free



750-513



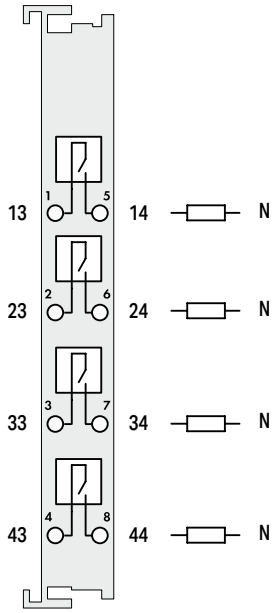


Item description	2-Channel Relay Output; 250 VAC; 2.0 A; Potential-free; 2 make contacts		2-Channel Relay Output; 250 VAC; 2.0 A; Potential-free; 2 make contacts; without power jumper contacts	
Version	Standard	pluggable (delivery without connector)	without power jumper contacts	without power jumper contacts; pluggable (delivery without connector)
Item no.	750-513	753-513	750-513/000-001	753-513/000-001
Order Text	2RO; 250 VAC; 2A; Pot-free; Relay2NO	2RO; 250 VAC; 2A; Pot-free; Relay2NO	2RO; 250 VAC; 2A; Pot-free; NC; Relay2NO	2RO; 250 VAC; 2A; Pot-free; NC; Relay2NO
Technical data				
Pluggable connector	fixed	pluggable	fixed	pluggable
Number of digital outputs	2		2	
Signal type	Digital		Digital	
Switching voltage (max.)	250 VAC, 30 VDC		250 VAC, 30 VDC	
Output circuit design	2 make contacts; Relay		2 make contacts; Relay	
Output characteristic	potential-free		potential-free	
Switching current (max.)	2 A		2 A	
Switching current (min.)	10 mA		10 mA	
Actuator connection	2 x (1-wire)		2 x (1-wire)	
Switching frequency (max.)	0.5 Hz; Nominal load		0.5 Hz; Nominal load	
Mechanical switching operations (min.) (at max. resistive load)	20 x 10^6 switching operations		20 x 10^6 switching operations	
Electrical switching operations (min.) (at max. resistive load)	300 x 10^3 switching operations		300 x 10^3 switching operations	
Supply voltage (field)	Transmission of ground potential via power jumper contact		-	
Current consumption (5 V system supply)	100 mA		100 mA	
Output data width (internal) max.	2 bits		2 bits	
Isolation	1500 V (system/field)		1500 V (system/field)	
Ambient temperature (operation)	0 … +55 °C		0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm		(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-513	wago.com/753-513	wago.com/750-513/000-001	wago.com/753-513/000-001
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	753-110

Digital output; Relay output ▶ Switching voltage: 250 VAC; 30 VDC; 110 VDC at 0.4 A ▶ potential-free



750-515



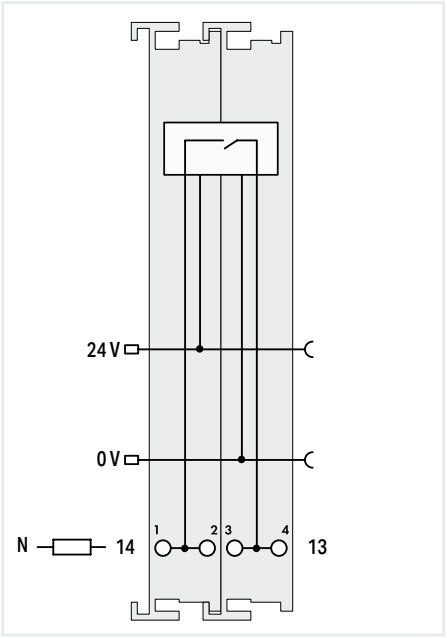
Item description	4-Channel Relay Output; 250 VAC; 2.0 A; Potential-free; 4 make contacts
Version	Standard
Item no.	750-515
Order Text	4RO; 250 VAC; 2A; Pot-free; Relay4NO

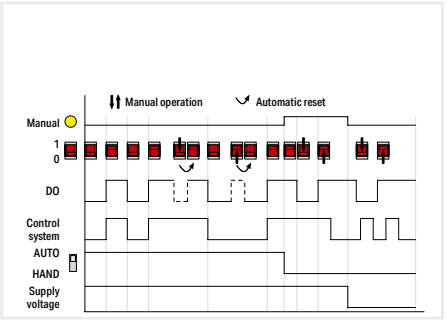
Technical data	
Pluggable connector	fixed
Number of digital outputs	4
Signal type	Digital
Switching voltage (max.)	250 VAC; 30 VDC; 110 VDC at 0.4 A
Output circuit design	4 make contacts; Relay
Output characteristic	potential-free
Switching current (max.)	2 A
Switching current (note)	5 A for single-channel use
Actuator connection	4 x (1-wire)
Switching frequency (max.)	0.33 Hz; 3 A / 250 VAC, 30 VDC
Mechanical switching operations (min.) (at max. resistive load)	20 x 10^6 switching operations
Electrical switching operations (min.) (at max. resistive load)	100 x 10^3 switching operations
Current consumption (5 V system supply)	95 mA
Output data width (internal) max.	4 bits
Isolation	1500 V (system/field)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-515

Digital output; Relay output ▶ Switching voltage: 440 VAC ▶ potential-free



750-523





Item description	**1-Channel Relay Output; 250 VAC; 16 A; Potential-free; 1 make contact**
Version	**Standard**
Item no.	**750-523**
Order Text	**1RO; 230 VAC; 16A; Pot-free; Relay1NO**

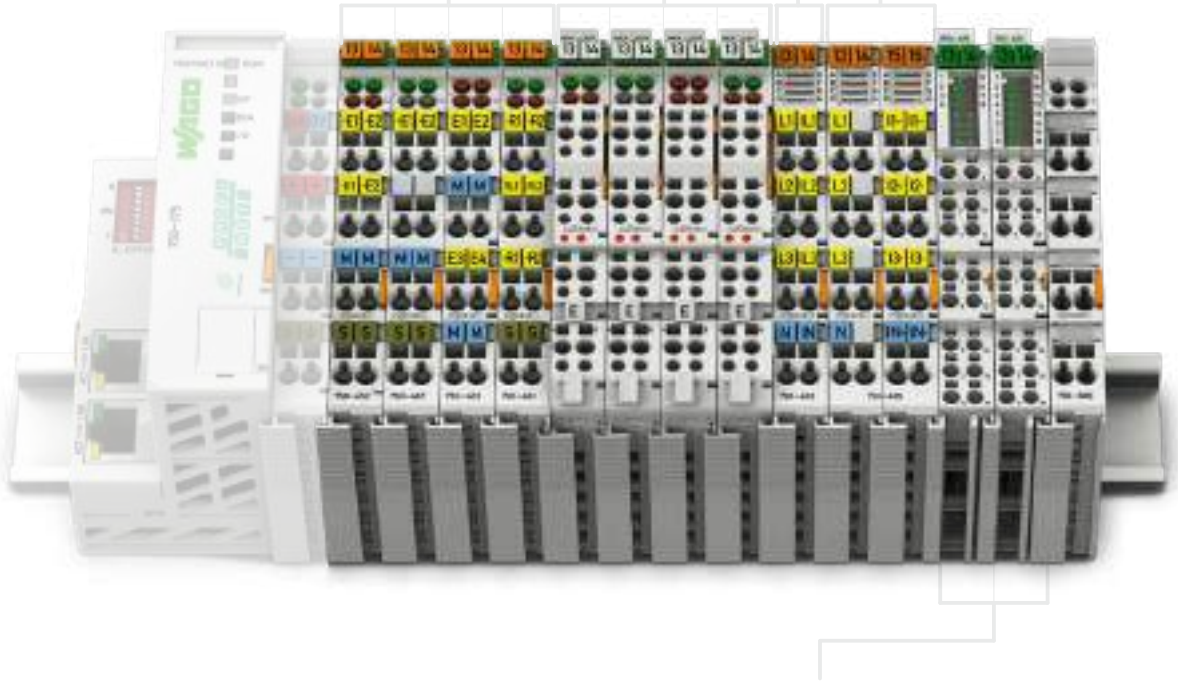
Technical data	
Pluggable connector	fixed
Number of digital outputs	1
Signal type	Digital
Switching voltage (max.)	440 VAC
Output circuit design	1 make contact; Relay
Output characteristic	potential-free
Switching current (max.)	16 A
Actuator connection	1 x (1-wire)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	80 mA
Current consumption (5 V system supply)	5 mA
Input data width (internal) max.	2 bits
Output data width (internal) max.	2 bits
Isolation	1500 V (system/field)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc
For data sheet and additional information, see:	wago.com/750-523

This relay output module switches a connected actuator or load. The 24 VDC supply is derived from the power jumper contacts to trigger the relays. The switched status of the relay is shown by the manual switch (1/0). The operating mode can be set using a manual/automatic selector switch. The mode status is indicated by an LED and via status bits in the process image.
Manual: Coil triggering is interrupted. Operation is only possible via the red manual operating switch.
Auto: The relay is operated via the control system; manual status transitions via the manual switch are reset by the control system after less than 500 ms.
The manual switch can also be used without 24 V supply to switch the output ON. The relay meets both international standards of IEC and DIN EN 61810 part 1 /VDE 0435 part 201, as well as overload and short circuit requirements of IEC and DIN EN 61036 /61037.

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch

Housing Design (750 Series), Double Width	
Dimensions W x H x D	24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch





I/O System –
750 XTR Series

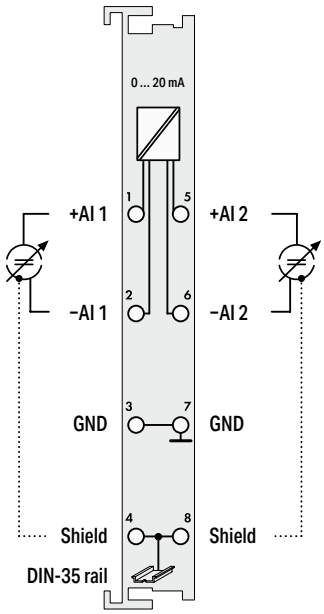
I/O System – 750 and 753 Series, Analog Input Modules
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Ex i						See Section 7.9				
*This module is also available as a variant of the 750 XTR Series.						See Section 8				

Analog input ▶ 0 … 20 mA ▶ Differential



750-452

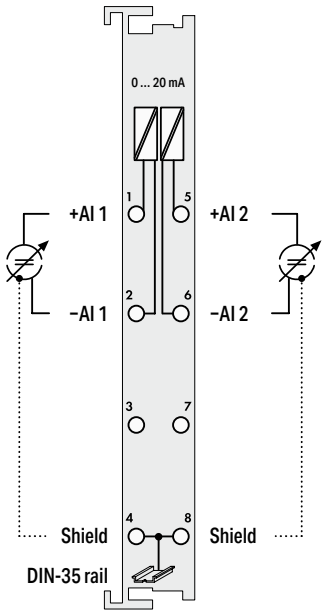


Item description	2-Channel Analog Input; 0 … 20 mA; Differential Input		
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)
Item no.	**750-452**	**753-452**	**750-452/000-200**
Order Text	**2AI; 0-20mA; Diff**	**2AI; 0-20mA; Diff**	**2AI; 0-20mA; Diff; S5**
Technical data			
Pluggable connector	-	pluggable	-
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog inputs	2		
Signal type	Current		
Signal type (current)	0 … 20 mADC		
Signal characteristics	Differential		
Sensor connection	2 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Input resistance (max.)	220 Ω		
Input voltage (max.)	35 V		
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Current consumption (5 V system supply)	70 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-452	wago.com/753-452	wago.com/750-452/000-200
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-

Analog input ▶ 0 … 20 mA ▶ Differential



750-480



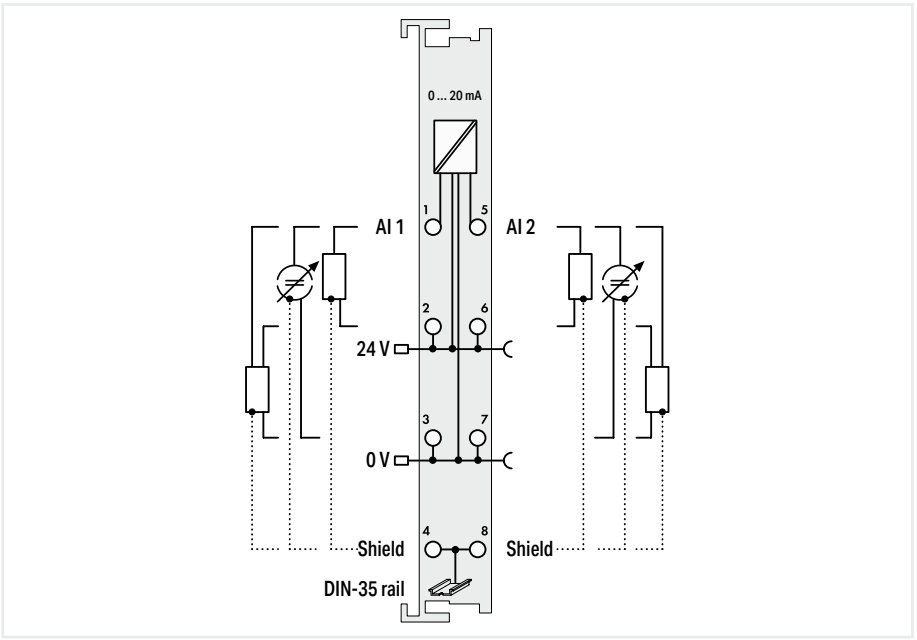
Item description	2-Channel Analog Input; 0 … 20 mA; Differential Input	
Version	Standard	pluggable (delivery without connector)
Item no.	750-480	753-480
Order Text	2AI; 0-20mA; Diff	2AI; 0-20mA; Diff

Technical data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristics	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	13 bits	
Input resistance (max.)	270 Ω	
Admissible continuous overload	30 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Current consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-480	wago.com/753-480
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ 0 … 20 mA ▶ Single-ended



750-465



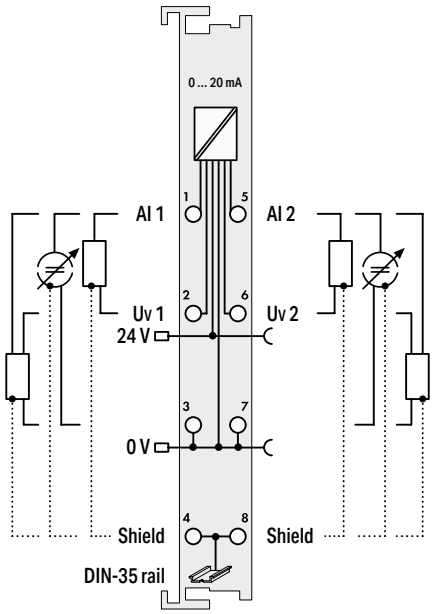
Item description	2-Channel Analog Input; 0 … 20 mA; Single-ended		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-465**	**750-465/025-000**	**753-465**
Order Text	**2AI; 0-20mA; SE**	**2AI; 0-20mA; SE; T**	**2AI; 0-20mA; SE**
Technical data			
Pluggable connector	-		pluggable
Number of analog inputs	2		
Signal type	Current		
Signal type (current)	0 … 20 mADC		
Signal characteristics	Single-ended		
Sensor connection	2 x (2-wire, 3-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Input resistance (max.)	220 Ω		
Input voltage (max.)	10 V		
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	75 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-465		wago.com/753-465
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

7.4

Analog input ▶ 0 … 20 mA ▶ Single-ended



750-470



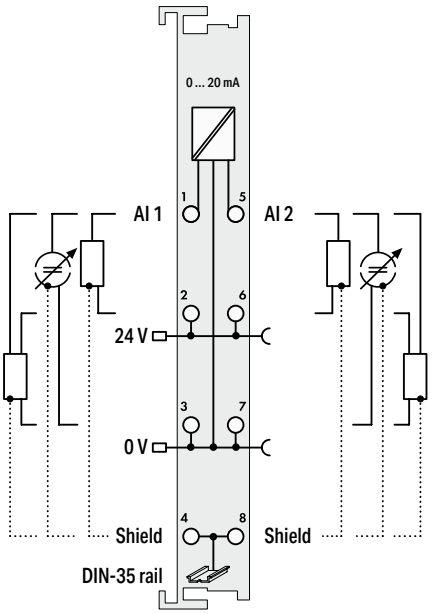
Item description	2-Channel Analog Input; 0 … 20 mA; Single-ended; Short-circuit-protected sensor supply	
Version	Standard	60 Hz
Item no.	750-470	750-470/005-000
Order Text	2AI; 0-20mA; SE	2AI; 0-20mA; SE; 60Hz

Technical data		
Extended functionality	Short-circuit-protected sensor supply	
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristics	Single-ended	
Sensor connection	2 x (2-wire, 3-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	80 ms	
Input resistance (max.)	160 Ω	
Input filter frequency (analog)	50 Hz	60 Hz
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	100 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-470	

Analog input ▶ 0 … 20 mA ▶ Single-ended



750-472



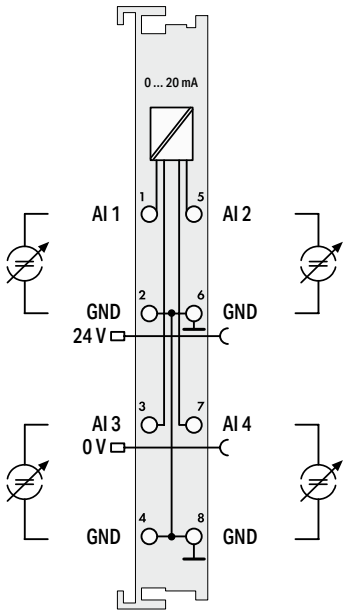
Item description	2-Channel Analog Input; 0 … 20 mA; Single-ended; 16 bits	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-472**	**753-472**
Order Text	**2AI; 0-20mA; SE; 16bits**	**2AI; 0-20mA; SE; 16bits**

Technical data		
Extended functionality	Overload protection	
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristics	Single-ended	
Sensor connection	2 x (2-wire, 3-wire)	
Resolution [bit]	15 bits	
Conversion time (typ.)	80 ms	
Input resistance (max.)	220 Ω	
Input voltage (max.)	24 V	
Input filter frequency (analog)	50 Hz	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	75 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-472	wago.com/753-472
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ 0 … 20 mA ▶ Single-ended



750-453



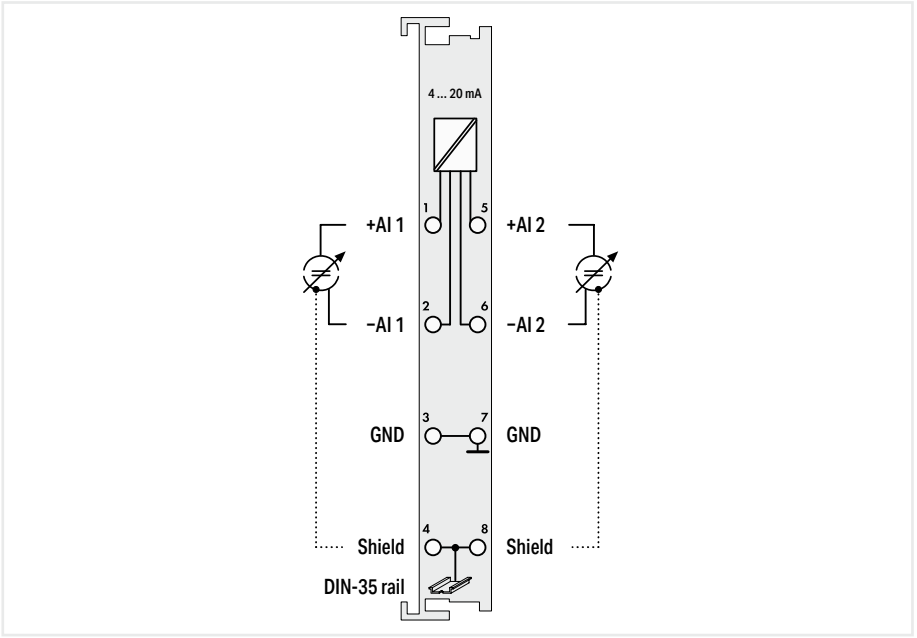
Item description	4-Channel Analog Input; 0 … 20 mA; Single-ended	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-453**	**753-453**
Order Text	**4AI; 0-20mA; SE**	**4AI; 0-20mA; SE**

Technical data		
Pluggable connector	-	pluggable
Number of analog inputs	4	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristics	Single-ended	
Sensor connection	4 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Input resistance (max.)	100 Ω	
Input voltage (max.)	32 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	65 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-453	wago.com/753-453
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

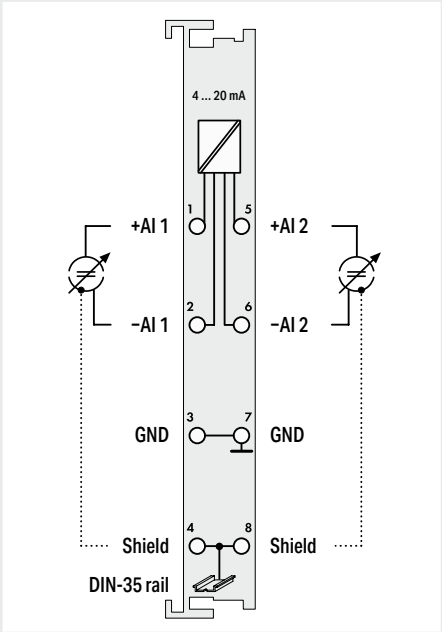
Analog input ▶ 4 … 20 mA ▶ Differential



750-454



Item description	2-Channel Analog Input; 4 … 20 mA; Differential input				
Version	Standard	ext. temperature	pluggable (delivery without connector)	Data format (S5 control)	Extended measure-ment range
Item no.	750-454	750-454/025-000	753-454	750-454/000-200	750-454/000-003
Order Text	2AI; 4-20mA; Diff	2AI; 4-20mA; Diff; T	2AI; 4-20mA; Diff	2AI; 4-20mA; Diff; S5	2AI; 4-20mA; Diff; EM
Technical data					
Pluggable connector	-		pluggable	-	
Customized data format	-			The S5 format allows you to import data with the standard S5 FB 250 function block.	-
Number of analog inputs	2				
Signal type	Current				
Signal type (current)	4 … 20 mADC				3.8 … 20.5 mADC
Signal characteristics	Differential				
Sensor connection	2 x (2-wire)				
Resolution [bit]	12 bits				
Conversion time (typ.)	2 ms				
Input resistance (max.)	220 Ω				
Input voltage (max.)	35 V				
Measurement error (reference temperature)	25 °C				
Measurement error, deviation (max.) from the up-per-range value	0.2 %				
Temperature error (max.) of the upper-range value	0.01 %/K				
Current consumption (5 V system supply)	70 mA				
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)				
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-454		wago.com/753-454	wago.com/750-454/000-200	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110	-	-

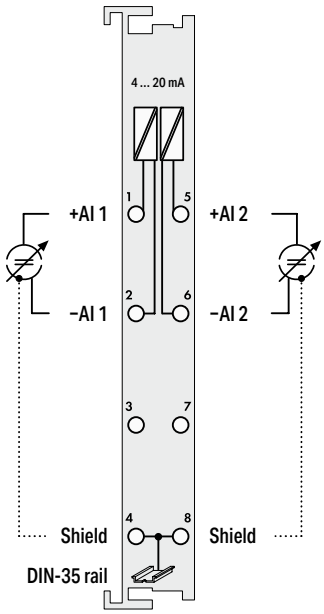


2-Channel Analog Input; 4 … 20 mA; Differential input ext. temperature; ext. measurement range
750-454/025-003
2AI; 4-20mA; Diff; EM; T
-
-
2
Current
3.8 … 20.5 mADC
Differential
2 x (2-wire)
12 bits
2 ms
220 Ω
35 V
25 °C
0.2 %
0.01 %/K
70 mA
2 x 16-bit data; 2 x 8-bit control/status (optional)
500 V system/field
-20 … +60 °C
(12 x 100 x 69.8) mm
CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
wago.com/750-454/000-200
Item no.
-

Analog input ▶ 4 … 20 mA ▶ Differential



750-492



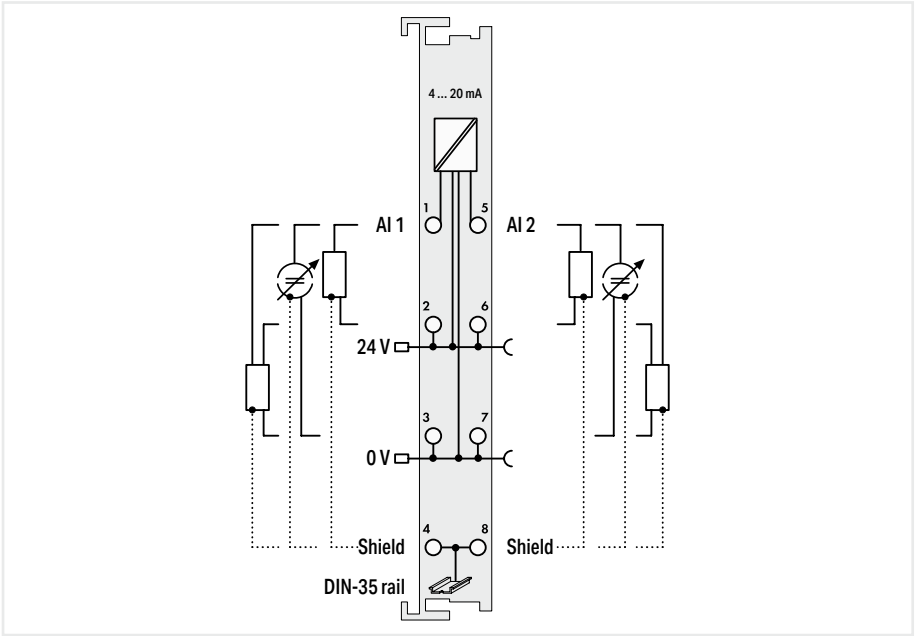
Item description	2-Channel Analog Input; 4 … 20 mA; Differential input	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-492**	**753-492**
Order Text	**2AI; 4-20mA; Diff**	**2AI; 4-20mA; Diff**

Technical data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	4 … 20 mADC	
Signal characteristics	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	13 bits	
Input resistance (max.)	270 Ω	
Admissible continuous overload	30 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Current consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-492	wago.com/753-492
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ 4 … 20 mA ▶ Single-ended



750-466

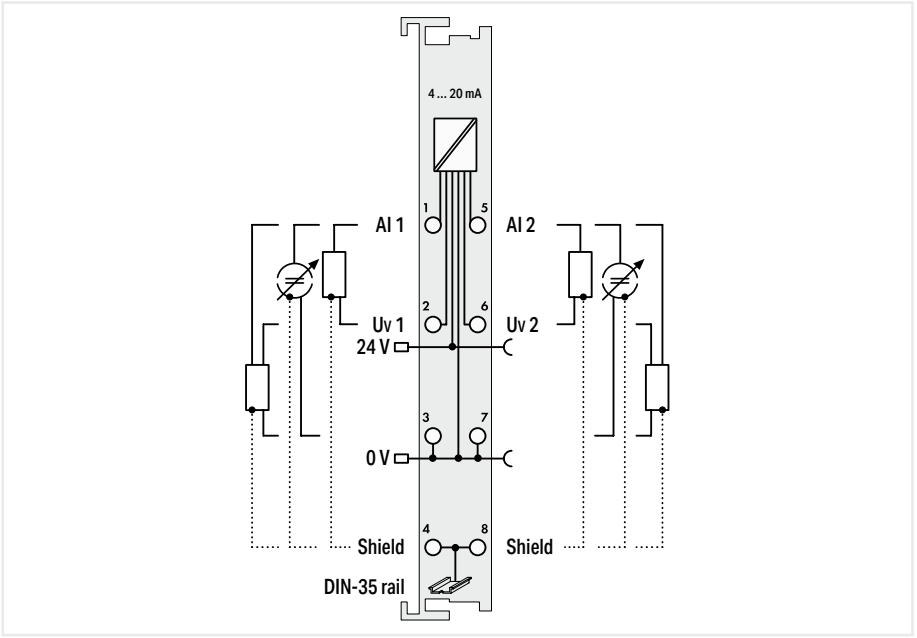


Item description	2-Channel Analog Input; 4 … 20 mA; Single-ended				
Version	Standard	ext. temperature	pluggable (delivery without connector)	Data format (S5 control)	Extended measure-ment range
Item no.	750-466	750-466/025-000	753-466	750-466/000-200	750-466/000-003
Order Text	2AI; 4-20mA; SE	2AI; 4-20mA; SE; T	2AI; 4-20mA; SE	2AI; 4-20mA; SE; S5	2AI; 4-20mA; SE; EM
Technical data					
Pluggable connector	-		pluggable	-	
Customized data format	-			The S5 format allows you to import data with the standard S5 FB 250 function block.	-
Number of analog inputs	2				
Signal type	Current				
Signal type (current)	4 … 20 mADC				3.8 … 20.5 mADC
Signal characteristics	Single-ended				
Sensor connection	2 x (2-wire, 3-wire)				
Resolution [bit]	12 bits				
Conversion time (typ.)	2 ms				
Input resistance (max.)	220 Ω				
Input voltage (max.)	10 V				
Measurement error (reference temperature)	25 °C				
Measurement error, deviation (max.) from the up-per-range value	0.2 %				
Temperature error (max.) of the upper-range value	0.01 %/K				
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Current consumption (5 V system supply)	75 mA				
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)				
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-466		wago.com/753-466	wago.com/750-466/000-200	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110	-	-

Analog input ▶ 4 … 20 mA ▶ Single-ended



750-473



Item description	2-Channel Analog Input; 4 … 20 mA; Single-ended	
Version	Standard	60 Hz
Item no.	**750-473**	**750-473/005-000**
Order Text	**2AI; 4-20mA; SE**	**2AI; 4-20mA; SE; 60Hz**

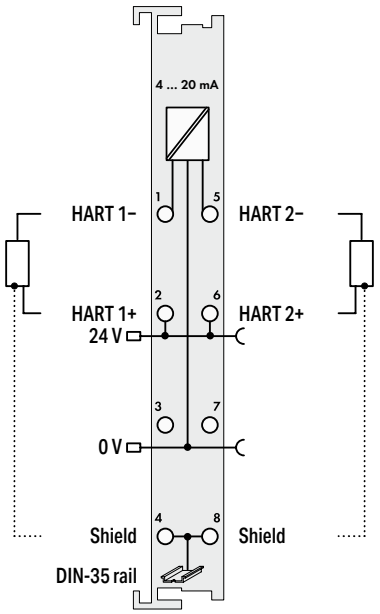
Technical data		
Extended functionality	Short-circuit-protected sensor supply	
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	4 … 20 mADC	
Signal characteristics	Single-ended	
Sensor connection	2 x (2-wire, 3-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	80 ms	
Input resistance (max.)	160 Ω	
Input filter frequency (analog)	50 Hz	60 Hz
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	100 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-473	

7.4

Analog input ▶ 4 … 20 mA ▶ Single-ended



750-482



Item description	2-Channel Analog Input; 4 … 20 mA HART		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	750-482	750-482/025-000	753-482
Order Text	2AI; 4-20mA HART	2AI; 4-20mA HART; T	2AI; 4-20mA HART

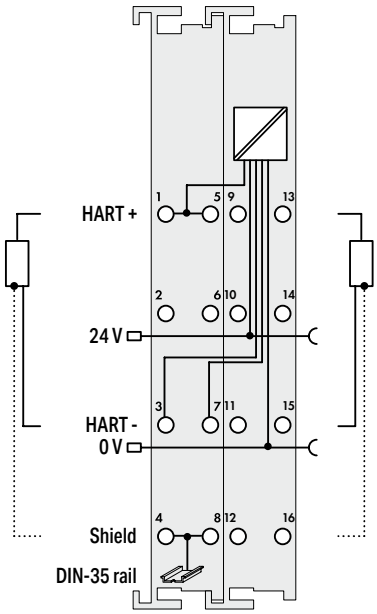
Technical data			
Extended functionality	Overload protection		
Pluggable connector	-		pluggable
Number of analog inputs	2		
Signal type	Current		
Signal type (current)	4 … 20 mADC		
Signal characteristics	Single-ended		
Sensor connection	2 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	10 ms		
Input voltage (max.)	24 V		
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	65 mA		
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox		
Configurable functions	4 HART dynamic variables (PV, SV, TV, QV)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-482		wago.com/753-482
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

HART devices per channel: 1 device (SingleDrop, no MultiDrop)
For select fieldbus couplers, FDT/DTM device drivers are available that can be used to integrate the I/O module into a higher-level control system.

Analog input ▶ 4 … 20 mA ▶ Single-ended



750-482/000-001



Item description	2-Channel Analog Input; 4 … 20 mA HART; NAMUR NE 43
Version	NAMUR NE43
Item no.	**750-482/000-001**
Order Text	**2AI; 4-20mA HART; NE43**

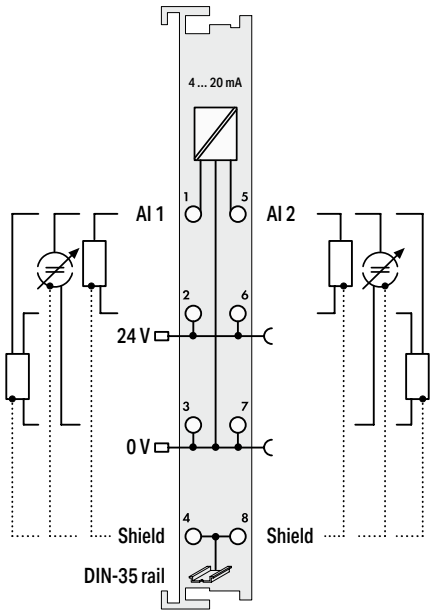
Technical data	
Extended functionality	Overload protection
Number of analog inputs	2
Signal type	Current
Signal type (current)	3.6 … 21 mADC
Signal characteristics	Single-ended
Sensor connection	2 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	315 ms
Input voltage (max.)	24 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Configurable functions	4 HART dynamic variables (PV, SV, TV, QV)
Isolation	300 VAC system/supply
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-482/000-001

HART devices per channel: 1 device (SingleDrop, no MultiDrop)
For select fieldbus couplers, FDT/DTM device drivers are available that can be used to integrate the I/O module into a higher-level control system.

Analog input ▶ 4 … 20 mA ▶ Single-ended



750-474

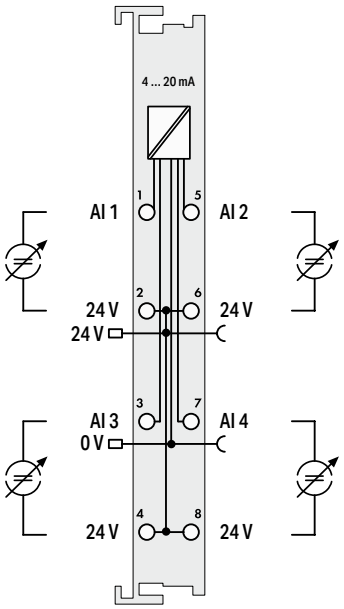


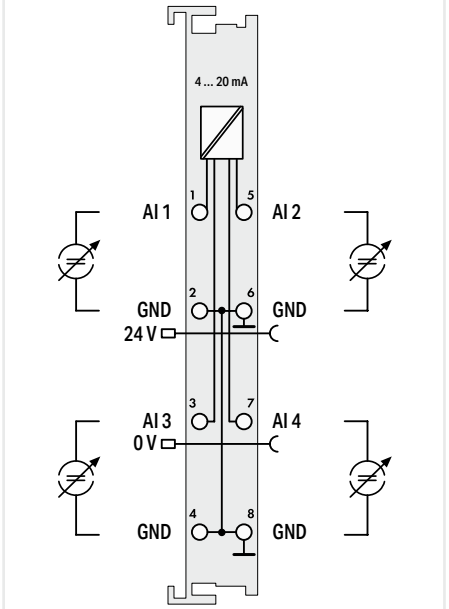
Item description	2-Channel Analog Input; 4 … 20 mA; Single-ended; 16 bits			
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)	60 Hz
Item no.	750-474	753-474	750-474/000-200	750-474/005-000
Order Text	2AI; 4-20mA; SE; 16bits	2AI; 4-20mA; SE; 16bits	2AI; 4-20mA; SE; 16bits; S5	2AI; 4-20mA; SE; 16bits; 60Hz
Technical data				
Extended functionality	Overload protection			
Pluggable connector	-	pluggable	-	
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.	-
Number of analog inputs	2			
Signal type	Current			
Signal type (current)	4 … 20 mADC			
Signal characteristics	Single-ended			
Sensor connection	2 x (2-wire, 3-wire)			
Resolution [bit]	15 bits			
Conversion time (typ.)	80 ms			
Input resistance (max.)	220 Ω			
Input voltage (max.)	24 V			
Input filter frequency (analog)	50 Hz			60 Hz
Measurement error (reference temperature)	25 °C			
Measurement error, deviation (max.) from the upper-range value	0.1 %			
Temperature error (max.) of the upper-range value	0.01 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption (5 V system supply)	75 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-474	wago.com/753-474	wago.com/750-474/000-200	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	-

Analog input ▶ 4 … 20 mA ▶ Single-ended

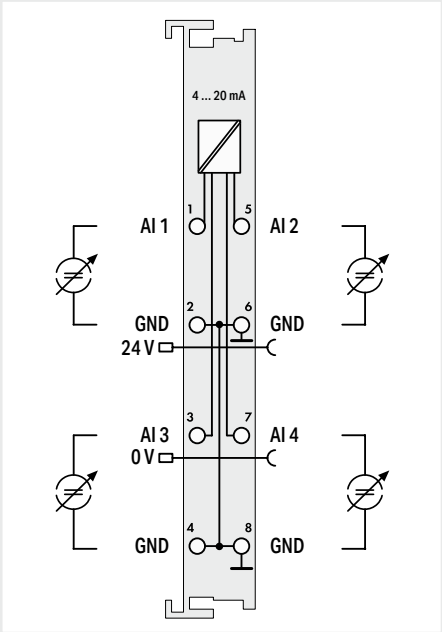


750-455/020-000





Item description	4-Channel Analog Input; 4 … 20 mA; Single-ended; 4 x 24 V	4-Channel Analog Input; 4 … 20 mA; Single-ended; 4 x GND	
Version	4 x 24 V	Standard	ext. temperature
Item no.	750-455/020-000	750-455	750-455/025-000
Order Text	4AI; 4-20mA; SE; 4x24V	4AI; 4-20mA; SE	4AI; 4-20mA; SE; T
Technical data			
Pluggable connector	-	-	
Number of analog inputs	4	4	
Signal type	Current	Current	
Signal type (current)	4 … 20 mADC	4 … 20 mADC	
Signal characteristics	Single-ended	Single-ended	
Sensor connection	4 x (2-wire)	4 x (2-wire)	
Resolution [bit]	12 bits	12 bits	
Conversion time (typ.)	10 ms	10 ms	
Input resistance (max.)	100 Ω	100 Ω	
Input voltage (max.)	32 V	32 V	
Measurement error (reference temperature)	25 °C	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	65 mA	65 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-455/020-000	wago.com/750-455/020-000	
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	-



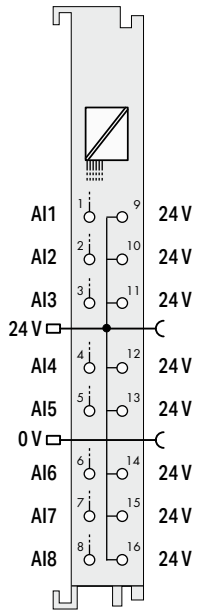
4-Channel Analog Input; 4 … 20 mA; Single-ended; 4 x GND
pluggable (delivery without connector)
753-455
4AI; 4-20mA; SE

pluggable
4
Current
4 … 20 mADC
Single-ended
4 x (2-wire)
12 bits
10 ms
100 Ω
32 V
25 °C
0.1 %
0.01 %/K
24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
65 mA
4 x 16-bit data; 4 x 8-bit control/status (optional)
500 V system/field
0 … +55 °C
(12 x 100 x 69.8) mm
CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
wago.com/753-455
Item no.
753-110

Analog input ▶ Configurable: current



750-496



Item description	**8-Channel Analog Input; 0/4 … 20 mA; Single-ended**
Version	**Standard with 16 connectors**
Item no.	**750-496**
Order Text	**8AI; 0/4-20mA; SE**

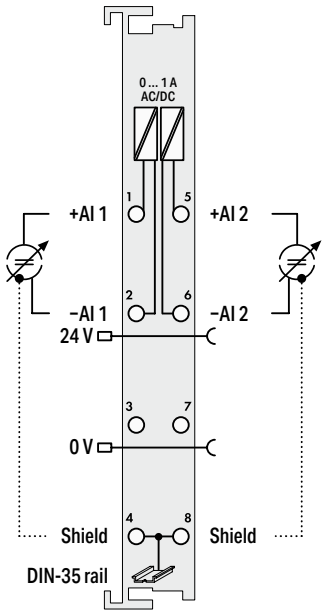
Technical data	
Number of analog inputs	8
Signal type	Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC
Sensor connection	8 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	220 Ω
Input voltage (max.)	31.2 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	69 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-496

7.4

Analog input ▶ 0 … 1 A rms (peak value 2.0 A) ▶ Differential



750-475



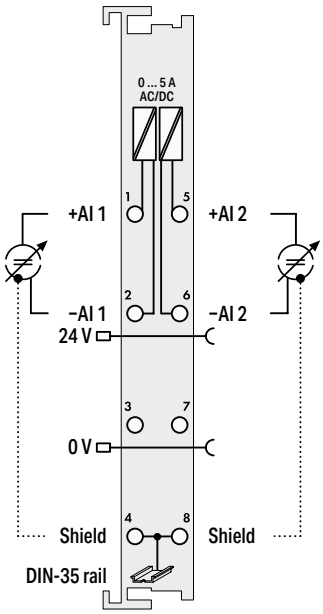
Item description	2-Channel Analog Input; 0 … 1 VAC/DC; Differential input	
Version	Standard	pluggable (delivery without connector)
Item no.	750-475	753-475
Order Text	2AI; 0-1A AC/DC; Diff	2AI; 0-1A AC/DC; Diff

Technical data		
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 1 AAC/DC	
Signal characteristics	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	15 bits	
Conversion time (typ.)	200 ms	
Input resistance (max.)	0.022 Ω	
Input voltage (max.)	24 VAC/DC (-20 … +20 %)	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature coefficient	< ± 110 ppm / K of the full scale value	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-475	wago.com/753-475
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ 0 … 5 A rms (peak value 6.0 A) ▶ Differential



750-475/020-000



Item description	2-Channel Analog Input; 0 … 5 VAC/DC; Differential input
Version	0 … 5 AAC/DC
Item no.	**750-475/020-000**
Order Text	**2AI; 0-5A AC/DC; Diff**

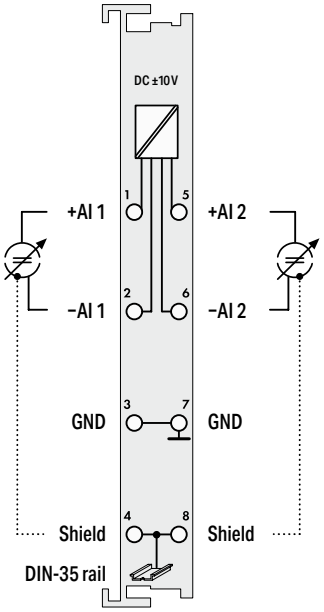
Technical data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	0 … 5 AAC/DC
Signal characteristics	Differential
Sensor connection	2 x (2-wire)
Resolution [bit]	15 bits
Input resistance (max.)	0.022 Ω
Input voltage (max.)	24 VAC/DC (-20 … +20 %)
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	80 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field or channel/channel
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-475/020-000

7.4

Analog input ▶ ±10 V ▶ Differential



750-456



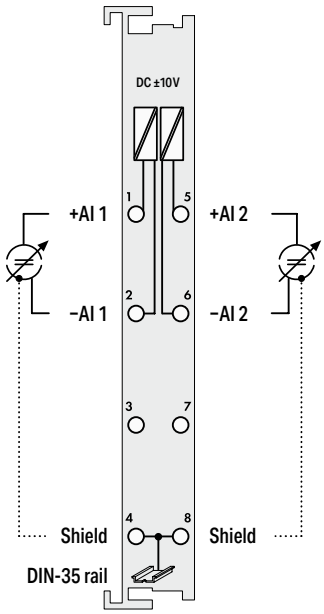
Item description	2-Channel Analog Input; ±10 VDC; Differential input		
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)
Item no.	**750-456**	**753-456**	**750-456/000-200**
Order Text	**2AI; ±10 VDC**	**2AI; ±10 VDC**	**2AI; ±10 VDC; S5**

Technical data			
Pluggable connector	-	pluggable	-
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog inputs	2		
Signal type	Voltage		
Signal type (voltage)	-10 … +10 VDC		
Signal characteristics	Differential		
Sensor connection	2 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Internal resistance	570 kΩ		
Input voltage (max.)	35 V		
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.015 %/K		
Current consumption (5 V system supply)	80 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-456	wago.com/753-456	wago.com/750-456/000-200
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-

Analog input ► ±10 V ► Differential



750-479



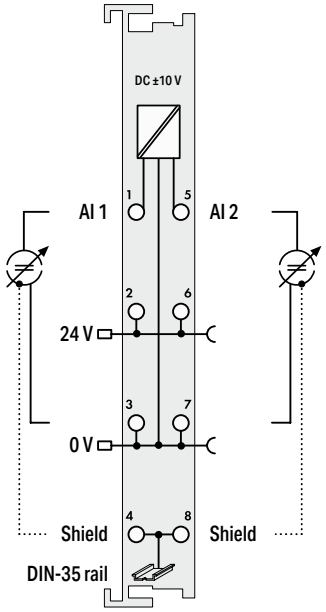
Item description	2-Channel Analog Input; ±10 VDC; Differential input	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-479**	**753-479**
Order Text	**2AI; ±10 VDC; Diff**	**2AI; ±10 VDC; Diff**

Technical data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Voltage	
Signal type (voltage)	-10 … +10 VDC	
Signal characteristics	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	14 bits	
Internal resistance	1000 kΩ	
Admissible continuous overload	60 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Current consumption (5 V system supply)	100 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-479	wago.com/753-479
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ ±10 V ▶ Single-ended



750-476



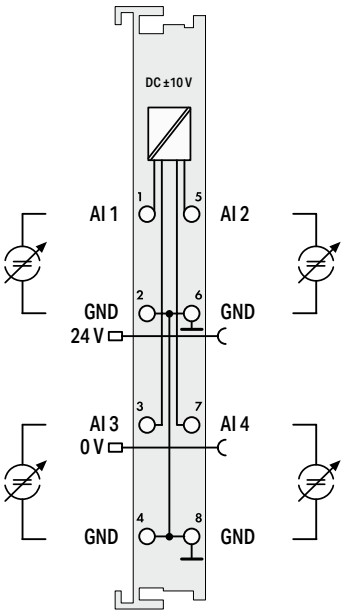
Item description	2-Channel Analog Input; ±10 VDC; Single-ended; 16 bits		
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)
Item no.	**750-476**	**753-476**	**750-476/000-200**
Order Text	**2AI; ±10 VDC; SE; 16bits**	**2AI; ±10 VDC; SE; 16bits**	**2AI; ±10 VDC; SE; 16bits; S5**

Technical data			
Pluggable connector	-	pluggable	-
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog inputs	2		
Signal type	Voltage		
Signal type (voltage)	-10 … +10 VDC		
Signal characteristics	Single-ended		
Sensor connection	2 x (2-wire)		
Resolution [bit]	16 bits		
Conversion time (typ.)	80 ms		
Internal resistance	130 kΩ		
Input voltage (max.)	24 V		
Input filter frequency (analog)	50 Hz		60 Hz
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	75 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-476	wago.com/753-476	wago.com/750-476/000-200
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-

Analog input ► ±10 V ► Single-ended



750-457

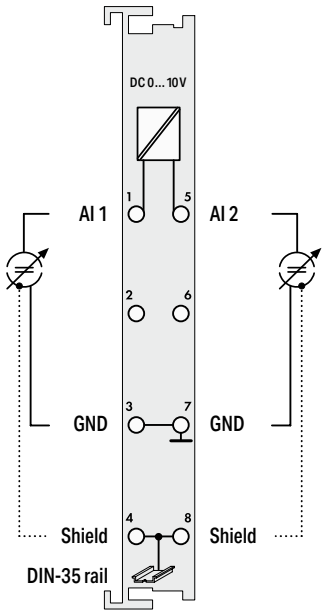


Item description	4-Channel Analog Input; ±10 VDC; Single-ended		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-457**	**750-457/025-000**	**753-457**
Order Text	**4AI; ±10 VDC; SE**	**4AI; ±10 VDC; SE; T**	**4AI; ±10 VDC; SE**
Technical data			
Pluggable connector	-		pluggable
Number of analog inputs	4		
Signal type	Voltage		
Signal type (voltage)	-10 … +10 VDC		
Signal characteristics	Single-ended		
Sensor connection	4 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	10 ms		
Internal resistance	100 kΩ		
Input voltage (max.)	±40 V		
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	65 mA		
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-457		wago.com/753-457
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Analog input ▶ 0 … 10 V ▶ Single-ended



750-467



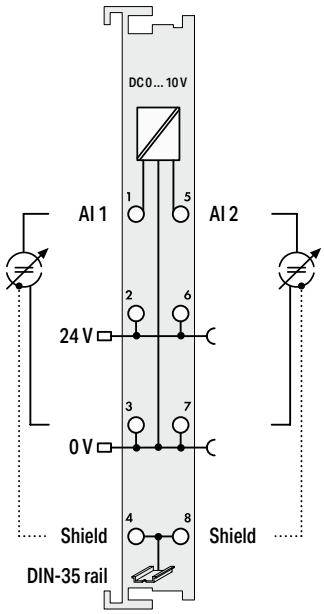
Item description	2-Channel Analog Input; 0 … 10 VDC; Single-ended	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-467**	**753-467**
Order Text	**2AI; 0-10 VDC; SE**	**2AI; 0-10 VDC; SE**

Technical data		
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Voltage	
Signal type (voltage)	0 … 10 VDC	
Signal characteristics	Single-ended	
Sensor connection	2 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	2 ms	
Internal resistance	130 kΩ	
Input voltage (max.)	35 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.2 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Current consumption (5 V system supply)	60 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-467	wago.com/753-467
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ 0 … 10 V ▶ Single-ended



750-478



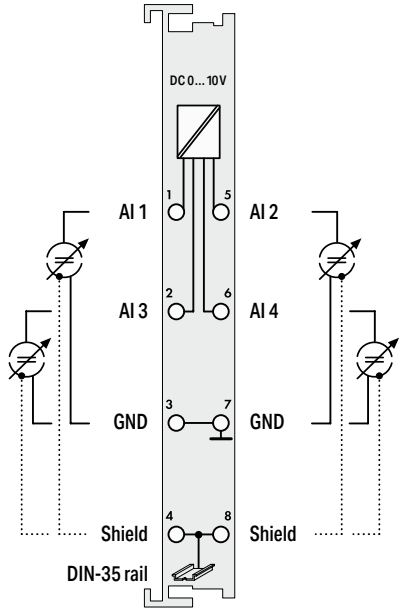
Item description	2-Channel Analog Input; 0 … 10 VDC; Single-ended; 16 bits		
Version	Standard	pluggable (delivery without connector)	60 Hz
Item no.	**750-478**	**753-478**	**750-478/005-000**
Order Text	**2AI; 0-10 VDC; SE; 16bits**	**2AI; 0-10 VDC; SE; 16bits**	**2AI; 0-10 VDC; SE; 16bits; 60Hz**

Technical data			
Pluggable connector	-	pluggable	-
Number of analog inputs	2		
Signal type	Voltage		
Signal type (voltage)	0 … 10 VDC		
Signal characteristics	Single-ended		
Sensor connection	2 x (2-wire)		
Resolution [bit]	16 bits		
Conversion time (typ.)	80 ms		
Internal resistance	130 kΩ		
Input voltage (max.)	24 V		
Input filter frequency (analog)	50 Hz		60 Hz
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	75 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-478	wago.com/753-478	wago.com/750-478/005-000
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-

Analog input ▶ 0 … 10 V ▶ Single-ended



750-468



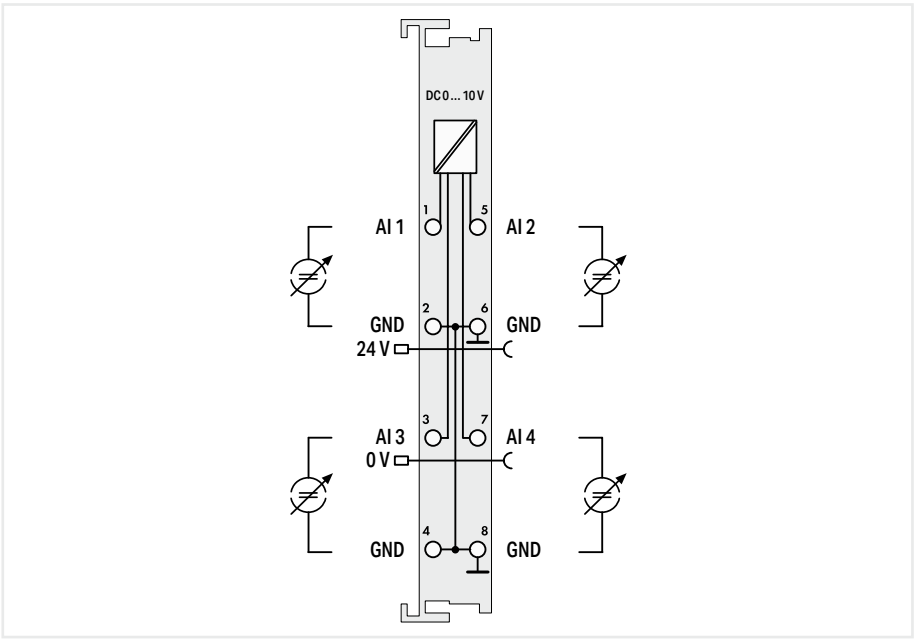
Item description	4-Channel Analog Input; 0 … 10 VDC; Single-ended	
Version	Standard	ext. temperature
Item no.	**750-468**	**750-468/025-000**
Order Text	**4AI; 0-10 VDC; SE**	**4AI; 0-10 VDC; SE; T**

Technical data		
Number of analog inputs	4	
Signal type	Voltage	
Signal type (voltage)	0 … 10 VDC	
Signal characteristics	Single-ended	
Sensor connection	4 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	4 ms	
Internal resistance	133 kΩ	
Input voltage (max.)	35 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.2 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Current consumption (5 V system supply)	60 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-468	

Analog input ▶ 0 … 10 V ▶ Single-ended



750-459



Item description	4-Channel Analog Input; 0 … 10 VDC; Single-ended	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-459**	**753-459**
Order Text	**4AI; 0-10 VDC; SE**	**4AI; 0-10 VDC; SE**

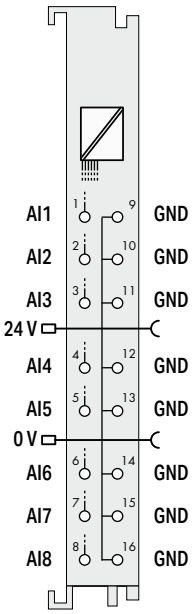
Technical data		
Pluggable connector	-	pluggable
Number of analog inputs	4	
Signal type	Voltage	
Signal type (voltage)	0 … 10 VDC	
Signal characteristics	Single-ended	
Sensor connection	4 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Internal resistance	100 kΩ	
Input voltage (max.)	±40 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	65 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-459	wago.com/753-459
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

7.4

Analog input ▶ Configurable: voltage



750-497



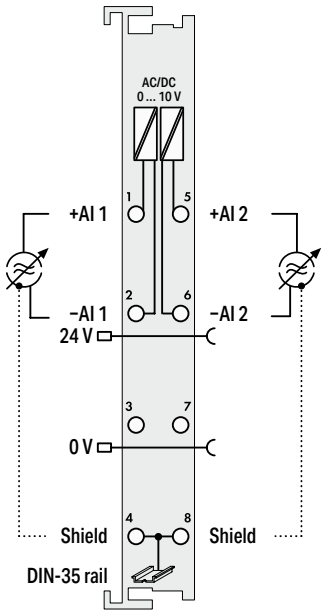
Item description	8-Channel Analog Input; 0 … 10 VDC/±10 V; Single-ended
Version	Standard with 16 connectors
Item no.	**750-497**
Order Text	**8AI; 0-10 V/±10 VDC; SE**

Technical data	
Number of analog inputs	8
Signal type	Voltage
Signal type (voltage)	0 … 10 VDC; -10 … +10 VDC
Sensor connection	8 x (2-wire)
Resolution [bit]	12 bits
Internal resistance	100 kΩ
Input voltage (max.)	35 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	105 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-497

Analog input ▶ 0 … 10 V rms (peak value 20 V) ▶ Differential



750-477



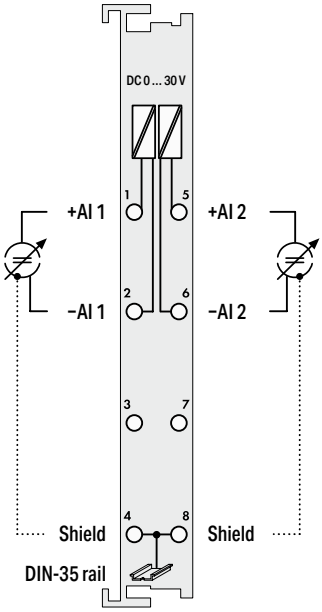
Item description	2-Channel Analog Input; 0 … 10 VAC/DC; Differential input	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-477**	**753-477**
Order Text	**2AI; 0-10 VDC; Diff**	**2AI; 0-10 VAC/VDC; Diff**

Technical data		
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Voltage	
Signal type (voltage)	0 … 10 VAC/DC	
Signal characteristics	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	15 bits	
Conversion time (typ.)	200 ms	
Internal resistance	120 kΩ	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.1 %	
Temperature coefficient	< ±110 ppm/K of greatest measurement range	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-477	wago.com/753-477
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ 0 … 30 V ▶ Differential



750-483



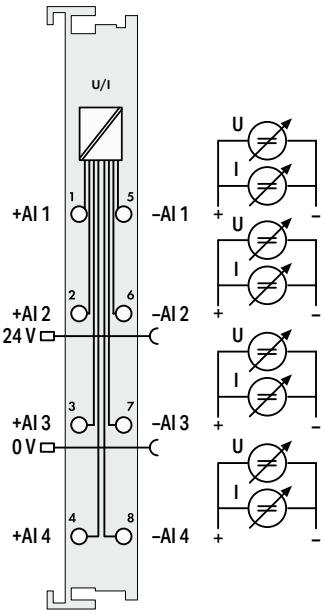
Item description	2-Channel Analog Input; 0 … 30 VDC; Differential input	
Version	Standard	pluggable (delivery without connector)
Item no.	750-483	753-483
Order Text	2AI; 0-30 VDC; Diff	2AI; 0-30 VDC; Diff

Technical data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Pluggable connector	-	pluggable
Number of analog inputs	2	
Signal type	Voltage	
Signal type (voltage)	0 … 30 VDC	
Signal characteristics	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	14 bits	
Internal resistance	1000 kΩ	
Admissible continuous overload	60 V	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Current consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-483	wago.com/753-483
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog input ▶ Voltages and currents (configurable channel for channel) ▶ Differential



750-471



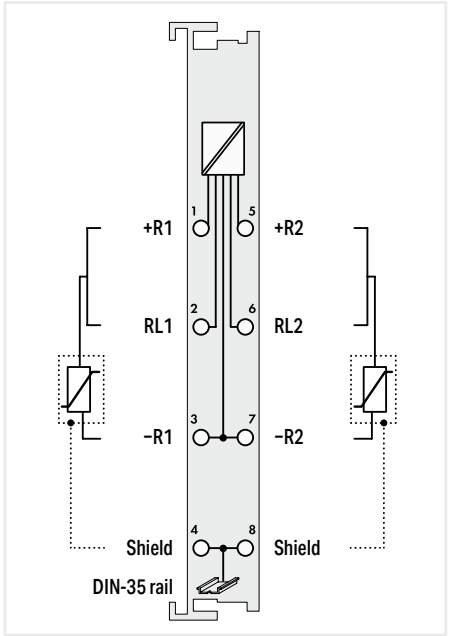
Item description	**4-Channel Analog Input; for voltage/current**
Version	**Standard**
Item no.	**750-471**
Order Text	**4AI; U/I; Diff; 16bits; Diagn**

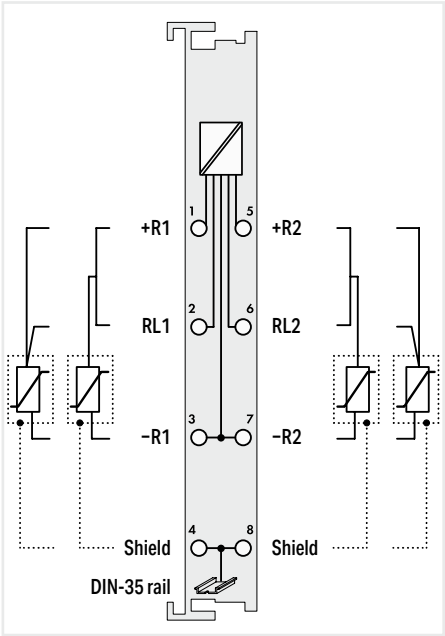
Technical data	
Number of analog inputs	4
Signal type	Voltage; Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC; -20 … +20 mADC
Signal type (voltage)	0 … 10 VDC; -10 … +10 VDC; -0.2 … +0.2 VDC
Signal characteristics	Differential
Sensor connection	4 x (2-wire)
Resolution [bit]	16 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	120 Ω
Internal resistance	100 kΩ
Input voltage (max.)	31.2 VDC
Reference for measurement error	Input ranges
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Reference for measurement error (2)	±200 mV
Measurement error, reference temperature (2)	25 °C
Measurement error, deviation (max.) of the upper-range value (2)	0.3 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	100 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	Functional insulation: 2000 VDC system/channel; 2000 VDC channel/channel
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-471

Analog input ▶ Resistance sensors



750-461/020-000





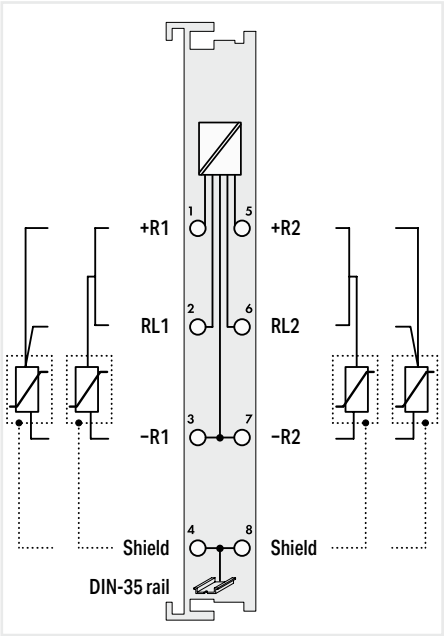
Item description	2-Channel Analog Input; for resistance sensors	2-Channel Analog Input; Resistance measurement	
Version	NTC 20k	10 … 1200 Ohm	10 … 5000 Ohm
Item no.	750-461/020-000	750-461/000-002	750-461/000-007
Order Text	2AI; NTC 20k	2AI; 10R-1k2	2AI; 10R-5k0

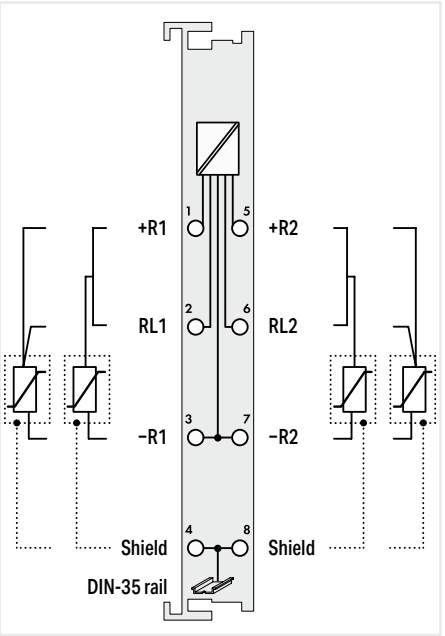
Technical data			
Number of analog inputs	2	2	
Signal type	Resistance measurement	Potentiometer positions	
Sensor types	NTC 20 kOhm	10R … 1k2	10R … 5k0
Sensor connection	2 x (2-wire)	2 x (2-wire)	
Temperature range	−30 … +130 °C	-	
Resolution (over entire range)	0.1 °C	0.1 Ohm	0.5 Ohm
Conversion time (typ.)	320 ms	320 ms	
Measuring current (typ.)	0.05 mA	0.5 mA	
Measurement error (25 °C)	0.5 … 3.0 K (temperature-dependent)	-	
Measurement error (reference temperature)	-	25 °C	
Measurement error, deviation (max.) from the upper-range value	-	0.2 %	
Temperature error (max.) of the upper-range value	0.002 %/K	0.01 %/K	
Current consumption (5 V system supply)	65 mA	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-461/020-000	wago.com/750-461/020-000	

Analog input ▶ Resistance sensors

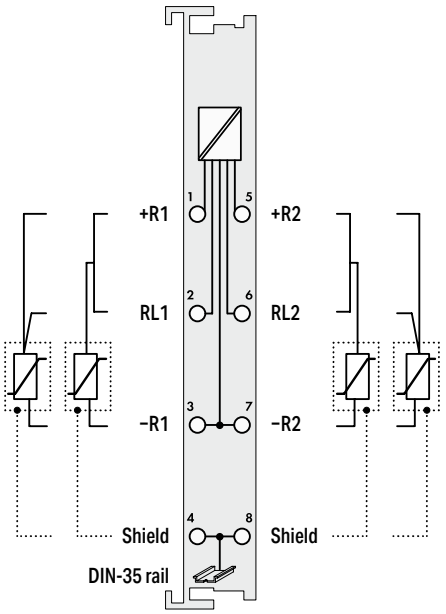


750-461/000-003





Item description	2-Channel Analog Input; for resistance sensors		2-Channel Analog Input; for Pt100/RTD resistance sensors	
Version	Pt1000/RTD	Ni1000/RTD	Standard	ext. temperature
Item no.	**750-461/000-003**	**750-461/000-005**	**750-461**	**750-461/025-000**
Order Text	**2AI; Pt1000/RTD**	**2AI; Ni1000/RTD**	**2AI; Pt100/RTD**	**2AI; Pt100/RTD; Adjust; T**
Technical data				
Pluggable connector	-		-	
Customized data format	-		-	
Number of analog inputs	2		2	
Signal type	Resistance measurement		Resistance measurement	
Sensor types	Pt1000	Ni1000 TK6180	Pt100	
Sensor connection	2 x (2-wire, 3-wire)		2 x (2-wire, 3-wire)	
Temperature range	–200 … +850 °C	–60 … +250 °C	–200 … +850 °C	
Resolution (over entire range)	0.1 °C		0.1 °C	
Conversion time (typ.)	320 ms		320 ms	
Measuring current (typ.)	0.5 mA		0.5 mA	
Measurement error (reference temperature)	25 °C		25 °C	
Measurement error, deviation (max.) from the upper-range value	0.2 %		0.2 %	
Temperature error (max.) of the upper-range value	0.01 %/K		0.01 %/K	
Current consumption (5 V system supply)	80 mA		80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field		500 V system/field	
Ambient temperature (operation)	0 … +55 °C		0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-461/000-003		wago.com/750-461/000-003	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	-	-

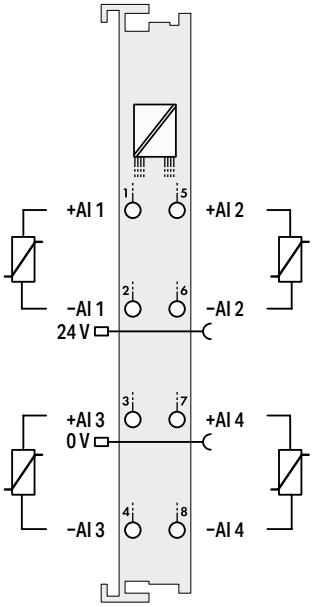


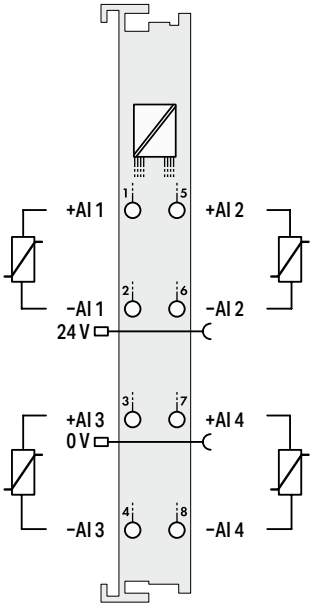
2-Channel Analog Input; for Pt100/RTD resistance sensors			
pluggable (delivery without connector)	Data format (S5 control)	adjustable	pluggable (delivery without connector); adjustable
753-461	750-461/000-200	750-461/003-000	753-461/003-000
2AI; Pt100/RTD	2AI; Pt100/RTD; S5	2AI; Pt100/RTD; Adjust	2AI; Pt100/RTD; Adjust
pluggable	-		pluggable
-	The S5 format allows you to import data with the standard S5 FB 250 function block.	-	
2			
Resistance measurement			
Pt100		Pt100; Configurable: Pt, Ni, Ohm	
2 x (2-wire, 3-wire)			
–200 … +850 °C		–200 °C … +850 °C (Pt), –60 °C … +250 °C (Ni)	
0.1 °C			
320 ms			
0.5 mA			
25 °C			
0.2 %			
0.01 %/K			
80 mA			
2 x 16-bit data; 2 x 8-bit control/status (optional)			
500 V system/field			
0 … +55 °C			
(12 x 100 x 69.8) mm			
CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
wago.com/753-461	wago.com/750-461/000-200		wago.com/753-461/003-000
Item no.	Item no.	Item no.	Item no.
753-110	-	-	753-110

Analog input ▶ Resistance sensors



750-464/020-000





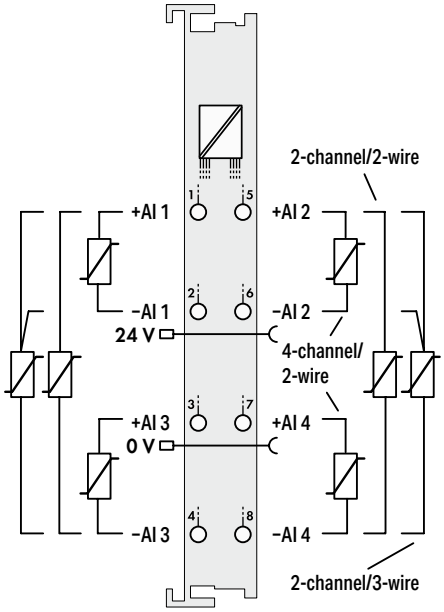
Item description	4-Channel Analog Input; for NTC resistance sensors; Adjustable	4-Channel Analog Input; Resistance measurement
Version	NTC	Measurement range: −30 °C … +150 °C
Item no.	**750-464/020-000**	**750-463**
Order Text	**4AI; NTC; Adjust**	**4AI; RTD; -30°C…+150°C**

Technical data		
Number of analog inputs	4	4
Signal type	Resistance measurement	Resistance measurement
Sensor types	NTC 10 kOhm; Configurable: NTC 10 kOhm Thermokon, NTC 20 kOhm, NTC 20 kOhm Thermokon	Pt1000; Configurable: Ni1000, KTY 81
Sensor connection	4 x (2-wire)	4 x (2-wire)
Temperature range	−30 … +150 °C	−30 … +150 °C
Resolution (over entire range)	0.1 °C	0.1 °C
Conversion time (typ.)	320 ms	-
Measuring current (typ.)	≤ 350 µA	≤ 350 µA
Measurement error (25 °C)	≤ 2 K within the entire temperature range	≤ 0.5 K in temperature range: −30 … +150 °C
Temperature coefficient	≤ 20 ppm/K	≤ 20 ppm/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	50 mA	50 mA
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	500 V system/field	500 V system/field
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; OrdLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-464/020-000	wago.com/750-463

Analog input ▶ Resistance sensors



750-464



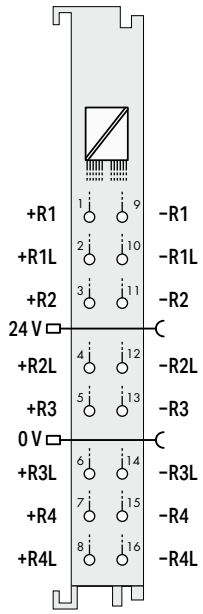
Item description	**2/4-Channel Analog Input; Resistance measurement; Adjustable**
Version	**Standard**
Item no.	**750-464**
Order Text	**2/4AI; RTD; Adjust**

Technical data	
Number of analog inputs	4
Signal type	Resistance measurement; Potentiometer positions
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000; Potentiometer (2-channel operation only): 10R … 1k2, 10R … 5k0
Sensor connection	4 x (2-wire); 2 x (3-wire)
Temperature range	–200 … +850 °C (Pt100), –60 … +300 °C (Ni 100, Ni 1000), –60 … +250 °C (Ni 1000 TK5000), –80 … +260 °C (Ni 120)
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Measuring current (typ.)	≤ 350 µA
Measurement error (25 °C)	≤ 1 K within the entire temperature range, ≤ 0.5 K within the temperature range (–30 … +120 °C, Pt 1000)
Temperature coefficient	≤ 20 ppm/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	50 mA
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-464

Analog input ▶ Resistance sensors



750-450



Item description	**4-Channel Analog Input; Resistance measurement; Adjustable**
Version	**Standard with 16 connectors**
Item no.	**750-450**
Order Text	**4AI; RTD; Adjust**

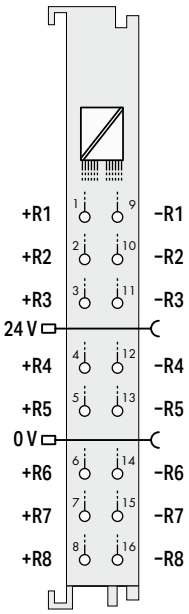
Technical data	
Number of analog inputs	4
Signal type	Resistance measurement; Potentiometer positions
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000 (TK6180 + TK5000), Potentiometer: 10R ... 1k2, 10R ... 5k0
Sensor connection	4 x (2-wire, 3-wire, 4-wire)
Temperature range	−200 ... +850 °C (Pt100, Pt200, Pt500, Pt1000), −60 ... +250 °C (Ni100, Ni1000), −80 ... +260 °C (Ni120)
Resolution (over entire range)	0.1 °C (over the entire range); 0.01 °C (–50 ... 150 °C; Pt1000, Ni1000)
Conversion time (typ.)	100 ms
Measuring current (typ.)	≤ 350 µA
Measurement error (25 °C)	≤ ±0.6 K (Pt100, Pt200, Pt500, Ni100, Ni120); ≤ ±0.2 K (Pt1000, Ni1000); ±0.3 ... 0.7 Ω for resistance measurement
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	85 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 ... +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-450

7.4

Analog input ▶ Resistance sensors



750-451



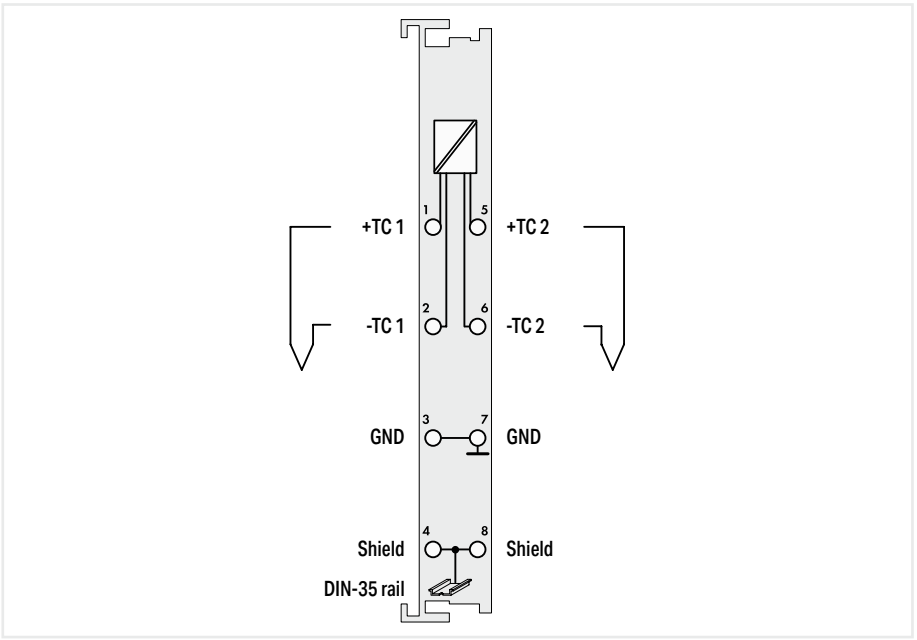
Item description	8-Channel Analog Input; Resistance measurement; Adjustable	
Version	ext. temperature	Standard with 16 connectors
Item no.	**750-451/025-000**	**750-451**
Order Text	**8AI; RTD; Adjust; T**	**8AI; RTD; Adjust**

Technical data		
Number of analog inputs	8	
Signal type	Resistance measurement; Potentiometer positions	
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000 (TK6180 + TK5000), Potentiometer: 10R … 1k2, 10R … 5k0	
Sensor connection	8 x (2-wire)	
Temperature range	−200 … +850 °C (Pt100, Pt200, Pt500, Pt1000), −60 … +250 °C (Ni100, Ni1000), −80 … +260 °C (Ni120)	
Resolution (over entire range)	0.1 °C (over the entire range); 0.01 °C (–50 … 150 °C; Pt1000, Ni1000)	
Conversion time (typ.)	100 ms	
Measuring current (typ.)	≤ 350 µA	
Measurement error (25 °C)	≤ ±0.6 K (Pt100, Pt200, Pt500, Ni100, Ni120); ≤ ±0.2 K (Pt1000, Ni1000); ≤ ±0.3 Ω for resistance measurement	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	110 mA	
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-451/025-000	

Analog input ▶ Thermocouples

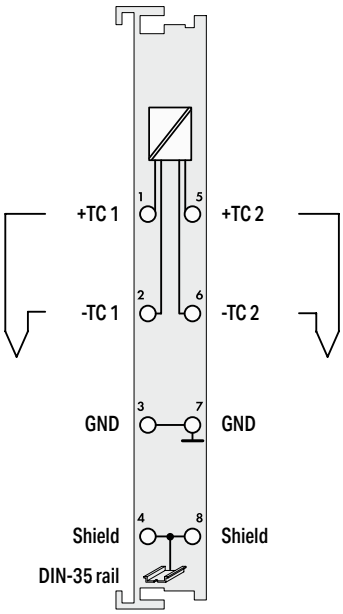


750-469



Item description	2-Channel Analog Input; Thermocouple K; Diagnostics				
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)	adjustable	pluggable (delivery without connector); adjustable
Item no.	**750-469**	**753-469**	**750-469/000-200**	**750-469/003-000**	**753-469/003-000**
Order Text	**2AI; TC K; Diagn**	**2AI; TC K; Diagn**	**2AI; TC K; Diagn; S5**	**2AI; TC K; Diagn Adjust**	**2AI; TC K; Diagn Adjust**
Technical data					
Pluggable connector	-	pluggable	-		pluggable
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.	-	
Number of analog inputs	2				
Signal type	Thermocouple			Thermocouple; Low voltages	
Sensor types	Thermocouple K			Thermocouple K; Configurable: L, J, E, T, N, U, B, R, S, mV	
Sensor connection	2 x (2-wire)				
Temperature range	–100 … +1370 °C			Sensor-specific	
Resolution (over entire range)	0.1 °C				
Conversion time (typ.)	320 ms				
Internal resistance	1000 kΩ				
Measurement error (25 °C)	< ±6 K (voltage input < ±2 K; cold junction compensation < ±4 K)				
Temperature coefficient	< ±0.2 K/K				
Cold junction compensation	at each pair of terminal blocks				
Current consumption (5 V system supply)	65 mA				
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)				
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-469	wago.com/753-469	wago.com/750-469/000-200		wago.com/753-469/003-000
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	-	753-110

7.4

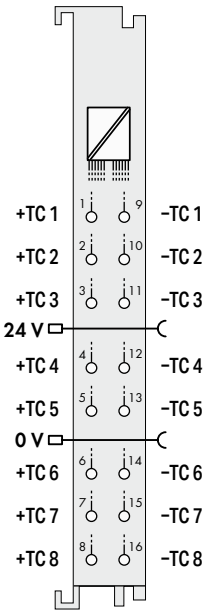


2-Channel Analog Input; Thermocouple; Diagnostics					
Thermocouple S	Thermocouple T	Thermocouple J	Thermocouple E	Thermocouple L	Thermocouple ±120 mV
750-469/000-001	750-469/000-002	750-469/000-006	750-469/000-008	750-469/000-012	750-469/000-003
2AI; TC S; Diagn	2AI; TC T; Diagn	2AI; TC J; Diagn	2AI; TC E; Diagn	2AI; TC L; Diagn	2AI; TC ±120mV; Diagn
			-		
			-		
			2		
		Thermocouple			Low voltages
Thermocouple S	Thermocouple T	Thermocouple J	Thermocouple E	Thermocouple L	±120 mV
			2 x (2-wire)		
−50 … +1700 °C	−100 … +400 °C	−100 … +1200 °C	−100 … +1000 °C	−100 … +900 °C	-
			0.1 °C		
			320 ms		
			1000 kΩ		
			< ±6 K (voltage input < ±2 K; cold junction compensation < ±4 K)		
			< ±0.2 K/K		
			at each pair of terminal blocks		
			65 mA		
			2 x 16-bit data; 2 x 8-bit control/status (optional)		
			500 V system/field		
			0 … +55 °C		
			(12 x 100 x 69.8) mm		
			CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
			wago.com/750-469/000-001		
Item no.	Item no.	Item no.	Item no.	Item no.	Item no.
-	-	-	-	-	-

Analog input ▶ Thermocouples



750-498



Item description	**8-Channel Analog Input; Thermocouple; Adjustable**
Version	**Standard with 16 connectors**
Item no.	**750-498**
Order Text	**8AI; TC; Adjust**

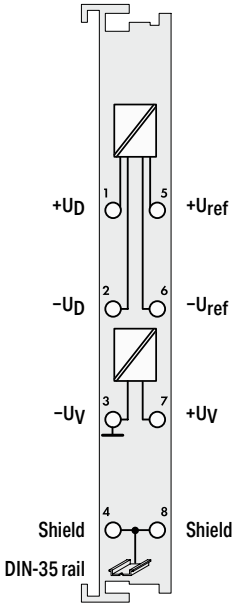
Technical data	
Number of analog inputs	8
Signal type	Thermocouple; Low voltages
Sensor types	Type K, J, B, E, N, R, S, T, C; Voltage measurement: ±30 mV; ±60 mV; ±120 mV; ±240 mV
Sensor connection	8 x (2-wire)
Resolution (over entire range)	0.1 °C
Measurement error (25 °C)	with cold junction compensation: ≤ ±1 K (type E, N, K, T, J) at ≥-50 °C; ≤ ±2 K (type S, R, C) at ≥100 °C; ≤ ±3 K (type B) at ≥350 °C;(Please find additional measurement error information in the manual.)
Temperature coefficient	Type K: ±0.05 K/K of the upper-range value; Voltage measurements: ±50 ppm/K of the upper-range value
Temperature error (max.) of the upper-range value	0.05 %/K
Cold junction compensation	Module-internal based on a cold junction temperature measurement
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	100 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-498

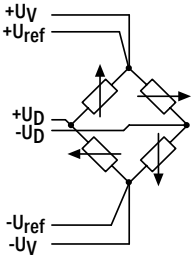
7.4

Analog input ▶ Resistor bridge (strain gauge)



750-491





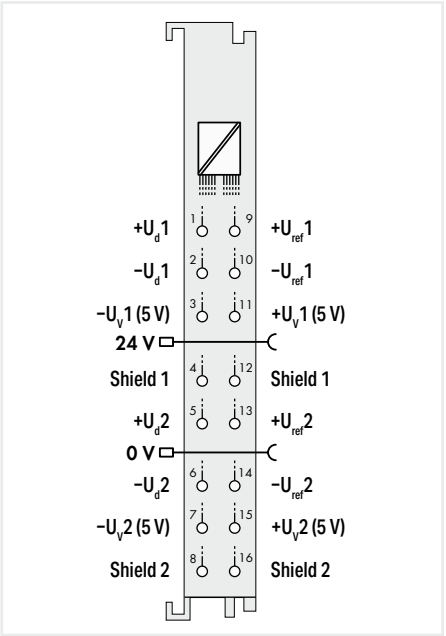
Item description	1-Channel Analog Input; Resistor bridges (strain gauge)	
Version	Standard	Conversion time: 125 ms
Item no.	**750-491**	**750-491/000-001**
Order Text	**1AI; DMS**	**1AI; DMS; 125ms**

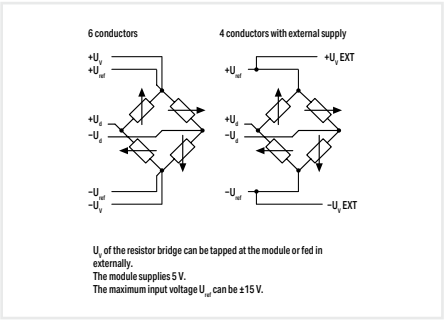
Technical data		
Number of analog inputs	1	
Signal type	Resistor bridge (strain gauge)	
Signal voltage U_D	−15 … +15 mV	
Signal voltage U_{ref}	2 … 6 V	
Supply voltage (sensor)	5 VDC; Supply voltage U_V	
Resolution [bit]	16 bits	
Conversion time (typ.)	500 ms	
Measurement error	U_D: ±30 µV; U_{ref}: ±10 mV	
Filter	50 Hz	200 Hz
Current consumption (5 V system supply)	65 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC	
For data sheet and additional information, see:	wago.com/750-491	

Analog input ▶ Resistor bridge (strain gauge)



750-1491





Item description	2-Channel Analog Input; Resistor bridges (strain gauge)
Version	Standard with 16 connectors
Item no.	**750-1491**
Order Text	**2AI Resistor Bridge (Strain Gauge)**

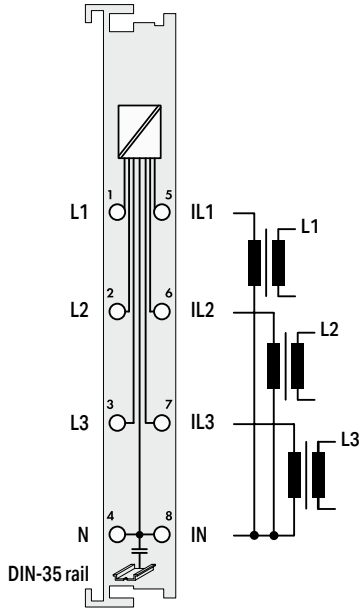
Technical data	
Number of analog inputs	2
Signal type	Resistor bridge (strain gauge)
Signal voltage U_D	±15 mV; ±30 mV; ±60 mV; ±120 mV; ±240 mV; ±360 mV
Signal voltage U_{ref}	Internal +5 V; external ±5 V; ±10 V; ±15 V
Supply voltage (sensor)	5 VDC
Resolution [bit]	16 bits
Measurement error (25 °C)	U_D: ±30 µV; U_{ref}: ±0.05 % of the upper-range value
Current consumption (5 V system supply)	70 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	per UL 61010-2-201: 1.2 kVDC system/channel and channel/channel
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE, KC, cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-1491

7.4

Analog input; Power measurement ▶ Three-phase power measurement



750-493



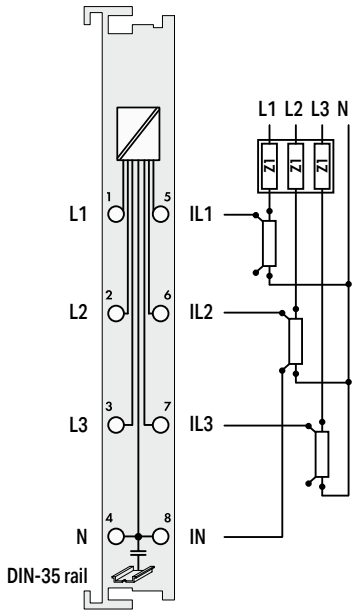
Item description	3-Phase Power Measurement; 480 VAC 1 A		
Version	Standard	ext. temperature	480 VAC, 5 A
Item no.	750-493	750-493/025-000	750-493/000-001
Order Text	3-PHASE POM; 480VAC 1A	3-PHASE POM; 480VAC 1A; T	3-PHASE POM; 480VAC 5A

Technical data			
Signal type	Power measurement		
Calculated values	Active power, active energy, grid frequency, cos φ		
Measured variable	Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi		
Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)		
Rated voltage	U_{LN} = 277 V AC/DC; U_{LL} = 480 VAC	U_{LN} = 277 VAC/DC; U_{LL} = 480 VAC	
Voltage path input resistance (typ.)	1071 kΩ		
Measurement current (max.)	1 A	1 A	5 A
Current path input resistance (typ.)	0.022 Ω		0.005 Ω
Resolution [bit]	16 bits		
Measurement method	True RMS measurement		
Reference for measurement error	AC current/voltage		
Measurement error (reference temperature)	25 °C		
Measurement error, deviation (max.) from the upper-range value	0.5 %	0.6 %	0.5 %
Frequency range (mains frequency)	45 … 65 Hz		
Limit frequency	7.2 kHz		
Signal form	Any periodic signals (considering the threshold frequencies)	Any (taking the maximum frequency into account)	
Current consumption (5 V system supply)	100 mA		
Rated surge voltage	4 kV		
Data width	2 x 48-bit data; 2 x 24-bit control/status (optional)		
Isolation	4 kV system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-493		

Analog input; Power measurement ► Three-phase power measurement



750-494/000-005



Item description	**Power Measurement; 277 VAC/DC; external shunts**
Version	**Standard**
Item no.	**750-494/000-005**
Order Text	**Power measurement; 277 VAC/DC; external shunts**

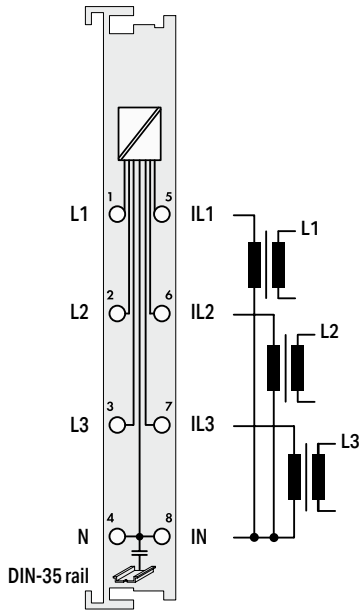
Technical data	
Signal type	Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Measured variable	Line-to-line voltage; Effective power; reactive power; apparent power; Energy sources; Power factor; Mains frequency; Harmonics analysis (up to 41st harmonic); THD
Number of measurement inputs	6 (3 voltage measurement inputs*, 3 current measurement inputs*) *Only 2 voltage/current measurement inputs can be used for DC measurement!
Rated voltage	V_{LN} = 277 V AC/DC; V_{LL} = 480 V AC
Voltage path input resistance (typ.)	1072 kΩ
Measurement current (max.)	1 … 20,000 A via ext. shunts (DIN 43703, DIN EN 60051 (50 … 300 mV))
Current path input resistance (typ.)	15000 Ω
Resolution [bit]	24 bits
Measurement method	True RMS measurement
Reference for measurement error	AC current/voltage
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.5 %
Reference for measurement error (2)	AC current/voltage; DC measurement (2 channels only)
Measurement error, reference temperature (2)	25 °C
Measurement error, deviation (max.) of the upper-range value (2)	1 %
Frequency range (mains frequency)	45 … 65 Hz
Frequency range (harmonics analysis)	0 … 3300 Hz
Limit frequency	15.9 kHz
Signal form	Any periodic signals (considering the threshold frequencies)
Current consumption (5 V system supply)	100 mA
Data width	2 x 128-bit data; 2 x 64-bit control/status
Isolation	4 kV system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-494/000-005

7.4

Analog input; Power measurement ▶ Three-phase power measurement



750-494



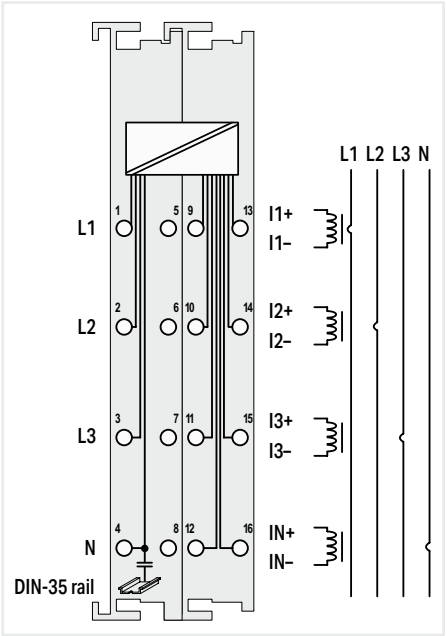
Item description	3-Phase Power Measurement; 480 VAC 1 A			
Version	Standard	ext. temperature	480 VAC, 5 A	480 VAC 5 A; extended temperature
Item no.	**750-494**	**750-494/025-000**	**750-494/000-001**	**750-494/025-001**
Order Text	**3-PHASE POM; 480VAC 1A**	**3-PHASE POM; 480VAC 1A; T**	**3-PHASE POM; 480VAC 5A**	**3-PHASE POM; 480VAC 5A; T**

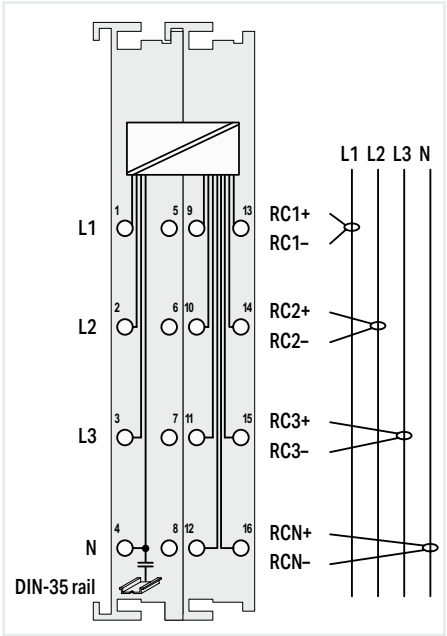
Technical data				
Signal type	Power measurement			
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD			
Measured variable	Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi; Harmonics (up to 41st harmonic); THD			
Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)			
Rated voltage	U_{LN} = 277 VAC/DC; U_{LL} = 480 VAC			
Voltage path input resistance (typ.)	1072 kΩ			
Measurement current (max.)	1 A		5 A	
Current path input resistance (typ.)	0.022 Ω		0.005 Ω	
Resolution [bit]	24 bits			
Measurement method	True RMS measurement			
Reference for measurement error	AC current/voltage			
Measurement error (reference temperature)	25 °C			
Measurement error, deviation (max.) from the upper-range value	0.5 %			
Frequency range (mains frequency)	45 … 65 Hz			
Frequency range (harmonics analysis)	0 … 3300 Hz			
Limit frequency	15.9 kHz			
Signal form	Any periodic signals (considering the threshold frequencies)			
Current consumption (5 V system supply)	100 mA			
Rated surge voltage	4 kV			
Data width	2 x 128-bit data; 2 x 64-bit control/status			
Isolation	4 kV system/field			
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C	-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-494			

Analog input; Power measurement ▶ Three-phase power measurement



750-495

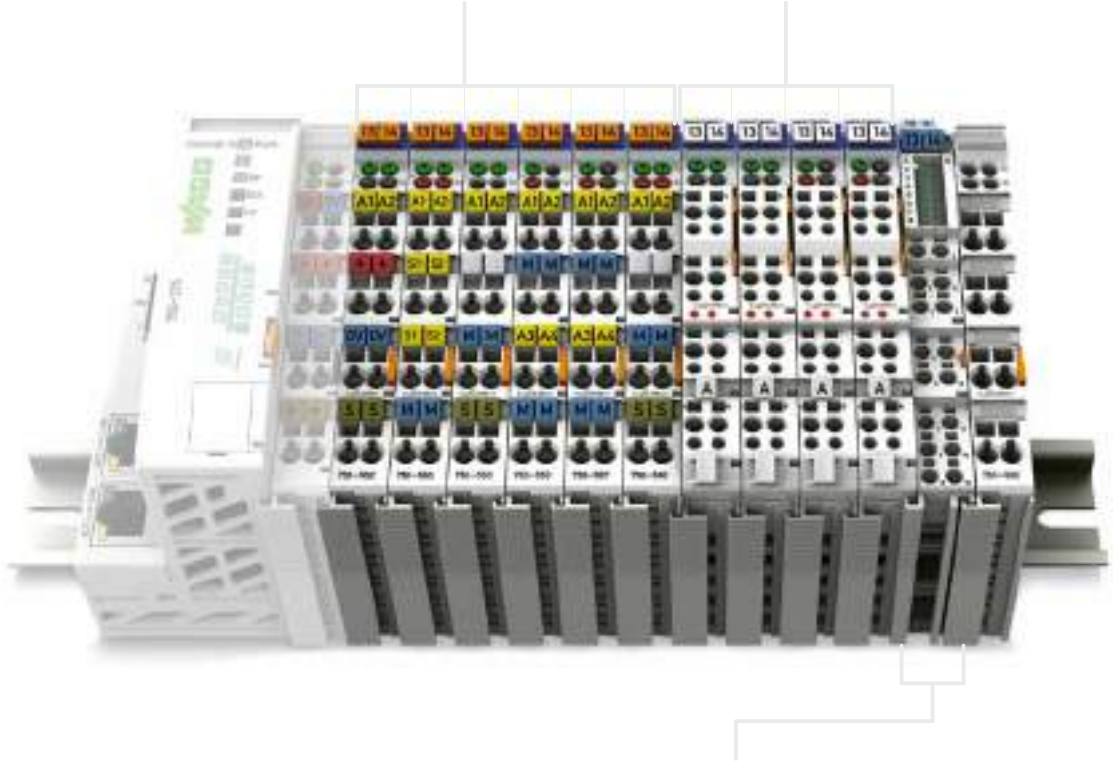




Item description	3-Phase Power Measurement; 690 VAC 1 A		3-Phase Power Measurement; 690 VAC Rogowski coils
Version	Standard	690 VAC 5 A	690 VAC Rogowski coils
Item no.	750-495	750-495/000-001	750-495/000-002
Order Text	3-PHASE POM; 690VAC 1A	3-PHASE POM; 690VAC 5A	3-PHASE POM; 690VAC R.C.
Technical data			
Signal type	Power measurement		Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD		Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Measured variable	Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi; Harmonics (up to 41st harmonic); THD; Current measurement in N-conductor		Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi; Harmonics (up to 41st harmonic); THD; Current measurement in N-conductor
Number of measurement inputs	7 (3 voltage measurement inputs, 4 differential current measurement inputs)	7 (3 Spannungsmesseingänge, 4 differentielle Strommesseingänge)	7 (3 Spannungsmesseingänge, 4 differentielle Strommesseingänge)
Rated voltage	V_{LN} = 400 V AC; V_{LL} = 690 V AC	U_{LN} = 400 V AC; U_{LL} = 690 V AC	V_{LN} = 400 VAC; V_{LL} = 690 VAC
Voltage path input resistance (typ.)	1429 kΩ		1429 kΩ
Measurement current (max.)	1 A	5 A	Rogowski Coils RT500/RT2000
Current path input resistance (typ.)	0.022 Ω	0.005 Ω	44000 Ω
Resolution [bit]	24 bits		24 bits
Measurement method	True RMS measurement		True RMS measurement
Reference for measurement error	AC current/voltage		AC current/voltage
Measurement error (reference temperature)	25 °C		25 °C
Measurement error, deviation (max.) from the upper-range value	0.5 %		0.5 %
Frequency range (mains frequency)	45 … 65 Hz		45 … 65 Hz
Frequency range (harmonics analysis)	0 … 3300 Hz		0 … 3300 Hz
Limit frequency	15.9 kHz		15.9 kHz
Signal form	Any periodic signals (considering the threshold frequencies)		Any periodic signals (considering the threshold frequencies)
Current consumption (5 V system supply)	100 mA		100 mA
Rated surge voltage	6 kV		6 kV
Data width	2 x 128-bit data; 2 x 64-bit control/status		2 x 128-bit data; 2 x 64-bit control/status
Isolation	6 kV system/field		6 kV system/field
Ambient temperature (operation)	0 … +55 °C		0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm		(24 x 100 x 67.8) mm
Approvals	CE; Marine		CE; Marine
For data sheet and additional information, see:	wago.com/750-495		wago.com/750-495

Housing Design (750 Series)	
Dimensions W x H x D	12 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	12 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch



I/O System –
750 XTR Series



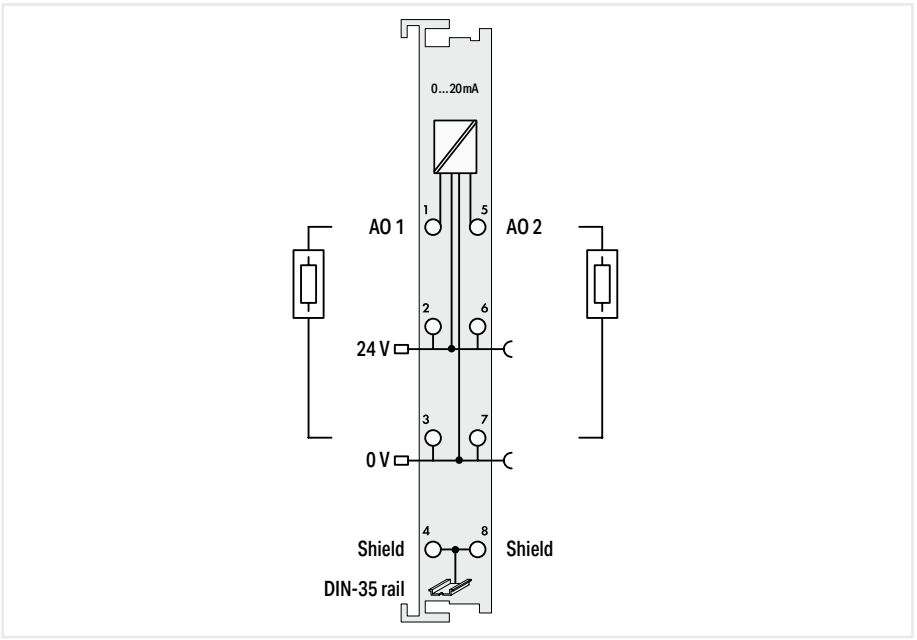
I/O System – 750 and 753 Series, Analog Output Modules
Contents

Function	2-Channel AO	4-Channel AO	8-Channel AO	Description	Item Number				Page
					Standard	/S5 Customized Data Format	Extended Temperature	Pluggable	
0 … 20 mA	■			2-Channel Analog Output; 0 … 20 mA	750-552	750-552/000-200	750-552/025-000	753-552	362
		■		4-Channel Analog Output; 0 … 20 mA	750-553			753-553	363
4 … 20 mA	■			2-Channel Analog Output; 4 … 20 mA	750-554	750-554/000-200	750-554/025-000	753-554	364
		■		4-Channel Analog Output; 4 … 20 mA	750-555			753-555	365
0/4 … 20 mA	■			2-Channel Analog Output; 0/4 … 20 mA; 16 Bits; 6 … 18 VDC	750-563*				366
±10 V	■			2-Channel Analog Output; ±10 VDC	750-556	750-556/000-200		753-556	367
		■		4-Channel Analog Output; ±10 VDC	750-557*			753-557	368
0 … 10 V	■			2-Channel Analog Output; 0 … 10 VDC; 10 Bits; 100 mW/24 V	750-560				369
	■			2-Channel Analog Output; 0 … 10 VDC	750-550	750-550/000-200		753-550	370
		■		4-Channel Analog Output; 0 … 10 VDC	750-559*		750-559/025-000	753-559	371
0 … 10 V/±10 V	■			2-Channel Analog Output; 0 … 10 VDC/±10 V; 16 Bits	750-562				372
			■	8-Channel Analog Output; 0 … 10 VDC/±10 V	750-597				373
Voltage/Current		■		4-Channel Analog Output; Voltage/Current	750-564				374
Ex i									See Section 7.9
*This module is also available as a variant of the 750 XTR Series.									See Section 8

Analog output ▶ 0 … 20 mA



750-552



Item description	2-Channel Analog Output; 0 … 20 mA			
Version	Standard	ext. temperature	pluggable (delivery without connector)	Data format (S5 control)
Item no.	750-552	750-552/025-000	753-552	750-552/000-200
Order Text	2AO; 0-20mA	2AO; 0-20mA; T	2AO; 0-20mA	2AO; 0-20mA; S5

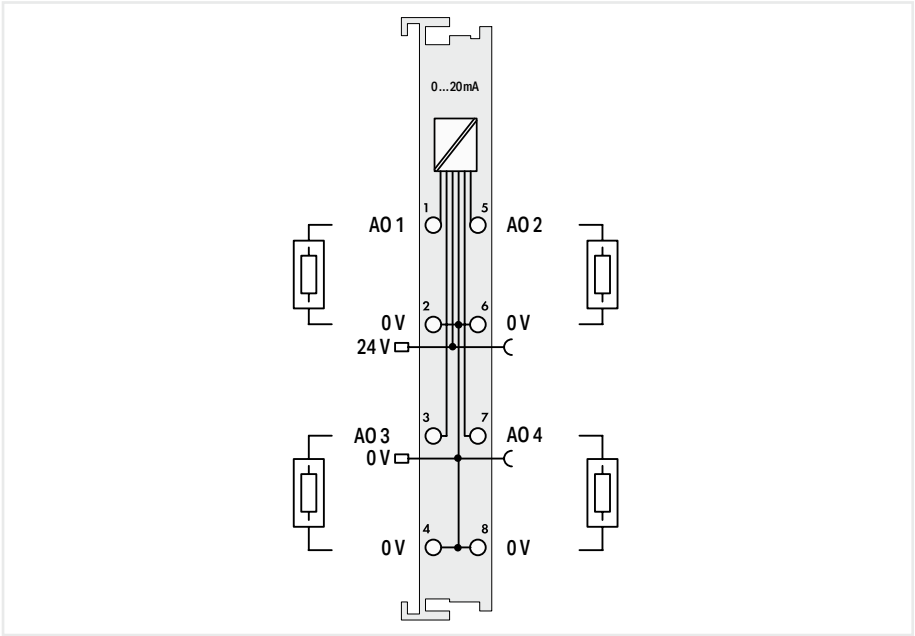
Technical data				
Pluggable connector	-		pluggable	-
Customized data format	-			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2			
Signal type	Current			
Signal type (current)	0 … 20 mADC			
Actuator connection	2 x (2-wire)			
Load impedance (current output)	≤ 600 Ω			
Resolution [bit]	12 bits			
Conversion time (typ.)	2 ms			
Linearity	±10 µA			
Output error, reference temperature	25 °C			
Output error, deviation (max.) of the upper-range value	0.1 %			
Temperature error (max.) of the output range value	0.01 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption (5 V system supply)	70 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-552		wago.com/753-552	wago.com/750-552/000-200

Accessories	Item no.	Item no.	Item no.	Item no.
Plug	-	-	753-110	-

Analog output ▶ 0 … 20 mA



750-553



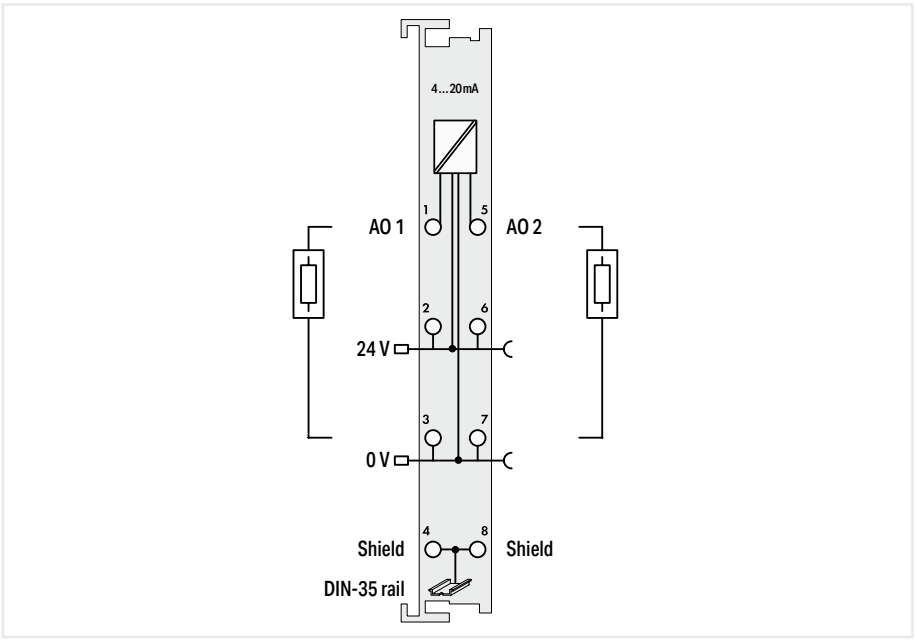
Item description	4-Channel Analog Output; 0 … 20 mA	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-553**	**753-553**
Order Text	**4AO; 0-20mA**	**4AO; 0-20mA**

Technical data		
Pluggable connector	-	pluggable
Number of analog outputs	4	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Actuator connection	4 x (2-wire)	
Load impedance	Either 0 … 300 Ω or 300 … 600 Ω (same resistance for all load impedances)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Output error, reference temperature	25 °C	
Output error, deviation (max.) of the upper-range value	0.1 %	
Temperature error (max.) of the output range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	60 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-553	wago.com/753-553
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog output ▶ 4 … 20 mA



750-554

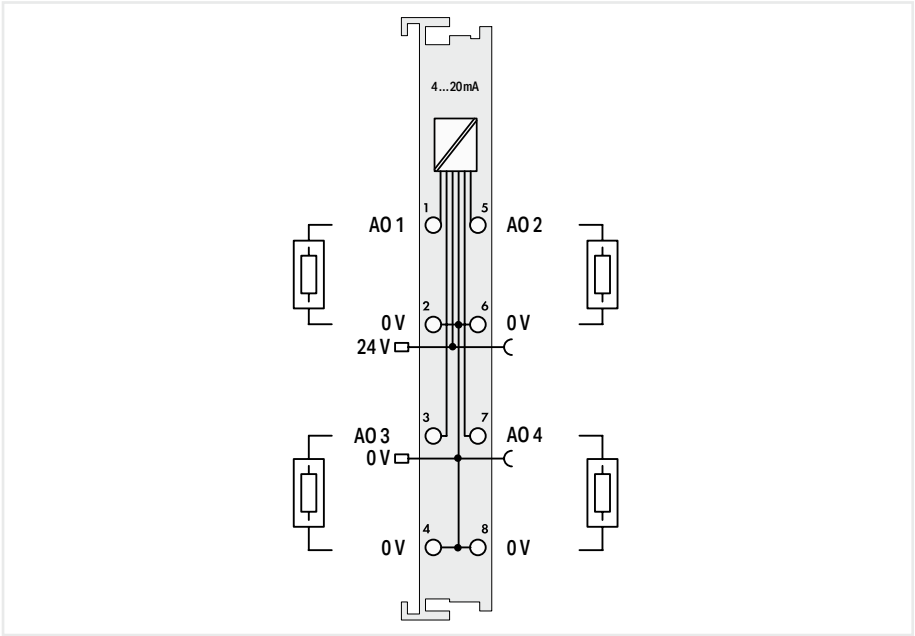


Item description	2-Channel Analog Output; 4 … 20 mA			
Version	Standard	ext. temperature	pluggable (delivery without connector)	Data format (S5 control)
Item no.	**750-554**	**750-554/025-000**	**753-554**	**750-554/000-200**
Order Text	**2AO; 4-20mA**	**2AO; 4-20mA; T**	**2AO; 4-20mA**	**2AO; 4-20mA; S5**
Technical data				
Pluggable connector	-		pluggable	-
Customized data format	-			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2			
Signal type	Current			
Signal type (current)	4 … 20 mADC			
Actuator connection	2 x (2-wire)			
Load impedance (current output)	≤ 600 Ω			
Resolution [bit]	12 bits			
Conversion time (typ.)	2 ms			
Linearity	±10 µA			
Output error, reference temperature	25 °C			
Output error, deviation (max.) of the upper-range value	0.1 %			
Temperature error (max.) of the output range value	0.015 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption (5 V system supply)	70 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
For data sheet and additional information, see:	wago.com/750-554		wago.com/753-554	wago.com/750-554/000-200
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110	-

Analog output ▶ 4 … 20 mA



750-555



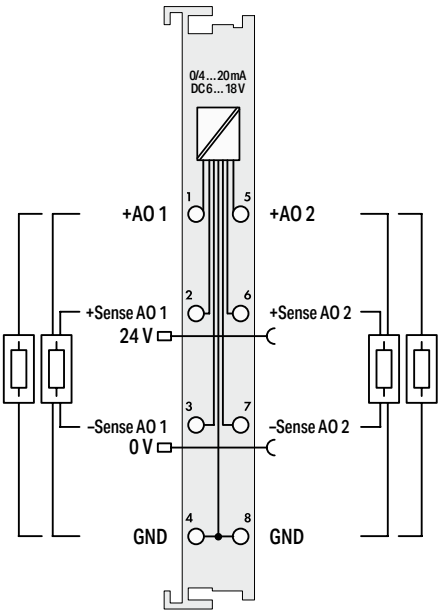
Item description	4-Channel Analog Output; 4 … 20 mA	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-555**	**753-555**
Order Text	**4AO; 4-20mA**	**4AO; 4-20mA**

Technical data		
Pluggable connector	-	pluggable
Number of analog outputs	4	
Signal type	Current	
Signal type (current)	4 … 20 mADC	
Actuator connection	4 x (2-wire)	
Load impedance	Either 0 … 300 Ω or 300 … 600 Ω (same resistance for all load impedances)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Output error, reference temperature	25 °C	
Output error, deviation (max.) of the upper-range value	0.1 %	
Temperature error (max.) of the output range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	60 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-555	wago.com/753-555
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog output ▶ Configurable: current/voltage



750-563



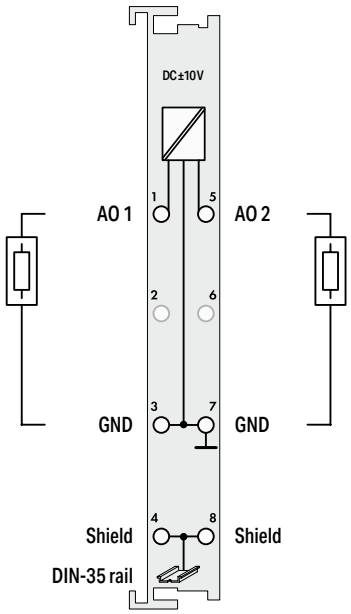
Item description	**2-Channel Analog Output; 0/4 … 20 mA; 16 Bits; 6 … 18 VDC**
Version	**Standard**
Item no.	**750-563**
Order Text	**2AO; 0/4-20mA; 16bits; 6-18 VDC**

Technical data	
Number of analog outputs	2
Signal type	Voltage; Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC
Signal type (voltage)	6 … 18 VDC
Actuator connection	2 x (2-wire, 4-wire)
Load impedance (current output)	≤ 500 Ω
Load impedance (voltage output)	≥ 1.8 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	5 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	< ±100 ppm
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	95 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-563

Analog output ▶ ±10 V



750-556



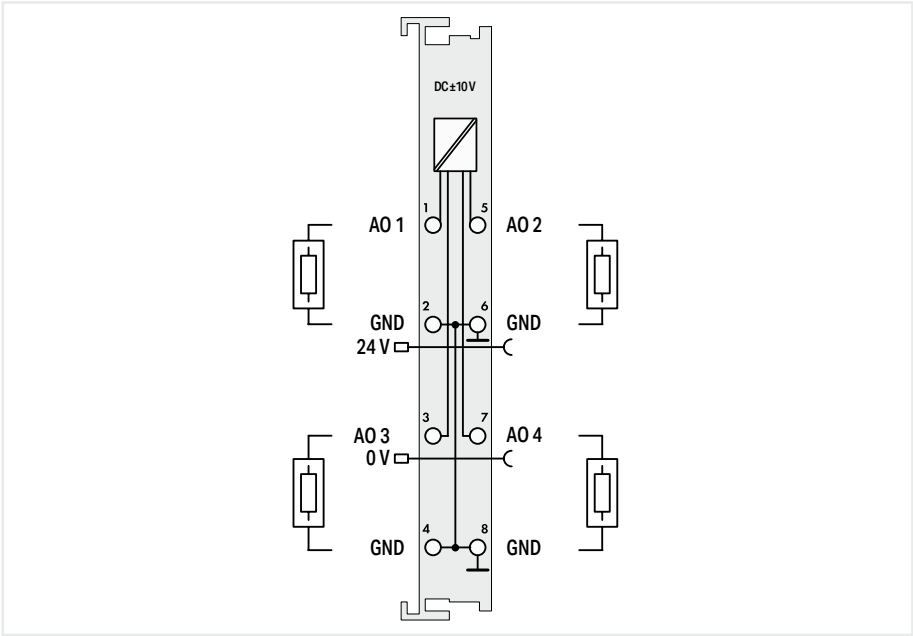
Item description	2-Channel Analog Output; ±10 VDC		
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)
Item no.	**750-556**	**753-556**	**750-556/000-200**
Order Text	**2AO; ±10 VDC**	**2AO; ±10 VDC**	**2AO; ±10 VDC; S5**

Technical data			
Pluggable connector	-	pluggable	-
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2		
Signal type	Voltage		
Signal type (voltage)	-10 … +10 VDC		
Actuator connection	2 x (2-wire)		
Load impedance (voltage output)	≥ 5 kΩ		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Linearity	±10 mV		
Output error, reference temperature	25 °C		
Output error, deviation (max.) of the upper-range value	0.1 %		
Temperature error (max.) of the output range value	0.01 %/K		
Current consumption (5 V system supply)	65 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-556	wago.com/753-556	wago.com/750-556/000-200
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-

Analog output ▶ ±10 V



750-557



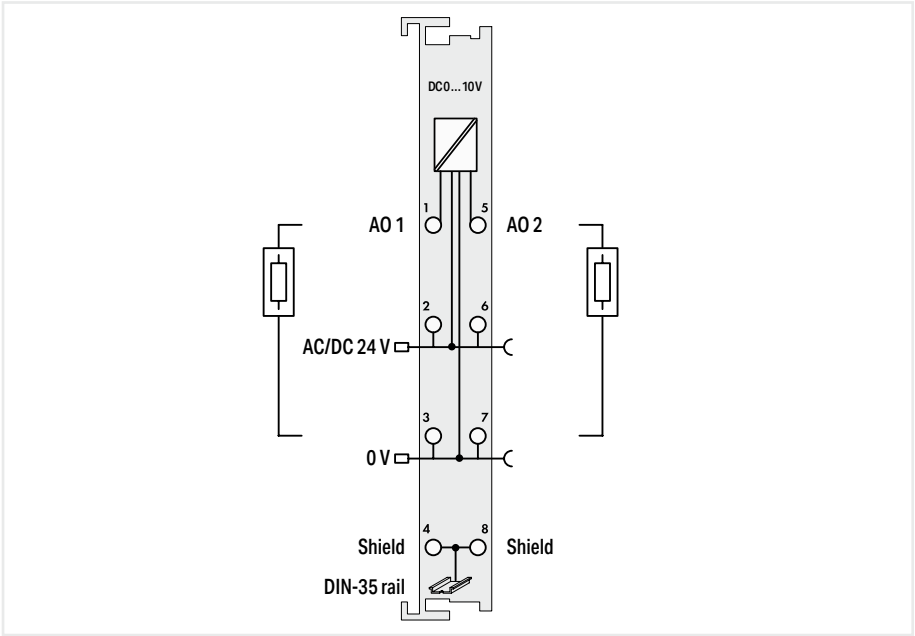
Item description	4-Channel Analog Output; ±10 VDC	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-557**	**753-557**
Order Text	**4AO; ±10 VDC**	**4AO; ±10 VDC**

Technical data		
Pluggable connector	-	pluggable
Number of analog outputs	4	
Signal type	Voltage	
Signal type (voltage)	-10 … +10 VDC	
Actuator connection	4 x (2-wire)	
Load impedance (voltage output)	≥ 5 kΩ	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Output error, reference temperature	25 °C	
Output error, deviation (max.) of the upper-range value	0.1 %	
Temperature error (max.) of the output range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	125 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-557	wago.com/753-557
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Analog output ▶ 0 … 10 V



750-560



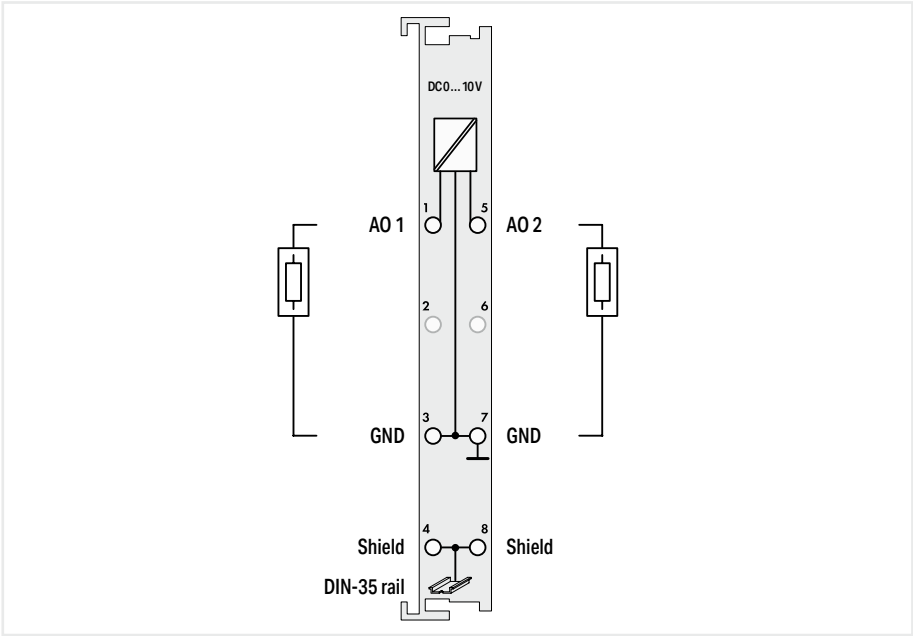
Item description	**2-Channel Analog Output; 0 … 10 VDC; 10 Bits; 100 mW/24 V**
Version	**Standard**
Item no.	**750-560**
Order Text	**2AO; 0-10 VDC; 10Bit; 100mW/ 24V**

Technical data	
Number of analog outputs	2
Signal type	Voltage
Signal type (voltage)	0 … 10 VDC
Actuator connection	2 x (2-wire)
Load impedance (voltage output)	≥ 1 kΩ
Resolution [bit]	10 bits
Conversion time (typ.)	10 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.02 %/K
Supply voltage (field)	24 VAC/DC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	16 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-560

Analog output ▶ 0 … 10 V



750-550

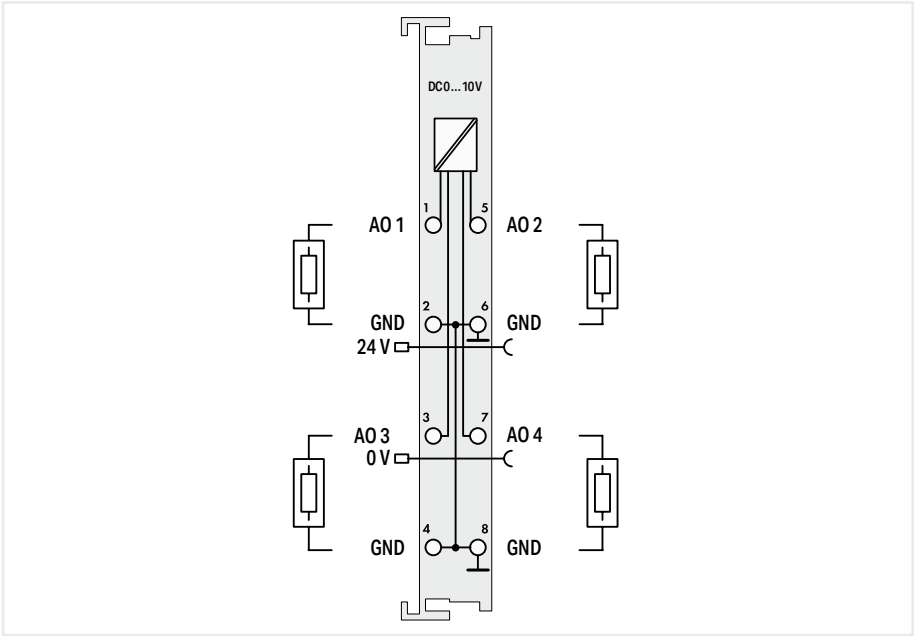


Item description	2-Channel Analog Output; 0 … 10 VDC		
Version	Standard	pluggable (delivery without connector)	Data format (S5 control)
Item no.	**750-550**	**753-550**	**750-550/000-200**
Order Text	**2AO; 0-10 VDC**	**2AO; 0-10 VDC**	**2AO; 0-10 VDC; S5**
Technical data			
Pluggable connector	-	pluggable	-
Customized data format	-		The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2		
Signal type	Voltage		
Signal type (voltage)	0 … 10 VDC		
Actuator connection	2 x (2-wire)		
Load impedance (voltage output)	≥ 5 kΩ		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Linearity	±10 mV		
Output error, reference temperature	25 °C		
Output error, deviation (max.) of the upper-range value	0.1 %		
Temperature error (max.) of the output range value	0.01 %/K		
Current consumption (5 V system supply)	65 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-550	wago.com/753-550	wago.com/750-550/000-200
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-

Analog output ▶ 0 … 10 V



750-559



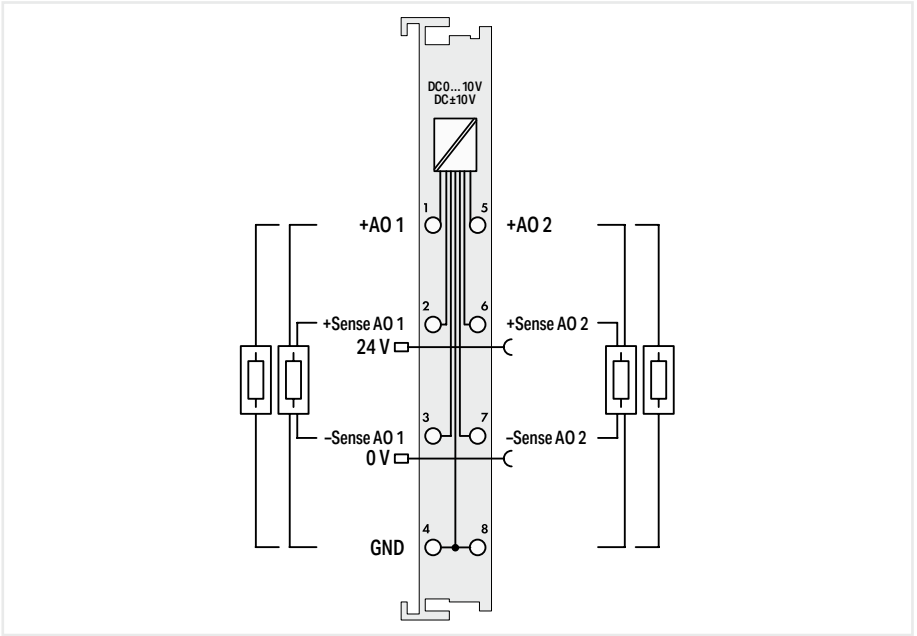
Item description	4-Channel Analog Output; 0 … 10 VDC		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-559**	**750-559/025-000**	**753-559**
Order Text	**4AO; 0-10 VDC**	**4AO; 0-10 VDC; T**	**4AO; 0-10 VDC**

Technical data			
Pluggable connector	-		pluggable
Number of analog outputs	4		
Signal type	Voltage		
Signal type (voltage)	0 … 10 VDC		
Actuator connection	4 x (2-wire)		
Load impedance (voltage output)	≥ 5 kΩ		
Resolution [bit]	12 bits		
Conversion time (typ.)	10 ms		
Output error, reference temperature	25 °C		
Output error, deviation (max.) of the upper-range value	0.1 %		
Temperature error (max.) of the output range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	125 mA		
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-559		wago.com/753-559
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Analog output ▶ Configurable: voltage



750-562



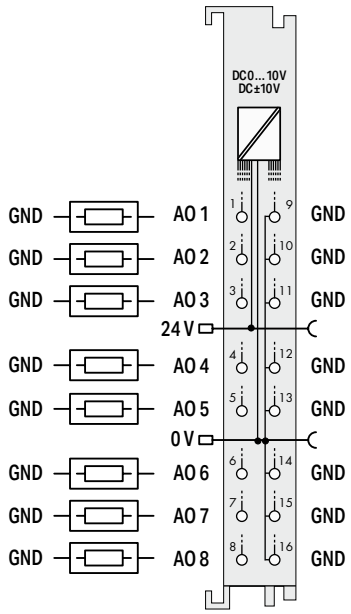
Item description	**2-Channel Analog Output; 0 … 10 VDC/±10 V; 16 bits**
Version	**Standard**
Item no.	**750-562**
Order Text	**2AO; 0-10 V/±10 VDC; 16bits**

Technical data	
Number of analog outputs	2
Signal type	Voltage
Signal type (voltage)	0 … 10 VDC; -10 … +10 VDC
Actuator connection	2 x (2-wire, 4-wire)
Load impedance (voltage output)	≥ 5 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	5 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	< ±100 ppm
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	125 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-562

Analog output ▶ Configurable: voltage



750-597



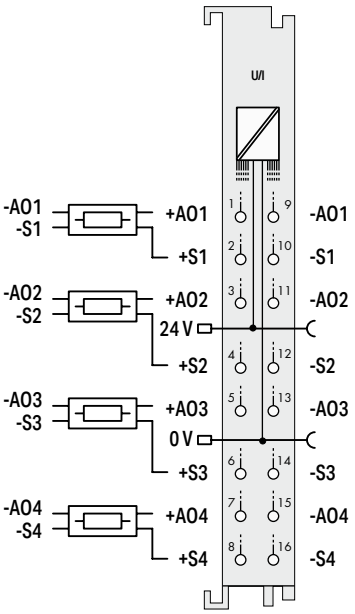
Item description	**8-Channel Analog Output; 0 … 10 VDC/±10 V**
Version	**Standard with 16 connectors**
Item no.	**750-597**
Order Text	**8AO; 0-10 V/±10 VDC**

Technical data	
Number of analog outputs	8
Signal type	Voltage
Signal type (voltage)	0 … 10 VDC
Actuator connection	8 x (2-wire)
Load impedance (voltage output)	≥ 2 kΩ
Resolution [bit]	12 bits
Conversion time (typ.)	13 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.1 %
Temperature coefficient	≤ ±10 ppm/K of the largest output area
Supply voltage (field)	24 VDC (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	61 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-597

Analog output ▶ Voltages and currents (configurable channel for channel)



750-564



Item description	**4-Channel Analog Output; Voltage/Current**
Version	**Standard with 16 connectors**
Item no.	**750-564**
Order Text	**4AO U/I**

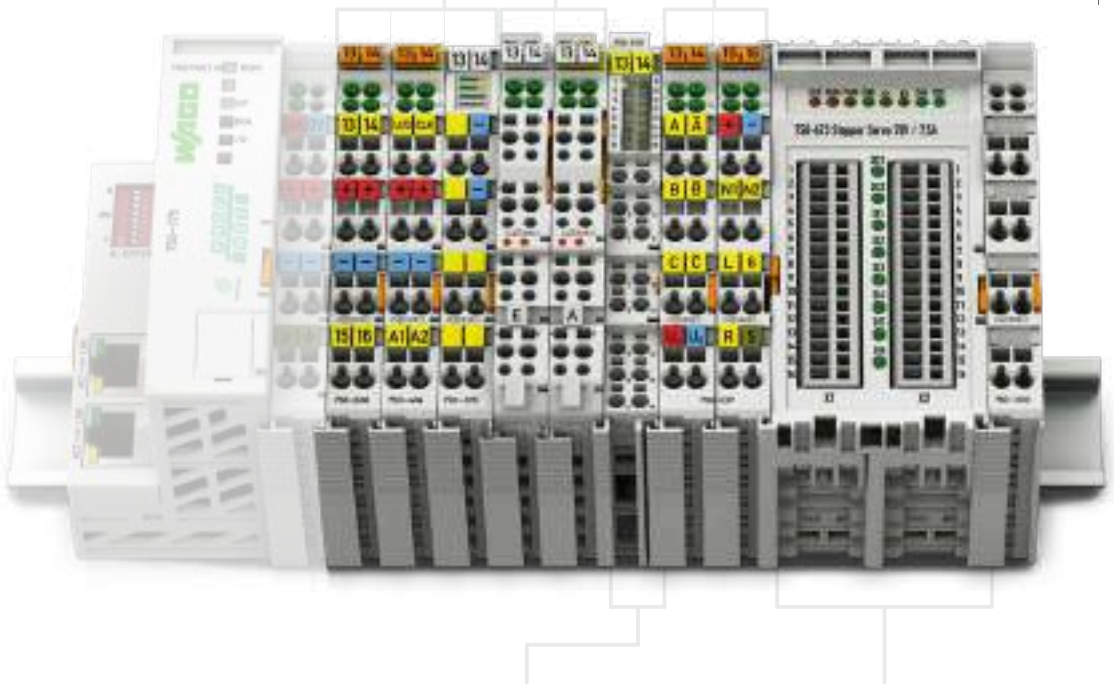
Technical data	
Number of analog outputs	4
Signal type	Voltage; Current
Signal type (current)	0 … 10 mA; 2 … 10 mA; -10 … +10 mA; 0 … 20 mA; 4 … 20 mA; -20 … +20 mA; 0 … 22 mA; -22 … +22 mA; 0 … 12 mA; -12 … +12 mA
Signal type (voltage)	0 … 5 V; 1 … 5 V; -5 … +5 V; 0 … 10 V; 2 … 10 V; -10 … +10 V; 0 … 12 V; -12 … +12 V
Actuator connection	4 x (2-wire); Voltage outputs can optionally be connected in 4-wire technology via the sense lines.
Load impedance (current output)	≤ 600 Ω
Load impedance (voltage output)	≥ 1 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	3 ms
Reference for measurement error	Voltage/current
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	U: ±25 ppm/K of the upper-range value; I: ±50 ppm/K of the upper-range value
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	55 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-564

7.5

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch

Housing Design (750 Series), Double Width	
Dimensions W x H x D	24 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

Specialty Housing	
Dimensions W x H x D	51 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 14 AWG
Strip length	5 … 6 mm / 0.22 inch



I/O System –
750 XTR Series



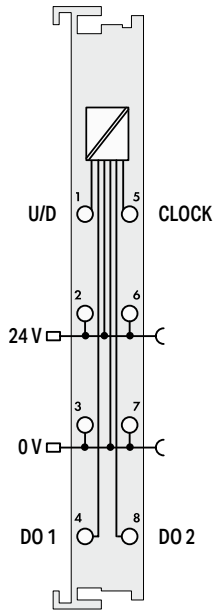
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Ex i		See Section 7.9			
*This module is also available as a variant of the 750 XTR Series.		See Section 8			

Counter ▸ Up/down counter



750-404



Item description	Up/Down Counter				
Version	Standard	pluggable (delivery without connector)	Switch output	Enable input	Peak-time counter
Item no.	750-404	753-404	750-404/000-004	750-404/000-001	750-404/000-002
Order Text	Up/Down Counter	Up/Down Counter	Up/Down Counter; Switch Output	Up Counter; Release Input	Peak Time Counter
Technical data					
Pluggable connector	-	pluggable	-		
Number of digital outputs	2				
Number of counters	1				
Output current per channel	0.5 A				
Output current	short-circuit-protected				
Voltage range for signal (0)	−3 … +5 VDC				
Voltage range for signal (1)	15 … 30 VDC				
Input current (typ.)	6 mA				
Switching frequency (max.)	100 kHz				10 kHz
Counter depth	32 bits				
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Current consumption (5 V system supply)	70 mA				
Data width	32-bit data; 8-bit control/status				
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-404	wago.com/753-404	wago.com/750-404/000-004		
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	-	-

Up/down counter: When the U/D input is switched with +24 V, the counting direction is upward. When an input is not switched or is 0 V, the counting direction is downward.

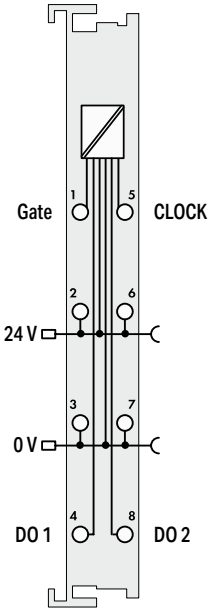
Up counter: The counting is locked when the GATE input is open or 0 V is present. Counting is enabled with +24 V at the GATE input.

Peak-time counter: The count pulses at the CLOCK input are recorded over a preset period of 10 seconds.

Counter ▶ Frequency counter



750-404/000-003



Item description	Frequency Counter	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-404/000-003**	**753-404/000-003**
Order Text	**Frequency Counter**	**Frequency Counter; 100kHz**

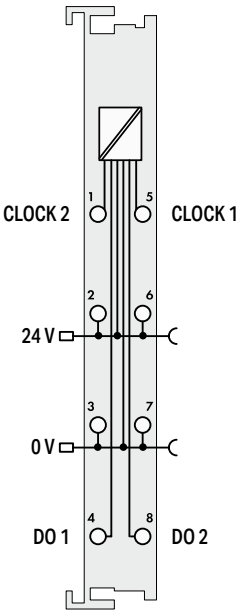
Technical data		
Pluggable connector	-	pluggable
Number of digital outputs	2	
Number of counters	1	
Output current per channel	0.5 A	
Output current	short-circuit-protected	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Input current (typ.)	5 mA	
Switching frequency (max.)	100 kHz	
Counter depth	32 bits	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	70 mA	
Data width	32-bit data; 8-bit control/status	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-404/000-003	wago.com/753-404/000-003
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

The frequency counter measures the 24 V signal pulse period at the CLOCK input and converts it to a frequency value. The measurement is enabled when the GATE input is open or 0 V is present. Measurement is disabled when 24 V are present at the GATE input.

Counter ▶ 2 up counters



750-404/000-005



Item description	**2 Up Counters; 16 bits**	
Version	**Standard**	**pluggable (delivery without connector)**
Item no.	**750-404/000-005**	**753-404/000-005**
Order Text	**2Up Counter; 16bits**	**2Up Counter; 16bits**

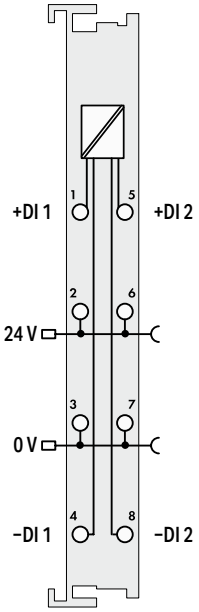
Technical data		
Pluggable connector	-	pluggable
Number of digital outputs	2	
Number of counters	2	
Output current per channel	0.5 A	
Output current	short-circuit-protected	
Voltage range for signal (0)	–3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Input current (typ.)	5 mA	
Switching frequency (max.)	5 kHz	
Counter depth	16 bits	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	70 mA	
Data width	32-bit data; 8-bit control/status	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-404/000-005	wago.com/753-404/000-005
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

This module features two 16-bit up counters. The count pulses are recorded at the CLOCK 1 and CLOCK 2 inputs.

Counter ▶ 2 up/down counters



750-638



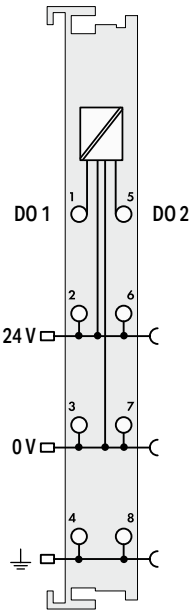
Item description	2 Up/Down Counters; 16 bits; 500 Hz		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-638**	**750-638/025-000**	**753-638**
Order Text	**2Up/Down Counter; 16bits; 500Hz**	**2Up/Down Counter; 500Hz; T**	**2Up/Down Counter; 16bits; 500Hz**

Technical data			
Pluggable connector	-		pluggable
Number of counters	2		
Voltage range for signal (0)	−3 … +5 VDC (per EN 61131 Type 1)		
Voltage range for signal (1)	15 … 30 VDC (per EN 61131 Type 1)		
Switching frequency (max.)	500 Hz		
Minimum pulse width (0, 1)	1 ms		
Counter depth	16 bits		
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	10 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-638		wago.com/753-638
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

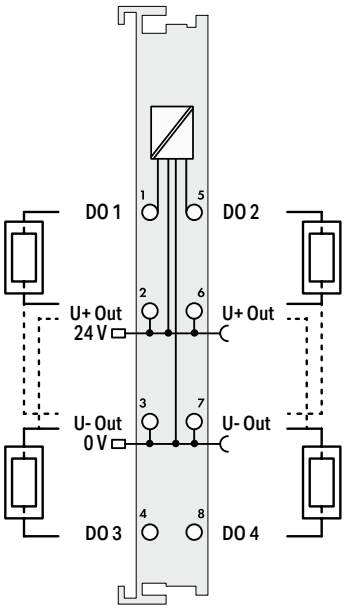
Pulse width output



750-511



Item description	2 Pulse Width Outputs; 24 VDC; 0.1 A; 250 Hz			
Version	Standard	pluggable (delivery without connector)	2 kHz; Frequency counter	100 Hz
Item no.	750-511	753-511	750-511/000-001	750-511/000-002
Order Text	2PWM; 24 VDC; 0.1A; 250kHz	2PWM; 24 VDC; 0.1A; 250Hz	2PWM; 24 VDC; 0.1A; 2kHz; Frequency Counter	2PWM; 24 VDC; 0.1A; 100Hz
Technical data				
Pluggable connector	-	pluggable	-	
Number of digital outputs	2			
Load type	Resistive, inductive			
Pulse frequency	250 Hz		2 Hz … 2 kHz	100 Hz
Duty cycle	0 … 100 %		50 %	0 … 100 %
Output current per channel	0.1 A			
Output current	short-circuit-protected			
Switching frequency (max.)	-			
Resolution [bit]	10 bits			
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Current consumption (5 V system supply)	70 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status			
Operating mode	-			
Isolation	500 V system/field			
Ambient temperature (operation)	0 … +55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx			
Approvals (pending)	-			
For data sheet and additional information, see:	wago.com/750-511	wago.com/753-511	wago.com/750-511/000-001	
Accessories	Item no.	Item no.	Item no.	Item no.
Plug	-	753-110	-	-



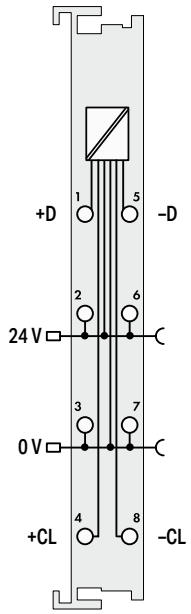
4-Channel Pulse Width Outputs; 24 VDC; 0.2 A; 20 kHz
Standard
750-677
4PWM; 24 VDC; 0.2A; 20kHz
-
4
-
0 … 20,000 Hz; integer
0 … 100 %; 11-bit resolution
0.2 A
short-circuit-protected; 0.4 A, short-circuit-protected in bridge mode
20 kHz
-
24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
85 mA
4 x 16-bit data; 4 x 8-bit control/status
1: PWM DC (variable duty cycle); 2: PWM Frq (variable frequency); 3: PWM Frq - Cnt; 4: Pulse Frq - Cnt; 5: PWM Pulse - Dir
500 V system/field
0 … +55 °C
(12 x 100 x 67.8) mm
CE
Marine; OrdLoc/HazLoc
wago.com/750-677
Item no.
-

This module outputs separately adjustable PWM signals at four channels. The channels can be individually configured as LSS (low-side switching) or HSS (high-side switching) and are short-circuit protected. The PWM signals are each 16 bits wide.
The module supports five operating modes. In both “PWM DC” and “PWM Frq” operating modes, all four channels may be used independently. The bridge mode can also be activated if the same operating mode is set on each channel pair (1 and 2 or 3 and 4). Both channels work synchronously and can be connected in parallel. In the other three complex operating modes, two channels functionally correlate with each other.
The first channel outputs the PWM signal and the second channel a static signal (“0” or “1”).
Refer to the manual (“Operating Modes” section) for all setting options and the bit signification in the process image.
The “PWM DC” operating mode is set by default.

Distance and angle measurement ▶ SSI transmitter interface

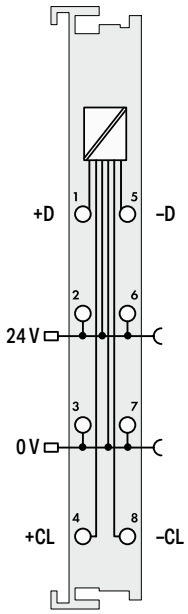


750-630/003-000



Item description	SSI Transmitter Interface				
Version	adjustable	24 bits; 125 kHz; gray code	24 bits; 125 kHz; gray code; status byte	15 bits; 125 kHz; gray code; status byte	24 bits; 250 kHz; gray code
Item no.	**750-630/003-000**	**750-630**	**750-630/000-004**	**750-630/000-005**	**750-630/000-006**
Order Text	**SSI Interface; adjust**	**SSI Interface; 24bits; 125kHz; Gray**	**SSI Interface; 24bits; 125kHz; Gray; Status**	**SSI Interface; 15bits; 125kHz; Gray; Status**	**SSI Interface; 24bits; 250kHz; Gray**
Technical data					
Encoder connection	On + D, -D / Off + Cl, - Cl				
Supply voltage (encoder)	24 VDC; via power jumper contacts				
Data transmission rate	250 kHz	125 kHz			250 kHz
Serial input	Data width: 1 … 32 bits	Data width: 24 bits		Data width: 15 bits	Data width: 24 bits
Code	Gray code/binary code	Gray code			
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Current consumption (5 V system supply)	20 mA				
Data width	1 x 32 bits	1 x 32-bit; 1 x 8-bit control/status (optional)			1 x 32 bits
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-630/003-000				

7.6

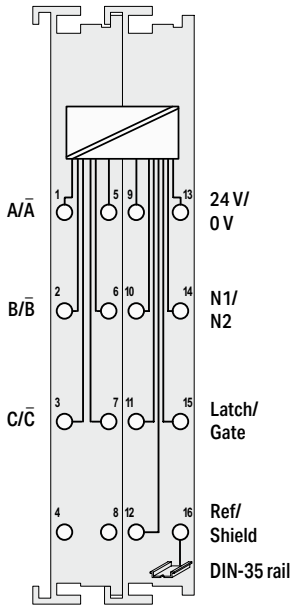


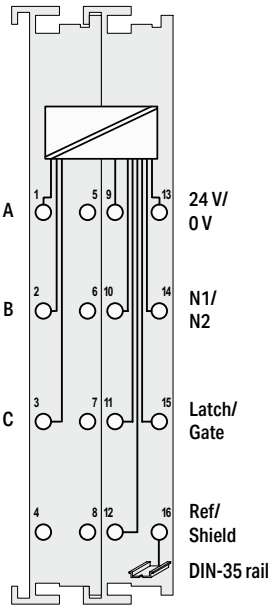
SSI Transmitter Interface						
25 bits; 125 kHz; gray code	13 bits; 125 kHz; gray code	24 bits; 125 kHz; bin. code	25 bits; 125 kHz; bin. code	29 bits; 125 kHz; bin. code	24 bits; 250 kHz; bin. code	13 bits; 250 kHz; bin. code
750-630/000-008	750-630/000-012	750-630/000-001	750-630/000-011	750-630/000-013	750-630/000-002	750-630/000-009
SSI Interface; 25bits; 125kHz; Gray	SSI Interface; 13bits; 125kHz; Gray	SSI Interface; 24bits; 125kHz; Bin	SSI Interface; 25bits; 125kHz; Bin	SSI Interface; 29bits; 125kHz; Bin	SSI Interface; 24bits; 250kHz; Bin	SSI Interface; 13bits; 250kHz; Bin
On + D, -D / Off + CI, - CI						
24 VDC; via power jumper contacts						
125 kHz					250 kHz	
Data width: 25 bits	Data width: 13 bits	Data width: 24 bits	Data width: 25 bits	Data width: 29 bits	Data width: 24 bits	Data width: 13 bits
Gray code		Binary code				
24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)						
20 mA						
1 x 32 bits						
500 V system/field						
0 … +55 °C						
(12 x 100 x 69.8) mm						
CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx						
wago.com/750-630/003-000						

Distance and angle measurement ▶ Incremental encoder interface



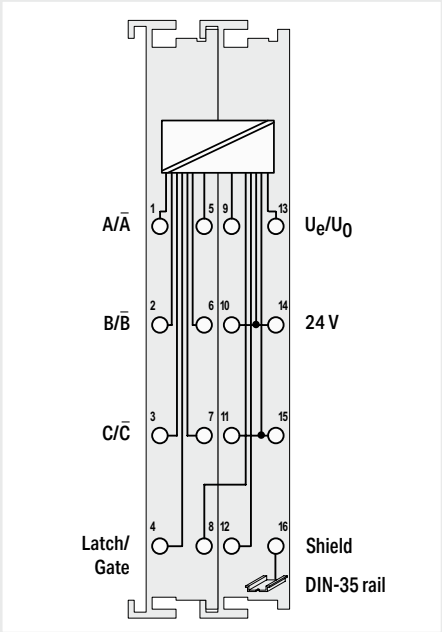
750-637/000-001

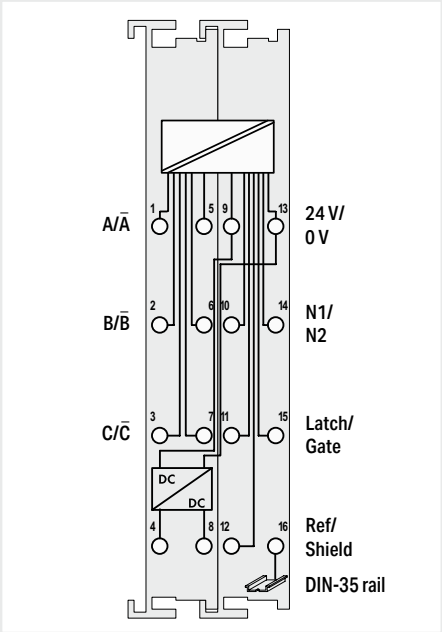




Item description	Incremental Encoder Interface; 24 VDC; Differential input; 32 bits	Incremental Encoder Interface; 24 VDC; Single-ended; 32 bits	
Version	Standard	Standard	Cam output
Item no.	750-637/000-001	750-637/000-002	750-637/000-004
Order Text	Inc. Encoder; 24 VDC; Diff; 32bits	Inc. Encoder; 24 VDC; SE; 32bits	Inc. Encoder; 24 VDC; SE; 32bits; Cam
Technical data			
Encoder connection	A; /A; B; /B; C; /C (differential inputs)	A; B; C (single-ended inputs)	
Counter depth	32 bits	32 bits	
Limit frequency	250 kHz	250 kHz	
Quadrature decoder	4x evaluation	4x evaluation	
Zero impulse (latch)	32 bits	32 bits	
Commands	Reading, setting, activating	Reading, setting, activating	
Supply voltage (encoder)	24 VDC	24 VDC	
Supply current (encoder) max.	300 mA	300 mA	
Output voltage	24 VDC	24 VDC	
Output current per channel	0.5 A	0.5 A	
Output current	short-circuit-protected	short-circuit-protected	
Voltage range for signal (0)	(U_{ABC} - $U_{ABC/}$): -30 … +15 VDC; Latch, gate, ref.: -3 … +5 VDC	−3 … +5 VDC	
Voltage range for signal (1)	(U_{ABC} - $U_{ABC/}$): 15 … 30 VDC; Latch, gate, ref.: 15 … 30 VDC	15 … 30 VDC	
Input current (typ.)	Latch 5 mA, Gate 7 mA, Ref. 7 mA	Latch 5 mA, Gate 7 mA, Ref. 7 mA	
Current consumption, field supply (module with no external load)	35 mA	35 mA	
Current consumption (5 V system supply)	110 mA	110 mA	
Data width	1 x 32-bit data 2 x 8-bit control/status	1 x 32-bit data 2 x 8-bit control/status	
Isolation	500 V system/field	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C	
Dimensions W x H x D	(24 x 100 x 69.8) mm	(24 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-637/000-001	wago.com/750-637/000-001	

7.6



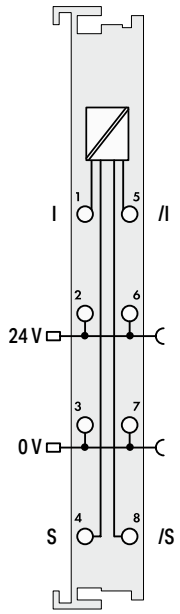


Incremental Encoder Interface; RS-422; 16 bits	Incremental Encoder Interface; RS-422; 32 bits	
Standard	Standard	Single evaluation
750-631/000-004	750-637	750-637/000-003
Inc. Encoder; RS422	Inc. Encoder; RS422; 32bits	Inc. Encoder; RS422; 32bits; Single Interp.
A; /A; B; /B; C; /C (RS-422 inputs)	A; /A; B; /B; C; /C (RS-422 inputs)	
16 bits	32 bits	
1000 kHz	250 kHz	
4x evaluation	4x evaluation	1x report
16 bits	32 bits	
Reading, setting, activating	Reading, setting, activating	
5 VDC	5 VDC	
200 mA	300 mA	
-	24 VDC	
-	0.5 A	
-	short-circuit-protected	
U_{ABC} = 0 V, $U_{ABC/}$ = 5 V; Latch, gate ≤ 5.0 V; External error U ≥ 5.0 V or open input	U_{ABC} = RS-422; Latch, gate, ref.: -3 … +5 VDC	
[ERROR READING XHTML FRAGMENT]	U_{ABC} = RS-422; Latch, gate, ref.: 15 … 30 VDC	
-	Latch 5 mA, Gate 7 mA, Ref. 7 mA	
10 mA	35 mA	
50 mA	110 mA	
2-byte output; 5-byte input; 2x 8-bit control/status (optional); 3 additional output bytes (reserved)	1 x 32-bit data 2 x 8-bit control/status	
500 V system/field	500 V system/field	
0 … +55 °C	0 … +55 °C	
(24 x 100 x 69.8) mm	(24 x 100 x 69.8) mm	
CE; OrdLoc/HazLoc	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	
wago.com/750-631/000-004	wago.com/750-637	

Distance and angle measurement ▶ Digital impulse interface



750-635



Item description	**Digital Impulse Interface**	
Version	**Standard**	**pluggable (delivery without connector)**
Item no.	**750-635**	**753-635**
Order Text	**Digital Impulse Interface**	**Digital Impulse Interface**

Technical data		
Pluggable connector	-	pluggable
Encoder connection	Start/stop; initialization; Uv; ground; shield connection via encoder housing	
Number of inputs	1	
Resolution	1 µm	
Update time (update rate)	2 ms	
Position sensor length	4 m	
Connection requirement (permissible cable type)	RS-422	
Connection requirement (permissible cable length)	500 m	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	45 mA	
Data width	1 x 24-bit data 1 x 8-bit control/status	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-635	wago.com/753-635
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

This digital impulse interface connects position sensors equipped with a start/stop interface. After receiving a read pulse, these sensors deliver a time-delayed reply impulse. The time delay is proportional to the sensor distance. Each sensor may have up to four position transmitters (permanent magnets). Their position data can be accessed serially by the controller and are stored in the process image of the fieldbus coupler as a 24-bit value.
Position sensors with the following features can be used:

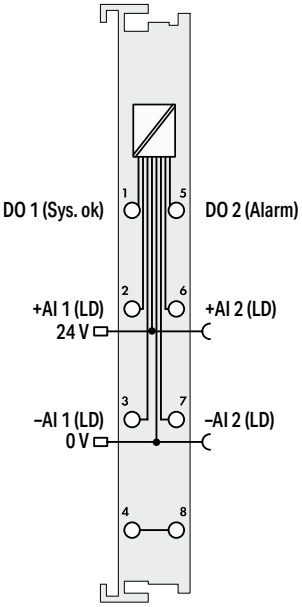
- Start/stop interface with RS-422 differential signals
- 24 V sensor supply

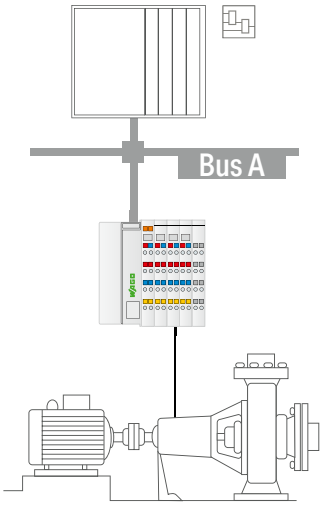
Manufacturer, e.g., Balluff

Vibration monitoring



750-645





Item description	**2-Channel Vibration Velocity/Bearing Condition Monitoring VIB I/O Module**
Version	**Standard**
Item no.	**750-645**
Order Text	**2VIB VRMS/SPM Multi**

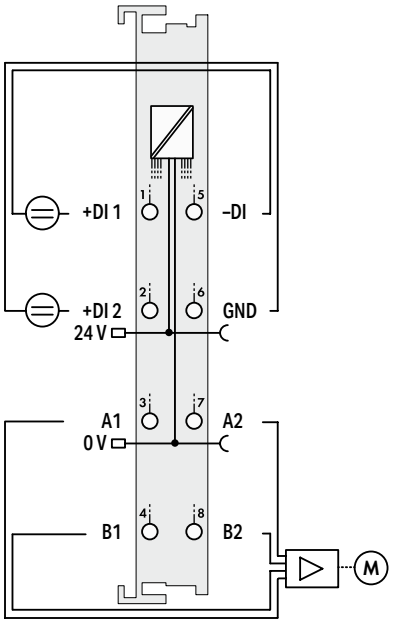
Technical data	
Encoder connection	+AI1, -AI1, +AI2, -AI2
Number of inputs	2
Number of digital outputs	2
Output voltage	24 VDC
Output current per channel	0.5 A
Output current	short-circuit-protected
Device-specific	Both alarm and warning threshold can be set via process image and engineering software.
Oscillating velocity (RMS)	0 … 100 mm/s
Shock impulse (SPM)	-10 … +80 db_{SV}
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	30 mA
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-645

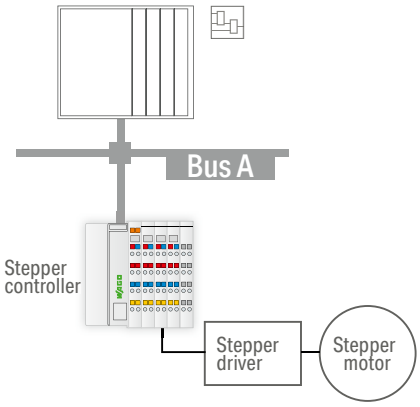
This module is used for online monitoring of machine vibration levels. It records the two most important parameters required for status monitoring: vibration severity and roller bearing condition.
Vibration velocity is a measurement for machines' energy and therefore, a suitable indicator for the vibration forces acting on the machine.
Roller bearing condition is evaluated on the basis of high-frequency shock impulse signals. Shock impulses are momentary impulses arising from mechanical damage to roller bearings or the bearing surfaces.
By recording the measurement results and evaluation in a trend curve, bearing damage can be detected at an early stage. A special Tandem-Piezo® acceleration sensor serves as encoder to facilitate simultaneous measurement of machine vibrations and high-frequency shock impulse signals.

Stepper module ▶ Stepper controller



750-670





Item description	**Stepper Controller; RS-422/24 VDC; 20 mA**
Version	**Standard**
Item no.	**750-670**
Order Text	**Stepper Controller; RS422/24 VDC; 20mA**

Technical data	
Number of outputs	1 channel (2 differential outputs A1, A2, B1, B2)
Signal voltage	5 VDC (internal), 5 … 24 VDC (external)
Resolution	15 bits + 16 bit prescaler
Stepper resolution	23 bits + sign bit
Load type	RS-422, TTL, optocoupler
Output current per channel	0.03 A
Output current	short-circuit-protected
Number of digital inputs	2
Voltage range for signal (0)	–3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	98 mA
Data width	12-byte input/output
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-670

This stepper controller is used to control different drive power sections with pulse/direction interface or incremental encoder input.
The 64 times microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Adjustable current limits for stop, acceleration and constant speed help minimize motor power dissipation. Two configurable inputs for start/stop, limit switches, reference cams, jog/tip, etc., are directly processed by the internal software without delay.
Versatile functions, such as positioning with different acceleration ramps, command tables, cam switch, auto referencing and other event-dependent properties provide this controller with a wide spectrum of possible uses.

Operating modes:

- Step positioning
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

Functions include:

- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

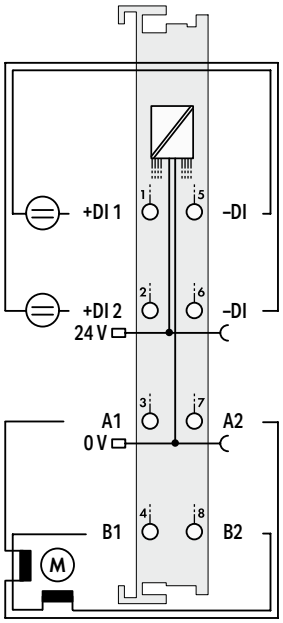
Additional operating modes:

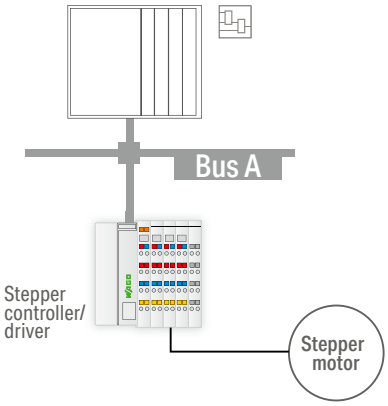
- Pulse width modulation
- Frequency generator
- Single-shot mode

Stepper module ▶ Stepper controller



750-671





Item description	**Stepper Controller; 24 VDC; 1.5 A**
Version	**Standard**
Item no.	**750-671**
Order Text	**Stepper Controller; 24 VDC; 1.5A**

Technical data	
Number of outputs	1 stepper motor (2 phases/bipolar)
Output current (max.) (motor)	Up to 2 x 1.5 A peak value; 1 A rms
Stepper frequency (full-step) max.	7812 Hz
Resolution	15 bits + 16 bit prescaler
Stepper resolution	23 bits + sign bit
Number of digital inputs	2
Voltage range for signal (0)	–3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	85 mA
Data width	12-byte input/output
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; EAC ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-671

This stepper controller has an on-board power driver designed to control 2-phase stepper motors up to 24 V/1.5 A.
The 64 times microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Adjustable current limits for stop, acceleration and constant speed help minimize motor power dissipation. Two configurable inputs for start/stop, limit switches, reference cams, jog/tip, etc., are directly processed by the internal software without delay.
Versatile functions, such as positioning with different acceleration ramps, command tables, cam switch, auto referencing and other event-dependent properties provide this controller with a wide spectrum of possible uses.

Operating modes:

- Step positioning
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

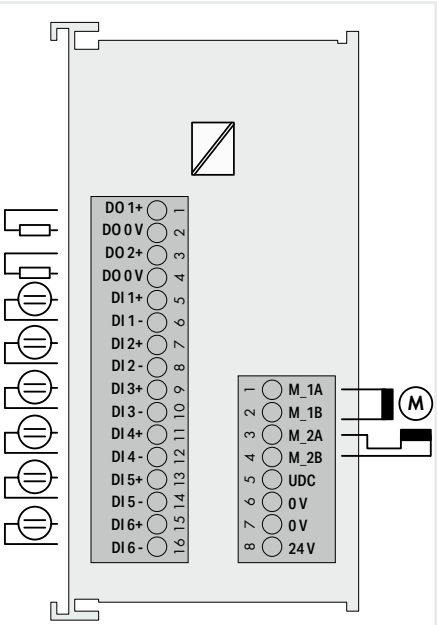
Functions include:

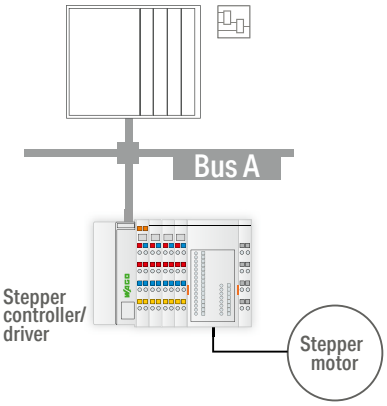
- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

Stepper module ▶ Stepper controller



750-672





Item description	**Stepper Controller; 70 VDC; 7.5 A**
Version	**Standard**
Item no.	**750-672**
Order Text	**Stepper Controller; 70 VDC; 7.5A**

Technical data	
Number of motor outputs	1 stepper motor (2 phases)
Supply voltage (motor)	55 VDC; Absolute upper limit: 71.5 V; Absolute lower limit: 18 V
Output current (max.) (motor)	2 x 5.0 A (2 x 7.5 A transient)
Stepper frequency (full-step) max.	7812 Hz
Resolution	15 bits + 16 bit prescaler; 64 microsteps per full step
Stepper resolution	23 bits + sign bit
Load type	Resistive load, inductive load (max. 2 H), lamps
Number of digital outputs	2
Output voltage	**Control voltage**: 24 VDC (-25 % … +30 %); Closed current: 120 mA + 2 x 0.5 A (DO1, DO2, load-dependent); **Motor voltage**: 55 VDC nominal value; Absolute upper limit: 71.5 V; Absolute lower limit: 18 V; Closed current (typ.) = 5 mA; Protection via external fuse 5 A
Output current per channel	0.5 A
Output current	short-circuit-protected
Switching frequency (max.)	5 Hz; Inductive load per IEC 947-5-1, DC 13
Voltage range for signal (0)	–3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Current consumption (5 V system supply)	70 mA
Data width	12-byte input/output
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(48 x 100 x 69.8) mm
Approvals	CE; UL 61800-5-1
For data sheet and additional information, see:	wago.com/750-672

This stepper controller has an on-board power driver designed to control 2-phase stepper motors.
The 64 times microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Adjustable current limits for stop, acceleration and constant speed help minimize motor power dissipation.
Six configurable inputs are directly processed by the internal software without delay. Two outputs can be linked with internal functions or freely allocated. Versatile functions enable a wide application range.

Inputs:

- Start/stop
- Limit switch (positive and negative direction)
- Reference cam
- Jog/tip (positive and negative direction)

Outputs (default setting):

- Target reached
- Error

Operating modes:

- Single positioning with different acceleration ramps
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

Functions include:

- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

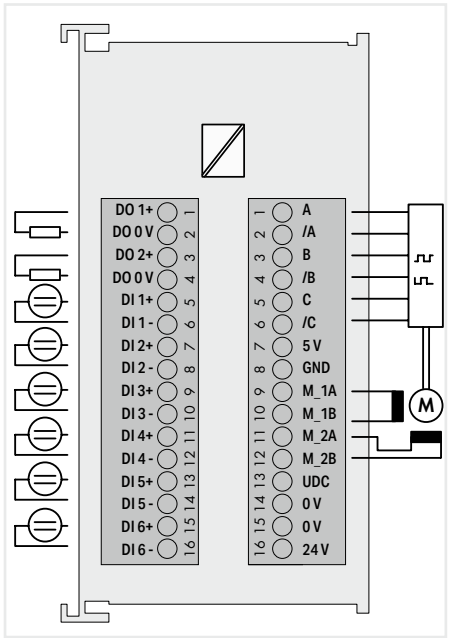
Protection

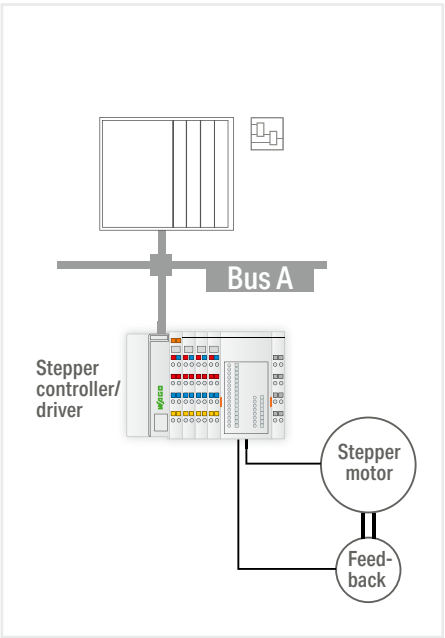
- Short circuit monitoring of motor connections: Winding short circuit and short circuit to 0 V and 24 V
- 24 V supply: reverse voltage protection
- Motor supply: reverse voltage protection via external fuse

Stepper module ▶ Servo stepper controller



750-673





Item description	**Servo Stepper Controller; 55 VDC; 7.5 A**
Version	**Standard**
Item no.	**750-673**
Order Text	**Servo Stepper Controller; 55 VDC; 7.5A**

Technical data	
Number of motor outputs	1 stepper motor (2 phases)
Supply voltage (motor)	55 VDC; Absolute upper limit: 71.5 V; Absolute lower limit: 18 V
Output current (max.) (motor)	2 x 5.0 A (2 x 7.5 A transient)
Stepper frequency (full-step) max.	7812 Hz
Signal voltage	Compatible with RS-485/-422, common GND with motor voltage and control voltage
Resolution	15 bits + 16 bit prescaler; 64 microsteps per full step
Stepper resolution	23 bits + sign bit
Load type	Resistive load, inductive load (max. 2 H), lamps
Number of digital outputs	2
Output voltage	**Control voltage**: 24 VDC (-25 % … +30 %); Closed current: 120 mA + 2 x 0.5 A (DO1, DO2, load-dependent) + approx. 100 mA (encoder); **Motor voltage**: 55 VDC nominal value; Absolute upper limit: 71.5 V; Absolute lower limit: 18 V; Closed current (typ.) = 5 mA; Protection via external fuse 5 A
Output current per channel	0.5 A
Output current	short-circuit-protected
Switching frequency (max.)	5 Hz; Inductive load per IEC 947-5-1, DC 13
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Encoder connection	A, /A, B, /B, C, /C
Encoder frequency	1 MHz
Sensor supply	5 VDC, 300 mA, short-circuit-protected
Quadrature decoder	4x evaluation
Counter depth	32 bits
Current consumption (5 V system supply)	70 mA
Data width	12-byte input/output
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(48 x 100 x 69.8) mm
Approvals	CE; UL 61800-5-1
For data sheet and additional information, see:	wago.com/750-673

This servo stepper controller has an on-board power driver and an incremental encoder evaluation for controlling 2-phase stepper motors.
The 64 times microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Together with the incremental encoder, the integrated vector control contributes to efficient, dynamic rotation speed characteristics.
Six configurable inputs are directly processed by the internal software without delay. Two outputs can be linked with internal functions or freely allocated. Versatile functions enable a wide application range.

Inputs:

- Start/stop
- Limit switch (positive and negative direction)
- Reference cam
- Jog/tip (positive and negative direction)

Outputs (default setting):

- Target reached
- Error

Operating modes:

- Single positioning with different acceleration ramps
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

Functions include:

- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

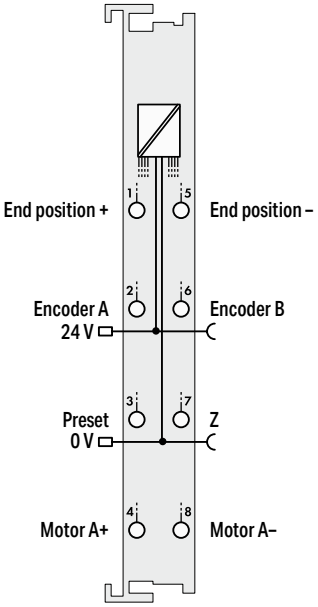
Protection

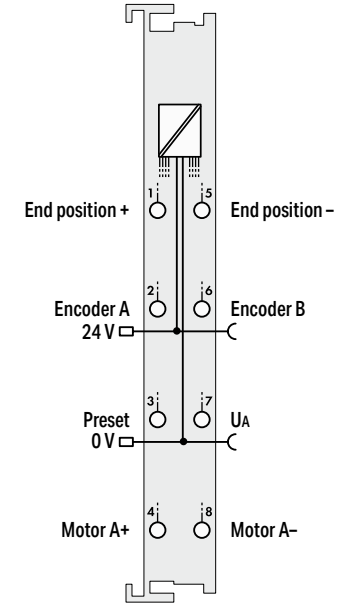
- Short circuit monitoring of motor connections: Winding short circuit and short circuit to 0 V and 24 V
- 24 V supply: reverse voltage protection
- Motor supply: reverse voltage protection via external fuse

DC drive controller



750-636



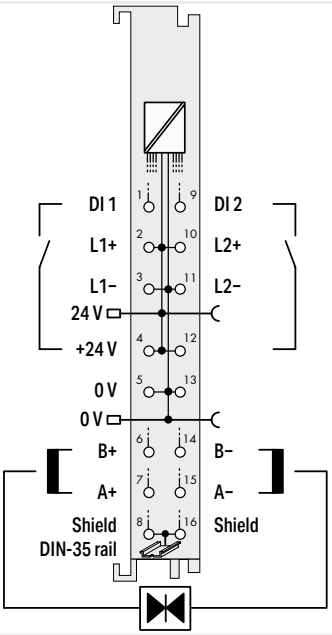


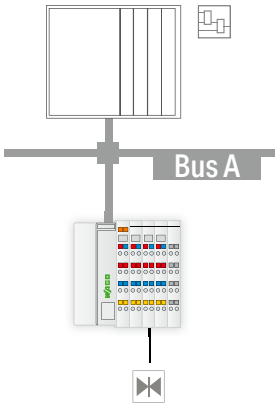
Item description	DC Drive Controller; 24 VDC; 5 A		DC Drive Controller; 24 VDC; 5 A; External motor voltage	
Version	Standard	ext. temperature	Separate motor power supply	Separate motor power supply; interference-free
Item no.	**750-636**	**750-636/025-000**	**750-636/000-700**	**750-636/000-800**
Order Text	**DC-Drive Controller; 24 VDC; 5A**	**DC-Drive Controller; 24 VDC; 5A; T**	**DC-Drive Controller; 24 VDC; 5A; UA**	**DC-Drive Controller; 24 VDC; 5A; IF**
Technical data				
Number of outputs	1 (A+; A-; H-bridge output)		1 (A+; A-; H-bridge output)	
Supply voltage (motor)	24 VDC (–20 … +15 %)		24 VDC (–20 … +15 %); Separate motor voltage: 24 VDC (–20 … +30 %)	
Output current (max.) (motor)	5 A (15 A / 500 ms), short-circuit-protected		5 A (15 A / 500 ms), short-circuit-protected	
PWM frequency (typ.)	20 kHz		20 kHz	
Number of digital inputs	3		3	
Input characteristic	Type 1		Type 1	
Input characteristic	high-side switching		high-side switching	
Voltage range for signal (0)	–3 … +1.5 VDC		–3 … +1.5 VDC	
Voltage range for signal (1)	2.4 … 30 VDC		2.4 … 30 VDC	
Encoder connection	A, B, zero low-side switching; 5 … 24 VDC / open collector		A, B, zero low-side switching; 5 … 24 VDC / open collector	
Quadrature decoder	1x, 2x, 4x evaluation		1x, 2x, 4x evaluation	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	55 mA		55 mA	
Data width	32-bit set/actual value; 16-bit control or status		32-bit set/actual value; 16-bit control or status	
Isolation	500 V system/field		500 V system/field	
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 67.8) mm	
Approvals	CE		CE	
For data sheet and additional information, see:	wago.com/750-636		wago.com/750-636	
	This DC drive controller is a single-channel, intelligent positioning controller for 24 VDC motors up to 5 A with incremental position feedback. Three 24 V inputs record the limit switches and a preset signal. An incremental encoder interface evaluates signals from the position sensor and determines the actual value. Current reduction is possible via pulse width modulation (PWM). As an option, the motor voltage can be supplied separately.		This DC drive controller is a single-channel, intelligent positioning controller for 24 VDC motors up to 5 A with incremental position feedback. Three 24 V inputs record the limit switches and a preset signal. An incremental encoder interface evaluates signals from the position sensor and determines the actual value. Current reduction is possible via pulse width modulation (PWM). As an option, the motor voltage can be supplied separately.	

Proportional valve controller



750-632





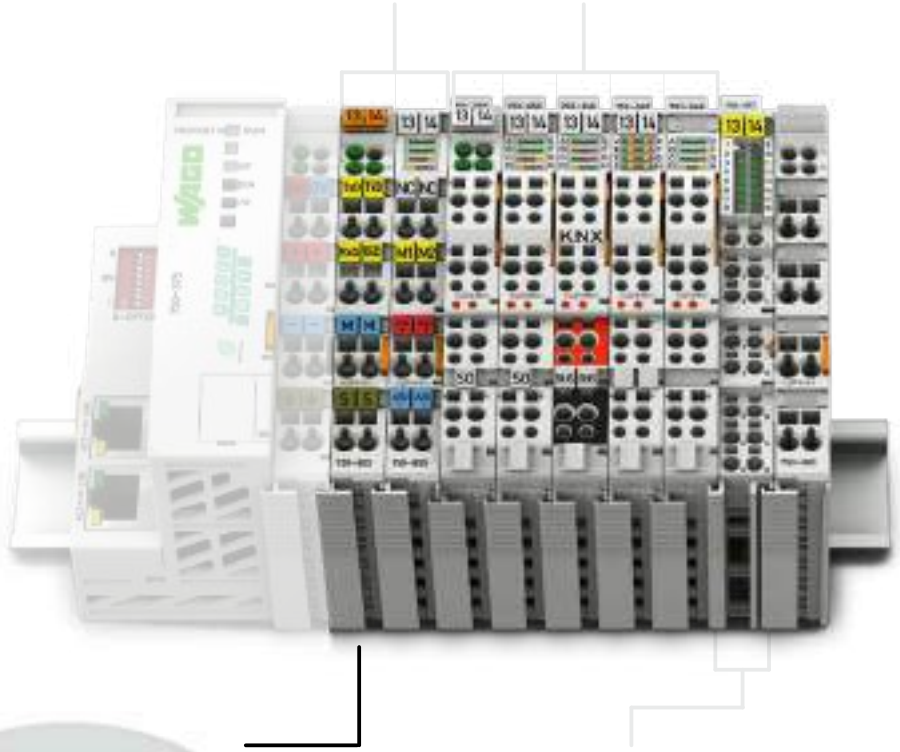
Item description	**Proportional Valve Module**
Version	**Standard with 16 connectors**
Item no.	**750-632**
Order Text	**Proportional Valve Module**

Technical data	
Number of outputs	2 bipolar outputs (A+, A- and B+, B-)
Type of output	H-bridge output with current-regulated PWM output (short-circuit-proof and thermal overload-proof for each channel)
Load type	Operating range: inductive (1 mH … 600 mH); Internal load resistance (> 8 Ohm)
Output current	1-channel operation: 2 A; 2-channel operation: 1.6 A per channel
Input current (typ.)	2.7 mA at 24 V
Dither frequency	250 Hz; 125 Hz; 62.5 … 1 Hz (parameterizable)
PWM frequency (typ.)	50 kHz
Nominal output voltage	24 VDC (–25 … +30 %)
Number of digital inputs	2
Input characteristic	Type 1
Input characteristic	high-side switching
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	125 mA
Data width	6 bytes: single-channel operating mode; 12 bytes: dual-channel operating mode
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-632

This proportional valve module controls two single-coil valves or one valve.
The module features two current-controlled PWM outputs with adjustable dither. Both unipolar and bipolar valve control are possible. Additionally, operation of a valve with two unipolar coils is also provided. The module is single-channel in this operating mode! Characteristic curve adaptations, such as zero offset, dual gain compensation or range limitations, can be adjusted via parameters.
The module functions can be internally triggered via digital outputs without any detours.

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch



RS-485



EnOcean-RS-485-Gateway; 868 MHz	
Dimensions Diameter x Height	95 × 36 mm
Protection type	IP30 (front side)
Connection technology	PUSH WIRE®
Conductor cross-section	Solid: 0.4 … 0.8 mm² / 26 … 20 AWG
Strip length	6 … 7 mm

Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch



I/O System –
750 XTR Series

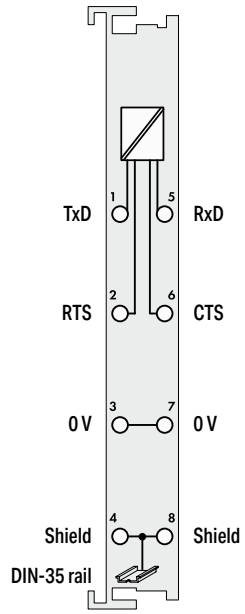
I/O System – 750 and 753 Series, Communication Modules
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		Standard	Extended Temperature	Pluggable	
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	Serial Interface RS-232 C; 9600 Baud; Even; 7/2 Bits	750-650/000-002			399
	Serial Interface RS-232 C; 9600 Baud; Even; 8/1 Bits	750-650/000-006			399
	Serial Interface RS-232 C; 19200 Baud; None; 8/1 Bits	750-650/000-010			399
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	Serial TTY Interface; 9600 Baud; None; 8/1 Bits	750-651			404
	Serial TTY Interface; 9600 Baud; Even; 8/1 Bits	750-651/000-002			404
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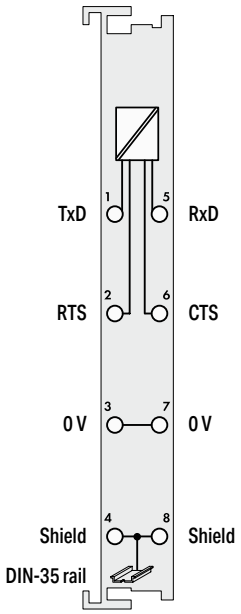
Serial interface RS-232 C



750-650/003-000



Item description	Serial Interface RS-232 C				
Version	adjustable	pluggable (delivery without connector); adjustable	9600 baud	9600 baud; pluggable (delivery without connector)	9600 baud; 5 bytes
Item no.	**750-650/003-000**	**753-650/003-000**	**750-650**	**753-650**	**750-650/000-001**
Order Text	**RS232 C Interface; Adjust**	**RS232 C Interface; Adjust**	**RS232 C Interface; 9600Bd**	**RS232 C Interface**	**RS232 C Interface; 9600Bd; 5byte**
Technical data					
Pluggable connector	-	pluggable	-	pluggable	-
Signal type	RS-232				
Transmission channels	1 TxD / 1 RxD, full-duplex				
Baud rate	1.2 kBd … 57.6 kBd (9600 baud (default setting))		9.6 kBd		
Parity	None/Even, adjustable		None		
Number of data bits	7/8, adjustable		8		-
Number of stop bits	1/2, adjustable		1		-
Buffer	120-byte input / 16-byte output				
Current consumption (5 V system supply)	55 mA				
Data width	1 x 24-bit input/output (3-byte user data); 1 x 40-bit input/output (5-byte user data); 1 x 8-bit control/status		1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		1 x 40-bit input/output (5-byte user data); 1 x 8-bit control/status
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-650/003-000	wago.com/753-650/003-000	wago.com/750-650	wago.com/753-650	wago.com/750-650/000-001
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	753-110	-



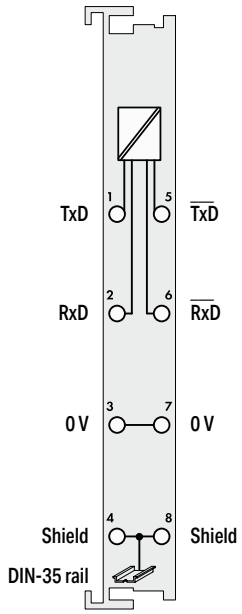
Serial Interface RS-232 C					
9600 baud; even; 7/2 bits	9600 baud; even; 8/1 bits	4800 baud; even; 8/1 bits; 5 bytes	2400 baud; none; 8/1 bits	19200 baud; none; 8/1 bits	19200 baud; even; 8/1 bits
750-650/000-002	750-650/000-006	750-650/000-015	750-650/000-012	750-650/000-010	750-650/000-011
RS232 C Interface; 9600Bd; E; 7/2	RS232 C Interface; 9600Bd; E; 8/1	RS232 C Interface; 4800Bd; E; 8/1; 5byte	RS232 C Interface; 2400Bd; N; 8/1	RS232 C Interface; 19200Bd; N; 8/1	RS232 C Interface; 19200Bd; E; 8/1
-					
RS-232					
1 TxD / 1 RxD, full-duplex					
9.6 kBd		4.8 kBd	2.4 kBd	19.2 kBd	
Even			None		Even
7	8				
2	1				
120-byte input / 16-byte output					
55 mA					
1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		1 x 40-bit input/output (5-byte user data); 1 x 8-bit control/status	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		
500 V system/field					
0 … +55 °C					
(12 x 100 x 69.8) mm					
CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx					
wago.com/750-650/000-001					

Item no.	Item no.	Item no.	Item no.	Item no.	Item no.
-	-	-	-	-	-

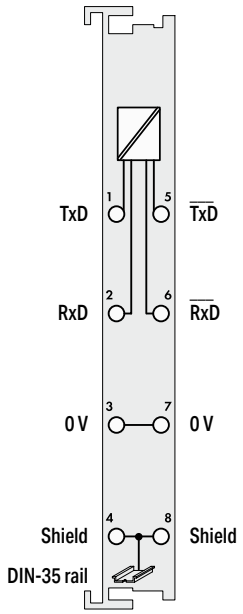
Serial interface RS-485



750-653



Item description	Serial Interface RS-485				
Version	Standard	pluggable (delivery without connector)	adjustable	pluggable (delivery without connector); adjustable	adjustable; ext. temperature
Item no.	**750-653**	**753-653**	**750-653/003-000**	**753-653/003-000**	**750-653/025-000**
Order Text	**RS485 Interface**	**RS485 Interface; 9600Bd; N; 8/1**	**RS485 Interface; Adjust**	**RS485 Interface; Adjust**	**RS485 Interface; Adjust; T**
Technical data					
Pluggable connector	-	pluggable	-	pluggable	-
Signal type	RS-422 / RS-485				
Transmission channels	1 TxD / 1 RxD, full-duplex				
Baud rate	9.6 kBd		1.2 kBd … 19.2 kBd (9600 baud (default setting))		
Parity	None		None/Even, adjustable		
Number of data bits	8		7/8, adjustable		
Number of stop bits	1		1/2, adjustable		
Buffer	120-byte input / 16-byte output				
Current consumption (5 V system supply)	65 mA				
Data width	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status				
Isolation	500 V system/field				
Ambient temperature (operation)	0 … +55 °C				-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx				
For data sheet and additional information, see:	wago.com/750-653	wago.com/753-653	wago.com/750-653/003-000	wago.com/753-653/003-000	wago.com/750-653/025-000
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Plug	-	753-110	-	753-110	-



Serial Interface RS-485			
9600 baud; none; 8/1 bits; extended temperature	9600 baud; even; 7/2 bits	9600 baud; even; 8/1 bits	2400 baud; none; 8/1 bits
750-653/025-018	750-653/000-001	750-653/000-002	750-653/000-007
RS485 Interface; 9600Bd; N; 8/1; 5byte; T	RS485 Interface; 9600Bd; E; 7/2	RS485 Interface; 9600Bd; E; 8/1	RS485 Interface; 2400Bd; N; 8/1

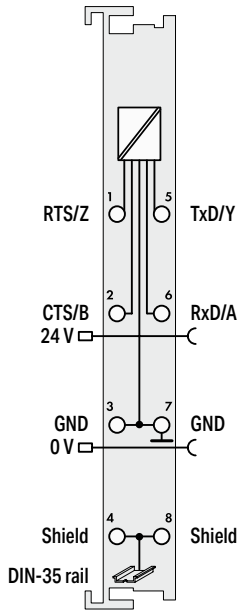
		-	
RS-422 / RS-485			
1 TxD / 1 RxD, full-duplex			
9.6 kBd			2.4 kBd
None	Even		None
8	7	8	
1	2	1	
120-byte input / 16-byte output			
65 mA			
1 x 40-bit input/output (5-byte user data); 1 x 8-bit control/status	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		
500 V system/field			
-20 … +60 °C	0 … +55 °C		
(12 x 100 x 69.8) mm			
CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
wago.com/750-653/025-000			

Item no.	Item no.	Item no.	Item no.
-	-	-	-

Serial interface RS-232/485



750-652



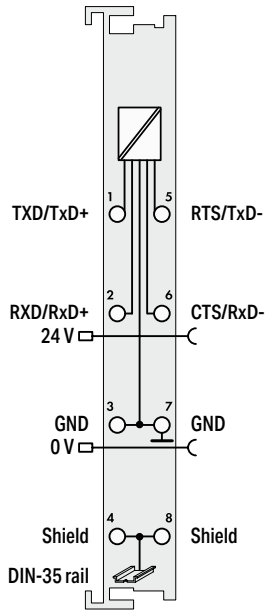
Item description	Serial Interface RS-232/485		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-652**	**750-652/025-000**	**753-652**
Order Text	**RS232/485 Interface**	**RS232/485 Interface; T**	**RS232/485 Interface**

Technical data			
Pluggable connector	-		pluggable
Signal type	RS-232; RS-422 / RS-485		
Transmission channels	1 TxD / 1 RxD, full-duplex, half-duplex		
Baud rate	300 Bd … 115.2 kBd		
Parity	None/Odd/Even		
Number of data bits	7/8, adjustable		
Number of stop bits	1/2, adjustable		
Buffer	2560-byte input / 512-byte output		
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Current consumption (5 V system supply)	85 mA		
Data width	1 x 46/1 x 22/1 x 6-byte input/output (parameterizable), 2-byte control/status		
Isolation	500 V system/field		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-652		wago.com/753-652
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

Serial Interface RS-232/485/422



750-652



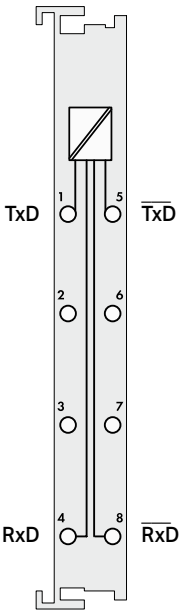
Item description	Serial Interface RS-232/485/422	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-1652**	**753-1652**
Order Text	**RS-232/485 Serial Interface**	**RS-232/485 Serial Interface**

Technical data		
Signal type	RS-232; RS-422 / RS-485	
Transmission channels	1 TxD / 1 RxD, full-duplex, half-duplex	
Baud rate	150 Bd … 250 kBd	
Parity	None/Odd/Even/Mark/Space	
Number of data bits	7 … 8, adjustable	
Number of stop bits	1/2, adjustable	
Buffer	8192-byte input / 2048-byte output	
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	120 mA	
Data width	Serial modes: 1 x 46/1 x 22/1 x 6-byte input/output (parameterizable), 2-byte control/status	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE	
Approvals (pending)	Marine; OrdLoc/HazLoc	
For data sheet and additional information, see:	wago.com/750-1652	wago.com/753-1652
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Serial TTY interface



750-651



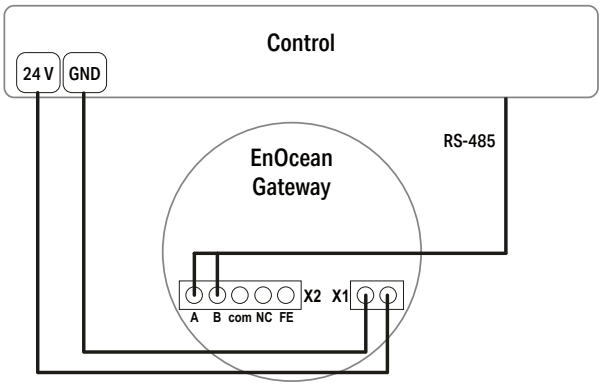
Item description	Serial TTY Interface	
Version	9600 baud; none; 8/1 bits	9600 baud; even; 8/1 bits
Item no.	**750-651**	**750-651/000-002**
Order Text	**TTY Interface; 9600Bd; N; 8/1**	**TTY Interface; 9600Bd; E; 8/1**

Technical data		
Signal type	TTY, 20 mA	
Transmission channels	1 TxD / 1 RxD, full-duplex	
Baud rate	1.2 kBd … 19.2 kBd (9600 baud (default setting))	
Load impedance (current output) max.	500 Ω	
Parity	None	Even
Number of data bits	8	
Number of stop bits	1	
Buffer	128-byte input / 16-byte output	
Current consumption (5 V system supply)	55 mA	
Data width	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc	
For data sheet and additional information, see:	wago.com/750-651	

EnOcean® RS-485 Gateway



750-940



Item description	**EnOcean® RS-485 Gateway; 868 MHz**
Version	**direct ceiling/wall mounting or mounting rail (through integrated adapter)**
Item no.	**750-940**

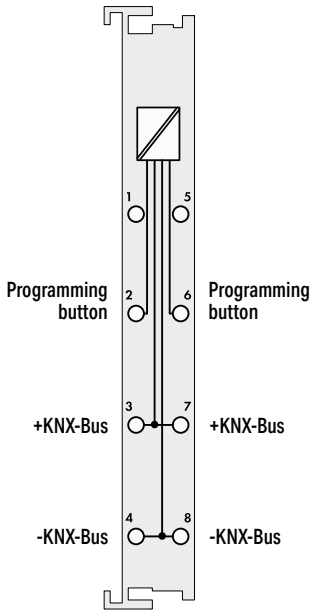
Technical Data	
Wireless technology	EnOcean®
Frequency band	868 MHz
Transmission range	Approx. 30 m within buildings; >100 m in open space
Antenna	Internal (external antenna optional via SMA socket)
Interface	RS-485
Protocol	ESP3, Modbus®
Transmission rate	9600 … 115200 Baud
Data width	50 bytes
Cable length	100 m (max.)
Power supply	24 VDC (–25 … +30 %)
Input current	2 A (max.)
Connection technology	RS-485 connection: 5-pole 2-conductor compact PCB connectors with PUSH WIRE® (252-155 is included); Supply connection: 2-pole 2-conductor compact PCB connectors with PUSH WIRE® (252-152 is included); Antenna: SMA socket for external antenna
Conductor cross-section	Solid: 0.4 … 0.8 mm² / 26 … 20 AWG
Strip length	6 … 7 mm
Dimensions (mm) Diameter x Height	95 × 36
Weight	103 g
Protection type	IP30 (front side)
Surrounding air temperature (operation)	0 … +55 °C
Surrounding air temperature (storage)	–20 … +85 °C
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3 + A1
Approvals	CE
For data sheet and additional information, see::	wago.com/750-940

The EnOcean® RS-485 Gateway integrates maintenance-free, battery-free and wireless sensors/actuators based on EnOcean® wireless technology (ISO/IEC 14543-3-1x) into intelligent control systems such as the WAGO I/O System. This gateway communicates with the remote station via RS-485 interface and ESP3 telegrams (EnOcean®) or via Modbus® protocol.
It may be mounted directly to the ceiling or wall. The device can also be mounted on a DIN-rail via an integrated adapter. The gateway has an internal antenna and also has a connector for an optional external antenna.

KNX/EIB/TP1 Interface



753-646



Item description	**KNX/EIB/TP1 Interface**
Version	**pluggable**
Item no.	**753-646**
Order Text	**KNX/EIB/TP1 Interface**

Technical data	
Pluggable connector	pluggable
Device specification	KNX/TP1 Bus Specification: 1.0
Device-specific	Number of group addresses: 254; Number of communication objects: 253; Number of associations: 254
Baud rate	9.6 kBd (KNX)
Power supply	KNX: via KNX power supply unit
Connection point (other) designation	Programming button; bridge 2/6
Application	on controllers
Commissioning	WAGO-I/O-*PRO* V2.3
Current consumption (5 V system supply)	25 mA
Data width	24 bytes
Isolation	2.5 kV (rms)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc
For data sheet and additional information, see:	wago.com/753-646

The KNX/EIB/TP1 Module connects to a KNX/EIB/TP1 network. This module supports two different functions:

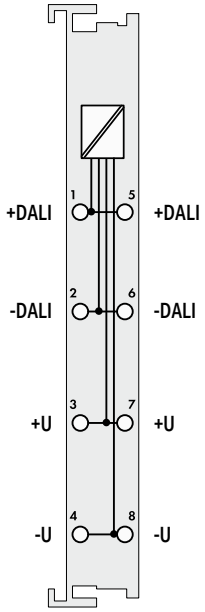
1. Device mode:
With this module, all programmable fieldbus controllers relevant for building automation can be connected to a KNX/TP1 network. The module is a standard KNX device and is linked via ETS Professional Commissioning Tool.
An ETS plug-in is required so that data from the application program can be allocated to group addresses for the programming software.

2. Router mode:
When connected to a KNX/IP Controller (e.g., 750-889), the combination becomes a KNXnet/IP router. The module is switched to the router mode automatically. An application program is not required for operation in router mode. Additional modules that are connected to a KNX IP Controller are addressed in device mode by the application.
The bus connections are internally bridged inside the plug, so the bus is not interrupted when the plug is pulled from the module. The plug is included with delivery.

DALI Multi-Master



753-647



Item description	**DALI Multi-Master**
Version	**pluggable**
Item no.	**753-647**
Order Text	**DALI Multi-Master**

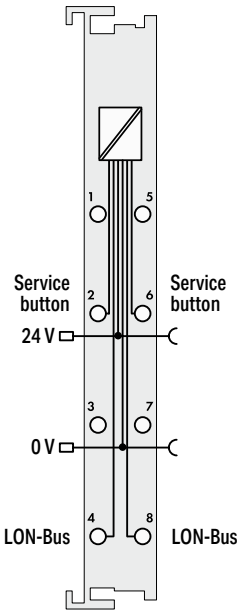
Technical data	
Pluggable connector	pluggable
Device specification	DALI-2 Specification: DIN IEC 62386 only in conjunction with 753-620 or 787-2857 Power Supplies
Device-specific	Current consumption from DALI bus with alternative supply via DALI bus: 10 mA
Topology	Number of control gears/control devices (DALI): 64 control gears + 64 control devices (addressable)
Power supply	DALI: 18 V (external)
Application	for programmable fieldbus controllers
Commissioning	via WAGO-I/O-CHECK
Current consumption (5 V system supply)	85 mA
Data width	24-byte data
Isolation	2100 VDC DALI bus/local bus
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc
For data sheet and additional information, see:	wago.com/753-647
Accessories	**Item no.**
DALI Multi-Master DC/DC Converter	753-620
Power supply; Compact; 1-phase; 18 VDC output voltage; 1.25 A output current	787-2857

This manufacturer-independent DALI standard ensures interoperability of DALI devices in lighting applications. This standard is substitute for the 1–10 V dimmer interface.
In addition to 64 DALI actuators (ECGs), a DALI Multi-Master Module supports up to 16 multi-sensors (max. 64 sensor addresses). Each DALI ECG can be assigned to 16 groups and 16 scenes. The DALI Multi-Master Module also offers 16 additional virtual groups on the DALI bus.
DALI control devices can be seamlessly integrated with all other building systems. Several DALI masters can be connected to a single fieldbus node. The maximum number of modules that can be connected to a controller depends on the memory required by the application. Function blocks prepared for DALI are available for programming fieldbus nodes.
Alternatively, an "EASY Mode" allows lighting functions to be readily controlled without any PLC programming.
The DALI Configurator (Section "Software") simplifies commissioning of the DALI network. It provides the following functions: easy commissioning, configuration, service, support and maintenance of the DALI network.

LON® FTT Interface



753-648



Item description	**LON® FTT Interface**
Version	**pluggable**
Item no.	**753-648**
Order Text	**LON FTT Interface**

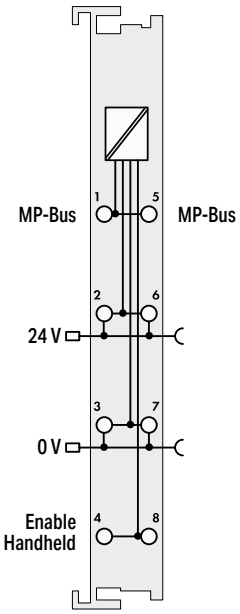
Technical data	
Pluggable connector	pluggable
Device-specific	Number of network variables: max. 254 (249 for application)
Number of aliases (max.)	127
Baud rate	0.078 Mbit/s
Bus segment length (max.)	500 m (free topology); 2700 m (bus topology)
Transmission medium	Twisted pair – FTT
Topology	per LON specification
Application	for controllers; max. 2 per controller
Commissioning	via WAGO-I/O-CHECK or WAGO-I/O-*PRO* V2.3
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	30 mA
Data width	24-byte data
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/753-648

The LON® FTT Interface is a full-fledged and flexible LON® device within LonWorks® FT or LP network. The module's network variable interface defines 249 network variables of any type and supports both LonMark® objects and configuration properties.

MP-Bus Master



750-643



Item description	**MP-Bus Master**
Version	**Standard**
Item no.	**750-643**
Order Text	**MP-Bus Master**

Technical data	
Device specification	MP-Bus Specification: PP/MP Specification V1.21 from Belimo (Valid since 1.10.2002)
Topology	Number of participants: 8 slaves (max.)
Power supply	MP-Bus: 24 VDC, via power jumper contacts
Application	on controllers
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	15 mA
Data width	1-byte C/S, 7-byte data
Isolation	500 V (rms) MP-Bus/system
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-643

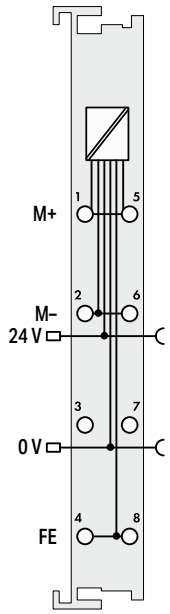
This module acts as a master for the MP bus (Multi-Point bus from Belimo/Switzerland) and allows the bus to be integrated into a higher level bus network. The MP-Bus controls HVAC actuators for dampers, regulator valves or VAV air volume controls.

The actuators have connections for sensors (temperature, humidity, on/off switch) that are also accessible via MP-Bus. An MP-Bus master can manage up to 8 slaves (actuators) + 8 sensors (1 sensor per slave) via a common bus line, which considerably reduces actuator and sensor wiring.

M-Bus Master



753-649



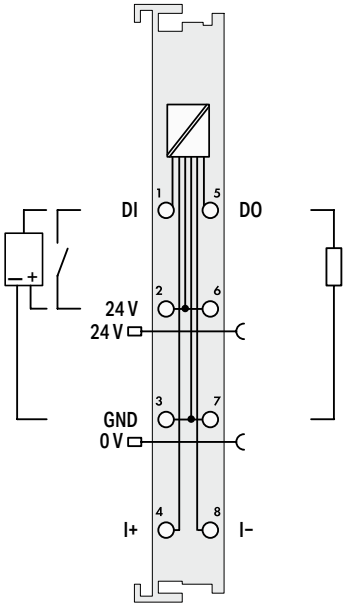
Item description	**M-Bus Master**
Version	**pluggable**
Item no.	**753-649**
Order Text	**M-Bus Master**

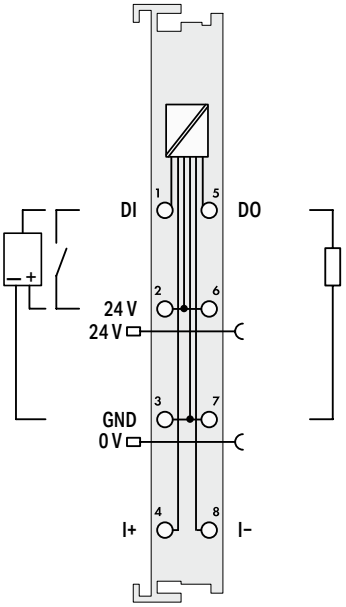
Technical data	
Pluggable connector	pluggable
Device-specific	Line length (overall network): up to 1000 m at 9600 baud; up to 2000 m at2400 baud; up to 6000 m at 300 baud; Master/slave distance: up to 500 m at 9600 baud; up to 1000 m at 2400 or 300 baud; M-Bus loads (max.): 40 (1.5 mA each); Overcurrent shutdown: Active current monitoring; Threshold value: approx. 120 mA; Minimum shutdown time: 500 ms
Transmission channels	1, bidirectional
Baud rate	300 Bd … 9.6 kBd (2400 baud (default))
Topology	Star, tree and line topology
Connection requirement (permissible cable type)	2-line, shielded or unshielded
Commissioning	WAGO-I/O-*PRO* V2.3, ***e!****COCKPIT*
Supply voltage (field)	24 VDC (-2.5 … +5 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	40 mA
Data width	24 bytes (mailbox 2.0 with 22-byte length)
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/753-649

SMI Master Module



753-1631





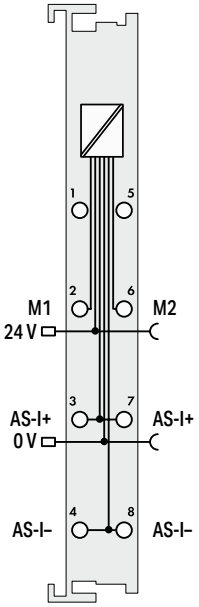
Item description	SMI Master Module; Low voltage	SMI Master Module; for drives with 230 VAC
Version	LoVo; pluggable	pluggable
Item no.	**753-1631**	**753-1630**
Order Text	**SMI Master LoVo; 24 VDC**	**SMI Master; 230 VAC**

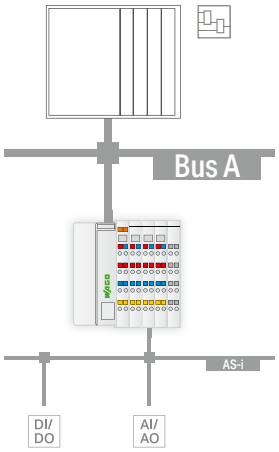
Technical data		
Pluggable connector	pluggable	pluggable
Device specification	SMI Master Interface per "SMI Data Format and Framework Protocol" Specifications Rev. 2.3.2 and "HMI Hardware Specification" Rev. 2.0	SMI Master Interface per "SMI Data Format and Framework Protocol" Specifications Rev. 2.3.2 and "HMI Hardware Specification" Rev. 2.0
Number of SMI channels	1 (1 … 16 SMI slaves per channel)	1 (1 … 16 SMI slaves per channel)
Number of digital inputs	1	1
Input characteristic	Type 1	Type 1
Input voltage (max.)	31.2 VDC	31.2 VDC
Number of digital outputs	1	1
Output current per channel	0.5 A	0.5 A
Connection requirement (permissible cable type)	2-line, unshielded	2-line, unshielded
Connection requirement (permissible cable length)	350 m	350 m
Commissioning	via WAGO SMI Configurator or IEC libraries	via WAGO SMI Configurator or IEC libraries
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	42 mA	42 mA
Data width	12-byte data	12-byte data
Isolation	3 kVAC RMS, 4 kV surge (system/SMI); 1.5 kVAC RMS, 2.5 kV surge (system/field)	3 kVAC RMS, 4 kV surge (system/SMI); 1.5 kVAC RMS, 2.5 kV surge (system/field)
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	(12 x 100 x 69.8) mm
Approvals	CE	CE
For data sheet and additional information, see:	wago.com/753-1631	wago.com/753-1630

AS-Interface Master



750-655





Item description	AS-Interface Master	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-655**	**753-655**
Order Text	**AS-Interface Master**	**AS-InterfaceMaster**
Technical data		
Pluggable connector	-	pluggable
Device specification	AS-i master class: M4; AS-I Specification: 3.0	
Device-specific	AS-I cable length (max.): 100 m, with repeater 300 m	
Topology	Number of slaves: up to 62; Slave profiles: V3.0 with transaction types 1 … 5	
Cycle time (AS-I)	0.3 … 10 ms, depending on the number of slaves	
Power supply	AS-I: 26.5 … 31.6 V	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	55 mA	
Data width	12 … 48 bytes (max.), configurable, including 1 byte control/status	
Isolation	500 V system/supply/AS-I	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-655	wago.com/753-655
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

The AS-Interface Master Module connects AS-Interface devices to a higher-level fieldbus.
It acts as a master for the AS-Interface and via the fieldbus coupler, as a slave for the fieldbus. The AS-i functions are provided both cyclically and acyclically via the fieldbus.

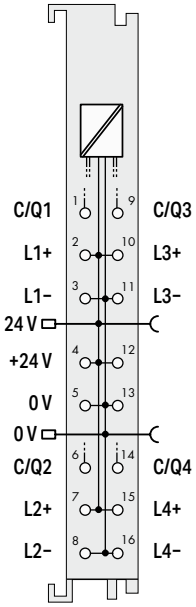
Diagnostics, which go far beyond the AS-i specifications, simplify detection of both sporadic configuration errors and AS-i communication interference sources. An auto-installation mode allows an AS-Interface network to be created via sequential slave installation, with no addressing tool required.

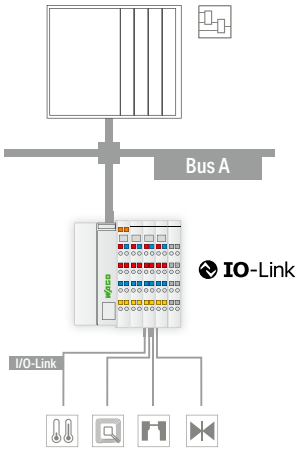
Both signal transmission and operating status, as well as trouble-free local bus communication, are indicated via LEDs.

IO-Link Master



750-657





Item description	**IO-Link Master**
Version	**Standard with 16 connectors**
Item no.	**750-657**
Order Text	**IO-Link Master**

Technical data	
Transmission modes	4.8 kBaud (COM 1), 38.4 kBaud (COM 2), 230.4 kBaud (COM 3)
Topology	Number of IO-Link ports: 4
Connection requirement (permissible cable length)	20 m
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	40 mA
Data width	4–24 bytes, configurable
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE, KC, cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-657

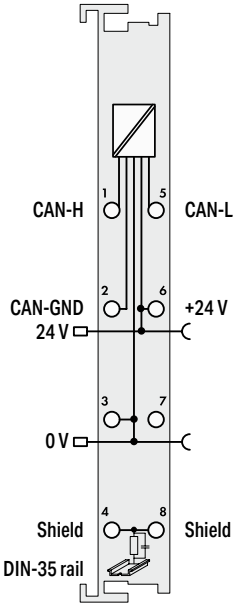
Four different IO-Link devices or standard digital sensors/actuators can simultaneously connect to the IO-Link Master. Process data, as well as acyclic data for identification, configuration, parameterization and diagnostics can be communicated to the respective device via a 3-wire connection.

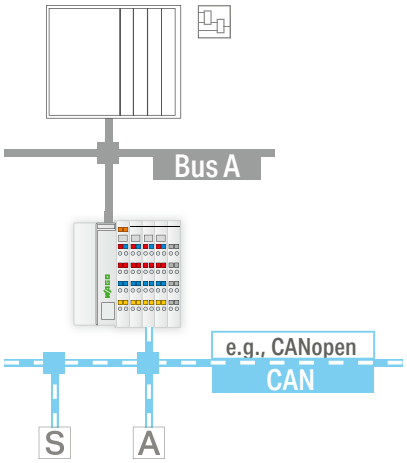
The functions and performance data are defined in device description files for master and devices; these are easy to customize via engineering tool. If a device must be replaced, the IO-Link devices' configuration and parameterization can be automatically restored without maintenance personnel. This makes project design, installation and operation considerably simpler!

CAN Gateway



750-658





Item description	CAN Gateway
Version	Standard
Item no.	**750-658**
Order Text	**CAN Gateway**

Technical data	
Device-specific	Operating modes: Sniffer mode, transparent mode, mapped mode
Number of inputs	1 (CAN interface)
Transmission modes	10 kbit/s; 20 kbit/s; 50 kbit/s; 125 kbit/s; 250 kbit/s; 500 kbit/s; 800 kbit/s (auto-baudrate); Data formats: per 2.0 A standard (11-bit ID); per 2.0 B extended (29-bit ID)
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	50 mA
Data width	Configurable to 8, 12, 16, 20, 24, 32, 40, 48 bytes; incl. control/status byte
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-658

The CAN Gateway allows a CAN bus to be installed as a sub-bus beneath a fieldbus coupler or controller. It enables special sensors/actuators that are only available with the widely used CAN bus to also be integrated under other bus systems. Function blocks allow the gateway to read and write higher-protocol telegrams, e.g., CANopen.

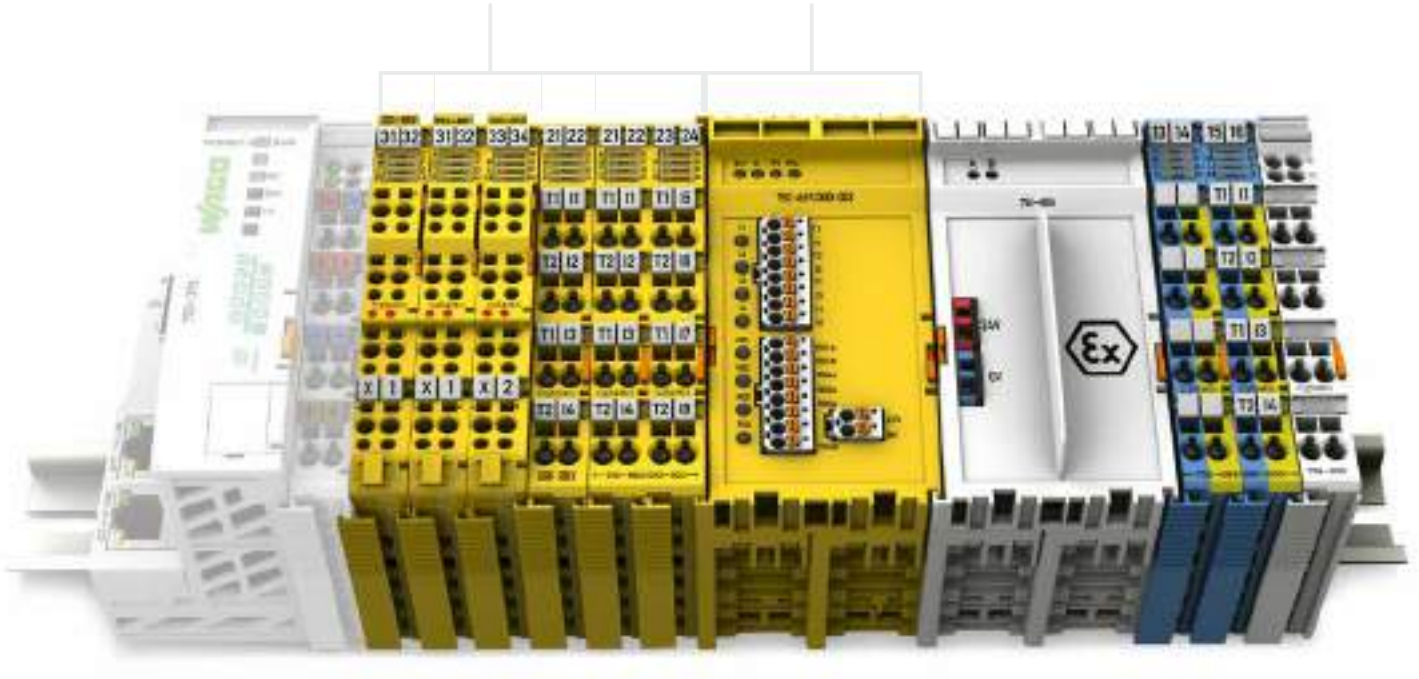
The module offers three different operating modes:

- Sniffer mode: Detailed analysis of the CAN bus through passive “snooping”
- Transparent mode: Active CAN subscriber that can send and receive any type of CAN telegram
- Mapped mode: Enables direct generation of CAN telegrams from the process image, or selective copying of process values from received CAN telegrams into the input process image (cyclic or event-based).

Functional Safety

Housing Design (750/753 Series)	
Dimensions W x H x D	750 Series: 12 or 24 x 67.8 x 100 mm 753 Series: 12 or 24 x 69 x 100 mm
Height from upper edge of DIN-rail	750 Series: 60.6 mm; 753 Series: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	750 Series: 8 … 9 mm / 0.33 inch 753 Series: 9 … 10 mm / 0.37 inch

Specialty Housing	
Dimensions W x H x D	48 x 69.8 x 100
Height from upper edge of DIN-rail	62.6 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	0.05 … 1.5 mm² / 20 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

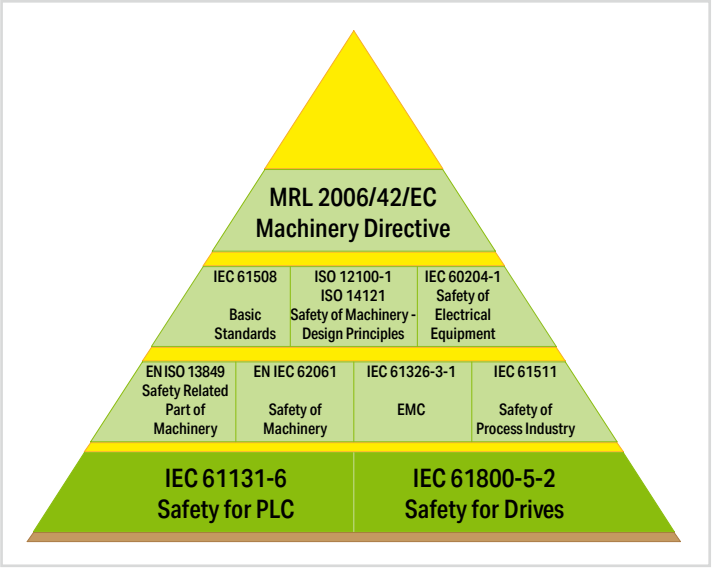


Functional Safety

In the European Union, the machinery directive defines the requirements for machine and system safety. This ensures a uniform standard for protecting the "life and limb" of workers within a machine's operating area.

The required risk assessment is based on harmonized standards (e.g., EN 13849) and identifies existing risks and required risk reduction (SIL or PL quality). Based on the risk assessment, safety functions can be implemented, e.g., by presence detection or protection zone violations, using secure switches or light arrays to shut down the "risk" immediately. For this purpose, the safety signals are detected by the "yellow" safety modules and transmitted via "PROFIsafe" to the fail-safe PLC for additional processing. The result is then executed via safe actuator (e.g., output module or controller).

The unique safety characteristics of the WAGO modules facilitate calculation of the final safety function up to Cat. 4/PLe according to EN 13849, or SIL3 according to EN 62061 or IEC 61511.



I/O System – 750 and 753 Series, Functional Safety
Contents

Function	Description	Item Number		Page
		Standard	Pluggable	
Fail-Safe Digital Input; PROFIsafe	Safe 4-channel digital input; 24 VDC; PROFIsafe	**750-661/000-004**	**753-661/000-004**	422
	Safe 8-channel digital input; 24 VDC; PROFIsafe	**750-662/000-004**	**753-662/000-004**	423
Fail-Safe Digital Input/Output; PROFIsafe	Safe 4/2 channel digital input/output; 24 VDC; 10 A; PROFIsafe	**750-666/000-004**		424
	Safe 4/4 channel digital input/output; 24 VDC; 2 A; PROFIsafe	**750-667/000-004**	**753-667/000-004**	425
	Safe 4/4 channel digital input/relay output; 48 VAC/ 60 VDC; 6 A; PROFIsafe V2.0 iPar	**750-669/000-003**		426
Intrinsically Safe Digital Input for Functional Safety	Intrinsically Safe 4-Channel Digital Input; 24 VDC; PROFIsafe V 2.0 iPar	**750-663/000-003**		428
Fail-Safe Analog Input; PROFIsafe	Safe 4 channel analog input; 0/4 … 20 mA; Differential input; PROFIsafe	**750-668/000-004**	**753-668/000-004**	427
	Classification of binary 24 V interfaces with functional safety testing according to Position Paper CB24I of the German Electrical and Electronic Manufacturer's Association (ZVEI)			418
Power Supply Ex i 	The intrinsically safe I/O module with inputs for functional safety (750-663/000-003) must only be operated with a 24 VDC Ex i supply module (e.g., 750-606, 750-625/000-001)! General information (e.g., installation regulations) on explosion protection is available in the WAGO I/O System 750 manuals!			
	Supply Module; 24 VDC; Diagnostics; Intrinsically Safe	**750-606**		432
	Supply Module; 24 VDC; Intrinsically Safe	**750-625/000-001**		432
Filter Module 	The mixed operation of safe and conventional I/O modules streamlines system configuration. For increased electromagnetic immunity (EMC standard), WAGO offers compact power supply filter modules (see Section 7.10). Specific power supply features must be considered, which are described in the corresponding manuals.			
	Field Supply Filter (Surge); 24 VDC; Higher Isolation	**750-624/020-000**		466
	Supply Filter; 24 VDC; Higher Isolation	**750-626/020-000**		468

Position Paper CB24I of the German Electrical and Electronic Manufacturer's Association (ZVEI)

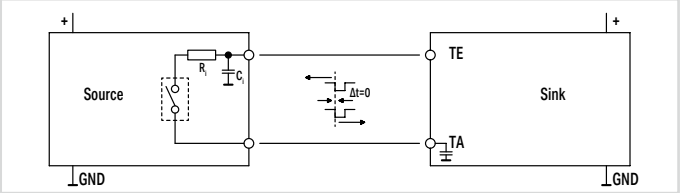
Safe digital interfaces differ from conventional digital interfaces though higher safety testing for both inputs and outputs.
They include dynamic digital interfaces of different characteristics and functions. At first glance, the combination of inputs to outputs results in a variety of possible variants due to the different applications.
For this reason, ZVEI has issued the Position Paper CB24i in order to increase functional safety and simplify engineering processes.

The purpose of this paper is to:
- describe terms
- define characteristics of interface types
- specify product information (technical data) per interface type to be supplied by the manufacturer.

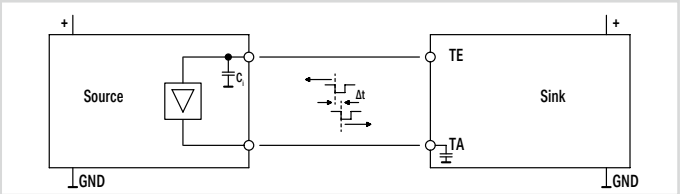
This paper provides a technical description for all interface types.
No safety-related assessment is made.

The variety of possible combinations was divided into just four interface types (see right).

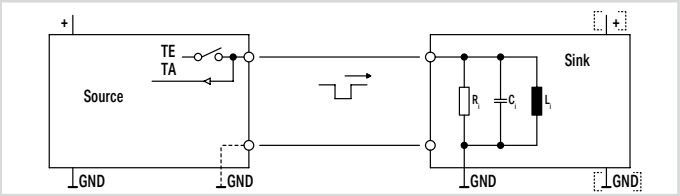
For both interface types C and D, four "performance" classes are also available to match the time requirements of the test pulses.



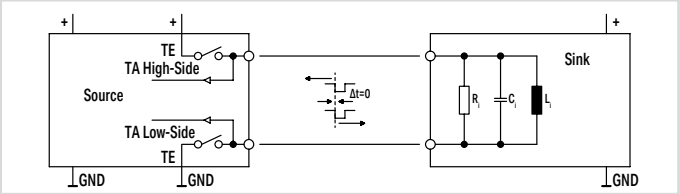
Interface type A



Interface type B



Interface type C



Interface type D

The identifying key has the following structure:

Source/Sink	Interface type (and class)	Additional measures "M"	Sink/Source	Suitable interface type (and class)	Suitable interface type (and class)	Suitable interface type (and class)

The first position describes the interface type and, if necessary, the class of the product. The second position indicates if additional measures are necessary. Next, the interface type suitable for this product is specified. Up to three interface types can be indicated.
A row can only contain interface types of the same kind. Depending on the product, several identifying keys may also be used.

Examples:

a) Manufacturer information for a source of interface type C/class 2 (e.g., sensor):

Source	C2		Sink	C1	C2	

Explanation: In this case, a source of type C2 is compatible with a sink of type C1 and also with a sink of type C2.

b) Manufacturer information for a sink of interface type C/class 2 (e.g., safety PLC):

Sink	C2		Source		C2	C3

Explanation: In this case, a sink of type C2 is compatible with a source of type C2 and also with a sink of type C3.

c) Manufacturer information for a sink of interface type A (e.g., safety evaluation unit):

Sink	A	M	Source	A		

Explanation: In this case, a sink of type A is compatible with a source of type A subject to "M" additional measures.

Complete information can be found in the ZVEI Position Paper CB24i.
This position paper is available for download in German and English via the ZVEI website.

Classification of Binary 24 V Interfaces with Testing in the Field of Functional Safety per ZVEI Position Paper CB24I

WAGO – Functional Safety		Identifying Key per ZVEI Position Paper CB24I										
					Measures							
Description	Item No.	Source/Sink	Interface type	Additional measures "M"	Parameterize filter time/ short circuit test	Parameterize/switch off test pulse duration	Protected wiring	Sink/Source	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Inputs												
Safe 4-channel digital input; 24 VDC; PROFIsafe	750-661/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Safe 4-channel digital input; 24 VDC; PROFIsafe	753-661/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Safe 8-channel digital input; 24 VDC; PROFIsafe	750-662/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Safe 8-channel digital input; 24 VDC; PROFIsafe	753-662/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Inputs/outputs												
Safe 4/2 channel digital input/output; 24 VDC; 10 A; PROFIsafe	750-666/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Safe 4/4 channel digital input/output; 24 VDC; 2 A; PROFIsafe	750-667/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Safe 4/4 channel digital input/output; 24 VDC; 2 A; PROFIsafe	753-667/000-004	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Safe 4/4 channel digital input/relay output; 48 VAC/ 60 VDC; 6 A; PROFIsafe V2.0 iPar	750-669/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	A	-				Sink	A	-	-	-
		Source	C0	M			x	Sink	C0	C1	C2	C3
Intrinsically Safe Input												
Intrinsically safe 4-channel digital input; 24 VDC; PROFIsafe V2.0 iPar	750-663/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3

Classification of Binary 24 V Interfaces with Testing in the Field of Functional Safety per ZVEI Position Paper CB24I

Interface Type A – Sink	Item: 75x-661/000-004; 75x-662/000-004; 750-666/000-004; 75x-667/000-004; 750-669/000-003			Item: 750-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Input current I_i (in the ON state)	>2 mA	-	<9 mA	>2 mA	3 mA	<9 mA
Output voltage U_i	Field power supply −0.2 V	-	-	Field power supply −0.2 V	-	-
Input capacitance C_i	-	-	12 nF	-	-	12 nF
Additional measure "M"	Parameterize filter time; activate short circuit test			Parameterize filter time; activate short circuit test		

Interface Type C – Sink, Class C0	Item: 75x-661/000-004; 75x-662/000-004; 750-666/000-004; 75x-667/000-004; 750-669/000-003			Item: 750-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	0.5 ms	-	200 ms	0.5 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time Deactivate short circuit test			Parameterize filter time Deactivate short circuit test		

Interface Type C – Sink, Class C1	Item: 75x-661/000-004; 75x-662/000-004; 750-666/000-004; 75x-667/000-004; 750-669/000-003			Item: 750-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	2 ms	-	200 ms	2 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time to at least 2 ms Deactivate short circuit test			Parameterize filter time to at least 2 ms Deactivate short circuit test		

Interface Type C – Sink, Class C2	Item: 75x-661/000-004; 75x-662/000-004; 750-666/000-004; 75x-667/000-004; 750-669/000-003			Item: 750-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	1 ms	-	200 ms	1 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time to at least 1 ms Deactivate short circuit test			Parameterize filter time to at least 1 ms Deactivate short circuit test		

Interface Type C – Sink, Class C3	Item: 75x-661/000-004; 75x-662/000-004; 750-666/000-004; 75x-667/000-004; 750-669/000-003			Item: 750-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	0.5 ms	-	200 ms	0.5 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time to at least 0.5 ms Deactivate short circuit test			Parameterize filter time to at least 0.5 ms Deactivate short circuit test		

Classification of Binary 24 V Interfaces with Testing in the Field of Functional Safety per ZVEI Position Paper CB24I

Interface Type A – Source	Item: 750-669/000-003		
Parameters	Min.	Typ.	Max.
Switching current I_i	3 mA	-	6 A per contact
Switching voltage U_i	10 V	-	60 VDC / 48 VAC
Internal resistance Ri (in the switched state)	-	-	100 mΩ
Load capacitance C_L	-	-	-
Load inductance L_L	-	-	1.2 H
Potential-free	Yes		

Interface Type C – Source, Class C0	Item: 750-666/000-004			Item: 75x-667/000-004		
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.
Test pulse duration t_i	2 ms	-	500 ms	1 ms	-	500 ms
Leakage current ILeakage of the output in the OFF state	-	-	<1 mA	-	-	1.2 mA
Nominal current IN of the output in the ON state	-	-	10 A	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	10,000 µF	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration Parameterize output tolerance time			Parameterize test pulse duration		

Interface Type D – Source, Class D0	Item: 750-666/000-004			Item: 75x-667/000-004		
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.
Test pulse duration t_i	2 ms	-	500 ms	1 ms	-	500 ms
Leakage current ILeakage of the output in the OFF state	-	-	<1 mA	-	-	1.2 mA
Nominal current IN of the output in the ON state	-	-	10 A	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	10,000 µF	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration Parameterize output tolerance time			Parameterize test pulse duration		

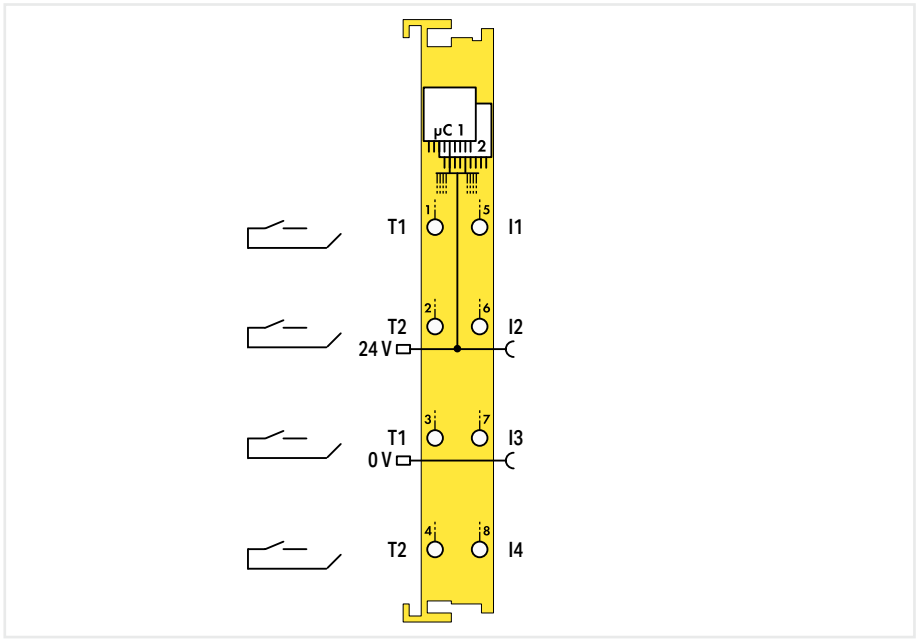
Interface Type D – Source, Class D1	Item: 75x-667/000-004		
Parameters	Min.	Typ.	Max.
Test pulse duration t_i	-	-	1 ms
Leakage current ILeakage of the output in the OFF state	-	-	1.2 mA
Nominal current IN of the output in the ON state	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration to 1 ms		

Interface Type D – Source, Class D1, D2, D3	Item: 750-666/000-004			Item: 75x-667/000-004		
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.
Test pulse duration t_i	-	-	-	-	-	-
Leakage current ILeakage of the output in the OFF state	-	-	<1 mA	-	-	1.2 mA
Nominal current IN of the output in the ON state	20 mA	2 A	10 A	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	10,000 µF	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration to 0 ms (off) Parameterize output tolerance time Program safety application for automatic test: Switch off the output once every 8 h Parameterize output configuration			Parameterize test pulse duration to 0 ms (off) Program safety application for automatic test: Switch off the output once every 8 h		

Functional safety ▶ Digital input



750-661/000-004



Item description	Safe 4-channel digital input; 24 VDC; PROFIsafe	
Version	Standard	pluggable
Item no.	750-661/000-004	753-661/000-004
Order Text	4FDI 24V PROFIsafe	4FDI 24V PROFIsafe

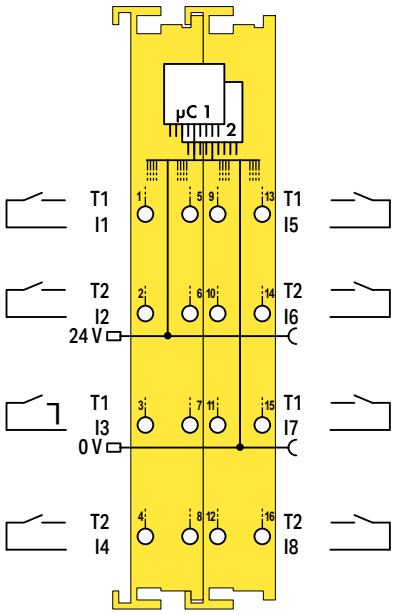
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Achievable safety classes	SIL 3; Category 4, PLe (two-channel); SIL 2; Category 2; PLd (one-channel)	
Interface types according to ZVEI (inputs)	Drain; A, C0, C1, C2, C3	
Protocols	PROFIsafe V2.6 (PROFINET)	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (Fail-safe input with test pulse)	
Input characteristic	clock sensitive	
Input characteristic	Type 1 per IEC 61131	
Input current per channel for signal (1) typ.	3 mA	
Signal frequency (max.)	50 Hz	
Output current per channel	0.1 A	
Supply voltage (field)	24 VSELV/PELV DC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	120 mA	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	
Functional safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; Marine; OrdLoc/HazLoc	
For data sheet and additional information, see:	wago.com/750-661/000-004	wago.com/753-661/000-004
Accessories	**Item no.**	**Item no.**
Plug; Safety	-	753-120

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▶ Digital input



750-662/000-004



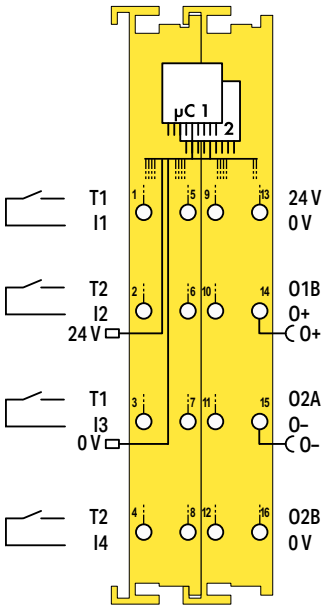
Item description	Safe 8-channel digital input; 24 VDC; PROFIsafe	
Version	Standard	pluggable
Item no.	750-662/000-004	753-662/000-004
Order Text	8FDI 24V PROFIsafe	8FDI 24V PROFIsafe

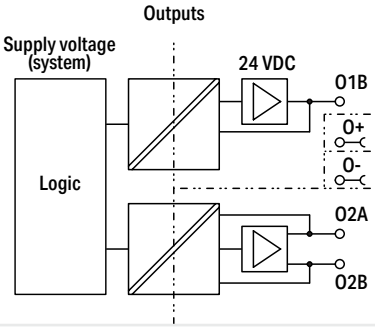
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	8	
Achievable safety classes	SIL 3; Category 4, PLe (two-channel); SIL 2; Category 2; PLd (one-channel)	
Interface types according to ZVEI (inputs)	Drain; A, C0, C1, C2, C3	
Protocols	PROFIsafe V2.6 (PROFINET)	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	8 x (Fail-safe input with test pulse)	
Input characteristic	clock sensitive	
Input characteristic	Type 1 per IEC 61131	
Input current per channel for signal (1) typ.	3 mA	
Signal frequency (max.)	50 Hz	
Output current per channel	0.1 A	
Supply voltage (field)	24 VSELV/PELV DC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	120 mA	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	
Functional safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; Marine; OrdLoc/HazLoc	
For data sheet and additional information, see:	wago.com/750-662/000-004	wago.com/753-662/000-004
Accessories	**Item no.**	**Item no.**
Plug; Safety	-	753-120
	Support for iPar servers allows automatic parameter restoration when replacing an I/O module.	

Functional safety ▶ Digital input; Digital output



750-666/000-004





Item description	**Safe 4/2 channel digital input/output; 24 VDC; 10 A; PROFIsafe**
Version	**Standard**
Item no.	**750-666/000-004**
Order Text	**4FDI/2FDO 24V/10A PROFIsafe**

Technical data	
Pluggable connector	fixed
Number of digital inputs	4
Achievable safety classes	SIL 3; Category 4, PLe (two-channel); SIL 2; Category 2; PLd (one-channel)
Interface types according to ZVEI (inputs)	Drain; A, C0, C1, C2, C3
Protocols	PROFIsafe V2.6 (PROFINET)
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Sensor connection	4 x (Fail-safe input with test pulse)
Input characteristic	clock sensitive
Input characteristic	Type 1 per IEC 61131
Input current per channel for signal (1) typ.	3 mA
Signal frequency (max.)	50 Hz
Number of digital outputs	2
Interface types according to ZVEI (outputs)	Source; C0, C1, C2, C3, D0, D1, D2, D3
Output circuit design	Power outputs
Actuator connection	2 x (fail-safe output with test pulse)
Output current per channel	10 A
Output current	short-circuit-protected
Output current (module)	20 A
Switching frequency (max.)	50 Hz; Resistive load
Switching frequency (max.) (2)	0.1 Hz; Inductive load
Switching frequency (max.) (3)	0.1 Hz; Capacitive load
Supply voltage (field)	24 VSELV/PELV DC (-25 … +30 %); via power jumper contacts (power supply via blade contact)
Current consumption (5 V system supply)	120 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Functional safety	
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-666/000-004

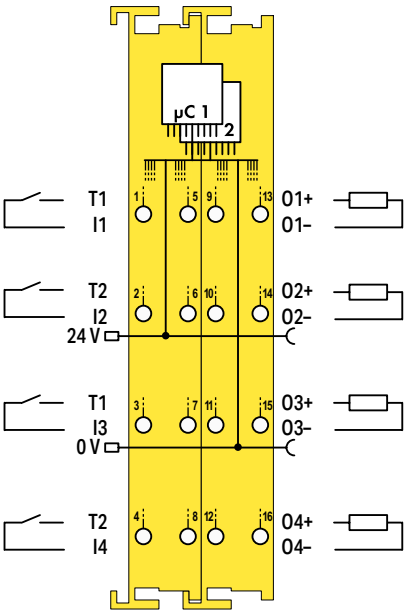
This module enables a fail-safe 2-channel switch-off (single failure protection) when the power outputs are used in a bipolar configuration. If a fail-safe 1-channel switch-off is adequate, two independent switching channels are available.
The module is capable of safely shutting off the supply voltage of entire actuator groups which are connected to the standard modules arranged to the right.
The 2-channel circuit types P-M and P-P, as well as the 1-channel circuit types P, P or P, M are available.

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▶ Digital input; Digital output



750-667/000-004



Item description	Safe 4/4 channel digital input/output; 24 VDC; 2 A; PROFIsafe	
Version	Standard	pluggable
Item no.	750-667/000-004	753-667/000-004
Order Text	4FDI/4FDO 24V/2A PROFIsafe	4FDI/4FDO 24V/2A PROFIsafe

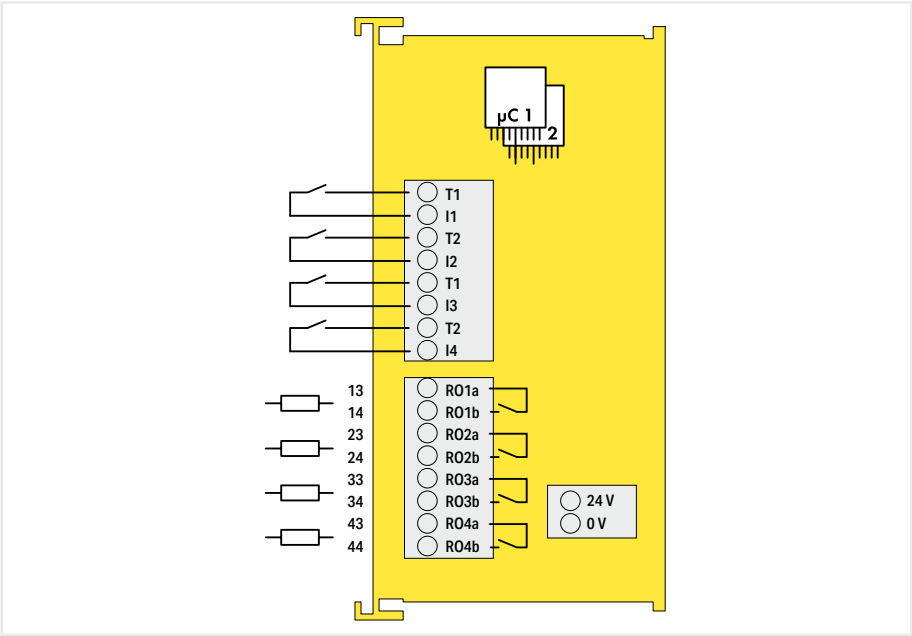
Technical data		
Pluggable connector	fixed	pluggable
Number of digital inputs	4	
Achievable safety classes	SIL 3; Category 4, PLe (two-channel); SIL 2; Category 2; PLd (one-channel)	
Interface types according to ZVEI (inputs)	Drain; A, C0, C1, C2, C3	
Protocols	PROFIsafe V2.6 (PROFINET)	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (Fail-safe input with test pulse)	
Input characteristic	clock sensitive	
Input characteristic	Type 1 per IEC 61131	
Input current per channel for signal (1) typ.	3 mA	
Signal frequency (max.)	50 Hz	
Number of digital outputs	4	
Interface types according to ZVEI (outputs)	Source; C0, C1, C2, C3, D0, D1, D2, D3	
Output circuit design	Power outputs	
Actuator connection	4 x (fail-safe output with test pulse)	
Output current per channel	2 A	
Output current	short-circuit-protected	
Output current (module)	8 A	
Capacitive load for each channel	O1 … O4; 47 µ F	
Switching frequency (max.)	50 Hz; Resistive load	
Switching frequency (max.) (2)	0.1 Hz; Inductive load	
Supply voltage (field)	24 VSELV/PELV DC (-25 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	120 mA	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	
Functional safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; Marine; OrdLoc/HazLoc	
For data sheet and additional information, see:	wago.com/750-667/000-004	wago.com/753-667/000-004
Accessories	**Item no.**	**Item no.**
Plug; Safety	-	753-120

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▶ Digital input; Relay output



750-669/000-003



Item description	**Safe Digital Input/Relay Output, 4/4 Channels; 48 VAC/60 VDC; 6 A; PROFIsafe V 2.0 iPar**
Item no.	**750-669/000-003**
Order Text	**4FDI/4FRO; 48VAC/ 60VDC; 6A; PROFIsafe V2 iPar**

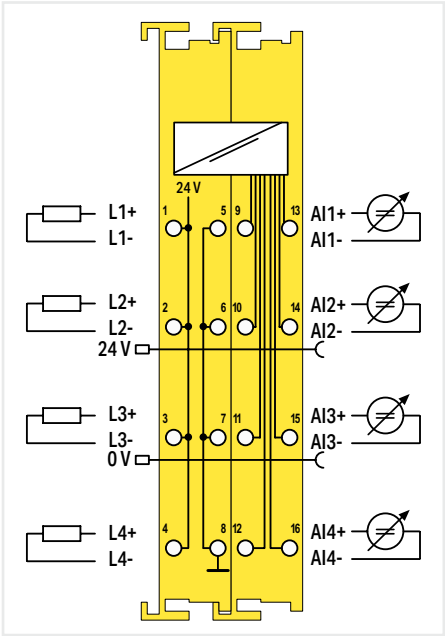
Technical data	
Number of digital inputs	4
Achievable safety classes	SIL 3; Category 4, PL e
Protocols	PROFIsafe V2
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Sensor connection	4 x (Fail-safe input with test pulse)
Input characteristic	clock sensitive
Input characteristic	Type 1
Input current per channel for signal (1) typ.	2.2 mA
Signal frequency (max.)	50 Hz
Number of digital outputs	4
Output circuit design	Relay outputs
Actuator connection	4 x (fail-safe output with test pulse)
Switching voltage range	5 … 60 VDC (SELV/PELV); 5 … 48 VAC
Isolation voltage	Relay outputs: 48 VAC, 60 VDC
Switching current (note)	Switching current range compatible with the WAGO 75x-66x/000-003 PROFIsafe I/O Module
Output current per channel	6 A
Output current (module)	24 A
Switching delay	50 ms
Supply voltage (system and sensor)	24 VDC(-25 … +30 %)
Supply voltage (field)	24 VDC; via pluggable connector (Push-in CAGE CLAMP®connection)
Current consumption (5 V system supply)	145 mA
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(48 x 100 x 69.8) mm
Functional safety	
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-669/000-003

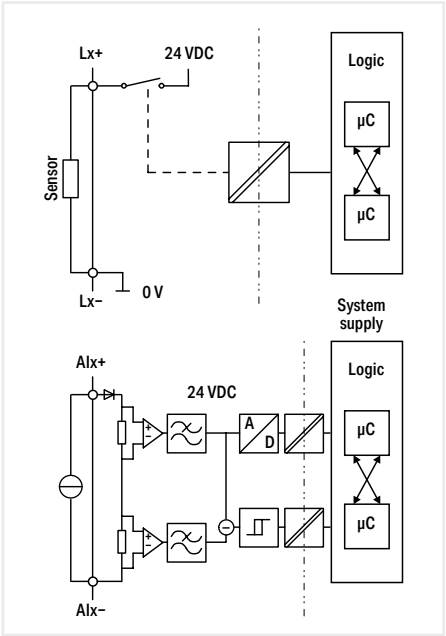
Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▶ Analog input



750-668/000-004



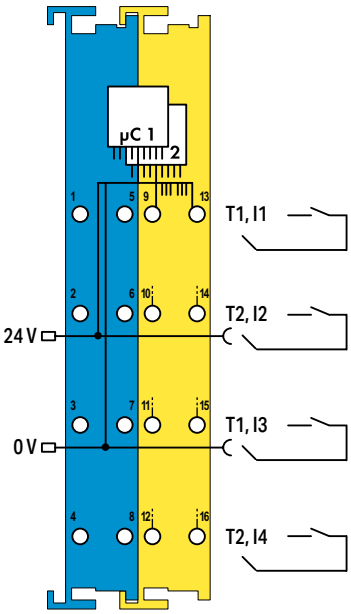


Item description	Safe Analog Input, 4 Channels; 0/4 … 20 mA; Differential Input; PROFIsafe	
Version	Standard	pluggable
Item no.	750-668/000-004	753-668/000-004
Order Text	4FAI 0/4-20 mA Diff PROFIsafe	4FAI 0/4-20 mA Diff PROFIsafe
Technical data		
Number of analog inputs	4	
Achievable safety classes	SIL 3; Category 4, PLe (two-channel); SIL 2; Category 2; PLd (one-channel)	
Protocols	PROFIsafe V2	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (2-wire, 3-wire, 4-wire)	
Signal characteristics	Differential	
Resolution [bit]	16 bits	
Load impedance	300 Ω	
Common-mode voltage (max.)	60 V	
Noise rejection at sampling frequency	38 dB	
Measurement error (reference temperature)	25 °C	
Measurement error, deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.006 %/K	
Output current per channel	1.5 A	
Output current (module)	1.5 A	
Current carrying capacity	40 mA	
Sensor supply	Outputs L1 … L4	
Supply voltage (field)	24 VSELV/PELV DC (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current consumption (5 V system supply)	120 mA	
Isolation	500 V system/field	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	(24 x 100 x 69) mm
Functional safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-668/000-004	wago.com/753-668/000-004
Accessories	**Item no.**	**Item no.**
Plug; Safety	-	753-120

Functional safety ▶ Intrinsically safe modules (Ex i); Digital input



750-663/000-003



Item description	**Intrinsically Safe 4-Channel Digital Input; 24 VDC; PROFIsafe V 2.0 iPar**
Version	**intrinsically safe**
Item no.	**750-663/000-003**
Order Text	**4F-Ex i DI; 24 VDC; PROFIsafe V2 iPar**

Technical data	
Number of digital inputs	4
Protocols	PROFIsafe V2
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Sensor connection	4 x (Fail-safe input with test pulse)
Input characteristic	clock sensitive
Input characteristic	Type 1
Input filter	0 … 200 ms (parameterizable in steps)
Input current per channel for signal (1) typ.	3 mA
Signal frequency (max.)	50 Hz
Short-circuit current	≤ 25 mA
Output current per channel	0.05 A
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	145 mA
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Functional safety	
Achievable risk reduction	SIL 3 per IEC 61508; SIL 3 per IEC 61511; SIL 3 per IEC 62061; Cat. 4, PL e per EN ISO 13849
Safety standards	IEC 61508; IEC 62061; EN ISO 13849; IEC 61511
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 23 mA; P_o = 157 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 61 mH; C_o = 64 nF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 552 nF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 2.28 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 2.95 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-663/000-003

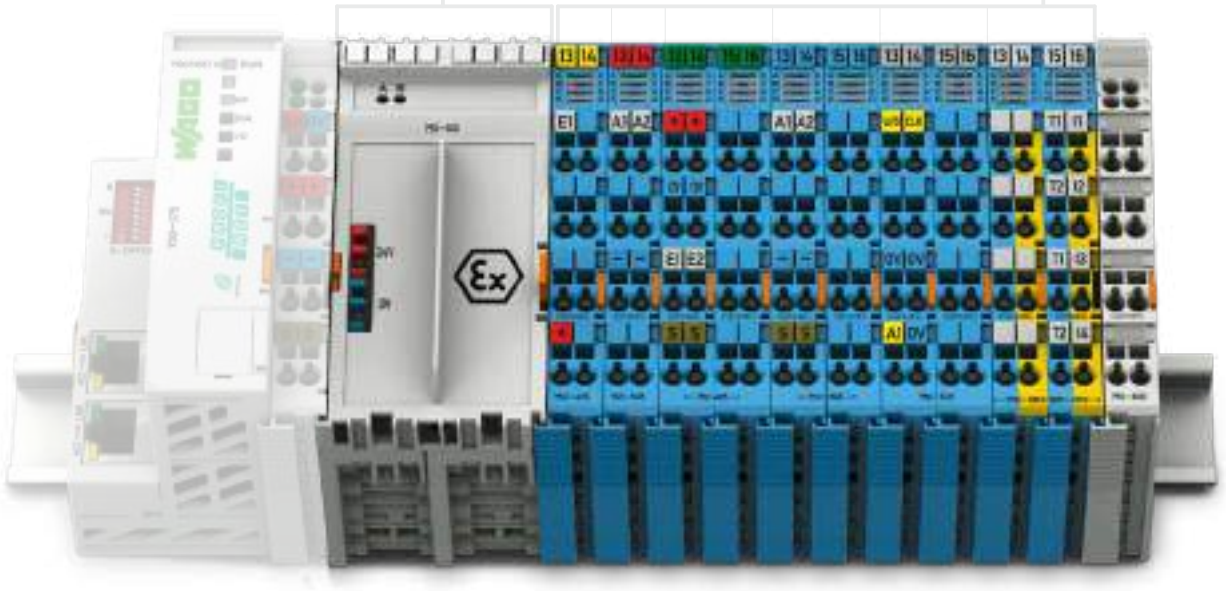
This module combines intrinsic safety with functional safety and was specifically developed for reliable acquisition from potential-free, contact-based emergency stop switches, safety interlock switches, mode selectors and safety sensors that are located in hazardous environments.
Thus, safety functions with fail-safe sensors from Ex Zones 0 and 1 can be implemented.

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Intrinsically Safe Modules Ex i

Specialty Housing	
Dimensions W x H x D	48 x 100 x 70.9 mm
Depth from upper edge of DIN-rail	63.7 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 16 AWG
Strip length	5 … 6 mm / 0.22 inch

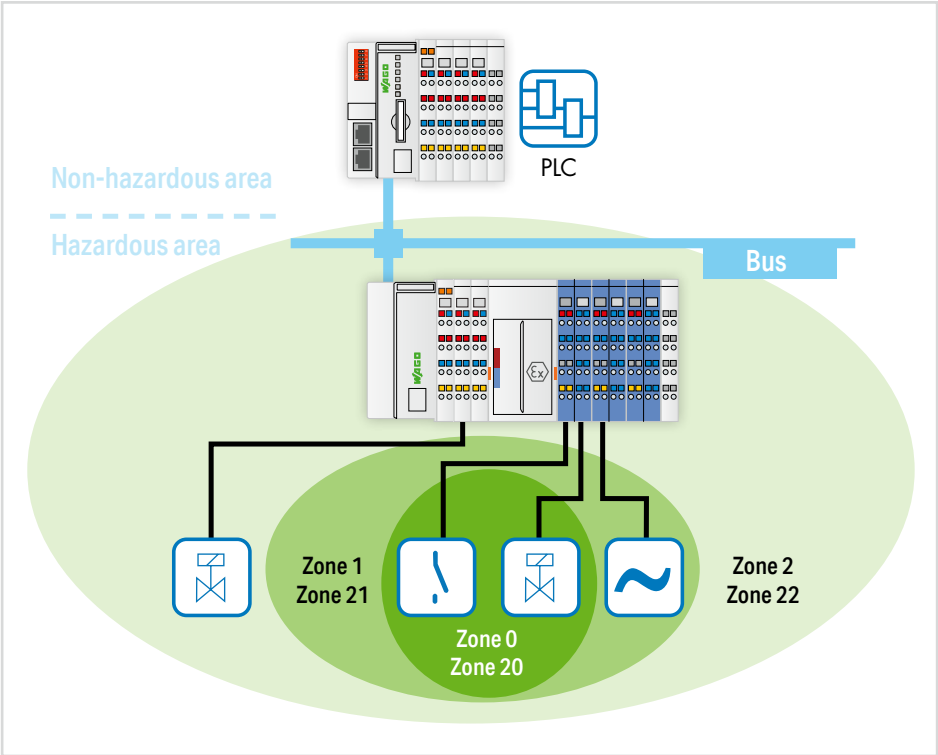
Housing Design (750 Series)	
Dimensions W x H x D	12 or 24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



Use in Hazardous Areas

In many plants across the chemical and petro-chemical industries, as well as in the production and process automation sectors, installations are operated that process explosive gas- or dust-air mixtures. This is why electrical equipment must be explosion-proof in order to avoid injuries to personnel and damage to facilities.

The modules within the WAGO I/O System 750 are designed for use in both non-hazardous and hazardous areas. The direct application of fieldbus technology in potentially explosive areas is typically resource-intensive. When used in hazardous areas of Zone 2/22, the I/O System 750 offers a safe, easy and economical connection to the sensors/actuators of Zones 0/20 and 1/21. The "blue" Ex i I/O modules were specially developed for this purpose. They form an intrinsically safe section that can be integrated into a standard fieldbus node, offering all the advantages of state-of-the-art fieldbus technology. The WAGO I/O System 750 is also approved for mining applications.



I/O System – 750 and 753 Series, Intrinsically Safe Modules Ex i
Contents

Function	Description	Item Number	Page
Power Supply Ex i	Supply Module; 24 VDC; Diagnostics; Intrinsically Safe	750-606*	432
	Supply Module; 24 VDC; Intrinsically Safe	750-625/000-001	432
Digital Input Ex i for Proximity Sensors per EN 60947-5-6	1-Channel Digital Input; NAMUR; Intrinsically Safe	750-435	433
	2-Channel Digital Input; NAMUR; Intrinsically Safe	750-438	434
	Intrinsically Safe 4-Channel Digital Input; 24 VDC; PROFIsafe V 2.0 iPar	750-663/000-003	428
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Digital Output Ex i	2-Channel Digital Output; 24 VDC; Intrinsically Safe	750-535*	436
	4-Channel Digital Output; 24 VDC; Valve; Intrinsically Safe	750-539	437
	2-Channel Relay Output; Changeover Contact; Potential-Free; Intrinsically Safe	750-538	438
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	2-Channel Analog Input; 4 … 20 mA HART; NAMUR NE43; Intrinsically Safe	750-484/000-001	442
	4-Channel Analog Input; RTD/TC; Intrinsically Safe	750-489	443
Analog Output Ex i	2-Channel Analog Output; 0 … 20 mA; Intrinsically Safe	750-585*	444
	2-Channel Analog Output; 4 … 20 mA; Intrinsically Safe	750-586	445
Function Module Ex i	Up/Down Counter; Intrinsically Safe	750-633*	446
*This module is also available as a variant of the 750 XTR Series.		See Section 8	

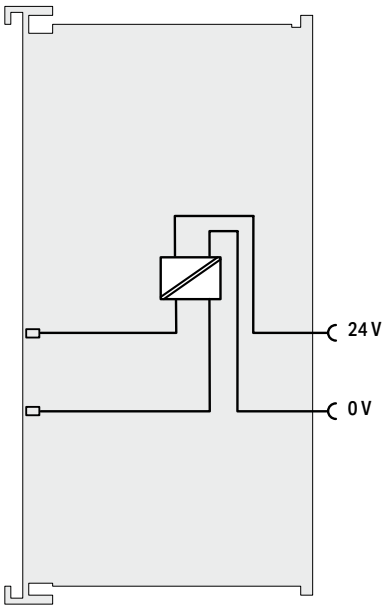


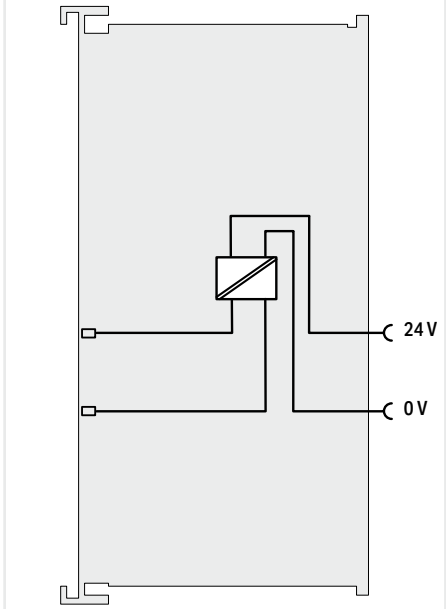
I/O System –
750 XTR Series

Intrinsically safe modules (Ex i) ► Supply module



750-625/000-001





Item description	Power Supply; 24 VDC	Power Supply; 24 VDC; Diagnostics
Version	intrinsically safe	Diagnostics; intrinsically safe
Item no.	750-625/000-001	750-606
Order Text	Power Supply; 24 VDC; Ex i	Power Supply; 24 VDC; Diagn; Ex i
Technical data		
Current consumption (5 V system supply)	7.5 mA	7.5 mA
Input voltage (note)	24 VDC (–25 % … +30 %)	24 VDC (–25 % … +30 %)
Supply voltage (field)	24 VDC (-25 … +30 %); (Adjacent Ex i modules are supplied with U_o = max. 27.3 V); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	24 VDC (-25 … +30 %); (Adjacent Ex i modules are supplied with U_o = max. 27.3 V); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	1 A	1 A
Fuse	electronic	electronic
Data width	-	2 bits (input voltage failure, fuse triggered)
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C
Dimensions W x H x D	(48 x 100 x 70.9) mm	(48 x 100 x 70.9) mm
Explosion protection		
Power supply (input)	U_n = 24 VDC (–25 % … +30 %); $P_{max.}$ = 29 W; U_m = 253 V	U_n = 24 VDC (-25 … +30 %); $P_{max.}$ = 29 W; U_m = 253 V
Power supply (output)	U_o = 26.8 V (safe voltage per IEC 60079-11, protection level ia); U_n = 24 V ± 0.3 V, I_n = 1 A	U_o = 26.8 V (safe voltage per IEC 60079-11, protection level ia); U_n = 24 V ± 0.3 V, I_n = 1 A
Ex standard	EN IEC 60079-0, -7, -11	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3G Ex ec IIC T4 Gc	ATEX/IECEx: II 3G Ex ec IIC T4 Gc
For data sheet and additional information, see:	wago.com/750-625/000-001	wago.com/750-606

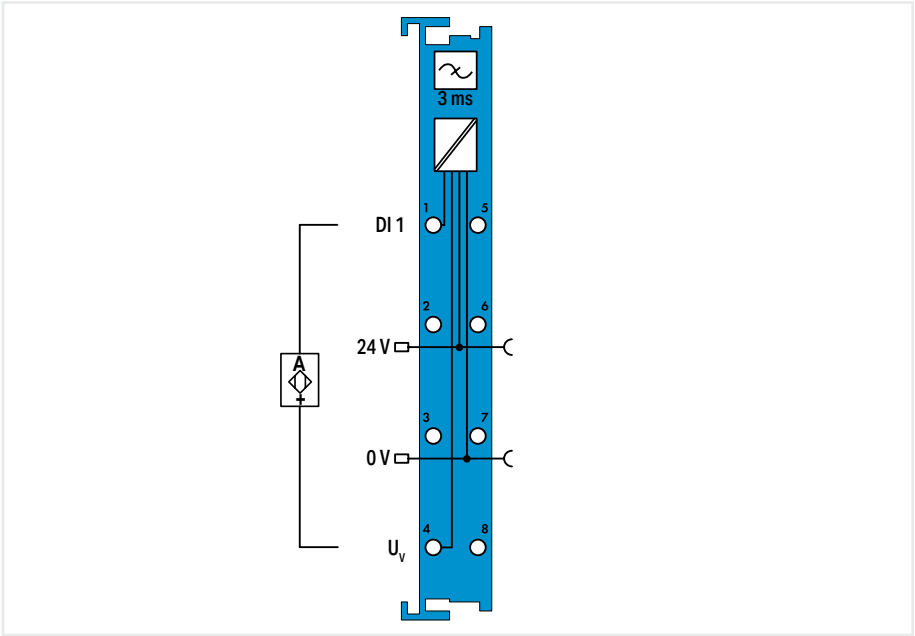
The supply modules monitor the voltage supply of the downstream intrinsically safe segment and separate the intrinsically safe from the non-intrinsically safe section of the I/O system. The input and output sides are electrically isolated from each other.
Note: If, due to load conditions, more than one supply module is required per station, four spacer modules (750-616) must be placed between the intrinsically safe sections.
General information (e.g., installation regulations) on explosion protection is available in the WAGO I/O System 750 manuals!

The supply modules monitor the voltage supply of the downstream intrinsically safe segment and separate the intrinsically safe from the non-intrinsically safe section of the I/O system. The input and output sides are electrically isolated from each other.
Note: If, due to load conditions, more than one supply module is required per station, four spacer modules (750-616) must be placed between the intrinsically safe sections.
General information (e.g., installation regulations) on explosion protection is available in the WAGO I/O System 750 manuals!

Intrinsically safe modules (Ex i) ▶ Digital input



750-435



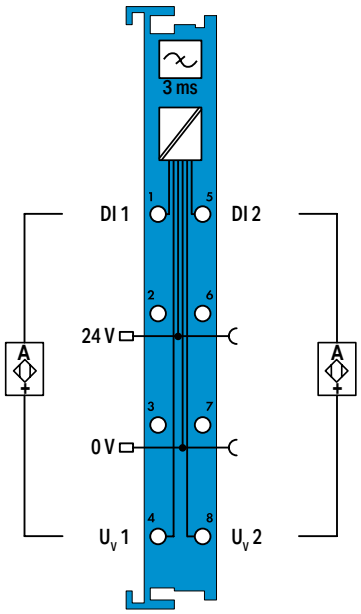
Item description	**1-Channel Digital Input; NAMUR**
Version	**intrinsically safe**
Item no.	**750-435**
Order Text	**1DI; NAMUR; Ex i**

Technical data	
Number of digital inputs	1
Signal type	NAMUR
Sensor connection	1 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Diagnostics	Short circuit, wire break
Supply voltage (sensor)	8.2 VDC; short-circuit-protected, each channel supplied separately
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	13 mA
Current consumption (5 V system supply)	2.5 mA
Input data width (internal) max.	2 bits
Data width	2-bit input: 1-bit status, 1-bit error (short circuit/wire break)
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 12 V; I_o = 16 mA; P_o = 48 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 180 mH; C_o = 1.4 µF
Reactances Ex ia IIB	L_o = 560 mH; C_o = 9 µF
Reactances Ex ia IIA	L_o = 900 mH; C_o = 36 µF
Reactances Ex ia I	L_o = 1 H; C_o = 38 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-435

Intrinsically safe modules (Ex i) ▶ Digital input



750-438



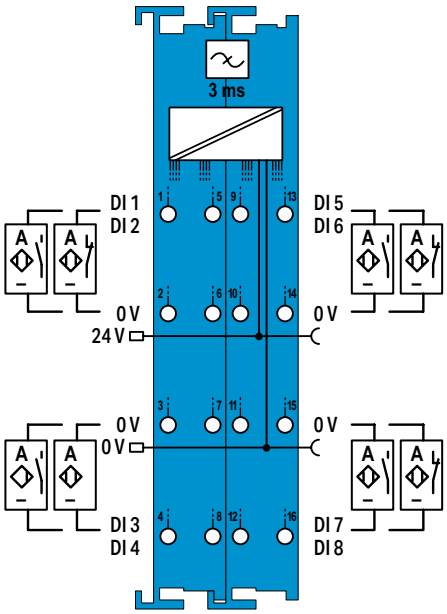
Item description	**2-Channel Digital Input; NAMUR**
Version	**intrinsically safe**
Item no.	**750-438**
Order Text	**2DI; NAMUR; Ex i**

Technical data	
Number of digital inputs	2
Signal type	NAMUR
Sensor connection	2 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Supply voltage (sensor)	8.2 VDC; short-circuit-protected, each channel supplied separately
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	16 mA
Current consumption (5 V system supply)	2.5 mA
Input data width (internal) max.	2 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 12 V; I_o = 13.5 mA; P_o = 40.5 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 190 mH; C_o = 1.4 µF
Reactances Ex ia IIB	L_o = 600 mH; C_o = 9 µF
Reactances Ex ia IIA	L_o = 1 H; C_o = 36 µF
Reactances Ex ia I	L_o = 1 H; C_o = 38 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-438

Intrinsically safe modules (Ex i) ▶ Digital input



750-439



Item description	8-Channel Digital Input; NAMUR
Version	intrinsically safe
Item no.	**750-439**
Order Text	**8DI; NAMUR; Ex i**

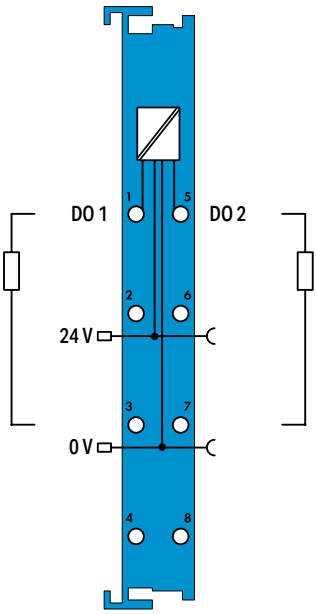
Technical data	
Number of digital inputs	8
Signal type	NAMUR
Sensor connection	4 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Diagnostics	Short circuit; wire break (can be switched off)
Supply voltage (sensor)	8.2 VDC; short-circuit-protected, each channel supplied separately
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	11 mA
Current consumption (5 V system supply)	56 mA
Input data width (internal) max.	16 bits
Output data width (internal) max.	16 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 11.76 V; I_o = 12.4 mA; P_o = 36.67 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 100 mH; C_o = 1 µF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 9.9 µF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 39 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 30 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-439

The process image can be used to define the sensor type (break or make contact) as well as to switch off the diagnostics (e.g., if contact monitoring in order to suppress the LED diagnostics).

Intrinsically safe modules (Ex i) ▶ Digital output



750-535



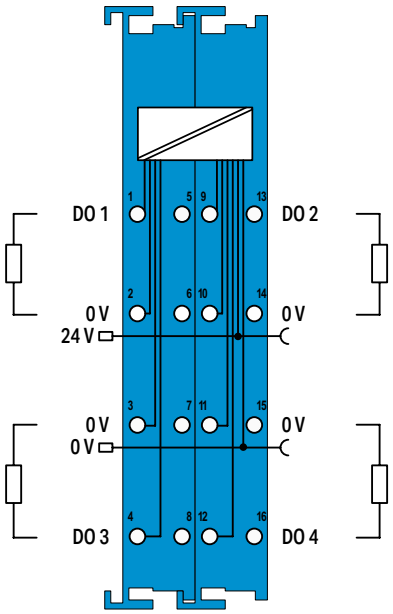
Item description	**2-Channel Digital Output; 24 VDC**
Version	**intrinsically safe**
Item no.	**750-535**
Order Text	**2DO; 24 VDC; Ex i**

Technical data	
Number of digital outputs	2
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	8.5 mA
Current consumption (5 V system supply)	7 mA
Output data width (internal) max.	2 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 106 mA; P_o = 723 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 3 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 12 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 18 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 20 mH; C_o = 3.6 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc/AEx; EAC ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-535

Intrinsically safe modules (Ex i) ▶ Digital output



750-539



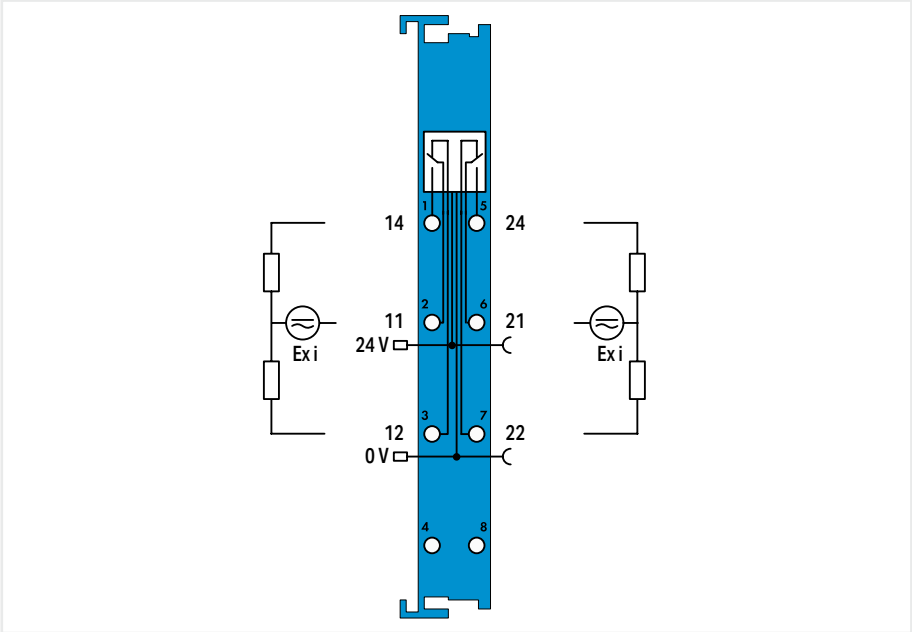
Item description	**4-Channel Digital Output; 24 VDC; Valve**
Version	**intrinsically safe**
Item no.	**750-539**
Order Text	**4DO; 24 VDC; valve; Ex i**

Technical data	
Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Load type	Resistive, inductive, lamp load
Actuator connection	4 x (2-wire)
Switching frequency (max.)	100 Hz
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	10 mA
Current consumption (5 V system supply)	20 mA
Input data width (internal) max.	4 bits
Output data width (internal) max.	4 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 117.5 mA; P_o = 800.1 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 13 µH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 8.1 mH; C_o = 683 nF
Reactances Ex ia IIA	L_o = 14 mH; C_o = 2.28 µF
Reactances Ex ia I	L_o = 21 mH; C_o = 540 nF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-539

Intrinsically safe modules (Ex i) ► Digital output



750-538



Item description	**2-Channel Relay Output; Changeover contact; Potential-free**
Version	**intrinsically safe**
Item no.	**750-538**
Order Text	**2RO; 100 VAC/ 30 VDC; Pot-free; Relay2CO**

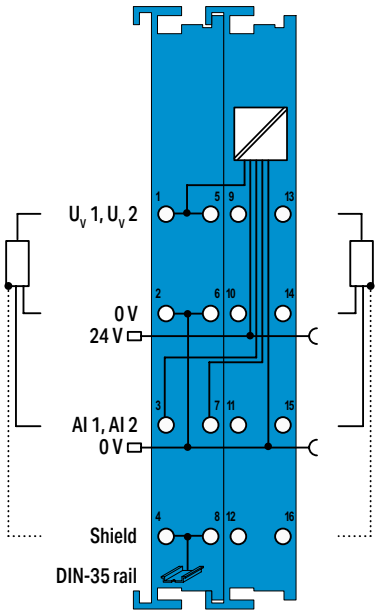
Technical data	
Number of digital outputs	2
Signal type	Digital
Signal type (voltage)	100 VAC; 30 VDC
Output circuit design	2 changeover contacts; Relay
Output characteristic	potential-free
Switching current (max.)	0.5 A
Switching current (note)	0.5 A at 100 VAC; 1 A at 30 VDC
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire)
Switching frequency (max.)	0.3 Hz
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	24 mA
Current consumption (5 V system supply)	26 mA
Output data width (internal) max.	2 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	**Relay output:** U_i = 30 VDC; I_i = 1 A; P_i = 30 W; U_i = 100 VAC; I_i = 0.5 A; P_i = 50 VA; L_i = negligibly small; C_i = negligibly small
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-538

Details on relay!
Both maximum switching current and voltage must comply with EN 60079-11.

Intrinsically safe modules (Ex i) ▶ Analog input ▶ 4 … 20 mA



750-485



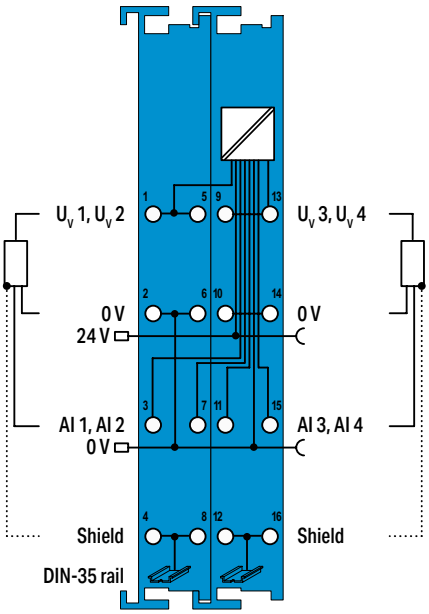
Item description	**2-Channel Analog Input; 4 … 20 mA**
Version	**intrinsically safe**
Item no.	**750-485**
Order Text	**2AI; 4-20mA; SE; Ex i**

Technical data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (3-wire)
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Input resistance (max.)	100 Ω
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (sensor)	16 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	11 mA
Current consumption (5 V system supply)	31 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 90 mA; P_o = 0.61 W; linear characteristic curve
Reactances Ex ia IIC	L_o = 5 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 18 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 40 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 3.5 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-485

Intrinsically safe modules (Ex i) ► Analog input ► 0/4 … 20 mA; NAMUR NE43



750-486



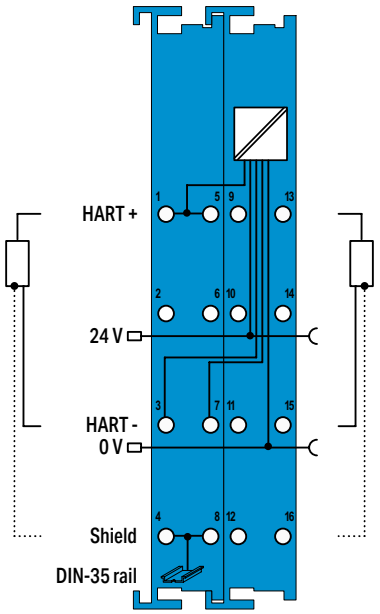
Item description	4-Channel Analog Input; 0/4 … 20 mA; NAMUR NE43
Version	NAMUR NE43; intrinsically safe
Item no.	**750-486**
Order Text	**4AI; 0/4-20mA; SE; 12bits; Diagn; Ex i**

Technical data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC
Sensor connection	2 x (3-wire)
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	200 Ω
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (sensor)	15 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	19 mA
Current consumption (5 V system supply)	45 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 98.4 mA; P_o = 0.672 W; linear characteristic curve
Reactances Ex ia IIC	L_o = 970 µH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 13 mH; C_o = 683 nF
Reactances Ex ia IIA	L_o = 22 mH; C_o = 2.28 µF
Reactances Ex ia I	L_o = 31 mH; C_o = 3.6 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-486

Intrinsically safe modules (Ex i) ▶ Analog input ▶ 4 … 20 mA HART



750-484



Item description	**2-Channel Analog Input; 4 … 20 mA HART**
Version	**intrinsically safe**
Item no.	**750-484**
Order Text	**2AI; 4-20mA HART; Ex i**

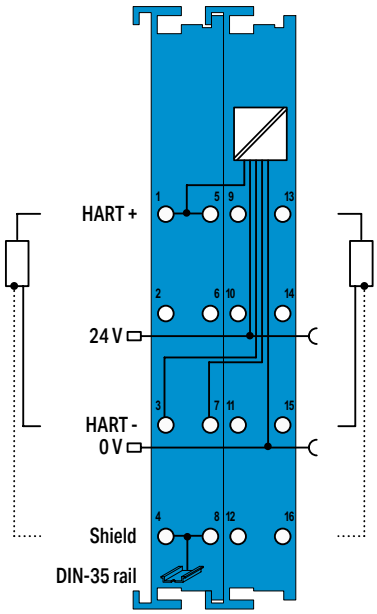
Technical data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	parameterizable
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Overvoltage protection	30 V, reverse polarity protected
Diagnostics	Wire break, measurement range overflow
Supply voltage (sensor)	16.5 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	26 mA
Current consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 92.7 mA; P_o = 630 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 1.5 mH; C_o = 87 nF
Reactances Ex ia IIB	L_o = 15 mH; C_o = 670 nF
Reactances Ex ia IIA	L_o = 38 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 36 mH; C_o = 3.49 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-484

In addition to analog signal processing, this module offers optional HART communication for parameterizing or recording dynamic variables.

Intrinsically safe modules (Ex i) ▶ Analog input ▶ 4 … 20 mA HART; NAMUR NE43



750-484/000-001



Item description	2-Channel Analog Input; 4 … 20 mA HART; NAMUR NE43
Version	NAMUR NE43; intrinsically safe
Item no.	**750-484/000-001**
Order Text	**2AI; 4-20mA HART; NE43; Ex i**

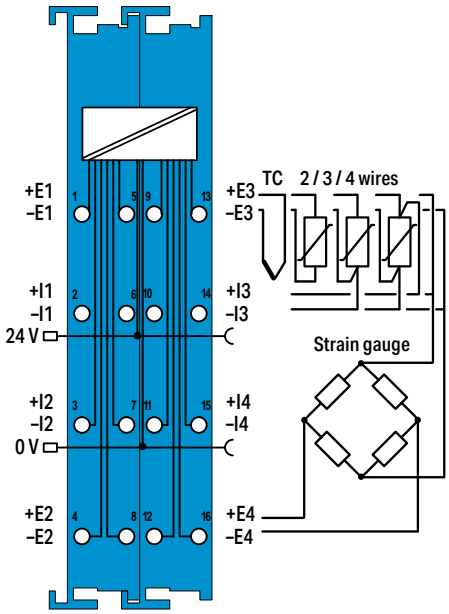
Technical data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	parameterizable
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Overvoltage protection	30 V, reverse polarity protected
Diagnostics	Wire break, measurement range overflow
Supply voltage (sensor)	16.5 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	26 mA
Current consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 92.7 mA; P_o = 630 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 1.5 mH; C_o = 87 nF
Reactances Ex ia IIB	L_o = 15 mH; C_o = 670 nF
Reactances Ex ia IIA	L_o = 38 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 36 mH; C_o = 3.49 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; cULus OrdLoc/HazLoc; Ex ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-484/000-001

In addition to analog signal processing, this module offers optional HART communication for parameterizing or recording dynamic variables.

Intrinsically safe modules (Ex i) ▶ Analog input ▶ Resistance sensors/thermocouples



750-489



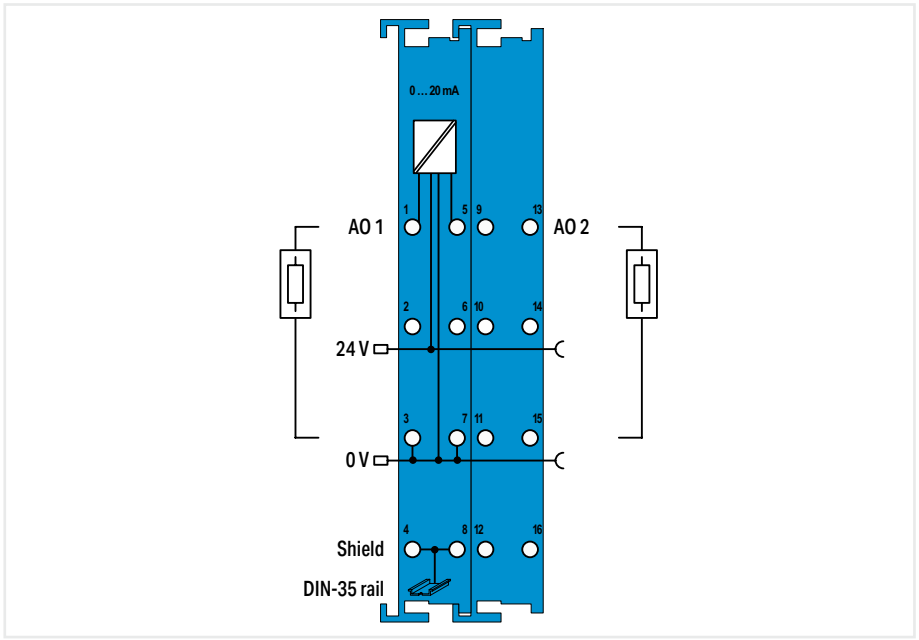
Item description	4-Channel Analog Input; RTD/TC
Version	intrinsically safe
Item no.	**750-489**
Order Text	**4AI; RTD/TC; Ex i**

Technical data	
Number of analog inputs	4
Signal type	Potentiometer positions; Thermocouple; Resistive temperature device; Resistors; mV encoder
Sensor connection	4 x (2-wire); RTD/R: 3-wire; 4-wire
Resolution (over entire range)	0.1 K of full scale value; 0.01 K of full scale value (restricted to -50 °C … +150 °C)
Conversion time	≥10 ms/2 wires (per channel)*; ≥20 ms/3 wires, 4 wires (per channel)*; *for RTD/R; TC/U conversion time depends on module setting
Measurement error (25 °C)	In delivery state: ±0.2 % of the upper-range value (value achieved during calibration in operating environment 0 ≤ TA ≤ 55 °C); After user calibration: ±0.05 % of the upper-range value (only valid in the thermally stable operating state)
Temperature coefficient	±0.001 %/K of the upper-range value
Cold junction compensation	integrated
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	120 mA
Current consumption (5 V system supply)	60 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	per EN/IEC 60079-11: 300 VAC system/supply; per EN/UL 61010-2-201: 1200 VDC system/supply/channel
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 4 V; I_o = 13.46 mA; P_o = 13.46 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 0.19 H; C_o = 100 µF
Reactances Ex ia IIB	L_o = 0.78 H; C_o = 1000 µF
Reactances Ex ia IIA	L_o = 1.57 H; C_o = 1000 µF
Reactances Ex ia I	L_o = 2.57 H; C_o = 1000 µF
Reactances (note)	Reactances, if the internal inductance L_i or capacitance C_i (without cable) of the connected device is ≤1 % of the specified values.
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-489

Intrinsically safe modules (Ex i) ▶ Analog output ▶ 0 … 20 mA



750-585



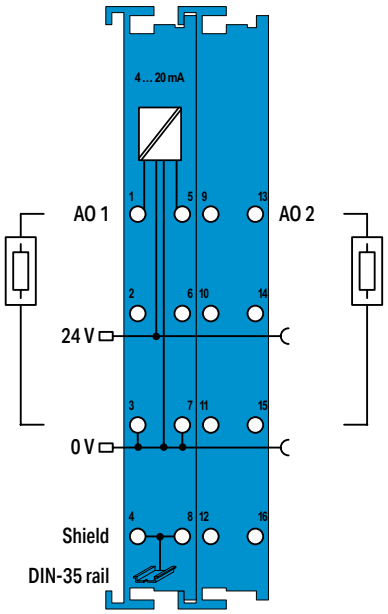
Item description	**2-Channel Analog Output; 0 … 20 mA**
Version	**intrinsically safe**
Item no.	**750-585**
Order Text	**2AO; 0-20mA; Ex i**

Technical data	
Number of analog outputs	2
Signal type	Current
Signal type (current)	0 … 20 mADC
Signal characteristics	Single-ended
Load impedance (current output) max.	500 Ω
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Actuator connection	2 x (2-wire)
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	19 mA
Current consumption (5 V system supply)	21 mA
Data width	2 x 16-bit data
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 57.5 mA; P_o = 392 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 11 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 56 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 90 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 110 mH; C_o = 3.5 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc/AEx; EAC ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-585

Intrinsically safe modules (Ex i) ► Analog output ► 4 … 20 mA



750-586



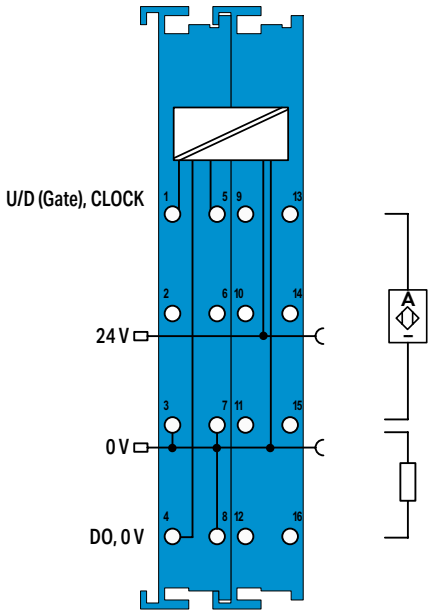
Item description	**2-Channel Analog Output; 4 … 20 mA**
Version	**intrinsically safe**
Item no.	**750-586**
Order Text	**2AO; 2-4-wire; Ex i**

Technical data	
Number of analog outputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Signal characteristics	Single-ended
Load impedance (current output) max.	500 Ω
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Actuator connection	2 x (2-wire)
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	19 mA
Current consumption (5 V system supply)	21 mA
Data width	2 x 16-bit data
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 57.5 mA; P_o = 392 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 11 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 56 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 90 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 110 mH; C_o = 3.5 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-586

Intrinsically safe modules (Ex i) ▶ Counter



750-633



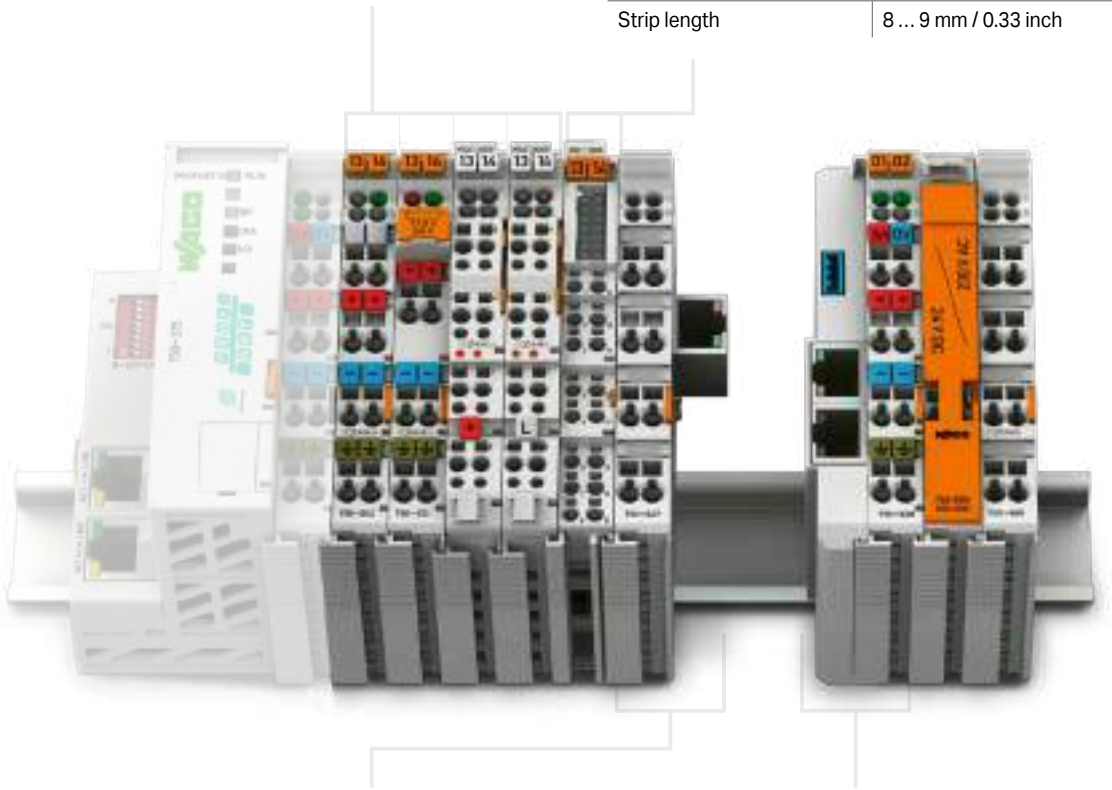
Item description	**Up/Down Counter**
Version	**intrinsically safe**
Item no.	**750-633**
Order Text	**Up/Down Counter; Ex i**

Technical data	
Number of counters	1
Number of digital outputs	1
Sensor supply U_V	8.2 V
Switching frequency	20 Hz … 50 kHz
Counter depth	32 bits
Output voltage	24 VDC
Input filter	10 µs
Input resistance (max.)	1000 Ω
Open-circuit voltage	8.2 V
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	31 mA
Current consumption (5 V system supply)	25 mA
Data width	1 x 32-bit data, 1 x 8-bit status/diagnostics
Isolation	300 VAC system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety data (input)	U_o = 12 V; I_o = 13.5 mA; P_o = 40.5 mW; linear characteristic curve
Reactances of Ex ia IIC inputs	L_o = 100 mH; C_o = 1.4 µF
Reactances of Ex ia IIB inputs	L_o = 100 mH; C_o = 9 µF
Reactances of Ex ia IIA inputs	L_o = 100 mH; C_o = 36 µF
Reactances of Ex ia I inputs	L_o = 100 mH; C_o = 38 µF
Safety data (output)	U_o = 26.8 V; I_o = 96.7 mA; P_o = 648 mW; linear characteristic curve
Reactances of Ex ia IIC output	L_o = 0.5 mH; C_o = 88 nF
Reactances of Ex ia IIB output	L_o = 10 mH; C_o = 683 nF
Reactances of Ex ia IIA output	L_o = 18 mH; C_o = 2.2 µF
Reactances of Ex ia I output	L_o = 26 mH; C_o = 3.6 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc/AEx; EAC ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; I (M1) [Ex ia Ma] I; II (1) D [Ex ia Da] IIIC
For data sheet and additional information, see:	wago.com/750-633

Supply/Segment Modules

Housing Design (750/753 Series)	
Dimensions W x H x D	12 x 100 x 69.8 mm
Depth from upper edge of DIN rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	750 Series: 8 … 9 mm / 0.33 inch 753 Series: 9 … 10 mm / 0.37 inch

Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 2.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch



Specialty Housing (End Module for Bus Extension)	
Dimensions W x H x D	24 x 100 x 69.8 mm
Depth from upper edge of DIN rail	62.6 mm

Specialty Housing (Coupler Module for Bus Extension)	
Dimensions W x H x D	24 x 100 x 69.8 mm
Depth from upper edge of DIN rail	62.6 mm





I/O System –
750 XTR Series

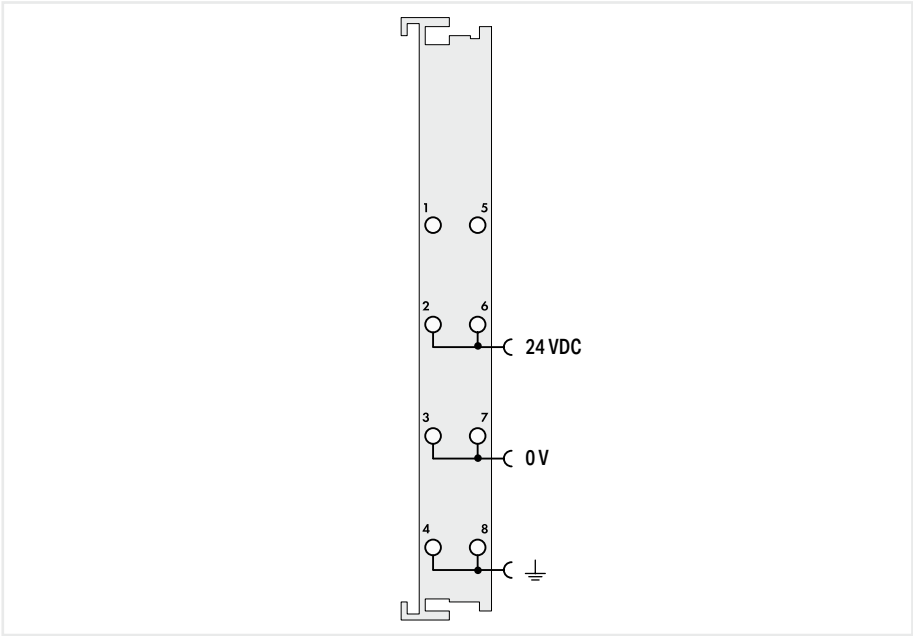
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	Field Supply Filter (Surge); 24 VDC; Higher Isolation; Without Power Jumper Contacts	750-624/020-001*			467
	Field Supply Filter (Surge); 24 VDC; Higher Isolation; Ground Fault Diagnostics	750-624/020-002			466
	Field Supply Filter (Surge); 24 VDC	750-624			466
	Field Supply Filter (Surge); 24 VDC; without Power Jumper Contacts	750-624/000-001			467
	Supply Filter; 24 VDC; Higher Isolation	750-626/020-000*	750-626/025-001		468
	Supply Filter; 24 VDC; Higher Isolation; Ground Fault Diagnostics	750-626/020-002			468
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Local Bus Extension	Bus Extension End Module	750-627			469
	Coupler Module for Bus Extension	750-628			470
Spacer Module	Binary Spacer Module	750-622			471
	Spacer Module; Active			753-1629	472
	Spacer Module; Active; Without Power Jumper Contacts			753-1629/000-001	472
	Spacer Module; Passive			753-629/020-000	473
Distance Module	Distance Module	750-616*			474
	Distance Module; 24 VDC/230 VAC	750-616/030-000			474
	Distance Module	750-621			475
End Module	End Module	750-600*	750-600/025-000		476
	End Module; with Potential Group	750-600/000-001*			477
Ex i		See Section 7.9			
*This module is also available as a variant of the 750 XTR Series.		See Section 8			

Supply module ▶ 24 VDC



750-602



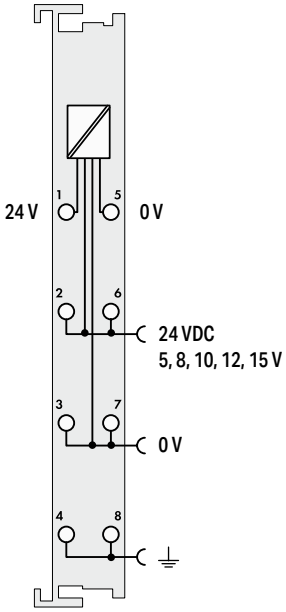
Item description	Power Supply; 24 VDC		
Version	Standard	ext. temperature	pluggable (delivery without connector)
Item no.	**750-602**	**750-602/025-000**	**753-602**
Order Text	**Power Supply; 24 VDC**	**Power Supply; 24 VDC; T**	**Power Supply; 24 VDC**
Technical data			
Pluggable connector	-		pluggable
Supply voltage (system)	5 VDC; via data contacts		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)		
Current carrying capacity (power jumper contacts)	10 A		
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
For data sheet and additional information, see:	wago.com/750-602		wago.com/753-602
Accessories	**Item no.**	**Item no.**	**Item no.**
Plug	-	-	753-110

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

Supply module ▶ 24 VDC; DIP switch



750-623



Item description	**Power Supply; 24 VDC/5 … 15 VDC**
Version	**Standard**
Item no.	**750-623**
Order Text	**Power Supply; 24/5-15 VDC**

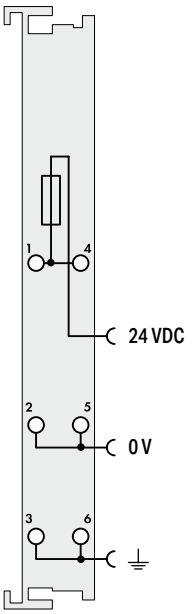
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Output voltage adjustable in steps via DIP switch: 5 V; 8 V; 10 V; 12 V; 15 V
Total current (system supply)	500 mA
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-623

This I/O module converts the applied supply voltage to a value selected via DIP switch and provides it to the field devices connected to the downstream I/O modules.

Supply module ▶ 24 VDC; fuse holder



750-601



7.10

Item description	**Power Supply; 24 VDC; Fuse holder**
Version	**Standard**
Item no.	**750-601**
Order Text	**Power Supply; 24 VDC**

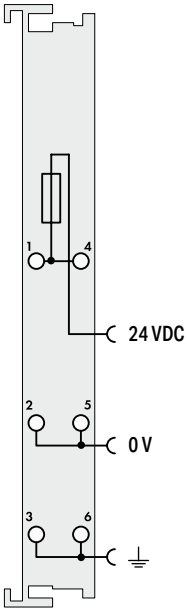
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-601

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 24 VDC; fuse holder; diagnostics



750-610



Item description	**Power Supply; 24 VDC; Fuse holder; Diagnostics**
Version	**Diagnostics**
Item no.	**750-610**
Order Text	**Power Supply; 24 VDC; Fuse; Diagn**

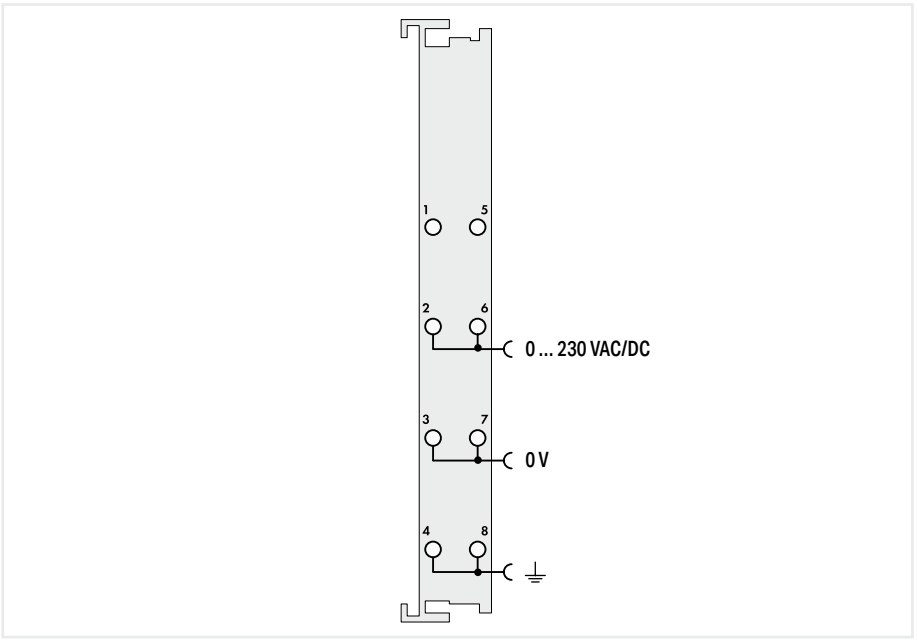
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current consumption (5 V system supply)	5 mA
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Diagnostics	Supply voltage (field): Detection “on” at > 15 VDC; Detection “off” at < 5 VDC
Data width	2 bits (1 bit current monitoring, 1 bit fuse fault)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-610

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED. The fuse status can also be queried from the fieldbus coupler.

Supply module ▶ 0 … 230 VAC/DC



750-612



Item description	Power Supply; 0 … 230 VAC/DC	
Version	Standard	pluggable (delivery without connector)
Item no.	750-612	753-612
Order Text	Power Supply; 0-230 VAC/VDC	Power Supply; 0-230 VAC/VDC

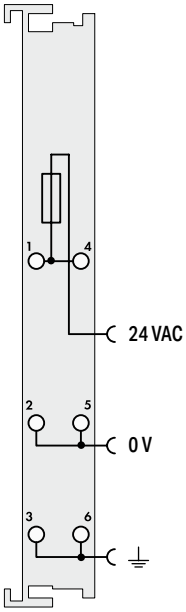
Technical data		
Pluggable connector	-	pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	230 VAC/DC (-15 … +10 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-612	wago.com/753-612
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

Supply module ▶ 24 VAC



750-617



Item description	**Power Supply; 24 VAC; Fuse holder**
Version	**Standard**
Item no.	**750-617**
Order Text	**Power Supply; 24 VAC; Fuse**

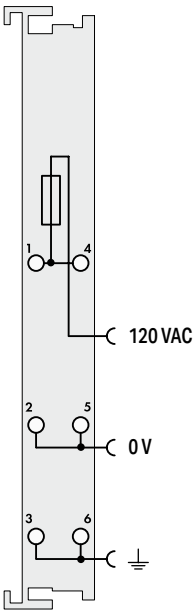
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VAC; via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE, cULus, OrdLoc
For data sheet and additional information, see:	wago.com/750-617

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 120 VAC



750-615



Item description	**Power Supply; 120 VAC; Fuse holder**
Version	**Standard**
Item no.	**750-615**
Order Text	**Power Supply; 120 VAC; Fuse**

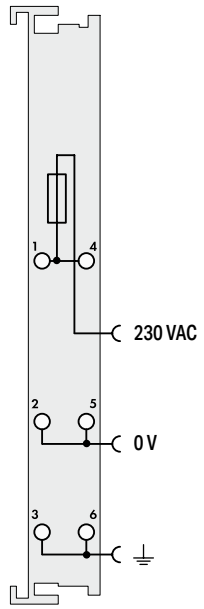
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	120 VAC; via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-615

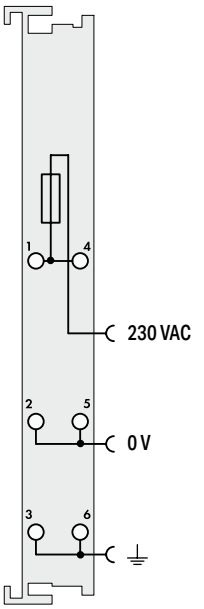
This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 230 VAC



750-609





Item description	Power Supply; 230 VAC; Fuse holder	Power Supply; 230 VAC; Fuse holder; Diagnostics
Version	Standard	Diagnostics
Item no.	750-609	750-611
Order Text	Power Supply; 230 VAC; Fuse	Power Supply; 230 VAC; Fuse; Diagn

Technical data		
Supply voltage (system)	5 VDC; via data contacts	5 VDC; via data contacts
Supply voltage (field)	230 VAC (-15 … +10 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	230 VAC (-15 … +10 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current consumption (5 V system supply)	-	5 mA
Current carrying capacity (power jumper contacts)	6.3 A	6.3 A
Fuse	5 x 20; T 6.3 A (not included)	5 x 20; T 6.3 A (not included)
Diagnostics	-	Supply voltage (field): Detection “on” at > 164 VAC; Detection “off” at < 40 VAC
Data width	-	2 bits (1 bit current monitoring, 1 bit fuse fault)
Ambient temperature (operation)	0 … +55 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-609	wago.com/750-611

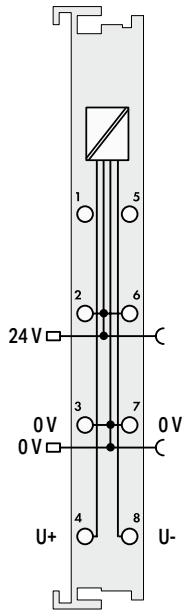
This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED. The fuse status can also be queried from the fieldbus coupler.

Supply module ▶ DALI



753-620



Item description	DALI Multi-Master DC/DC Converter
Version	pluggable
Item no.	**753-620**
Order Text	**DALI Multi-Master DC/DC-Converter**

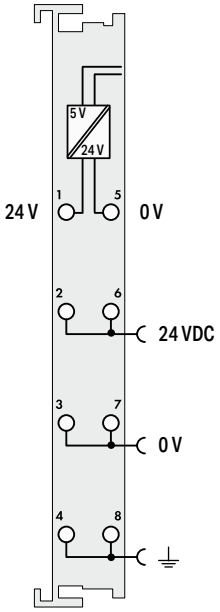
Technical data	
Pluggable connector	pluggable
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Supply voltage (DALI): 18 VDC; at +U and -U via CAGE CLAMP® connection
Total current (system supply)	200 mA
Current carrying capacity (power jumper contacts)	10 A
Test voltage (input/output)	1.5 kV
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; Marine; OrdLoc
For data sheet and additional information, see:	wago.com/753-620

This I/O module powers the DALI Multi-Master (753-647). It uses the field supply, which is connected via the power jumper contacts. Cable bridges connect the module to the DALI Multi-Master.

System power supply ▶ 24 VDC; system power supply



750-613



Item description	**System Power Supply; 24 VDC**
Version	**Standard**
Item no.	**750-613**
Order Text	**System Power Supply; 24 VDC**

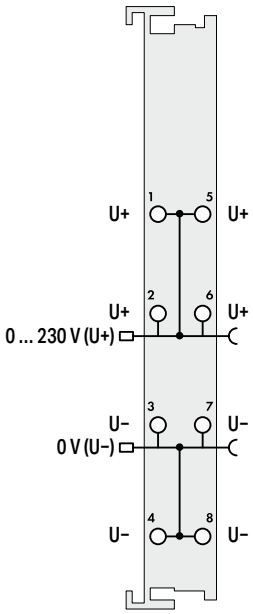
Technical data	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	90 %
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Total current (system supply)	2000 mA
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-613

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules. It also serves as an additional system supply for large nodes, covering the I/O modules' power demands.

Potential distribution module ▶ 0 … 230 VAC/DC



750-614



7.10

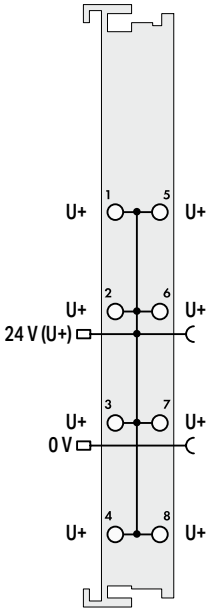
Item description	Potential Distribution	
Version	Standard	pluggable (delivery without connector)
Item no.	750-614	753-614
Order Text	Potential Distribution	Potential Distribution

Technical data		
Pluggable connector	-	pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	230 VAC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-614	wago.com/753-614
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Potential distribution module ▶ 8x 24 V



750-603



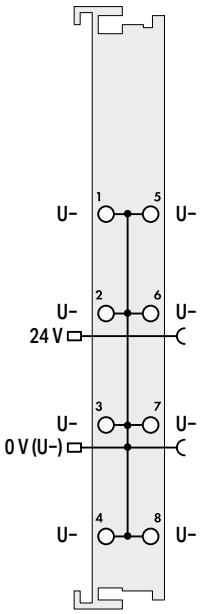
Item description	Potential Distribution; 8x 24 V	
Version	Standard	pluggable (delivery without connector)
Item no.	**750-603**	**753-603**
Order Text	**Potential Distribution; 8*24V**	**Potential Distribution; 8*24V**

Technical data		
Pluggable connector	-	pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-603	wago.com/753-603
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Potential distribution module ▶ 8x 0 V



750-604



7.10

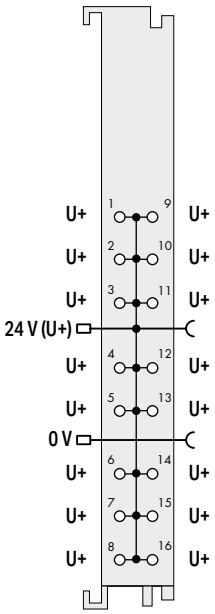
Item description	**Potential Distribution; 8x 0 V**	
Version	**Standard**	**pluggable (delivery without connector)**
Item no.	**750-604**	**753-604**
Order Text	**Potential Distribution; 8*0V**	**Potential Distribution; 8*0V**

Technical data		
Pluggable connector	-	pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
For data sheet and additional information, see:	wago.com/750-604	wago.com/753-604
Accessories	**Item no.**	**Item no.**
Plug	-	753-110

Potential distribution module ▶ 16x 24 V



750-1605



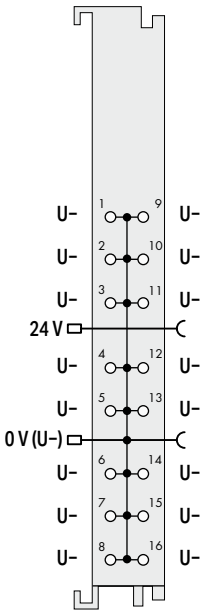
Item description	**Potential Distribution; 16x 24 V**
Version	**Standard with 16 connectors**
Item no.	**750-1605**
Order Text	**Potential Distribution; 16*24V**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1605

Potential distribution module ▶ 16x 0 V



750-1606



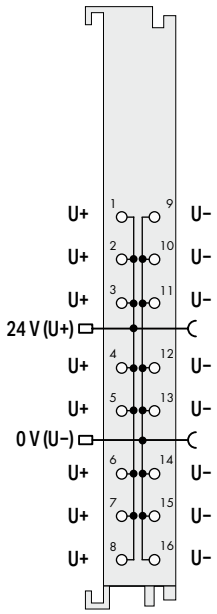
Item description	**Potential Distribution; 16x 0 V**
Version	**Standard with 16 connectors**
Item no.	**750-1606**
Order Text	**Potential Distribution; 16*0V**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1606

Potential distribution module ▶ 8x 24 V/8x 0 V



750-1607



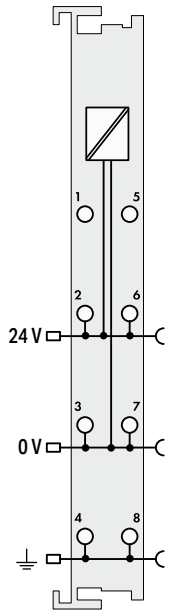
Item description	**Potential Distribution; 8x 24 V/8x 0 V**
Version	**Standard with 16 connectors**
Item no.	**750-1607**
Order Text	**Potential Distribution; 8*24V/8*0V**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1607

Filter module ▶ Field supply filter



750-624



Item description	Field Supply Filter (Surge); 24 VDC		
Version	Standard	Higher isolation	higher isolation; ground fault diagnostics
Item no.	750-624	750-624/020-000	750-624/020-002
Order Text	Field Supply Filter; 24 VDC	Field Supply Filter; 24 VDC; HI	Field Supply Filter; 24 VDC HI; GF

Technical data			
Supply voltage (system)	5 VDC; via data contacts		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		24 VSELV DC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	-		29 mA
Current carrying capacity (power jumper contacts)	10 A		
Current consumption, field supply (module with no external load)	-		16 mA
Application	Marine-certified operation in conjunction with the Ex i supply module and the use of 750 Series PROFIsafe Modules	Marine-certified operation in conjunction with 750 Series I/O Modules	
Data width	-		8-bit input; 8-bit output
Ambient temperature (operation)	0 … +55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; cULus OrdLoc/HazLoc	CE; Marine; cULus OrdLoc/HazLoc

For data sheet and additional information, see: wago.com/750-624

Use in systems with isolation monitoring requires the high isolation variants.

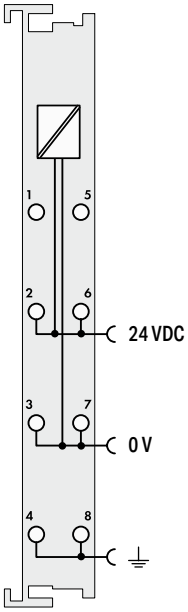
Ground diagnostics (response values) 750-624/020-002:

- Pre-alarm 50 kΩ (±15 %)
- Main alarm 25 kΩ (±15 %)
- Hysteresis (typ.) 25 … 30 %
- Response time ≤ 5 s (typ. 2.5 s)
- Internal resistance DC (test circuit) >10 MΩ (test inactive), >90 kΩ (test active)
- Test current ≤180 µA (RF=0 Ω)
- Permissible system leakage capacitance ≤ 2 µF

Filter module ▶ Field supply filter; without power jumper contacts



750-624/000-001



Item description	Field Supply Filter (Surge); 24 VDC	
Version	without power jumper contacts	higher isolation; without power jumper contacts
Item no.	750-624/000-001	750-624/020-001
Order Text	Field Supply Filter; 24 VDC; NC	Field Supply Filter; 24 VDC; HI; NC

Technical data		
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Application	Marine-certified operation in conjunction with the Ex i supply module and the use of 750 Series PROFIsafe Modules	Marine-certified operation in conjunction with 750 Series I/O Modules
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx

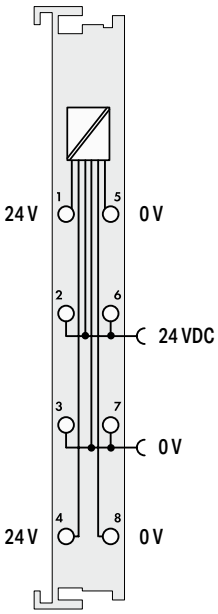
For data sheet and additional information, see: wago.com/750-624/000-001

Use in systems with isolation monitoring requires the high isolation variants.

Filter module ▶ Power supply filter



750-626



Item description	Supply Filter; 24 VDC				
Version	Standard	ext. temperature	Higher isolation	higher isolation; ground fault diagnostics	Higher isolation; extended temperature
Item no.	**750-626**	**750-626/025-000**	**750-626/020-000**	**750-626/020-002**	**750-626/025-001**
Order Text	**Supply Filter; 24 VDC**	**Supply Filter; 24 VDC; T**	**Supply Filter; 24 VDC; HI**	**Supply Filter; 24 VDC HI; GF**	**Supply Filter; 24 VDC; HI; T**
Technical data					
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)			24 VDC (-25 … +30 %)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)			24 VSELV DC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current consumption (5 V system supply)	-			29 mA	-
Current via system voltage (max.)	1.5 A (1 A up to hardware version 04)	1.5 A (1 A up to hardware 04)	1.5 A (1 A up to hardware version 04)	-	1.5 A (1 A up to hardware 04)
Current carrying capacity (power jumper contacts)	10 A				
Current consumption, field supply (module with no external load)	-			16 mA	-
Isolation	-			300 VDC (limited by a transient protection device) system/field	-
Application	Marine-certified operation in conjunction with the Ex i supply module and the use of 750 Series PROFIsafe Modules		Marine-certified operation in conjunction with 750 Series Couplers and Controllers		
Data width	-			8-bit input; 8-bit output	-
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C		-20 … +60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			CE; Marine; OrdLoc/HazLoc	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-626				

Use in systems with isolation monitoring requires the high isolation variants.

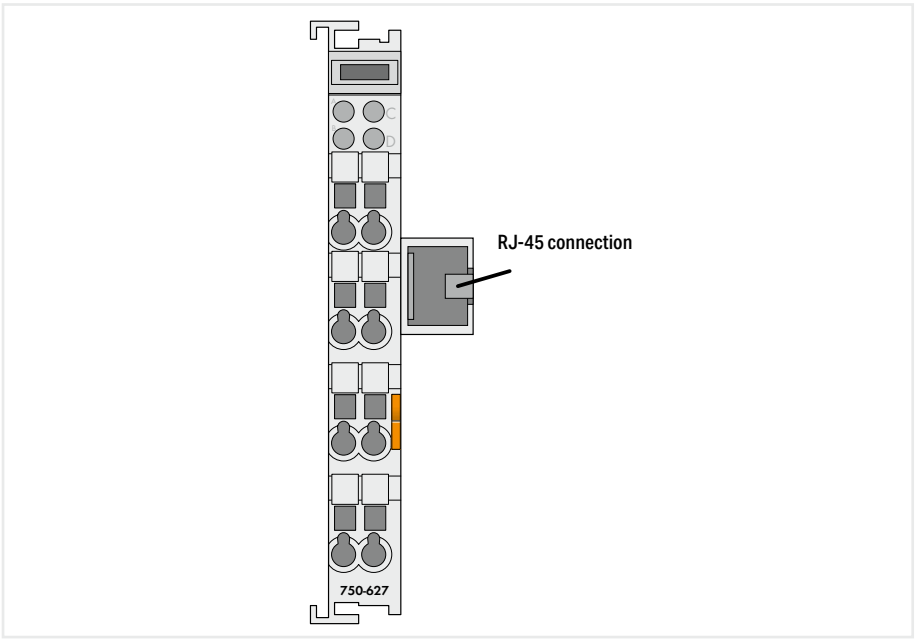
Ground diagnostics (response values) 750-626/020-002:

- Pre-alarm 50 kΩ (±15 %)
- Main alarm 25 kΩ (±15 %)
- Hysteresis (typ.) 25 … 30 %
- Response time ≤ 5 s (typ. 2.5 s)
- Internal resistance DC (test circuit) >10 MΩ (test inactive), >90 kΩ (test active)
- Test current ≤180 µA (RF=0 Ω)
- Permissible system leakage capacitance ≤ 2 µF

Bus extension ▶ End module



750-627



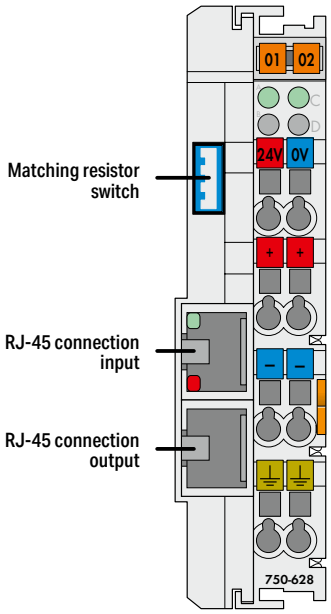
Item description	**Bus Extension End Module**
Version	**Standard**
Item no.	**750-627**
Order Text	**Bus Extension End Module**

Technical data	
Device-specific	Number of coupler modules: up to 10; Distance (max.): 5 m (10 m see manual); (end/coupler modules or coupler/coupler modules)
Connection technology: communication/fieldbus	Local bus: 1 x RJ-45
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	70 mA
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc
For data sheet and additional information, see:	wago.com/750-627

Bus extension ▶ Coupler module



750-628



7.10

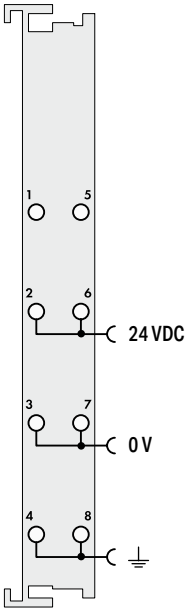
Item description	**Bus Extension Coupler Module**
Version	**Standard**
Item no.	**750-628**
Order Text	**Bus Extension Coupler Module**

Technical data	
Number of modules per node (max.)	64
Device-specific	Distance (max.): 5 m (10 m see manual); (end/coupler modules or coupler/coupler modules)
Connection technology: communication/fieldbus	Local bus: 2 x RJ-45
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	200 mA
Power supply efficiency (typ.) at nominal load (24 V)	76 %
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current consumption (5 V system supply)	150 mA
Total current (system supply)	400 mA
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(24 x 100 x 69.8) mm
Approvals	CE; Marine; OrdLoc
For data sheet and additional information, see:	wago.com/750-628

Spacer module ▶ Binary



750-622



Item description	**Binary Spacer Module**
Version	**Standard**
Item no.	**750-622**
Order Text	**Binary Spacer Module**

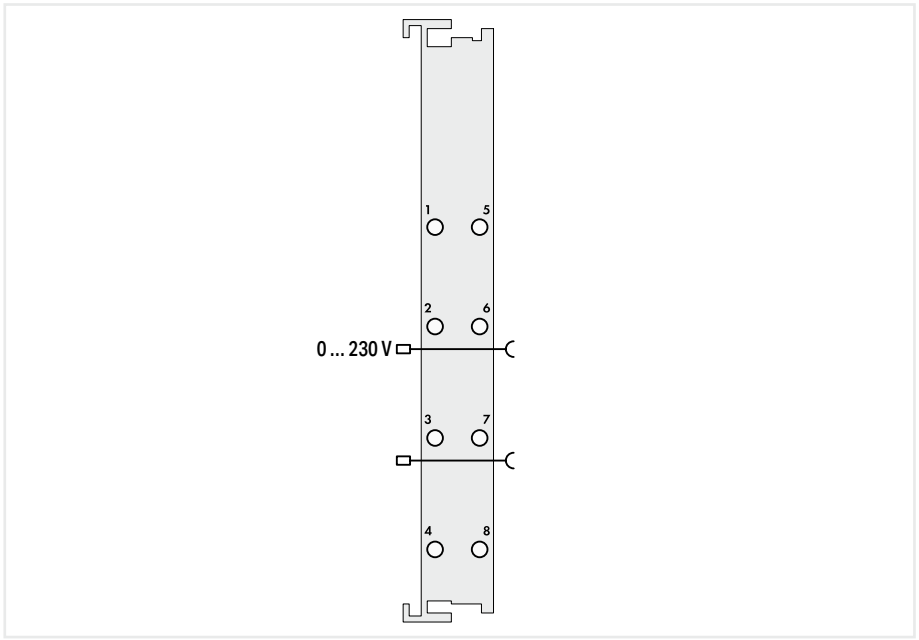
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current consumption (5 V system supply)	10 mA
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field
Data width	2, 4, 6 or 8 bits (adjustable via DIP switches)
Operating mode	Inputs DIP 3: OFF; Outputs DIP 3: ON
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-622

This binary spacer module reserves bit addresses in the process image of a fieldbus node.

Spacer module ▶ active



753-1629



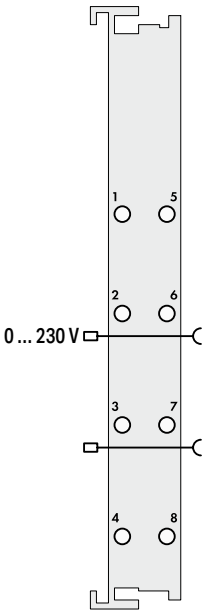
Item description	**Spacer Module**	
Version	**active; pluggable (delivery without connector)**	**active; without power jumper contacts; pluggable (delivery without connector)**
Item no.	**753-1629**	**753-1629/000-001**
Order Text	**Spacer Module; Active**	**Spacer Module; Active; NC**

Technical data		
Pluggable connector	pluggable	
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	Field-side supply via power jumper contacts	-
Ambient temperature (operation)	0 … +55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE, KC, cULus OrdLoc	
For data sheet and additional information, see:	wago.com/753-1629	
Accessories	**Item no.**	**Item no.**
Plug	753-110	753-110

This active spacer module enables both hardware and software space reservation for standard function modules (digital input/output modules and analog input/output modules) in PROFIBUS/PROFINET networks (only in conjunction with 750-333, 750-375, 750-377).

Spacer module ▶ passive





Item description	**Spacer Module**
Version	**passive; pluggable (delivery without connector)**
Item no.	**753-629/020-000**
Order Text	**Spacer Module; Passive**

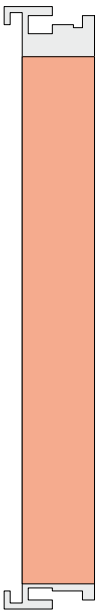
Technical data	
Pluggable connector	pluggable
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	Field-side supply via power jumper contacts
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc
For data sheet and additional information, see:	wago.com/753-629/020-000
Accessories	**Item no.**
Plug	753-110

This passive spacer module enables hardware space reservation for standard function modules (digital input/output modules and analog input/output modules).

Distance module ▶ Distance module



750-616



Item description	**Distance Module**	
Version	**Standard**	**labeled**
Item no.	**750-616**	**750-616/030-000**
Order Text	**Distance Module**	**Distance Module; 24 VDC/230 VAC**

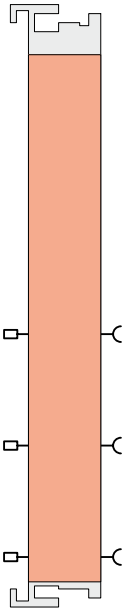
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-616

This distance module visually divides a fieldbus node into sections. The 750-616 Distance Module has no power jumper contacts. The labeled version of the distance module is available under the item number 750-616/030-000.
Notice:
Operation of the adjacent I/O modules requires a supply module.

Distance module ▶ Distance module; with power jumper contacts



750-621



Item description	**Distance Module**
Version	**with power jumper contacts**
Item no.	**750-621**
Order Text	**Distance Module**

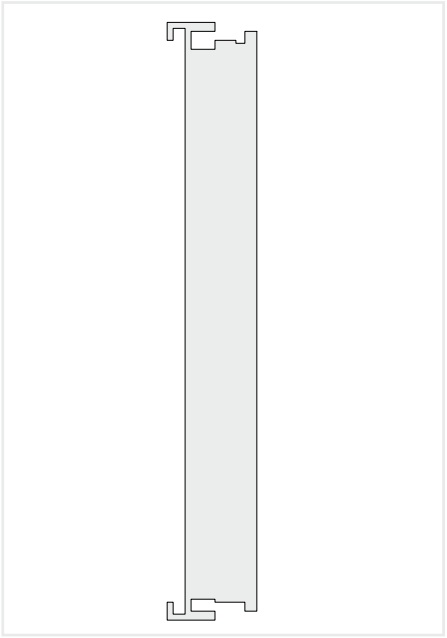
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Ambient temperature (operation)	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-621

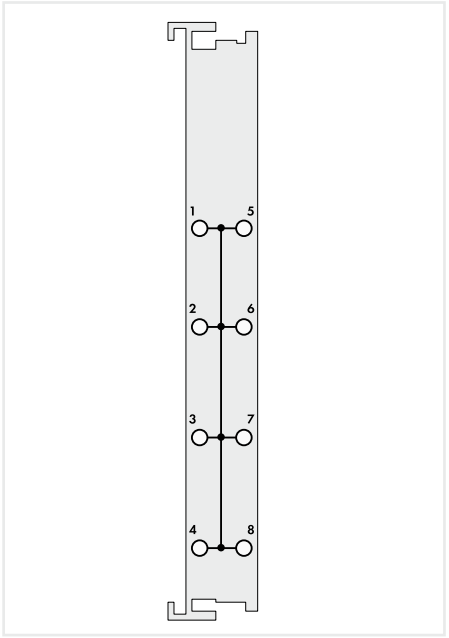
The 750-621 Distance Module has power jumper contacts that can supply the power to adjacent I/O modules.

Bus end module



750-600





Item description	End Module		End Module; with Potential Group
Version	Standard	ext. temperature	Standard
Item no.	750-600	750-600/025-000	750-600/000-001
Order Text	End module	End Module; T	End Module; with Potential Group
Technical data			
Supply voltage (system)	-		5 VDC; via data contacts
Voltage (potential group)	-		0 … 230 VAC/DC; Supply via CAGE CLAMP® contacts
Rated surge voltage	-		5 kV per EN 60870-2-1 / Class VW3, or 6.4 kV per EN 61010-1
Ambient temperature (operation)	0 … +55 °C	-20 … +60 °C	0 … +55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-600		wago.com/750-600
	This end module must be snapped onto the assembly at the end of a fieldbus node. The end module completes the internal data bus, ensuring flawless data transmission.	An end module must be snapped onto the assembly at the end of a fieldbus node. The end module completes the internal data bus, ensuring flawless data transmission.	An end module must be snapped onto the assembly at the end of a fieldbus node. In addition, the eight CAGE CLAMP® connections form a potential group. The end module completes the internal local data bus, ensuring flawless data transmission.



I/O System – 750 XTR Series

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

I/O System – 750 XTR Series

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

I/O System Field

Automate and Network Modular Machines for the Future

- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

◄ Section 7

Section 9 ►►

I/O System – 750 XTR Series
Contents

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Standards and Rated Conditions		485
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Approvals		484
Controllers PFC200 XTR	See Section 6.2	
Controllers 750 XTR	See Section 6.5	





	Description	Item No.	
Fieldbus Couplers	Fieldbus Coupler PROFIBUS DP; 2nd Generation; 12 MBd; Extreme	750-333/040-000	486
	Fieldbus Coupler Modbus TCP; Extreme	750-362/040-000	487
	Fieldbus Coupler Modbus TCP M12; 4th Generation; Extreme	750-364/040-010	488
	Fieldbus Coupler EtherNet/IPTM; Extreme	750-363/040-000	489
	Fieldbus Coupler EtherNet/IPTM M12; 4th Generation; Extreme	750-365/040-010	490
	Fieldbus Coupler CANopen; D-Sub; Extreme	750-338/040-000	491
Digital Input Modules	8-Channel Digital Input; 24 VDC; 3 ms; 2-Wire Connection; Extreme	750-1415/040-000	492
	8-Channel Digital Input; 24 VDC; 3 ms; Extreme	750-430/040-000	492
	16-Channel Digital Input; 24 VDC; 3 ms; Extreme	750-1405/040-000	493
	8-Channel Digital Input; 24 VDC; 0.2 ms; 2-Wire Connection; Extreme	750-1416/040-000	494
	8-Channel Digital Input; 24 VDC; 0.2 ms; Extreme	750-431/040-000	495
	8-Channel Digital Input; 24 VDC; 3 ms; Low-Side Switching; 2-Wire Connection; Extreme	750-1417/040-000	495
	2-Channel Digital Input; 60 VDC; 3 ms; Extreme	750-429/040-001	496
	2-Channel Digital Input; 110 VDC; 3 ms; Extreme	750-427/040-000	497
	2-Channel Digital Input; 220 VDC; 3 ms; Extreme	750-407/040-000	498
Digital Output Modules	2-Channel Digital Output; 24 VDC; 2.0 A; Diagnostics; Extreme	750-508/040-000	499
	8-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics; Extreme	750-537/040-000	500
	8-Channel Digital Output; 24 VDC; 0.5 A; 2-Wire Connection; Extreme	750-1515/040-000	501
	8-Channel Digital Output; 24 VDC; 0.5 A; Low-Side Switching; 2-Wire Connection; Extreme	750-1516/040-000	502
	2-Channel Relay Output; 250 VAC; 1 A; Relay with 2 Changeover Contacts; Extreme	750-517/040-000	503
Analog Input Modules	4-Channel Analog Input; 0 … 20 mA; Single-Ended; Extreme	750-453/040-000	504
	2-Channel Analog Input; 4 … 20 mA; Differential Input; NAMUR NE 43; Extreme	750-492/040-001	505
	4-Channel Analog Input; 4 … 20 mA; Single-Ended; Extreme	750-455/040-000	506
	4-Channel Analog Input; ±10 VDC; Single-Ended; Extreme	750-457/040-000	507
	4-Channel Analog Input; 0 … 10 VDC; Single-Ended; Extreme	750-468/040-000	508
	2-Channel Analog Input; 0 … 30 VDC; Differential Input; Extreme	750-483/040-000	509
	4-Channel Analog Input; for Voltage/Current; Extreme	750-471/040-000	510
	2/4-Channel Analog Input; Resistance Measurement; Adjustable; Extreme	750-464/040-000	511
	2-Channel Analog Input; Thermocouple; Adjustable; Extreme	750-469/040-000	512
	3-Phase Power Measurement; 20 kVAC; 300 A; Extreme	750-495/040-010	513
	3-Phase Power Measurement; 690 VAC 1 A; Extreme	750-495/040-000	514
	3-Phase Power Measurement; 690 VAC 5 A; Extreme	750-495/040-001	514
	3-Phase Power Measurement; 690 VAC Rogowski Coils; Extreme	750-495/040-002	514
Analog Output Modules	2-Channel Analog Output; 0/4 … 20 mA; 16 Bits; 6 … 18 VDC; Extreme	750-563/040-000	515
	4-Channel Analog Output; ±10 VDC; Extreme	750-557/040-000	516
	4-Channel Analog Output; 0 … 10 VDC; Extreme	750-559/040-000	517
Function/Technology Modules	Counter; Adjustable; Extreme	750-404/040-003	518
	4-Channel Pulse-Width Modulation; 24 VDC; 0.2 A; 20 kHz; Extreme	750-677/040-000	519
	Incremental Encoder Interface; 32 Bits; Extrem	750-637/040-00x	520
	SSI Transmitter Interface; Adjustable; Extreme	750-630/040-001	521
Communication Modules	Serial Interface RS-232/485; Extreme	750-652/040-000	522
	CAN Gateway; Extreme	750-658/040-000	523
Supply/Segment Modules	Power Supply; 24 VDC; Extreme	750-602/040-000	524
	Power Supply; 24 VDC; Fuse Holder; Extreme	750-601/040-000	525
	Power Supply; 24 VDC; Fuse Holder; Diagnostics; Extreme	750-610/040-000	526
	Power Supply; 0 … 230 VAC/DC; Extreme	750-612/040-000	527
	System Power Supply; 24 VDC; Extreme	750-613/040-000	528
	Potential Multiplication; 0 … 230 VAC/DC; Extreme	750-614/040-000	529
	Potential Multiplication; 16x 24 V; Extreme	750-1605/040-000	530
	Potential Multiplication; 16x 0 V; Extreme	750-1606/040-000	531
	Field Supply Filter (Surge); 24 VDC; Higher Isolation; Extreme	750-624/040-000	532
	Field Supply Filter (Surge); 24 VDC; Higher Isolation; Without Power Jumper Contacts; Extreme	750-624/040-001	533
	Supply Filter; 24 VDC; Higher Isolation; Extreme	750-626/040-000	534
	Distance Module; Extreme	750-616/040-000	535
	End Module; Extreme	750-600/040-00x	536



Intrinsically Safe XTR Modules	Power Supply; 24 VDC; Extreme; for Intrinsically Safe XTR Modules	750-606/040-000	539
	8-Channel Digital Input; NAMUR; Intrinsically Safe; Extreme	750-439/040-000	540
	2-Channel Digital Output; 24 VDC; Intrinsically Safe; Extreme	750-535/040-000	541
	4-Channel Analog Input; 0/4 … 20 mA; Intrinsically Safe; Extreme	750-486/040-000	542
	2-Channel Analog Input; 4 … 20 mA HART; Intrinsically Safe; Extreme	750-484/040-000	543
	2-Channel Analog Input; Resistance Measurement; Intrinsically Safe; Extreme	750-481/040-000	544
	2-Channel Analog Output; 0 … 20 mA; Intrinsically Safe; Extreme	750-585/040-000	545
	Up/Down Counter; Intrinsically Safe; Extreme	750-633/040-000	546



Accessories
Marking and Mounting Accessories — Section 13

8

I/O System – 750 XTR Series
General Product Information

Taking It to the eXTReme – The Standard for 750 XTR

Instantly recognizable by its dark gray modules, you will benefit from the unique added value of the WAGO I/O System 750 XTR for applications that are subjected to extreme environments.

Extremely temperature-resistant, immune to interference, as well as unfazed by vibrations and impulse voltages – the WAGO I/O System 750 XTR is the first choice for demanding applications including:
- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical processing
- Water and wastewater treatment systems
- Custom machines
- Railway systems

Superior Reliability in Extreme Climates

Automation systems are increasingly being located in outdoor and remote locations where components are directly affected by widely fluctuating temperature conditions such as wind turbines or transformer stations.
Engineered for freezing cold, extreme heat and high humidity, the WAGO I/O System 750 XTR provides absolute dependability in virtually any weather. The XTR version of the WAGO I/O System 750 is unfazed by both freezing cold down to −40°C and scorching heat up to +70°C. And this applies equally for both start-up and ongoing operation.
The maximum approved operating altitude of 5,000 m is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

eXTReme Evolution of the Tried and Tested

Using an industry-leading platform, the WAGO I/O System 750 XTR boasts the same proven benefits:
- Compact design: up to 16 channels in a module width of 12 mm (1/2")
- Easy to use
- Vibration-proof, fast and maintenance-free CAGE CLAMP® spring connections
- Fieldbus independence due to its modular design
- Clear identification with the WAGO WSB Marking System

Additional Protection against Interference Pulses

The WAGO I/O System 750 XTR provides greater immunity to impulse voltages up to 5 kV, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths ensure trouble-free operation.

High Mechanical Performance

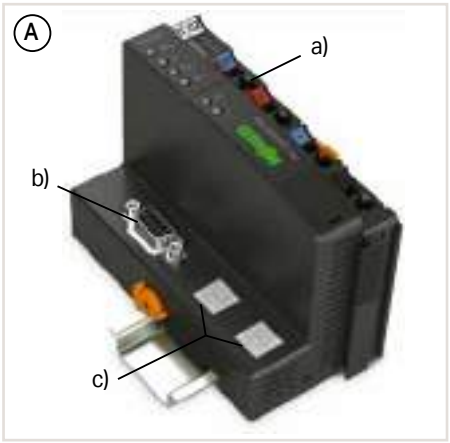
Automation systems must be incredibly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples of the many applications that can stress automation systems. To perform in these demanding environments, the WAGO I/O System 750 XTR was developed to set new standards. With 5g of vibration resistance per DIN EN 60068-2-6 (acceleration: 50 m/s2) and shock resistance of 15g (150 m/s2) or 25g (250 m/s2) per IEC 60068-2-27, the system is engineered for dependability – no matter what. Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

Worldwide Approvals

International approvals for industrial automation, marine automation and onshore/offshore applications guarantee worldwide use – even under harsh operating conditions, e.g., Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale and Polski Rejestr Stratkow.

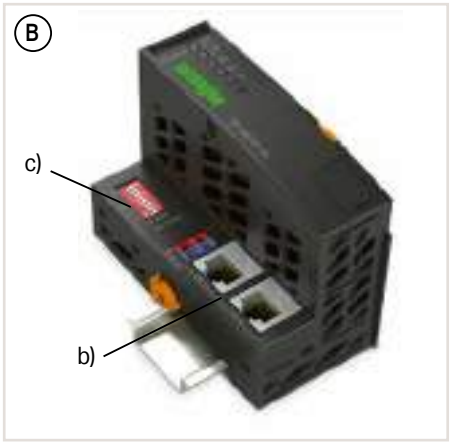
Benefits:
- No need for air conditioning
  - Requires less space
  - Lower energy and maintenance costs
- Can be used in unshielded areas
- Maximum system uptime
- Use on vibrating/shock-generating system components
- Vibration-proof, fast and maintenance-free CAGE CLAMP® connections

I/O System – 750 XTR Series
Interfaces and Types



Housing Design: Fieldbus Coupler (A)
- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level; fieldbus interface (b) and optional addressing switch (c)
- W x H x D (mm): 50.5 x 100 x 71.1

Housing Design: Fieldbus Coupler Eco (B)
- Restriction on power supply and data width
- W x H x D (mm): 49.5 x 96.8 x 71.9





Housing Design: 750 (C)
- 8 connection points (CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 67.8

Housing Design: 750 (D)
- 16 connection points (Push-in CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 69





Housing Design: Double Width (E)
Some modules are integrated into a double housing to address specific technological needs. Despite utilizing the same standardized housing, these modules are twice as wide.
- W x H x D (mm): 24 x 100 x 67.8

Specialty Housing Design (F)
Some modules are integrated into a specialty housing with a specific width and pluggable connectors. The dimensions are specified on the respective catalog pages.





Housing Design: Intrinsically Safe XTR Modules (G)
- 8 connection points (CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 67.8

Housing Design (Intrinsically Safe XTR Modules): Double Width (H)
- 16 connection points (CAGE CLAMP®)
- W x H x D (mm): 24 x 100 x 67.8



I/O System – 750 XTR Series
Application and Installation Instructions



Securing/Removing a module from the DIN-rail

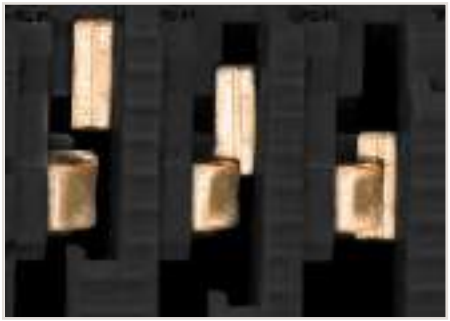


Secure, automatic data and electronics power supply connection via gold-plated pressure contacts



Service interface for configuring the fieldbus coupler; connectivity via configuration cable or radio adapter

8



Secure, automatic power supply connection via self-cleaning blade contacts

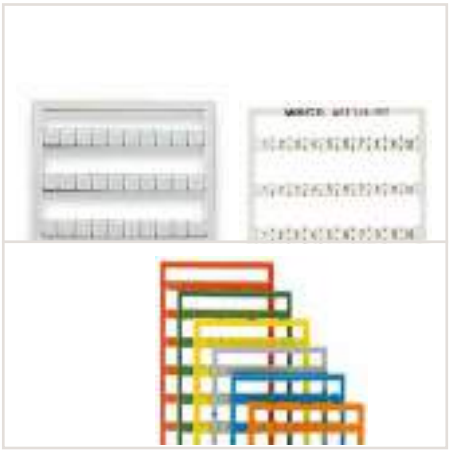
Notice:
Some I/O modules do not provide all power jumper contacts. Therefore, an I/O module with three power jumper contacts (e.g., 2-channel digital input) cannot be connected to an I/O module that do not have all power jumper contacts.

To increase electromagnetic compatibility (EMC), some components are connected to the DIN-rail via a discharge contact. The DIN-rail must always have a low-resistance connection to the ground potential.



Wide range of accessories available for EMC-compliant installation, including shield connection

Marking Accessories



Mini-WSB marking cards (blank, pre-marked or colored) are suitable for all 750 Series I/O Modules.



Marker carrier for a single I/O module (suitable for all 750 and 753 Series I/O Modules); the marker carrier can be accommodated in the upper Mini-WSB marker slot.

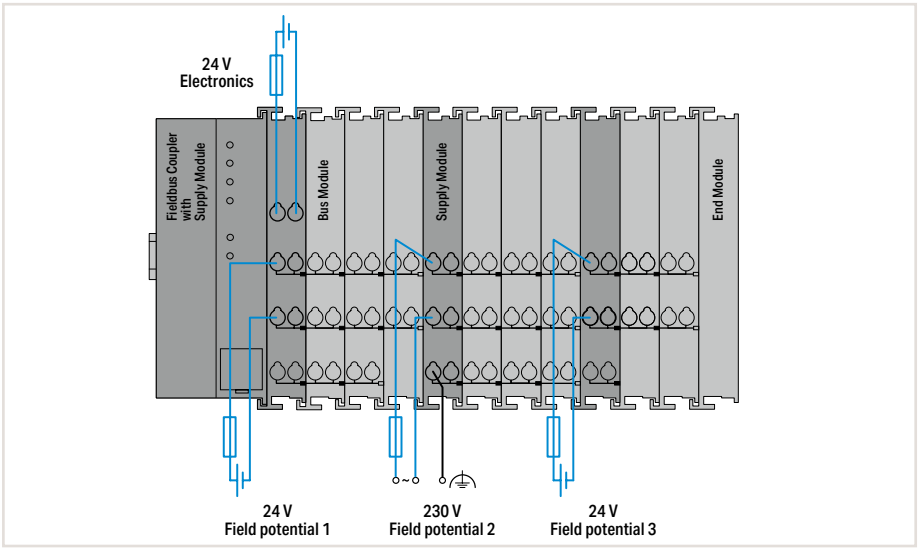


Marker carrier for one I/O node; both models (750-106 and 750-107) permit continuous marking regardless of the I/O module housing used.

I/O System – 750 XTR Series
Application and Installation Instructions

Power Supply

The internal electronics are powered by the fieldbus coupler. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value depends on the fieldbus coupler used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs. In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

All 750 XTR Series Digital Output Modules are designed to provide interference-free safety functionality. The modules can be used in safety applications up to category 4 per DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:
WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

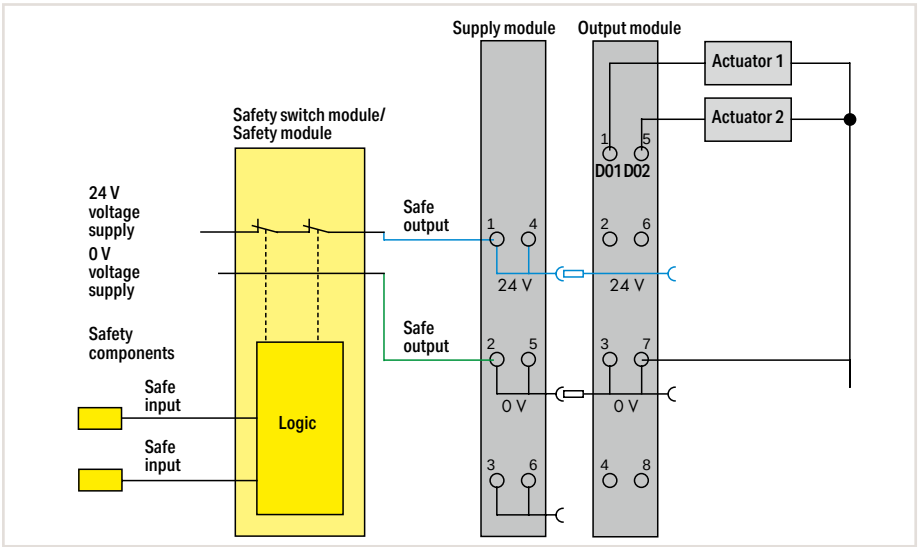
Notes:
Additional steps must be implemented based on where the I/O system is installed:
Specific power and field-side power supply filters (750-624/040-001 or 750-626/040-000) are required for marine and onshore/offshore applications, as well as in telecontrol and railway systems.

A specific supply module (750-606/040-000) is required to operate intrinsically safe Ex i modules. Additionally, both supply modules and field-side power supply filters are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.

Please refer to the manual for details about the power supply's design.

Mixed Operation

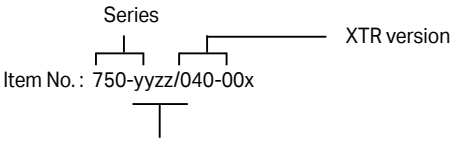
Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply). This combination may be useful, for example, when there are only increased requirements for immunity to impulse voltages and interference, but the surrounding air temperature is not critical.



Example: 2-channel, double-pole power supply disconnection

I/O System – 750 XTR Series
Item Number Key

Explanation of an item number key's components



01zz: Marker
03zz: Fieldbus coupler
zz: Consecutive number

1yzz: 16 connection points or ribbon cable
y4zz: Input
00 ... 49 = Digital input
50 ... 99 = Analog input

y5zz: Output
00 ... 49 = Digital output
50 ... 99 = Analog input

y6zz: Communication/system modules
0z: Power supply, field-side connection, end module
1z: Power supply, distance module
2z: Filter
5z: Serial interface

09zz: Accessories

8

Approvals

For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Standards and Rated Conditions for Rail Applications (EN 50155), not for Intrinsically Safe XTR Modules

Railway Applications (EN 50155)	Class/Standard Compliance
4.1 Rated operating conditions	
4.1.1 Altitude above sea level	AX (EN 50125-1)
4.1.2 Surrounding air temperature	TX
4.1.3 Shock and vibration	1A and 1B (EN 61373)
4.1.4 Relative humidity	95 % (coated PCBs)
5.1 Power supply	
5.1.1.1 Voltage fluctuations	
Minimum voltage	0.725 x Un
Maximum voltage	1.3 x Un
5.1.1.2 Power interruptions	S1
5.4 Surge, ESD, burst tests	EN 50121-3-2
5.5 EMC (emission of interference, immunity to interference)	EN 50121-3-2, EN 50121-4, -5
Fire behavior: per EN 45545-2 hazard level HL3	

WAGO is certified in accordance with the IRIS quality standard.

I/O System – 750 XTR Series
Standards and Rated Conditions

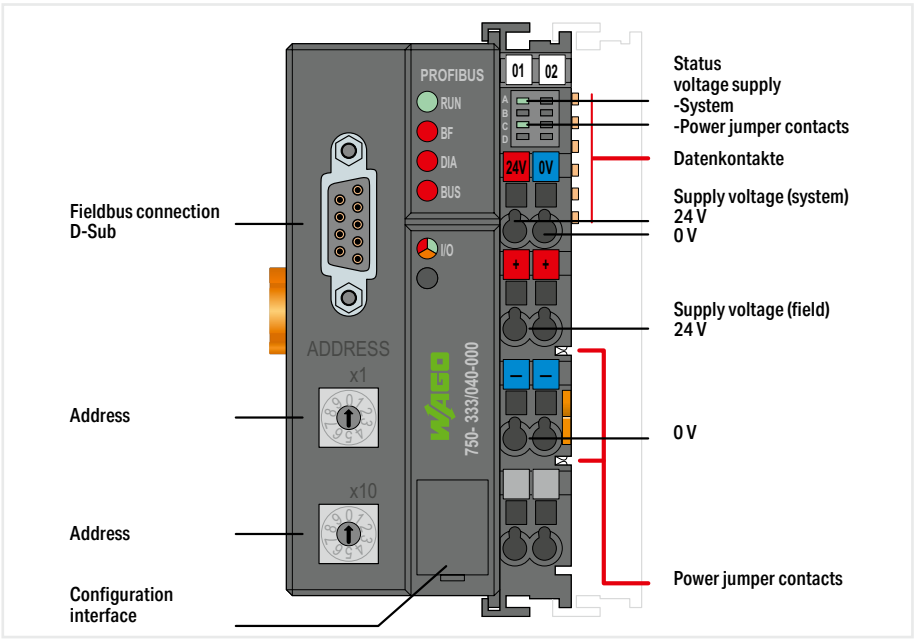
General technical data	
Ambient temperature (operation)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +85 °C
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Vibration resistance	per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
Protection type	IP20
Mounting position	horizontal (standing/lying); vertical
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43

Cables and connectors	Page 680
Communication	Page 678
DIN-rail	Page 716
Marking	Page 714
Power supply	Page 539
Shield termination	Page 708
Supply module	Page 524
System enclosure	Page 693
Tool	Page 719

Fieldbus couplers ▶ PROFIBUS DP; 2nd generation



750-333/040-000



Version	extreme
Item no.	**750-333/040-000**
Order Text	**FC PROFIBUS; G2; 12MBd; XTR**

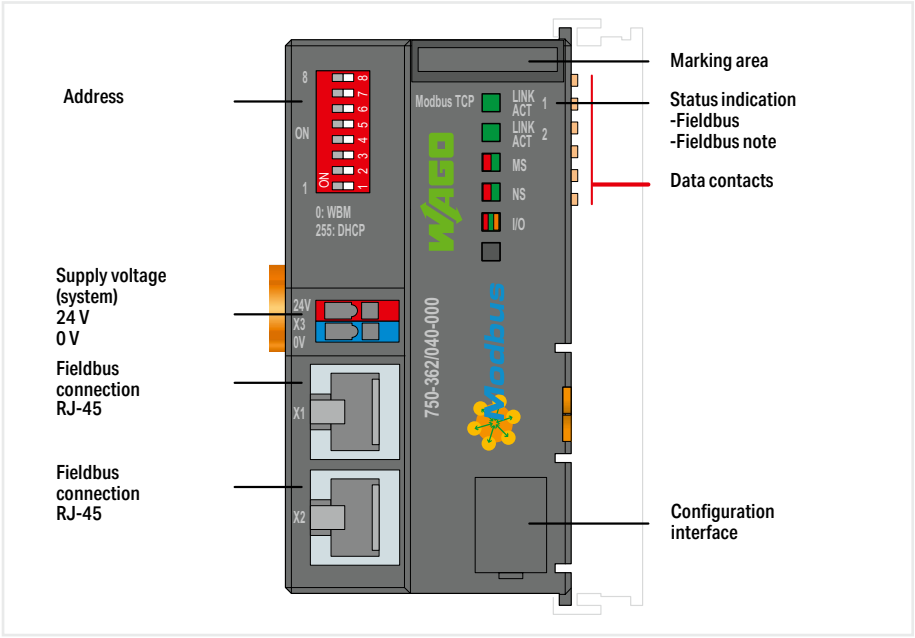
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Technical data	
Communication	PROFIBUS
Protocols	PROFIBUS DP/V1
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	96
Baud rate	9.6 kBd … 12 MBd
Transmission medium (communication/fieldbus)	Cu cable per EN 50170
Number of modules per node (max.)	63
Input and output process image (fieldbus) max.	244 bytes/244 bytes
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-333/040-000

Fieldbus couplers ▶ Modbus TCP; ECO



750-362/040-000



Version	extreme
Item no.	**750-362/040-000**
Order Text	**FC Modbus TCP; G4; XTR**

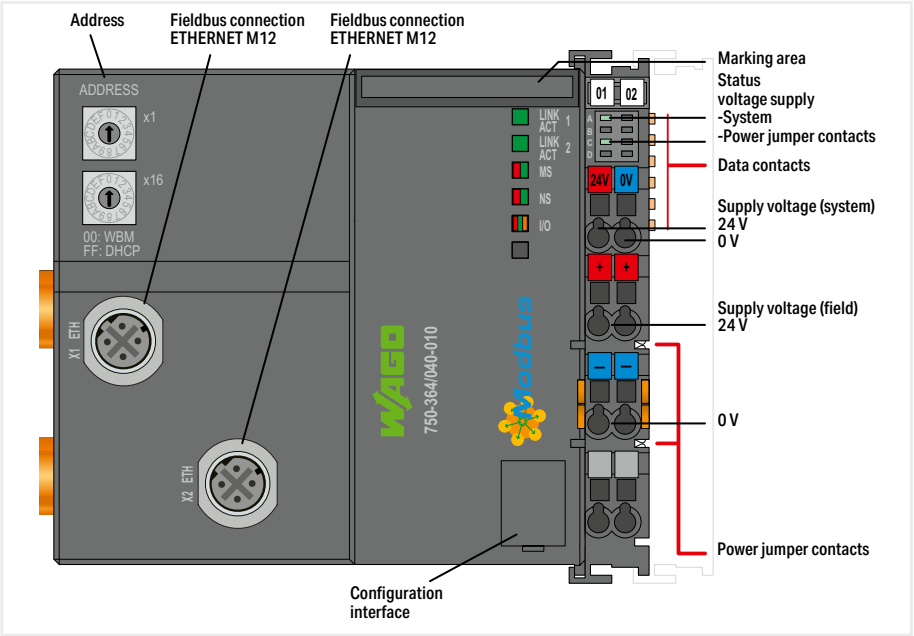
Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	280 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-362/040-000

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Fieldbus couplers ▶ Modbus TCP M12



750-364/040-010



Version	extreme
Item no.	**750-364/040-010**
Order Text	**FC Modbus TCP M12; G4; XTR**

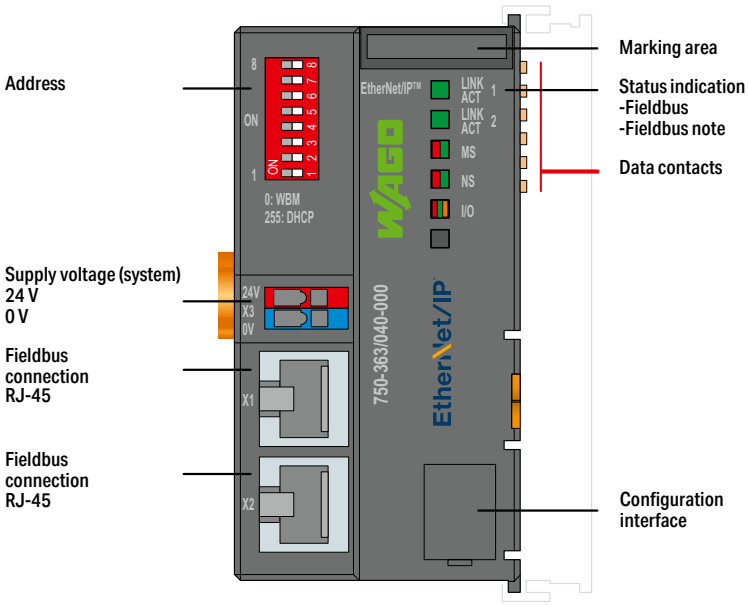
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Technical data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus (TCP, UDP): 2 x M12 socket; 4-pole; D-coded
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; M12 D-coded; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1700 mA
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-364/040-010

Fieldbus couplers ▶ EtherNet/IP™; ECO



750-363/040-000



Version	**extreme**
Item no.	**750-363/040-000**
Order Text	**FC EtherNet/IP™; G4; XTR**

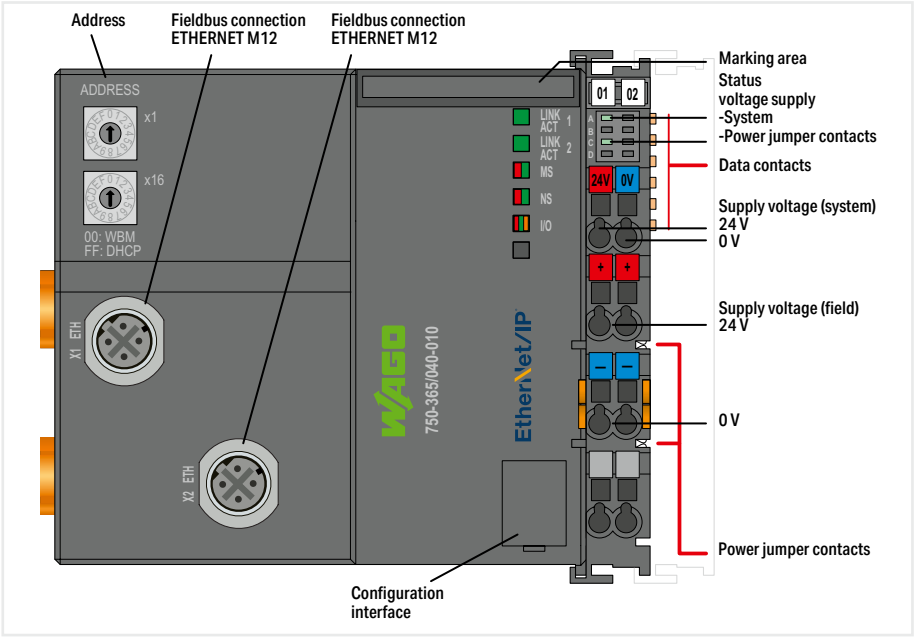
Technical data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	280 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-363/040-000

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Fieldbus couplers ▶ EtherNet/IP™ M12



750-365/040-010



Version	extreme
Item no.	**750-365/040-010**
Order Text	**FC EtherNet/IP™ M12; G4; XTR**

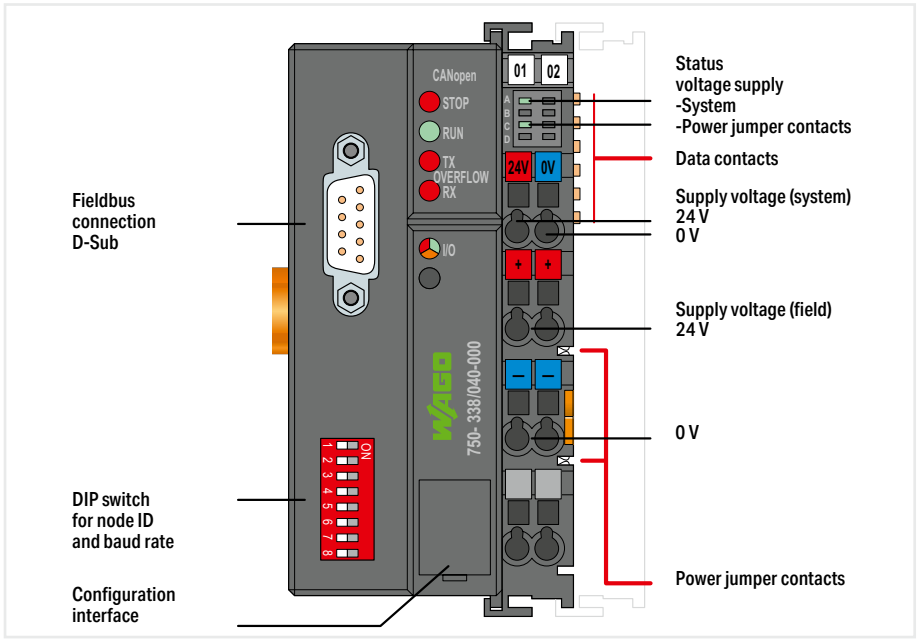
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Technical data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x M12 socket; 4-pole; D-coded
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; M12 D-coded; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1700 mA
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-365/040-010

Fieldbus couplers ▶ CANopen



750-338/040-000



Version	extreme
Item no.	**750-338/040-000**
Order Text	**FC CANopen; DSub; XTR**

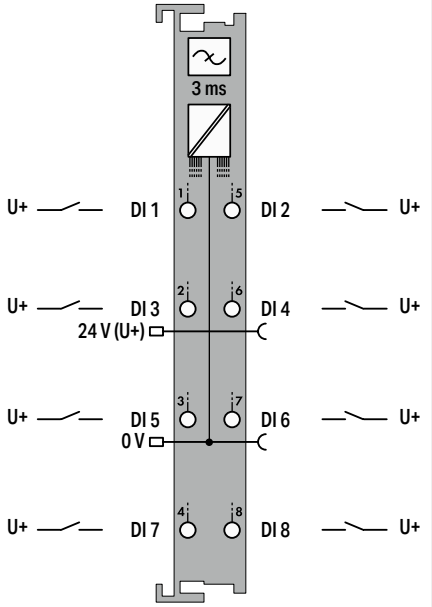
Technical data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Number of fieldbus nodes on master (max.)	110
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	512 bytes/512 bytes
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Limit value monitoring ; Edge-triggered PDOs; Configurable response in the event of an error
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-338/040-000

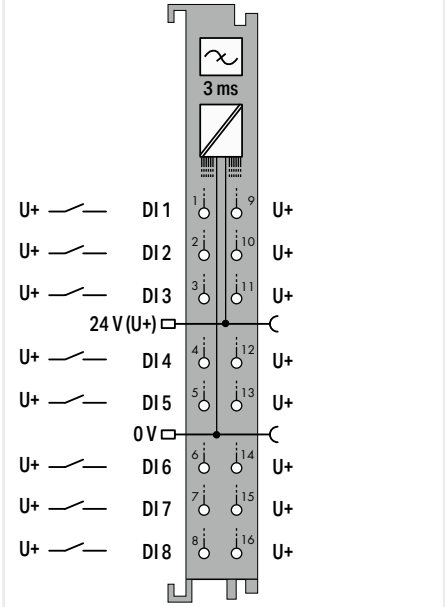
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Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-430/040-000



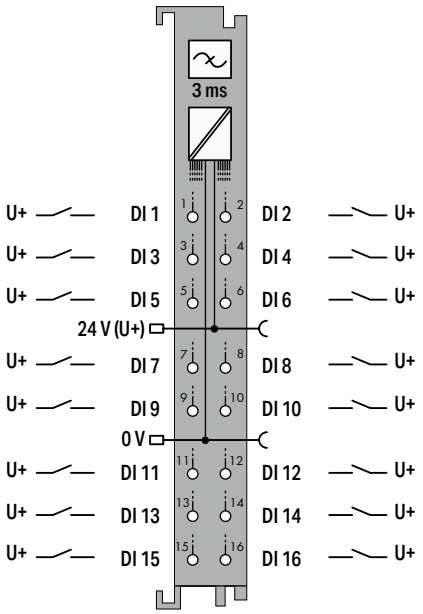


Item description	8-Channel Digital Input; 24 VDC; 3 ms	8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection
Version	extreme	extreme with 16 connectors
Item no.	**750-430/040-000**	**750-1415/040-000**
Order Text	**8DI; 24 VDC; 3ms; XTR**	**8DI; 24 VDC; 3ms; 2-wire; XTR**
Technical data		
Number of digital inputs	8	8
Signal type	Digital	Digital
Signal type (voltage)	24 VDC	24 VDC
Voltage range for signal (0)	−3 … +5 VDC	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC	11 … 30 VDC
Input characteristic	-	Type 3
Sensor connection	8 x (1-wire)	8 x (2-wire)
Input characteristic	high-side switching	high-side switching
Input filter (digital)	3 ms	3 ms
Input current per channel for signal (1) typ.	2.8 mA	4.5 mA
Input current per channel for signal (0) typ.	-	1.6 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1	510 VAC/775 VDC; per EN 60870-2-1
Current consumption, field supply (module with no external load)	-	2 mA
Supply voltage (sensor)	-	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	17 mA	6 mA
Rated surge voltage	1 kV	1 kV
Input data width (internal) max.	8 bits	8 bits
Ambient temperature (operation)	-40 … +70 °C	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-430/040-000	wago.com/750-1415/040-000

Digital input ▶ 24 VDC ▶ high-side switching ▶ 3 ms



750-1405/040-000



Item description	16-Channel Digital Input; 24 VDC; 3 ms
Version	extreme with 16 connectors
Item no.	**750-1405/040-000**
Order Text	**16DI; 24 VDC; 3ms; XTR**

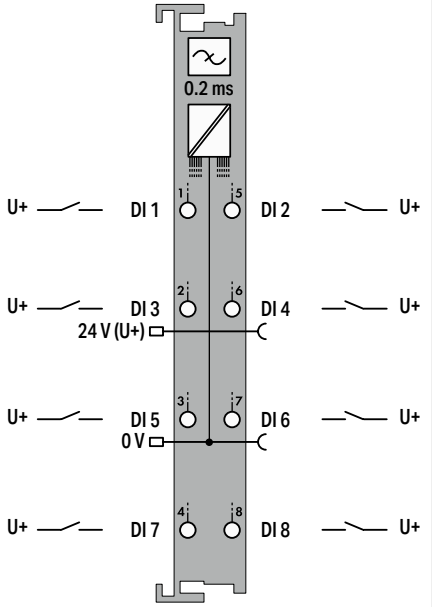
Technical data	
Number of digital inputs	16
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input characteristic	Type 1
Sensor connection	16 x (1-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Delay time T_off from 1 to 0	400 µs
Delay time T_on from 0 to 1	300 µs
Input current per channel for signal (1) typ.	2.3 mA
Input current per channel for signal (0) typ.	0.6 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	25 mA
Rated surge voltage	1 kV
Input data width (internal) max.	16 bits
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1405/040-000

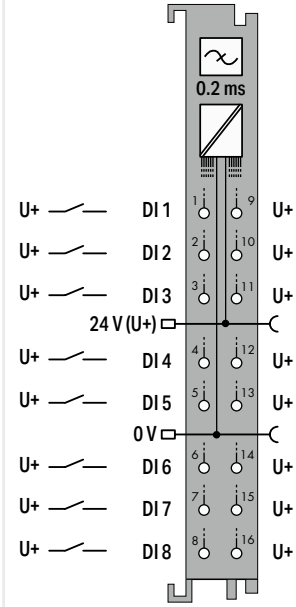
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Digital input ▶ 24 VDC ▶ high-side switching ▶ 0.2 ms



750-431/040-000



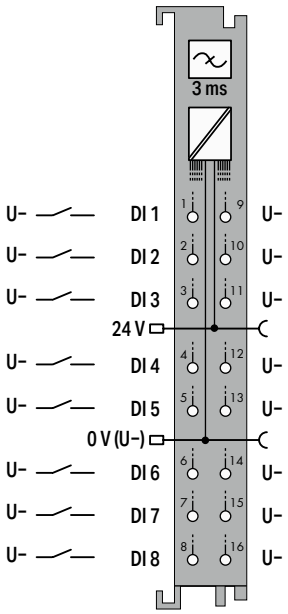


Item description	8-Channel Digital Input; 24 VDC; 0.2 ms	8-Channel Digital Input; 24 VDC; 0.2 ms; 2-wire connection
Version	extreme	extreme with 16 connectors
Item no.	**750-431/040-000**	**750-1416/040-000**
Order Text	**8DI; 24 VDC; 0.2ms; XTR**	**8DI; 24 VDC; 0.2ms; 2-wire; XTR**
Technical data		
Number of digital inputs	8	8
Signal type	Digital	Digital
Signal type (voltage)	24 VDC	24 VDC
Voltage range for signal (0)	−3 … +5 VDC	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC	11 … 30 VDC
Input characteristic	-	Type 3
Sensor connection	8 x (1-wire)	8 x (2-wire)
Input characteristic	high-side switching	high-side switching
Input filter (digital)	0.2 ms	0.2 ms
Input current per channel for signal (1) typ.	2.8 mA	4.5 mA
Input current per channel for signal (0) typ.	-	1.6 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1	510 VAC/775 VDC; per EN 60870-2-1
Current consumption, field supply (module with no external load)	-	2 mA
Supply voltage (sensor)	-	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	17 mA	6 mA
Rated surge voltage	1 kV	1 kV
Input data width (internal) max.	8 bits	8 bits
Ambient temperature (operation)	-40 … +70 °C	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-431/040-000	wago.com/750-1416/040-000

Digital input ▶ 24 VDC ▶ low-side switching ▶ 3 ms



750-1417/040-000



Item description	**8-Channel Digital Input; 24 VDC; 3 ms; Low-Side Switching; 2-Wire Connection**
Version	**extreme with 16 connectors**
Item no.	**750-1417/040-000**
Order Text	**8DI; 24 VDC; 3ms; LSS; 2-wire; XTR**

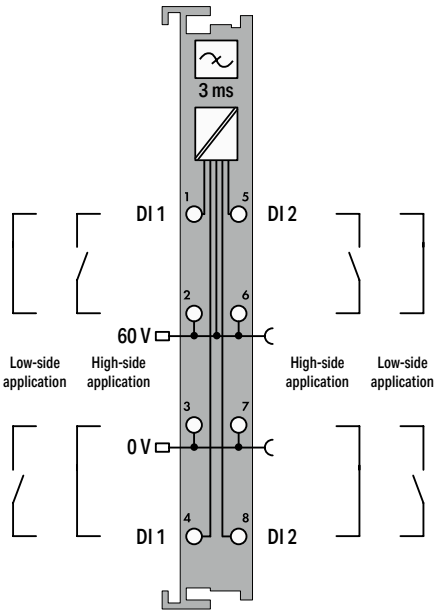
Technical data	
Number of digital inputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	8 x (2-wire)
Input characteristic	low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (0) typ.	-2.4 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 ... +30 %); for −40 ... +55 °C: 24 V (−25 ... +20 %); for +55 ... +70 °C: 24 V (−25 ... +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	12 mA
Rated surge voltage	1 kV
Input data width (internal) max.	8 bits
Ambient temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-1417/040-000

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Digital input ▶ 60 VDC ▶ high-side/low-side switching, configurable ▶ 3 ms



750-429/040-001



Item description	**2-Channel Digital Input; 60 VDC; 3 ms**
Version	**extreme**
Item no.	**750-429/040-001**
Order Text	**2DI; 60 VDC; 3ms; XTR**

8

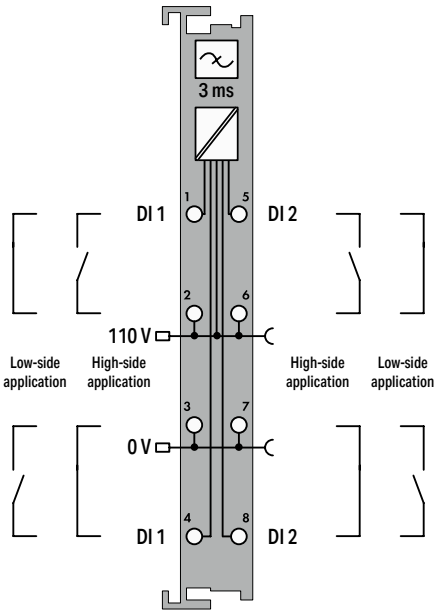
Technical data	
Number of digital inputs	2
Signal type	Digital
Signal type (voltage)	60 VDC
Voltage range for signal (0)	−7.5 … +12 VDC
Voltage range for signal (1)	44 … 78 VDC
Sensor connection	2 x (2-wire)
Input characteristic	high-side/low-side switching, configurable
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.9 mA
Dielectric strength	2.5 kV (AC)/3.5 kV (DC); per EN 60870-2-1
Supply voltage (sensor)	60 VDC
Supply voltage (field)	60 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	2.5 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 4.0 kV (EN 61010-1 to 2000 m); 2.5 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 110 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Input data width (internal) max.	2 bits
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-429/040-001

Notice: An additional supply module must be added for 60 VDC supply!

Digital input ▶ 110 VDC ▶ high-side/low-side switching, configurable ▶ 3 ms



750-427/040-000



Item description	**2-Channel Digital Input; 110 VDC; 3 ms**
Version	**extreme**
Item no.	**750-427/040-000**
Order Text	**2DI; 110 VDC; 3ms; XTR**

Technical data	
Number of digital inputs	2
Signal type	Digital
Signal type (voltage)	110 VDC
Voltage range for signal (0)	−14 … +50 VDC
Voltage range for signal (1)	70 … 143 VDC
Sensor connection	2 x (2-wire)
Input characteristic	high-side/low-side switching, configurable
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	2.5 mA
Dielectric strength	2.5 kV (AC)/3.5 kV (DC); per EN 60870-2-1
Supply voltage (sensor)	110 VDC
Supply voltage (field)	110 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption (5 V system supply)	2.5 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 4.0 kV (EN 61010-1 to 2000 m); 2.5 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 110 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Input data width (internal) max.	2 bits
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-427/040-000

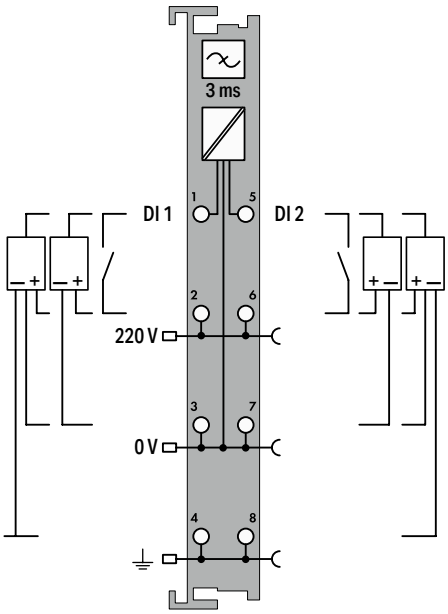
Notice: An additional supply module must be added for 110 VDC supply!

8

Digital input ▶ 220 VDC ▶ high-side switching ▶ 3 ms



750-407/040-000



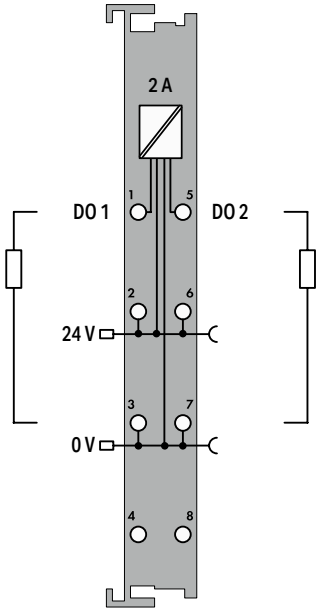
Item description	**2-Channel Digital Input; 220 VDC; 3 ms**
Version	**extreme**
Item no.	**750-407/040-000**
Order Text	**2DI; 220 VDC; 3ms; XTR**

Technical data	
Number of digital inputs	2
Signal type	Digital
Signal type (voltage)	220 VDC
Voltage range for signal (0)	−3 … +100 VDC
Voltage range for signal (1)	160 … 286 VDC
Sensor connection	2 x (2-wire, 3-wire, 4-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) typ.	1.2 mA
Dielectric strength	2.5 kV (AC)/3.5 kV (DC); per EN 60870-2-1
Supply voltage (sensor)	220 VDC
Supply voltage (field)	220 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Derating	Current via power jumper contacts (max.): 10 mA (surrounding air (operating) temperature < 60 °C); 8 A (surrounding air (operating) temperature: 60 … 70 °C)
Current consumption (5 V system supply)	5 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 4.0 kV (EN 60664-1 / to 4,000 m ASL); 2.5 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)
Overvoltage category	Nominal voltage 220 V: IV (EN 60664-1 / up to 5,000 m above sea level)
Input data width (internal) max.	2 bits
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-407/040-000
	Notice: An additional supply module must be added for 220 VDC supply!

Digital output ► 24 VDC



750-508/040-000



Item description	**2-Channel Digital Output; 24 VDC; 2.0 A; Diagnostics**
Version	**extreme**
Item no.	**750-508/040-000**
Order Text	**2DO; 24 VDC; 2A; Diagn; XTR**

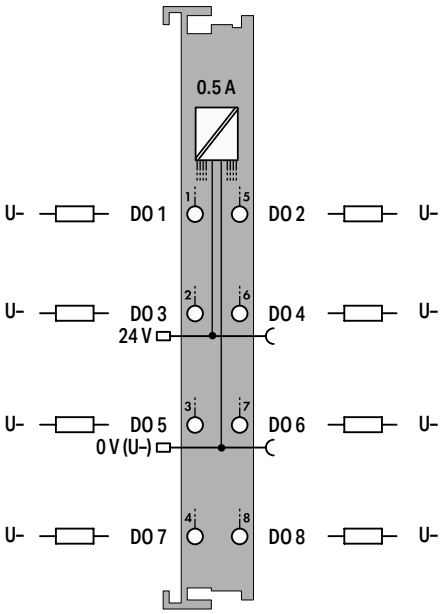
Technical data	
Interference-free with safety function	Yes
Number of digital outputs	2
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	2 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire, 3-wire)
Switching frequency (max.)	1 kHz
Diagnostics	Open circuit, short circuit, overload
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption, field supply (module with no external load)	7 mA
Current consumption (5 V system supply)	14 mA
Input data width (internal) max.	2 bits
Output data width (internal) max.	2 bits
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-508/040-000

8

Digital output ► 24 VDC



750-537/040-000



Item description	**8-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics**
Version	**extreme**
Item no.	**750-537/040-000**
Order Text	**8DO; 24 VDC; 0.5A; Diagn; XTR**

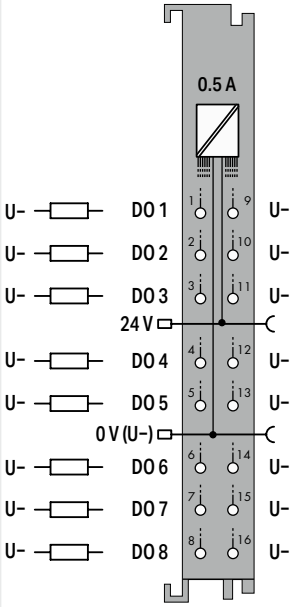
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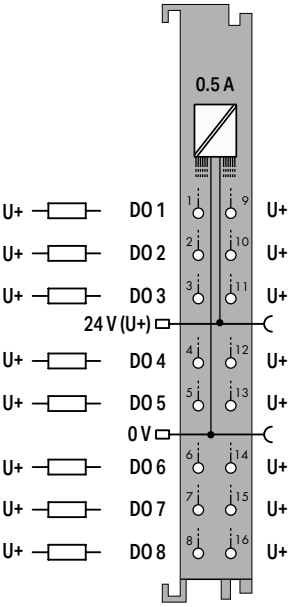
Technical data	
Interference-free with safety function	Yes
Number of digital outputs	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Output current per channel	0.5 A
Output current	short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Diagnostics	Open circuit, short circuit, overload
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption, field supply (module with no external load)	16 mA
Current consumption (5 V system supply)	50 mA
Input data width (internal) max.	8 bits
Output data width (internal) max.	8 bits
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-537/040-000

Digital output ▶ 24 VDC



750-1515/040-000





Item description	8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection	8-Channel Digital Output; 24 VDC; 0.5 A; Low-Side Switching; 2-Wire Connection
Version	extreme with 16 connectors	extreme with 16 connectors
Item no.	**750-1515/040-000**	**750-1516/040-000**
Order Text	**8DO; 24 VDC; 0.5A; 2-wire; XTR**	**8DO 24 VDC 0.5A LSS 2-wire XTR**

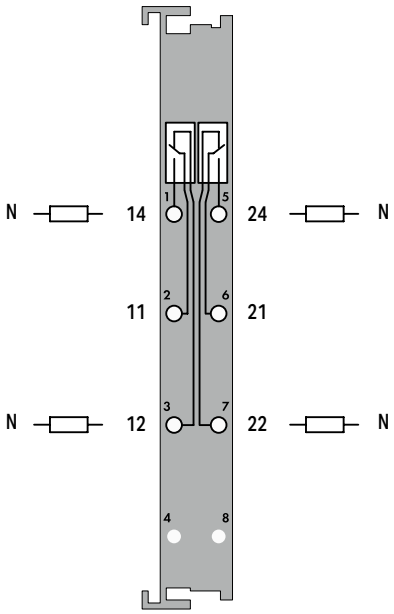
Technical data		
Interference-free with safety function	Yes	-
Number of digital outputs	8	8
Signal type	Digital	Digital
Signal type (voltage)	24 VDC	24 VDC
Output characteristic	high-side switching	low-side switching
Output current per channel	0.5 A	0.5 A
Output current	short-circuit-protected	short-circuit-protected
Load type	Resistive, inductive, lamp load	Resistive, inductive, lamp load
Actuator connection	8 x (2-wire)	8 x (2-wire)
Switching frequency (max.)	1 kHz	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption, field supply (module with no external load)	15 mA	8 mA
Current consumption (5 V system supply)	20 mA	20 mA
Output data width (internal) max.	8 bits	8 bits
Rated surge voltage	1 kV	1 kV
Ambient temperature (operation)	-40 … +70 °C	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 69) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-1515/040-000	wago.com/750-1516/040-000

8

Digital output; Relay output ▶ Switching voltage: 250 VAC; 300 VDC



750-517/040-000



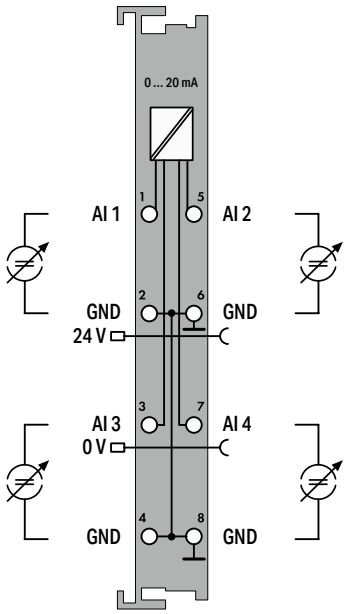
Item description	**2-Channel Relay Output; 250 VAC; 1 A; Relay with 2 changeover contacts**
Version	**extreme**
Item no.	**750-517/040-000**
Order Text	**2RO; 250 VAC; 1A; Relay2CO; XTR**

Technical data	
Number of digital outputs	2
Signal type	Digital
Switching voltage (max.)	250 VAC, 300 VDC
Output circuit design	2 changeover contacts; Relay
Output characteristic	potential-free
Switching current (max.)	1 A
Switching current (note)	1 A at 250 VAC and 40 VDC; 0.15 A at 300 VDC
Switching current (min.)	100 mA
Actuator connection	2 x (1-wire)
Switching frequency (max.)	0.1 Hz; Nominal load
Mechanical switching operations (min.) (at max. resistive load)	5 x 10^6 switching operations
Electrical switching operations (min.) (at max. resistive load)	1 x 10^6 switching operations
Current consumption (5 V system supply)	90 mA
Output data width (internal) max.	2 bits
Isolation, Field/System	per EN 61010-2-201: 3510 VAC/1 min
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 6.4 kV (EN 61010-1)
Overvoltage category	Nominal voltage 230 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-517/040-000

Analog input ▶ 0 … 20 mA ▶ Single-ended



750-453/040-000



Item description	**4-Channel Analog Input; 0 … 20 mA; Single-ended**
Version	**extreme**
Item no.	**750-453/040-000**
Order Text	**4AI; 0-20mA; SE; XTR**

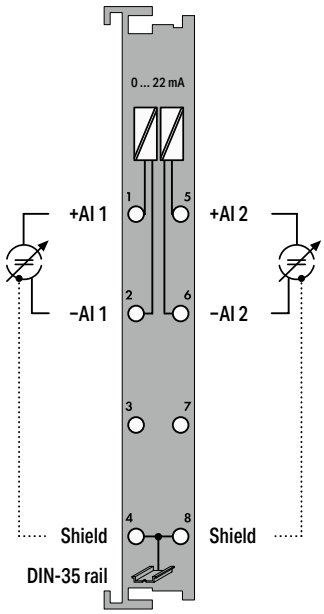
Technical data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 … 20 mADC
Signal characteristics	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	100 Ω
Input voltage (max.)	32 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-453/040-000

8

Analog input ► 4 … 20 mA ► Differential



750-492/040-001



Item description	**2-Channel Analog Input; 4 … 20 mA; Differential input; NAMUR NE 43**
Version	**extreme**
Item no.	**750-492/040-001**
Order Text	**2AI; 4-20mA; Diff; NE43; XTR**

8

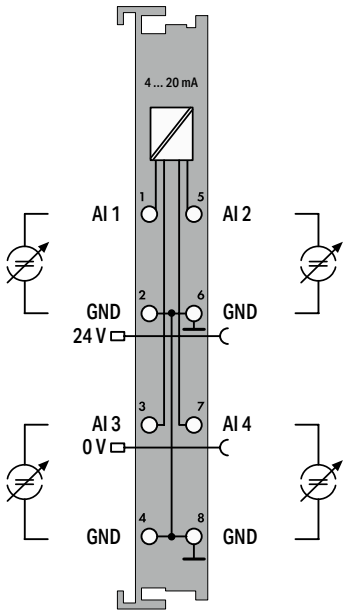
Technical data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	3.8 … 20.5 mADC
Signal characteristics	Differential
Sensor connection	2 x (2-wire)
Resolution [bit]	13 bits
Conversion time (typ.)	1 ms
Input resistance (max.)	270 Ω
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Current consumption (5 V system supply)	80 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-492/040-001

Sampling repetition time: 1 ms
Sampling delay (module): ≤1 ms
Sampling delay (channel/channel): ≤1 µs
Sampling duration: ≤5 µs

Analog input ▶ 4 … 20 mA ▶ Single-ended



750-455/040-000



Item description	**4-Channel Analog Input; 4 … 20 mA; Single-ended**
Version	**extreme**
Item no.	**750-455/040-000**
Order Text	**4AI; 4-20mA; SE; XTR**

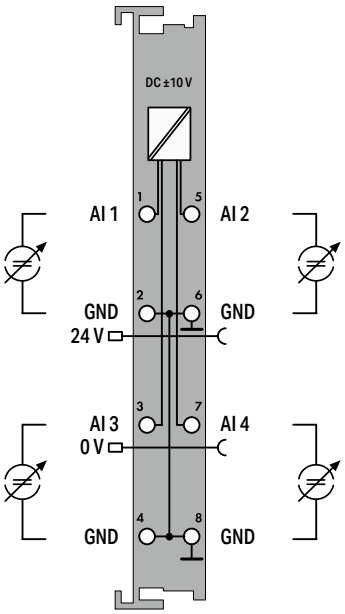
Technical data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	4 … 20 mADC
Signal characteristics	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	100 Ω
Input voltage (max.)	32 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-455/040-000

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Analog input ► ±10 V ► Single-ended



750-457/040-000



Item description	4-Channel Analog Input; ±10 VDC; Single-ended
Version	extreme
Item no.	**750-457/040-000**
Order Text	**4AI; ±10 VDC; SE; XTR**

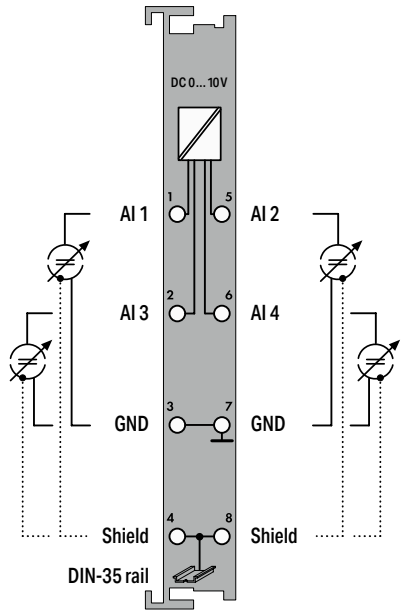
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Technical data	
Number of analog inputs	4
Signal type	Voltage
Signal type (voltage)	-10 … +10 VDC
Signal characteristics	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Internal resistance	100 kΩ
Input voltage (max.)	±40 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-457/040-000

Analog input ▶ 0 … 10 V ▶ Single-ended



750-468/040-000



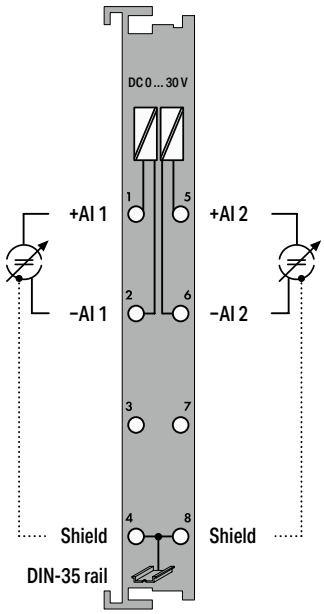
Item description	**4-Channel Analog Input; 0 … 10 VDC; single-ended**
Version	**extreme**
Item no.	**750-468/040-000**
Order Text	**4AI; 0-10 VDC; SE; XTR**

Technical data	
Number of analog inputs	4
Signal type	Voltage
Signal type (voltage)	0 … 10 VDC
Signal characteristics	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	4 ms
Internal resistance	133 kΩ
Input voltage (max.)	35 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Current consumption (5 V system supply)	60 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-468/040-000

Analog input ▶ 0 … 30 V ▶ Differential



750-483/040-000



Item description	2-Channel Analog Input; 0 … 30 VDC; Differential input
Version	extreme
Item no.	**750-483/040-000**
Order Text	**2AI; 0-30 VDC; Diff; XTR**

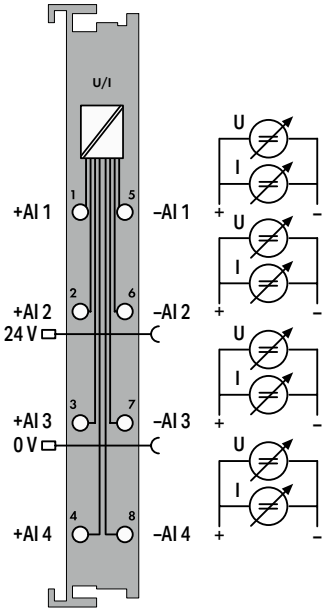
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Technical data	
Extended functionality	Time-synchronized measured value acquisition within the module
Number of analog inputs	2
Signal type	Voltage
Signal type (voltage)	0 … 30 VDC
Signal characteristics	Differential
Sensor connection	2 x (2-wire)
Resolution [bit]	14 bits
Conversion time (typ.)	1 ms
Internal resistance	1000 kΩ
Admissible continuous overload	60 V
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Current consumption (5 V system supply)	80 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-483/040-000

Analog input ▶ Voltages and currents (configurable channel for channel) ▶ Differential



750-471/040-000



Item description	**4-Channel Analog Input; for Voltage/Current**
Version	**extreme**
Item no.	**750-471/040-000**
Order Text	**4AI U/I Diff Galv XTR**

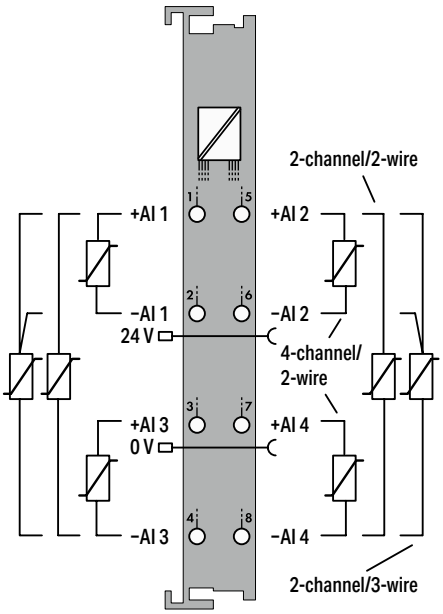
Technical data	
Number of analog inputs	4
Signal type	Voltage; Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC; -20 … +20 mADC
Signal type (voltage)	0 … 10 VDC; -10 … +10 VDC; -0.2 … +0.2 VDC
Signal characteristics	Differential
Sensor connection	4 x (2-wire)
Resolution [bit]	16 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	120 Ω
Internal resistance	100 kΩ
Input voltage (max.)	31.2 VDC
Reference for measurement error	Input ranges
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Reference for measurement error (2)	±200 mV
Measurement error, reference temperature (2)	25 °C
Measurement error, deviation (max.) of the upper-range value (2)	0.3 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	100 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	Functional insulation: 2000 VDC system/channel; 2000 VDC channel/channel
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-471/040-000

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Analog input ▶ Resistance sensors



750-464/040-000



Item description	2/4-Channel Analog Input; Resistance measurement; Adjustable
Version	extreme
Item no.	**750-464/040-000**
Order Text	**2/4AI; RTD; Adjust; XTR**

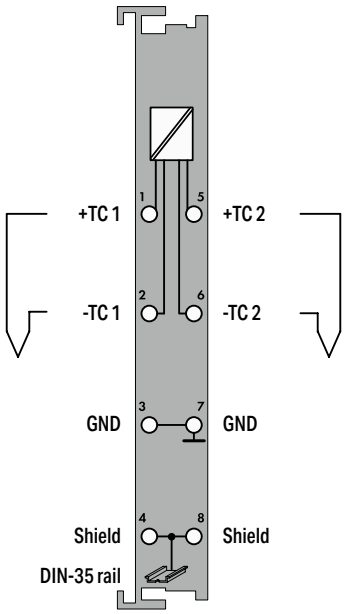
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Technical data	
Number of analog inputs	4
Signal type	Resistance measurement; Potentiometer positions
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000 (IEC 751), Ni100, Ni1000 (DIN 43760), Ni120 (Minco), Ni1000 (TK 5000), Potentiometer (2-channel operation only): 10R … 1k2, 10R … 5k0
Sensor connection	4 x (2-wire); 2 x (3-wire)
Temperature range	−200 … +850 °C (Pt), −60 … +300 °C (Ni 100, Ni 1000), −60 … +250 °C (Ni 1000 TK5000), −80 … +260 °C (Ni 120)
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Measuring current (typ.)	≤ 350 µA per measurement circuit
Measurement error (25 °C)	≤ 1 K over entire temperature range, ≤ 0.5 K over limited temperature range (−30 °C … +120 °C)
Temperature coefficient	≤ 20 ppm/K; typ. ≤ 15 ppm/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	50 mA
Rated surge voltage	1 kV
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-464/040-000

Analog input ▶ Thermocouples



750-469/040-000



Item description	**2-Channel Analog Input; Thermocouple; Adjustable**
Version	**extreme**
Item no.	**750-469/040-000**
Order Text	**2AI; TC; Adjust; XTR**

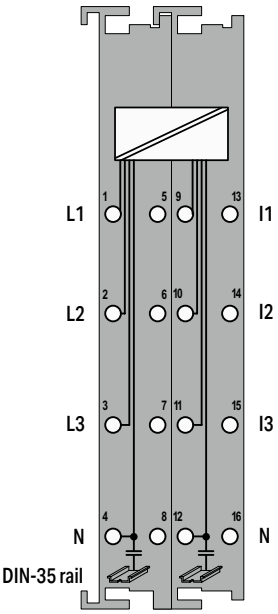
Technical data	
Number of analog inputs	2
Signal type	Thermocouple; Low voltages
Sensor types	Thermocouple K; Configurable: J, E, S, T, L, N, U, B, R; ±30 mV, ±60 mV, ±120 mV
Sensor connection	2 x (2-wire)
Temperature range	Sensor-specific
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Internal resistance	1000 kΩ
Measurement error (25 °C)	< ±6 K (voltage input < ±2 K; cold junction compensation < ±4 K)
Temperature coefficient	< ±0.2 K/K
Cold junction compensation	at each pair of terminal blocks
Current consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-469/040-000

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Analog input; Power measurement ▶ Three-phase power measurement



750-495/040-010



Item description	**3-Phase Power Measurement; 20 kVAC 300 A**
Version	**20 kVAC; 300 A; extreme**
Item no.	**750-495/040-010**
Order Text	**3-PHASE POM; 20KV; 300A; XTR**

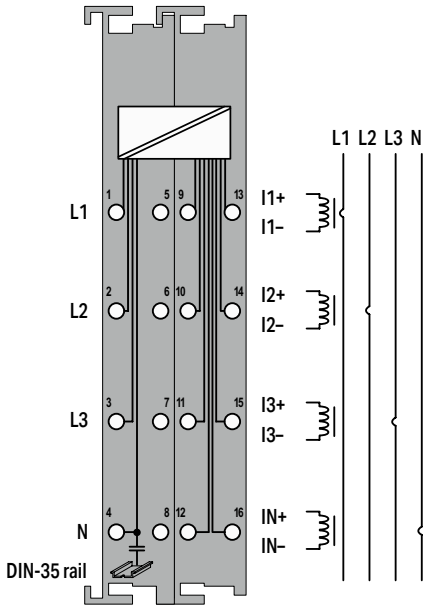
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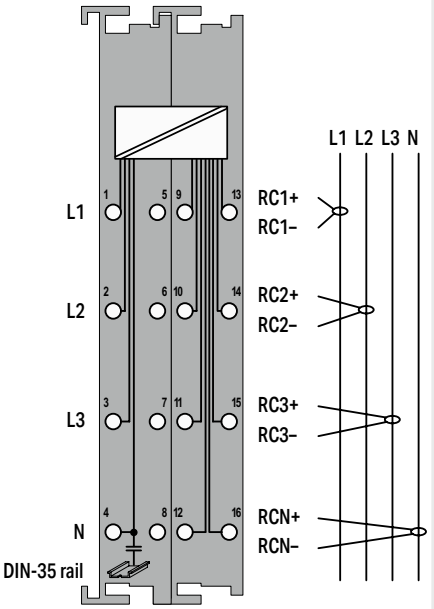
Technical data	
Signal type	Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Number of measurement inputs	6 (3 input pairs for voltage and current measurement sensors)
Input voltage (max.)	with sensor: 20 kV / √3 (Module input: 3.25 V / √3)
Input current (max.)	with sensor: 300 A AC; (Module input: 225 mV)
Voltage path input resistance (typ.)	200.3 kΩ
Current path input resistance (typ.)	20.8 Ω
Resolution [bit]	24 bits
Measurement method	True RMS measurement
Reference for measurement error	AC current/voltage
Measurement error, deviation (max.) from the upper-range value	0.3 %
Frequency range (mains frequency)	45 … 65 Hz
Frequency range (harmonics analysis)	45 … 2665 Hz
Limit frequency	8.6 kHz
Signal form	Any periodic signals (considering the threshold frequencies)
Current consumption (5 V system supply)	100 mA
Rated surge voltage	4 kV
Overvoltage category	III (EN 61010)
Data width	2 x 128-bit data; 2 x 64-bit control/status
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE
For data sheet and additional information, see:	wago.com/750-495/040-010

Analog input; Power measurement ▶ Three-phase power measurement



750-495/040-000





Item description	3-Phase Power Measurement; 690 VAC 1 A		3-Phase Power Measurement; 690 VAC Rogowski coils
Version	extreme	690 VAC 5 A; extreme	690 VAC Rogowski coils; extreme
Item no.	**750-495/040-000**	**750-495/040-001**	**750-495/040-002**
Order Text	**3-PHASE POM; 690VAC 1A; XTR**	**3-PHASE POM; 690VAC 5A; XTR**	**3-PHASE POM; 690VAC R.C.; XTR**

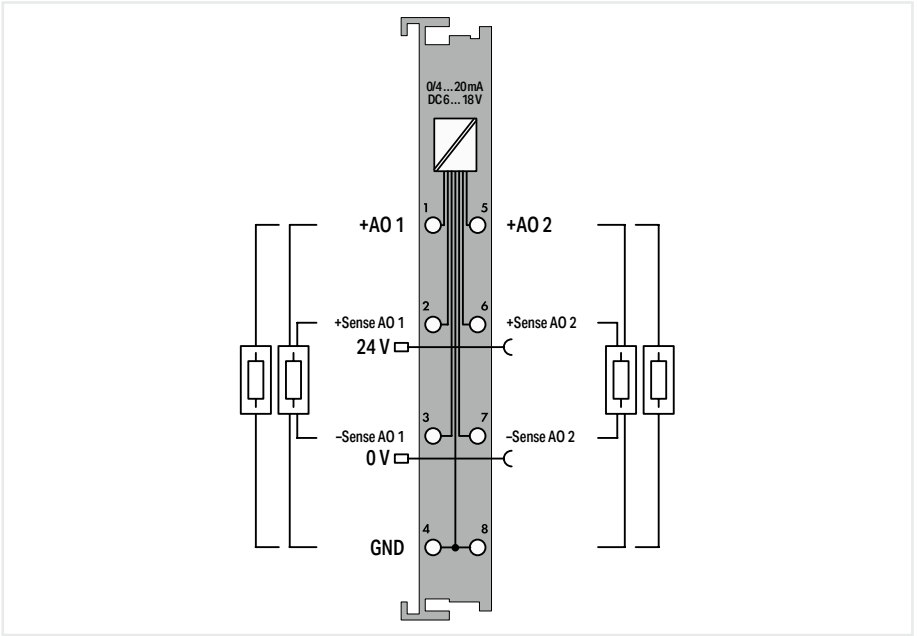
Technical data			
Signal type	Power measurement		Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD		Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Number of measurement inputs	7 (3 voltage measurement inputs, 4 differential current measurement inputs)		7 (3 voltage measurement inputs, 4 differential current measurement inputs)
Rated voltage	U_{LN} = 400 VAC; U_{LL} = 690 VAC		U_{LN} = 400 VAC; U_{LL} = 690 VAC
Voltage path input resistance (typ.)	1429 kΩ		1429 kΩ
Measurement current (max.)	1 A	5 A	Rogowski coils RT500/RT2000
Current path input resistance (typ.)	0.022 Ω	0.005 Ω	44000 Ω
Resolution [bit]	24 bits		24 bits
Measurement method	True RMS measurement		True RMS measurement
Reference for measurement error	AC current/voltage		AC current/voltage
Measurement error (reference temperature)	25 °C		25 °C
Measurement error, deviation (max.) from the upper-range value	0.5 %		0.5 %
Frequency range (mains frequency)	45 … 65 Hz		45 … 65 Hz
Frequency range (harmonics analysis)	0 … 3300 Hz		0 … 3300 Hz
Limit frequency	15.9 kHz		15.9 kHz
Signal form	Any periodic signals (considering the threshold frequencies)		Any periodic signals (considering the threshold frequencies)
Current consumption (5 V system supply)	100 mA		100 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 6.0 kV (UL 508); 6.0 kV (EN 60664-1 / to 4,000 m ASL); 4.0 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)		5.0 kV (EN 60870-2-1 / Class VW3); 6.0 kV (UL 508); 6.0 kV (EN 60664-1 / to 4,000 m ASL); 4.0 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)
Overvoltage category	Nominal voltage 400 V/690 V in a 3-phase system: III (EN 60664-1 / to 4,000 m ASL); II (EN 60664-1 / > 4,000 m up to 5,000 m ASL)		Nominal voltage 400 V/690 V in a 3-phase system: III (EN 60664-1 / to 4,000 m ASL); II (EN 60664-1 / > 4,000 m up to 5,000 m ASL)
Data width	2 x 128-bit data; 2 x 64-bit control/status		2 x 128-bit data; 2 x 64-bit control/status
Ambient temperature (operation)	-40 … +70 °C		-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm		(24 x 100 x 67.8) mm
Approvals	CE; KC; Marine; ATEX/IECEx		CE; KC; Marine; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-495/040-000		wago.com/750-495/040-000

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Analog output ▶ Configurable: current/voltage



750-563/040-000



Item description	**2-Channel Analog Output; 0/4 … 20 mA; 16 bits; 6 … 18 VDC**
Version	**extreme**
Item no.	**750-563/040-000**
Order Text	**2AO; 0/4-20mA; 16bits; 6-18 VDC; XTR**

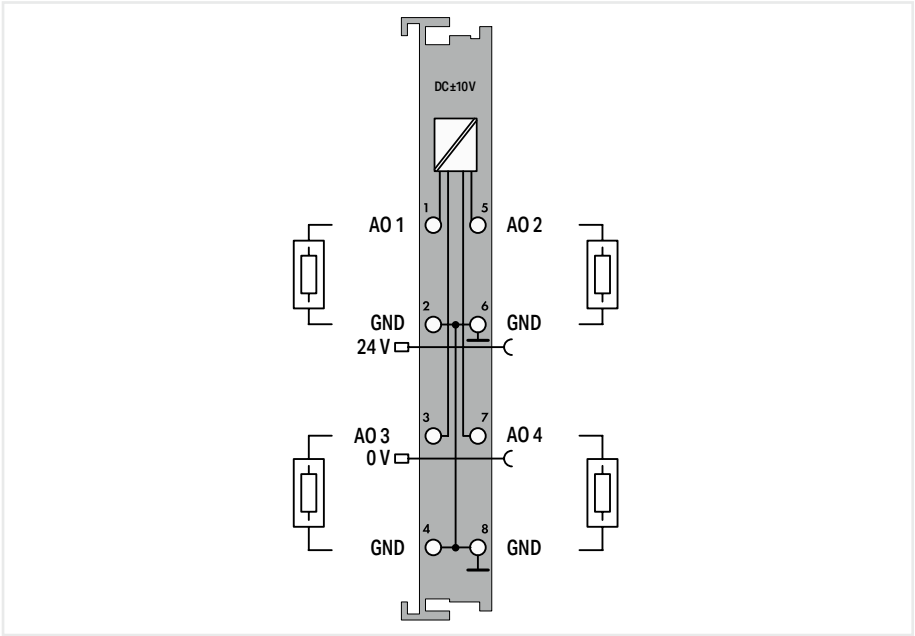
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Technical data	
Number of analog outputs	2
Signal type	Voltage; Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC
Signal type (voltage)	6 … 18 VDC
Actuator connection	2 x (2-wire, 4-wire)
Load impedance (current output)	≤ 500 Ω
Load impedance (voltage output)	≥ 1.8 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	5 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	< ±100 ppm
Supply voltage (field)	24 VDC (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 C: 24 V (min. … +20 %); for +55 … +70 °C: 24 V (min. … +10 %); Voltage range (min.): 21.6 V; Current range (min.): 20.4 V; Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	95 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-563/040-000

Analog output ▶ ±10 V



750-557/040-000



Item description	**4-Channel Analog Output; ±10 VDC**
Version	**extreme**
Item no.	**750-557/040-000**
Order Text	**4AO; ±10 VDC; XTR**

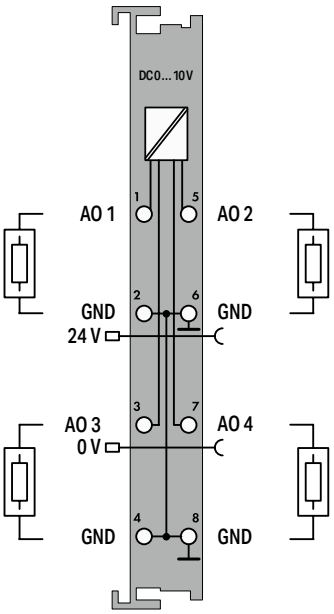
Technical data	
Number of analog outputs	4
Signal type	Voltage
Signal type (voltage)	-10 … +10 VDC
Actuator connection	4 x (2-wire)
Load impedance (voltage output)	≥ 5 kΩ
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.1 %
Temperature error (max.) of the output range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	125 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-557/040-000

8

Analog output ▶ 0 … 10 V



750-559/040-000



Item description	**4-Channel Analog Output; 0 … 10 VDC**
Version	**extreme**
Item no.	**750-559/040-000**
Order Text	**4AO; 0-10 VDC; XTR**

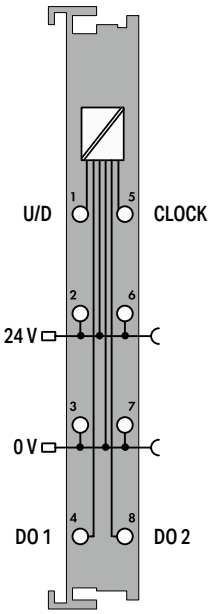
8

Technical data	
Number of analog outputs	4
Signal type	Voltage
Signal type (voltage)	0 … 10 VDC
Actuator connection	4 x (2-wire)
Load impedance (voltage output)	≥ 5 kΩ
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.1 %
Temperature error (max.) of the output range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	125 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-559/040-000

Counter



750-404/040-003



Item description	**Counter; adjustable**
Version	**extreme**
Item no.	**750-404/040-003**
Order Text	**Counter; Adjust; XTR**

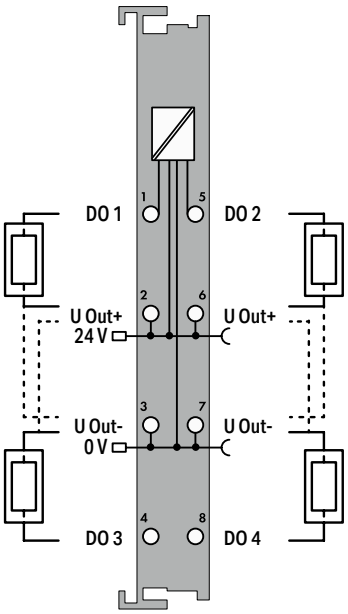
Technical data	
Number of digital outputs	2
Number of counters	1
Output current per channel	0.5 A
Output current	short-circuit-protected
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input current (typ.)	7 mA
Switching frequency (max.)	100 kHz
Counter depth	32 bits
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	70 mA
Rated surge voltage	1 kV
Data width	32-bit data; 8-bit control/status
Operating mode	Up/down counter/100 kHz; Up counter/enable input; Peak-time counter; Frequency measurement: 0.1 Hz … 100 kHz (default setting); Up/down counter/signal outputs (DO); Two up counters/16 bits/5 kHz
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-404/040-003

8

Pulse width modulation



750-677/040-000



8

Item description	**4-Channel Pulse Width Outputs; 24 VDC; 0.2 A; 20 kHz**
Version	**extreme**
Item no.	**750-677/040-000**
Order Text	**4PWM; 24 VDC; 0.2A; 20kHz; XTR**

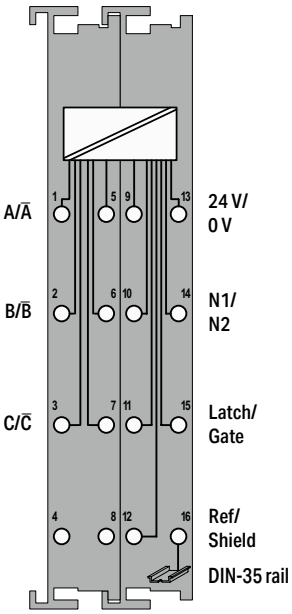
Technical data	
Number of digital outputs	4
Pulse frequency	0 … 20,000 Hz; integer
Duty cycle	0 … 100 %; 11-bit resolution
Output current per channel	0.2 A
Output current	short-circuit-protected; 0.4 A, short-circuit-protected in bridge mode
Switching frequency (max.)	20 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	85 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status
Operating mode	1: PWM DC (variable duty cycle); 2: PWM Frq (variable frequency); 3: PWM Frq - Cnt; 4: Pulse Frq - Cnt; 5: PWM Pulse - Dir
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE
Approvals (pending)	Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-677/040-000

This module outputs separately adjustable PWM signals at four channels. The channels can be individually configured as LSS (low-side switching) or HSS (high-side switching) and are short-circuit protected. The PWM signals are each 16 bits wide.
The module supports five operating modes. In both “PWM DC” and “PWM Frq” operating modes, all four channels may be used independently. The bridge mode can also be activated if the same operating mode is set on each channel pair (1 and 2 or 3 and 4). Both channels work synchronously and can be connected in parallel. In the other three complex operating modes, two channels functionally correlate with each other.
The first channel outputs the PWM signal and the second channel a static signal (“0” or “1”).
Refer to the manual (“Operating Modes” section) for all setting options and the bit signification in the process image.
The “PWM DC” operating mode is set by default.

Distance and angle measurement



750-637/040-001



Item description	**Incremental Encoder Interface; 24 VDC; Differential input; 32 bits**
Version	**extreme**
Item no.	**750-637/040-001**
Order Text	**Inc. Encoder; 24 VDC; Diff; 32bits; XTR**

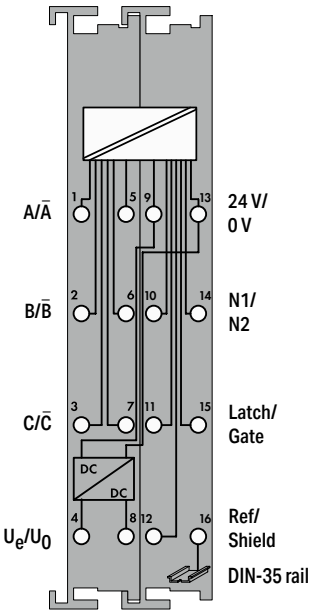
Technical data	
Encoder connection	A, A/, B, B/, C, C/
Counter depth	32 bits
Limit frequency	250 kHz
Quadrature decoder	4x evaluation
Zero impulse (latch)	32 bits
Commands	Reading, setting, activating
Supply voltage (encoder)	24 VDC
Output voltage	24 VDC
Output current per channel	0.5 A
Output current	short-circuit-protected
Voltage range for signal (0)	(U_{ABC} - $U_{ABC/}$): -30 … +15 VDC; Latch, gate, ref.: -3 … +5 VDC
Voltage range for signal (1)	(U_{ABC} - $U_{ABC/}$): 15 … 30 VDC; Latch, gate, ref.: 15 … 30 VDC
Input current (typ.)	Latch 7 mA, Gate 7 mA, Ref. 7 mA
Current consumption, field supply (module with no external load)	35 mA
Current consumption (5 V system supply)	110 mA
Rated surge voltage	1 kV
Data width	1 x 32-bit data 2 x 8-bit control/status
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-637/040-001

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Distance and angle measurement



750-637/040-000



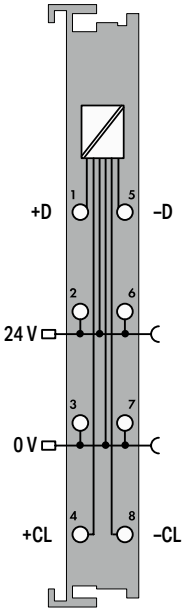
Item description	**Incremental Encoder Interface; RS-422; 32 Bits**
Version	**extreme**
Item no.	**750-637/040-000**
Order Text	**Inc. Encoder; RS422; 32Bit; XTR**

Technical data	
Encoder connection	A; /A; B; /B; C; /C (RS-422 inputs)
Counter depth	32 bits
Limit frequency	250 kHz
Quadrature decoder	4x evaluation
Zero impulse (latch)	32 bits
Commands	Reading, setting, activating
Supply voltage (encoder)	5 VDC
Output voltage	24 VDC
Output current per channel	0.5 A
Output current	short-circuit-protected
Voltage range for signal (0)	U_{ABC} = RS-422; Latch, gate, ref.: -3 … +5 VDC
Voltage range for signal (1)	U_{ABC} = RS-422; Latch, gate, ref.: 15 … 30 VDC
Input current (typ.)	Latch 7 mA, Gate 7 mA, Ref. 7 mA
Current consumption, field supply (module with no external load)	35 mA
Current consumption (5 V system supply)	110 mA
Rated surge voltage	1 kV
Data width	1 x 32-bit data 2 x 8-bit control/status
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-637/040-000

Distance and angle measurement



750-630/040-001



Item description	**SSI Transmitter Interface; adjustable**
Version	**extreme**
Item no.	**750-630/040-001**
Order Text	**SSI Interface; Adjust; XTR**

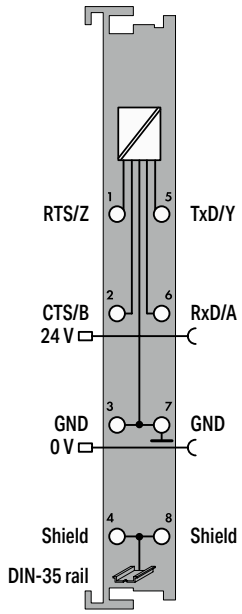
Technical data	
Encoder connection	On + D, -D / Off + Cl, - Cl
Supply voltage (encoder)	24 VDC; via power jumper contacts
Data transmission rate	125 kHz
Serial input	Data width: 1 … 32 bits
Code	Gray code/binary code
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	20 mA
Rated surge voltage	1 kV
Data width	1 x 32 bits; 1 x 8-bit control/status (optional) (24-bit data, 8 bits reserved)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-630/040-001

8

Serial interface



750-652/040-000



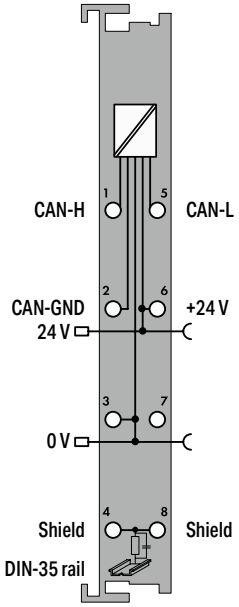
Item description	**Serial Interface RS-232/485**
Version	**extreme**
Item no.	**750-652/040-000**
Order Text	**RS232/485 Interface; XTR**

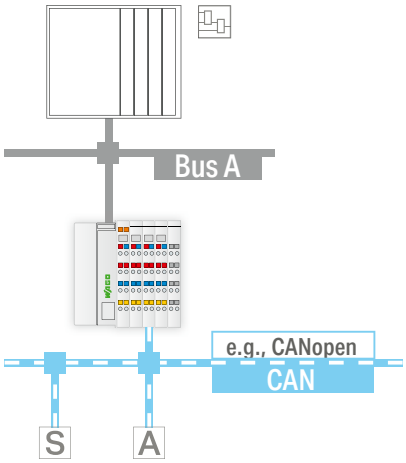
Technical data	
Signal type	RS-232; RS-422 / RS-485
Transmission channels	1 TxD / 1 RxD, full duplex, half duplex, 7- or 8-bit data, 1 or 2 stop bits
Baud rate	300 Bd … 115.2 kBd
Number of data bits	7/8, adjustable
Number of stop bits	1/2, adjustable
Buffer	2560 bytes for reception / 512 bytes for transmission
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	85 mA
Rated surge voltage	1 kV
Data width	8, 24 or 48 bytes (parameterizable)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-652/040-000

CAN gateway



750-658/040-000





Item description	**CAN Gateway**
Version	**extreme**
Item no.	**750-658/040-000**
Order Text	**CAN Gateway; XTR**

Technical data	
Device-specific	Operating modes: Sniffer mode, transparent mode, mapped mode
Number of inputs	1 (CAN interface)
Transmission modes	10 kbit/s; 20 kbit/s; 50 kbit/s; 125 kbit/s; 250 kbit/s; 500 kbit/s; 800 kbit/s (auto-baudrate); Data formats: per 2.0 A standard (11-bit ID); per 2.0 B extended (29-bit ID)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	50 mA
Rated surge voltage	1 kV
Data width	Configurable to 8, 12, 16, 20, 24, 32, 40, 48 bytes; incl. control/status byte
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-658/040-000

The CAN Gateway allows a CAN bus to be installed as a sub-bus beneath a fieldbus coupler or controller. It enables special sensors/actuators that are only available with the widely used CAN bus to also be integrated under other bus systems. Function blocks allow the gateway to read and write higher-protocol telegrams, e.g., CANopen.

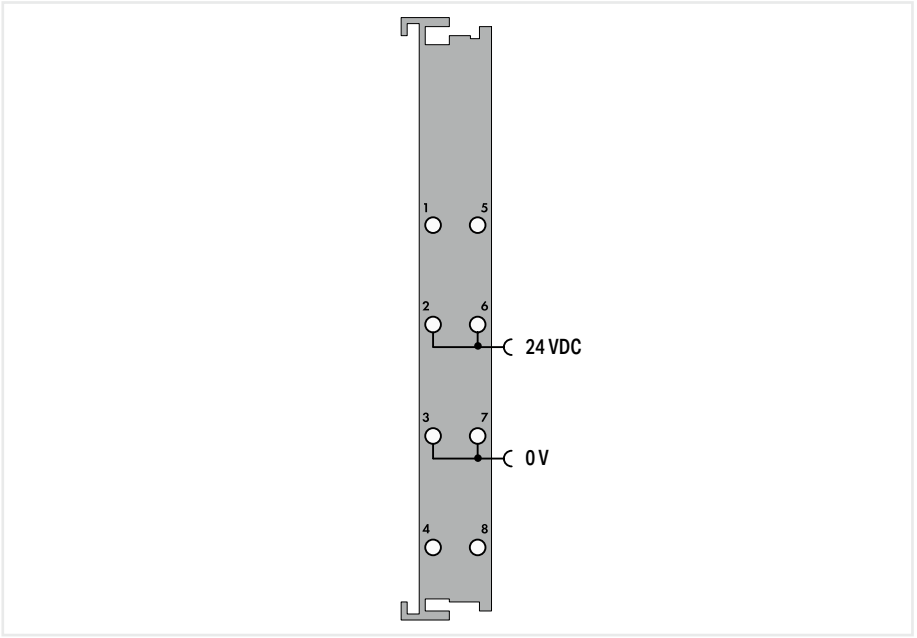
The module offers three different operating modes:

- Sniffer mode: Detailed analysis of the CAN bus through passive “snooping”
- Transparent mode: Active CAN subscriber that can send and receive any type of CAN telegram
- Mapped mode: Enables direct generation of CAN telegrams from the process image, or selective copying of process values from received CAN telegrams into the input process image (cyclic or event-based).

Supply module ▶ 24 VDC



750-602/040-000



Item description	**Power Supply; 24 VDC**
Version	**extreme**
Item no.	**750-602/040-000**
Order Text	**Power Supply; 24 VDC; XTR**

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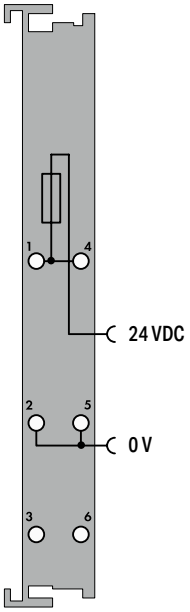
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-602/040-000

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

Supply module ▶ 24 VDC; fuse holder



750-601/040-000



Item description	**Power Supply; 24 VDC; Fuse holder**
Version	**extreme**
Item no.	**750-601/040-000**
Order Text	**Power Supply; 24 VDC; Fuse; XTR**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	6.3 A
Rated surge voltage	1 kV
Fuse	5 x 20; T 6.3 A (not included)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-601/040-000

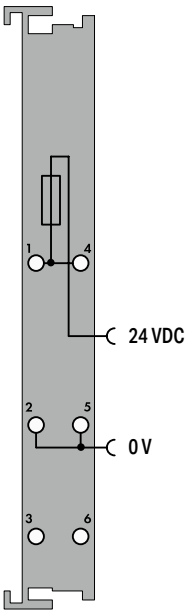
This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

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Supply module ▶ 24 VDC; fuse holder; diagnostics



750-610/040-000



Item description	**Power Supply; 24 VDC; Fuse holder; Diagnostics**
Version	**extreme**
Item no.	**750-610/040-000**
Order Text	**Power Supply; 24 VDC; Fuse; Diagn; XTR**

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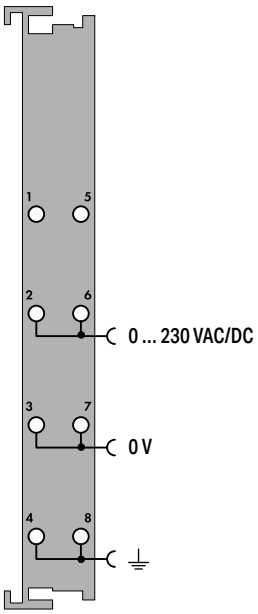
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current consumption (5 V system supply)	5 mA
Current carrying capacity (power jumper contacts)	6.3 A
Rated surge voltage	1 kV
Fuse	5 x 20; T 6.3 A (not included)
Diagnostics	Supply voltage (field): Detection “on” at > 15 VDC; Detection “off” at < 5 VDC
Data width	2 bits (1 bit current monitoring, 1 bit fuse fault)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-610/040-000

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED. The fuse status can also be queried from the fieldbus coupler.

Supply module ▶ 0 … 230 VAC/DC



750-612/040-000



Item description	**Power Supply; 0 … 230 VAC/DC**
Version	**extreme**
Item no.	**750-612/040-000**
Order Text	**Power Supply; 0-230 VAC/VDC; XTR**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	230 VAC/DC (-20 … +25 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 6.4 kV (EN 61010-1 to 2000 m); 4.0 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 230 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx

For data sheet and additional information, see: wago.com/750-612/040-000

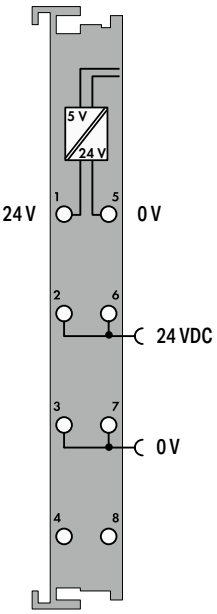
This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

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System power supply ► 24 VDC; system power supply



750-613/040-000



Item description	**System Power Supply; 24 VDC**
Version	**extreme**
Item no.	**750-613/040-000**
Order Text	**System Power Supply; 24 VDC; XTR**

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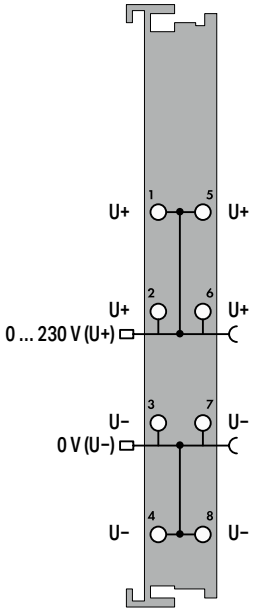
Technical data	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	90 %
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Total current (system supply)	2000 mA
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-613/040-000

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules. It also serves as an additional system supply for large nodes, covering the I/O modules' power demands.

Potential distribution module ▶ 0 … 230 VAC/DC



750-614/040-000



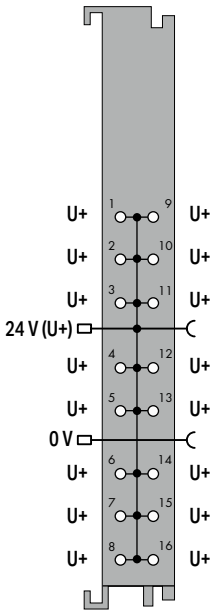
Item description	**Potential Multiplication; 0 … 230 VAC/DC**
Version	**extreme**
Item no.	**750-614/040-000**
Order Text	**Potential Distribution; 0-230 VAC/VDC; XTR**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	230 VAC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 6.0 kV (UL 61010); 6.0 kV (EN 60664-1 / to 4,000 m ASL); 4.0 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-614/040-000

Potential distribution module ▶ 16x 24 V



750-1605/040-000



Item description	**Potential Distribution; 16x 24 V**
Version	**extreme**
Item no.	**750-1605/040-000**
Order Text	**Potential Distribution; 16*24V; XTR**

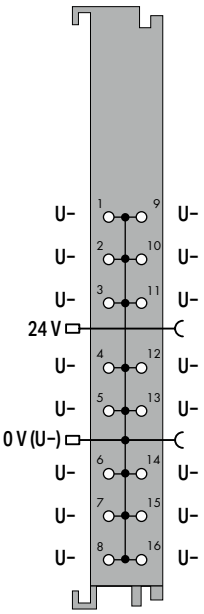
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Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1605/040-000

Potential distribution module ▶ 16x 0 V



750-1606/040-000



Item description	**Potential Distribution; 16x 0 V**
Version	**extreme**
Item no.	**750-1606/040-000**
Order Text	**Potential Distribution; 16*0V; XTR**

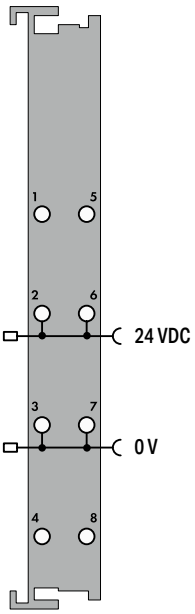
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-1606/040-000

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Filter module ▶ Field supply filter



750-624/040-000



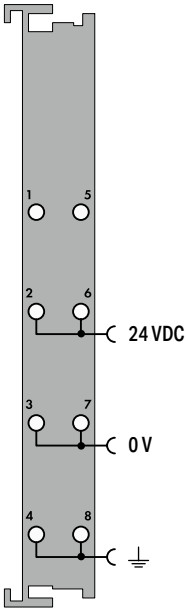
Item description	**Field Supply Filter (Surge); 24 VDC; Higher isolation**
Version	**extreme**
Item no.	**750-624/040-000**
Order Text	**Field Supply Filter; 24 VDC; HI; XTR**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (–25 … +30 %); for –40 … +55 °C: 24 V (–25 … +20 %); for +55 … +70 °C: 24 V (–25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Application	in marine and onshore/offshore applications, as well as in telecontrol and rail technology
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-624/040-000

Filter module ▶ Field supply filter; without power jumper contacts



750-624/040-001



Item description	**Field Supply Filter (Surge); 24 VDC; Higher isolation; without power jumper contacts**
Version	**extreme**
Item no.	**750-624/040-001**
Order Text	**Field Supply Filter; 24 VDC; HI; NC; XTR**

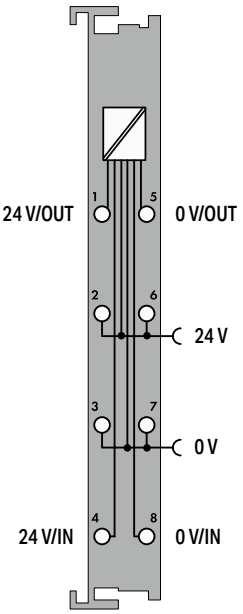
Technical data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Application	in marine and onshore/offshore applications, as well as in telecontrol and rail technology
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-624/040-001

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Filter module ▶ Power supply filter



750-626/040-000



Item description	**Supply Filter; 24 VDC; Higher isolation**
Version	**extreme**
Item no.	**750-626/040-000**
Order Text	**Supply Filter; 24 VDC; HI; XTR**

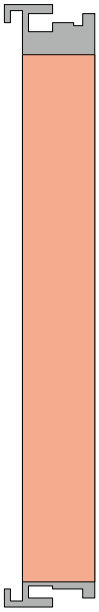
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Technical data	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current via system voltage (max.)	1.5 A
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Application	in marine and onshore/offshore applications, as well as in telecontrol and rail technology
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-626/040-000

Distance module



750-616/040-000



Item description	**Distance Module**
Version	**extreme**
Item no.	**750-616/040-000**
Order Text	**Distance Module; XTR**

Technical data	
Supply voltage (system)	5 VDC; via data contacts
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-616/040-000

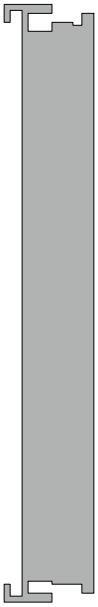
This distance module visually divides a fieldbus node into sections.
Notice:
Power supply to the adjacent I/O modules is performed via the power jumper contacts and requires an appropriate supply module.

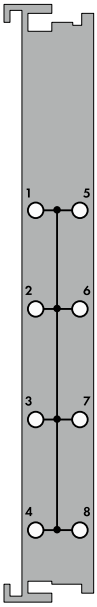
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Bus end module



750-600/040-000





Item description	End Module	End Module; with Potential Group
Version	extreme	extreme
Item no.	**750-600/040-000**	**750-600/040-001**
Order Text	**End Module; XTR**	**End Module; with Potential Group; XTR**
Technical data		
Supply voltage (system)	-	5 VDC; via data contacts
Voltage (potential group)	-	0 … 230 VAC/DC; Supply via CAGE CLAMP® contacts
Rated surge voltage	-	5 kV per EN 60870-2-1 / Class VW3, or 6.4 kV per EN 61010-1
Ambient temperature (operation)	-40 … +70 °C	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; Marine; OrdLoc/HazLoc
For data sheet and additional information, see:	wago.com/750-600/040-000	wago.com/750-600/040-000
	An end module must be snapped onto the assembly at the end of a fieldbus node. The end module completes the internal data bus, ensuring flawless data transmission.	An end module must be snapped onto the assembly at the end of a fieldbus node. In addition, the eight CAGE CLAMP® connections form a potential group. The end module completes the internal local data bus, ensuring flawless data transmission.

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Intrinsically Safe XTR Modules

Specialty Housing	
Dimensions W x H x D	48 x 100 x 70.9 mm
Depth from upper edge of DIN-rail	63.7 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.25 … 1.5 mm² / 24 … 14 AWG
Strip length	5 … 6 mm / 0.22 inch

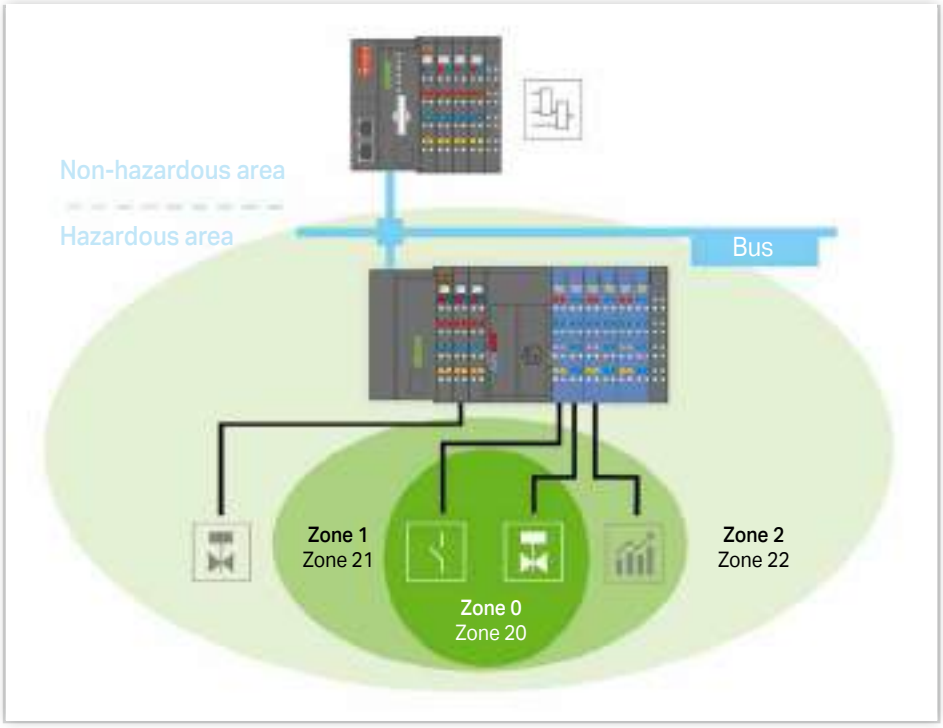
Housing Design (750 Series)	
Dimensions W x H x D	12 or 24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



8

Use in Hazardous Locations in eXTReme Environments

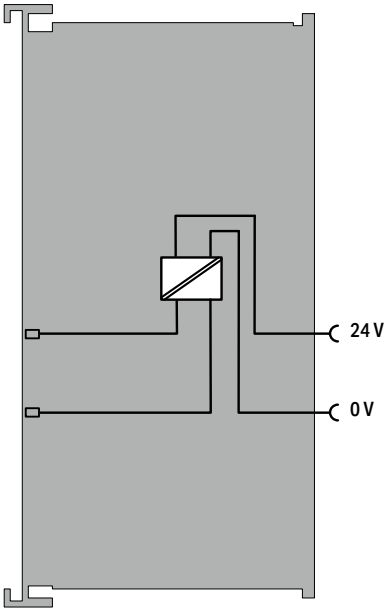
In many plants across the oil and gas industry, along with those in the chemical and petrochemical industries and the process automation sector, installations are operated that process explosive gas- or dust-air mixtures under extreme conditions. This is why electrical equipment must be explosion-proof in order to avoid injuries to personnel and damage to facilities.
When used in hazardous areas of Zone 2/22, the I/O System 750 XTR offers a safe, easy and economical connection to the sensors/actuators of Zones 0/20 and 1/21. Surrounding air temperatures from −40 to +70°C are permissible, as well as increased vibration loads up to 5g. The "blue" Ex i XTR I/O Modules were specially developed for this purpose. They form an intrinsically safe section that can be integrated into a standard 750 XTR Series node, offering all the advantages of state-of-the-art fieldbus technology. The WAGO I/O System 750 XTR is also approved for mining applications.



Intrinsically safe modules (Ex i) ▶ Supply module



750-606/040-000



Item description	**Power Supply; 24 VDC; Diagnostics; Intrinsically safe**
Version	**extreme**
Item no.	**750-606/040-000**
Order Text	**Power Supply; 24 VDC; Ex i; XTR**

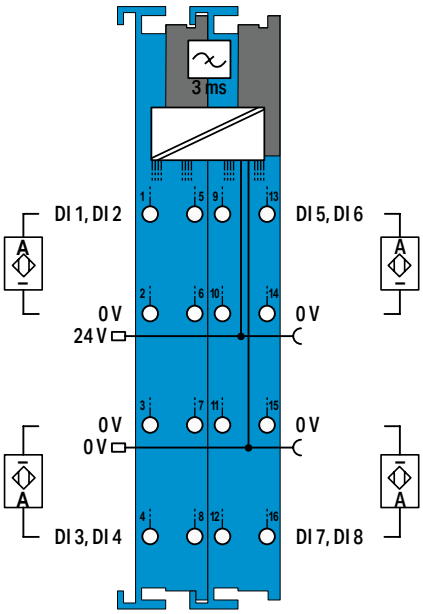
Technical data	
Current consumption (5 V system supply)	7.5 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (−25 … +30 %); for −40 … +55 °C: 24 V (−25 … +20 %); for +55 … +70 °C: 24 V (−25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	1 A
Fuse	electronic
Data width	2 bits (input voltage failure, fuse triggered)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(48 x 100 x 70.9) mm
Explosion protection	
Power supply (input)	U_n = 24 VDC; $P_{max.}$ = 29 W; U_m = 253 V
Power supply (output)	U_o = 26.8 V (intrinsically safe output voltage per protection level ia); I_n = 1 A
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3G Ex ec IIC T4 Gc
For data sheet and additional information, see:	wago.com/750-606/040-000

This supply module monitors the power supply to the downstream Ex i segment and separates the intrinsically safe from the non-intrinsically safe section of the I/O system. The input and output sides are electrically isolated from each other.
Note: If, due to load conditions, more than one supply module is required per station, four distance modules (750-616/040-000) must be placed between the intrinsically safe sections.
General information (e.g., installation regulations) on explosion protection is available in the WAGO I/O System 750 XTR manuals!

Intrinsically safe modules (Ex i) ► Digital input



750-439/040-000



Item description	8-Channel Digital Input; NAMUR; Intrinsically safe
Version	extreme
Item no.	**750-439/040-000**
Order Text	**8DI; NAMUR; Ex i; XTR**

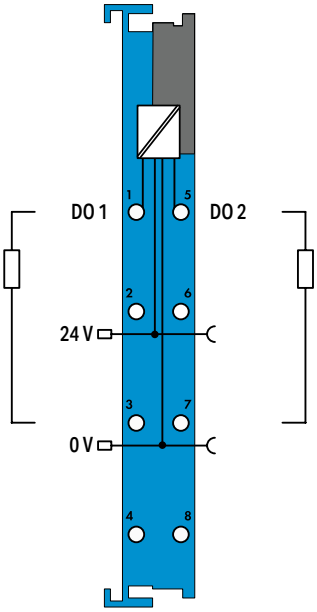
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Technical data	
Number of digital inputs	8
Signal type	NAMUR
Sensor connection	4 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Diagnostics	Short circuit, wire break
Supply voltage (sensor)	8.2 VDC; short-circuit-protected, each channel supplied separately
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	11 mA
Current consumption (5 V system supply)	56 mA
Input data width (internal) max.	16 bits
Output data width (internal) max.	16 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 11.76 V; I_o = 12.48 mA; P_o = 36.67 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 100 mH; C_o = 1.5 µF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 9.9 µF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 39 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 38 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-439/040-000

Intrinsically safe modules (Ex i) ▶ Digital output



750-535/040-000



Item description	**2-Channel Digital Output; 24 VDC; Intrinsically safe**
Version	**extreme**
Item no.	**750-535/040-000**
Order Text	**2DO; 24 VDC; Ex i; XTR**

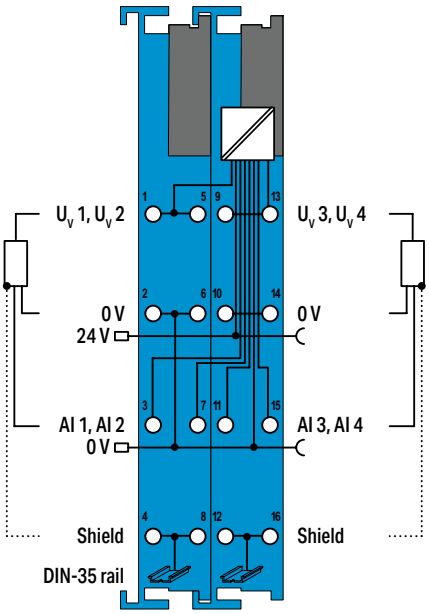
Technical data	
Number of digital outputs	2
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	high-side switching
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	8.5 mA
Current consumption (5 V system supply)	7 mA
Output data width (internal) max.	2 bits
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 99.91 mA; P_o = 669.43 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 1.1 mH; C_o = 0.092 µF
Reactances Ex ia IIB	L_o = 12 mH; C_o = 0.72 µF
Reactances Ex ia IIA	L_o = 21 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 30 mH; C_o = 3.85 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-535/040-000

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Intrinsically safe modules (Ex i) ▶ Analog input ▶ 0/4 … 20 mA; NAMUR NE43



750-486/040-000



Item description	4-Channel Analog Input; 0/4 … 20 mA; NAMUR NE43; Intrinsically safe
Version	extreme
Item no.	**750-486/040-000**
Order Text	**4AI; 0/4-20mA; Ex i; XTR**

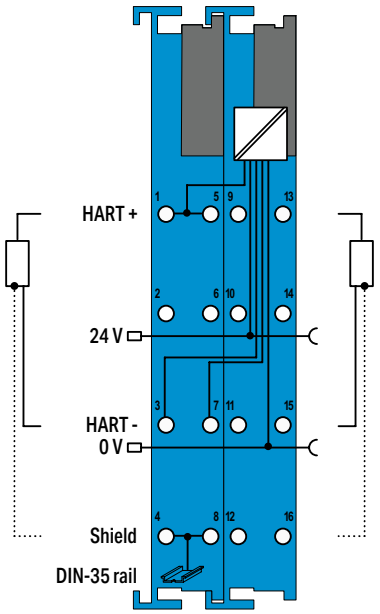
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Technical data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC
Sensor connection	2 x (3-wire)
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	200 Ω
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (sensor)	15 VDC; Transmitter supply U$_V$ at 20 mA
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U$_O$ = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	19 mA
Current consumption (5 V system supply)	45 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U$_o$ = 26.8 V; I$_o$ = 92.72 mA; P$_o$ = 621.27 mW; linear characteristic curve
Reactances Ex ia IIC	L$_o$ = 1.6 mH; C$_o$ = 0.082 µF
Reactances Ex ia IIB	L$_o$ = 15 mH; C$_o$ = 0.71 µF
Reactances Ex ia IIA	L$_o$ = 25 mH; C$_o$ = 2.36 µF
Reactances Ex ia I	L$_o$ = 36 mH; C$_o$ = 3.84 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C$_o$) and inductance (L$_o$)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-486/040-000

Intrinsically safe modules (Ex i) ▶ Analog input ▶ 4 … 20 mA HART



750-484/040-000



Item description	**2-Channel Analog Input; 4 … 20 mA HART; Intrinsically safe**
Version	**extreme**
Item no.	**750-484/040-000**
Order Text	**2AI; 4-20mA HART; Ex i; XTR**

Technical data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	parameterizable
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Overvoltage protection	30 V, reverse polarity protected
Diagnostics	Wire break, measurement range overflow
Supply voltage (sensor)	16.5 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_O = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	26 mA
Current consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 90.07 mA; P_o = 603.5 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 1.8 mH; C_o = 0.092 µF
Reactances Ex ia IIB	L_o = 16 mH; C_o = 0.72 µF
Reactances Ex ia IIA	L_o = 27 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 38 mH; C_o = 3.85 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-484/040-000

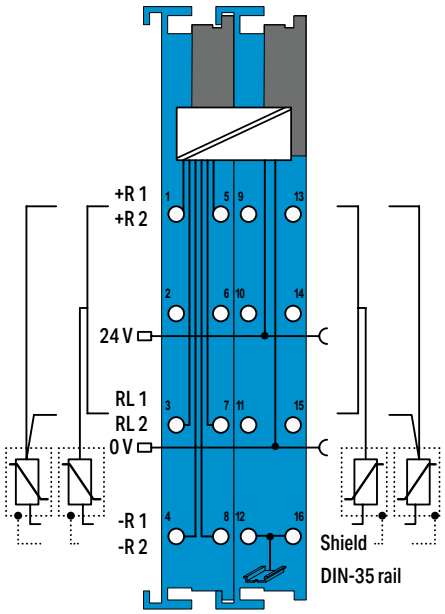
In addition to analog signal processing, this module offers optional HART communication for parameterizing or recording dynamic variables.

8

Intrinsically safe modules (Ex i) ▶ Analog input ▶ Resistance sensors



750-481/040-000



Item description	**2-Channel Analog Input; RTD; Intrinsically safe**
Version	**extreme**
Item no.	**750-481/040-000**
Order Text	**2AI; RTD; Ex i; XTR**

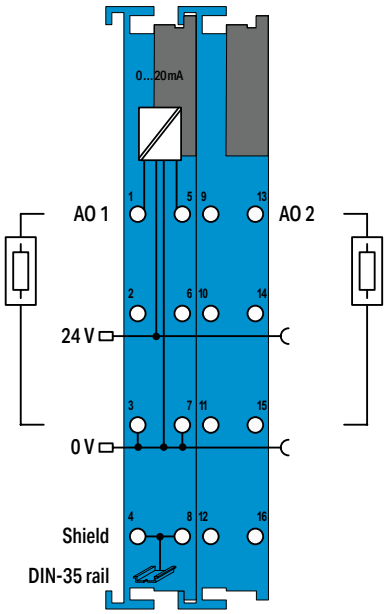
8

Technical data	
Number of analog inputs	2
Signal type	Resistance measurement; Potentiometer positions
Temperature range	−200 … +850 °C (Pt), −60 … +250 °C (Ni), −80 … +320 °C (Ni120)
Sensor connection	2 x (2-wire, 3-wire)
Resolution (over entire range)	0.1 °C, 0.1 Ω, 0.0049 %
Conversion time (typ.)	325 ms
Conversion time	150 … 500 ms (per channel)
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	12 mA
Current consumption (5 V system supply)	25 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 7.2 V; I_o = 5.8 mA; P_o = 10.5 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 100 mH; C_o = 13.5 µF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 240 µF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 1000 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 1000 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-481/040-000

Intrinsically safe modules (Ex i) ▶ Analog output



750-585/040-000



Item description	**2-Channel Analog Output; 0 … 20 mA; Intrinsically safe**
Version	**extreme**
Item no.	**750-585/040-000**
Order Text	**2AO; 0-20mA; Ex i; XTR**

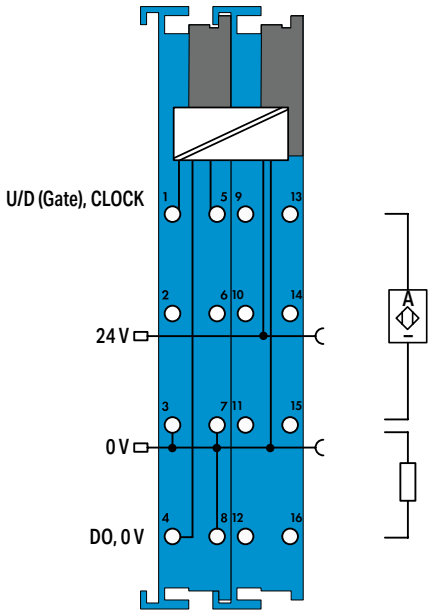
Technical data	
Number of analog outputs	2
Signal type	Current
Signal type (current)	0 … 20 mADC
Signal characteristics	Single-ended
Load impedance (current output) max.	500 Ω
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Actuator connection	2 x (2-wire)
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	19 mA
Current consumption (5 V system supply)	21 mA
Data width	2 x 16-bit data
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 56.4 mA; P_o = 378 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 8.2 mH; C_o = 0.092 µF
Reactances Ex ia IIB	L_o = 46 mH; C_o = 0.72 µF
Reactances Ex ia IIA	L_o = 76 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 3.85 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-585/040-000

8

Intrinsically safe modules (Ex i) ▶ Counter



750-633/040-000



Item description	**Up/Down Counter; Intrinsically safe**
Version	**extreme**
Item no.	**750-633/040-000**
Order Text	**Up/Down Counter; Ex i; XTR**

8

Technical data	
Number of counters	1
Number of digital outputs	1
Sensor supply U_V	8.2 V
Switching frequency	20 Hz … 50 kHz
Counter depth	32 bits
Output voltage	24 VDC
Input filter	10 µs
Input resistance (max.)	1000 Ω
Open-circuit voltage	8.2 V
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	31 mA
Current consumption (5 V system supply)	25 mA
Data width	1 x 32-bit data, 1 x 8-bit status/diagnostics
Isolation	300 VAC system/field
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion protection	
Safety data (input)	U_o = 12 V; I_o = 13.3 mA; P_o = 40.4 mW; linear characteristic curve
Reactances of Ex ia IIC inputs	L_o = 100 mH; C_o = 1.41 µF
Reactances of Ex ia IIB inputs	L_o = 100 mH; C_o = 9 µF
Reactances of Ex ia IIA inputs	L_o = 100 mH; C_o = 36 µF
Reactances of Ex ia I inputs	L_o = 100 mH; C_o = 35 µF
Safety data (output)	U_o = 26.8 V; I_o = 96.69 mA; P_o = 674.83 mW; linear characteristic curve
Reactances of Ex ia IIC output	L_o = 1.3 mH; C_o = 0.091 µF
Reactances of Ex ia IIB output	L_o = 13 mH; C_o = 0.719 µF
Reactances of Ex ia IIA output	L_o = 23 mH; C_o = 2.369 µF
Reactances of Ex ia I output	L_o = 33 mH; C_o = 3.849 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)
Ex standard	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
For data sheet and additional information, see:	wago.com/750-633/040-000

IP67



I/O System Field

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

◄◄ Section 7

I/O System – 750 XTR Series

For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

◄ Section 8

I/O System Field

Automate and Network Modular Machines for the Future
- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

I/O System Field
Contents

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General Product Information	550
Functional Variants	551
Interfaces and Types	552
Item Number Key	553
Standards and Rated Conditions	553
Approvals	553
Configuration Guide	554









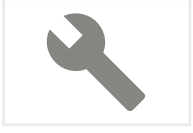












	PROFINET	EtherCAT®	EtherNet/IP™	IO-Link Master	IO-Link Devices	Description	Item No.	
Fieldbus Modules								
	x					16-Channel Digital Input; 24 VDC; 8 x M12 Connector	765-1101/100-000	556
		x					765-1201/100-000	
			x				765-1501/100-000	
	x					16-Channel Digital Output; 24 VDC; 8 x M12 Connector	765-1103/100-000	557
		x					765-1203/100-000	
			x				765-1503/100-000	
	x					16-Channel Digital Input/Output; 24 VDC; 8 x M12 Connector	765-1102/100-000	558
		x					765-1202/100-000	
			x				765-1502/100-000	
	x					8-Channel Digital Input/Output; 24 VDC; 4 x M12 Connector	765-1104/100-000	559
		x					765-1204/100-000	
			x				765-1504/100-000	
	x					8-Channel Digital Input/Output; 24 VDC; 8 x M8 Connector	765-1105/100-000	560
		x					765-1205/100-000	
			x				765-1505/100-000	
IO-Link Masters								
	x			Class A		8-Port IO-Link Master; 24 VDC 2.0 A; 8 x M12 Connector	765-4101/100-000	562
		x					765-4201/100-000	
			x				765-4501/100-000	
	x			Class B			765-4102/100-000	563
		x					765-4202/100-000	
			x				765-4502/100-000	
	x			Class A		4-Port IO-Link Master; 24 VDC 2.0 A; 4 x M12 Connector	765-4103/100-000	564
		x					765-4203/100-000	
			x				765-4503/100-000	
	x			Class B			765-4104/100-000	565
		x					765-4204/100-000	
			x				765-4504/100-000	
IO-Link Hubs								
					Class A	8-Channel Digital Input/Output; 24 VDC 2.0 A; 4 x M12 Connector	765-1701/200-000	566
					Class B		765-1704/200-000	567
					Class A	8-Channel Digital Input/Output; 24 VDC 2.0 A; 8 x M8 Connector	765-1702/200-000	568
					Class B		765-1705/200-000	569
					Class A	16-Channel Digital Input/Output; 24 VDC 2.0 A; 8 x M12 Connector	765-1703/200-000	570
					Class B		765-1706/200-000	571
IO-Link Converter								
					Class A	1-Channel Analog Input; IO-Link Converter; 4 … 20 mA	765-2701/200-000	572
					Class A/B	2-Channel Analog Input; IO-Link Converter; 0 … 10 V	765-2702/200-000	573
					Class A/B	2-Channel Analog Output; IO-Link Converter; 4 … 20 mA	765-2703/200-000	574
					Class A/B	2-Channel Analog Output; IO-Link Converter; 0 … 10 V	765-2704/200-000	575

Accessories 576

Power Cable; L-Coded; 5-Pole
ETHERNET/PROFINET Cable; D-Coded; 4-Pole
Pre-Assembled Connectors; 5-Pole; IDC Technology
Mounting Clip

I/O System Field
General Product Information

Automate and Network Modular Machines for the Future

High performance, designed for time-sensitive networking (TSN) and unshakeable even in the harshest environmental conditions: The WAGO I/O System Field for cabinet-free automation combines an impressive variety of functions with robust IP67 housings.

Extended Network Connectivity

Modern, decentralized production facilities require automation solutions that ensure the highest level of connectivity, while providing maximum performance outside of the control cabinet.

WAGO developed its upgradable I/O System Field with IP67 protection to meet these needs today and tomorrow: It combines fast ETHERNET-based fieldbuses (e.g., PROFINET), technologies such as OPC UA, *Bluetooth*® and Webserver, and MQTT for cloud connectivity.

Functionality and Aesthetics in One System

The IP67 I/O System Field offers no-compromise protection with pressure cast zinc housings for extremely harsh environments, or robust yet lightweight plastic housings for mobile applications. The modules operate reliably at temperatures from −25 to +70°C (−13 … +158°F) and, thanks to internal shielding, are immune to electromagnetic interference. Slim housing variants and lateral mounting options open up more space.



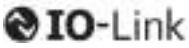
Industrial Ethernet and PROFINET on the field level provide the basis for digitalization with WAGO I/O System Field, which supports Ethernet-based standards (EtherNet/IP™ and EtherCAT®) and is #made for TSN (Time-Sensitive Networking).



WAGO I/O System Field supports MQTT as an open message protocol for data transmission.



The system is equipped with an OPC UA server, allowing OPC UA clients to access the widest range of device data (e.g., parameter data, status information, identification/diagnostics data, containers).



Fieldbus modules equipped with IO-Link masters and IO-Link hubs as devices facilitate effective, versatile connection of intelligent sensors/actuators to the automation system.



An app for direct access to a WAGO Field Device via DMC (Data Matrix Code) identification and BLE (*Bluetooth*® Low Energy) communication is available for wireless access with a mobile device.



An integrated Webserver enables HTTP and HTTPS communication. With this capability, a wide range of system information can be accessed using standard browsers.

Integrated Load Management

Innovative load management ensures that the system's power is fully utilized via supply and output current load management. Current and voltage can be recorded and evaluated for each channel. Overload limits can be set for individual channels. As a result, errors can be detected faster and more clearly differentiated in the event of faults – it is also easier to predict errors, which is essential for future-oriented trends such as predictive maintenance.

All-in-One Solution via IO-Link

In combination with IO-Link, the I/O System Field fully demonstrates its strengths as a flexible "IO distributor" for both data collection and distribution. The prominent communication standard enables seamless data flow from the control to the sensor and actuator level. This considerably simplifies configuration and cabling. Furthermore, completely new possibilities arise for diagnostics, parameterization and device identification.

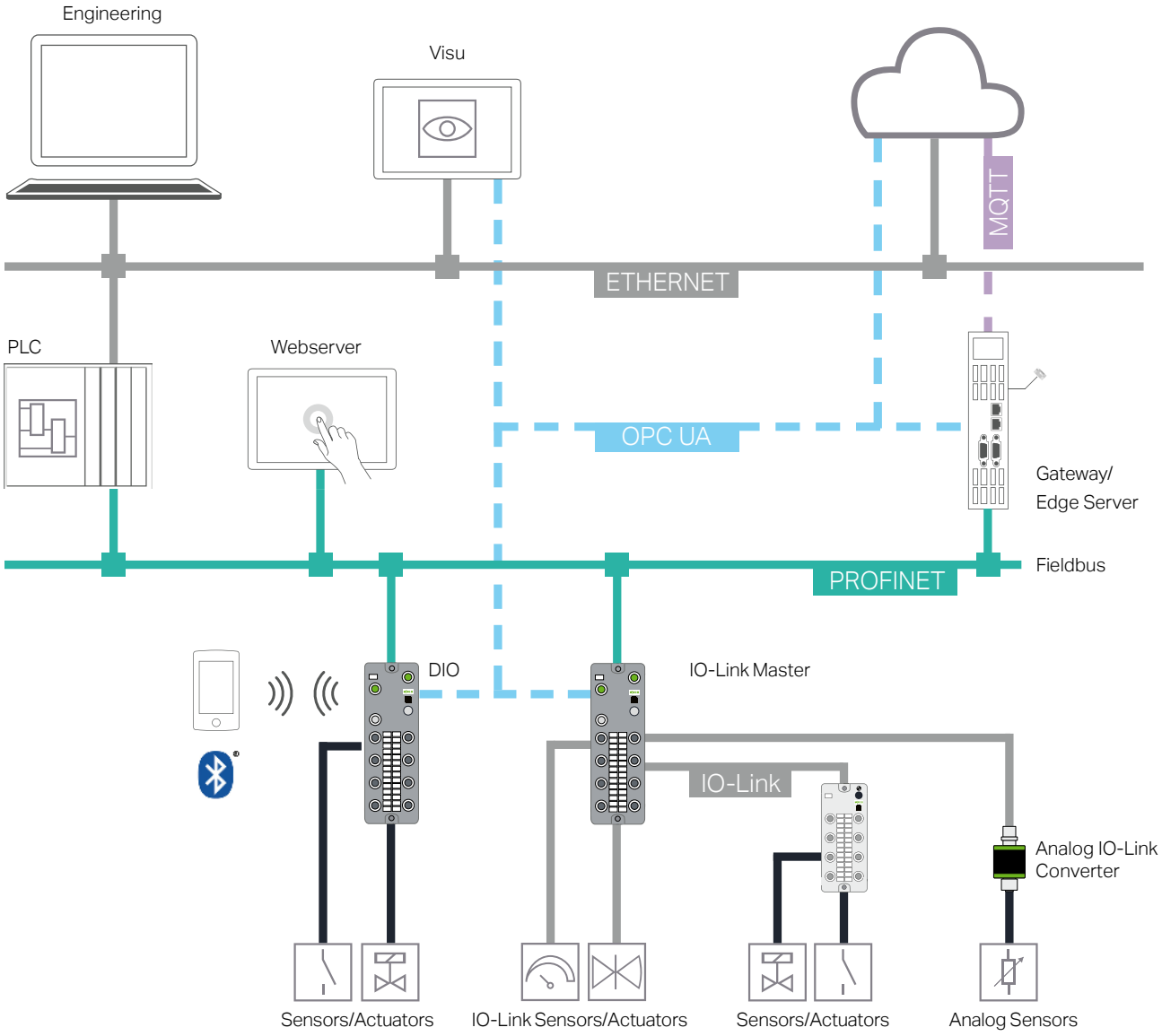
Advantages:

- Platform-independent data exchange through OPC UA
- System information provided via MQTT
- Fast on-site access to data through *Bluetooth*®
- Status information of the system via integrated Webserver
- Ready for future TSN implementation
- Fully encapsulated IP67 metal housings for extreme environments
- Non-encapsulated, lightweight IP67 plastic housings for mobile applications
- WAGO standard marking (WMB Inline markers and marking strips)

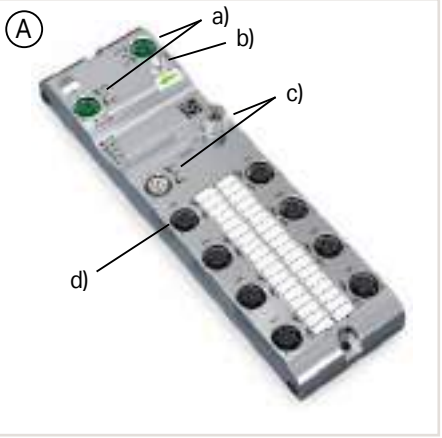
I/O System Field
Functional Variants

PROFINET
EtherNet/IP™
EtherCAT

Fieldbus Module and IO-Link Master as PROFINET, EtherCAT® or EtherNet/IP™ Slave



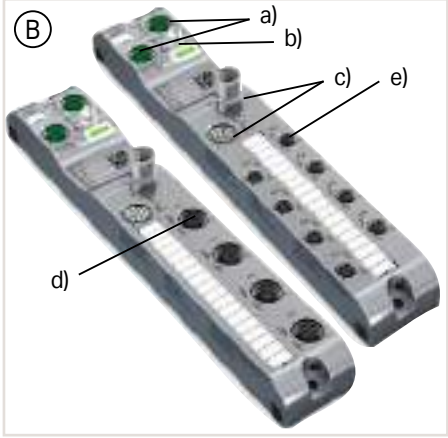
I/O System Field
Interfaces and Types

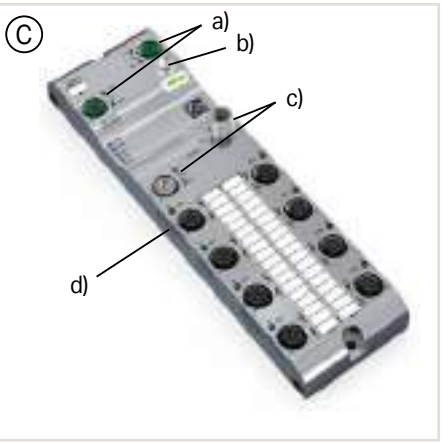


Fieldbus Module
- Fieldbus: 2 x D-coded M12; 5-pole (a)
- *Bluetooth*® (b)
- Supply: L-coded M12; 5-pole (c)

Housing Design (A): 16 DI, 16 DO or 16 DIO
- Inputs/Outputs: A-coded M12; 5-pole (d)
- W x H x D (mm): 60 x 30 x 210

Housing Design (B): 8 DIO
- Inputs/Outputs: A-coded M12; 5-pole (d) or M8; 3-pole (e)
- W x H x D (mm): 35 x 30 x 210

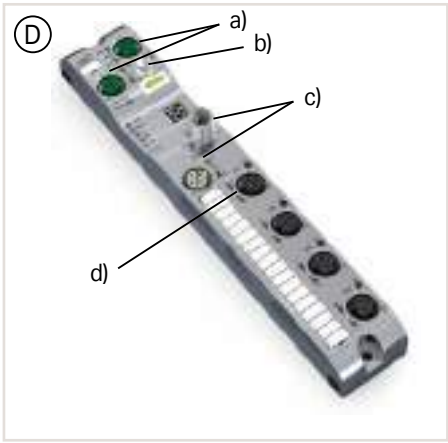


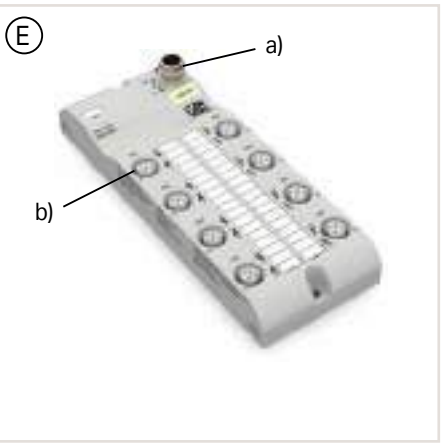


IO-Link Master
- Fieldbus: 2 x D-coded M12; 5-pole (a)
- *Bluetooth*® (b)
- Supply: L-coded M12; 5-pole (c)
- IO-Link Ports: A-coded M12; 5-pole (d)

Housing Design (C): 8 IO-Link ports, class A or B
- W x H x D (mm): 60 x 30 x 210

Housing Design (D): 4 IO-Link ports, class A or B
- W x H x D (mm): 35 x 30 x 210

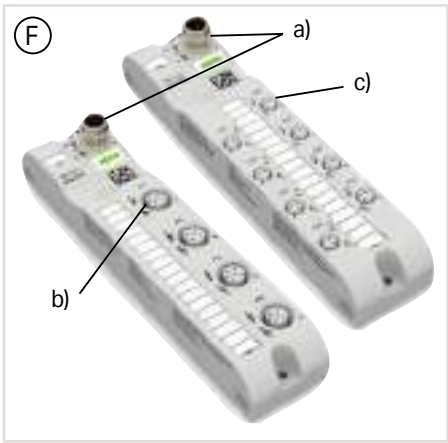


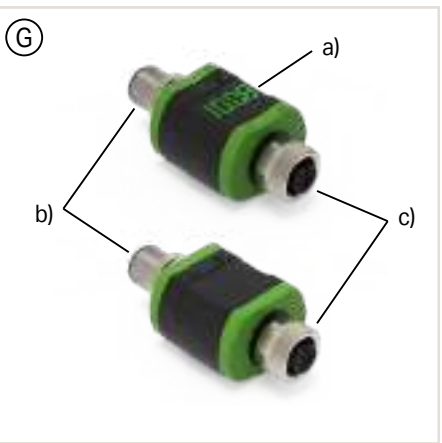


IO-Link Hub
- IO-Link Hub: A-coded M12; 5-pole (a)

Housing Design (E): 16 DIO
- Inputs/Outputs: A-coded M12; 5-pole (b)
- W x H x D (mm): 60 x 30 x 158.5

Housing Design (F): 8 DIO
- Inputs/Outputs: A-coded M12; 5-pole (b) or M8; 3-pole (c)
- W x H x D (mm): 35 x 30 x 158.5



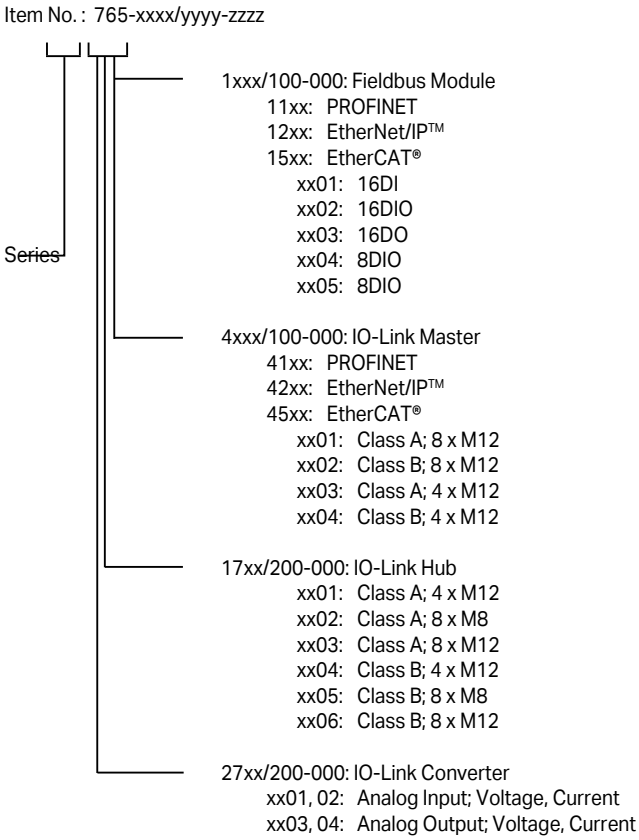


Analog IO-Link Converter

Housing Design (G)
- configurable via IO-Link; with display (a) also directly on the device
- IO-Link side: M12-A plug; 4-pole (b)
- Sensor/Actuator side: M12-A socket; 5-pole (c)

I/O System Field
Item Number Key

Explanation of an item number key's components



9

Standards and Rated Conditions

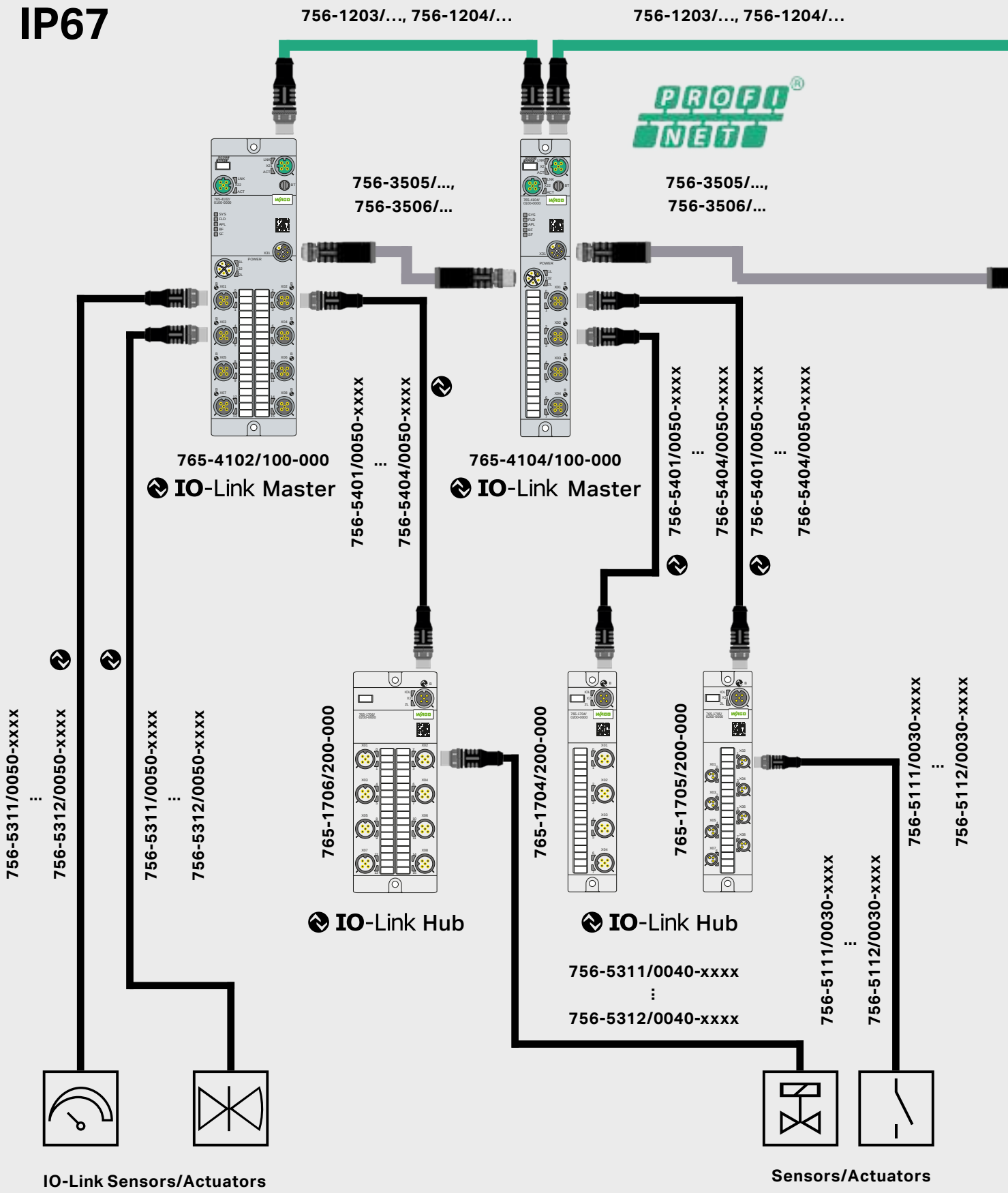
General Specifications	
Supply voltage (system)	24 VDC (–25 … +30 %)
Surrounding air temperature (operation)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +80 °C
Maximum temperature change	3 K/min
Relative humidity (operation)	5 … 95 % (with condensation)
Pollution degree	3 (EN 60664-1)
Operating altitude	0 … 2000 m / 0 … 6562 ft
Overvoltage category	II (EN 60664-1)
Protection type	IP67 (EN 60529)
Protection class	III (EN 61140)
Vibration resistance	5g (IEC 60068-2-6)
Shock resistance	50g (IEC 60068-2-27)
EMC immunity to interference	Per EN 61000-6-2
EMC emission of interference	Per EN 61000-6-4
Mounting type	Screw mount, 2xM4 (front and side)
Connection technology	M8 and M12 connectors
Housing material	Metal, plastic (PA, PBT)

For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

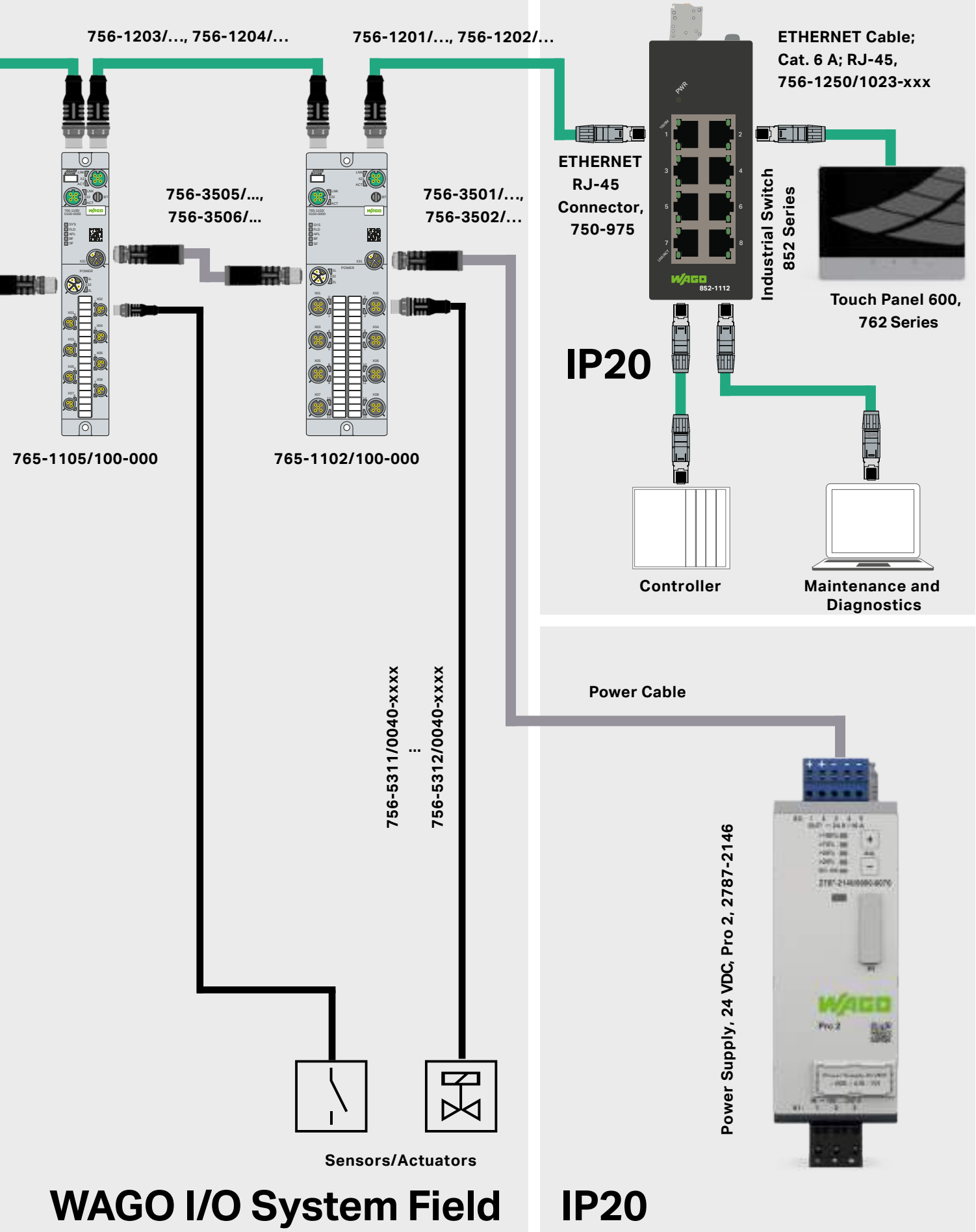
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FCC/ ISED

I/O System Field
Configuration Guide



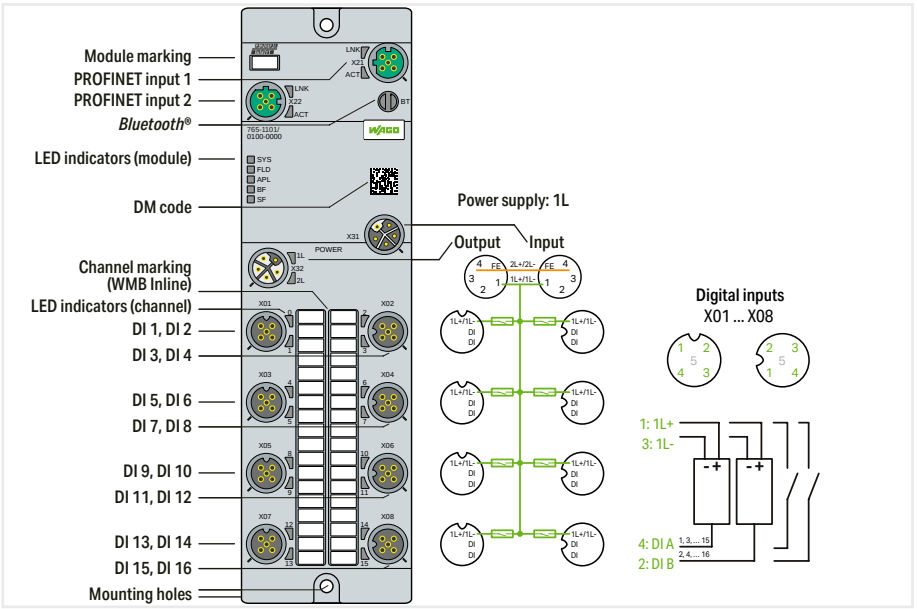
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756-1203/..., 756-1204/...
756-1201/..., 756-1202/...
ETHERNET Cable;
Cat. 6 A; RJ-45,
756-1250/1023-xxx
ETHERNET
RJ-45
Connector,
750-975
Industrial Switch
852 Series
852-1112
Touch Panel 600,
762 Series
IP20
756-3505/...,
756-3506/...
756-3501/...,
756-3502/...
765-1105/100-000
765-1102/100-000
Controller
Maintenance and
Diagnostics
Power Cable
756-5311/0040-xxxx
...
756-5312/0040-xxxx
Power Supply, 24 VDC, Pro 2, 2787-2146
Sensors/Actuators
WAGO I/O System Field
IP20

Fieldbus module ▶ 16-Channel Digital Input; I/O System Field; 24 VDC; 8 x M12 connector



765-1101/100-000



Item description	16-Channel Digital Input; I/O System Field; 24 VDC; 8 x M12 connector		
Version	PROFINET slave	EtherCAT® slave	EtherNet/IP™ slave
Item no.	765-1101/100-000	765-1201/100-000	765-1501/100-000
Order Text	16DI FLD PN DC 24V	16DI FLD EC DC 24V	16DI FLD EI DC 24V

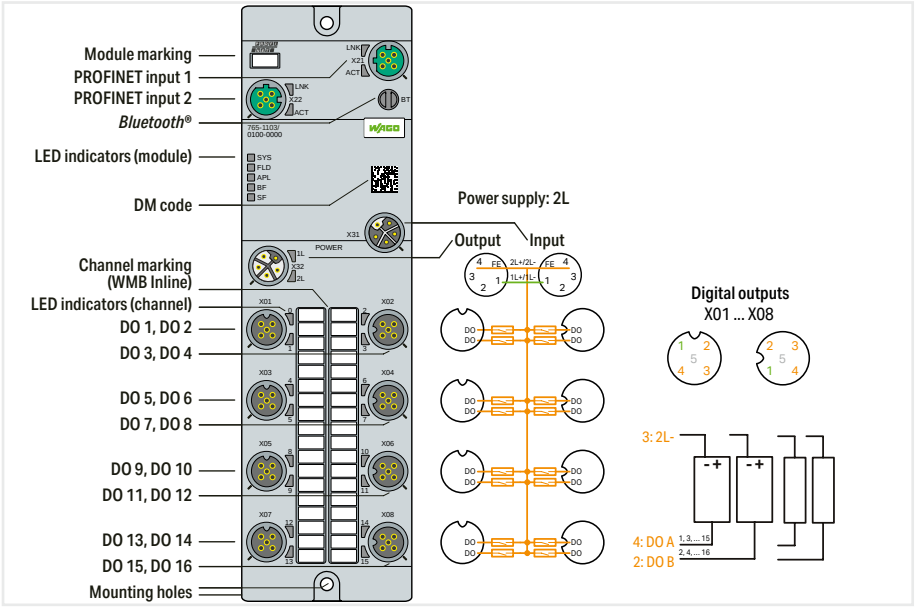
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
Digital inputs/outputs			
Number of digital inputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Sensor current (per channel) max.	2 A		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-1101/100-000	wago.com/765-1201/100-000	wago.com/765-1501/100-000

Accessories	Item no.	Item no.	Item no.
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

Fieldbus module



765-1103/100-000



Item description	16-Channel Digital Output; I/O System Field; 24 VDC; 8 x M12 connector		
Version	PROFINET slave	EtherCAT® slave	EtherNet/IP™ slave
Item no.	765-1103/100-000	765-1203/100-000	765-1503/100-000
Order Text	16DO FLD PN DC 24V	16DO FLD EC DC 24V	16DO FLD EI DC 24V

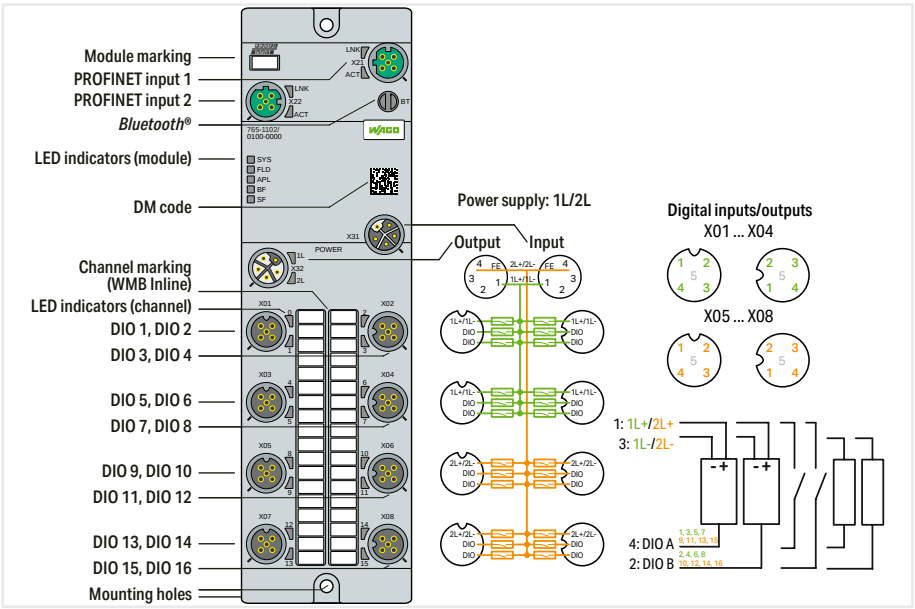
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
Digital inputs/outputs			
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	2L: 4 A (max.)	1L/2L: 4 A (max.)	
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-1103/100-000	wago.com/765-1203/100-000	wago.com/765-1503/100-000

Accessories	Item no.	Item no.	Item no.
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

Fieldbus module ▶ 16-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M12 connector



765-1102/100-000



Item description	16-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M12 connector		
Version	PROFINET slave	EtherCAT® slave	EtherNet/IP™ slave
Item no.	765-1102/100-000	765-1202/100-000	765-1502/100-000
Order Text	16DIO FLD PN DC 24V	16DIO FLD EC DC 24V	16DIO FLD EI DC 24V

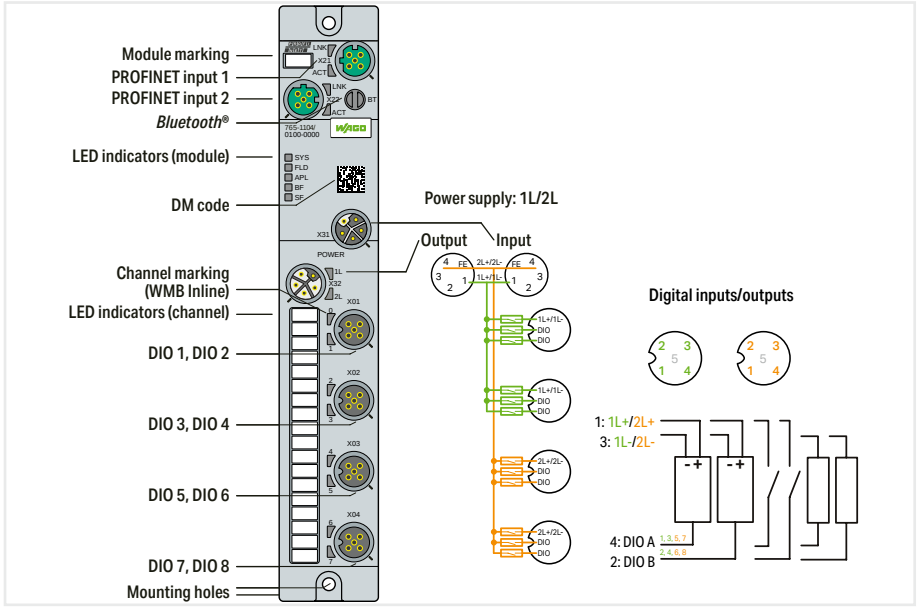
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
Digital inputs/outputs			
Number of digital inputs	16		
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L/2L: 4 A (max.)		
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-1102/100-000	wago.com/765-1202/100-000	wago.com/765-1502/100-000

Accessories	Item no.	Item no.	Item no.
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

Fieldbus module ▶ 8-Channel Digital Input/Output; I/O System Field; 24 VDC; 4 x M12 connector



765-1104/100-000

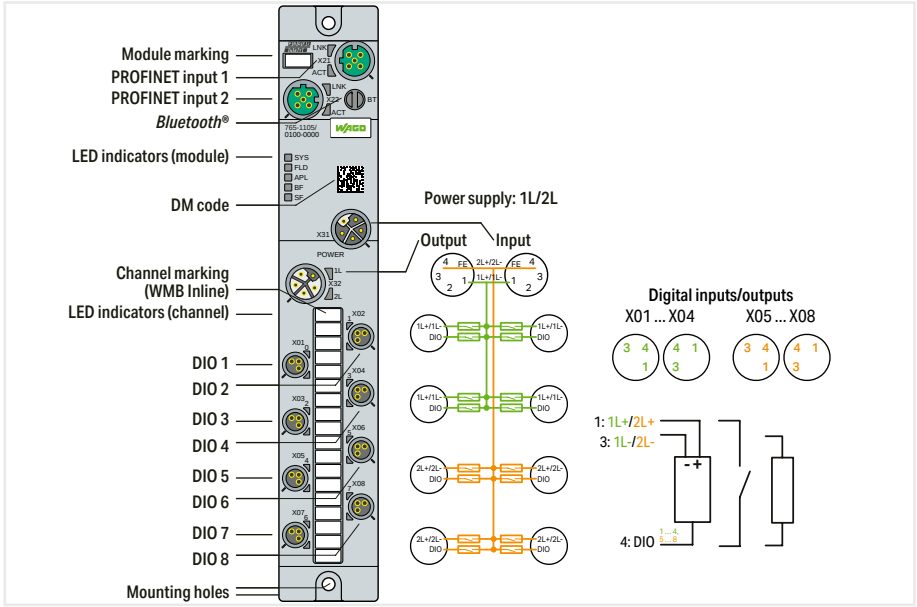


Item description	8-Channel Digital Input/Output; I/O System Field; 24 VDC; 4 x M12 connector		
Version	PROFINET slave	EtherCAT® slave	EtherNet/IP™ slave
Item no.	765-1104/100-000	765-1204/100-000	765-1504/100-000
Order Text	8DIO FLD PN DC 24V	8DIO FLD EC DC 24V	8DIO FLD EI DC 24V
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
Digital inputs/outputs			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 … 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L/2L: 4 A (max.)		
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 … 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 … +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-1104/100-000	wago.com/765-1204/100-000	wago.com/765-1504/100-000
Accessories	**Item no.**	**Item no.**	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

Fieldbus module ▶ 8-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M8 connector



765-1105/100-000



Item description	8-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M8 connector		
Version	PROFINET slave	EtherCAT® slave	EtherNet/IP™ slave
Item no.	**765-1105/100-000**	**765-1205/100-000**	**765-1505/100-000**
Order Text	**8DIO FLD PN DC 24V**	**8DIO FLD EC DC 24V**	**8DIO FLD EI DC 24V**

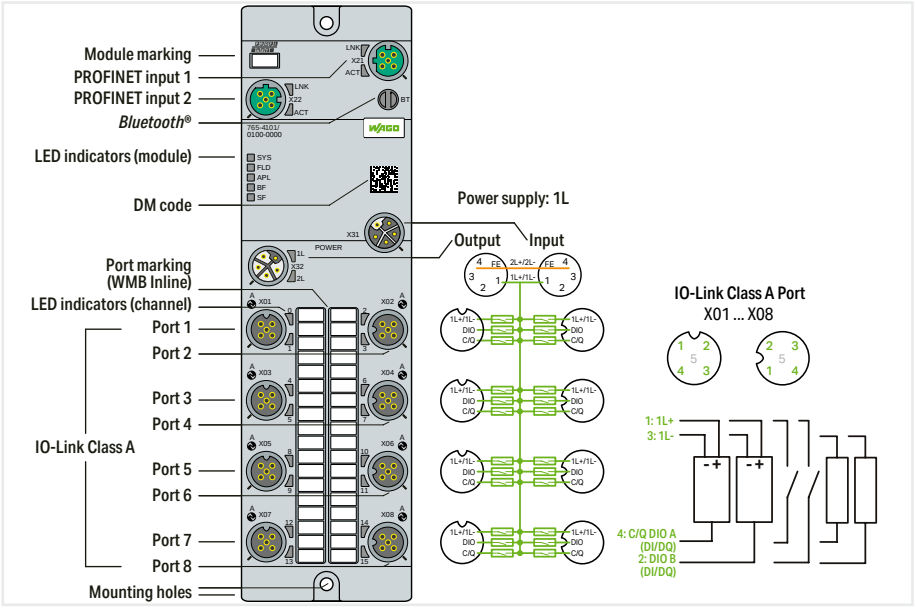
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
Digital inputs/outputs			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	8 x M8; 3-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L/2L: 4 A (max.)		
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-1105/100-000	wago.com/765-1205/100-000	wago.com/765-1505/100-000

Accessories	**Item no.**	**Item no.**	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M8 protective cap; for unused sockets	756-8101	756-8101	756-8101
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

IO-Link master ▶ 8-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector



765-4101/100-000

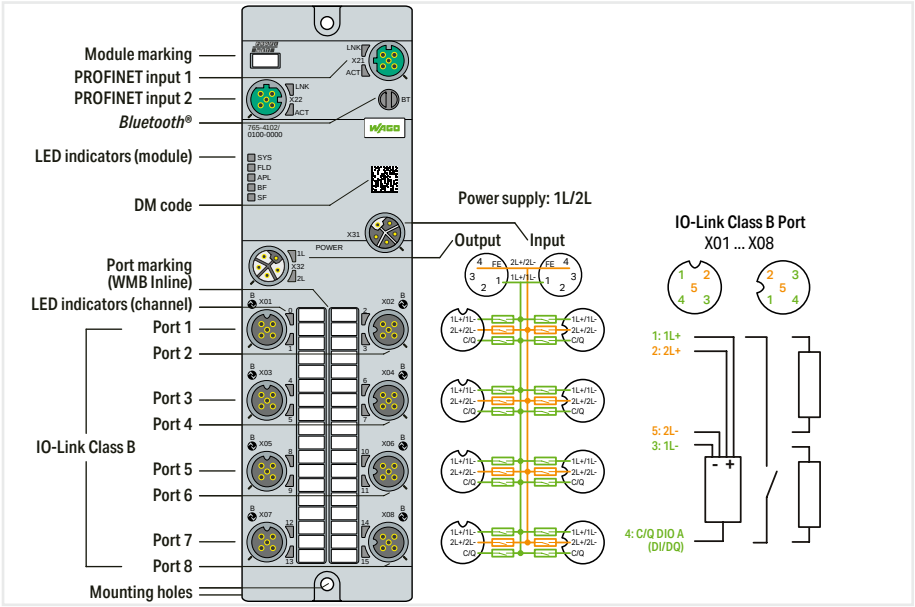


Item description	8-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item no.	765-4101/100-000	765-4201/100-000	765-4501/100-000
Order Text	8PORT IOL-A FLD PN DC 24V 2.0A	8PORT IOL-A FLD EC DC 24V 2.0A	8PORT IOL-A FLD EI DC 24V 2.0A
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
IO-Link master			
IO-Link master classification	Class A; V1.1 specification		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link master, DI or DO (adjustable for pin 4 per port); DI or DO (adjustable for pin 2 per port)		
IO-Link ports			
Number of digital inputs	16		
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L: 1 A for IO-Link; 4 A (max.) for DIO		
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	OrdLoc		
For data sheet and additional information, see:	wago.com/765-4101/100-000	wago.com/765-4201/100-000	wago.com/765-4501/100-000
Accessories	**Item no.**	**Item no.**	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

IO-Link master ▶ 8-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector



765-4102/100-000

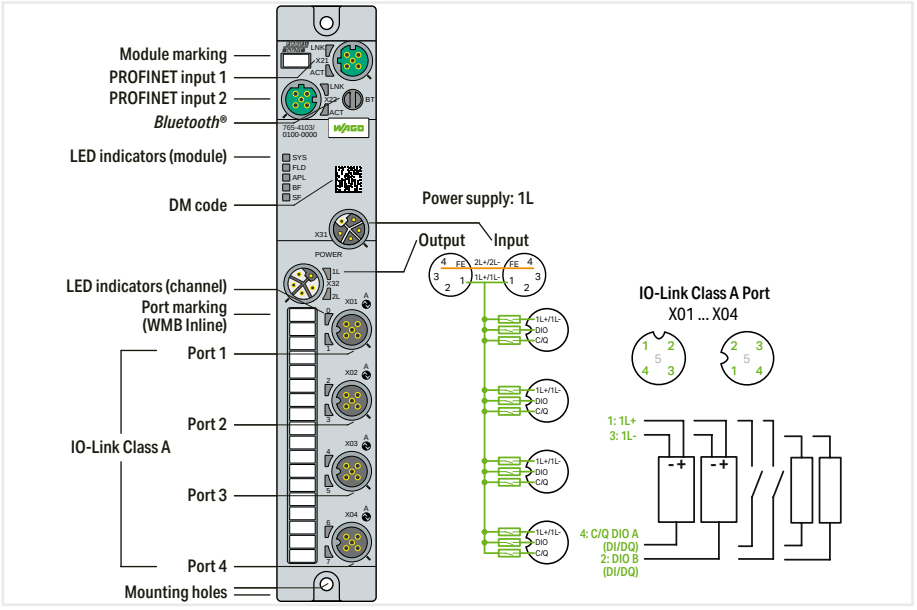


Item description	8-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item no.	765-4102/100-000	765-4202/100-000	765-4502/100-000
Order Text	8PORT IOL-B FLD PN DC 24V 2.0A	8PORT IOL-B FLD EC DC 24V 2.0A	8PORT IOL-B FLD EI DC 24V 2.0A
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
IO-Link master			
IO-Link master classification	Class B; V1.1 specification		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link master, DI or DO (adjustable for pin 4 per port); Supply voltage 2L (fixed for pin 2 per port)		
IO-Link ports			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L (pin 1): 1 A for IO-Link; 4 A (max.) for DIO; 2L (pin 2): 4 A (max.)	1L (Pin 1): 1 A for IO-Link; 4 A (max.) for DIO; 2L (Pin 2): 4 A (max.)	
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-4102/100-000	wago.com/765-4202/100-000	wago.com/765-4502/100-000
Accessories	**Item no.**	**Item no.**	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

IO-Link master ▶ 4-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector



765-4103/100-000

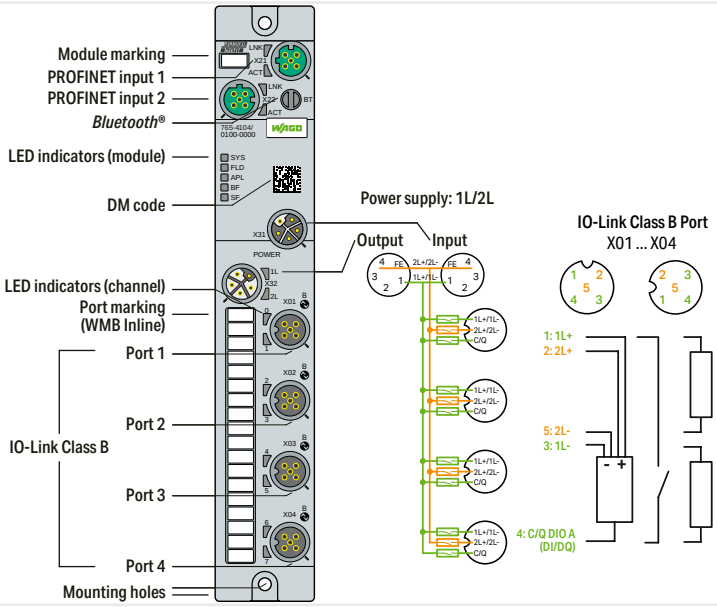


Item description	4-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item no.	765-4103/100-000	765-4203/100-000	765-4503/100-000
Order Text	4PORT IOL-A FLD PN DC 24V 2.0A	4PORT IOL-A FLD EC DC 24V 2.0A	4PORT IOL-A FLD EI DC 24V 2.0A
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
IO-Link master			
IO-Link master classification	Class A; V1.1 specification		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link master, DI or DO (adjustable for pin 4 per port); DI or DO (adjustable for pin 2 per port)		
IO-Link ports			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L: 1 A for IO-Link; 4 A (max.) for DIO		
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-4103/100-000	wago.com/765-4203/100-000	wago.com/765-4503/100-000
Accessories	**Item no.**	**Item no.**	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

IO-Link master ▶ 4-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector



765-4104/100-000

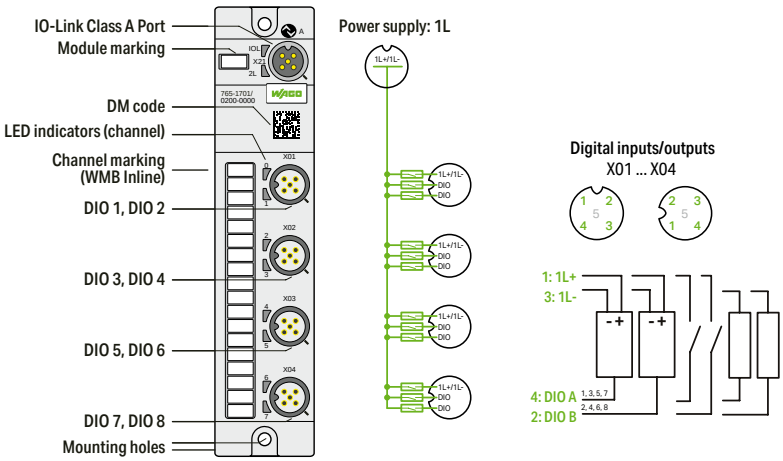


Item description	4-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item no.	765-4104/100-000	765-4204/100-000	765-4504/100-000
Order Text	4PORT IOL-B FLD PN DC 24V 2.0A	4PORT IOL-B FLD EC DC 24V 2.0A	4PORT IOL-B FLD EI DC 24V 2.0A
Technical data			
Fieldbus			
Communication	PROFINET; PROFINET IO device; 2-port switch, LLDP, MRP, SNMP	EtherCAT®; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device functions			
Parameter	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA server		
Visualization	Android/iOS app; Web server		
IO-Link master			
IO-Link master classification	Class B; V1.1 specification		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link master, DI or DO (adjustable for pin 4 per port); Supply voltage 2L (fixed for pin 2 per port)		
IO-Link ports			
Number of digital inputs	4		
Number of digital outputs	4		
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole		
Signal type (voltage)	24 VDC		
Input characteristic	high-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L (pin 1): 1 A for IO-Link; 4 A (max.) for DIO; 2L (pin 2): 4 A (max.)	1L (Pin 1): 1 A for IO-Link; 4 A (max.) for DIO; 2L (Pin 2): 4 A (max.)	
Supply (module)			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Current consumption (max.)	16000 mA		
Current consumption (note)	per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Ambient temperature (operation)	-25 ... +70 °C		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
For data sheet and additional information, see:	wago.com/765-4104/100-000	wago.com/765-4204/100-000	wago.com/765-4504/100-000
Accessories	**Item no.**	**Item no.**	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115	2009-115	2009-115

IO-Link hub ▶ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 4 x M12 Connector



765-1701/200-000



Item description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 4 x M12 Connector
Version	IO-Link hub (class A)
Item no.	**765-1701/200-000**
Order Text	**8DIO FLD IOL-A HUB DC 24V 2.0A**

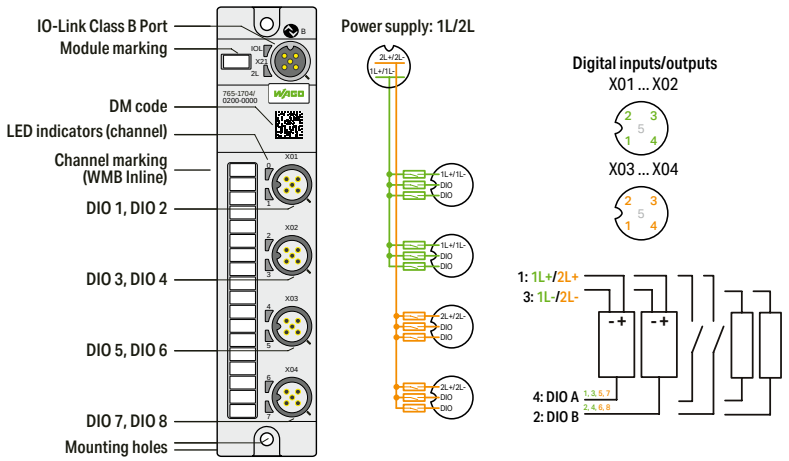
Technical data	
IO-Link	
Communication	IO-Link slave (class A)
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device functions	
Parameter	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital inputs/outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole
Signal type (voltage)	24 VDC
Input characteristic	high-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L
Current consumption (max.)	4000 mA
Current consumption (note)	1L: 0.2 A + load current
Reverse voltage protection	Yes
Ambient temperature (operation)	-25 ... +70 °C
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
For data sheet and additional information, see:	wago.com/765-1701/200-000

Accessories	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115

IO-Link hub ▶ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 4 x M12 Connector



765-1704/200-000



Item description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 4 x M12 Connector
Version	IO-Link hub (class B)
Item no.	**765-1704/200-000**
Order Text	**8DIO FLD IOL-B HUB DC 24V 2.0A**

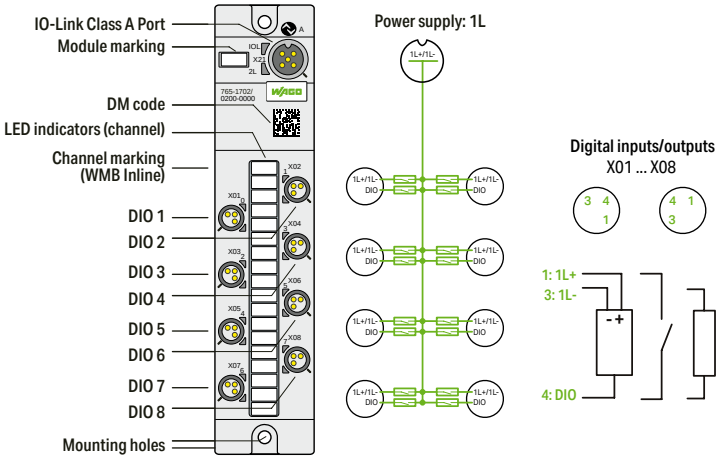
Technical data	
IO-Link	
Communication	IO-Link slave (class B)
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device functions	
Parameter	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital inputs/outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole
Signal type (voltage)	24 VDC
Input characteristic	high-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L/2L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L
Current consumption (max.)	4000 mA
Current consumption (note)	1L: 0.2 A; 2L: 0.1 A; + load current
Reverse voltage protection	Yes
Ambient temperature (operation)	-25 ... +70 °C
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
For data sheet and additional information, see:	wago.com/765-1704/200-000

Accessories	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115

IO-Link hub ► 8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M8 Connector



765-1702/200-000



Item description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M8 Connector
Version	IO-Link hub (class B)
Item no.	**765-1702/200-000**
Order Text	**8DIO FLD IOL-A HUB DC 24V 2.0A**

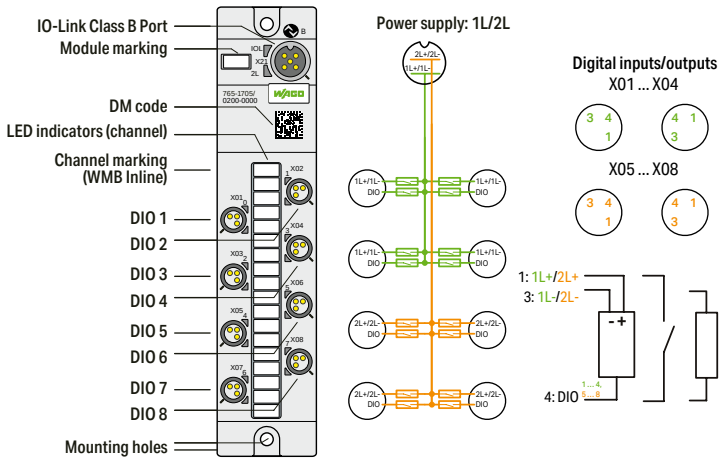
Technical data	
IO-Link	
Communication	IO-Link slave (class A)
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device functions	
Parameter	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital inputs/outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	8 x M8; 3-pole
Signal type (voltage)	24 VDC
Input characteristic	high-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L
Current consumption (max.)	4000 mA
Current consumption (note)	1L: 0.2 A + load current
Reverse voltage protection	Yes
Ambient temperature (operation)	-25 ... +70 °C
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
For data sheet and additional information, see:	wago.com/765-1702/200-000

Accessories	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701
M8 protective cap; for unused sockets	756-8101
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115

IO-Link hub ▶ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M8 Connector



765-1705/200-000



Item description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M8 Connector
Version	IO-Link hub (class A)
Item no.	**765-1705/200-000**
Order Text	**8DIO FLD IOL-B HUB DC 24V 2.0A**

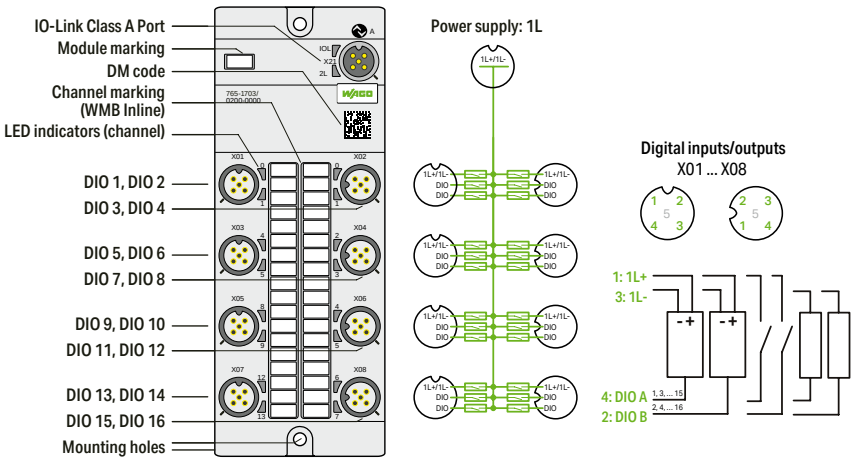
Technical data	
IO-Link	
Communication	IO-Link slave (class B)
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device functions	
Parameter	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital inputs/outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	8 x M8; 3-pole
Signal type (voltage)	24 VDC
Input characteristic	high-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L/2L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L
Current consumption (max.)	4000 mA
Current consumption (note)	1L: 0.2 A; 2L: 0.1 A; + load current
Reverse voltage protection	Yes
Ambient temperature (operation)	-25 ... +70 °C
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
For data sheet and additional information, see:	wago.com/765-1705/200-000

Accessories	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701
M8 protective cap; for unused sockets	756-8101
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115

IO-Link hub ► 16-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M12 Connector



765-1703/200-000



Item description	16-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M12 Connector
Version	IO-Link hub (class A)
Item no.	**765-1703/200-000**
Order Text	**16DIO FLD IOL-A HUB DC 24V 2.0A**

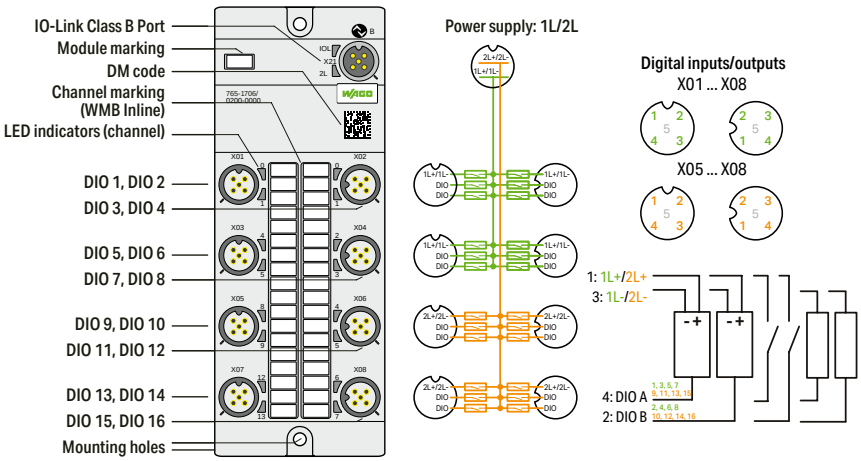
Technical data	
IO-Link	
Communication	IO-Link slave (class A)
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device functions	
Parameter	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital inputs/outputs	
Number of digital inputs	16
Number of digital outputs	16
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole
Signal type (voltage)	24 VDC
Input characteristic	high-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L
Current consumption (max.)	4000 mA
Current consumption (note)	1L: 0.2 A + load current
Reverse voltage protection	Yes
Ambient temperature (operation)	-25 ... +70 °C
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
For data sheet and additional information, see:	wago.com/765-1703/200-000

Accessories	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115

IO-Link hub ▶ 16-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M12 Connector



765-1706/200-000



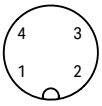
Item description	16-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M12 Connector
Version	IO-Link hub (class B)
Item no.	**765-1706/200-000**
Order Text	**16DIO FLD IOL-B HUB DC 24V 2.0A**

Technical data	
IO-Link	
Communication	IO-Link slave (class B)
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device functions	
Parameter	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital inputs/outputs	
Number of digital inputs	16
Number of digital outputs	16
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole
Signal type (voltage)	24 VDC
Input characteristic	high-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L/2L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L
Current consumption (max.)	4000 mA
Current consumption (note)	1L: 0.2 A; 2L: 0.1 A; + load current
Reverse voltage protection	Yes
Ambient temperature (operation)	-25 ... +70 °C
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
For data sheet and additional information, see:	wago.com/765-1706/200-000

Accessories	**Item no.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115

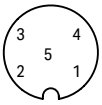
1-Channel Analog Input; IO-Link Converter; 4 … 20 mA





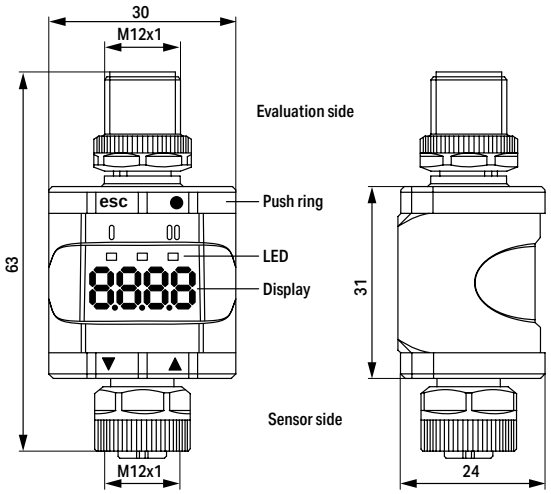
M12-A plug; 4-pole

1: 24 VDC: Supply 1L+
2: OUT2: Analog output
3: 0 V: Supply 1L-
4: OUT1: Digital output (SIO)/IO-Link



M12-A socket; 5-pole

1: Sensor supply 1L+
2: Analog input (4 … 20 mA)
3: Sensor supply 1L-
4: not used
5: not used



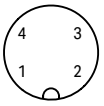
Item Description	**1-Channel Analog Input; IO-Link Converter; 4 … 20 mA**
Item No.	765-2701/200-000
Order Text	1AI FLD IOL CONV 4-20mA

Technical Data	
Supply voltage	24 VDC; −25 … +25 %; (18 … 30 VDC)
Current consumption	30 … 830 mA
Operation modes	SIO; IO-Link
Inputs	
Number of analog inputs	1
Connection technology	M12-A socket; 5-pole
Signal type (current)	4 … 20 mA
Sensor supply	24 VDC
Sensor current	≤ 800 mA
Accuracy	0.5 % of the upper-range value
Outputs	
Digital output (OUT 1)	
Number of digital outputs	1
Connection technology	M12-A plug; 4-pole
Current carrying capacity per output	50 mA
Signal type (voltage)	10 … 30 VDC
Output circuit design	Make/break contact; parameterizable
Analog output (OUT 2)	
Number of analog outputs	1
Signal type (current)	4 … 20 mA
Accuracy	0.5 % of the upper-range value
Resolution	10 bits
IO-Link	
Communication interface	IO-Link Class A
Transmission type	COM2 (38.4 kBaud)
IO-Link revision	1.1
Process data	1 x 16-bit IN (analog); 1 x 16-bit IN (digital)
Process cycle time (min.)	3 ms
Parameters via IO-Link	Operating mode, switching point, delay, scaling, etc.
Indicators	Digital output: 1 x yellow LED; Power: 1 x green LED; Display: 7-segment red/green LED
Length of connection cables	30 m without IO-Link on each side; 20 m with IO-Link on the master side
Dimensions	63 x 30 x 24 mm
Ambient temperature (operation)	−20 … +60 °C
Ambient temperature (storage)	−25 … 70 °C
Protection type	IP67
Relative humidity (without condensation)	90 % (max.)
Approvals	CE, UL, IO-Link, MTTF (373 years)
For data sheet and additional information, see:	wago.com/765-2701/200-000

Accessories	Item No.
Mounting Clip	765-101/000-000

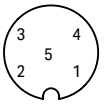
2-Channel Analog Input; IO-Link Converter; 0 … 10 V





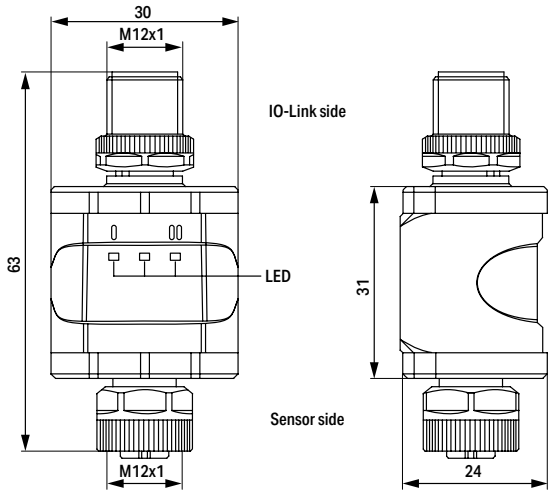
M12-A plug; 4-pole

1: 24 VDC: Supply 1L+
2: not used
3: 0 V: Supply 1L-
4: C/Q IO-Link



M12-A socket; 5-pole

1: Sensor supply 1L+
2: Analog input 2 (0 … 10 V)
3: Sensor supply 1L-
4: Analog input 1 (0 … 10 V)
5: not used

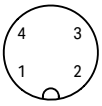


Item Description	**2-Channel Analog Input; IO-Link Converter; 0 … 10 V**
Item No.	765-2702/200-000
Order Text	2AI FLD IOL CONV 0-10V

Technical Data	
Supply voltage	24 VDC; −25 … +25 %; (18 … 30 VDC)
Current consumption	< 380 mA
Inputs	
Number of analog inputs	2
Connection technology	M12-A socket; 5-pole
Signal type (voltage)	0 … 10 V
Current carrying capacity for all inputs	200 mA (max.)
Input resistance	> 100 kΩ
Accuracy	0.25 % of the upper-range value
IO-Link	
Communication interface	IO-Link Class A/B
Transmission type	COM2 (38.4 kBaud)
IO-Link revision	1.1
Process data	2 x 16-bit IN (analog)
Process cycle time (min.)	4.6 ms
Parameters via IO-Link	Description, system identifier, location identifier, mean value filter
Indicators	Analog input: 2 x yellow LED; Power: 1 x green LED
Length of connection cables	20 m
Dimensions	63 x 30 x 24 mm
Ambient temperature (operation)	−20 … +60 °C
Ambient temperature (storage)	−25 … 70 °C
Protection type	IP67
Relative humidity (without condensation)	90 % (max.)
Approvals	CE, UL, IO-Link, MTTF (504 years)
For data sheet and additional information, see:	wago.com/765-2702/200-000
Accessories	**Item No.**
Mounting Clip	765-101/000-000

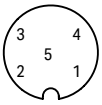
2-Channel Analog Output; IO-Link Converter; 4 … 20 mA





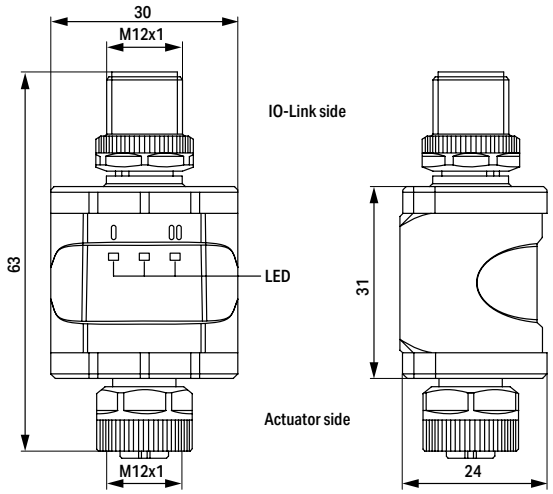
M12-A plug; 4-pole

1: 24 VDC: Supply 1L+
2: not used
3: 0 V: Supply 1L-
4: C/Q IO-Link



M12-A socket; 5-pole

1: Actuator supply 1L+
2: Analog output 2 (4 … 20 mA)
3: Actuator supply 1L-
4: Analog output 1 (4 … 20 mA)
5: not used

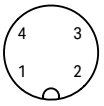


Item Description	**2-Channel Analog Output; IO-Link Converter; 4 … 20 mA**
Item No.	765-2703/200-000
Order Text	2AO FLD IOL CONV 4-20mA

Technical Data	
Supply voltage	24 VDC; −25 … +25 %; (18 … 30 VDC)
Current consumption	300 mA
Current carrying capacity (module)	0.2 A
Operation modes	IO-Link
Outputs	
Number of analog outputs	2
Connection technology	M12-A socket; 5-pole
Signal type (current)	4 … 20 mA
Load impedance	≤ 300 Ω
Accuracy	0.25 % of output range end value
IO-Link	
Communication interface	IO-Link Class A/B
Transmission type	COM2 (38.4 kBaud)
IO-Link revision	1.1
Process data	2 x 16-bit OUT (analog)
Process cycle time (min.)	3.6 ms
Parameters via IO-Link	Description
Indicators	Analog output: 2 x yellow LED; Power: 1 x green LED
Length of connection cables	20 m
Dimensions	63 x 30 x 24 mm
Ambient temperature (operation)	−20 … +60 °C
Ambient temperature (storage)	−25 … 70 °C
Protection type	IP67
Relative humidity (without condensation)	90 % (max.)
Approvals	CE, UL, IO-Link, MTTF (352 years)
For data sheet and additional information, see:	wago.com/765-2703/200-000
Accessories	**Item No.**
Mounting Clip	765-101/000-000

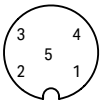
2-Channel Analog Output; IO-Link Converter; 0 … 10 V





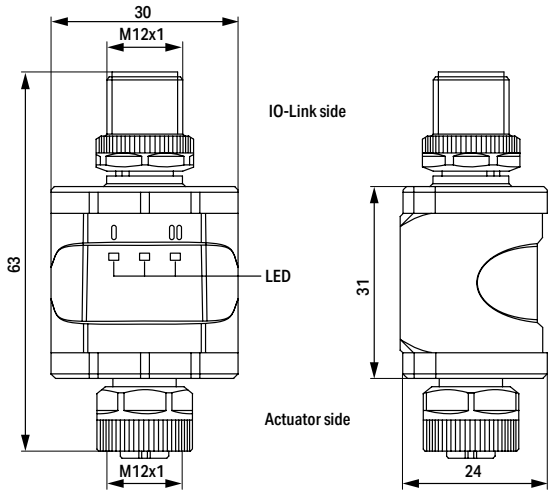
M12-A plug; 4-pole

1: 24 VDC: Supply 1L+
2: not used
3: 0 V: Supply 1L-
4: C/Q IO-Link



M12-A socket; 5-pole

1: Actuator supply 1L+
2: Analog output 2 (0 … 10 V)
3: Actuator supply 1L-
4: Analog output 1 (0 … 10 V)
5: not used



Item Description	**2-Channel Analog Output; IO-Link Converter; 0 … 10 V**
Item No.	765-2704/200-000
Order Text	2AO FLD IOL CONV 0-10V

Technical Data	
Supply voltage	24 VDC; −25 … +25 %; (18 … 30 VDC)
Current consumption	300 mA
Current carrying capacity (module)	0.2 A
Operation modes	IO-Link
Outputs	
Number of analog outputs	2
Connection technology	M12-A socket; 5-pole
Signal type (voltage)	0 … 10 V
Load impedance	≤ 3000 Ω
Accuracy	0.25 % of output range end value
IO-Link	
Communication interface	IO-Link Class A/B
Transmission type	COM2 (38.4 kBaud)
IO-Link revision	1.1
Process data	2 x 16-bit OUT (analog)
Process cycle time (min.)	3.6 ms
Parameters via IO-Link	Description, system identifier, location identifier
Indicators	Analog output: 2 x yellow LED; Power: 1 x green LED
Length of connection cables	20 m
Dimensions	63 x 30 x 24 mm
Ambient temperature (operation)	−20 … +60 °C
Ambient temperature (storage)	−25 … 70 °C
Protection type	IP67
Relative humidity (without condensation)	90 % (max.)
Approvals	CE, UL, IO-Link, MTTF (373 years)
For data sheet and additional information, see:	wago.com/765-2704/200-000
Accessories	**Item No.**
Mounting Clip	765-101/000-000

Power Cable; L-Coded; 5-Pole

M12 socket



M12 plug

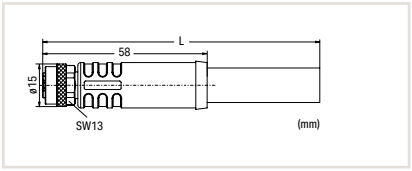


Pin 1 ... 4/FG: 1.5 mm²

1	brown
2	white
3	blue
4	black
FG	gray

Operating voltage	60 VDC
Operating current	16 A / 40 °C (max.)
Surrounding air temperature (operation)	–30 ... +90 °C
Protection type	IP67
Cable diameter	9.9 mm ±0.3

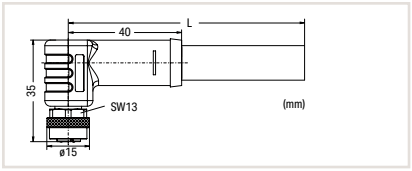




Power cable; pre-assembled on one end; M12 straight socket; L-coded

Cable length	Item No.	PU
2 m	756-3501/050-020	1
5 m	756-3501/050-050	1
7.5 m	756-3501/050-075	1
10 m	756-3501/050-100	1
15 m	756-3501/050-150	1

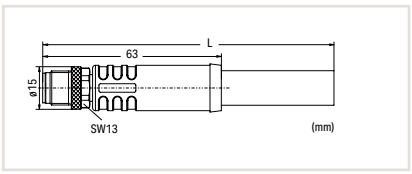




Power cable; pre-assembled on one end; M12 angled socket; L-coded

Cable length	Item No.	PU
2 m	756-3502/050-020	1
5 m	756-3502/050-050	1
7.5 m	756-3502/050-075	1
10 m	756-3502/050-100	1
15 m	756-3502/050-150	1

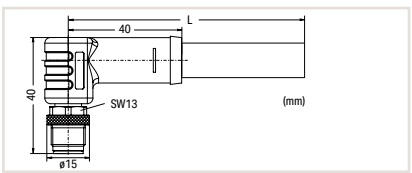




Power cable; pre-assembled on one end; M12 straight plug; L-coded

Cable length	Item No.	PU
2 m	756-3503/050-020	1
5 m	756-3503/050-050	1
7.5 m	756-3503/050-075	1
10 m	756-3503/050-100	1
15 m	756-3503/050-150	1

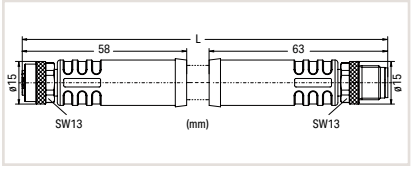




Power cable; pre-assembled on one end; M12 angled plug; L-coded

Cable length	Item No.	PU
2 m	756-3504/050-020	1
5 m	756-3504/050-050	1
7.5 m	756-3504/050-075	1
10 m	756-3504/050-100	1
15 m	756-3504/050-150	1

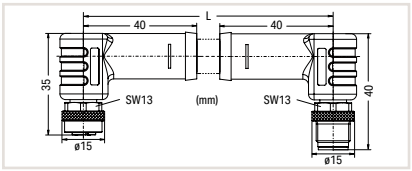




Power cable; pre-assembled on both ends; M12 straight socket/M12 straight plug; L-coded

Cable length	Item No.	PU
0.3 m	756-3505/050-003	1
0.5 m	756-3505/050-005	1
1 m	756-3505/050-010	1
2 m	756-3505/050-020	1
5 m	756-3505/050-050	1
7.5 m	756-3505/050-075	1
10 m	756-3505/050-100	1
15 m	756-3505/050-150	1





Power cable; pre-assembled on both ends; M12 angled socket/M12 angled plug; L-coded

Cable length	Item No.	PU
0.3 m	756-3506/050-003	1
0.5 m	756-3506/050-005	1
1 m	756-3506/050-010	1
2 m	756-3506/050-020	1
5 m	756-3506/050-050	1
7.5 m	756-3506/050-075	1
10 m	756-3506/050-100	1
15 m	756-3506/050-150	1

ETHERNET/PROFINET Cable; D-Coded; 4-Pole

M12 plug

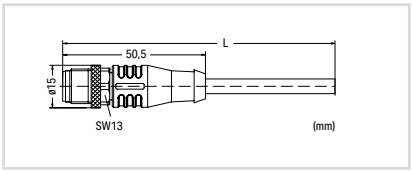


Pin 1 - 4: 0.34 mm²

1	yellow
2	white
3	orange
4	blue

Operating voltage	250 V
Operating current	4 A
Rated surge voltage	2 kV
Drag chain suitability	≥ 3 million bending cycles
Surrounding air (operating) temperature (dynamic)	–40 … +70 °C
Protection type	IP67
Cable diameter	6.5 mm ±0.2

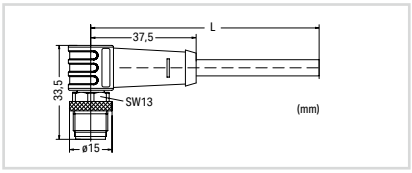




ETHERNET/PROFINET cable; pre-assembled on one end; M12 straight plug; D-coded

Cable length	Item No.	PU
2 m	756-1201/060-020	1
5 m	756-1201/060-050	1
10 m	756-1201/060-100	1
20 m	756-1201/060-200	1

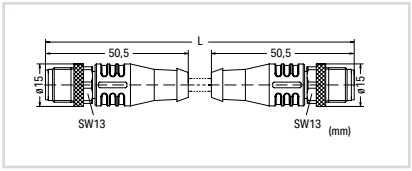




ETHERNET/PROFINET cable; pre-assembled on one end; M12 angled plug; D-coded

Cable length	Item No.	PU
2 m	756-1202/060-020	1
5 m	756-1202/060-050	1
10 m	756-1202/060-100	1
15 m	756-1202/060-200	1

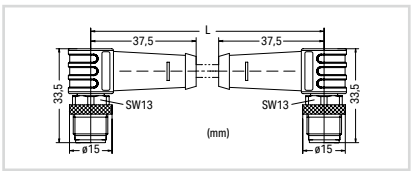




ETHERNET/PROFINET cable; pre-assembled on both ends; M12 plug – M12 plug; straight; D-coded

Cable length	Item No.	PU
2 m	756-1203/060-020	1
5 m	756-1203/060-050	1
10 m	756-1203/060-100	1
20 m	756-1203/060-200	1





ETHERNET/PROFINET cable; pre-assembled on both ends; M12 plug – M12 plug; angled; D-coded

Cable length	Item No.	PU
2 m	756-1204/060-020	1
5 m	756-1204/060-050	1
10 m	756-1204/060-100	1
20 m	756-1204/060-200	1

Configurable Connector; 5-Pole; IDC Technology

M12 socket, L-coded



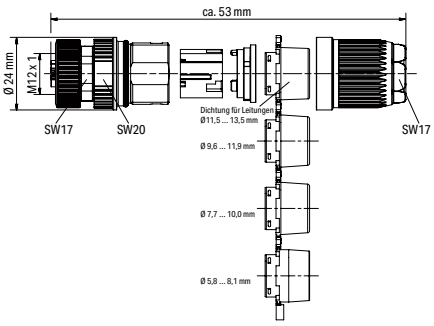
M12 plug, L-coded



Connectable cable:
Ø 5.8 … 13.5 mm
0.75 … 1.5 mm²

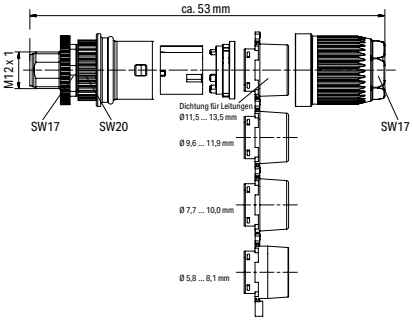
Rated current	12 A
Rated voltage	63 V
Rated surge voltage	1.5 kV
Surrounding air temperature (operation)	–40 … +85 °C
Protection type	IP65; IP67 when mated; per IEC 60529
Cable diameter	5.8 … 13.5 mm





Configurable connector; 5-pole; IDC technology		
	Item No.	PU
M12-L socket; straight	756-9711/050-000	1





Configurable connector; 5-pole; IDC technology		
	Item No.	PU
M12-L plug; straight	756-9701/050-000	1

9

Mounting Clip

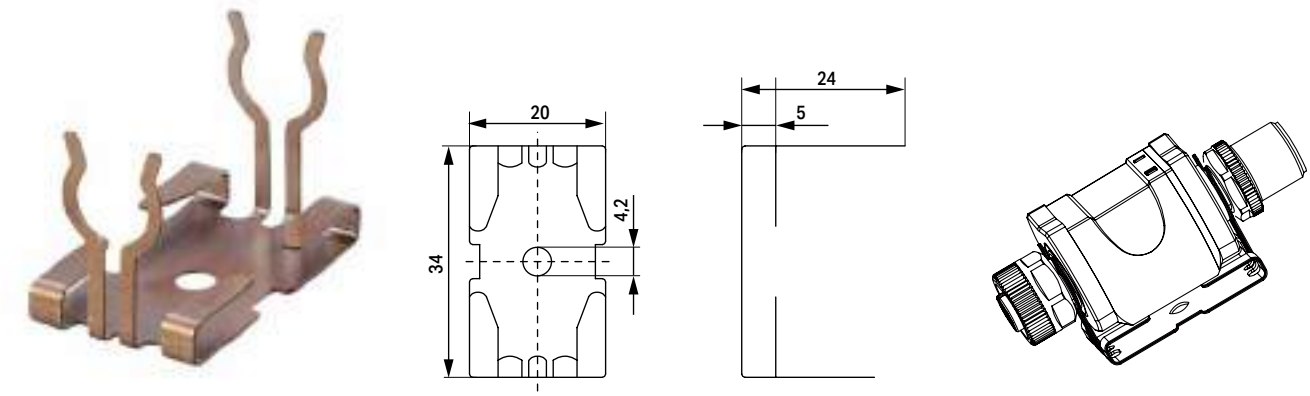


Figure: Mounting Clip (765-101/000-000)

Item Description	**Mounting Clip**
Version	**for 765-2701/200-000, 765-2702/200-000, 765-2703/200-000 and 765-2704/200-000 Converters**
Item No.	765-101/000-000

Technical Data	
Weight	6.8 g
Dimensions	34 x 20 x 24 mm
Material	Copper beryllium 2.1247 (CuBe2)



Industrial Switches

Industrial Switches

- Copper cables
- Fiber optic cables
- Ring redundancy

Industrial Switches
Contents

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General Product Information	582
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Configuration, Diagnostics and Performance	584
Security	585
Redundancy	586
Product Overview	587

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	5					852-111/000-001	589
	8					852-112	590
	8					852-112/000-001	591
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 Lean Managed	8					852-1812	602
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	6		2			852-1328	607
 Fully Managed	8		2			852-303	608
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	8			4	8	852-1505/000-001	612
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10

Industrial Switches
General Product Information

Always the Right Solution

WAGO's range of switches ensures the scalability of your ETHERNET network infrastructure, while providing outstanding electrical and mechanical performance. These rugged switches are designed for industrial use and are fully compliant with IEEE 802.3, IEEE 802.3u and IEEE 802.3ab.

Combinable with Fiber Optic Cables

ETHERNET via fiber optic cables offers a multitude of advantages for industrial applications.
High immunity to interference, electrical isolation and long ranges up to 80 km are extremely beneficial characteristics – and these benefits are a perfect fit with the IT environment.

Scaled Selection

Unmanaged and managed switches in various designs are available for high-end applications. WAGO's Eco Switches are ideal for cost-sensitive applications that do not require technical features such as redundancy. They are ideal for small- to medium-sized networks.

Modular and Expandable

Exchangeable SPF modules adapt WAGO's switches to various fiber optic cables (FOC) and the associated required distances and fibers. These SFP modules are available for multimode and single-mode fiber optic cables for ranges up to 80 km. With the exact combination of copper and fiber optic cables, you are prepared for a multitude of requirements.

Web-Based Management

WAGO's fully managed switches have integrated Web-based management. Any Web browser can be used to configure the switch.

Integrated Function Monitoring

For monitoring and error reporting, WAGO's managed switch have configurable functions such as an email alarm and SNMP traps. Additionally, all switches (except for Eco versions) can monitor individual ports or the power supply via a potential-free alarm contact. A DIP switch configures this function.

Full Bandwidth on All Ports

The WAGO Switches' internal bandwidth is designed so that all ports can communicate simultaneously – in full duplex without restrictions.

Security

WAGO's managed switches have built-in security features, such as:
- Authentication
- Access control lists
- DHCP snooping
- Port security

Data Transmission

WAGO's managed switches provide configuration options for data transmission, such as:
- VLAN
- IGMP snooping
- IP-based VLAN
- MAC-based VLAN

Redundancy

Select industrial switches have several options for building redundant network structures and guarantee secure communication – even when connections are faulty:
- Rapid Spanning Tree per IEEE 802.1w – compatible with the IT standard
- Jet Ring – a simple ring protocol with switching time < 300 ms
- Xpress Ring – a fast ring protocol with switching time < 20 ms
- ERPSv2 per ITU-T standard, switching time < 50 ms
- Media Redundancy Protocol (MRP), switching time < 200 ms

In addition to communication link redundancy, a redundant power supply – which can also be monitored using an alarm relay – is integrated into the switches. If the power supply fails, communication is not interrupted.

Different Operating Modes

The unmanaged switches are ideal for direct plug-and-play use. Managed switches are available for applications where IP filtering or further interpretation of telegrams is required for the application.

Configurable Performance

WAGO's managed switches offer performance control features, such as:
- Storm control
- Bandwidth control
- Auto-provisioning
- Link aggregation

Configuration and Diagnostics

Modbus® can be used to diagnose managed switches. Configuration and diagnostics can also be performed with standardized protocols such as SNMP.
Select products also have the "PROFINET Conformance Class B" certificate, allowing simple diagnostics and configuration in PROFINET systems.

Advantages:

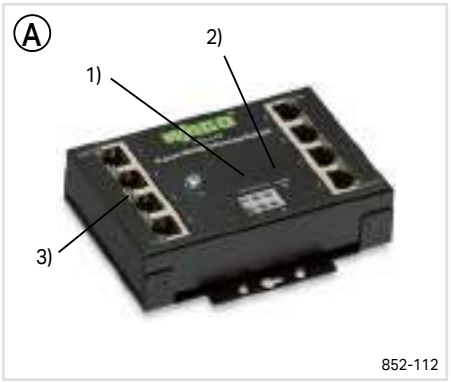
- Adaptable to different transmission media
- Automatically adapts to
  - Speed (auto-negotiation)
  - Wiring (auto-crossover, MDI/MDIX)
- Optional redundancy
- Wide supply voltage range

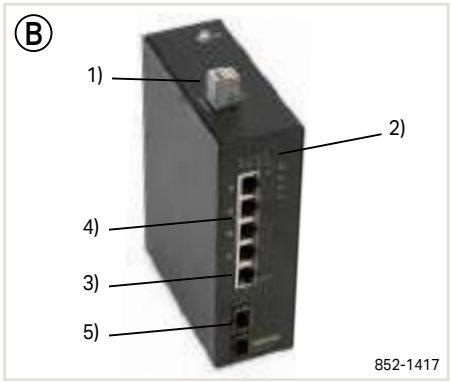
Industrial Switches
Functional Variants

Eco Unmanaged (A, B)

- Plug & play operation (Auto MDI-X)
- Megabit and gigabit variants
- Vibration and shock resistance
- DIN-rail adapter

1) Power supply
2) Status LEDs
3) Copper ports
4) Power over Ethernet (PoE+) ports
5) SFP ports for SFP modules

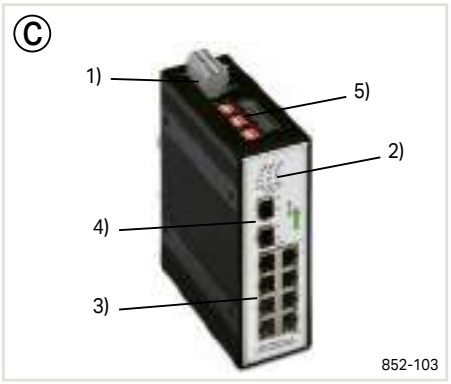


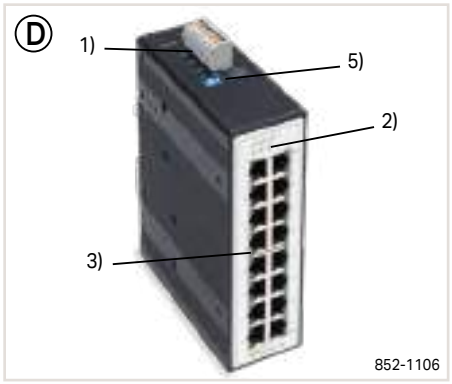


Standard Unmanaged (C, D)

- Up to 16-Gbit ports + SFP slots
- Diagnostics via LEDs and relay
- High temperature range (–40 … +70 °C)
- Redundant power supply

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) SFP ports for SFP modules
5) DIP switches for configuration

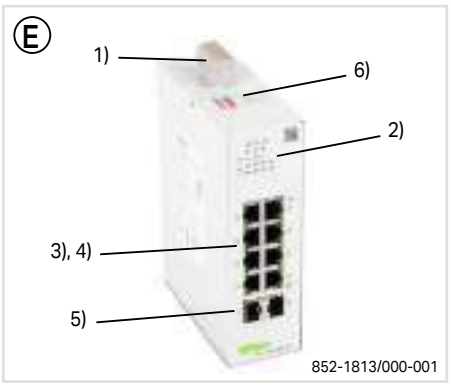


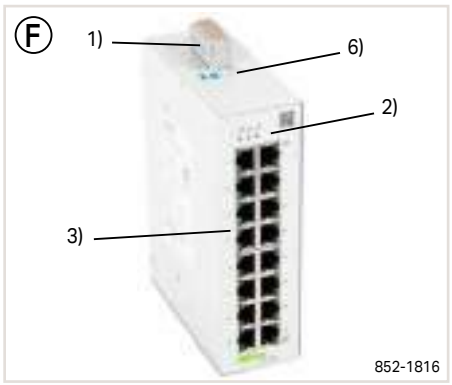


Lean Managed (E, F)

- Intuitive configuration for automation engineers
- Simple network diagnostics in the browser
- Media redundancy with RSTP/ERPS
- Network security basic functions

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) Power over Ethernet (PoE+) ports
5) SFP ports for SFP modules
6) DIP switches for configuration

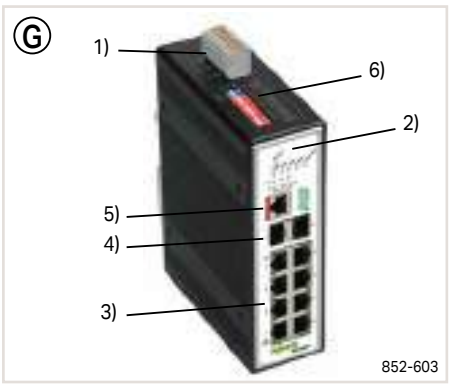


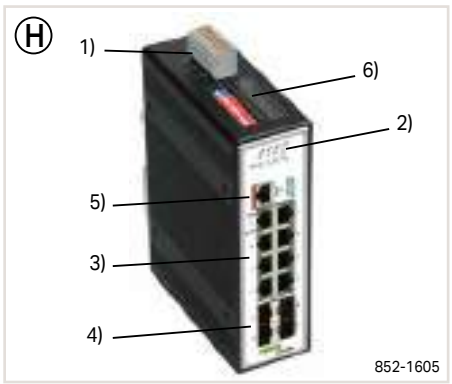


PROFINET® Managed (G, H)

- Configuration/diagnostics in the PROFINET® system
- PROFINET®-certified (CC-B)
- Cyclically readable process image
- Potential-free networking over 80 km

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) SFP ports for SFP modules
5) RS-232 port
6) DIP switches for configuration

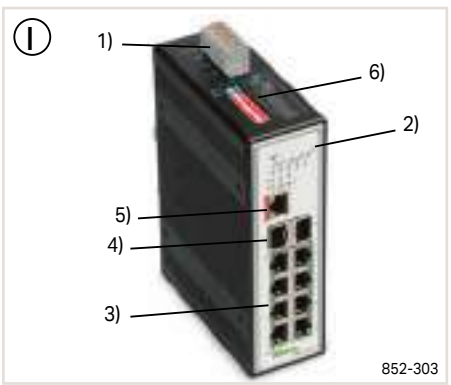


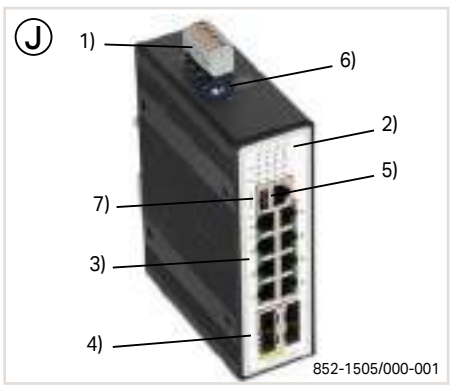


Fully Managed (I, J)

- Fast network redundancy (< 30 ms)
- Diagnostics (SNMPv3, Modbus®, Syslog, …)
- Security (SSH, VLAN, 802.1X, ACL, …)
- Extended network functions
- (Routing, IPv6, LACP, DHCP, …)

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) SFP ports for SFP modules
5) RS-232 port
6) DIP switches for configuration
7) USB interface

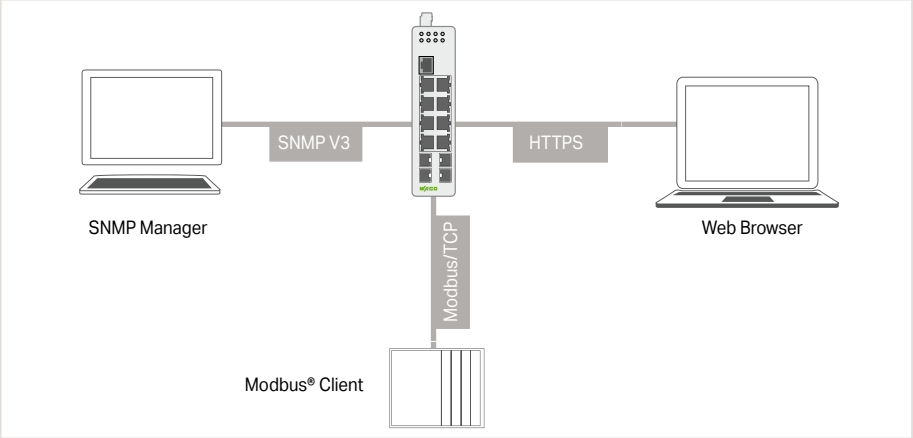




Industrial Switches
Configuration, Diagnostics and Performance

Configuration and Diagnostics

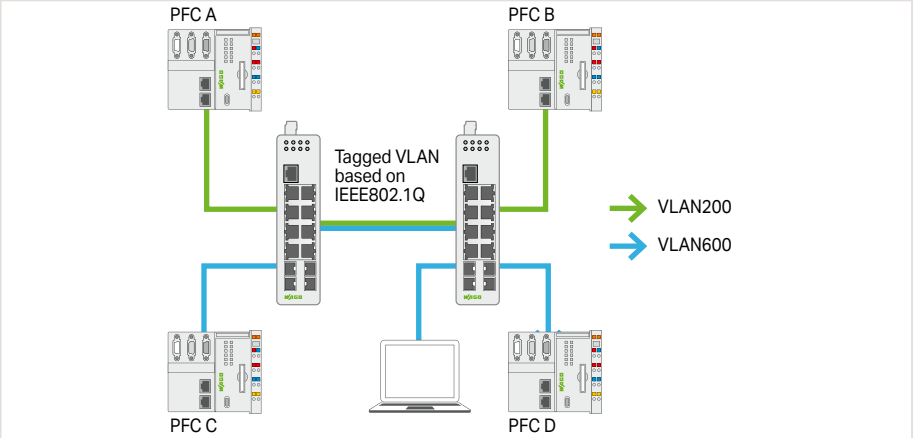
Several options:
- Configuration via Web-Based Management
- Configuration via command line (SSH, Telnet, RS-232)
- Network management via SNMP v1, v2c, v3
- Support of Management Information Base (MIB) standards
- PROFINET configuration via device description file (GSD file)
- Diagnostics via Modbus TCP: Comprehensive data available for easy diagnostics via Modbus®



Configuration interfaces

Logical Network Segmentation

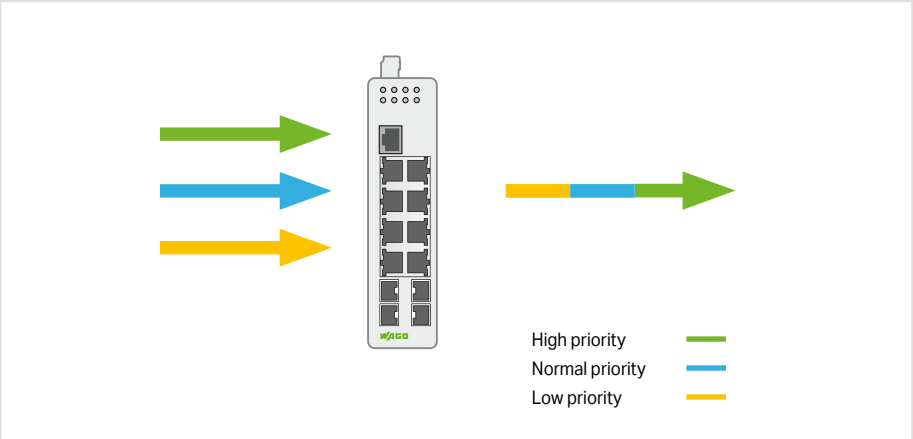
VLAN (e.g., per IEEE 802.1Q) and segmentation into virtual networks:
- Broadcast limitation
- Network security improvement
- Data flow prioritization
- Subdivision of machines and office networks



VLAN

Data Traffic Prioritization and Limitation

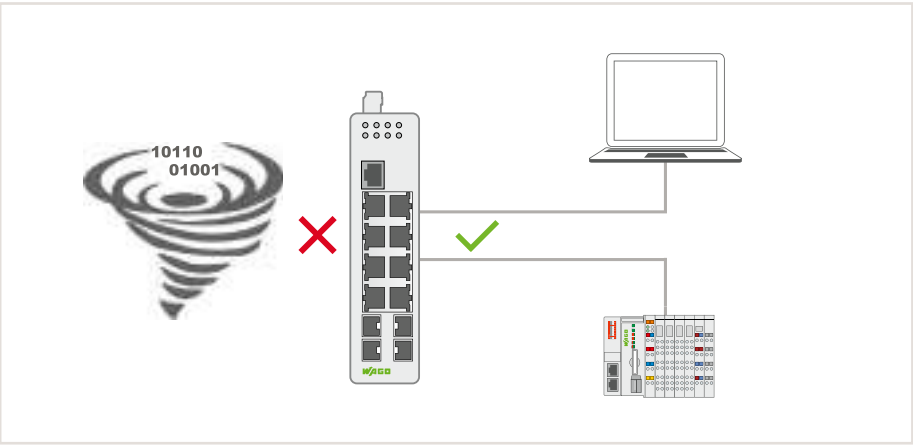
- Faster transfer of important data packets through the switch
- Prioritization of data packets per IEEE 802.1 Q
- Limitation of the bandwidth or number of packets per unit of time per port
- Increase in data transmission quality



QoS

Mastering Data Traffic

- Stopping broadcast storms
- Ensuring network availability
- Limiting broadcast and multicast data flows (packets/time)



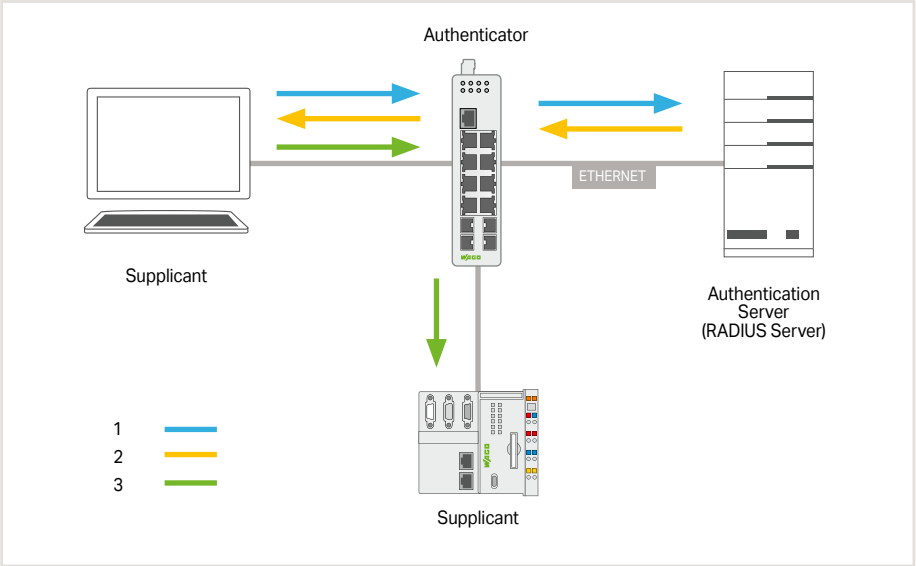
Storm Control

Industrial Switches
Security

Authentication (IEEE 802.1X)

Secure authentication and authorization in ETHERNET networks (locally on the switch or via RADIUS server)

Process:
- Authentication of a subscriber is performed by the authenticator.
- The authenticator checks the authentication information of the subscriber (supplicant) with an authentication server.

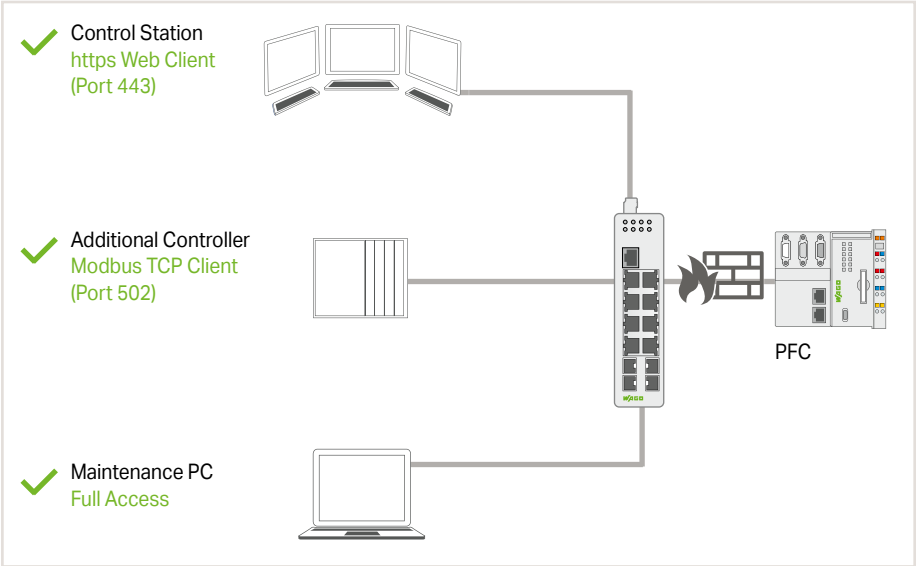


IEEE 802.1X

Firewall – Access Control List

Authorization Only for the Required Services

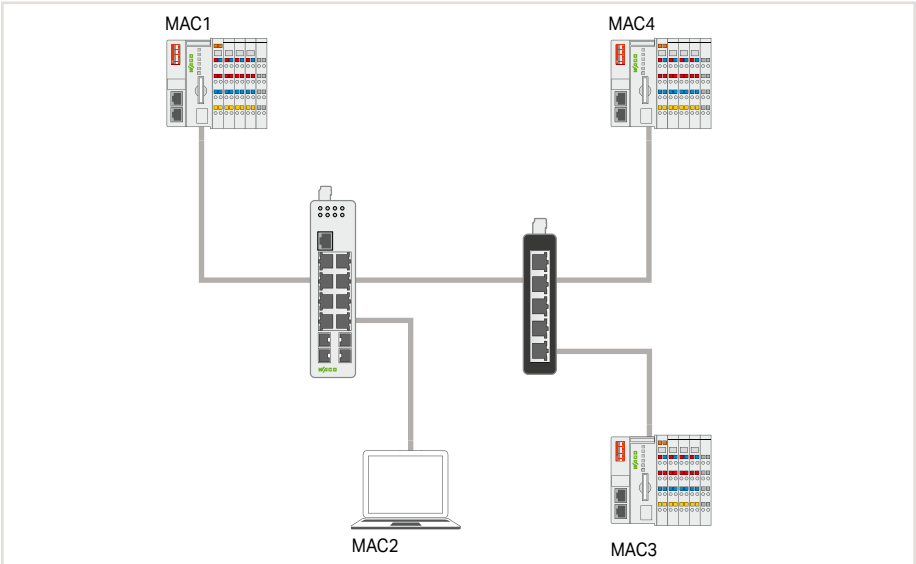
Filtering data packets via:
- Source MAC or source IP address
- Destination MAC or destination IP address
- Range of MAC or IP addresses
- UDP/TCP source or destination ports
- MAC-based white/black list for each port



Firewall

Port Security

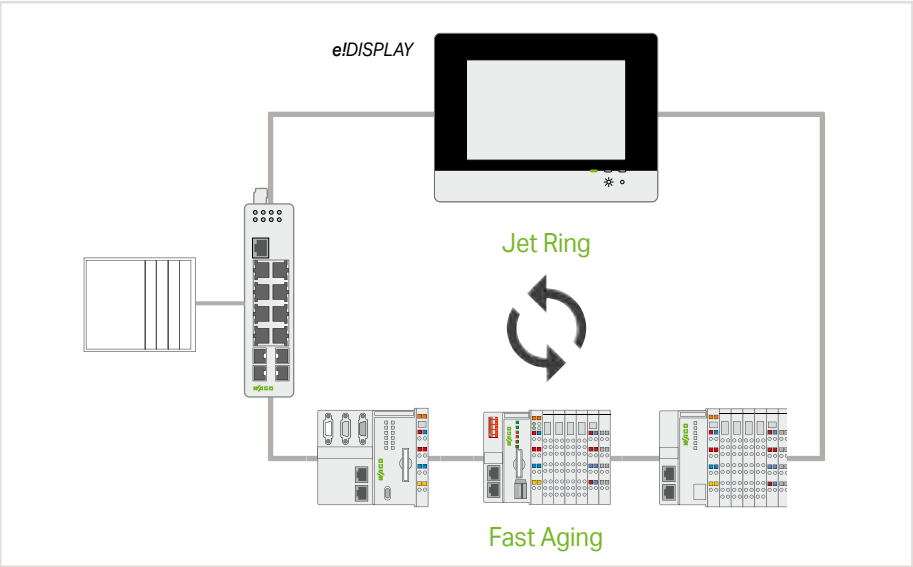
- Dynamically learns MAC addresses for each port
- Limitation of MAC addresses for each port
- MAC-based white/black list for each port



Industrial Switches
Redundancy

Jet Ring

- Typical switching time of 400 ms (depends on the application)
- Extremely easy configuration (on or off)
- Up to 20 switches in a Jet Ring
- WAGO ETHERNET devices (Fast Aging) can be used in the Jet Ring



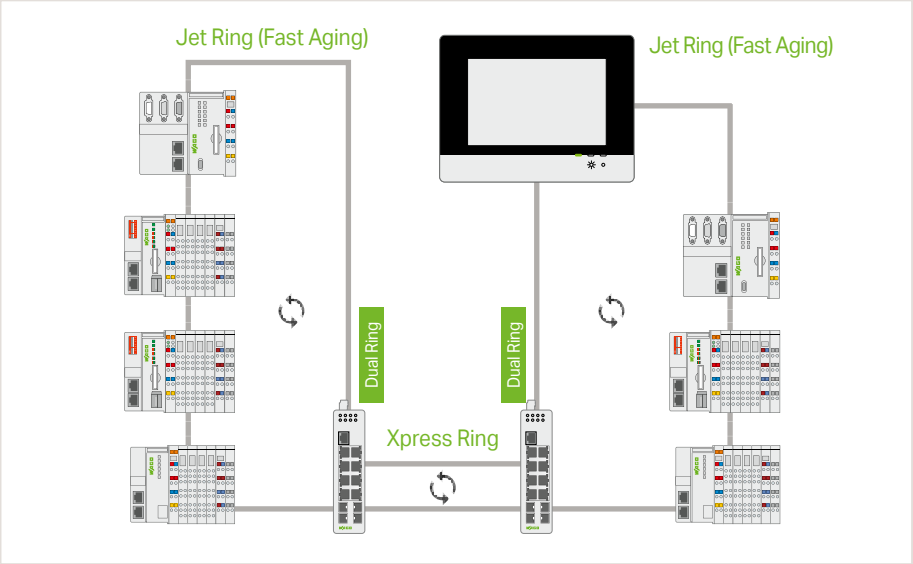
Jet Ring

Xpress Ring

- Switching time < 20 ms
- Easy configuration (3 parameters per switch)
- Up to 200 switches in one Xpress Ring
- 2 Xpress Rings per switch

Dual Ring

- Combination of both redundancy types
- 1 Jet Ring and 1 Xpress Ring per switch



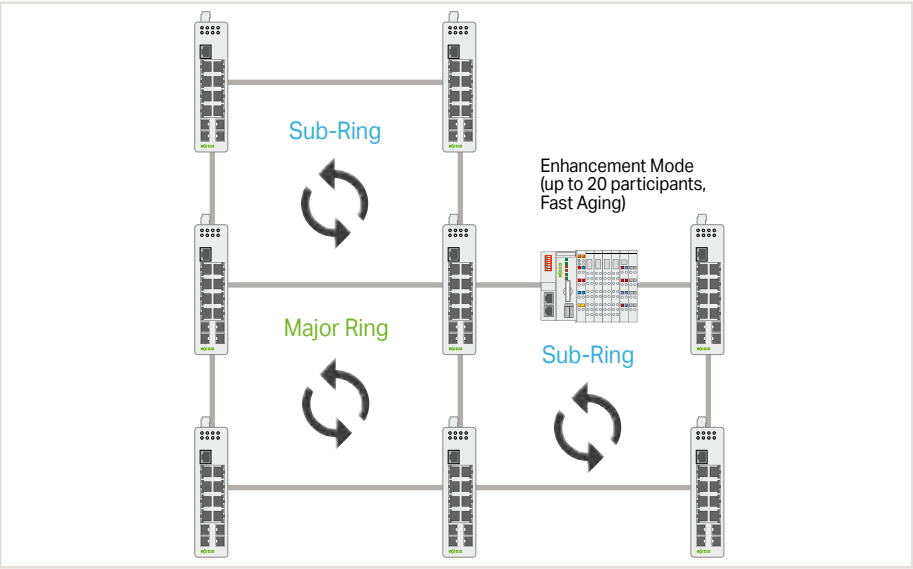
Xpress Ring and Dual Ring

ERPS: ETHERNET Ring Protection Switching

- Standardized and open technology
- Switching time < 50 ms
- Nested topologies with up to 6 rings per switch
- Implementation of one-fault tolerance (SPOF – Single Point of Failure)

ERPS – Enhancement Mode

- WAGO devices with an integrated switch and fast aging configuration
- Typical switching time of 400 ms (depends on the application)



ERPS V2

Industrial Switches
Product Overview

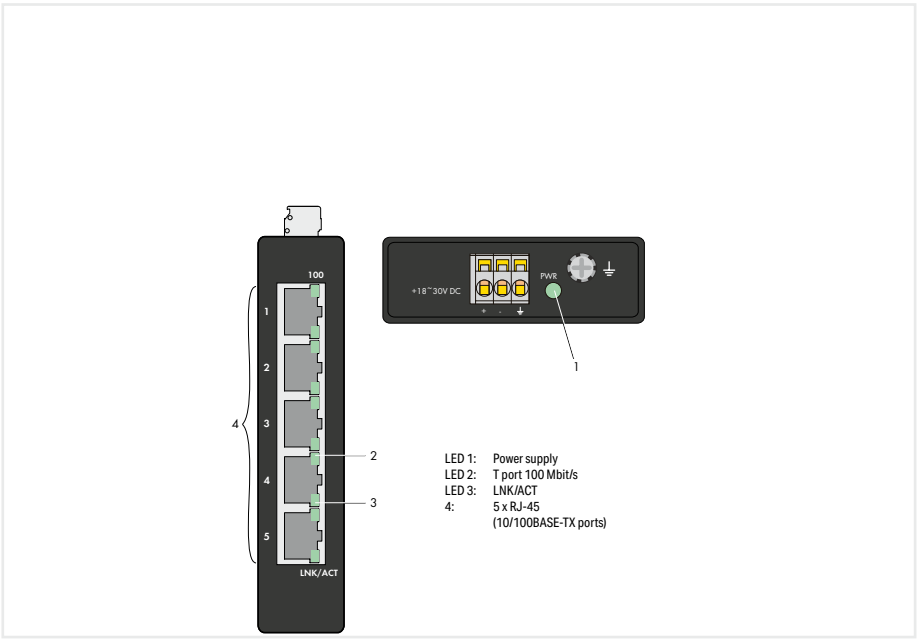
		Unmanaged											Managed												
		Eco						Standard					Lean Managed				MACsec		Fully Managed					PROFINET®		
		852-111	852-112	852-1111/000-001	852-1112	852-1411	852-1411/000-001	852-1417	852-101	852-102	852-103	852-1102	852-1106	852-1812	852-1813	852-1813/000-001	852-1816	852-1322	852-1328	852-303	852-1305	852-1305/000-001	852-1505	852-1505/000-001	852-602	852-603	852-1605
Hardware	Number of copper ports	5	8	5	8	5	5	5	5	8	8	8	16	8	8	8	16	8	6	8	8	8	8	8	8	8	8
	100 Mbit/s	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1 Gbit/s			☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐		☐	☐	☐	☐			☐
	PoE+ ports among these (1 Gbit/s)	–	–	–	–	4	4	4	–	–	–	–	–	–	–	8	–	–	–	–	–	–	8	8	–	–	–
	Number of SFP ports	–	–	–	–	–	–	2	–	–	2	–	–	–	2	2	–	–	2	2	4	4	4	4	–	2	4
	100 Mbit/s										☐				☐	☐			☐	☐						☐	
	1 Gbit/s							☐							☐	☐			☐	☐	☐	☐	☐	☐		☐	☐
	Alarm relay								☐	☐	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐	☐	☐	☐
Approvals, Standards, Certificates	CE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	DNV GL	☐		☐								☐[1]	☐[1]							☐	☐			☐[1]			
	UL 61010	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		☐	☐	☐	☐
	IEC 61850-3																					☐		☐			
	PROFINET® CC-B (certificate)																								☐	☐	☐
Hardware Features	Status LEDs				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Autonegotiation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Auto-crossing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	PROFINET CC-A			☐	☐	☐	☐	☐				☐	☐	☐[2]	☐[2]	☐[2]	☐[2]	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Configuration	DIP switches (diagnostics)								☐	☐	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐	☐	☐	☐
	Web-Based Management (http, https)													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	SNMP (MIB)													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	CLI (SSH, Telnet)													☐	☐	☐	☐			☐	☐	☐	☐	☐	☐	☐	☐
	CLI with RS-232																			☐	☐	☐	☐	☐	☐	☐	☐
	PROFINET configurator (GSD file)																								☐	☐	☐
	USB storage																					☐		☐			
Diagnostics	Status LED (LINK active)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Status LED (LINK down)								☐	☐	☐	☐		☐	☐	☐	☐			☐	☐	☐	☐	☐	☐	☐	☐
	Status LED (alarm)								☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	SNMP (MIB)													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	SNMP traps													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Modbus® registers													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
	Web-Based Management (http, https)													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Dashboard and topology map													☐	☐	☐	☐										
	PROFINET diagnostics (acyclic and cyclic)																								☐	☐	☐
	Neighborhood detection (LLDP)													☐	☐	☐	☐			☐	☐	☐	☐	☐	☐	☐	☐
Redundancy	Redundant power supply								☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Jet Ring																			☐	☐	☐	☐	☐			
	Xpress Ring																			☐	☐	☐	☐	☐			
	ETHERNET Ring Protection Switching													☐[3]	☐[3]	☐[3]	☐[3]			☐	☐	☐	☐	☐			
	Media Redundancy Protocol (MRP) (client/manager)																								☐	☐	☐
	RSTP/STP													☐	☐	☐	☐	☐[2]	☐[2]	☐	☐	☐	☐	☐	☐	☐	☐
Network Security	Segmentation (VLAN)													☐[4]	☐[4]	☐[4]	☐[4]	☐[2]	☐[2]	☐	☐	☐	☐	☐	☐	☐	☐
	Authentication (IEEE 802.1X)													☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
	Access Control List (MAC, IP, Port)													☐[5]	☐[5]	☐[5]	☐[5]			☐	☐	☐	☐	☐	☐	☐	☐
	Port security													☐	☐	☐	☐	☐[2]	☐[2]	☐	☐	☐	☐	☐			
	MAC security (IEEE 802.1AE)																	☐	☐								
Data Transmission and Performance	LACP link aggregation																			☐	☐	☐	☐	☐			
	Prioritization (IEEE 802.1 p)	☐[6]	☐[6]	☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Quality of service (IEEE 802.1 Q)													☐	☐	☐	☐	☐[2]	☐[2]	☐	☐	☐	☐	☐	☐	☐	☐
	Bandwidth limitation																			☐	☐	☐	☐	☐	☐	☐	☐
	Broadcast limitation													☐	☐	☐	☐			☐	☐	☐	☐	☐	☐	☐	☐
	Routing within VLANs																			☐	☐	☐	☐	☐	☐	☐	☐
	Static route																			☐	☐	☐	☐	☐			

[1] DNV GL and LR starting from hardware version 5 or 3
[2] Firmware 2 or higher
[3] Supports two ERPS rings with a switchover time of less than 800 ms
[4] Supports up to five VLANs
[5] Supports up to 32 entries (based on MAC and IP address)
[6] applies to variant 852-111/000-001; 852-112/000-001 and 852-112/000-002

ECO Unmanaged ▶ 5 ports 100BASE-TX



852-111



Item no.	**852-111**
Order Text	**Industrial-Eco-Switch; 5Port**

Technical data

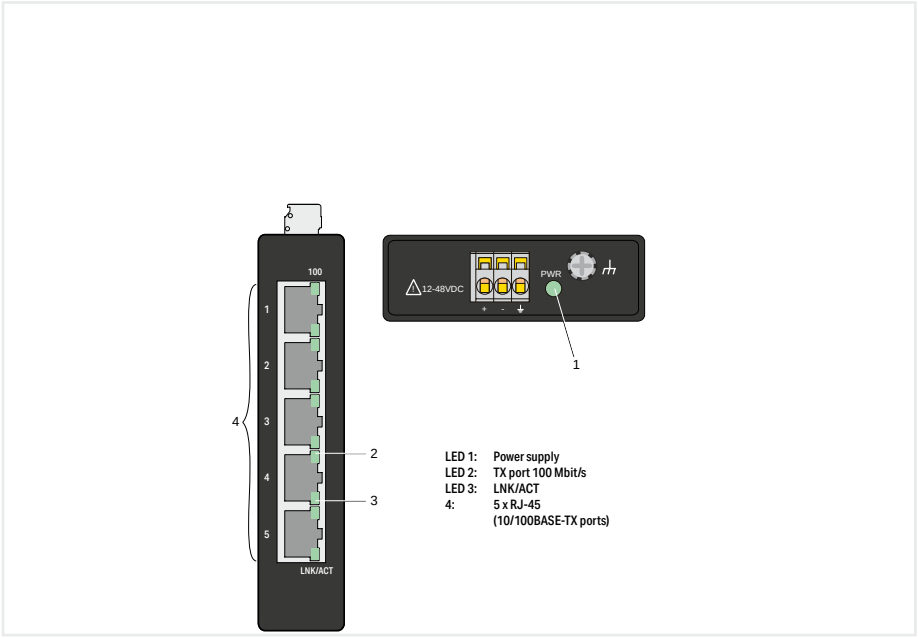
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
MAC table (size)	2000 addresses
Topology	Star
Jumbo frame size	1536 bytes
Supply voltage	18 … 30 VDC
Power consumption (max.)	3 W
ESD (contact/air discharge)	4 KV / 8 KV
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Ambient temperature (operation)	-40 … +70 °C (UL max. +60 °C)
Dimensions W x H x D	(23.4 x 109.2 x 73.8) mm
Approvals	CE; DNV GL; OrdLoc
For data sheet and additional information, see:	wago.com/852-111

10

ECO Unmanaged ▶ 5 ports 100BASE-TX



852-111/000-001



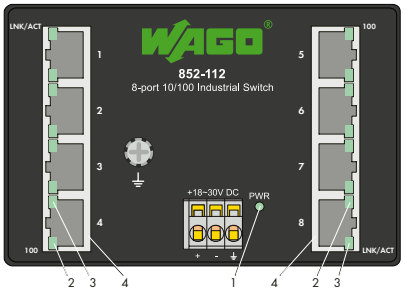
Item no.	**852-111/000-001**
Order Text	**Industrial-Eco-Switch; 5Port**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization
MAC table (size)	2000 addresses
Topology	Star
Supply voltage	12 … 48 VDC
Power consumption (max.)	2 W
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(23.4 x 109.2 x 73.8) mm
For data sheet and additional information, see:	wago.com/852-111/000-001

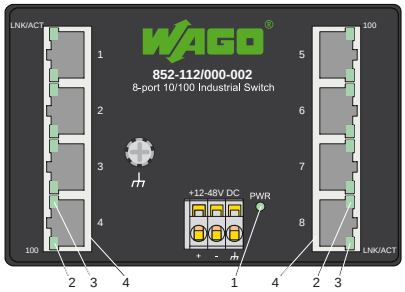
ECO Unmanaged ▶ 8 ports 100BASE-TX



852-112



LED 1: Power supply
LED 2: T port 100 Mbit/s
LED 3: LNK/ACT
4: 8 x RJ-45 (10/100BASE-TX ports)



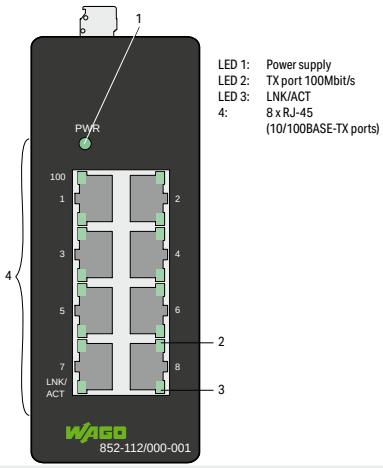
LED 1: Power supply
LED 2: TX port 100 Mbit/s
LED 3: LNK/ACT
4: 8 x RJ-45 (10/100BASE-TX ports)

Item no.	852-112	852-112/000-002
Order Text	Industrial-Eco-Switch; 8Port	Industrial-Eco-Switch; 8Port
Technical data		
Switching mode	Store-and-forward; non-blocking	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization; IEEE 802.3 Nway Autonegotiation
MAC table (size)	2000 addresses	8192 Adressen
Topology	Star	Star
Jumbo frame size	1536 bytes	9216 bytes
Supply voltage	18 … 30 VDC	12 … 48 VDC; (±15 %); 12 … 48 VDC (UL)
Power consumption (max.)	3 W	2 W
ESD (contact/air discharge)	4 KV / 8 KV	-
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-40 … +70 °C (UL max. +60 °C)	-40 … +70 °C
Dimensions W x H x D	(109.2 x 73.8 x 24) mm	(109.2 x 73.8 x 24) mm
Approvals	CE; KC; cULus OrdLoc	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-112	wago.com/852-112

ECO Unmanaged ▶ 8 ports 100BASE-TX



852-112/000-001



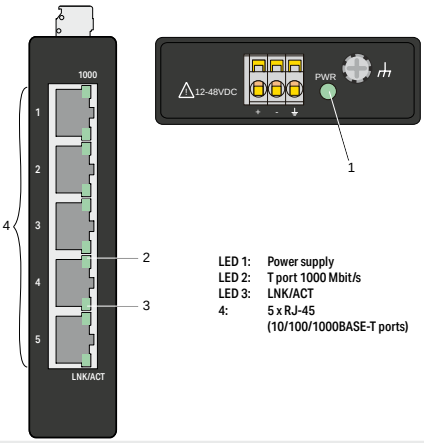
Item no.	**852-112/000-001**
Order Text	**Industrial-Eco-Switch; 8Port**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization
Topology	Star
Supply voltage	12 … 48 VDC
Power consumption (max.)	2 W
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(23.4 x 109.2 x 73.8) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-112

ECO Unmanaged ▶ 5 ports 1000BASE-T



852-1111/000-001



Item no.	**852-1111/000-001**
Order Text	**Industrial-Eco-Switch; 5-Port Gb**

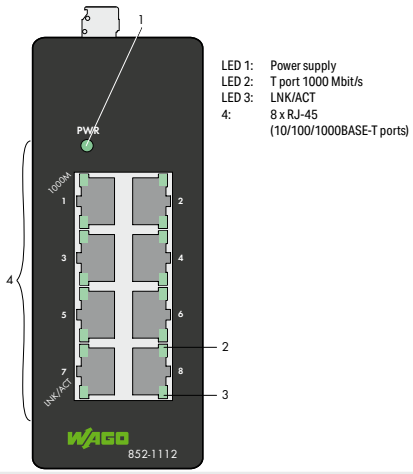
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization
MAC table (size)	2000 addresses
Topology	Star
Jumbo frame size	9216 bytes
Supply voltage	12 … 48 VDC; (±15 %); 24 … 48 VDC (UL)
Power consumption (max.)	4 W
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(23.4 x 109.2 x 73.8) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1111/000-001

10

ECO Unmanaged ▶ 8 ports 1000BASE-T



852-1112



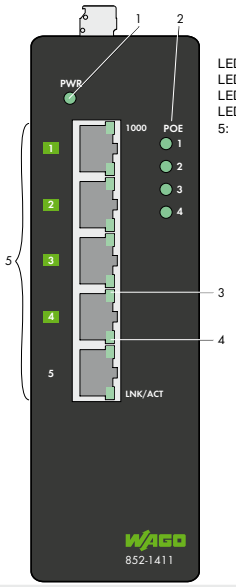
Item no.	**852-1112**
Order Text	**Industrial-Eco-Switch; 8-Port Gb**

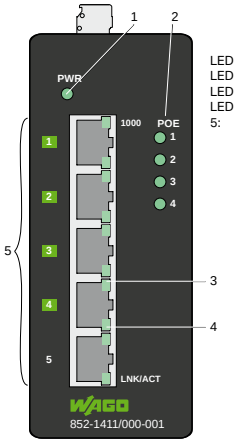
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
MAC table (size)	8000 addresses
Topology	Star
Jumbo frame size	9000 bytes
Supply voltage	9 … 57 VDC
Power consumption (max.)	6 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	0 … +60 °C
Dimensions W x H x D	(46 x 116 x 110) mm
Approvals	CE, cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1112

ECO Unmanaged ▶ 5 ports 1000BASE-T; 4 * Power over Ethernet



852-1411





Item no.	852-1411	852-1411/000-001
Order Text	Industrial-Eco-Switch; 5Port Gb; 4PoE	Industrial-Eco-Switch; 5Port Gb; 4PoE

Technical data

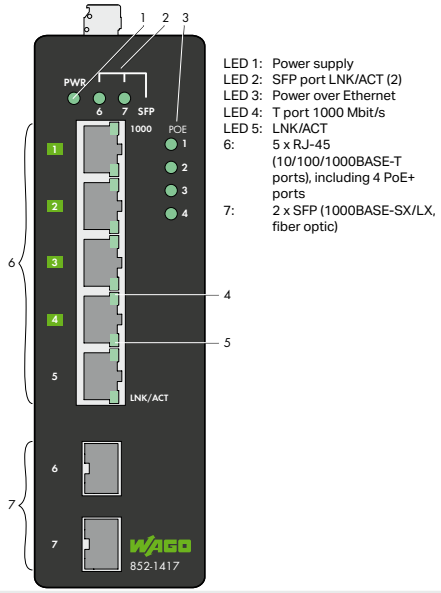
Number of copper ports	5 x 1000BASE-T or 100BASE-TX (RJ-45); 4 x PoE+ (Power over Ethernet)	5 x 1000BASE-T or 100BASE-TX (RJ-45); 4 x PoE+ (Power over Ethernet)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization
MAC table (size)	8000 addresses	8000 addresses
Topology	Star	Star
Jumbo frame size	10000 bytes	10000 bytes
Supply voltage	24 … 57 VDC	24 … 57 VDC
Power consumption (max.)	13 W	13 W
Power consumption (note)	133 W with 4 PoE	133 W with 4 PoE
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45	Copper cable: 5 x RJ-45
Ambient temperature (operation)	-40 … +70 °C (per CE; −10 … +60 °C per UL 61010)	-40 … +70 °C (per CE; −10 … +60 °C per UL 61010)
Dimensions W x H x D	(50 x 160 x 120) mm	(50 x 104 x 115) mm
Approvals	CE; cULus OrdLoc	CE; cULus OrdLoc; FCC approval (This device complies with Part 15 Subport B, Class A of the FCC Rules)
For data sheet and additional information, see:	wago.com/852-1411	wago.com/852-1411

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ECO Unmanaged ▶ 5 ports 1000BASE-T; 2 slots 1000BASE-SX/LX; 4 * Power over Ethernet



852-1417



LED 1: Power supply
LED 2: SFP port LNK/ACT (2)
LED 3: Power over Ethernet
LED 4: T port 1000 Mbit/s
LED 5: LNK/ACT
6: 5 x RJ-45 (10/100/1000BASE-T ports), including 4 PoE+ ports
7: 2 x SFP (1000BASE-SX/LX, fiber optic)

Item no.	**852-1417**
Order Text	**Industrial-Eco-Switch; 5Port Gb; 2-Slot 1000BASE-SX/LX; 4PoE**

Technical data

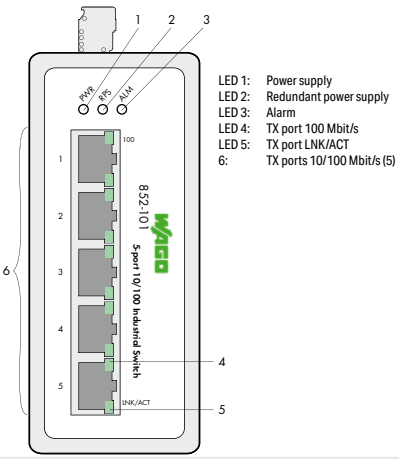
Number of copper ports	5 x 1000BASE-T or 100BASE-TX (RJ-45); 4 x PoE+ (Power over Ethernet)
Number of FOC ports	2 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization
MAC table (size)	8000 addresses
Topology	Star
Jumbo frame size	10000 bytes
Supply voltage	24 … 57 VDC
Power consumption (max.)	14 W
Power consumption (note)	134 W with 4 PoE
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C (per CE; −10 … +60 °C per UL 61010)
Dimensions W x H x D	(50 x 160 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1417

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Standard Unmanaged ▶ 5 ports 100BASE-TX



852-101



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: TX port 100 Mbit/s
LED 5: TX port LNK/ACT
6: TX ports 10/100 Mbit/s (5)

Item no.	**852-101**
Order Text	**Industrial-Switch; 5Port**

Technical data

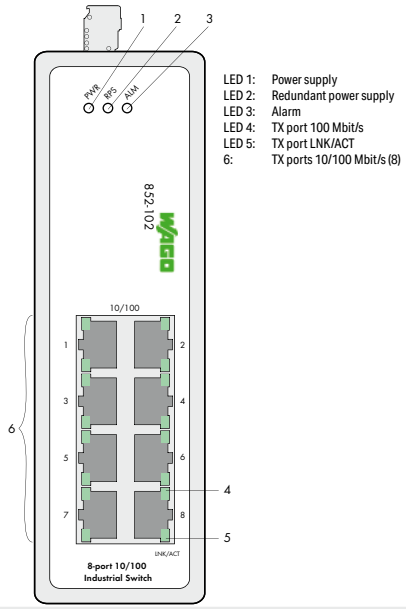
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	2000 addresses
Jumbo frame size	1536 bytes
Supply voltage	9 … 48 VDC; Cable length:< 3 m
Power consumption (max.)	3.84 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Ambient temperature (operation)	-40 … +70 °C (UL max. +60 °C)
Dimensions W x H x D	(50 x 105 x 120) mm
Approvals	CE; KC; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-101

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Standard Unmanaged ▶ 8 ports 100BASE-TX



852-102



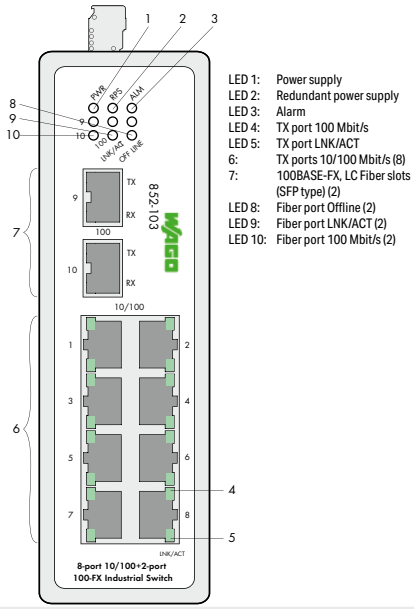
Item no.	**852-102**
Order Text	**Industrial-Switch; 8Port**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	2000 addresses
Jumbo frame size	1536 bytes
Supply voltage	9 … 48 VDC; Cable length:< 3 m
Power consumption (max.)	5.28 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-40 … +70 °C (UL max. +60 °C)
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE, KC, cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-102

Standard Unmanaged ▶ 8 ports 100BASE-TX; 2 slots 100BASE-FX



852-103



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: TX port 100 Mbit/s
LED 5: TX port LNK/ACT
6: TX ports 10/100 Mbit/s (8)
7: 100BASE-FX, LC Fiber slots (SFP type) (2)
LED 8: Fiber port Offline (2)
LED 9: Fiber port LNK/ACT (2)
LED 10: Fiber port 100 Mbit/s (2)

Item no.	**852-103**
Order Text	**Industrial-Switch; 8Port; 2-Slot 100BASE-FX**

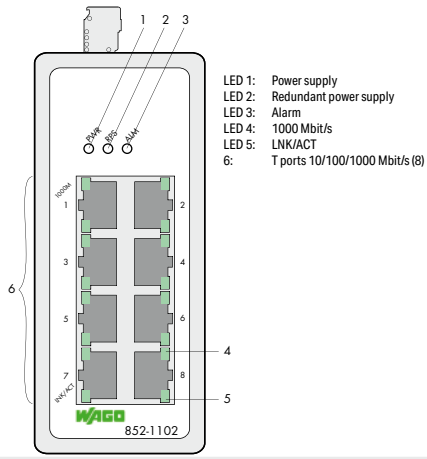
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Number of FOC ports	2 x 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3x Flow Control
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	2000 addresses
Jumbo frame size	1536 bytes
Supply voltage	9 … 48 VDC; Cable length:< 3 m
Power consumption (max.)	6.08 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C (UL max. +60 °C)
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE, KC, cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-103

Accessories	Item no.
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; silver-colored	852-201/107-002
SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; silver-colored	852-201/107-030

Standard Unmanaged ▶ 8 ports 1000BASE-T



852-1102



Item no.	**852-1102**
Order Text	**Industrial-Switch; 8-Port Gb**

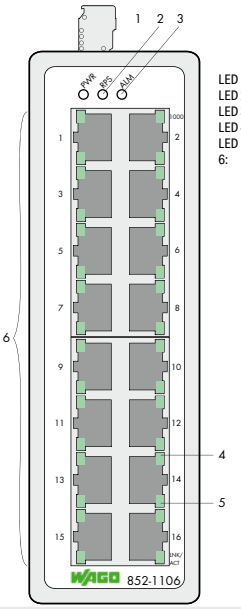
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	8000 addresses
Jumbo frame size	9000 bytes
Supply voltage	9 … 57 VDC
Power consumption (max.)	6 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 105 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1102

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Standard Unmanaged ▶ 16 ports 1000BASE-T



852-1106



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: 1000 Mbit/s
LED 5: LNK/ACT
6: T ports 10/100/1000 Mbit/s (16)

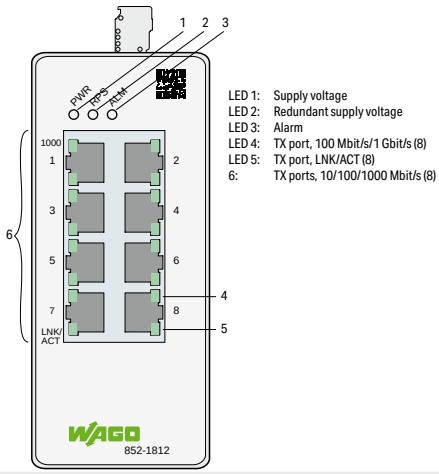
Item no.	**852-1106**
Order Text	**Industrial-Switch; 16-Port Gb**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	16 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	8000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
Connection technology: communication/fieldbus	Copper cable: 16 x RJ-45
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1106

Lean Managed ▶ 8 ports 1000BASE-T



852-1812



Item no.	**852-1812**
Order Text	**Lean-Managed-Switch; 8-Port 1000BASE-T**

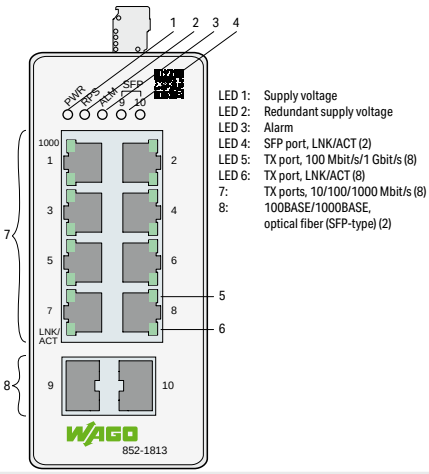
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Safety	Access-control list with max. 32 entries; port security; IEEE 802.1X authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 bytes
Supply voltage	24 … 48 VDC; (±15 %); 24 … 48 VDC (UL)
Power consumption (max.)	10 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-40 … +60 °C
Dimensions W x H x D	(50 x 116 x 100) mm
Approvals	CE, cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1812

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Lean Managed ▶ 8 ports 1000BASE-T; 2 slots 1000BASE-FX/TX



852-1813



Item no.	**852-1813**
Order Text	**Lean-Managed-Switch; 8-Port 1000BASE-T; 2 Slots 1000BASE-SX/LX**

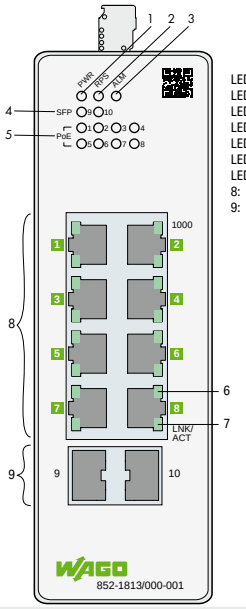
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of FOC ports	2 x 1000BASE-SX/LX/ZX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Safety	Access-control list with max. 32 entries; port security; IEEE 802.1X authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 bytes
Supply voltage	24 … 48 VDC; (±15 %); 24 … 48 VDC (UL)
Power consumption (max.)	11 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +60 °C
Dimensions W x H x D	(50 x 116 x 100) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1813

Accessories	**Item no.**
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; silver-colored	852-201/107-002
SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; silver-colored	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Lean Managed ▶ 8 ports 1000BASE-T; 2 slots 1000BASE-FX/TX; 8 * Power over Ethernet



852-1813/000-001



LED 1: Supply voltage
LED 2: Redundant supply voltage
LED 3: Alarm
LED 4: SFP port, LNK/ACT (2)
LED 5: Power over Ethernet (8)
LED 6: TX port, 100 Mbit/s/1 Gbit/s (8)
LED 7: TX port, LNK/ACT (8)
8: TX ports, 10/100/1000 Mbit/s (8)
9: 100BASE/1000BASE, optical fiber (SFP-type) (2)

Item no.	**852-1813/000-001**
Order Text	**Lean-Managed-Switch; 8-Port 1000BASE-T; 2 Slots 1000BASE-SX/LX; +PoE**

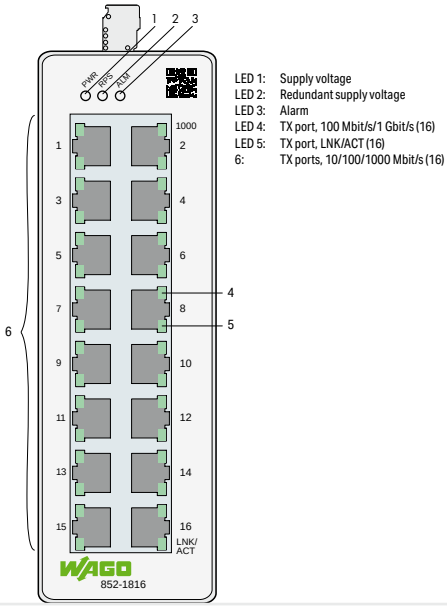
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45); 8 x PoE+ (Power over Ethernet)
Number of FOC ports	2 x 1000BASE-SX/LX/ZX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Safety	Access-control list with max. 32 entries; port security; IEEE 802.1X authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 bytes
Supply voltage	24 … 57 VDC
Power consumption (max.)	13 W
Power consumption (note)	253 W with 8 PoE+; 30 W per port
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +60 °C
Dimensions W x H x D	(50 x 160 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1813/000-001

Accessories	**Item no.**
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; silver-colored	852-201/107-002
SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; silver-colored	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Lean Managed ▶ 16 ports 1000BASE-T



852-1816



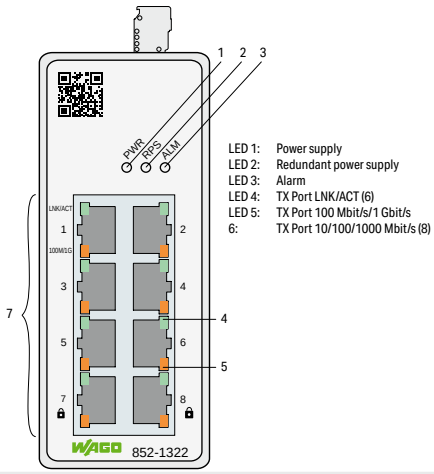
Item no.	**852-1816**
Order Text	**Lean-Managed-Switch; 16 Ports 1000BASE-T**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	16 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Safety	Access-control list with max. 32 entries; port security; IEEE 802.1X authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 16 x RJ-45
Ambient temperature (operation)	-40 … +60 °C
Dimensions W x H x D	(50 x 160 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1816

MACsec Managed ▶ 8 ports 1000BASE-T; MAC security



852-1322



Item no.	**852-1322**
Order Text	**Managed Switch; 8Port Gb; MACsec**

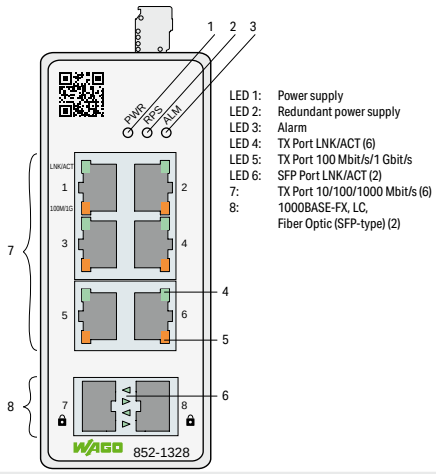
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1Q VLAN Tagging; IEEE 802.1AE MAC Security
Redundancy function	Redundant DC power supply
Configuration options	Web-based (HTTP(S)); SNMPv1/v2c/v3
Diagnostics	Modbus TCP; Port status; Syslog; SNMP traps
MAC table (size)	16000 addresses
Supply voltage	9 … 48 VDC
Power consumption (max.)	5.8 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-20 … +70 °C
Dimensions W x H x D	(45.3 x 110 x 92) mm
Approvals	CE; cULus OrdLoc (E482462)
For data sheet and additional information, see:	wago.com/852-1322

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MACsec Managed ▶ 6 ports 1000BASE-T; 2 slots 1000BASE-SX/LX; MAC security



852-1328



Item no.	**852-1328**
Order Text	**Managed Switch; 6Port Gb; 2FOC Gb; MACsec**

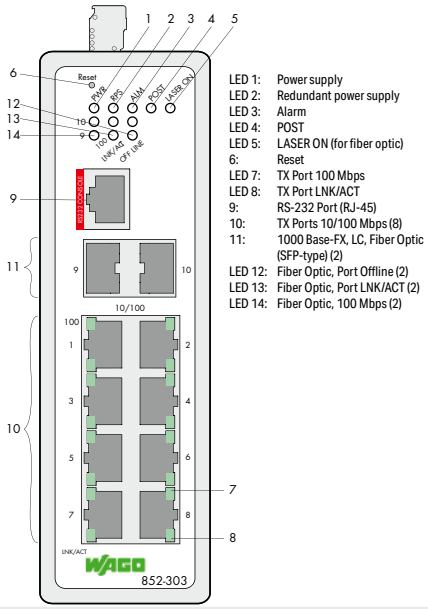
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	6 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of FOC ports	2 x 1000BASE-SX/LX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1Q VLAN Tagging; IEEE 802.1AE MAC Security
Redundancy function	Redundant DC power supply
Configuration options	Web-based (HTTP(S)); SNMPv1/v2c/v3
Diagnostics	Modbus TCP; Port status; Syslog; SNMP traps
MAC table (size)	16000 addresses
Supply voltage	9 … 48 VDC
Power consumption (max.)	5.8 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 6 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-20 … +70 °C
Dimensions W x H x D	(45.3 x 110 x 92) mm
Approvals	CE; cULus OrdLoc (E482462)
For data sheet and additional information, see:	wago.com/852-1328

Accessories	**Item no.**
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; silver-colored	852-201/107-002
SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; silver-colored	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Fully Managed ▶ 8 ports 100BASE-TX; 2 slots 1000BASE-SX/LX



852-303



Item no.	**852-303**
Order Text	**Managed-Switch; 8Port; 2-Slot 1000BASE-SX/LX**

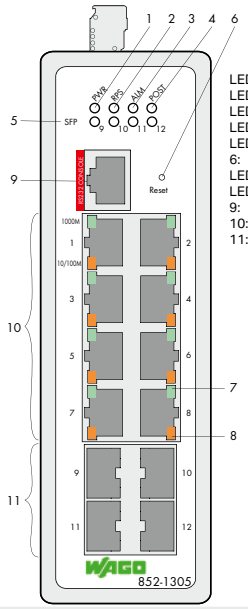
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Number of FOC ports	2 x 1000BASE-SX/LX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact, Modbus/TCP, port status, port statistics, port load, traffic monitor, SFP information, syslog, mail alarm, SNMP traps
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC; Cable length:< 3 m
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-303

Accessories	**Item no.**
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; silver-colored	852-201/107-002
SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; silver-colored	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Fully Managed ▶ 8 ports 1000BASE-T; 4 slots 1000BASE-SX/LX



852-1305



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP port LNK/ACT (4)
6: Reset
LED 7: TX port 1000 Mbit/s
LED 8: TX port 10/100 Mbit/s
9: RS-232 port (RJ-45)
10: TX ports 10/100 Mbit/s (8)
11: 1000BASE-FX, LC, fiber optic (SFP type) (4)

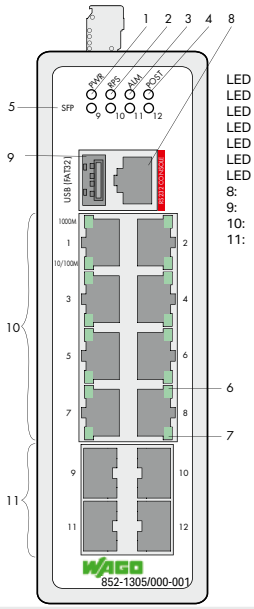
Item no.	**852-1305**
Order Text	**Managed-Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX**
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of FOC ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact, Modbus/TCP, port status, port statistics, port load, traffic monitor, SFP information, syslog, mail alarm, SNMP traps
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC; Cable length:< 3 m
Power consumption (max.)	18 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1305

Accessories	**Item no.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Fully Managed ▶ 8 ports 1000BASE-T; 4 slots 1000BASESX/LX; USB



852-1305/000-001



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP Port LNK/ACT (4)
LED 6: TX Port 1000 Mbit/s
LED 7: TX Port 10/100 Mbit/s
8: RS-232 Port (RJ-45)
9: USB Host 2.0
10: TX Ports 10/100 Mbit/s (8)
11: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

Item no.	852-1305/000-001
Order Text	Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; USB

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of FOC ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3ad Link Aggregation; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3; USB storage medium
Diagnostics	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps; Loop detection; ...
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 ... 48 VDC
Power consumption (max.)	18 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1305/000-001

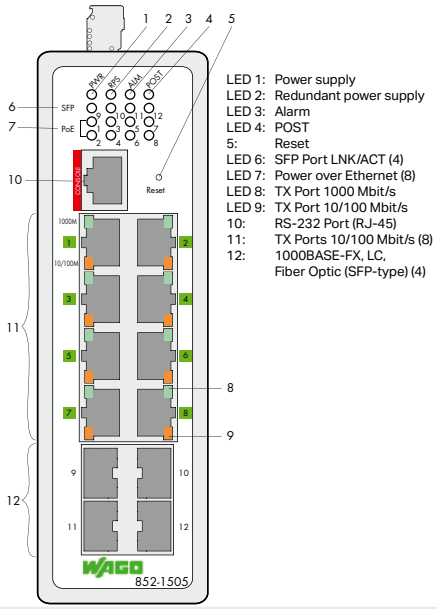
Accessories	Item no.
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

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Fully Managed ▶ 8 ports 1000BASE-T; 4 slots 1000BASE-SX/LX; 8 * Power over Ethernet



852-1505



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
5: Reset
LED 6: SFP Port LNK/ACT (4)
LED 7: Power over Ethernet (8)
LED 8: TX Port 1000 Mbit/s
LED 9: TX Port 10/100 Mbit/s
10: RS-232 Port (RJ-45)
11: TX Ports 10/100 Mbit/s (8)
12: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

Item no.	**852-1505**
Order Text	**Managed-Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX; 8PoE**

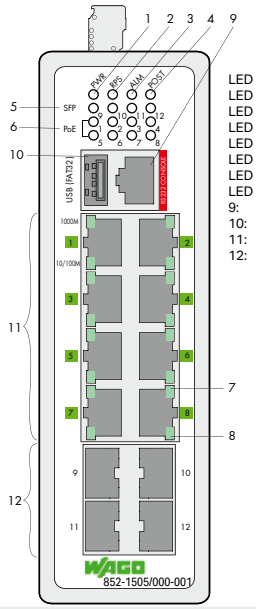
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45); 8 x PoE+ (Power over Ethernet)
Number of FOC ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3ad Port Trunk with LACP; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 1588v2 Precision Time Protocol (PTP); IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact, Modbus/TCP, port status, port statistics, port load, traffic monitor, SFP information, syslog, mail alarm, SNMP traps
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	48 … 57 VDC
Power consumption (max.)	18 W
Power consumption (note)	258 W with 8 PoE+
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE
For data sheet and additional information, see:	wago.com/852-1505

Accessories	**Item no.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Fully Managed ▶ 8 ports 1000BASE-T; 4 slots 1000BASESX/LX; 8 * Power over Ethernet; USB



852-1505/000-001



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP Port LNK/ACT (4)
LED 6: Power over Ethernet (8)
LED 7: TX Port 1000 Mbit/s
LED 8: TX Port 10/100 Mbit/s
9: RS-232 Port (RJ-45)
10: USB Host 2.0
11: TX Ports 10/100 Mbit/s (8)
12: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

Item no.	**852-1505/000-001**
Order Text	**Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; EXT; 8PoE; USB**

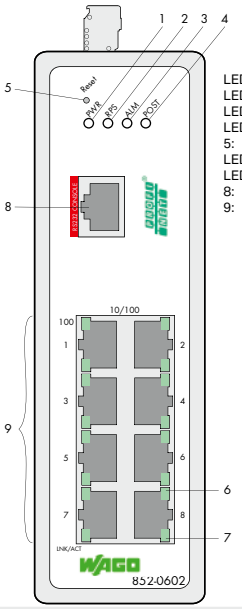
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45); 8 x PoE+ (Power over Ethernet)
Number of FOC ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3ad Link Aggregation; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3; USB storage medium
Diagnostics	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps; Loop detection; ...
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	24 … 57 VDC
Power consumption (max.)	18 W
Power consumption (note)	258 W with 8 PoE+
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1505/000-001

Accessories	**Item no.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

PROFINET® Managed ▶ 8 ports 100BASE-TX; PROFINET



852-602



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
5: Reset
LED 6: TX-Port 100 Mit/s
LED 7: TX-Port LNK/ACT
8: RS-232 Port (RJ-45)
9: TX Ports 10/100 Mit/s (8)

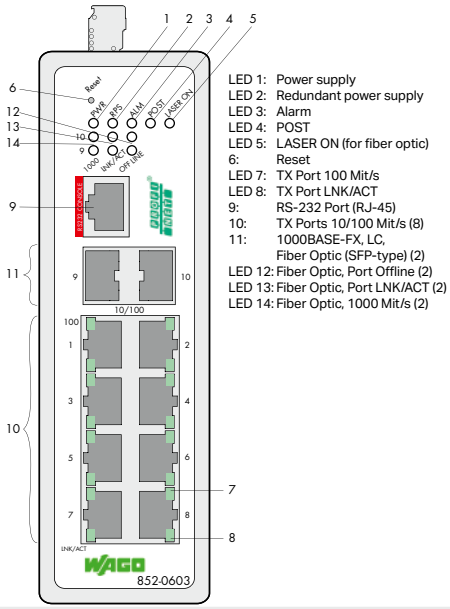
Item no.	**852-602**
Order Text	**Managed-Switch; 8Port 100BASE-TX; PROFINET; T**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Class of Service; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); PROFINET Conformance Class B
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Media redundancy protocol as manager or client
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; SNMP traps; PN diagnostics (cyclic and acyclic)
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-602

PROFINET® Managed ▶ 8 ports 100BASE-TX; 2 slots 1000BASE-SX/LX; PROFINET



852-603



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: LASER ON (for fiber optic)
6: Reset
LED 7: TX Port 100 Mit/s
LED 8: TX Port LNK/ACT
9: RS-232 Port (RJ-45)
10: TX Ports 10/100 Mit/s (8)
11: 1000BASE-FX, LC, Fiber Optic (SFP-type) (2)
LED 12: Fiber Optic, Port Offline (2)
LED 13: Fiber Optic, Port LNK/ACT (2)
LED 14: Fiber Optic, 1000 Mit/s (2)

Item no.	852-603
Order Text	**Managed-Switch; 8Port 100BASE-TX; 2Slot 1000BASE-SX/LX; PROFINET; T**

Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Number of FOC ports	2 x 1000BASE-SX/LX/ZX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Class of Service; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); PROFINET Conformance Class B
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Media redundancy protocol as manager or client
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; SNMP traps; PN diagnostics (cyclic and acyclic)
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-603

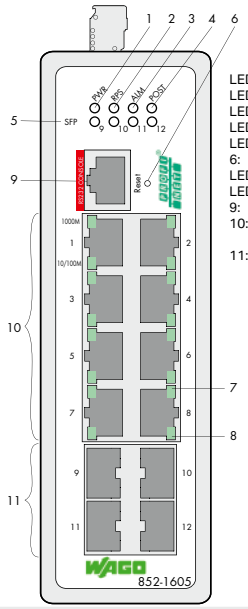
Accessories	Item no.
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; silver-colored	852-201/107-002
SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; silver-colored	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

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PROFINET® Managed ▶ 8 ports 1000BASE-T; 4 slots 1000BASE-SX/LX; PROFINET



852-1605



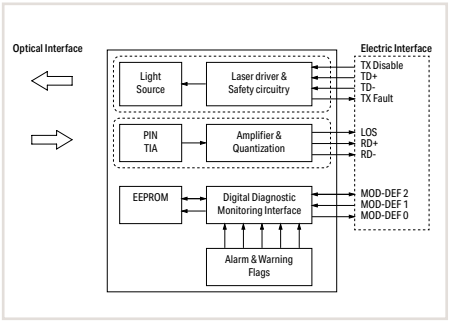
LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP Port LNK/ACT (4)
6: Reset
LED 7: TX Port 1000 Mbit/s
LED 8: TX Port 10/100 Mbit/s
9: RS-232 Port (RJ-45)
10: T Ports 10/100/1000 Mbit/s (8)
11: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

Item no.	**852-1605**
Order Text	**Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; PROFINET; T**
Technical data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of FOC ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Class of Service; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); PROFINET Conformance Class B
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Media redundancy protocol as manager or client
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; SNMP traps; PN diagnostics (cyclic and acyclic)
MAC table (size)	16000 addresses
Jumbo frame size	10000 bytes
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP-slots (e.g., with SFP module and LC fiber-optic connector)
Ambient temperature (operation)	-40 … +70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
For data sheet and additional information, see:	wago.com/852-1605

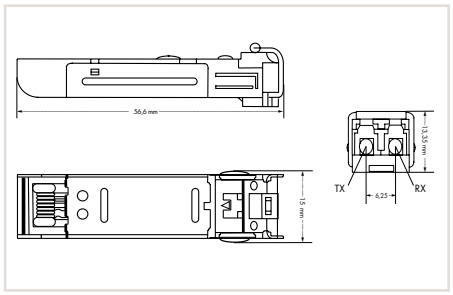
Accessories	**Item no.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM; silver-colored	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; Digital Diagnostics Monitoring; silver-colored	852-1210

Industrial Switches – Accessories
SFP Modules







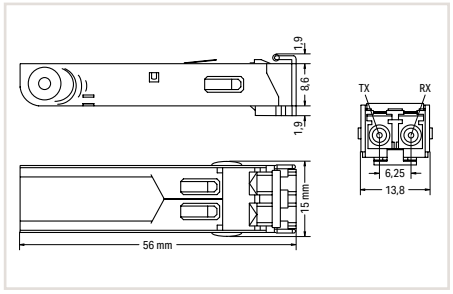


Features:
- Duplex LC optical connector
- Small Form-Factor Pluggable (SFP) industry-standard design
- Compliant with Fast ETHERNET and Gigabit ETHERNET (IEEE802.3z) standards
- Differential LVPECL inputs and outputs
- Supply voltage: 3.3 V
- TTL signal detect indicator
- Hot-pluggable capability

Item Description	SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended Temperature Range; DDM	SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended Temperature Range; DDM	SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended Temperature Range; DDM
Item No.	852-1200	852-1210	852-1280
Technical Data			
Optical fiber type	Multi-mode	Single-mode	
Cable length (max.)	300 m; 550 m	10 km	80 km
Cable type	62.5/125 µm, 50/125 µm	9/125 µm	
Wavelength	850 nm	1310 nm	1550 nm
Surrounding air temperature (operation)	–40 … +85 °C	–40 … +85 °C	

Item Description	SFP Module 2: 1310 nm; 100BASE-FX Multi-Mode LC; 2 km	SFP Module 30: 1310 nm; 100BASE-FX Single-Mode LC; 30 km
Item No.	852-201/107-002	852-201/107-030
Technical Data		
Optical fiber type	Multi-mode	Single-mode
Cable length (max.)	2 km	30 km
Cable type	62.5/125 µm, 50/125 µm	9/125 µm
Wavelength	1310 nm	1310 nm
Surrounding air temperature (operation)	–40 … +70 °C	0 … +60 °C



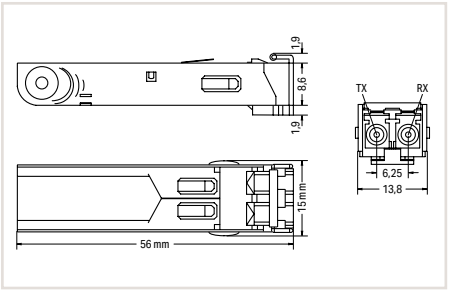


Features:
- Low Power
- Coated PCB
- Extended surrounding air temperature: -40 …100 °C
- High impulse withstand voltage: 1.2 kVDC
- Duplex LC optical connector
- Small Form-Factor Pluggable (SFP) industry-standard design
- 125Mbps 100BASE-LX10, IEEE 802.3 Clause 58
- Compliant with the Fast ETHERNET standard
- Digital Diagnostic Monitoring interface according to SFF-8472
- Supply voltage: 3.3 V
- TTL signal detect indicator
- Hot-pluggable capability

Item Description	SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; DDM; Extended Temperature Range; DDM
Item No.	852-202
Technical Data	
Optical fiber type	Multi-mode
Cable length (max.)	2 km
Cable type	62.5/125 µm, 50/125 µm
Wavelength	1310 nm
Surrounding air temperature (operation)	–40 … +100 °C

Industrial Switches – Accessories
SFP Modules





Item Description	SFP Module 100BASE; LX Single-Mode 1310 nm LC; 30 km; DDM; Extended Temperature Range
Item No.	852-230

Technical Data

Optical fiber type	Single-mode
Cable length (max.)	30 km
Cable type	9/125 µm
Wavelength	1310 nm
Surrounding air temperature (operation)	–40 … +95 °C

Features:
- Low Power
- Coated PCB
- Extended surrounding air temperature: -40 … 95 °C
- High impulse withstand voltage: 0.7 kVDC
- Duplex LC optical connector
- Small Form-Factor Pluggable (SFP) industry-standard design
- 125Mbps 100BASE-LX10, IEEE 802.3 Clause 58
- Compliant with the Fast ETHERNET standard
- Digital Diagnostic Monitoring interface according to SFF-8472
- Supply voltage: 3.3 V
- TTL signal detect indicator
- Hot-pluggable capability
- Class 1 laser according to IEC 60825



Radio Technology

Radio Technology

- *Bluetooth*®
- WLAN
- EnOcean®

Radio Technology – *Bluetooth*®, WLAN and EnOcean® Components
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	Wireless Access Point	758-919	625
	EnOcean® RS-485 Gateway; 868 MHz	750-940	626
	Radio Transmitter, EnOcean® easyfit PTM 250 2-Channel Lighting Control 4-Channel Lighting Control 2-Channel Sunblind Control 4-Channel Sunblind Control	 758-940/001-000 758-940/003-000 758-940/002-000 758-940/004-000	627
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Radio Technology
General Product Information

Wireless Technology in the Industrial Environment

Wireless technology can support wired applications or enable completely new applications.

In mobile or movable systems, wireless technology is the first choice when greater distances or obstacles must be overcome. It is an alternative for applications in which wired solutions are not economical or technically feasible.

Various wireless technologies can be used depending on the application.

Bluetooth® – Robust, Flexible, High-Performance

Well-known in consumer electronics, *Bluetooth*® technology is also well-suited to industrial use with its internationally approved frequency range, a very robust transmission technology (frequency hopping), real-time response and a range of up to 400 m. It makes wireless process data communication between two stations possible (point-to-point communication), and also enables the setup of a piconet in which a *Bluetooth*® master can communicate with up to seven slaves, e.g., decentralized mobile sensors.
In addition, *Bluetooth*® can be used as the radio system for commissioning.
Features:
- Secure transmission (encrypted)
- AFH (Adaptive Frequency Hopping)
- Adaptive transmission power
- Uses the license-free 2.4 GHz frequency band

WLAN – Full IT Integration

WLAN makes it easy to set up a wireless transmission link for ETHERNET protocols. This can be standard ETHERNET protocols, e.g., for communication between a smartphone and automation components. Industrial fieldbus protocols such as PROFINET, Modbus TCP or Ethernet/IP can also be used to link mobile equipment with stationary equipment. Ranges up to 400 m are possible depending on the transmission technology used.

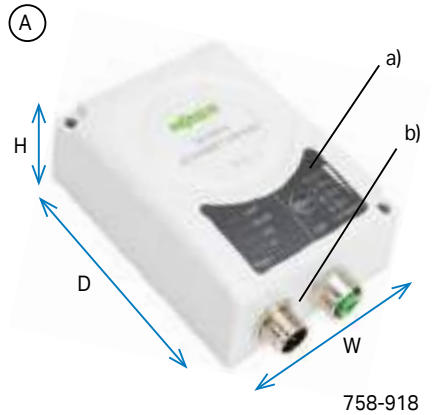
EnOcean® – The Radio Standard in Building Automation

Wireless switches and sensors based on EnOcean® technology harvest available energy to power themselves, e.g., kinetic energy from actuating a switch or sensors powered by ambient light. This energy harvesting completely eliminates maintenance of the radio transmitter at a range of up to 300 m in open air (30 m in buildings).

Advantages:

- Branch and application-specific – always the right radio system
- Industrial design – high-performance, rugged and safe
- Tightly integrated into WAGO automation technology

Radio Technology
Interfaces and Types



758-918

ETHERNET Gateway (A)
- Wireless transmission via WLAN (IEEE802.11a/b/g/d/n/r), *Bluetooth*® or *Bluetooth*® Low Energy
- Works as an access point, client or gateway
- Two internal 2.4 GHz and 5 GHz dual-band antennas and an integrated 2.4 GHz MIMO antenna
- Status and diagnostic LEDs (a)
- M12 connectors for both network connection and power supply (b)
- Protection type: IP65
- W x H x D (mm): 66 x 36.2 x 91

Wireless Access Point (B)
- Wireless transmission via WLAN (IEEE802.11a/b/g/d/n/r), *Bluetooth*® or *Bluetooth*® Low Energy
- Internal 2.4 GHz and 5 GHz dual-band antenna
- Protection type (top): IP66/IP67 (outside of unit)
- M50 through-panel installation (cut-out: 50.5 mm)



758-919



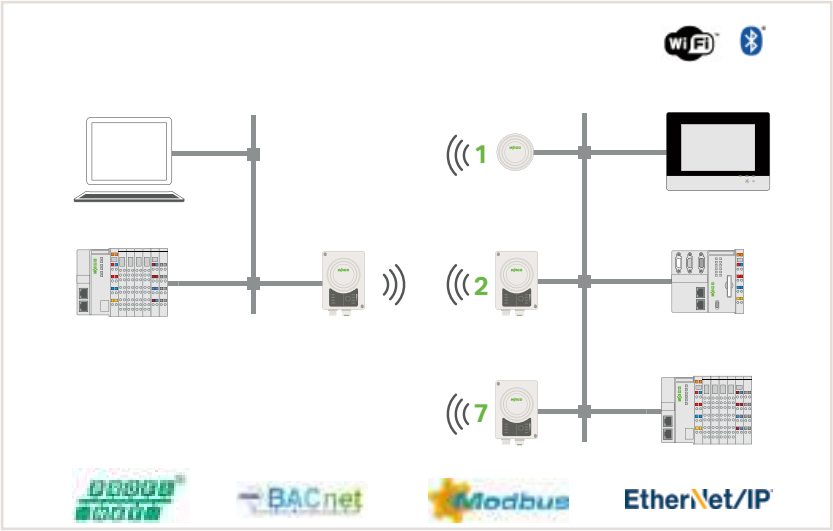
EnOcean® RS-485 Gateway (C); Communication module for I/O system
- Integration of sensors/actuators based on EnOcean® wireless technology into intelligent control systems such as the WAGO I/O system
- Communication via RS-485 interface using ESP3 telegrams (EnOcean®) or Modbus® protocol
- Internal antenna (optional external antenna)
- Dimensions (mm) Diameter x Height 95 × 36

Switch Inserts (D)
- Universal switch inserts for standard switch series in building automation
- Compatible with manufacturer programs from BERKER, GIRA, JUNG, MERTEN



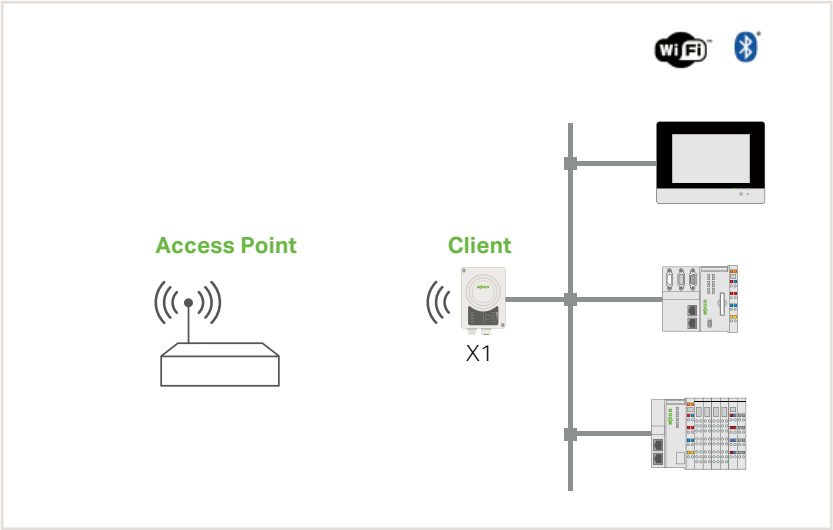
Radio Technology
Application and Installation Instructions

ETHERNET Bridge
- Transmission of each TCP/IP protocol along with prioritized PROFINET RT and EtherNet/IP™ frames
- Pairing via device's push-button (758-918 only)
- Up to 7 clients
- Use of Wi-Fi or *Bluetooth*®



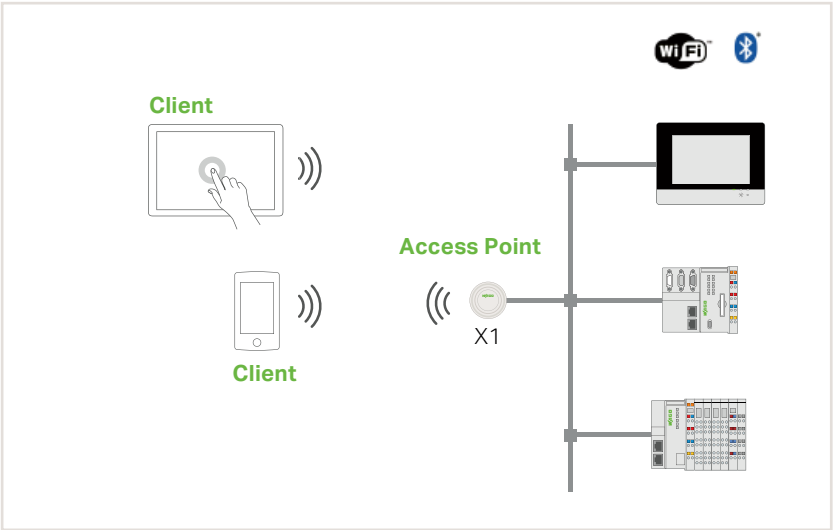
Client for Existing Access Point
- Connection to a Wi-Fi 802.11a/b/g/n/d/r network
- Protocols like Modbus TCP, EtherNet/IP™, BACnet/IP ...
- Possibility of connecting multiple devices after the client

Note X1: 758-918 or 758-919



Access Point
- Setup of a Wi-Fi 802.11a/b/g/n/d/r or *Bluetooth*® network
- Connection of tablets, smartphones ...
- Up to 7 clients simultaneously

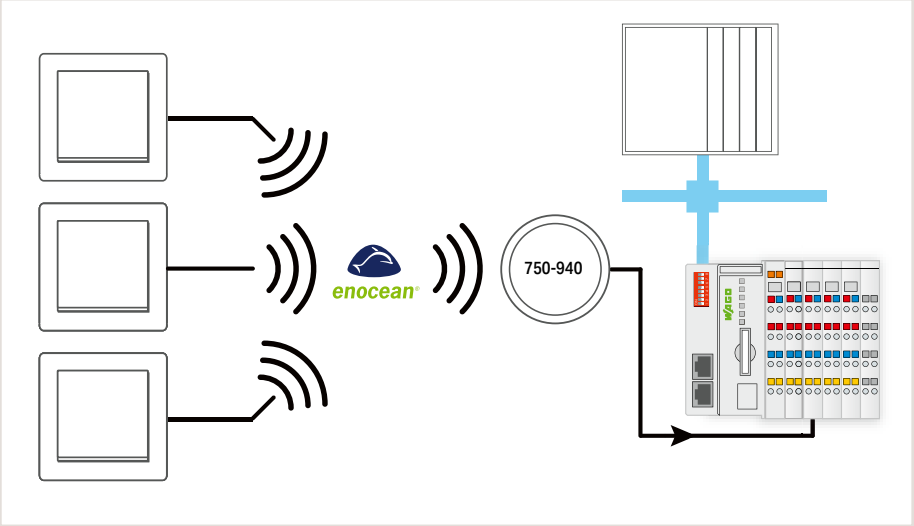
Note X1: 758-918 or 758-919



11

Radio Technology
Application and Installation Instructions

Integration into the WAGO I/O System via EnOcean® Radio Technology
- Communication via the EnOcean® RS-485 Gateway in the WAGO I/O System
- Operation on:
  - Controllers
  - Fieldbus couplers
- Internal antenna (optional external antenna)



11

WLAN ETHERNET Gateway



Power connector:
M12 plug, A-coded



1: Vin + (9 … 30 VDC)
2: Digital input GND
3: Vin GND (0 V)
4: Digital input + (9 … 30 VDC)
5: Functional ground

ETHERNET connector:
M12 socket, D-coded



1: Transmit +
2: Receive +
3: Transmit -
4: Receive -

Item Description	Wireless ETHERNET Gateway	
Version		**External Antenna**
Item No.	**758-918**	**758-918/000-001**
Order Text	Wireless ETHERNET Gateway	Wireless ETHERNET Gateway; External Antenna
Technical Data		
Wireless technology	*Bluetooth*®: 4.0; WLAN: 802.11a/b/g/d/e/i/h	
Topology	Peer-to-peer connection	
Security authentication	WLAN: WPA/WPA2 PSK; LEAP; PEAP	
Security encryption	WLAN: none; WEP64; WEP128; TKIP; AES/CCMP	
Frequency band	ISM band; 2.4 GHz (*Bluetooth*®, WLAN); ISM band; 5 GHz (WLAN)	
Transmission range	Up to 400 m*	
Antenna	Internal directional antenna	External dipole antenna (3dBi); included in delivery
Supply voltage	24 VDC (9 … 30 V)	
Connectors	ETHERNET connection: M12 connector, D-coded Power connection: M12 connector, A-coded; RP-SMA socket for external antenna	
Configuration	Simple push-button operation and Web-Based Management	
Number of inputs	1 (trigger input: 9 … 30 VDC)	
Surrounding air temperature (operation)	–30 … +65 °C	
Dimensions W x H x D	67.8 × 33.2 x 92.7	
Protection type	IP65	
Approvals	CE	
For data sheet and additional information, see:	wago.com/758-918	

Accessories	Item No.
ETHERNET/PROFINET Cable; M12 plug; straight; D-coded; 2 m	**756-1201/060-020**
Power Cable; M12 socket; straight; A coded; 2 m	**756-3102/040-020**
PROFINET RJ-45 Plug; IP20	**750-976**

*The maximum range in the field decreases within buildings and varies depending on building materials and spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

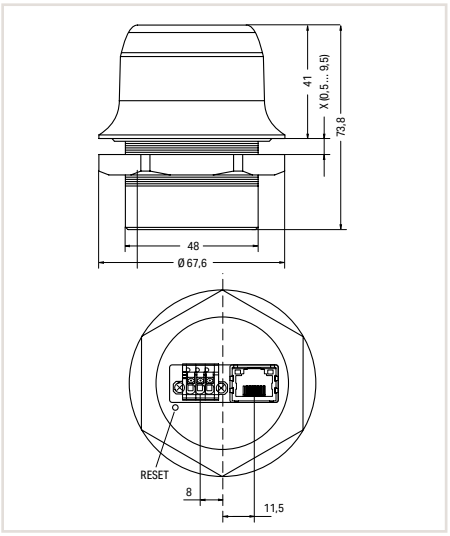
WAGO's Wireless ETHERNET Gateway simplifies the creation of a wireless transmission link for ETHERNET protocols (e.g., PROFINET, Modbus/TCP, EtherNet/IP™). The gateway works as a cable substitute to create a robust, industry-proven *Bluetooth*® or WLAN link between two automation devices.
This gateway supports various configurations and can therefore also be operated as an access point.
IP65 protection type and an external antenna allow installation of the Wireless ETHERNET Gateway within a conductive housing. The external antenna must be mounted on the outside of the housing. Simple push-button operation rapidly connects two Wireless ETHERNET Gateways.
Additional settings can be made via Web-Based Management.

Note:
Two Wireless ETHERNET Gateways of the same type are required to establish a peer-to-peer connection.

Wireless Access Point



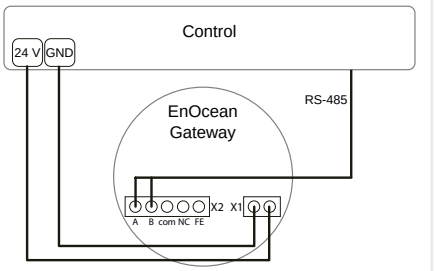




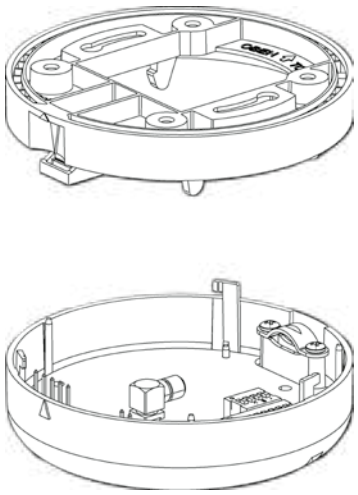
Item Description	Wireless Access Point
Item No.	758-919
Order Text	Wireless Access Point
Technical Data	
Wireless technology	*Bluetooth*® 2.1; *Bluetooth*® 4.0 (Low Energy); WLAN: IEEE 802.11 a, b, g, n, d, r
Frequency band	ISM band, 2.4 GHz (*Bluetooth*®, WLAN); ISM band, 5 GHz (WLAN)
ETHERNET protocols	IP; TCP; UDP; HTTP; LLDP; ARP; DHCP client/server; DNS support; transparent transmission of PROFINET IO; EtherNet/IP™; Modbus-TCP or another TCP/UDP-based protocol
Antenna	Internal 2.4 GHz and 5 GHz broadband antenna
Transmission range	Up to 200 m in open air*
Supply voltage	19 … 36 VDC
Power consumption (max.)	1.7 W
Configuration	Web-Based Management
Maximum number of clients	7
WLAN	
Transmitter power	15 dBm EIRP
Operating modes	Wireless access point, wireless client or gateway mode
Communication standards	IEEE 802.11 a, b, g, n, d, r
Data rate (net) (max.)	65 Mbit/s
Security	WEP 64/128; WPA; WPA-PSK and WPA2; TKIP and AES/CCMP; LEAP; PEAP including MS-CHAP
Bluetooth® 2.1	
Transmitter power	11 dBm EIRP
Supported profiles	PAN (PANU & NAP)
Operating modes	Access point, client or gateway mode
Data rate (net)	1 Mbit/s
Security	NIST-compliant; FIPS-approved (authentication and authorization, encryption and data security, privacy and discretion)
Bluetooth® 4.0 (Low Energy)	
Transmitter power	7 dBm EIRP
Supported profiles	GATT
Operating modes	Central device
Data rate (net)	200 Kbit/s
Security	AES-CCM encryption
Connector	RJ-45; 10/100BASE-T (Auto MDI/MDIX & cross-over detection); PoE supply: 44 … 57 VDC; DTE type 1 per IEEE 802.3af
Dimensions	Height: 75 mm (91 mm with connector); Outside height: 41 mm; Diameter: 68 mm
Weight	84 g
Surrounding air temperature (operation)	−40 … +65 °C
Protection type	Top (outside of unit): IP66/IP67/UL NEMA 4X ; Base (inside of unit): IP21
Mounting	M50 through-panel installation (cut-out = 50.5 mm)
Approvals	CE; UL 61010 E198726; FCC; IC: 5325A-0965, for indoor use only (5 GHz)
For data sheet and additional information, see:	wago.com/758-919

*The maximum range in the field decreases within buildings and varies depending on building materials and spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

EnOcean® RS-485 Gateway; 868 MHz







Item Description	EnOcean® RS-485 Gateway; 868 MHz
Item No.	**750-940**
Technical Data	
Wireless technology	EnOcean®
Frequency band	868 MHz
Transmission range	Approx. 30 m within buildings; >100 m in open space
Antenna	Internal (external antenna optional via SMA socket)
Interface	RS-485
Protocol	ESP3, Modbus®
Transmission rate	9600 … 115200 Baud
Data width	50 bytes
Cable length	100 m (max.)
Power supply	24 VDC (−25 … +30 %)
Input current	2 A (max.)
Connection technology	RS-485 connection: 5-pole 2-conductor compact PCB connectors with PUSH WIRE® (252-155 is included) Supply connection: 2-pole 2-conductor compact PCB connectors with PUSH WIRE® (252-152 is included) Antenna: SMA socket for external antenna
Conductor cross-section	Solid: 0.4 … 0.8 mm² / 26 … 20 AWG
Strip length	6 … 7 mm
Dimensions (mm) Diameter x Height	95 × 36
Weight	103 g
Protection type	IP30 (front side)
Surrounding air temperature (operation)	0 … +55 °C
Surrounding air temperature (storage)	−20 … +85 °C
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3 + A1
Approvals	CE
Data sheet and additional information, see:	wago.com/750-940

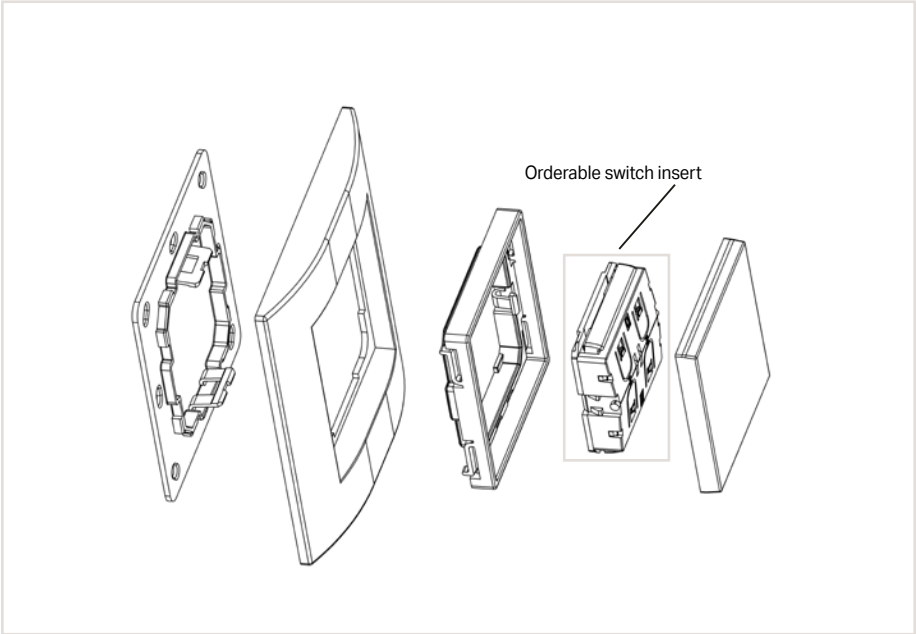
The EnOcean® RS-485 Gateway integrates maintenance-free, battery-free and wireless sensors/actuators based on EnOcean® wireless technology (ISO/IEC 14543-3-1x) into intelligent control systems such as the WAGO I/O System.

This gateway communicates with the remote station via RS-485 interface and ESP3 telegrams (EnOcean®) or via Modbus® protocol.

It may be mounted directly to the ceiling or wall. The device can also be mounted on a DIN-rail via an integrated adapter.
The gateway has an internal antenna and also has a connector for an optional external antenna.

Radio Transmitter, EnOcean® easyfit PTM 250





Item Description	Radio Transmitter, EnOcean® easyfit PTM 250			
Version	**2-Channel Lighting Control**	**4-Channel Lighting Control**	**2-Channel Sunblind Control**	**4-Channel Sunblind Control**
Item No.	**758-940/001-000**	**758-940/003-000**	**758-940/002-000**	**758-940/004-000**
Order Text	Radio Transmitter; EnOcean® easyfit PTM 250; 2-Channel Light	Radio Transmitter; EnOcean® easyfit PTM 250; 4-Channel Light	Radio Transmitter; EnOcean® easyfit PTM 250; 2-Channel Sunblind	Radio Transmitter; EnOcean® easyfit PTM 250; 4-Channel Sunblind
Technical Data				
Integrated radio transmitter module	EnOcean® PTM 200			
Wireless technology	EnOcean® 868 MHz; RPS type 2			
Range	300 m in open air; 30 m (typ.) within buildings*			
Antenna	Integrated			
Total installation height	14 mm (frame lies directly on flat surface)			
Dimensions of rocker/frame cut-out/center plate	50 x 50 mm / 55 x 55 mm / 71 x 71 m			
Mounting	Flat surface; glued (double-sided mounting film enclosed) or screwed			
Color	Pure white			
Rocker switch variant	Rocker switch with neutral middle position	Series rocker switch	Rocker switch with neutral middle position	Series rocker switch
Relative humidity	95 % (non condensing)			
Surrounding air temperature (operation)	–25 … +65 °C			
Compatibility	BERKER, GIRA, JUNG, MERTEN			
Approvals	R&TTE, CE			
For data sheet and additional information, see:	wago.com/758-940			

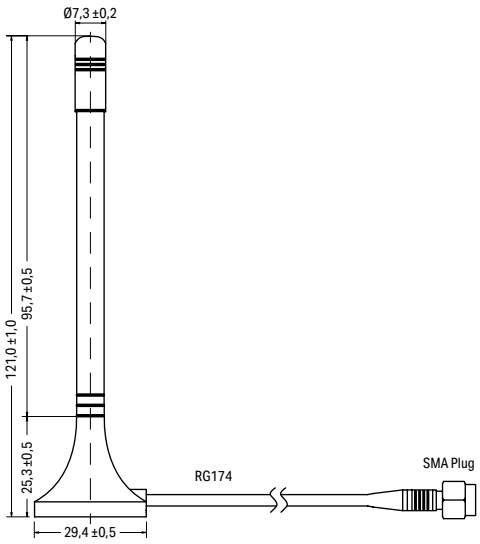
WAGO's EnOcean® easyfit PTM 250 Radio Transmitter is a universal, extremely flat wireless switch insert with a maintenance-free energy generator. This universal switch insert fits in numerous frame types from various installation material suppliers. The base plate can be glued or screwed into position for easy attachment to glass as well as plaster. Integration into the frame is similar to universal inserts for antenna sockets.

The switch insert is delivered without frame. Frames must be ordered separately from the desired manufacturer!

*The maximum range in the field decreases with use in buildings and changes depending on the building materials used and the spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

Magnetic-Mount Antenna; with 3 m cable and SMA plug; GSM/ UMTS; 850/ 900/ 1800/ 1900/ 2100 MHz

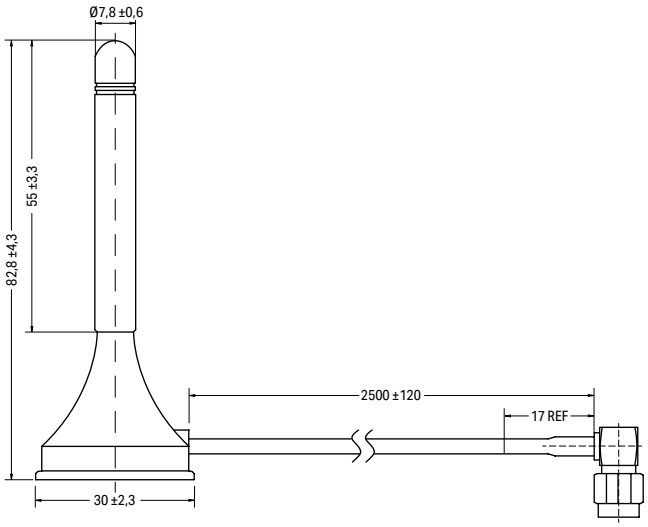




Item Description	Magnetic-Mount Antenna; with 3 m cable and SMA plug; GSM/ UMTS; 850/ 900/ 1800/ 1900/ 2100 MHz
Item No.	758-911
Technical Data	
Wireless technology	GSM; UMTS; EnOcean
Frequency band	824 … 960 MHz; 1710 … 2170 MHz
Gain	2 dBi
Mechanical Data	
Connector	SMA-Stecker
Connection cable length	3 m
Mounting type	Magnetic stand
Cable type	RG-174
Weight	44 g
Surrounding air temperature (operation)	-40 … +85 °C

Magnetic-Mount Antenna; GSM/UMTS/LTE/*Bluetooth*®/WLAN





Item Description	Magnetic-Mount Antenna; with 2.5 m cable and SMA angled plug; GSM/UMTS/LTE/*Bluetooth*®/WLAN; 698-960, 1400-1518, 1710-2700 MHz
Item No.	**758-975**
Technical Data	
Wireless technology	GSM; UMTS; LTE; *Bluetooth*®; WLAN
Frequency band	B1 … B23; B25 … B30; B32 … B42; B48; B66; B74 … 76; B78 Frequency range: 698 … 960 MHz; 1400 … 1518 MHz; 1710 … 2700 MHz
Gain	3 dBi
Mechanical Data	
Connector	SMA angled plug
Connection cable length	2.5 m
Mounting type	Magnetic stand
Cable type	RG-174
Weight	44 g
Surrounding air temperature (operation)	−40 … +85 °C

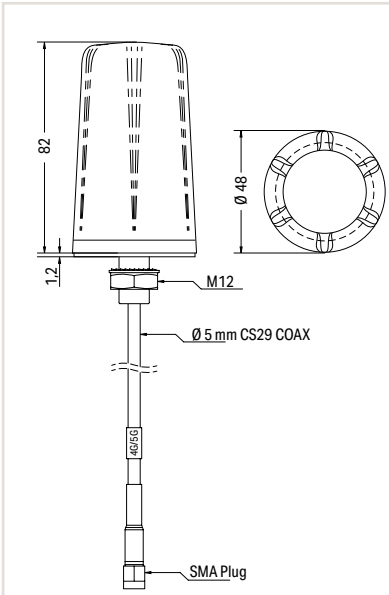
RF Antenna; GSM; UMTS; LTE; *Bluetooth*®; WLAN; 5G

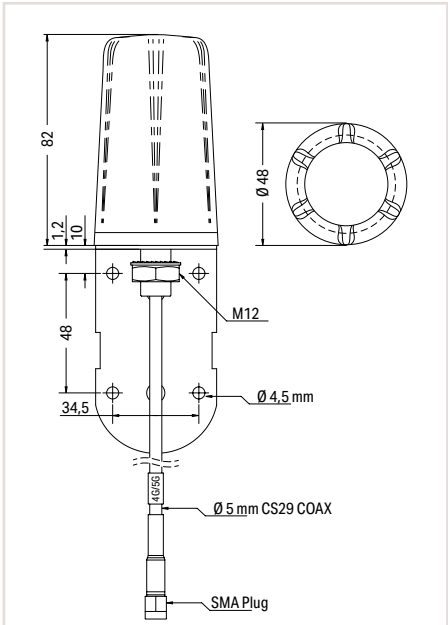


758-974



758-974/000-001





Item Description	RF Antenna; with 2.5 m cable and SMA plug; GSM/ UMTS/LTE/*Bluetooth*®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G	RF Antenna; with 2.5 m cable and SMA plug; GSM/ UMTS/LTE/*Bluetooth*®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G
Item No.	**758-974**	**758-974/000-001**
Technical Data		
Wireless technology	GSM; UMTS; LTE; *Bluetooth*®; WLAN; 5G	GSM; UMTS; LTE; *Bluetooth*®; WLAN; 5G
Frequency band	617 … 960 MHz; 1710 … 6000 MHz	617 … 960 MHz; 1710 … 6000 MHz
Gain	617 … 960 MHz: 1dBi; 1710 … 2700 MHz: 4dBi; 3400 … 3800 MHz: 8dBi; 4900 … 6000 MHz: 9dBi	617 … 960 MHz: 1dBi; 1710 … 2700 MHz: 4dBi; 3400 … 3800 MHz: 8dBi; 4900 … 6000 MHz: 9dBi
Mechanical Data		
Connectors	SMA plug	SMA plug
Connection cable length	2 m	2 m
Mounting type	Enclosure installation; adhesive strips	Wall-mount
Cable type	CS29	CS29
Weight	185 g	252 g
Protection type	IP66	IP66

- The antenna must be mounted on a conductive base plate measuring at least 40 x 40 cm.
- The distance of interfering sources to the antenna and antenna line must be at least 30 cm.
- The free space between the antenna and the next wall must be at least 35 cm.
- The antenna cable must not, under any circumstances, be bent sharply, or the antenna line may be irreversibly damaged.

- The distance of interfering sources to the antenna and antenna line must be at least 30 cm.
- The free space between the antenna and the next wall must be at least 35 cm.
- The antenna cable must not, under any circumstances, be bent sharply, or the antenna line may be irreversibly damaged.



Sensor/Actuator Boxes

Sensor/Actuator Boxes

- M8 and M12 Sensor/Actuator Boxes
- Passive signal acquisition and output at the machine level
- Fully encapsulated

Sensor/Actuator Boxes
Contents

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Approvals				635
Interfaces and Types				636
		Description	Item No.	
	M12 Sensor/Actuator Boxes with Cable Connection	M12 Sensor/Actuator Box; 4-Port, 4-Pole; 5 m Connection Cable	757-244/000-005	638
		M12 Sensor/Actuator Box; 4-Port, 4-Pole; 10 m Connection Cable	757-244/000-010	
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		M12 Sensor/Actuator Box; 8-Port, 4-Pole; 5 m Connection Cable	757-284/000-005	639
		M12 Sensor/Actuator Box; 8-Port, 4-Pole; 10 m Connection Cable	757-284/000-010	
		M12 Sensor/Actuator Box; 8-Port, 4-Pole; 25 m Connection Cable	757-284/000-025	
		M12 Sensor/Actuator Box; 4-Port, 5-Pole; 5 m Connection Cable	757-245/000-005	640
		M12 Sensor/Actuator Box; 4-Port, 5-Pole; 10 m Connection Cable	757-245/000-010	
		M12 Sensor/Actuator Box; 6-Port, 5-Pole; 5 m Connection Cable	757-265/000-005	640
		M12 Sensor/Actuator Box; 6-Port, 5-Pole; 10 m Connection Cable	757-265/000-010	
		M12 Sensor/Actuator Box; 8-Port, 5-Pole; 5 m Connection Cable	757-285/000-005	641
		M12 Sensor/Actuator Box; 8-Port, 5-Pole; 10 m Connection Cable	757-285/000-010	
		M12 Sensor/Actuator Box; 8-Port, 5-Pole; 25 m Connection Cable	757-285/000-025	
	M12 Sensor/Actuator Boxes with M23 Connection	M12 Sensor/Actuator Box; 4-Port; 4-Pole; M23 Connector	757-144	642
		M12 Sensor/Actuator Box; 6-Port; 4-Pole; M23 Connector	757-164	642
		M12 Sensor/Actuator Box; 8-Port; 4-Pole; M23 Connector	757-184	643
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		M12 Sensor/Actuator Box; 8-Port; 5-Pole; M23 Connector; without LED	757-185/100-000	
	M8 Sensor/Actuator Boxes with Cable Connection	M8 Sensor/Actuator Box; 4-Port, 3-Pole; 5 m Connection Cable	757-443/000-005	646
		M8 Sensor/Actuator Box; 4-Port, 3-Pole; 10 m Connection Cable	757-443/000-010	
		M8 Sensor/Actuator Box; 6-Port, 3-Pole; 5 m Connection Cable	757-463/000-005	646
		M8 Sensor/Actuator Box; 6-Port, 3-Pole; 10 m Connection Cable	757-463/000-010	
		M8 Sensor/Actuator Box; 8-Port, 3-Pole; 5 m Connection Cable	757-483/000-005	647
		M8 Sensor/Actuator Box; 8-Port, 3-Pole; 10 m Connection Cable	757-483/000-010	
		M8 Sensor/Actuator Box; 10-Port, 3-Pole; 5 m Connection Cable	757-403/000-005	647
		M8 Sensor/Actuator Box; 10-Port, 3-Pole; 10 m Connection Cable	757-403/000-010	
	M8 Sensor/Actuator Boxes with M16 Connection	M8 Sensor/Actuator Box; 4-Port; 3-Pole; M16 Connector	757-343	648
		M8 Sensor/Actuator Box; 6-Port; 3-Pole; M16 Connector	757-363	648
		M8 Sensor/Actuator Box; 8-Port; 3-Pole; M16 Connector	757-383	649
		M8 Sensor/Actuator Box; 10-Port; 3-Pole; M16 Connector	757-303	649
	Accessories Marker Cards, Marking Strips, Protective Caps, Spacer Modules, Interconnection Cables			650

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Sensor/Actuator Boxes
General Product Information

For Signal Acquisition at the Machine Level

WAGO's passive M8/M12 Sensor/Actuator Boxes are placed close to the process and acquire signals at the machine level. They can be used under very harsh environmental conditions and establish the connection between sensors/actuators and the controller via molded or detachable cables. Use of standardized pluggable connections supports plug-and-play installation of sensors and actuators, while trunk cables replace the individual wiring of I/O signals to automation components in the control cabinet. Cabling is well-organized and minimized.

Signal Acquisition in Exceptionally Harsh Conditions

WAGO's Sensor/Actuator Boxes with molded cables have an extremely robust design and meet both IP67 and IP68 protection standards (72 hours at 1 m water depth). This design makes them ideal for applications where signals must be recorded in extreme environments (temperature, shock, vibration) without a control cabinet. They're also excellent alternatives when using an active IP67 I/O system would not be cost-effective due to a low signal count or the simple signal conditions (only digital signal acquisition/output).

Plug-&-Play Connection Technology

The IP67 Sensor/Actuator Boxes with a removable connection cable (M16 or M23 pluggable connector) are ideal for areas where frequent easy disconnection and reconnection are required (e.g., transport, modification, service).

Fixed Trunk Cable

The IP68 Sensor/Actuator Boxes with molded cables are preferred when challenging cable paths do not allow the installation of M16/M23 cable assemblies.

Extreme Mechanical Performance

A system/machine is exposed to severe mechanical and thermal influences. It is important to process its signals despite severe vibrations and shocks. WAGO's Sensor/Actuator Boxes are used at the machine level. Full encapsulation safeguards system operation, so even extreme vibration and temperature loads do not degrade signal acquisition and power supply via the connection cable to the controller or other automation components located in the non-critical control cabinet area.

Flexible Installation

WAGO's Sensor/Actuator Boxes can be directly mounted on machines. Extensive engineering ensures compliance with standardized specifications from CNOMO guidelines regarding the spacing of assembly drill holes that are often used in passive distribution boxes or sensor/actuator boxes. An optional adapter is available for seamlessly mounting two modules side by side. This has the advantage of maintaining a specified distance for properly routing the sensor/actuator cables and avoiding contamination points.

Advantages:
- Rugged, simple and compact extension for IP20 automation components
  - for stricter requirements on environmental conditions
  - for plug-and-play connector technology when needed
  - for simpler cable installation in the form of trunk cables
- High-quality PUR connection cables (drag chain compatible, halogen-free)
- Fully encapsulated (resistance and leak-proof)
- Flange sockets (metal design)
- Surrounding air temperature (operation): −25 … +80 °C
- Status LEDs

Sensor/Actuator Boxes
Item Number Key

Explanation of an item number key's components:

Series

Item No. : 757-abc/x00-0yy

a: Design
- 1: M12 sensor/actuator box with M23 connector
- 2: M12 sensor/actuator box with cable connector
- 3: M8 sensor/actuator box with M16 connector
- 4: M8 sensor/actuator box with cable connector

b: Number of M8/M12 connectors
- 4: 4 ea.
- 6: 6 ea.
- 8: 8 ea.
- 0: 10 ea.

c: Pole number
- 3: 3-pole
- 4: 4-pole
- 5: 5-pole

x00: Status LEDs
- 100: without status LEDs

0yy: Length of connection cable
- 002: 2 m
- 005: 5 m
- 010: 10 m
- 025: 25 m

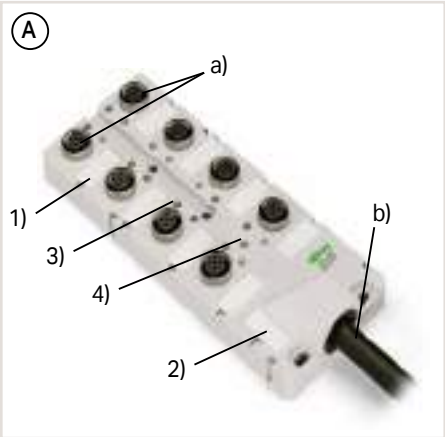
Standards and Rated Conditions

General Specifications	
Electrical Data	
Contact resistance (max.)	10 mΩ
Supply voltage	10 … 30 VDC
Current carrying capacity (signal connections)	2 A
Current carrying capacity (supply connections)	9 A (M12) or 6 A (M8)
Signal characteristics	PNP
Mechanical Data	
Protection type	
Sensor/actuator boxes with cable connection	IP68 (72 hours at 1 m water depth)
Sensor/actuator boxes with M16/M23 connection	IP67
Surrounding air temperature (operation)	–25 … +80 °C
Mounting	Screw mount
Mounting position	Any
Vibration resistance	5g per IEC 60068-2-6
Shock resistance	49g per IEC 60068-2-27
Material Data	
Housing material	PA 66 (UL 94 V0); RAL 7035; silicon and halogen free
Encapsulation	Fully encapsulated with conformal coating (UL 94 V0)
Connection cable	Drag chain compatible

Approvals

Overview of the approvals in the item comparison in Section 14, Technical Section, or online at www.wago.com

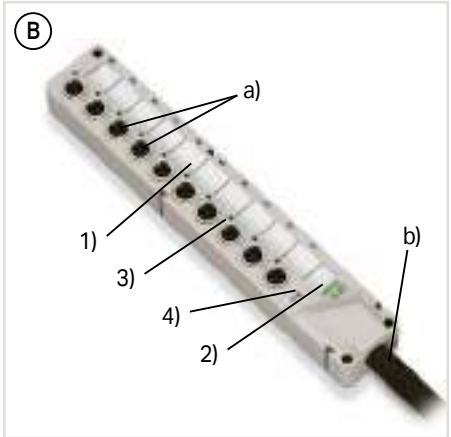
Sensor/Actuator Boxes
Interfaces and Types

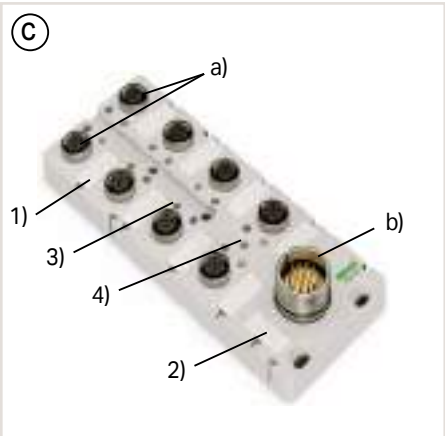


(1) Sensor/actuator marking
(2) Module marking
(3) Yellow status LED (for each channel)
(4) Green operating status LED (module)

Housing Design (A)
- M12 sensor/actuator box with cable connection
- Sensor/actuator M12 sockets (a)
- Connection technology (trunk cable): fixed connection cable (b)

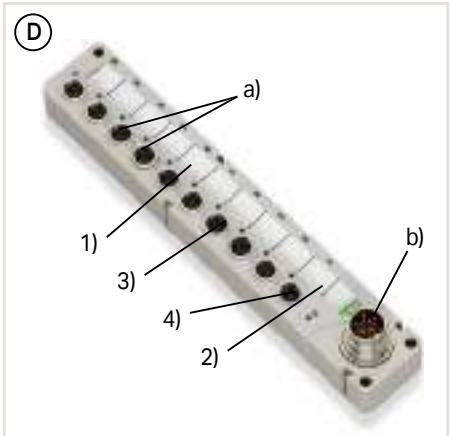
Housing Design (B)
- M8 sensor/actuator box with cable connection
- Sensor/actuator M8 sockets (a)
- Connection technology (trunk cable): fixed connection cable (b)





Housing Design (C)
- M12 sensor/actuator box with M23 plug
- Sensor/actuator M12 sockets (a)
- Connection technology (trunk cable): M23 plug (b)

Housing Design (D)
- M8 sensor/actuator box with M16 plug
- Sensor/actuator M8 sockets (a)
- Connection technology (trunk cable): M16 plug (b)





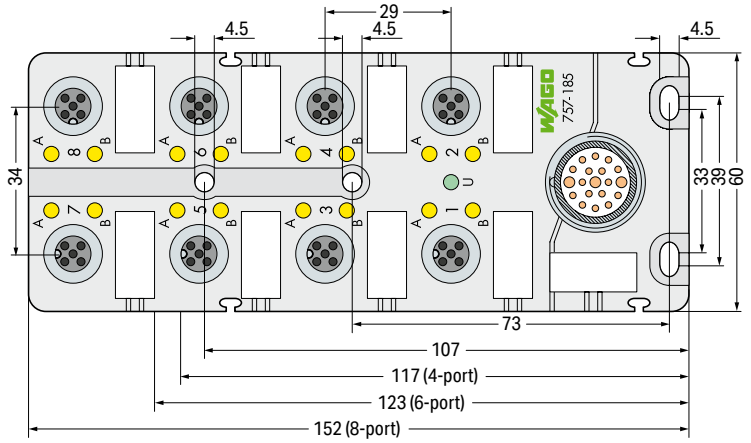
Spacer Module (E)
- Optional accessory
- For seamless assembly of two side-by-side sensor/actuator boxes
- Specified distance for proper cable connection
- Covers contamination points
- W x H x D (mm):
  10-port: 20 x 16 x 175
  8-port: 20 x 16 x 152
  6-port: 20 x 16 x 123
  4-port: 20 x 16 x 117



Protection Type (F)
- Fully encapsulated modules
- IP67/68 protection type
- Back-side printing details pin assignment

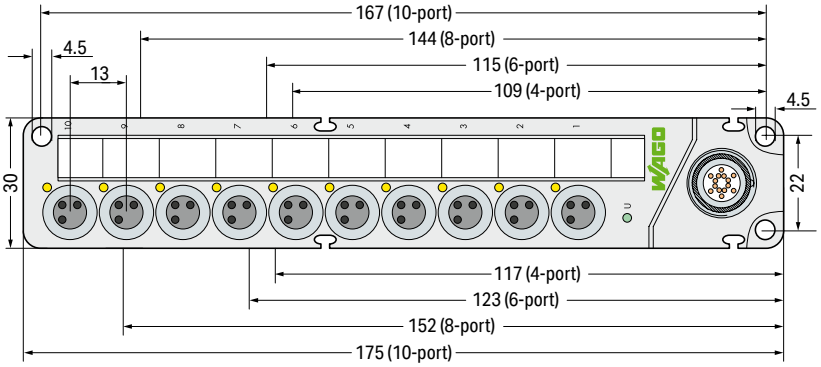
Sensor/Actuator Boxes
Interfaces and Types

Dimensions and Mounting Dimensions
of M12 Sensor/Actuator Boxes
The dimensions also apply to M12 sensor/actuator boxes with cable connection.



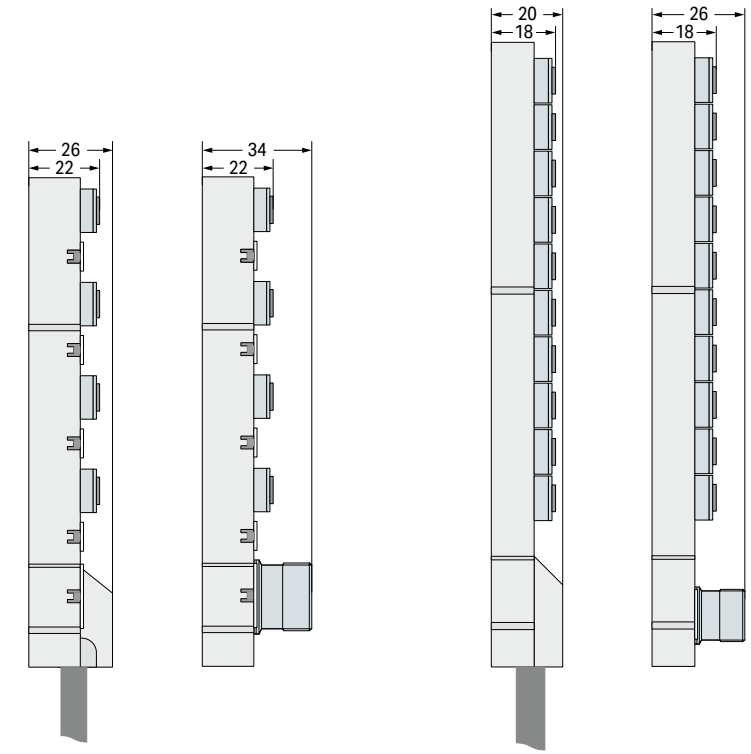
Dimensions in mm

Dimensions and Mounting Dimensions
of M8 Sensor/Actuator Boxes
The dimensions also apply to M8 sensor/actuator boxes with cable connection.



Dimensions in mm

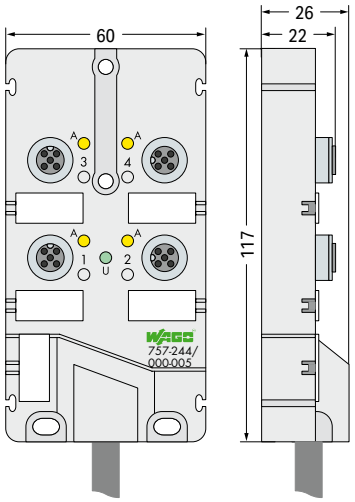
Dimensions:
Depth of M12 sensor/actuator boxes
or M8 sensor/actuator boxes

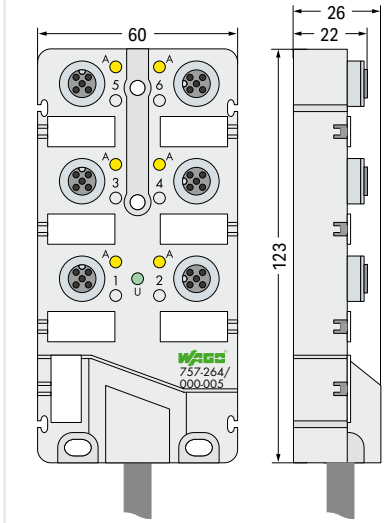


12

Sensor/actuator boxes ▶ M12 socket; 4-pole; incl. ground



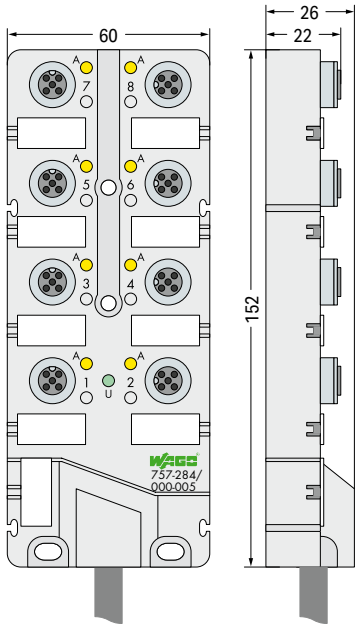


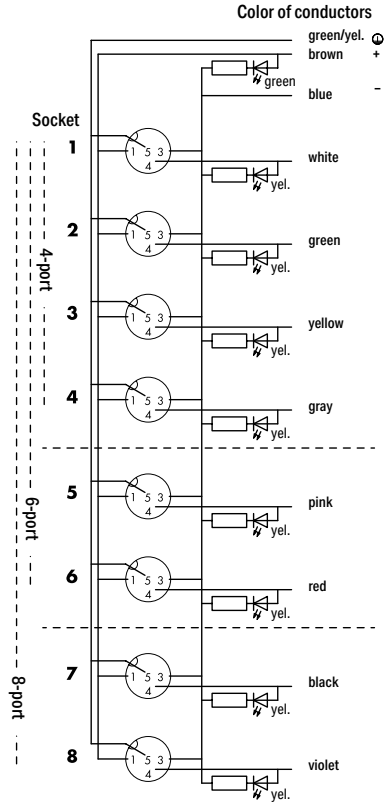


Connection technology: inputs/outputs	4 x M12 socket; 4-pole; incl. ground		6 x M12 socket; 4-pole; incl. ground	
Item description	M12 Sensor/Actuator Box; 4-port; 4-pole		M12 Sensor/Actuator Box; 6-port, 4-pole	
Version	5 m connecting cable	10 m connecting cable	5 m connecting cable	10 m connecting cable
Item no.	**757-244/000-005**	**757-244/000-010**	**757-264/000-005**	**757-264/000-010**
Order Text	**M12 S/A-Box; 4port; 4pole; 5m**	**M12 S/A-Box; 4port; 4pole; 10m**	**M12 S/A-Box; 6port; 4pole; 5m**	**M12 S/A-Box; 6port; 4pole; 10m**

Technical data				
Connection technology: inputs/outputs	4 x M12 socket; 4-pole; incl. ground		6 x M12 socket; 4-pole; incl. ground	
Pole number	4		4	
Connection technology: trunk cable	1 x Fixed connecting cable		1 x Fixed connecting cable	
Length of connection cable	5 m	10 m	5 m	10 m
Dimensions W x H x D	(60 x 26 x 117) mm		(60 x 26 x 123) mm	
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.		E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
For data sheet and additional information, see:	wago.com/757-244/000-005		wago.com/757-264/000-005	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Fiber-tip pen	210-110	210-110	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	757-040	-	-
Spacer module for sensor/actuator box; 6-way	-	-	757-060	757-060
Spacer module for sensor/actuator box; 8-way	-	-	-	-

12





8 x M12 socket; 4-pole; incl. ground		
M12 Sensor/Actuator Box; 8-port, 4-pole		
5 m connecting cable	10 m connecting cable	25 m connecting cable
757-284/000-005	757-284/000-010	757-284/000-025
M12 S/A-Box; 8port; 4pole; 5m	M12 S/A-Box; 8port; 4pole; 10m	M12 S/A-Box; 8port; 4pole; 25m

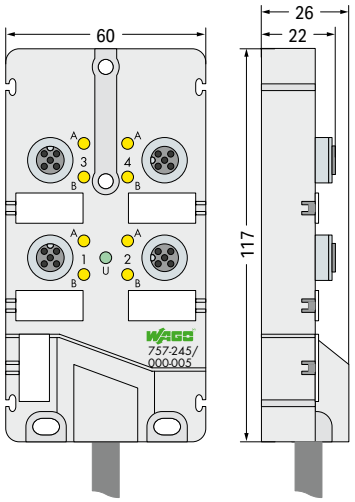
8 x M12 socket; 4-pole; incl. ground		
4		
1 x Fixed connecting cable		
5 m	10 m	25 m
(60 x 26 x 152) mm		

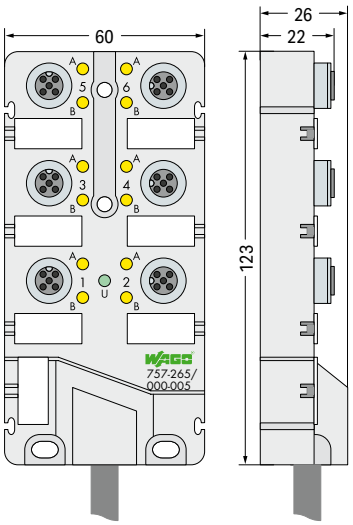
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.

wago.com/757-284/000-005		
Item no.	Item no.	Item no.
210-110	210-110	210-110
756-8102	756-8102	756-8102
757-011	757-011	757-011
-	-	-
-	-	-
757-080	757-080	757-080

Sensor/actuator boxes ▶ M12 socket; 5-pole; incl. ground

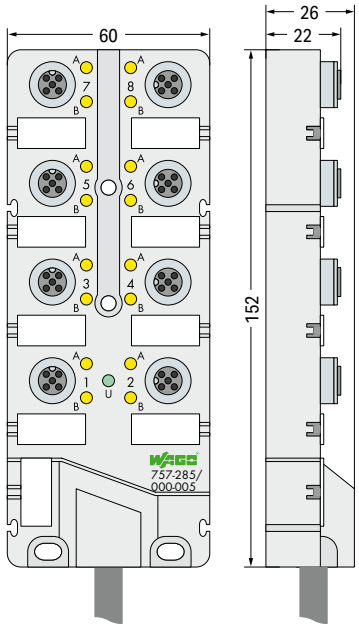


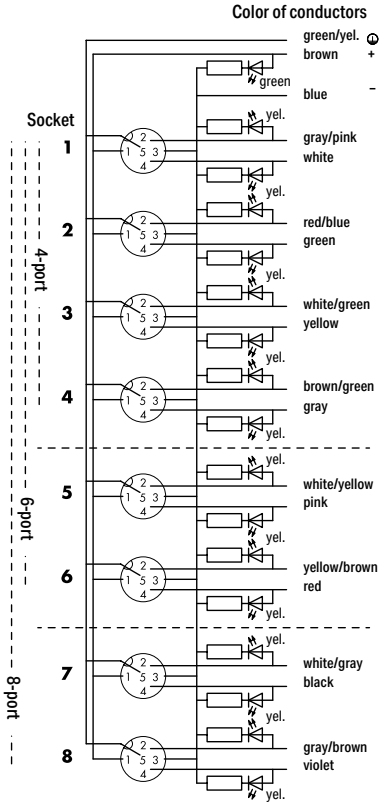




Connection technology: inputs/outputs	4 x M12 socket; 5-pole; incl. ground		6 x M12 socket; 5-pole; incl. ground	
Item description	M12 Sensor/Actuator Box; 4-port, 5-pole		M12 Sensor/Actuator Box; 6-port, 5-pole	
Version	5 m connecting cable	10 m connecting cable	5 m connecting cable	10 m connecting cable
Item no.	**757-245/000-005**	**757-245/000-010**	**757-265/000-005**	**757-265/000-010**
Order Text	**M12 S/A-Box; 4port; 5pole; 5m**	**M12 S/A-Box; 4port; 5pole; 10m**	**M12 S/A-Box; 6port; 5pole; 5m**	**M12 S/A-Box; 6port; 5pole; 10m**

Technical data				
Connection technology: inputs/outputs	4 x M12 socket; 5-pole; incl. ground		6 x M12 socket; 5-pole; incl. ground	
Pole number	5		5	
Connection technology: trunk cable	1 x Fixed connecting cable		1 x Fixed connecting cable	
Length of connection cable	5 m	10 m	5 m	10 m
Dimensions W x H x D	(60 x 26 x 117) mm		(60 x 26 x 123) mm	
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.		E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
For data sheet and additional information, see:	wago.com/757-245/000-005		wago.com/757-265/000-005	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Fiber-tip pen	210-110	210-110	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	757-040	-	-
Spacer module for sensor/actuator box; 6-way	-	-	757-060	757-060
Spacer module for sensor/actuator box; 8-way	-	-	-	-





8 x M12 socket; 5-pole; incl. ground		
M12 Sensor/Actuator Box; 8-port, 5-pole		
5 m connecting cable	10 m connecting cable	25 m connecting cable
757-285/000-005	757-285/000-010	757-285/000-025
M12 S/A-Box; 8port; 5pole; 5m	M12 S/A-Box; 8port; 5pole; 10m	M12 S/A-Box; 8port; 5pole; 25m

8 x M12 socket; 5-pole; incl. ground		
5		
1 x Fixed connecting cable		
5 m	10 m	25 m
(60 x 26 x 152) mm		

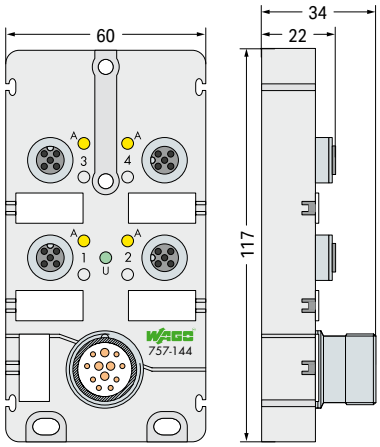
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.

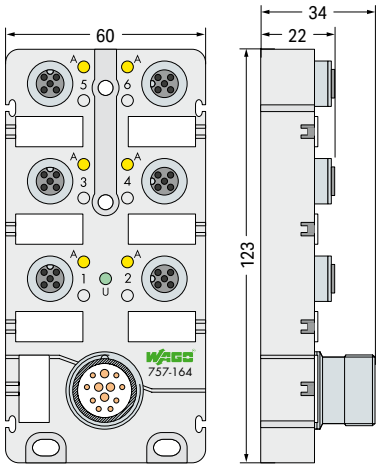
wago.com/757-285/000-005		
Item no.	Item no.	Item no.
210-110	210-110	210-110
756-8102	756-8102	756-8102
757-011	757-011	757-011
-	-	-
-	-	-
757-080	757-080	757-080

Sensor/actuator boxes ▶ M12 socket; 4-pole; incl. ground



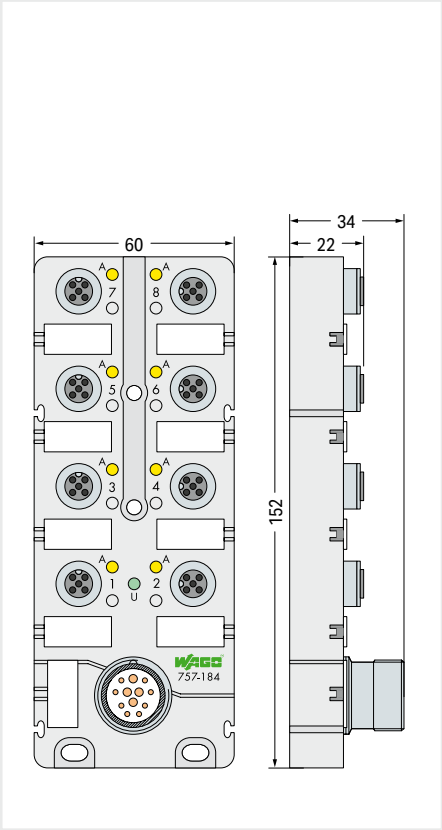
757-185

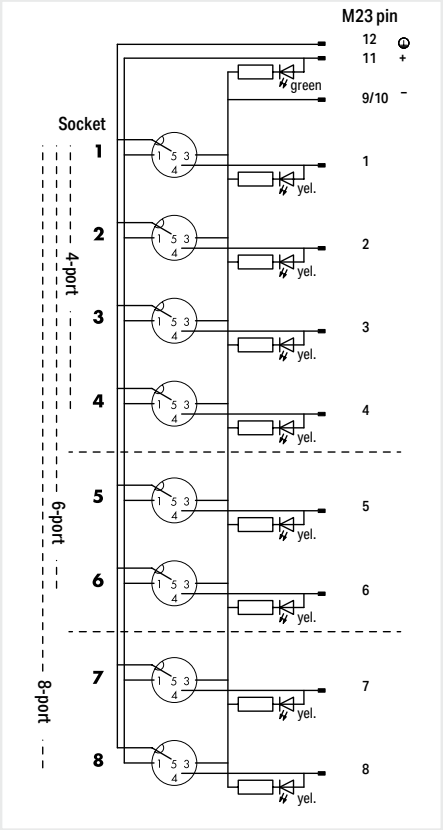




Connection technology: inputs/outputs	4 x M12 socket; 4-pole; incl. ground	6 x M12 socket; 4-pole; incl. ground
Item description	M12 Sensor/Actuator Box; 4-port; 4-pole; M23 connector	M12 Sensor/Actuator Box; 6-port; 4-pole; M23 connector
Item no.	**757-144**	**757-164**
Order Text	**M12 S/A-Box; 4port; 4pole; M23**	**M12 S/A-Box; 6port; 4pole; M23**

Technical data		
Connection technology: inputs/outputs	4 x M12 socket; 4-pole; incl. ground	6 x M12 socket; 4-pole; incl. ground
Pole number	4	4
Connection technology: trunk cable	1 x M23 plug; 12-pole	1 x M23 plug; 12-pole
Dimensions W x H x D	(60 x 34 x 117) mm	(60 x 34 x 123) mm
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
For data sheet and additional information, see:	wago.com/757-144	wago.com/757-164
Accessories	**Item no.**	**Item no.**
Fiber-tip pen	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	-
Spacer module for sensor/actuator box; 6-way	-	757-060
Spacer module for sensor/actuator box; 8-way	-	-





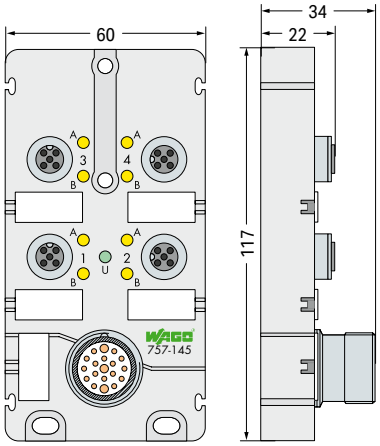
8 x M12 socket; 4-pole; incl. ground
M12 Sensor/Actuator Box; 8-port; 4-pole; M23 connector
757-184
M12 S/A-Box; 8port; 4pole; M23

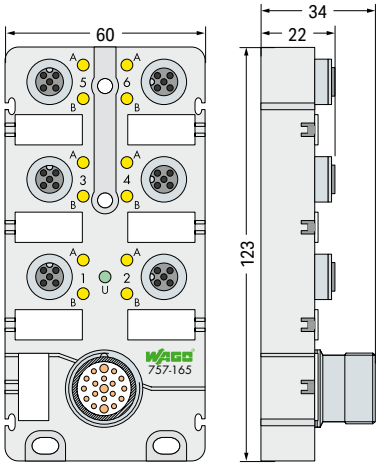
8 x M12 socket; 4-pole; incl. ground
4
1 x M23 plug; 12-pole
(60 x 34 x 152) mm
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
wago.com/757-184
Item no.
210-110
756-8102
757-011
-
-
757-080

Sensor/actuator boxes ▶ M12 socket; 5-pole; incl. ground



757-185



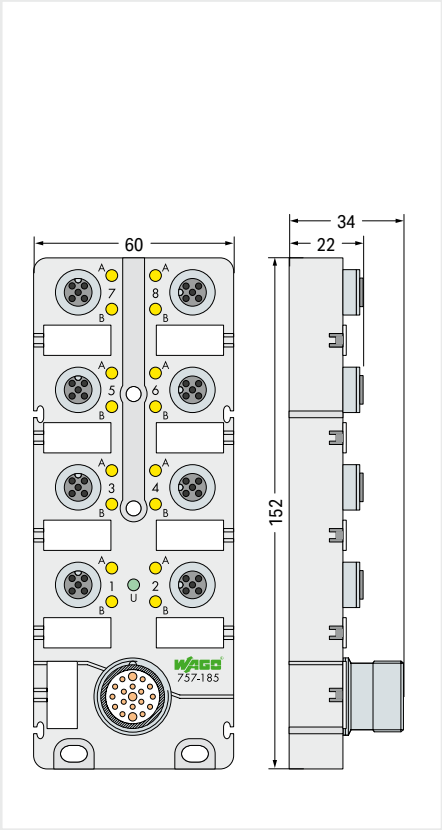


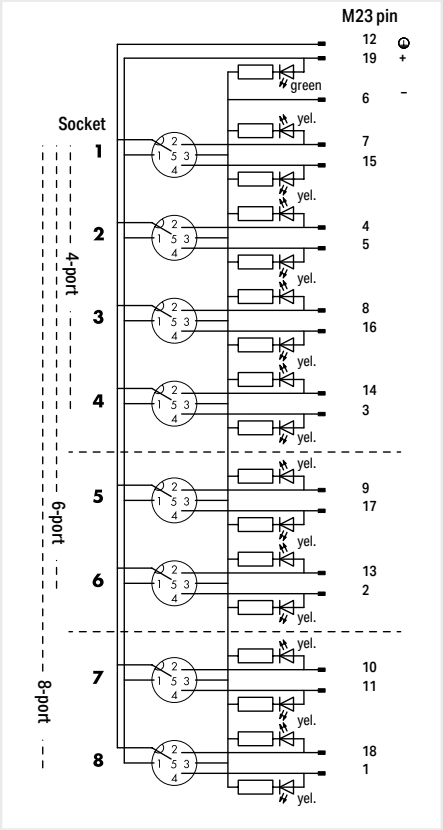
Connection technology: inputs/outputs	4 x M12 socket; 5-pole; incl. ground	6 x M12 socket; 5-pole; incl. ground
Item description	M12 Sensor/Actuator Box; 4-port; 5-pole; M23 connector	M12 Sensor/Actuator Box; 6-port; 5-pole; M23 connector
Item no.	**757-145**	**757-165**
Order Text	**M12 S/A-Box; 4port; 5pole; M23**	**M12 S/A-Box; 6port; 5pole; M23**

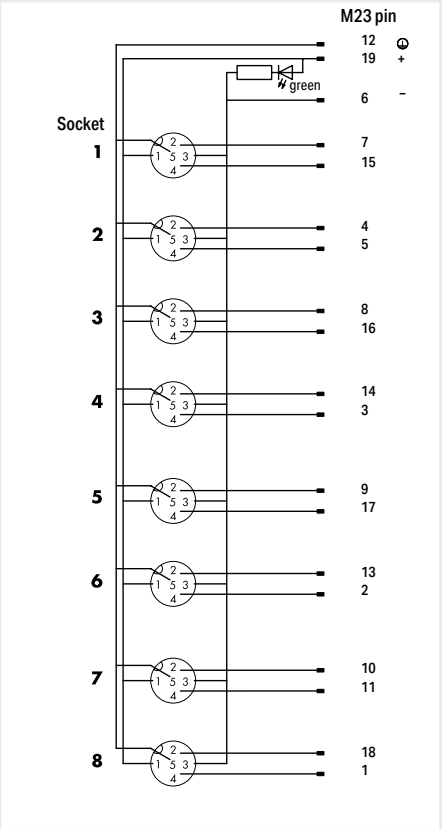
Technical data

Connection technology: inputs/outputs	4 x M12 socket; 5-pole; incl. ground	6 x M12 socket; 5-pole; incl. ground
Pole number	5	5
Connection technology: trunk cable	1 x M23 plug; 19-pole	1 x M23 plug; 19-pole
Dimensions W x H x D	(60 x 34 x 117) mm	(60 x 34 x 123) mm
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
For data sheet and additional information, see:	wago.com/757-145	wago.com/757-165
Accessories	**Item no.**	**Item no.**
Fiber-tip pen	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	-
Spacer module for sensor/actuator box; 6-way	-	757-060
Spacer module for sensor/actuator box; 8-way	-	-

12







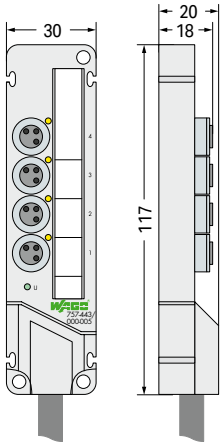
8 x M12 socket; 5-pole; incl. ground	
M12 Sensor/Actuator Box; 8-port; 5-pole; M23 connector	
	without LED
757-185	757-185/100-000
M12 S/A-Box; 8port; 5pole; M23	M12 S/A-Box; 8port; 5pole; M23; NL

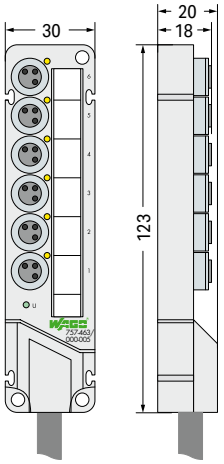
8 x M12 socket; 5-pole; incl. ground
5
1 x M23 plug; 19-pole
(60 x 34 x 152) mm
E 175199; OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
wago.com/757-185

Item no.	Item no.
210-110	210-110
756-8102	756-8102
757-011	757-011
-	-
-	-
757-080	757-080

Sensor/actuator boxes ▶ M8 socket; 3-pole

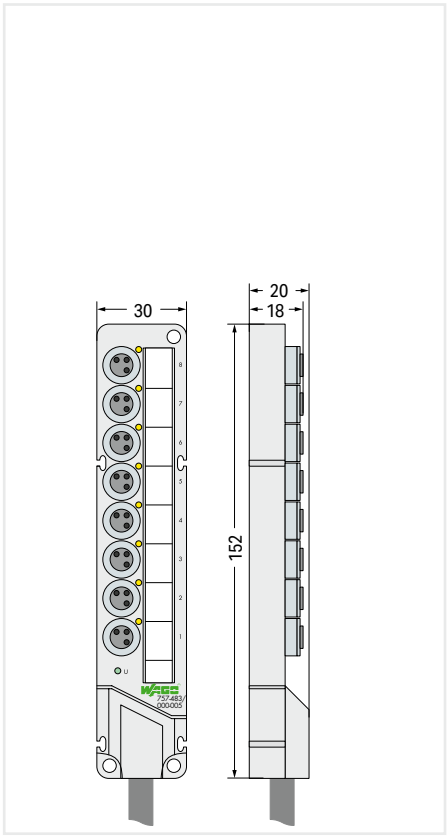


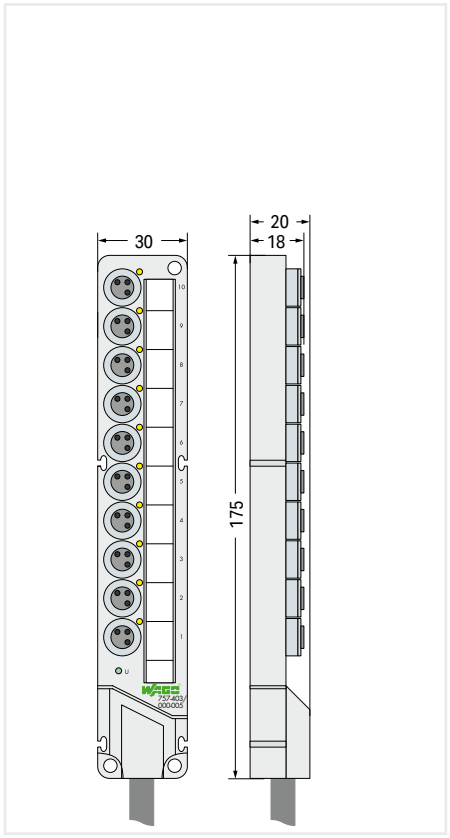


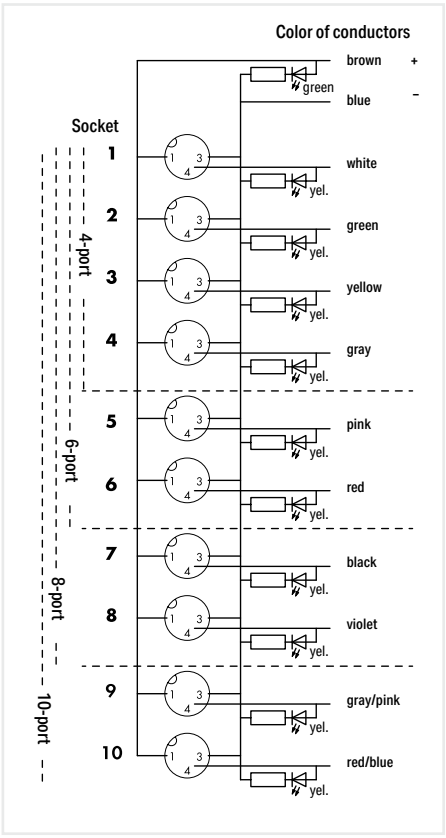


Connection technology: inputs/outputs	4 x M8 socket; 3-pole		6 x M8 socket; 3-pole	
Item description	M8 Sensor/Actuator Box; 4-port, 3-pole		M8 Sensor/Actuator Box; 6-port, 3-pole	
Version	5 m connecting cable	10 m connecting cable	5 m connecting cable	10 m connecting cable
Item no.	**757-443/000-005**	**757-443/000-010**	**757-463/000-005**	**757-463/000-010**
Order Text	**M8 S/A-Box; 4port; 3pole; 5m**	**M8 S/A-Box; 4port; 3pole; 10m**	**M8 S/A-Box; 6port; 3pole; 5m**	**M8 S/A-Box; 6port; 3pole; 10m**

Technical data				
Connection technology: inputs/outputs	4 x M8 socket; 3-pole		6 x M8 socket; 3-pole	
Pole number	3		3	
Connection technology: trunk cable	1 x Fixed connecting cable		1 x Fixed connecting cable	
Length of connection cable	5 m	10 m	5 m	10 m
Dimensions W x H x D	(30 x 20 x 117) mm		(30 x 20 x 123) mm	
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.		E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
For data sheet and additional information, see:	wago.com/757-443/000-005		wago.com/757-463/000-005	
Accessories	**Item no.**	**Item no.**	**Item no.**	**Item no.**
Fiber-tip pen	210-110	210-110	210-110	210-110
M8 protective cap; for unused sockets	756-8101	756-8101	756-8101	756-8101
Spacer module for sensor/actuator box; 4-way	757-040	757-040	-	-
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	757-041	757-041	-	-
Spacer module for sensor/actuator box; 6-way	-	-	757-060	757-060
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	-	-	757-061	757-061
Spacer module for sensor/actuator box; 8-way	-	-	-	-
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	-	-	-	-
Spacer module for sensor/actuator box; 10-way	-	-	-	-
Marking strips; not stretchable; snap-on type	-	-	-	-







8 x M8 socket; 3-pole	
M8 Sensor/Actuator Box; 8-port, 3-pole	
5 m connecting cable	10 m connecting cable
757-483/000-005	757-483/000-010
M8 S/A-Box; 8port; 3pole; 5m	M8 S/A-Box; 8port; 3pole; 10m

10 x M8 socket; 3-pole	
M8 Sensor/Actuator Box; 10-port, 3-pole	
5 m connecting cable	10 m connecting cable
757-403/000-005	757-403/000-010
M8 S/A-Box; 10port; 3pole; 5m	M8 S/A-Box; 10port; 3pole; 10m

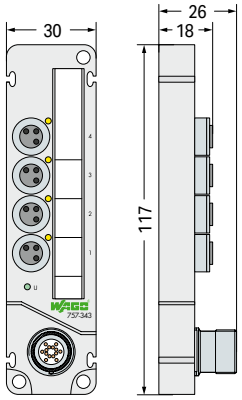
8 x M8 socket; 3-pole	
3	
1 x Fixed connecting cable	
5 m	10 m
(30 x 20 x 152) mm	
E 175199; OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
wago.com/757-483/000-005	
Item no.	Item no.
210-110	210-110
756-8101	756-8101
-	-
-	-
-	-
-	-
757-080	757-080
757-081	757-081
-	-
-	-

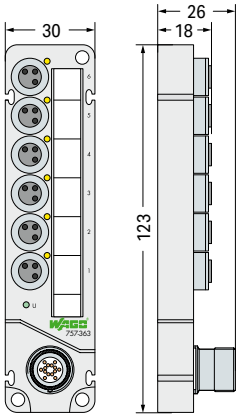
10 x M8 socket; 3-pole	
3	
1 x Fixed connecting cable	
5 m	10 m
(30 x 20 x 175) mm	
E 175199; OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
wago.com/757-403/000-005	
Item no.	Item no.
210-110	210-110
756-8101	756-8101
-	-
-	-
-	-
-	-
-	-
-	-
757-000	757-000
757-001	757-001

Sensor/actuator boxes ▶ M8 socket; 3-pole



757-303

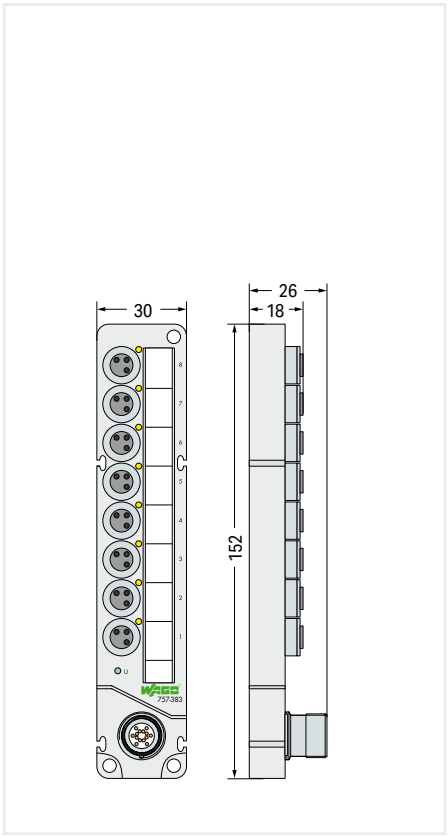


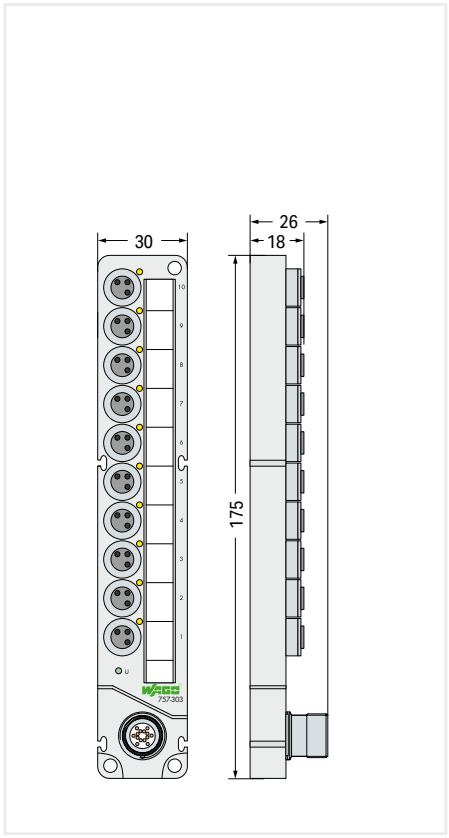


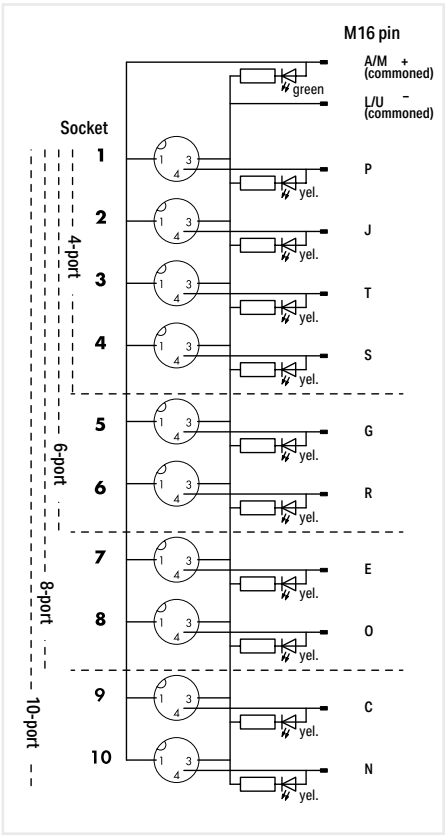
Connection technology: inputs/outputs	4 x M8 socket; 3-pole	6 x M8 socket; 3-pole
Item description	M8 Sensor/Actuator Box; 4-port; 3-pole; M16 connector	M8 Sensor/Actuator Box; 6-port; 3-pole; M16 connector
Item no.	**757-343**	**757-363**
Order Text	**M8 S/A-Box; 4port; 3pole; M16**	**M8 S/A-Box; 6port; 3pole; M16**

Technical data		
Connection technology: inputs/outputs	4 x M8 socket; 3-pole	6 x M8 socket; 3-pole
Pole number	3	3
Connection technology: trunk cable	1 x M16 plug; 14-pole	1 x M16 plug; 14-pole
Dimensions W x H x D	(30 x 26 x 117) mm	(30 x 26 x 123) mm
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
For data sheet and additional information, see:	wago.com/757-343	wago.com/757-363

Accessories	**Item no.**	**Item no.**
Fiber-tip pen	210-110	210-110
M8 protective cap; for unused sockets	756-8101	756-8101
Spacer module for sensor/actuator box; 4-way	757-040	-
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	757-041	-
Spacer module for sensor/actuator box; 6-way	-	757-060
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	-	757-061
Spacer module for sensor/actuator box; 8-way	-	-
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	-	-
Spacer module for sensor/actuator box; 10-way	-	-
Marking strips; not stretchable; snap-on type	-	-







8 x M8 socket; 3-pole	10 x M8 socket; 3-pole
M8 Sensor/Actuator Box; 8-port; 3-pole; M16 connector	M8 Sensor/Actuator Box; 10-port; 3-pole; M16 connector
757-383	757-303
M8 S/A-Box; 8port; 3pole; M16	M8 S/A-Box; 10port; 3pole; M16
8 x M8 socket; 3-pole	10 x M8 socket; 3-pole
3	3
1 x M16 plug; 14-pole	1 x M16 plug; 14-pole
(30 x 26 x 152) mm	(30 x 26 x 175) mm
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
wago.com/757-383	wago.com/757-303
Item no.	**Item no.**
210-110	210-110
756-8101	756-8101
-	-
-	-
-	-
-	-
757-080	-
757-081	-
-	757-000
-	757-001

Sensor/Actuator Boxes; Accessories



Marker Card; not stretchable; snap-on type		
	Item No.	PU
for M12 Sensor/Actuator Box	757-011	1



Marking Strip; cut to specified length; not stretchable; plain; snap-on type		
for M8 Sensor/Actuator Box	Item No.	PU
4-port	757-041	100
6-port	757-061	100
8-port	757-081	100
10-port	757-001	100



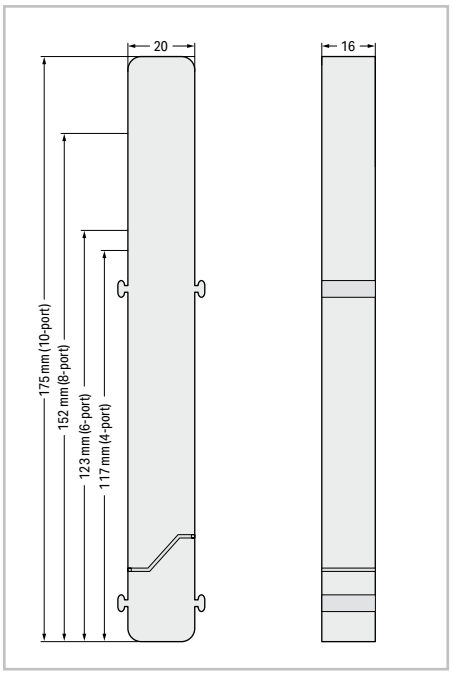
Felt-Tip Pen		
	Item No.	PU
for permanent marking	210-110	1

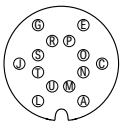


Protective Caps (for covering unused sensor/actuator ports)		
	Item No.	PU
M8 Protective Cap	756-8101	10
M12 Protective Cap	756-8102	10



Spacer Module for Sensor/Actuator Box		
	Item No.	PU
4-port	757-040	10
6-port	757-060	10
8-port	757-080	10
10-port	757-000	10





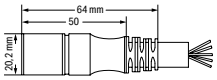
14-pole

Pin A, L: 0.75 mm²
Pin C … J, N … T: 0.34 mm²

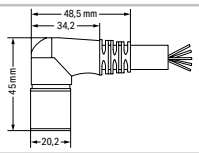
A	brown	N	pink-brown
C	white-pink	O	violet
E	black	P	white
G	rose	R	red
J	green	S	gray
L	blue	T	yellow
M bridged with A		U bridged with L	

Operating voltage	150 V
Operating current	6 A (0.75 mm²); 4 A (0.34 mm²)
Rated surge voltage	1.2 kV
Drag chain suitability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–30 … +90 °C
Protection type	IP67
Cable diameter	9.1 mm ±0.2







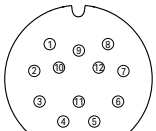


Interconnection Cable; 14-pole; M16 socket (straight)

Cable Length	Item No.	PU
5 m	756-3205/140-050	1
10 m	756-3205/140-100	1
15 m	756-3205/140-150	1

Interconnection Cable; 14-pole; M16 socket (angled)

Cable Length	Item No.	PU
5 m	756-3206/140-050	1
10 m	756-3206/140-100	1
15 m	756-3206/140-150	1



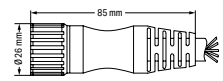
12-pole

Pin 9, 11, 12: 1.00 mm²;
Pin 1 … 8: 0.34 mm²

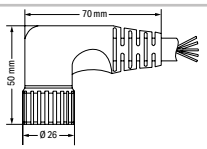
1	white	9	blue
2	green	10	bridged with 9
3	yellow	11	brown
4	gray	12	green-yellow
5	rose		
6	red		
7	black		
8	violet		

Operating voltage (max.)	300 V
Operating current	8 A
Rated surge voltage	≥ 2.0 kV rms
Drag chain suitability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +80 °C
Protection type	IP67
Cable diameter	9.3 mm ±0.3







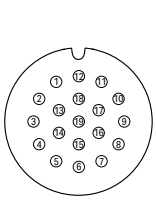


Interconnection Cable; 12-pole; M23 socket (straight)

Cable Length	Item No.	PU
5 m	756-3201/120-050	1
10 m	756-3201/120-100	1
15 m	756-3201/120-150	1

Interconnection Cable; 12-pole; M23 socket (angled)

Cable Length	Item No.	PU
5 m	756-3202/120-050	1
10 m	756-3202/120-100	1
15 m	756-3202/120-150	1



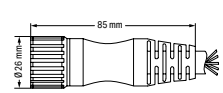
19-pole

Pin 6, 12, 19: 1.00 mm²;
Pin 1 … 5, 7 … 11, 13 … 19: 0.34 mm²

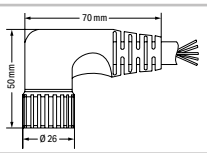
1	violet	11	black
2	red	12	green-yellow
3	gray	13	yellow-brown
4	red-blue	14	brown-green
5	green	15	white
6	blue	16	yellow
7	gray-pink	17	rose
8	white-green	18	gray-brown
9	white-yellow	19	brown
10	white-gray		

Operating voltage (max.)	300 V
Operating current	10 A (contacts 6, 12, 19); 8 A (remaining contacts)
Rated surge voltage	≥ 2.0 kV rms
Drag chain suitability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +80 °C
Protection type	IP67
Cable diameter	11.6 mm ±0.3









Interconnection Cable; 19-pole; M23 socket (straight)

Cable Length	Item No.	PU
5 m	756-3203/190-050	1
10 m	756-3203/190-100	1
15 m	756-3203/190-150	1

Interconnection Cable; 19-pole; M23 socket (angled)

Cable Length	Item No.	PU
5 m	756-3204/190-050	1
10 m	756-3204/190-100	1
15 m	756-3204/190-150	1



Accessories and Tools

Accessories and Tools
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WAGO Power Supplies Pro 2 – 2787 / 2789 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Derating (> +55 °C and Ue < 230 VAC)	PowerBoost	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; TopBoost + PowerBoost; DI/DO; communication interface; 12 VDC output voltage								
	100 … 240 VAC	10 A	≥ 93.8 %	–3 %/K	15 ADC (5 s)	> 1,200,000 h	35 x 130 x 130	**2787-2134**
	100 … 240 VAC	15 A	≥ 95.3 %	–3 %/K	22.5 ADC (5 s)	> 1,200,000 h	70 x 130 x 130	**2787-2135**
1-phase; TopBoost + PowerBoost; DI/DO; communication interface; 24 VDC output voltage								
	100 … 240 VAC	5 A	≥ 93.8 %	–3 %/K	7.5 ADC (5 s)	> 1,200,000 h	35 x 130 x 130	**2787-2144**
	100 … 240 VAC	10 A	≥ 95.3 %	–3 %/K	15 ADC (5 s)	> 1,200,000 h	50 x 130 x 130	**2787-2146**
	100 … 240 VAC	20 A	≥ 95.4 %	–3 %/K	30 ADC (5 s)	> 900,000 h	70 x 130 x 130	**2787-2147**
	200 … 240 VAC	40 A	≥ 96 %	–3 %/K	60 ADC (5 s)	> 900,000 h	120 x 130 x 130	**2787-2448**
1-phase; TopBoost + PowerBoost; DI/DO; communication interface; 48 VDC output voltage								
	100 … 240 VAC	5 A	≥ 95.3 %	–3 %/K	7.5 ADC (5 s)	> 900,000 h	50 x 130 x 130	**2787-2154**
	100 … 240 VAC	10 A	≥ 95.3 %	–3 %/K	15 ADC (5 s)	> 800,000 h	70 x 130 x 130	**2787-2157**
3-phase; TopBoost + PowerBoost; DI/DO; communication interface; 24 VDC output voltage								
	(2 / 3) x 400 … 500 VAC	5 A	≥ 92,5%	–3 %/K	7,5 ADC (5 s)	> 1.400.000 h	40 x 130 x 130	**2787-2344**
	(2 / 3) x 400 … 500 VAC	10 A	≥ 93 %	–3 %/K	15 ADC (5 s)	> 1.000.000 h	50 x 130 x 130	**2787-2346**
	(2 / 3) x 400 … 500 VAC	20 A	≥ 95,9 %	–3 %/K	30 ADC (5 s)	> 800.000 h	70 x 130 x 130	**2787-2347**
	(2 / 3) x 400 … 500 VAC	40 A	≥ 96,1 %	–3 %/K	60 ADC (5 s)	> 800.000 h	120 x 130 x 130	**2787-2348**
3-phase; TopBoost + PowerBoost; DI/DO; communication interface; 48 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 95 %	–3 %/K	15 ADC (5 s)	> 900,000 h	70 x 130 x 130	**2787-2357**
	(2/3) x 400 … 500 VAC	20 A	≥ 96 %	–3 %/K	30 ADC (5 s)	> 800,000 h	120 x 130 x 130	**2787-2358**

Accessories

Illustration	Description	Item No.
	IO-Link Communication Module	**2789-9080**
	Modbus RTU Communication Module	**2789-9015**
	Ethernet/Modbus® TCP/Modbus® UDP/MQTT Communication Module	**2789-9052**
	Communication module; EtherNet/IP; communication capability	**2789-9023**



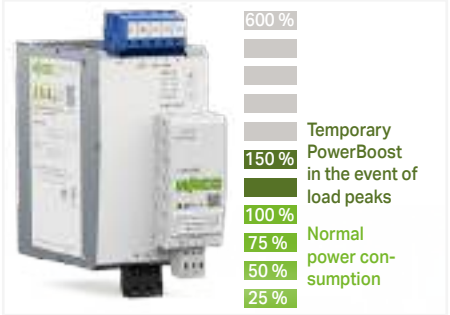
WAGO Power Supplies Pro 2
This new generation of professional power supplies is for applications requiring high performance, efficiency and reliability. These devices also offer tremendous added value thanks to flexible configuration and comprehensive monitoring via optional communication interface – can be used with the WAGO USB Communication Cable and IO-Link Communication Module.



Communication
The pluggable IO-Link communication modules allow continuous fieldbus communication, provide data (such as the current output current and voltage), and can also be configured or put in standby mode remotely.



Configuration
WAGO's new Interface Configuration Software offers both local/remote configuration and parameter setting, allowing the power supplies to be quickly and easily tailored to system requirements. The configuration function can be used to parameterize the power supply as an ECB.



Load Management
Rapidly switching capacitive loads and high start-up currents are no problem, thanks to 150 % output power (PowerBoost) for five seconds. Output current up to 600 % for 15 ms provides reserves for rapidly and reliably tripping miniature circuit breakers. The ability to allow a specified output current to be exceeded for a configurable amount of time allows the Pro 2 Power Supply to work like a single-channel ECB.



Efficiency
Up to 96 % efficiency within a wide load range is the key to energy cost savings, reduced power losses and lower demand for control cabinet cooling. The CO2 footprint is also dramatically reduced. WAGO's Pro 2 Power Supply can be permanently connected to the PLC via the communication module or a digital signal, allowing the power supply output to be switched off via a signal and standby mode to be used to save energy.



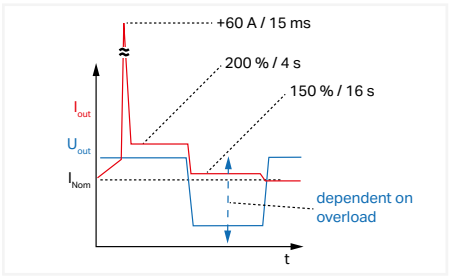
Robust Design
WAGO's Pro 2 Power Supplies can be started and operated from –40°C to +70°C, creating significant cost savings by reducing the need for control cabinet air conditioning. Featuring low derating capability above 60°C, the Pro 2 units are also highly robust, providing reliable operation in high-vibration and shock-prone applications. The power supplies can be operated at altitudes up to 5000 m, requiring no derating below 2000 m ASL.

WAGO Power Supplies Pro – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Derating	PowerBoost	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; TopBoost + PowerBoost; DC OK contact; 12 VDC output voltage								
	100 … 240 VAC	6 A	≥ 83 %	–3 %/K (> +50 °C)	12 ADC (4 s); 9 ADC (8 s)	> 500,000 h	40 x 163 x 163	787-819
	100 … 240 VAC	10 A	≥ 87.8 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (8 s)	> 500,000 h	57 x 163 x 163	787-821
	100 … 240 VAC	15 A	≥ 87 %	–3 %/K (> +50 °C)	30 ADC (4 s); 22.5 ADC (8 s)	> 500,000 h	57 x 163 x 179	787-831
1-phase; TopBoost + PowerBoost; DC OK contact; 24 VDC output voltage								
	100 … 240 VAC	3 A	≥ 87.8 %	–3 %/K (> +50 °C)	6 ADC (4 s); 4.5 ADC (8 s)	> 500,000 h	40 x 163 x 163	787-818
	100 … 240 VAC	5 A	≥ 87.8 %	–3 %/K (> +50 °C)	10 ADC (4 s); 7.5 ADC (8 s)	> 500,000 h	57 x 163 x 163	787-822
	100 … 240 VAC	10 A	≥ 90 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (8 s)	> 500,000 h	57 x 163 x 179	787-832
	100 … 240 VAC	20 A	≥ 91 %	–3 %/K (> +50 °C)	30 ADC (4 s); 55 ADC (8 s)	> 500,000 h	97 x 171 x 187	787-834
1-phase; TopBoost + PowerBoost; DC OK contact; output voltage: 48 VDC								
	100 … 240 VAC	5 A	≥ 91 %	–3 %/K (> +50 °C)	10 ADC (4 s); 7.5 ADC (8 s)	> 500,000 h	57 x 163 x 179	787-833
	100 … 240 VAC	10 A	≥ 91 %	–3 %/K (> +50 °C)	17.5 ADC (4 s); 15 ADC (8 s)	> 500,000 h	97 x 171 x 187	787-835
3-phase; TopBoost + PowerBoost; DC OK contact; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 91.7 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (16 s)	> 500,000 h	57 x 163 x 179	787-840
	(2/3) x 400 … 500 VAC	20 A	≥ 92.9 %	–3 %/K (> +50 °C)	40 ADC (4 s); 30 ADC (16 s)	> 500,000 h	77 x 171 x 179	787-842
	(2/3) x 400 … 500 VAC	40 A	≥ 93.6 %	–5 %/K (> +45 °C)	60 ADC (4 s); 50 ADC (16 s)	> 500,000 h	128 x 171 x 205	787-844
3-phase; TopBoost + PowerBoost; DC OK contact; 24 VDC output voltage; LineMonitor								
	(2/3) x 400 … 500 VAC	10 A	≥ 91.7 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (16 s)	> 500,000 h	57 x 163 x 179	787-850
	(2/3) x 400 … 500 VAC	20 A	≥ 92.9 %	–3 %/K (> +50 °C)	40 ADC (4 s); 30 ADC (16 s)	> 500,000 h	77 x 171 x 179	787-852
	(2/3) x 400 … 500 VAC	40 A	≥ 93.6 %	–5 %/K (> +45 °C)	60 ADC (4 s); 50 ADC (16 s)	> 500,000 h	128 x 171 x 205	787-854
3-phase; TopBoost + PowerBoost; DC OK contact; output voltage: 48 VDC								
	(2/3) x 400 … 500 VAC	10 A	≥ 93 %	–3 %/K (> +50 °C)	15 ADC (4 s); 12.5 ADC (16 s)	> 500,000 h	77 x 171 x 179	787-845
	(2/3) x 400 … 500 VAC	20 A	≥ 94.4 %	–3 %/K (> +50 °C)	30 ADC (4 s); 25 ADC (16 s)	> 500,000 h	128 x 171 x 205	787-847



TopBoost
- Multiplies the nominal current for up to 50 ms
- Fast and reliable triggering of the secondary-side fusing via miniature circuit breakers or melting fuses in the event of a short circuit or overload



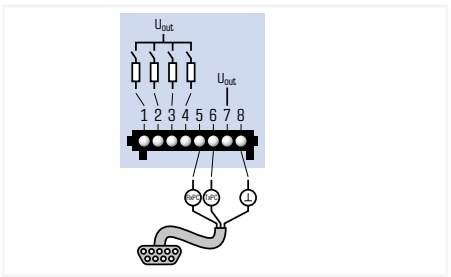
PowerBoost
- Provides 200 % of output power for 4 seconds
- Provides 150 % of output power for up to 16 seconds
- Ideal during start-up or switching of capacitive loads, valve clusters, motors, etc.
- Power reserve eliminates expensive oversizing



Innovative Communication
- LineMonitor with display and function keys
- Variable monitoring, e.g., current, voltage, phase position, operating hours and more
- Output voltage and overload behavior can be parameterized
- Integrated fault memory



RS-232 Serial Interface
- Front-side integrated interface communicates with a PC or PLC
- Free 759-850 Configuration Software and 759-851 Visualization Software can be downloaded at www.wago.com
- Free function blocks are available for various PLC systems
- 787-890 Serial Communication Cable is available as an accessory



Active Signal Contacts
- Four active signal outputs for watchdog functions
- Each unit features a separate collective message for warning/fault
- Features two individually configurable signal outputs
- Free configuration software (Item No. 759-850) at www.wago.com

WAGO Power Supplies Classic – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Signal	Features	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; 12 VDC output voltage								
	100 … 240 VAC	2 A	≥ 82 %	DC OK signal	NEC class 2	> 500,000 h	22.5 x 90 x 107.5	787-1601
	100 … 240 VAC	4 A	≥ 86 %	DC OK signal	NEC class 2	> 500,000 h	45 x 90 x 107.5	787-1611
	100 … 240 VAC	7 A	≥ 86 %	DC OK signal		> 500,000 h	52 x 90 x 119	787-1621
	100 … 240 VAC	15 A	≥ 90 %	DC OK contact	TopBoost	> 500,000 h	55 x 27 x 172	787-1631
1-phase; 24 VDC output voltage								
	100 … 240 VAC	1 A	≥ 86 %	DC OK signal	NEC class 2	> 500,000 h	22.5 x 90 x 107.5	787-1602
	100 … 240 VAC	2 A	≥ 89 %	DC OK signal	NEC class 2	> 500,000 h	45 x 90 x 107.5	787-1606
	100 … 240 VAC	4 A	≥ 89 %	DC OK signal		> 500,000 h	52 x 90 x 119.5	787-1616
	100 … 240 VAC	3.8 A	≥ 87 %	DC OK signal	NEC class 2	> 500,000 h	52 x 90 x 119	787-1616/000-1000
	100 … 240 VAC	5 A	≥ 89 %	DC OK contact	TopBoost	> 500,000 h	42 x 127 x 137.5	787-1622
	100 … 240 VAC	10 A	≥ 91 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 172	787-1632
	100 … 240 VAC	20 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	95 x 127 x 170	787-1634
1-phase; 48 VDC output voltage								
	100 … 240 VAC	2 A	≥ 86 %	DC OK contact		> 500,000 h	52 x 90 x 119	787-1623
	100 … 240 VAC	5 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 172	787-1633
	100 … 240 VAC	10 A	≥ 93 %	DC OK contact	TopBoost	> 500,000 h	95 x 127 x 170	787-1635
1-phase/2-phase; 24 VDC output voltage								
	(1 / 2) x 200 … 500 VAC	5 A	≥ 89 %	DC OK contact	TopBoost	> 500,000 h	42 x 127 x 143.5	787-1628
	(1 / 2) x 200 … 500 VAC	10 A	≥ 92.5 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 146.5	787-1638
3-phase; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 90 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 171	787-1640
	(2/3) x 400 … 500 VAC	20 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	80 x 127 x 180	787-1642
	(2/3) x 400 … 500 VAC	40 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	126 x 127 x 198	787-1644



Communicative
- Green LED indicates output voltage availability
- Remote monitoring via DC OK signal or potential-free DC OK contact
- Easy commissioning and maintenance
- Quickly provides system information or machine status

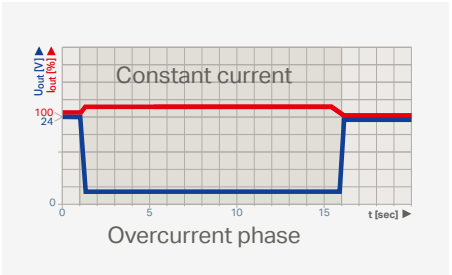


Integrated TopBoost*
- Multiplies the nominal current
- Fast and reliable triggering of the secondary-side fusing via circuit breakers or melting fuses in the event of a short circuit and overload

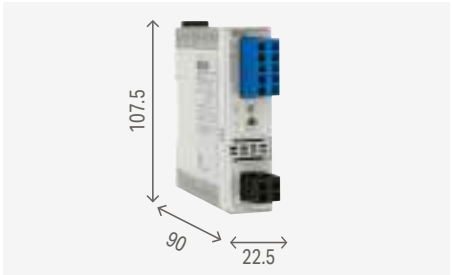
* Only for 787-1622 … -1628, -1631 … -1638, -1640 … -1644



Device Marking
- Marking field for fast and securely attached device identification
- Supports WAGO's WMB Multi Marking System (5 mm pin spacing)
- Supports WAGO Marking Strips, 11 mm wide



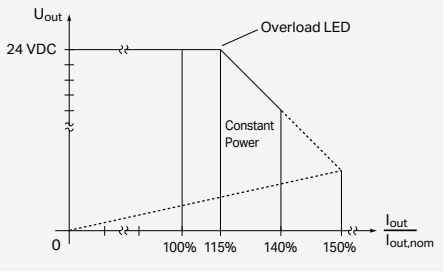
High Load-Carrying Capacity
- Constant current characteristic under overload conditions
- 110 % of output current with a lowered output voltage – even during a short circuit
- High capacitive loads can be reliably started



Slim Design
- Enclosure width reduced by up to 45% compared to previous Classic Power Supplies
- Saves valuable cabinet space

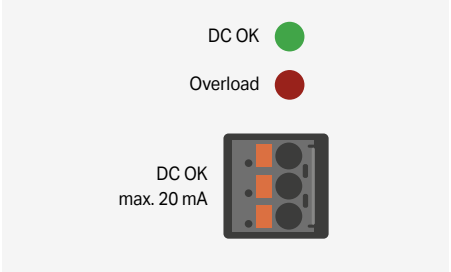
WAGO Power Supplies Eco 2 – 2687 Series / Eco – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Derating	Signal	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; 24 VDC output voltage; Eco 2								
	100 … 240 VAC	1.25 A	≥ 88 %	–3 %/K (> +50 °C)		> 1.000.000 h	25 x 90 x 100	2687-2142
	100 … 240 VAC	5 A	≥ 89 %	–3 %/K (> +50 °C)	DC OK contact	> 1.000.000 h	38 x 130 x 130	2687-2144
	100 … 240 VAC	10 A	≥ 93 %	-3 %/K (> 50 °C)	DC OK contact	> 1.000.000 h	50 x 130 x 130	2687-2146
1-phase; 12 VDC output voltage; several mounting options								
	100 … 240 VAC	2 A	≥ 86 %	–4 %/K (> +45 °C)		> 300,000 h	30 x 90 x 99	787-1701
	100 … 240 VAC	4 A	≥ 86 %	–4 %/K (> +45 °C)		> 300,000 h	40 x 90 x 99	787-1711
	100 … 240 VAC	8 A	≥ 86 %	–3 %/K (> +40 °C)		> 300,000 h	60 x 130 x 99	787-1721
1-phase; 24 VDC output voltage								
	110 … 240 VAC	2.5 A	≥ 86 %	–3.3 %/K (> 50 °C)		480,000 h	50 x 92 x 136	787-712
	110 … 240 VAC	5 A	≥ 86 %	–5.3 %/K (> 45 °C)		480,000 h	75 x 92 x 136	787-722
	110 … 240 VAC	10 A	≥ 86 %	–2.3 %/K (> 40 °C)		480,000 h	110 x 92 x 136	787-732
	110 … 240 VAC	20 A	≥ 90 %	–2.7 %/K (> 55 °C)	DC OK signal	> 250,000 h	115 x 136 x 144	787-734
	110 … 240 VAC	40 A	≥ 90 %	–2.7 %/K (> 55 °C)	DC OK signal	> 250,000 h	170 x 136 x 150	787-736
1-phase; 24 VDC output voltage; several mounting options								
	100 … 240 VAC	1.25 A	≥ 87 %	–4 %/K (> +45 °C)		> 300,000 h	30 x 90 x 99	787-1702
	100 … 240 VAC	2.5 A	≥ 88 %	–4 %/K (> +45 °C)		> 300,000 h	40 x 90 x 99	787-1712
	100 … 240 VAC	5 A	≥ 88 %	–3 %/K (> +45 °C)		> 300,000 h	60 x 130 x 99	787-1722
	100 … 240 VAC	10 A	≥ 91 %	–4 %/K (> +45 °C)		> 300,000 h	70 x 165 x 99	787-1732
3-phase; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	6.25 A	≥ 87 %	–2.5 %/K (> 50 °C)	DC OK contact	> 250,000 h	50 x 130 x 92	787-738
	(2/3) x 400 … 500 VAC	10 A	≥ 89 %	–1.3 %/K (> 50 °C)	DC OK contact	> 250,000 h	65 x 130 x 130	787-740
	(2 / 3) x 400 … 480 VAC	20 A	≥ 92 %	–2 %/K (> 45 °C)	DC OK contact	> 1,800,000 h	80 x 130 x 170	787-2742
	(2 / 3) x 400 … 480 VAC	40 A	≥ 92,3 %	–2 %/K (> 45 °C)	DC OK contact	> 1,300,000 h	140 x 130 x 170	787-2744



High Load-Carrying Capacity
- Overload warning from 1.15 times the nominal output current*
- Overload of up to 1.4 times the nominal current with a lowered output voltage (constant power)*
- Output shutdown in case of a low-resistance short circuit; also includes automatic restart

* Except for 787-17xx



Status Monitoring
- Potential-isolated make contact signal, via bounce-free optocoupler* or PhotoMOS**
- Indicates whether an output voltage or an overload is present
- Ideal for remote monitoring

* Only for 787-734 … -740
** Only for 787-2742, -2744



Fast Wiring
- Convenient, tool-free wiring thanks to lever-actuated terminal strips*
- Integrated test slot simplifies testing by eliminating conductor removal

* Only for 787-734 … -740, -2742, -2744



Various Mounting Options
- Flexible mounting via DIN-rail adapter*
- Flexible installation via screw-mount clips*

* Only for 787-17xx



Highly Economical
- Triple the savings thanks to low purchase costs, easy installation and maintenance-free operation
- Budget-friendly for basic applications



EN 60335-1 Household Appliances Standard
- Power supplies with item numbers having the 787-17xx format meet the requirements of the household appliances standard

WAGO Power Supplies Compact – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Signal	MTBF (per IEC 61709)	Special Mounting Features	Dimensions (W x H x D in mm)	Item No.
1-phase; 5 VDC output voltage								
	100 … 240 VAC	5.5 A	≥ 75 %		> 500,000 h	Overhead mounting	72 x 89 x 59	787-1020
1-phase; 12 VDC output voltage								
	100 … 240 VAC	2 A	≥ 80 %		> 500,000 h	Overhead mounting	54 x 89 x 59	787-1001
	100 … 240 VAC	4 A	≥ 85 %		> 500,000 h	Overhead mounting	72 x 89 x 59	787-1011
	100 … 240 VAC	6 A	≥ 87 %		> 500,000 h	Overhead mounting	90 x 89 x 59	787-1021
1-phase; 12 VDC output voltage; with picoMAX connection technology (tool-free)								
	100 … 240 VAC	2.5 A	≥ 88 %		> 500,000 h	Removable front panel	54 x 90 x 56	787-1201
	100 … 240 VAC	5 A	≥ 88.5 %		> 500,000 h	Removable front panel	72 x 90 x 56	787-1211
	100 … 240 VAC	8 A	≥ 91.5 %		> 500,000 h		108 x 90 x 56	787-1221
1-phase; 18 VDC output voltage								
	100 … 240 VAC	1,25 A	≥ 88 %		> 2,500.000 h		36 x 90 x 62	787-2857
	100 … 240 VAC	2.4 A	≥ 84 %		> 500,000 h	Overhead mounting	72 x 89 x 59	787-1017
1-phase; 24 VDC output voltage								
	100 … 240 VAC	1.3 A	82 %		> 500,000 h	Overhead mounting	54 x 89 x 59	787-1002
	100 … 240 VAC	2.5 A	88 %		> 500,000 h	Overhead mounting	72 x 89 x 59	787-1012
	100 … 240 VAC	4 A	88 %		> 500,000 h	Overhead mounting	90 x 89 x 59	787-1022
1-phase; 24 VDC output voltage; with picoMAX connection technology (tool-free)								
	100 … 240 VAC	0.5 A	83 %		> 700,000 h		18 x 90 x 55	787-1200
	110 … 240 VAC	1.25 A	88 %		> 500,000 h		36 x 90 x 62	787-2850
	100 … 240 VAC	1.3 A	87 %	DC OK signal	> 700,000 h	Removable front panel	54 x 90 x 56	787-1202
	100 … 240 VAC	2.5 A	89 %	DC OK signal	> 500,000 h	Removable front panel	72 x 90 x 56	787-1212
	100 … 240 VAC	4.2 A	90 %	DC OK signal	> 500,000 h	Removable front panel	108 x 90 x 56	787-1216
	100 … 240 VAC	6 A	90 %	DC OK signal	> 500,000 h	Removable front panel	144 x 90 x 56	787-1226



Easy to Connect
- Vibration-proof, fast and maintenance-free CAGE CLAMP® connections
- Pre-assembly via pluggable picoMAX® connection technology*

* Only for 787-11xx, 787-12xx



DIN-Rail Built-In Installation
- Housing design per EN 43880, for installation in small distribution boards or meter panels



Various Mounting Options
- Easy mounting on DIN-rail
- Flexible installation via screw-mount clips also possible*

* Only for 787-12xx



Overhead Mounting
- Any type of mounting position is possible at reduced output power.
- Units can even be mounted overhead, e.g., in ceiling-mounted distribution boxes



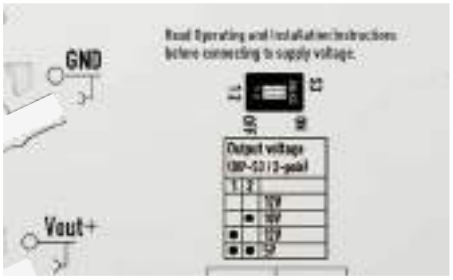
Highly Economical
- Triple the savings thanks to low purchase costs, easy installation and maintenance-free operation
- Budget-friendly for basic applications



EN 60335-1 Household Appliances Standard
- Power supplies with item numbers having the 787-12xx format meet the requirements of the household appliances standard

WAGO DC/DC Converters – 787 / 288 Series

Illustration	Nominal Input Voltage	Nominal Output Voltage	Input Current	Output Current	Efficiency	Dimensions (W x H x D in mm)	Item No.
DC OK contact; in a compact 6 mm housing							
	24 VDC	5 VDC	≤ 0.34 A	0.5 A	≥ 82.5 %	6 x 97.8 x 94	787-2801
	24 VDC	10 VDC	≤ 0.42 A	0.5 A	≥ 89 %	6 x 97.8 x 94	787-2802
	24 VDC	12 VDC	≤ 0.5 A	0.5 A	≥ 90 %	6 x 97.8 x 94	787-2805
	48 VDC	24 VDC	≤ 0.34 A	0.5 A	≥ 91 %	6 x 97.8 x 94	787-2803
	24 VDC	5/10/12 VDC	≤ 0.5 A	0.5 A	≥ 82.5 %	6 x 97.8 x 94	787-2810
Output voltage: 12 VDC							
	24 VDC	12 VDC	≤ 3.39 A	4 A	≥ 84 %	45 x 90 x 107.5	787-1650
	72 VDC	12 VDC	≤ 0.79 A	4 A	≥ 85 %	72 x 89 x 59	787-1015/072-000
Output voltage: 18 VDC							
	24 VDC	18 VDC	≤ 0.37 A	0.4 A	82 %	50 x 25 x 85	288-895
Output voltage: 24 VDC							
	72 VDC	24 VDC	≤ 0.79 A	2 A	≥ 84 %	72 x 89 x 59	787-1014/072-000
	110 VDC	24 VDC	≤ 0.77 A	2 A	≥ 85 %	72 x 89 x 59	787-1014



One Device for Many Applications
- Output voltage of the DC/DC Converter (787-2810) set via built-in DIP switch



Communicative
- Green LED indicates output voltage availability
- Remote monitoring via DC OK signal
- Easy commissioning and maintenance



Can Be Commoned with 857/2857 Series
- Full commoning of the supply voltage thanks to shared profile between the 787-28xx DC/DC Converters and the 857/2857 Series Relays and Signal Conditioners



The Industry's Most Compact
- "True" 6.0 mm (0.23 inch) width maximizes panel space



Suitable for Railway Applications per EN 50155
- Wide DC input voltage range
- Wide temperature range
- Protective coating

* Only 787-1014 & 787-101x/072-000

WAGO Electronic Circuit Breakers – 787 Series

Illustration	Output Current	Signaling	Features	Dimensions (W x H x D in mm)	Item No.
1 channel; 24 VDC input voltage					
	1 x 0.5 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/050-000
	1 x 1 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/100-000
	1 x 2 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/200-000
	1 x 4 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/400-000
	1 x 6 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/600-000
	1 x 8 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/800-000
	1 x 1 / 2 / 3 / 4 / 5 / 6 / 8 A	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/108-020
	1 x 0,5 A (fixed setting)	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/050-000
	1 x 1 A (fixed setting)	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/100-000
	1 x 2 A (fixed setting)	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/200-000
	1 x 4 A (fixed setting)	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/400-000
	1 x 6 A (fixed setting)	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/600-000
	1 x 8 A (fixed setting)	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/800-000
	1 x 0,5 / 1 / 1,5 / 2 / 2,5 / 3 / 3,5 / 4 A	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/004-020
	1 x 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 A	1 x LED Status (green/yellow/red)	Communication capability	6 x 97,8 x 94	787-3861/108-020
2 channels; 24 VDC input voltage					
	2 x 0.5 / 1 / 2 / 3 / 4 / 6 A	2 x LED status (green/red/orange)	Active current limitation; communication capability	45 x 90 x 115.5	787-1662/006-1000
	2 x 3.8 A	2 x LED status (green/red/orange)	Active current limitation; NEC class 2; communication capability	45 x 90 x 115.5	787-1662/004-1000
	2 x 2 / 3 / 4 / 6 / 8 / 10 A	2 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1662
	2 x 1 / 2 / 3 / 4 / 5 / 6 A	2 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1662/106-000
	2 x 2 / 3 / 4 / 6 / 8 / 10 A	2 x LED status (green/red/orange)	Signal contact; special configuration	45 x 90 x 115.5	787-1662/000-054
2 channels; 48 VDC input voltage					
	2 x 2 / 3 / 4 / 6 / 8 / 10 A	2 x LED status (green/red/orange)	Signal contact	45 x 90 x 115.5	787-1662/000-250
4 channels; 12 VDC input voltage					
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664/000-100
4 channels; 24 VDC input voltage					
	4 x 0.5 / 1 / 2 / 3 / 4 / 6 A	4 x LED status (green/red/orange)	Active current limitation; communication capability	45 x 90 x 115.5	787-1664/006-1000
	4 x 3.8 A	4 x LED status (green/red/orange)	Active current limitation; NEC class 2; communication capability	45 x 90 x 115.5	787-1664/004-1000
	4 x 2 / 4 / 6 / 8 / 10 / 12 A	4 x LED status (green/red/orange)	Active current limitation; communication capability	45 x 90 x 115.5	787-1664/212-1000
	4 x 0.5 / 1 / 2 / 3 / 4 / 6 A	4 x LED status (green/red/orange)	Active current limitation; signal contact; special configuration	45 x 90 x 115.5	787-1664/006-1054
	4 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	IO-Link	45 x 90 x 115.5	787-1664/000-080
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664
	4 x 1 / 2 / 3 / 4 / 5 / 6 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664/106-000
	4 x 1 / 2 / 3 / 4 / 5 / 6 A	4 x LED status (green/red/orange)	Communication capability; NPN signaling	45 x 90 x 115.5	787-1664/106-011
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability; special configuration	45 x 90 x 115.5	787-1664/000-004
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Signal contact; special configuration	45 x 90 x 115.5	787-1664/000-054
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability; NPN signaling	45 x 90 x 115.5	787-1664/000-011
4 channels; 48 VDC input voltage					
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664/000-200
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Signal contact	45 x 90 x 115.5	787-1664/000-250
8 channels; 24 VDC input voltage					
	8 x 0.5 / 1 / 2 / 3 / 4 / 6 A	8 x LED status (green/red/orange)	Active current limitation; communication capability	42 x 127 x 142.5	787-1668/006-1000
	8 x 0.5 / 1 / 2 / 3 / 4 / 6 A	8 x LED status (green/red/orange)	Active current limitation; signal contact; special configuration	42 x 127 x 142.5	787-1668/006-1054
	8 x 1 / 2 / 3 / 4 / 5 / 6 A	8 x LED status (green/red/orange)	Communication capability	42 x 127 x 142.5	787-1668/106-000
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Communication capability	42 x 127 x 142.5	787-1668
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Communication capability; special configuration	42 x 127 x 142.5	787-1668/000-004
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Signal contact; special configuration	42 x 127 x 142.5	787-1668/000-054
	8 x 1 / 2 / 3 / 4 / 5 / 6 A	8 x LED status (green/red/orange)	Signal contact	42 x 127 x 142.5	787-1668/106-054
	8 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	IO-Link	42 x 127 x 142.5	787-1668/000-080
8 channels; 48 VDC input voltage					
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Communication capability	42 x 127 x 142.5	787-1668/000-200
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Signal contact	42 x 127 x 142.5	787-1668/000-250

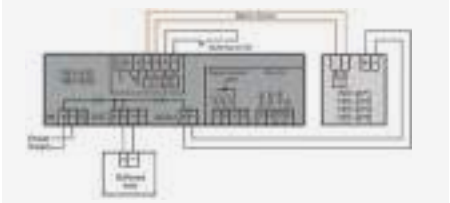
Uninterruptible Power Supplies (UPS); Battery Modules; Capacitive Buffer Modules; Redundancy Modules – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Buffer Time	Features	Dimensions (W x H x D in mm)	Item No.
Power Supply with Integrated Charger and Controller; 1-phase; 24 VDC output voltage							
	100 … 240 VAC	5 A	≥ 88 %	1 s … 20 min	Communication capability; Charging current ≤ 1 A	60 x 127 x 135.5	787-1675
UPS Charger and Controller; 24 VDC output voltage							
	24 VDC	10 A	≥ 95 %	10 … 600 s	LineMonitor; communication capability	40 x 163 x 163	787-870
	24 VDC	20 A	≥ 95 %	10 … 600 s	LineMonitor; communication capability	57 x 171 x 163	787-875
	24 VDC	40 A	≥ 97 %	Load-dependent	Charging current ≤ 4 A	68 x 181 x 162	787-915

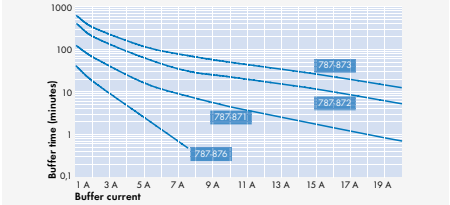
Illustration	Nominal Input Voltage	Output Current	Capacitance	Charging Current	Features	Dimensions (W x H x D in mm)	Item No.
Pure Lead Battery Module; 24 VDC output voltage							
	24 VDC	20 A	2.5 Ah	≤ 5 A	Battery control –40 … +60 °C	86 x 186 x160	787-878/000-2500
	24 VDC	40 A	13 Ah	≤ 5 A	Battery control –40 … +60 °C	217 x 186 x 199.5	787-878/001-3000
Lead Fleece Battery Module; 24 VDC output voltage							
	24 VDC	7.5 A	1.2 Ah	≤ 0.3 A	Battery control –10 … +40 °C	55 x 153 x 126.6	787-876
	24 VDC	20 A	3.2 Ah	≤ 0.8 A	Battery control	76.2 x 168 x 175.5	787-871
	24 VDC	40 A	7 Ah	≤ 1.8 A	Battery control	86 x 239 x 217.5	787-872
	24 VDC	40 A	12 Ah	≤ 3 A	Battery control	120.5 x 239 x 217.5	787-873
	24 VDC	5 A	0.8 Ah	0.2 A	Battery control –10 … +40 °C	72 x 97 x 124	787-1671

Illustration	Nominal Input Voltage	Output Current	Buffer Time	Charging Time (typ.)	Features	Dimensions (W x H x D in mm)	Item No.
Capacitive Buffer Module; 24 VDC output voltage							
	24 VDC	10 A	0.06 … 7.2 s	5 min	Communication capability	57 x 163 x 179	787-880
	24 VDC	20 A	0.17 … 16.5 s	5 min	Communication capability	57 x 181 x 179	787-881
	24 VDC	40 A	0.3 … 6.6 s	2.5 min		68 x 181 x 162	787-916

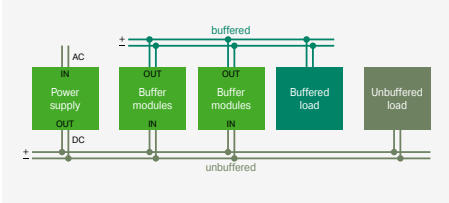
Illustration	Nominal Input Voltage	Output Current	Efficiency	Signaling	Features	Dimensions (W x H x D in mm)	Item No.
Redundancy Module; 24 VDC output voltage							
	2 x 24 VDC	25 A	≥ 96 %	Diode		50 x 130 x 92	787-783
	2 x 24 VDC	25 A	≥ 96 %	Diode	Ex approval	50 x 130 x 92	787-783/000-040
	2 x 24 VDC	40 A	≥ 99.5 %	MOSFET	Communication capability	42 x 127 x 139.5	787-1685
	2 x 24 VDC	40 A	≥ 97 %	Diode	Communication capability	40 x 181 x 163	787-885
	2 x 24 VDC	76 A	≥ 97 %	Diode		83 x 130 x 153	787-785
	2 x 24 VDC	76 A	≥ 97 %	Diode	Ex approval	83 x 130 x 153	787-785/000-040
Redundancy Module; 48 VDC output voltage							
	2 x 48 VDC	40 A	≥ 97 %		Communication capability	40 x 181 x 163	787-886



Battery Control Technology
- Allows continuous data exchange between intelligent Battery Modules (787-87x) and a UPS Charger/Controller
- Automatically detects a connected Battery Module (787-87x)
- Maximized battery life via temperature-controlled battery management



Buffer Time vs. Load Current
Different buffer times/currents can be achieved depending on the battery module selected. The example above shows a 7 A load current provided for approximately 30 seconds by a 787-870 UPS Charger/Controller (10 A) and 787-876 Battery Module.

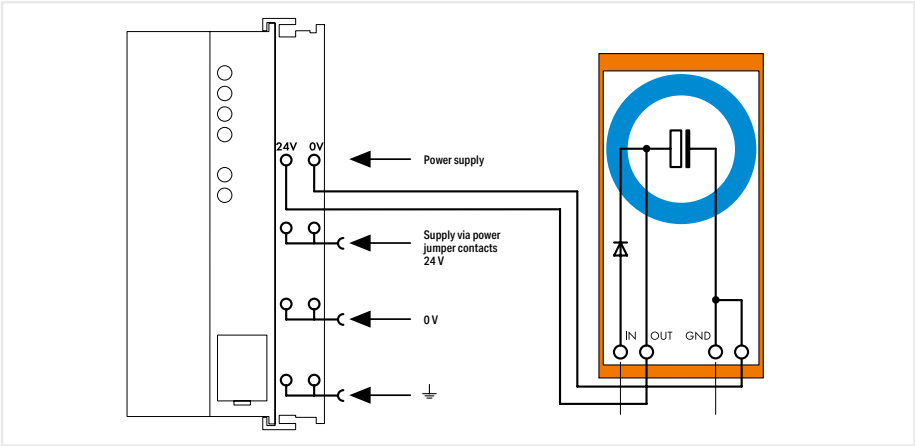


Parallel Connection Possible
- Multiple buffer modules can be connected in parallel to increase buffer time or load current

13

Backup Capacitor Module and DC/DC Converter





Item Description	Component module with capacitor; 1 module; Capacity: 10 mF; Nominal voltage: 24 VDC
Item No.	288-824

Technical Data

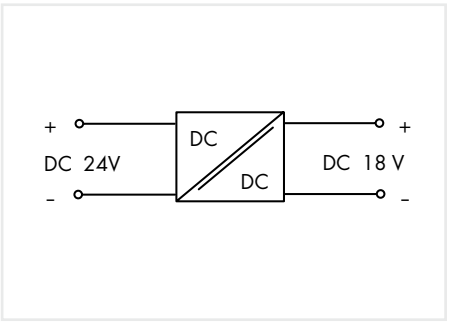
Nominal input voltage (DC) max.	24 VDC (+25 %)
Input current Ii (max.)	1 A
Nominal capacity	10 mF
Weight	104.4 g
Dimensions W x H x D	38 x 81 x 85 mm; height from upper-edge of DIN-rail
Conductor connection	CAGE CLAMP® (236 Series)
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG
Strip length	5 … 6 mm / 0.24 inch
For data sheet and additional information, see:	wago.com/288-824

This back-up capacitor module smoothes unstable 24 VDC power supplies for electronic modules in case the voltage tolerances mentioned in our data sheets cannot be ensured.

Reasons for voltage transients could be:
- Power interruptions (switching transients) on primary side
- Overloads on secondary side
- Switching of inductive or capacitive loads
- The back-up capacitor module is connected between the 24 V power supply and the electronic device to be protected.

Notice:
Using insufficiently smoothed and unregulated single-phase power supplies may lead to voltage increases by the back-up capacitor module.





Item Description	DC/DC Converter; 24 VDC input voltage; 18 VDC output voltage; 0.4 A output current
Item No.	288-895

Technical Data

Nominal input voltage (DC) max.	24 VDC
Input voltage range	18 … 36 VDC
Nominal output voltage (DC)	18 VDC (±2 %)
Nominal output current	0.4 A
Efficiency	82 %
Short-circuit-protected	Yes
Surrounding air temperature (operation)	–25 … +70 °C
Weight	76 g
Dimensions W x H x D	50 x 25 x 85 mm; height from upper-edge of DIN-rail
Conductor connection	CAGE CLAMP® (256 Series)
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG (THHN, THWN)
Strip length	5 … 6 mm / 0.24 inch
For data sheet and additional information, see:	wago.com/288-895

WAGO System Wiring – 706 / 289 / 704 Series
Interface Modules and Interface Cables

PLC WAGO I/O System 750

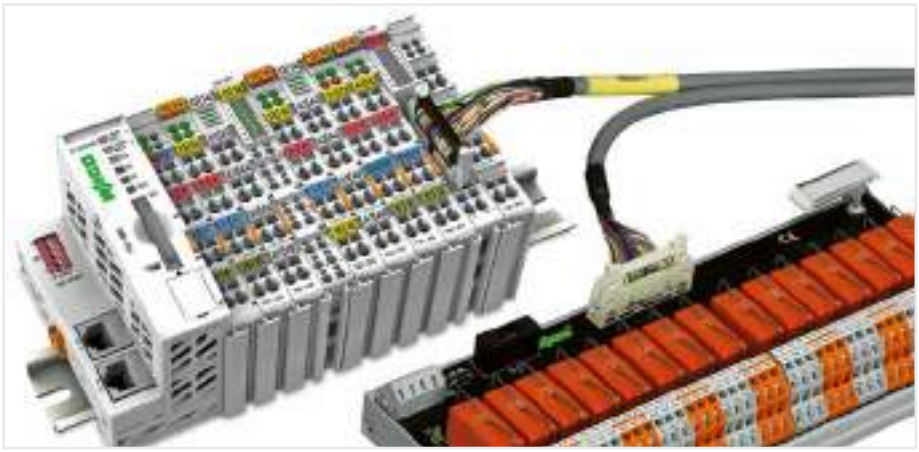
PLC				WAGO Interface Cable		WAGO Interface Modules	
	PLC I/O Assembly			Item No.	Qty.	Type	Qty.
DI	750-1400	16	DI	706-3057/300-XXXX	1	T16ES	1
DO	750-1500	16	DO	706-3057/300-XXXX	1	T16(E)S	1
DI /DO	750-1502	8	DI	706-7753/302-XXXX	1	T8ES	1
		8	DO			T8(E)S	1
	750-1502	8	DI	706-3057/300-XXXX	1	T16ES	1
		8	DO				

PLC WAGO I/O System 753

PLC				WAGO Interface Cable		WAGO Interface Modules	
	PLC I/O Assembly			Item No.	Qty.	Type	Qty.
DI	753-430 (x1)	8	DI	706-7753/300-XXXX	1	T8ES	1
	753-430 (x2)	16	DI	706-7753/301-XXXX	1	T16ES	1
	753-431 (x1)	8	DI	706-7753/300-XXXX	1	T8ES	1
	753-431 (x2)	16	DI	706-7753/301-XXXX	1	T16ES	1
DO	753-530 (x1)	8	DO	706-7753/300-XXXX	1	T8(E)S	1
	753-530 (x2)	16	DO	706-7753/301-XXXX	1	T16(E)S	1
AI	753-453 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-453 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
	753-455 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-455 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
	753-457 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-457 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
	753-459 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-459 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
AO	753-553 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-553 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1
	753-555 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-555 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1
	753-557 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-557 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1
	753-559 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-559 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1

WAGO Interface Modules

Type		Description	Item No.
DI /DO	T8ES	10-pole; without supply	289-611
		10-pole; with LED; 3-wire	704-2003
	T8ESHT	12-pole (MCS); without LED; 2-wire; up to 250 V	704-3003
	T8S	10-pole; with LED; electrical isolation: 5 A relay	704-5003
		10-pole; with LED; electrical isolation: 5 A relay; manual operation	704-5013
	T16ES	20-pole; without supply	289-614
		20-pole; with LED; 1-wire	704-2004
		20-pole; with LED; 1-wire; channel isolation	704-2014
		20-pole; with LED; 2-wire	704-2024
		20-pole; with LED; 2-wire; channel fuse	704-2034
		20-pole; with LED; 2-wire; channel isolation	704-2044
		20-pole; with LED; 3-wire	704-2054
		20-pole; with LED; 3-wire; channel isolation	704-2064
		20-pole; with LED; 2-wire; 0 V/channel isolation	704-2074
		20-pole; without LED; 2-wire	704-2224
	T16ESHT	2 x 10-pole (MCS); without LED; 2-wire; up to 250 V	704-3004
	T16S	20-pole; with LED; electrical isolation: 5 A relay	704-5004
		20-pole; with LED; electrical isolation: 5 A relay	704-5024
		20-pole; with LED; electrical isolation: 5 A relay; channel fuse	704-5034
		20-pole; with LED; electrical isolation: 5 A relay; manual operation	704-5044
		20-pole; with LED; electrical isolation: 5 A relay; 0 V isolation; channel fuse	704-5054
		20-pole; with LED; electrical isolation: 5 A relay (2 u)	704-5064
		20-pole; with LED; electrical isolation: 5 A relay (1 a); 0 V/ channel isolation; channel fuse	704-5074
AI/AO	A4ES	15-pole D-sub; 2- and 4-wire	704-8002
		15-pole D-sub; 2- and 4-wire; isolation	704-8012
	A8ES	25-pole D-sub; 2- and 4-wire	704-8003
		25-pole D-sub; 2- and 4-wire; isolation	704-8013
	A8TSX	25-pole D-sub; current and voltage signal	704-8023



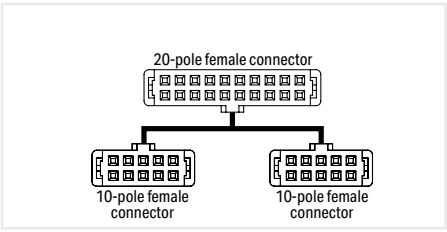
I/O modules equipped with a ribbon cable connector provide easy and fast connection of WAGO Interface Modules to the WAGO I/O System. WAGO's pre-assembled system cables eliminate discrete wiring, while reducing costs for system wiring applications. Additionally, modules can be pre-wired, allowing the connection level to be relocated.

System Cables; for 750 Series WAGO I/O System
706 Series



When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

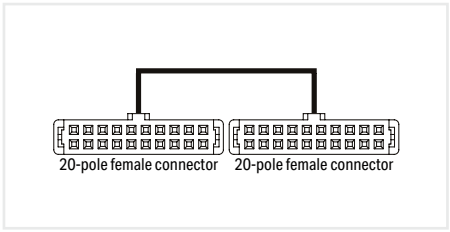




System Cable; for 750 Series WAGO I/O System; 8 digital inputs and 8 digital outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/302-100	1
2 m	706-7753/302-200	1
3 m	706-7753/302-300	1





System Cable; for Schneider TSX; 16 digital inputs or outputs; Conductor cross-section: 0.14 mm²

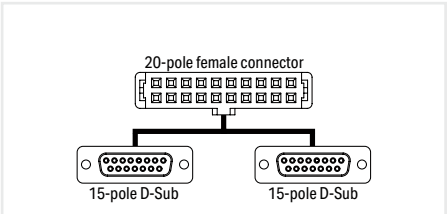
Length	Item No.	PU
1 m	706-3057/300-100	1
2 m	706-3057/300-200	1
3 m	706-3057/300-300	1

Technical Data

Connectors (side 1)	20-pole DIN 41651 connector; female connector / 2 x 10-pole DIN 41651 connector; female connector	20-pole DIN 41651 connector; female connector / 20-pole DIN 41651 connector; female connector
Wire cross-section	0.14 mm2 LiYY	0.14 mm2 LiYY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	1 A	1 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	–20 … +50 °C	–20 … +50 °C

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

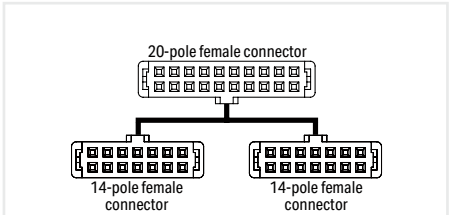




System Cable; for 750 Series WAGO I/O System; 2 x 8 digital inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/306-100	1
2 m	706-7753/306-200	1
3 m	706-7753/306-300	1





System Cable; for 750 Series WAGO I/O System; 2 x 8 analog inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/304-100	1
2 m	706-7753/304-200	1
3 m	706-7753/304-300	1

Technical Data

Connectors	20-pole DIN 41651 connector; female connector / 2 x 15-pole D-sub; socket	20-pole DIN 41651 connector; female connector / 2 x 14-pole DIN 41651 connector; female connector
Wire cross-section	0.14 mm2 LiYY	0.14 mm2 LiYY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	1 A	1 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	–20 … +50 °C	–20 … +50 °C

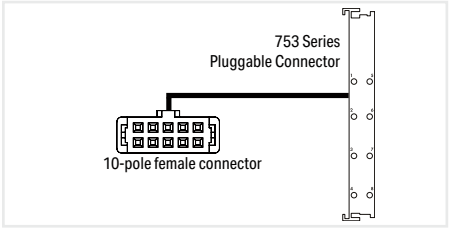
System Cables; for 753 Series WAGO I/O System

706 Series



When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

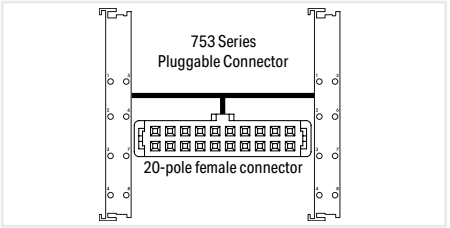




System Cable; for 753 Series WAGO I/O System; 8 digital inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/300-100	1
2 m	706-7753/300-200	1
3 m	706-7753/300-300	1





System Cable; for 753 Series WAGO I/O System; 2 x 8 digital inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/301-100	1
2 m	706-7753/301-200	1
3 m	706-7753/301-300	1

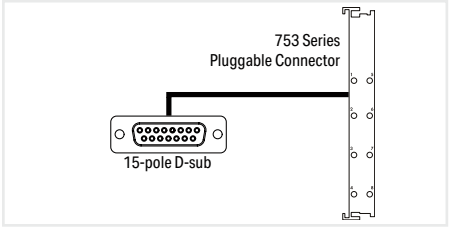
Technical Data

Connectors (side 1)	8-pole male connector (753 Series) / 10-pole DIN 41651 connector; female connector	2 x 8-pole male connector (753 Series) / 20-pole DIN 41651 connector; female connector
Wire cross-section	0.14 mm2 LiYY	0.14 mm2 LiYY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	1 A	1 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	−20 … +50 °C	−20 … +50 °C



When using more than 10 wires, the maximum current per wire must be reduced to 1 A.

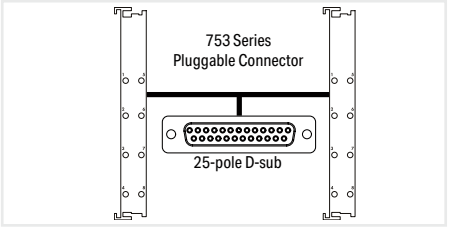




System Cable; for 753 Series WAGO I/O System; 4 analog inputs or outputs; Conductor cross-section: 0.25 mm²

Length	Item No.	PU
1 m	706-7753/602-100	1
2 m	706-7753/602-200	1
3 m	706-7753/602-300	1





System Cable; for 753 Series WAGO I/O System; 8 analog inputs or outputs; Conductor cross-section: 0.25 mm²

Length	Item No.	PU
1 m	706-7753/601-100	1
2 m	706-7753/601-200	1
3 m	706-7753/601-300	1

Technical Data

Connectors	8-pole male connector (753 Series) / 15-pole Mini D-sub; female connector	2 x 8-pole male connector (753 Series) / 25-pole Mini D-sub; female connector
Wire cross-section	0.25 mm2 LiYCY	0.25 mm2 LiYCY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	2 A	2 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	−20 … +50 °C	−20 … +50 °C

IP67 Cables and Connectors



WAGO's 756 Series offers a wide range of accessories for connecting inductive or capacitive proximity switches, photoelectric sensors, flow monitors, limit switches, pressure switches and other devices.
The cables not only protect against the ingress of dust and water, but also protect against self-loosening due to vibration by working as a constructive "brake" thanks to the design of their coupling nuts. Injected cable entries also offer bend protection.

A distinction is made between cables assembled on one or both ends. Cables assembled on one end are often used where an exact cable length can not be determined or the installation of cables with connectors proves to be very difficult. These free-end cables can adapt to suit the installation's requirements. In contrast, cables assembled on both sides reduce assembly and installation times, cutting overall project costs.

Sensor/Actuator Cable; Fitted on One End

M8 Socket

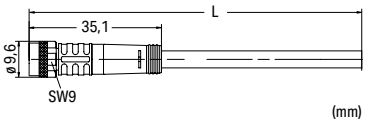


3-pole

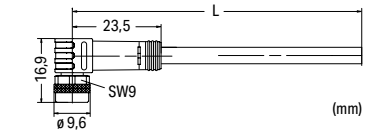
Pin 1 ... 4: 0.34 mm²

1	brown (+)
3	blue (-)
4	black (S)









Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2

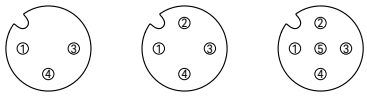
Sensor/Actuator Cable; M8 socket (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5101/030-015	10
3-pole	5 m	756-5101/030-050	10
3-pole	10 m	756-5101/030-100	10

Sensor/Actuator Cable; M8 socket (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5102/030-015	10
3-pole	5 m	756-5102/030-050	10
3-pole	10 m	756-5102/030-100	10

M12 Socket

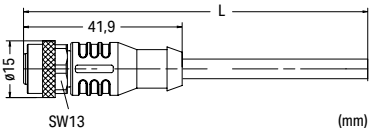


3-pole 4-pole 5-pole

Pin 1 ... 5: 0.34 mm²

1	brown (+)
2	white (Ö)
3	blue (-)
4	black (S)
5	gray



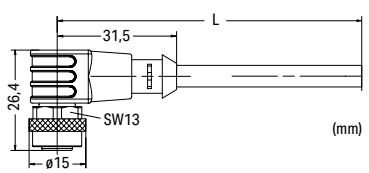


Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV (3- and 4-pole); 1.5 kV (5-pole)
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.3 mm ±0.2 (3-pole); 4.7 mm ±0.2 (4-pole); 5.0 mm ±0.2 (5-pole); 6.5 mm ±0.2 (5-pole; shielded)

Sensor/Actuator Cable; M12 socket (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5301/030-015	10
3-pole	5 m	756-5301/030-050	10
3-pole	10 m	756-5301/030-100	10
4-pole	1.5 m	756-5301/040-015	10
4-pole	5 m	756-5301/040-050	10
4-pole	10 m	756-5301/040-100	10
5-pole	1.5 m	756-5301/050-015	10
5-pole	5 m	756-5301/050-050	10
5-pole	10 m	756-5301/050-100	10
5-pole; shielded	1.5 m	756-5301/060-015	10
5-pole; shielded	5 m	756-5301/060-050	10
5-pole; shielded	10 m	756-5301/060-100	10





Sensor/Actuator Cable; M12 socket (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5302/030-015	10
3-pole	5 m	756-5302/030-050	10
3-pole	10 m	756-5302/030-100	10
4-pole	1.5 m	756-5302/040-015	10
4-pole	5 m	756-5302/040-050	10
4-pole	10 m	756-5302/040-100	10
5-pole	1.5 m	756-5302/050-015	10
5-pole	5 m	756-5302/050-050	10
5-pole	10 m	756-5302/050-100	10
5-pole; shielded	1.5 m	756-5302/060-015	10
5-pole; shielded	5 m	756-5302/060-050	10
5-pole; shielded	10 m	756-5302/060-100	10

Sensor/Actuator Cable; Fitted on One End

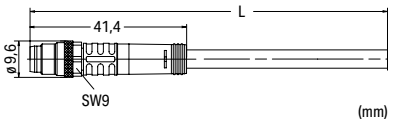
M8 Plug



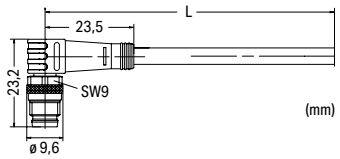
3-pole

Pin 1 ... 4: 0.34 mm²
1 brown (+)
3 blue (-)
4 black (S)









Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2

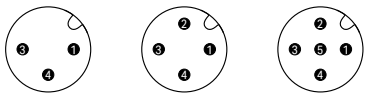
Sensor/Actuator Cable; M8 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5111/030-015	10
3-pole	5 m	756-5111/030-050	10
3-pole	10 m	756-5111/030-100	10

Sensor/Actuator Cable; M8 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5112/030-015	10
3-pole	5 m	756-5112/030-050	10
3-pole	10 m	756-5112/030-100	10

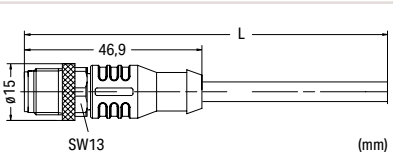
M12 Plug



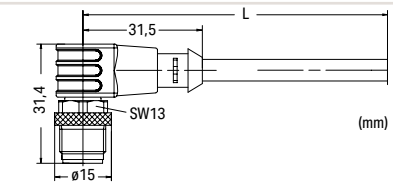
3-pole 4-pole 5-pole

Pin 1 ... 5: 0.34 mm²
1 brown (+)
2 white (Ö)
3 blue (-)
4 black (S)
5 gray









Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV (3- and 4-pole); 1.5 kV (5-pole)
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +90 °C
Protection type	IP67
Cable diameter	4.3 mm ±0.2 (3-pole); 4.7 mm ±0.2 (4-pole); 5.0 mm ±0.2 (5-pole); 6.5 mm ±0.2 (5-pole; shielded)

Sensor/Actuator Cable; M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5311/030-015	10
3-pole	5 m	756-5311/030-050	10
3-pole	10 m	756-5311/030-100	10
4-pole	1.5 m	756-5311/040-015	10
4-pole	5 m	756-5311/040-050	10
4-pole	10 m	756-5311/040-100	10
5-pole	1.5 m	756-5311/050-015	10
5-pole	5 m	756-5311/050-050	10
5-pole	10 m	756-5311/050-100	10
5-pole; shielded	1.5 m	756-5311/060-015	10
5-pole; shielded	5 m	756-5311/060-050	10
5-pole; shielded	10 m	756-5311/060-100	10

Sensor/Actuator Cable; M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5312/030-015	10
3-pole	5 m	756-5312/030-050	10
3-pole	10 m	756-5312/030-100	10
4-pole	1.5 m	756-5312/040-015	10
4-pole	5 m	756-5312/040-050	10
4-pole	10 m	756-5312/040-100	10
5-pole	1.5 m	756-5312/050-015	10
5-pole	5 m	756-5312/050-050	10
5-pole	10 m	756-5312/050-100	10
5-pole; shielded	1.5 m	756-5312/060-015	10
5-pole; shielded	5 m	756-5312/060-050	10
5-pole; shielded	10 m	756-5312/060-100	10

Sensor/Actuator Cable; Fitted on One End

M12 Plug

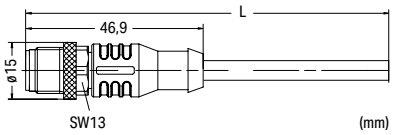


8-pole, shielded

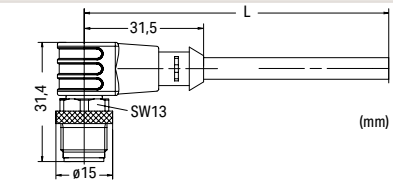
Pin 1 ... 8: 0.25 mm²

1	white
2	brown
3	green
4	yellow
5	gray
6	rose
7	blue
8	red
Shield	









Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	6.3 mm ±0.2

Sensor/Actuator Cable; M12 plug (straight)

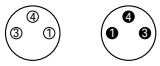
Pole No.	Cable Length	Item No.	PU
8-pole; shielded	1.5 m	756-5311/090-015	10
8-pole; shielded	5 m	756-5311/090-050	10
8-pole; shielded	10 m	756-5311/090-100	10

Sensor/Actuator Cable; M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
8-pole; shielded	1.5 m	756-5312/090-015	10
8-pole; shielded	5 m	756-5312/090-050	10
8-pole; shielded	10 m	756-5312/090-100	10

Sensor/Actuator Cable; Fitted on Both Ends

M8 Socket M8 Plug

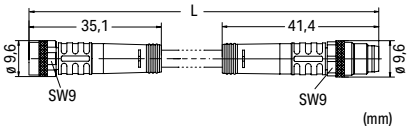


3-pole

Pin 1 ... 4: 0.34 mm²
1 brown (+)
3 blue (-)
4 black (S)

Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2

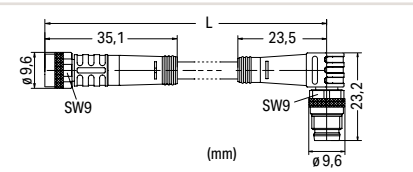




Sensor/Actuator Cable; M8 socket (straight) – M8 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5201/030-010	10
3-pole	2 m	756-5201/030-020	10

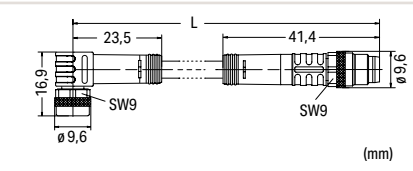




Sensor/Actuator Cable; M8 socket (straight) – M8 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5202/030-010	10
3-pole	2 m	756-5202/030-020	10

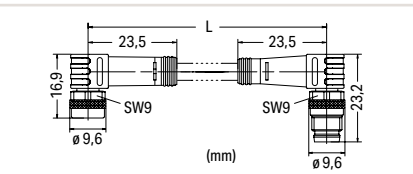




Sensor/Actuator Cable; M8 socket (angled) – M8 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5203/030-010	10
3-pole	2 m	756-5203/030-020	10

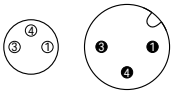




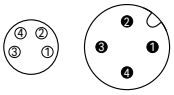
Sensor/Actuator Cable; M8 socket (angled) – M8 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5204/030-010	10
3-pole	2 m	756-5204/030-020	10

M8 Socket M12 Plug



3-pole

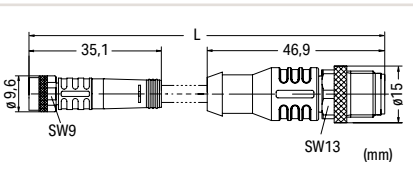


4-pole

Pin 1 ... 4: 0.34 mm²
1 brown (+)
2 white (Ö)
3 blue (-)
4 black (S)

Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2

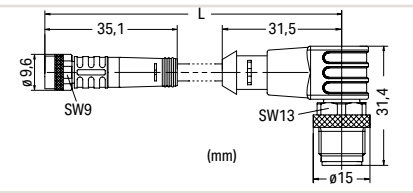




Sensor/Actuator Cable; M8 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5507/030-010	10
3-pole	2 m	756-5507/030-020	10
4-pole	1 m	756-5507/040-010	10
4-pole	2 m	756-5507/040-020	10



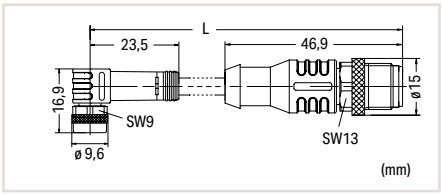


Sensor/Actuator Cable; M8 socket (straight) – M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5508/030-010	10
3-pole	2 m	756-5508/030-020	10
4-pole	1 m	756-5508/040-010	10
4-pole	2 m	756-5508/040-020	10

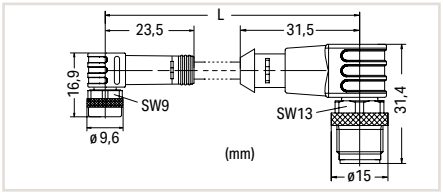
Sensor/Actuator Cable; Fitted on Both Ends





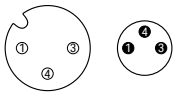
Sensor/Actuator Cable; M8 socket (angled) – M12 plug (straight)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5509/030-010	10
3-pole	2 m	756-5509/030-020	10
4-pole	1 m	756-5509/040-010	10
4-pole	2 m	756-5509/040-020	10





Sensor/Actuator Cable; M8 socket (angled) – M12 plug (angled)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5510/030-010	10
3-pole	2 m	756-5510/030-020	10
4-pole	1 m	756-5510/040-010	10
4-pole	2 m	756-5510/040-020	10

M12 Socket **M8 Plug**

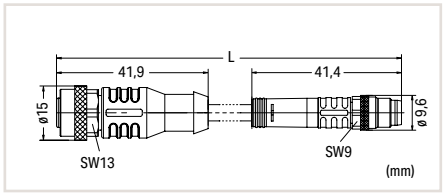


3-pole 3-pole

Pin 1 ... 4: 0.34 mm²
1 brown (+)
3 blue (-)
4 black (S)

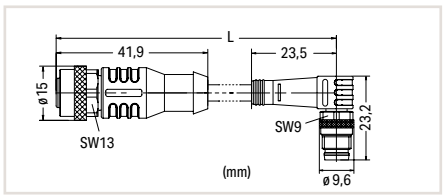
Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2





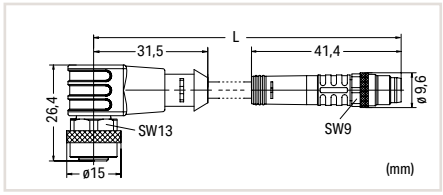
Sensor/Actuator Cable; M12 socket (straight) – M8 plug (straight)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5501/030-010	10
3-pole	2 m	756-5501/030-020	10





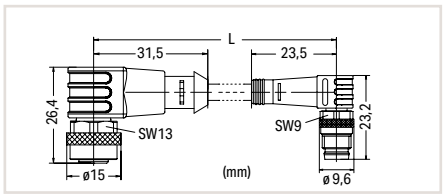
Sensor/Actuator Cable; M12 socket (straight) – M8 plug (angled)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5502/030-010	10
3-pole	2 m	756-5502/030-020	10





Sensor/Actuator Cable; M12 socket (angled) – M8 plug (straight)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5503/030-010	10
3-pole	2 m	756-5503/030-020	10



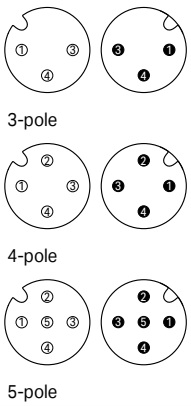


Sensor/Actuator Cable; M12 socket (angled) – M8 plug (angled)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5504/030-010	10
3-pole	2 m	756-5504/030-020	10

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Sensor/Actuator Cable; Fitted on Both Ends

M12 Socket M12 Plug

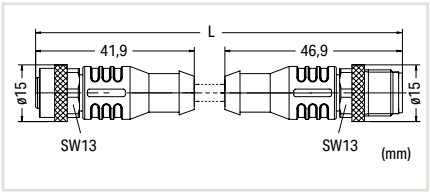


Pin 1 ... 5: 0.34 mm²

1	brown (+)
2	white (Ö)
3	blue (-)
4	black (S)
5	gray

Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV (3- and 4-pole); 1.5 kV (5-pole)
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 ... +90 °C
Protection type	IP67
Cable diameter	4.3 mm ±0.2 (3-pole); 4.7 mm ±0.2 (4-pole); 5.0 mm ±0.2 (5-pole); 6.5 mm ±0.2 (5-pole; shielded)

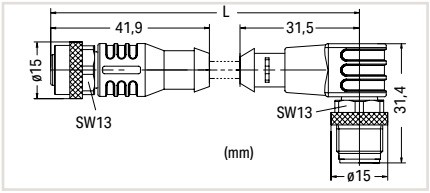




Sensor/Actuator Cable; M12 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5401/030-010	10
3-pole	2 m	756-5401/030-020	10
4-pole	1 m	756-5401/040-010	10
4-pole	2 m	756-5401/040-020	10
5-pole	1 m	756-5401/050-010	10
5-pole	2 m	756-5401/050-020	10
5-pole; shielded	1 m	756-5401/060-010	10
5-pole; shielded	2 m	756-5401/060-020	10

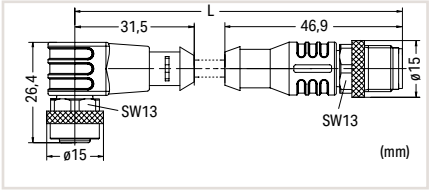




Sensor/Actuator Cable; M12 socket (straight) – M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5402/030-010	10
3-pole	2 m	756-5402/030-020	10
4-pole	1 m	756-5402/040-010	10
4-pole	2 m	756-5402/040-020	10
5-pole	1 m	756-5402/050-010	10
5-pole	2 m	756-5402/050-020	10
5-pole; shielded	1 m	756-5402/060-010	10
5-pole; shielded	2 m	756-5402/060-020	10

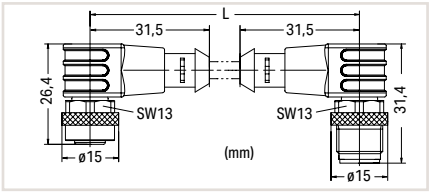




Sensor/Actuator Cable; M12 socket (angled) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5403/030-010	10
3-pole	2 m	756-5403/030-020	10
4-pole	1 m	756-5403/040-010	10
4-pole	2 m	756-5403/040-020	10
5-pole	1 m	756-5403/050-010	10
5-pole	2 m	756-5403/050-020	10
5-pole; shielded	1 m	756-5403/060-010	10
5-pole; shielded	2 m	756-5403/060-020	10

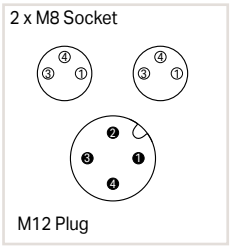


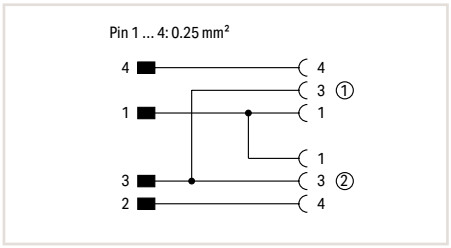


Sensor/Actuator Cable; M12 socket (angled) – M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5404/030-010	10
3-pole	2 m	756-5404/030-020	10
4-pole	1 m	756-5404/040-010	10
4-pole	2 m	756-5404/040-020	10
5-pole	1 m	756-5404/050-010	10
5-pole	2 m	756-5404/050-020	10
5-pole; shielded	1 m	756-5404/060-010	10
5-pole; shielded	2 m	756-5404/060-020	10

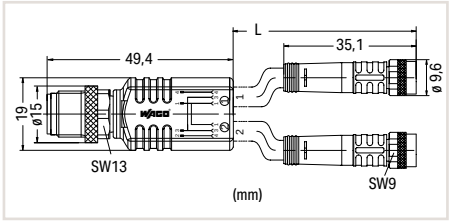
Sensor/Actuator Cable; Fitted on Both Ends; Distribution Connector





Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 … +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2



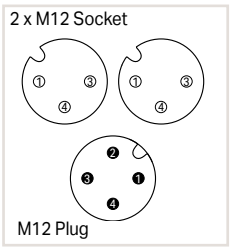


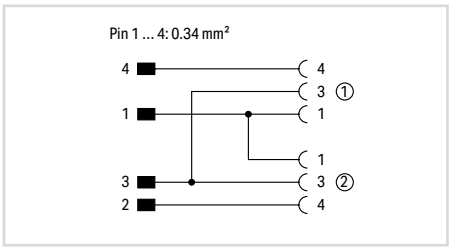
Sensor/Actuator Cable; 2 x M8 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5513/040-010	10
4-pole	2 m	756-5513/040-020	10

Sensor/Actuator Cable; 2 x M8 socket (angled) – M12 plug (straight)

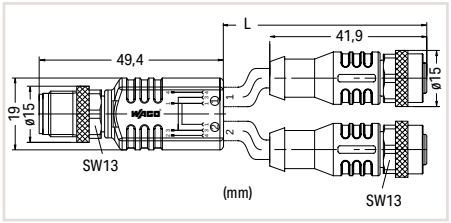
Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5514/040-010	10
4-pole	2 m	756-5514/040-020	10





Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 … +90 °C
Protection type	IP67
Cable diameter	4.7 mm ±0.2





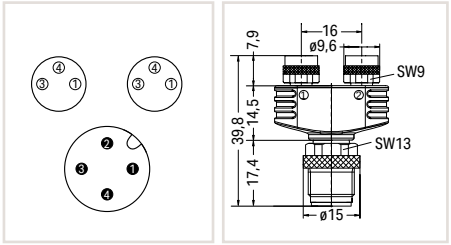
Sensor/Actuator Cable; 2 x M12 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5516/040-010	10
4-pole	2 m	756-5516/040-020	10

Sensor/Actuator Cable; 2 x M12 socket (angled) – M12 plug (straight)

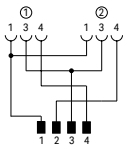
Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5517/040-010	10
4-pole	2 m	756-5517/040-020	10



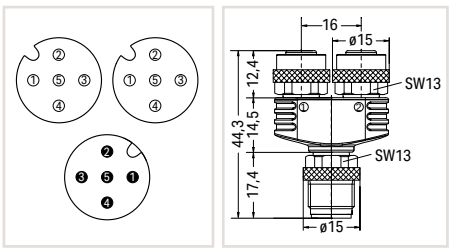


Distribution Connector M8/M12

	Item No.	PU
Accessories; M12/M8 Distribution Connector	756-9301/040-000	1

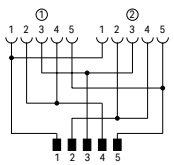






Distribution Connector M12/M12

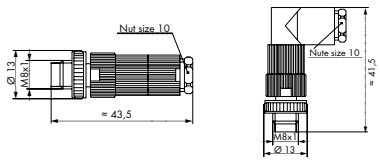
	Item No.	PU
Accessories; M12/M12 Distribution Connector	756-9301/050-000	1



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Configurable Connector







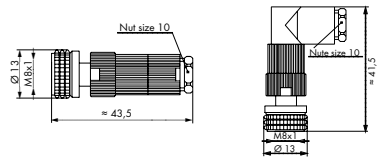
3-pole

Connectable cable:
Ø 4 … 5 mm
0.14 … 0.34 mm²

M8 Plug, Straight and Angled

	Item No.	PU
Configurable Connector; 3-pole; M8 plug (straight); IDC technology	756-9102/030-000	5
Configurable Connector; 3-pole; M8 plug (angled); IDC technology	756-9105/030-000	5







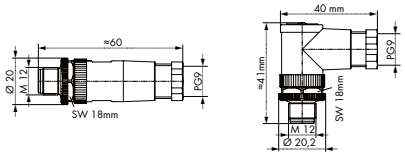
3-pole

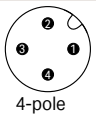
Connectable cable:
Ø 4 … 5 mm
0.14 … 0.34 mm²

M8 Socket, Straight and Angled

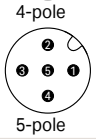
	Item No.	PU
Configurable Connector; 3-pole; M8 socket (straight); IDC technology	756-9112/030-000	5
Configurable Connector; 3-pole; M8 socket (angled); IDC technology	756-9115/030-000	5







4-pole



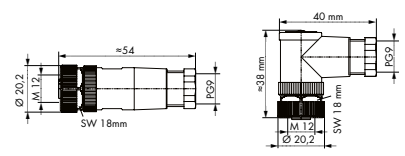
5-pole

Connectable cable:
Ø 4 … 6 mm/0.25 … 0.75 mm²
(Screw clamp technology)
Ø 4 … 6 mm/0.14 … 0.50 mm²
(Spring clamp technology)

M12 Plug, Straight and Angled

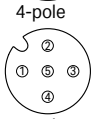
	Item No.	PU
Configurable Connector; 4-pole; M12 plug (straight); Screw connection technology	756-9201/040-000	5
Configurable Connector; 4-pole; M12 plug (angled); Screw connection technology	756-9204/040-000	5
Configurable Connector; 4-pole; M12 plug (straight); Spring clamp technology	756-9202/040-000	5
Configurable Connector; 4-pole; M12 plug (angled); Spring clamp technology	756-9205/040-000	5
Configurable Connector; 5-pole; M12 plug (straight); Screw connection technology	756-9201/050-000	5
Configurable Connector; 5-pole; M12 plug (angled); Screw connection technology	756-9204/050-000	5
Configurable Connector; 5-pole; M12 plug (straight); Spring clamp technology	756-9202/050-000	5
Configurable Connector; 5-pole; M12 plug (angled); Spring clamp technology	756-9205/050-000	5







4-pole



5-pole

Connectable cable:
Ø 4 … 6 mm/0.25 … 0.75 mm²
(Screw clamp technology)
Ø 4 … 6 mm/0.14 … 0.50 mm²
(Spring clamp technology)

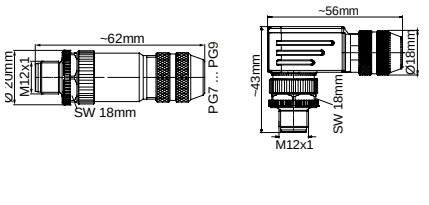
M12 Socket, Straight and Angled

	Item No.	PU
Configurable Connector; 4-pole; M12 socket (straight); Screw connection technology	756-9211/040-000	5
Configurable Connector; 4-pole; M12 socket (angled); Screw connection technology	756-9214/040-000	5
Configurable Connector; 4-pole; M12 socket (straight); Spring clamp technology	756-9212/040-000	5
Configurable Connector; 4-pole; M12 socket (angled); Spring clamp technology	756-9215/040-000	5
Configurable Connector; 5-pole; M12 socket (straight); Spring clamp technology	756-9212/050-000	5
Configurable Connector; 5-pole; M12 socket (angled); Spring clamp technology	756-9215/050-000	5

Configurable Shielded Connector; ETHERNET, PROFINET Accessories







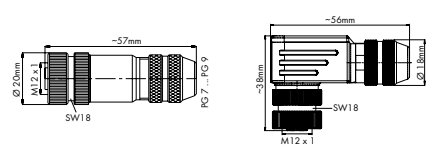
Connectable cable:
Ø 6 ... 8 mm
0.14 ... 0.5 mm²

M12 Plug, Straight and Angled

	Item No.	PU
Configurable Connector; 5-pole; shielded; M12 plug (straight); A-coded; Spring clamp technology	756-9207/060-000	1
Configurable Connector; 4-pole; shielded; M12 plug (straight); D-coded; Spring clamp technology	756-9501/060-000	1
Configurable Connector; 5-pole; shielded; M12 plug (angled); A-coded; Spring clamp technology	756-9211/060-000	1
Configurable Connector; 4-pole; shielded; M12 plug (angled); D-coded; Spring clamp technology	756-9501/040-000	1







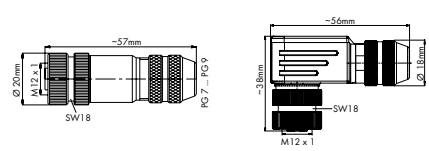
Connectable cable:
Ø 6 ... 8 mm
0.14 ... 0.5 mm²

M12 Socket, Straight and Angled

	Item No.	PU
Configurable Connector; 5-pole; shielded; M12 socket (straight); Spring clamp technology	756-9208/060-000	1
Configurable Connector; 5-pole; shielded; M12 socket (angled); Spring clamp technology	756-9210/060-000	1







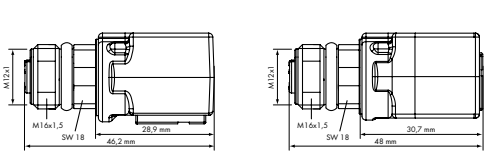
Connectable cable:
Ø 6 ... 8 mm
0.14 ... 0.75 mm²

M12 Socket, Straight and Angled

	Item No.	PU
Configurable Connector; 8-pole; shielded; M12 socket (straight); Screw connection technology	756-9211/090-000	1
Configurable Connector; 8-pole; shielded; M12 socket (angled); Screw connection technology	756-9214/090-000	1



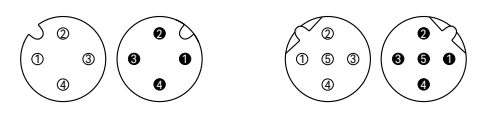




M12 Socket, Straight – RJ-45 Socket

	Item No.	PU
Socket; 4-pole, M12-socket (straight); D-coded; RJ-45 socket (angled)	756-9503/040-000	1
Socket; 4-pole, M12-socket (straight); D-coded; RJ-45 socket (straight)	756-9504/040-000	1





M12 Panel Feed-Through Connector

	Item No.	PU
M12 Panel Feed-Through Connector; 4-pole; M12 socket (straight); A-coded	756-9217/050-000	1
M12 Panel Feed-Through Connector; 5-pole; M12 socket (straight); B-coded	756-9406/050-000	1

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Torque Wrench M8 and M12; Assembly Kit







Assembly kit for pre-assembled IP67 cables and hex nut connectors (756 Series) consists of:

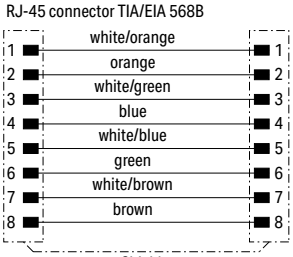
- Tool kit
- Torque screwdriver with adjustable torque (window scale)
- Adjustment tool for changing the torque
- Socket wrench SW9 (for M8 cable assemblies)
- Socket wrench SW13 (for M12 cable assemblies)

A torque specification of 0.6 Nm for M8 connectors and 1.0 Nm for M12 connectors is required for both 756 Series Cables and Connectors.

Torque Wrench M8 and M12; Assembly Kit		
	Item No.	PU
	206-701	1

Torque range	0,4 … 1 Nm ±6 %
Material	
Handle	Polypropylene (PP) for hard zone; thermoplastic elastomers (TPE) for soft zone
Allen key	Polyamide (PA), glass-fiber-reinforced; chrome-vanadium-molybdenum steel (CrMoV) (1.2381)
Adjustment tool	Cellulose acetate; chrome-vanadium-molybdenum steel (CrMoV) (1.2381)
Color	Black
Standards/specifications	EN ISO 6789; BS EN 26789; ASME B107.14.M

ETHERNET Cable; Cat. 6A S/FTP







Item Description	ETHERNET Cable; Cat. 6A; RJ-45; RJ-45		ETHERNET Cable; Cat. 6A; RJ-45; RJ-45		
Version			Axial unlocking		
	Cable Length	Item No.	PU	Cable Length	Item No.	PU
	0.5 m	756-1250/1013-005	1	0.5 m	756-1250/1023-005	1
	1 m	756-1250/1013-010	1	1 m	756-1250/1023-010	1
	2 m	756-1250/1013-020	1	2 m	756-1250/1023-020	1
	3 m	756-1250/1013-030	1	3 m	756-1250/1023-030	1
	5 m	756-1250/1013-050	1	5 m	756-1250/1023-050	1
	7.5 m	756-1250/1013-075	1	7.5 m	756-1250/1023-075	1
	10 m	756-1250/1013-100	1	10 m	756-1250/1023-100	1

Technical Data	
Transmission	10 Gbit/s (500 MHz)
Operating voltage	80 V
Operating current	720 mA
Rated surge voltage	500 V (wire/wire/shield rms 50 Hz 1 min)
Insulation resistance	≥ 1x108 Ωxkm
Resistance of conductor	< 142 Ω/km
Surrounding air temperature (operation)	–40 … +80 °C (static and moving)
Bending radius	10 mm (min.)
Bending cycles	≥ 8500
Cable	S/FTP 4x2xAWG26/7
Overall shield	Overlapped aluminum-laminated foil and tinned copper braid (PiMF)
Conductor	Bare copper wire (7 x 0.16 mm)
Conductor insulation	Halogen-free PE
Outer jacket	LSOH TPE; halogen-free per IEC 60754-2; flame-retardant per IEC 60332-1; low-smoke per IEC 61034
Color	Green (RAL 6018)
Cable diameter	Ø 6.2 mm ±0.2
Plug	2 x Cat. 6A RJ-45
Contact material	CuZn
Contact plating	CuNi/Au; 50 µin gold plating
Mech. service life	> 1200 mating cycles
For data sheet and additional information, see:	wago.com/756-1250

Short description:
- Halogen-free TPE
- Cat. 6A S/FTP
- Highly flexible
- 50 µin gold plating in the contact area
- Mechanically/electrically tested
- 4C Channel Link Test
- Wrap-around label for clear traceability
- Easy plug unlocking (756-1250/1023-xxx)

Communication Cables and Antennas



Item Description	RS-232 Communication Cable; RS-232 (D-Sub; 9-pole); I/O System 750 Service Interface
Item No.	750-920
Order Text	Communication Cable
Technical Data	
Connectors	4-pole service connector
Cable length	2.5 m
Surrounding air temperature (operation)	0 … +55 °C
Protection type	IP20
For data sheet and additional information, see:	wago.com/750-920

This communication cable connects the engineering software to the controller or fieldbus coupler.

Notice: The communication cable must not be connected or removed when energized.



Item Description	USB Communication Cable; USB-A; I/O System 750 Service Interface	
Item No.	750-923	750-923/000-001
Order Text	CONF-CABLE; USB; 2.5m	CONF-CABLE; USB; 5m
Technical Data		
Connectors	USB interface: Type A/m; USB specification: 2.0 compatible/full-speed device	
Cable length	2.5 m	5 m
Surrounding air temperature (operation)	-25 … +70 °C	
Protection type	IP20	
For data sheet and additional information, see:	wago.com/750-923	

This USB communication cable connects the engineering software to the controller or fieldbus coupler.

Notice: A specific firmware version is required to connect the 759-923 USB Communication Cable to some particular controllers.



Magnetic-Mount Antenna; with 2.5 m cable and SMA angled plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1400-1518, 1710-2700 MHz	
Item No.	758-975
Technical Data	
Frequency band	698 … 960 MHz; 1400 … 1518 MHz; 1710 … 2700 MHz
Connection cable length	2.5 m
Mounting type	Magnetic stand
Cable type	RG-174
Connector	SMA angled plug



RF Antenna; with 2.5 m cable and SMA plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G	
Item No.	758-974
Technical Data	
Frequency band	617 … 960 MHz; 1710 … 6000 MHz
Connection cable length	2.5 m
Mounting type	Enclosure installation; Adhesive strips
Cable type	CS29
Connector	SMA plug



RF Antenna; with 2.5 m cable and SMA plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G	
Item No.	758-974/000-001
Technical Data	
Frequency band	617 … 960 MHz; 1710 … 6000 MHz
Connection cable length	2.5 m
Mounting type	Wall-mount
Cable type	CS29
Connector	SMA plug

Memory Cards





Item Description	microSD Memory Card; Temperature range: −40 … +90 °C	microSD Memory Card; Temperature range: −40 … +90 °C
Version	SLC-NAND; 2 GB	pSLC-NAND; 8 GB
Item No.	758-879/000-3102	758-879/000-3108
Technical Data		
Memory	2 GB (SLC)	8 GB (pSLC)
Read/write cycles (max.)	20 MB/s / 17 MB/s	48 MB/s / 45 MB/s
MTBF	4,000,000 h	2,000,000 h
Service life	100,000 write cycles (per cell)	20,000 write cycles (per cell)
Data storage	10 years	10 years
Surrounding air temperature (operation)	−40 … +90 °C	−40 … +90 °C
Surrounding air temperature (storage)	−40 … +90 °C	−40 … +90 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Dimensions W x H x D	15 x 11 x 1 mm	15 x 11 x 1 mm
Vibration resistance	15g	15g
Shock resistance	50g	50g



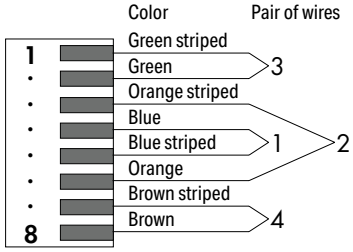


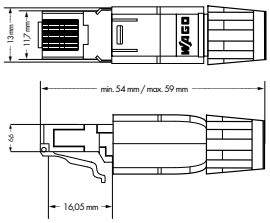
Item Description	SD Memory Card; Temperature range: −40 … +90 °C	SD Memory Card; Temperature range: −40 … +90 °C
Version	SLC-NAND; 2 GB	pSLC-NAND; 8 GB
Item No.	758-879/000-001	758-879/000-2108
Technical Data		
Memory	2 GB (SLC)	8 GB (pSLC)
Read/write cycles (max.)	22 MB/s / 16 MB/s	50 MB/s / 45 MB/s
MTBF	4,000,000 h	2,000,000 h
Service life	100,000 write cycles (per cell)	20,000 write cycles (per cell)
Data storage	10 years	10 years
Surrounding air temperature (operation)	−40 … +90 °C	−40 … +90 °C
Surrounding air temperature (storage)	−40 … +90 °C	−40 … +90 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Dimensions W x H x D	24 x 32 x 2.1 mm	24 x 32 x 2.1 mm
Vibration resistance	15g	15g
Shock resistance	50g	50g

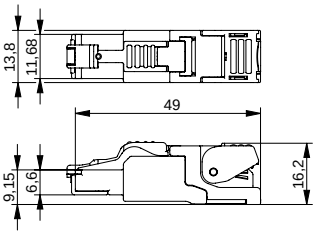
ETHERNET Connectors; Code T568A









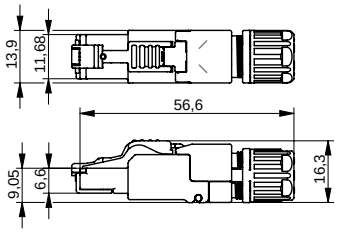


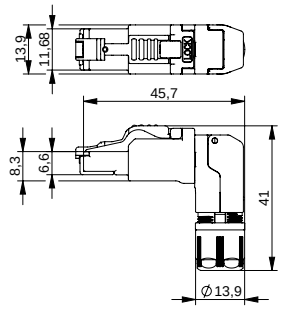
Item Description	ETHERNET Connector; RJ-45; Cat. 5; Straight; Code T568A	ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568A	
Version	AWG 22	AWG 22	AWG 24
Item No.	750-975	750-977/000-011	750-977/000-021
Order Text	Connector ETHERNET; RJ-45; Cat.5; 180°; T568A; AWG22	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG22	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG24
Technical Data			
Cable category	Cat. 5e	Cat. 6A	
Data transmission rate (max.)	1 GBit/s	10 GBit/s	
Code	TiA-568A	TiA-568A	
Cable exit	180°	180°	
Pole number	8	8	
Housing material	Plastic	Zinc die-cast	
Mating cycles	> 1000	> 750	
Conductor connection	IDC contact	IDC contact	
Conductor cross-sections	Solid: 0.13 … 0.24 mm² / AWG 26/1 … 23/1; Stranded: 0.14 … 0.36 mm² / AWG 26/7 … 22/7	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
Cable jacket diameter	4.5 … 8 mm	5.5 … 9 mm	
Cable strain relief	Screw clamp connection		
Shield connection	> 180°	360°	
Surrounding air temperature (operation)	–20 … +70 °C	–40 … +85 °C	
Surrounding air temperature (storage)	–40 … +70 °C	–40 … +85 °C	
Relative humidity	95 %; non condensing	95 %; non condensing	
Protection type	IP20	IP20	
Standards/specifications	Basic standard: IEC 60603-7 RJ-45 Category 5; CD ISO/IEC 11801: 2002; - EN 50173: 2002; EIA/TIA 568A: 2002; UL 1863	IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	
Approvals	Marine		
For data sheet and additional information, see:	wago.com/750-975	wago.com/750-977/000-011	wago.com/750-977/000-021

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ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568A; Strain relief	
AWG 22	**AWG 24**
750-978/000-011	**750-978/000-021**
Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG24; Strain relief

ETHERNET Connector; RJ-45; Cat. 6A; Angled; Code T568A; Strain relief	
AWG 22	**AWG 24**
750-979/000-011	**750-979/000-021**
Connector ETHERNET; RJ-45; Cat.6A; 90°; T568A; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 90°; T568A; AWG24; Strain relief

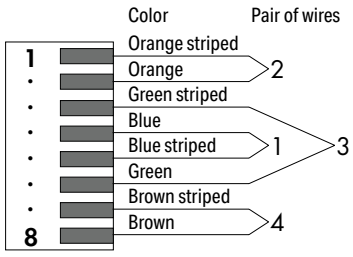
Cat. 6A	
10 GBit/s	
TiA-568A	
180°	
8	
Zinc die-cast	
> 750	
IDC contact	
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
5.5 … 10 mm	
Screw clamp connection	
360°	
–40 … +85 °C	
–40 … +85 °C	
95 %; non condensing	
IP20	
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	
wago.com/ 750-978/000-011	wago.com/ 750-978/000-021

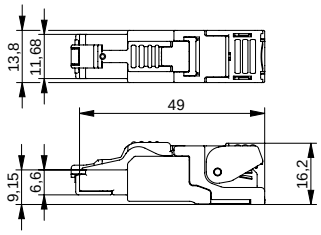
Cat. 6A	
10 GBit/s	
TiA-568A	
90°; selectable position	
8	
Zinc die-cast	
> 750	
IDC contact	
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
5.5 … 10 mm	
Screw clamp connection	
360°	
–40 … +85 °C	
–40 … +85 °C	
95 %; non condensing	
IP20	
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	
wago.com/ 750-979/000-011	wago.com/ 750-979/000-021

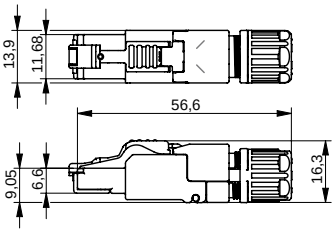
ETHERNET Connectors; Code T568B





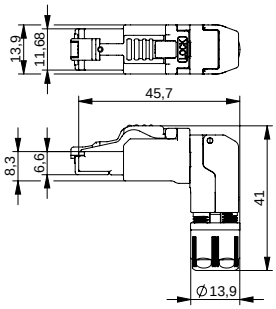






Item Description	ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568B		ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568B; Strain relief	
Version	**AWG 22**	**AWG 24**	**AWG 22**	**AWG 24**
Item No.	**750-977/000-012**	**750-977/000-022**	**750-978/000-012**	**750-978/000-022**
Order Text	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG22	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG24	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG24; Strain relief
Technical Data				
Cable category	Cat. 6A		Cat. 6A	
Data transmission rate (max.)	10 GBit/s		10 GBit/s	
Code	TiA-568B		TiA-568B	
Cable exit	180°		180°	
Pole number	8		8	
Housing material	Zinc die-cast		Zinc die-cast	
Mating cycles	> 750		> 750	
Conductor connection	IDC contact		IDC contact	
Conductor cross-sections	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
Cable jacket diameter	5.5 … 9 mm		5.5 … 10 mm	
Cable strain relief			Screw clamp connection	
Shield connection	360°		360°	
Surrounding air temperature (operation)	–40 … +85 °C		–40 … +85 °C	
Surrounding air temperature (storage)	–40 … +85 °C		–40 … +85 °C	
Relative humidity	95 %; non condensing		95 %; non condensing	
Protection type	IP20		IP20	
Standards/specifications	IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043		IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	
Approvals				
For data sheet and additional information, see:	wago.com/ 750-977/000-012	wago.com/ 750-977/000-022	wago.com/ 750-978/000-012	wago.com/ 750-978/000-022





ETHERNET Connector; RJ-45; Cat. 6A; Angled; Code T568B; Strain relief	
AWG 22	**AWG 24**
750-979/000-012	**750-979/000-022**
Connector ETHERNET; RJ-45; Cat.6A; 90°; T568B; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 90°; T568B; AWG24; Strain relief

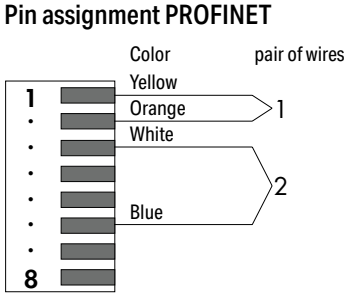
Cat. 6A	
10 GBit/s	
TiA-568B	
90°; selectable position	
8	
Zinc die-cast	
> 750	
IDC contact	
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
5.5 … 10 mm	
Screw clamp connection	
360°	
–40 … +85 °C	
–40 … +85 °C	
95 %; non condensing	
IP20	
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	

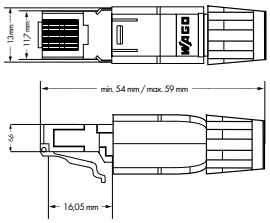
wago.com/ 750-979/000-012	wago.com/ 750-979/000-022

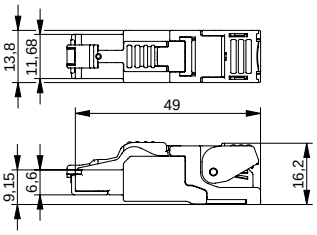
PROFINET Connectors







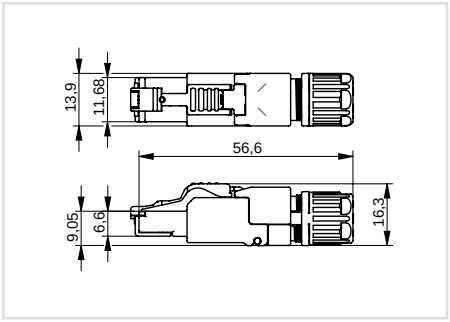


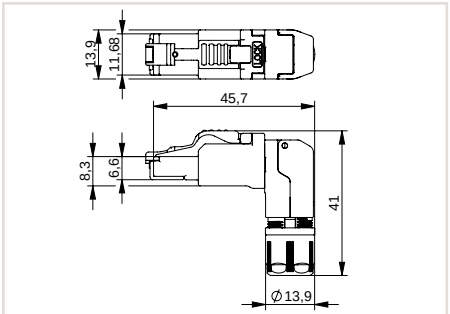


Item Description	PROFINET Connector; RJ-45; Cat. 5; Straight	PROFINET Connector; RJ-45; Cat. 6A; Straight
Version	AWG 22	AWG 22
Item No.	750-976	750-977/000-013
Order Text	Connector PROFINET; RJ-45; Cat.5; 180°; AWG22	Connector PROFINET; RJ-45; Cat.6A; 180°; AWG22
Technical Data		
Cable category	Cat. 5e	Cat. 6A
Data transmission rate (max.)	100 MBit/s	100 MBit/s
Code	PROFINET	PROFINET
Cable exit	180°	180°
Pole number	8	8
Housing material	Plastic	Zinc die-cast
Mating cycles	> 1000	> 750
Conductor connection	IDC contact	IDC contact
Conductor cross-sections	Solid: 0.13 … 0.24 mm² / AWG 26/1 … 23/1; Stranded: 0.14 … 0.36 mm² / AWG 26/7 … 22/7	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7
Cable jacket diameter	4.5 … 8 mm	5.5 … 9 mm
Cable strain relief	Screw clamp connection	
Shield connection	>180°	360°
Surrounding air temperature (operation)	–20 … +70 °C	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +70 °C	–40 … +85 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Protection type	IP20	IP20
Standards/specifications	Basic standard: IEC 60603-7 RJ-45 Category 5; CD ISO/IEC 11801: 2002; - EN 50173: 2002; EIA/TIA 568A: 2002; UL 1863	IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
Approvals	Marine	
For data sheet and additional information, see:	wago.com/750-976	wago.com/750-977/000-013









PROFINET Connector; RJ-45; Cat. 6A; Straight; Strain relief
AWG 22
750-978/000-013
Connector PROFINET; RJ-45; Cat.6A; 180°; AWG22; Strain relief

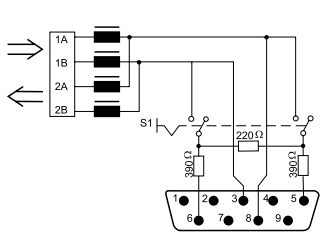
Cat. 6A
100 MBit/s
PROFINET
180°
8
Zinc die-cast
> 750
IDC contact
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7
5.5 … 10 mm
Screw clamp connection
360°
–40 … +85 °C
–40 … +85 °C
95 %; non condensing
IP20
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
wago.com/750-978/000-013

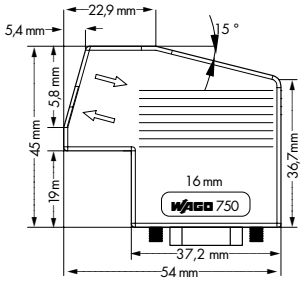
PROFINET Connector; RJ-45; Cat. 6A; Angled; Strain relief
AWG 22
750-979/000-013
Connector PROFINET; RJ-45; Cat.6A; 90°; AWG22; Strain relief

Cat. 6A
100 MBit/s
PROFINET
90°; selectable position
8
Zinc die-cast
> 750
IDC contact
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7
5.5 … 10 mm
Screw clamp connection
360°
–40 … +85 °C
–40 … +85 °C
95 %; non condensing
IP20
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
wago.com/750-979/000-013

PROFIBUS Fieldbus Connectors







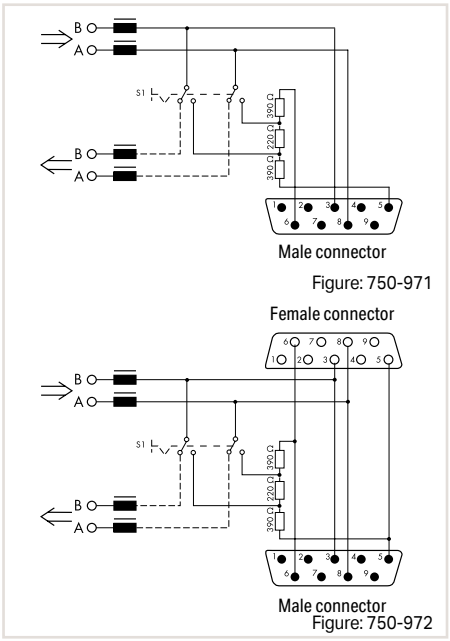
Item Description	PROFIBUS Fieldbus Connector; with D-sub plug; 9-pole
Item No.	750-960
Order Text	Connector PROFIBUS; DSub-M; 9P

Technical Data	
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Data transmission rate (max.)	12 Mbit/s
Terminating resistor	Integrated switch
Housing color	Light gray
Protection type	IP20
Surrounding air temperature (operation)	0 … +60 °C
Surrounding air temperature (storage)	–25 … +85 °C
Relative humidity	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-960

Accessories	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	210-720

13

PROFIBUS Fieldbus Connectors



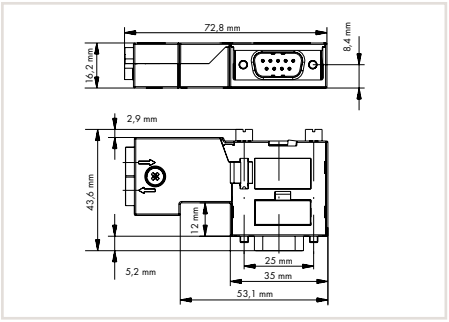
Male connector
Figure: 750-971

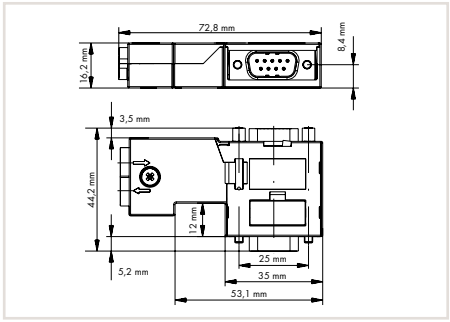
Female connector

Male connector
Figure: 750-972









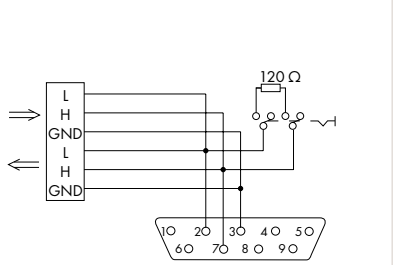
Item Description	PROFIBUS Fieldbus Connector; with D-sub plug; 9-pole	PROFIBUS Fieldbus Connector; with D-sub plug and socket; 9-pole
Item No.	**750-971**	**750-972**
Order Text	Connector PROFIBUS; DSub-M; 9P	Connector PROFIBUS; DSub-M; 9P; PG-Int
Technical Data		
Double cable entry point	Ø 8.5 mm	Ø 8.5 mm
Data transmission rate (max.)	12 Mbit/s	12 Mbit/s
Terminating resistor	Integrated switch	Integrated switch
Housing color	Light gray	Light gray
Protection type	IP20	IP20
Surrounding air temperature (operation)	–25 … +70 °C	–25 … +70 °C
Surrounding air temperature (storage)	–25 … +85 °C	–25 … +85 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
For data sheet and additional information, see:	wago.com/750-971	wago.com/750-972

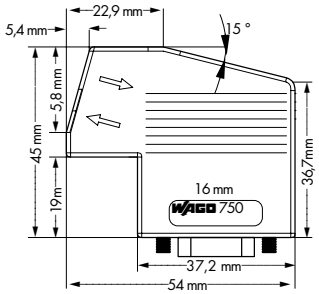
Accessories	Item No.	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719	210-719

This fieldbus connector can be connected to a programming tool without interrupting the connection to the PROFIBUS device.

CANopen Fieldbus Connector







Item Description	CANopen Fieldbus Connector; with D-sub socket; 9-pole
Item No.	750-963
Order Text	Connector CANopen; DSub-F; 9P

Technical Data	
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Data transmission rate (max.)	1 Mbd
Terminating resistor	Integrated switch
Housing color	Light gray
Protection type	IP20
Surrounding air temperature (operation)	0 … +60 °C
Surrounding air temperature (storage)	−25 … +85 °C
Relative humidity	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	Marine; OrdLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-963

Accessories	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	210-720

INTERBUS Fieldbus Connectors

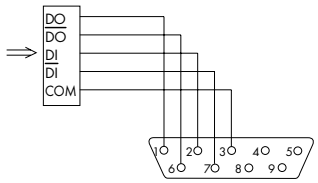


Figure: 750-961

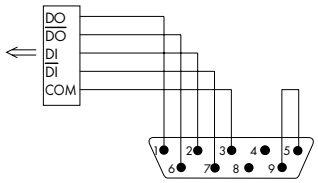
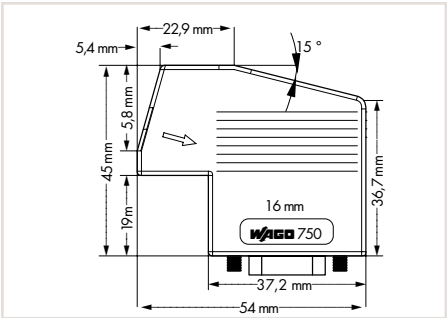
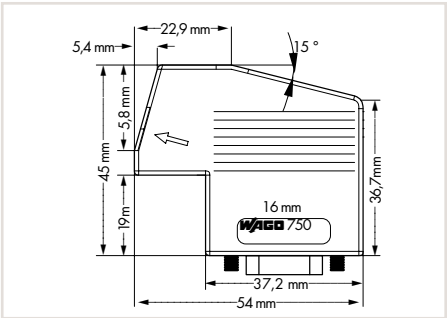


Figure: 750-962







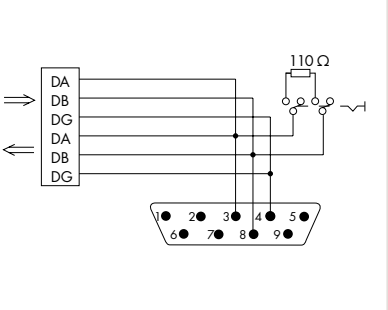


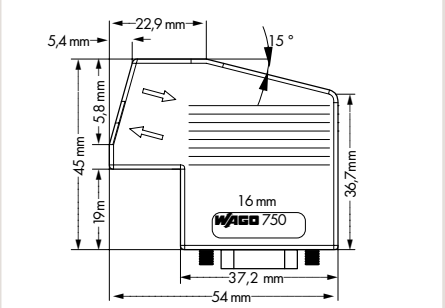
Item Description	INTERBUS Fieldbus Connector (IN); with D-sub socket; 9-pole	INTERBUS Fieldbus Connector (OUT); with D-sub plug; 9-pole
Item No.	**750-961**	**750-962**
Order Text	Connector INTERBUS; DSub-F; 9P	Connector INTERBUS; DSub-M; 9P
Technical Data		
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Data transmission rate (max.)	2 Mbd	2 Mbd
Housing color	Light gray	Light gray
Protection type	IP20	IP20
Surrounding air temperature (operation)	0 … +60 °C	0 … +60 °C
Surrounding air temperature (storage)	−25 … +85 °C	−25 … +85 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	cULus OrdLoc/HazLoc; ATEX/IECEx	cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-961	wago.com/750-962

Accessories	Item No.	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	**210-719**	**210-719**
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	**210-720**	**210-720**

CC-Link Fieldbus Connector







Item Description	CC-Link Fieldbus Connector; with D-sub plug; 9-pole
Item No.	750-965
Order Text	Connector CC-Link; DSub-M; 9P

Technical Data	
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Terminating resistor	Integrated switch
Housing color	Light gray
Protection type	IP20
Surrounding air temperature (operation)	0 … +60 °C
Surrounding air temperature (storage)	−25 … +85 °C
Relative humidity	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	OrdLoc
For data sheet and additional information, see:	wago.com/750-965

Accessories	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	210-720

System Enclosures



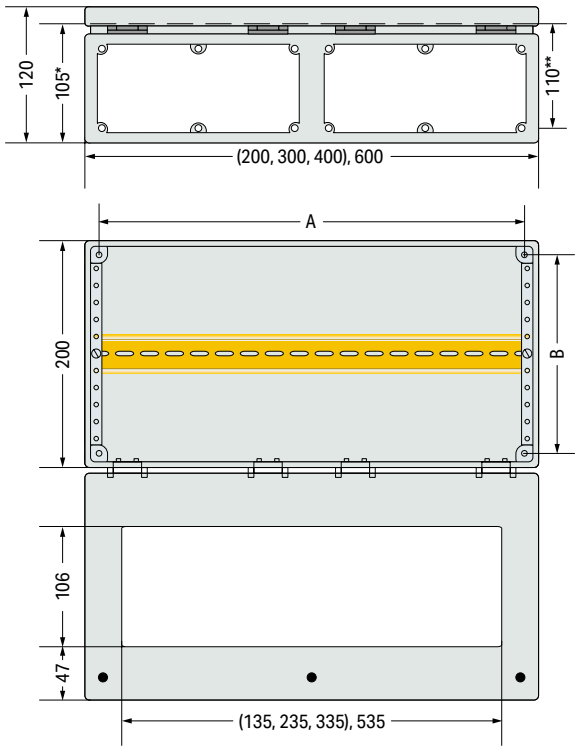
1 Sheet steel
2 Cast aluminum
3 Polyester
4 Sheet steel with cable entry plates

The increasing importance of using the application industrial fieldbus systems in various process engineering areas, such as the chemical and food industry, calls for enclosures that protect both the system technology used and the goods being produced.

This is why WAGO offers system enclosures that allow the use of the WAGO I/O System 750/753 in systems exposed to severe environmental conditions. Each enclosure version is available in four different sizes and features the appropriate number of cable grips with metric thread or cable entry plates.

Sheet-Steel System Enclosures





Dimensions in mm
* internal dimension
** from upper-edge of DIN 35 rail

Item Description	IP65 System Enclosure; Sheet steel (RAL 7035); without flange plate			
Version	WxHxD (200x120x200 mm)	WxHxD (300x120x200 mm)	WxHxD (400x120x200 mm)	WxHxD (600x120x200 mm)
Item No.	850-814/002-000	850-815/002-000	850-816/002-000	850-817/002-000
Order Text	STE Enclosure; RAL7035 200mm	STE Enclosure; RAL7035 300mm	STE Enclosure; RAL7035 400mm	STE Enclosure; RAL7035 600mm
Technical Data				
Recommended assembly dimension (A x B)	160 x 160	260 x 160	360 x 160	560 x 160
Dimensions W x H x D	200 x 120 x 200 mm	300 x 120 x 200 mm	400 x 120 x 200 mm	600 x 120 x 200 mm
Number of I/O modules	≤ 8*	≤ 16*	≤ 24*	≤ 40*
For data sheet and additional information, see:	wago.com/ 850-814/002-000	wago.com/ 850-815/002-000	wago.com/ 850-816/002-000	wago.com/ 850-817/002-000

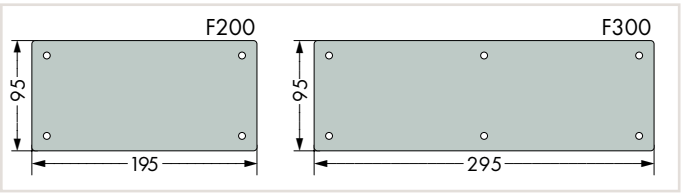
Accessories: Flange Plates	Number of flange plates that can be fitted			
Size 195 x 95 mm: F200; F200-1; F200-2; F204	1	-	2	-
Size 295 x 95 mm: F300; F300-1; F300-2; F304	-	1	-	2

Accessories	Item No.
Wall Mount	850-904

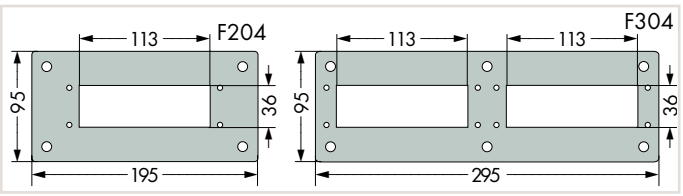
*Both fieldbus coupler and end module are part of the system. This applies to 12 mm wide I/O modules. I/O modules with a width of 24 mm count as two I/O modules.

Included:
- Powder-coated, sheet steel enclosure
- Box with narrow beveled edge, sturdy gutter profile
- Hinged cover 180° (PA), with foam PU seal and 2–3 quick disconnects
- Quick-release fasteners in plastic bushes
- Mounting holes (incl. sealing plugs)
- Large Makrolon inspection glass
- Removable, yellow-tinted chrome interior profiles
- Galvanized DIN-35/7.5 rail (contact with enclosure), adjustable in 12.5 mm spacing
- Grounding lug for cover and flanges with quick-release ribbon cable connectors
- Light gray (RAL 7035)

Flange Plates and Cable Entry Plates



Flange Plate; RAL7035; without cut-out		
	Width x Height	Item No.
F200 Flange Plate RAL7035 WCO	195 x 95 mm	850-818/002-000
F300 Flange Plate RAL7035 WCO	295 x 95 mm	850-819/002-000



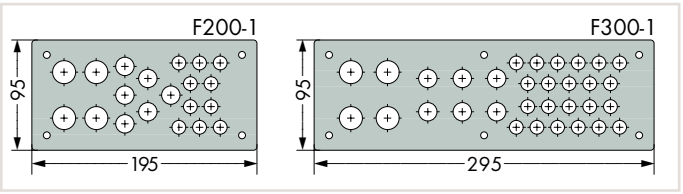
Flange Plate; RAL7035; with cut-out		
	Width x Height	Item No.
F204 Flange Plate RAL7035 1CO	195 x 95 mm	850-818/002-005
F304 Flange Plate RAL7035 2CO	295 x 95 mm	850-819/002-005



Illustration: Flange Plate F204 with Cable Entry Plate KDP 22

Cable Entry Plate	
	Item No.
KDP 22 Cable Entry Plate; 16 x Size 1, 4 x Size 2, 2 x Size 3	850-820/000-001
KDP 29 Cable Entry Plate; 29 x Size 1	850-820/000-002

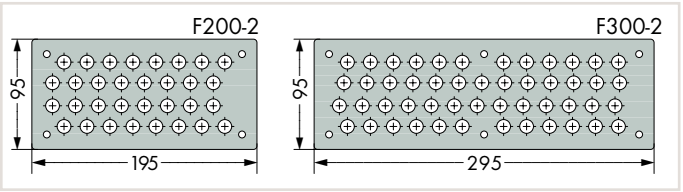
Cable entry plate, polyamide
Size 1: Cable diameter 3.0 … 6.5 mm
Size 2: Cable diameter 5.0 … 9.2 mm
Size 3: Cable diameter 8.0 … 12.5 mm



Flange Plate; RAL7035; M20, M16, M12 bore holes		
	Width x Height	Item No.
F200-1 Flange Plate RAL7035 HO1; 4 x M20, 6 x M16, 10 x M12	195 x 95 mm	850-818/002-001
F300-1 Flange Plate RAL7035 HO5; 4 x M20, 6 x M16, 22 x M12	295 x 95 mm	850-819/002-001



Flange Plate; RAL7035; M20, M16, M12 cable grips		
	Width x Height	Item No.
F200-1 Flange Plate RAL7035 CG8; 4 x M20, 6 x M16, 10 x M12	195 x 95 mm	850-818/002-002
F300-1 Flange Plate RAL7035 CG9; 4 x M20, 6 x M16, 22 x M12	295 x 95 mm	850-819/002-002



Flange Plate; RAL7035; M12 bore holes		
	Width x Height	Item No.
F200-2 Flange Plate RAL7035 HO4; 32 x M12	195 x 95 mm	850-818/002-003
F300-2 Flange Plate RAL7035 HO6; 50 x M12	295 x 95 mm	850-819/002-003

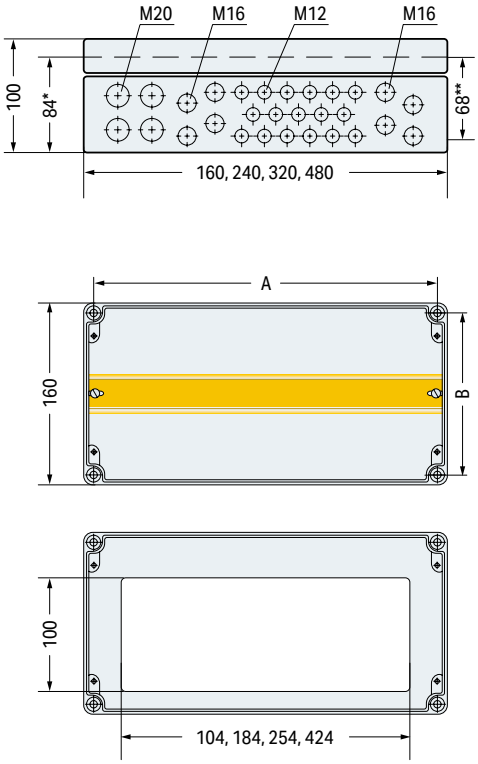


Flange Plate; RAL7035; M12 cable grips		
	Width x Height	Item No.
F200-2 Flange Plate RAL7035 HO2; 32 x M12	195 x 95 mm	850-818/002-004
F300-2 Flange Plate RAL7035 CG12; 50 x M12	295 x 95 mm	850-819/002-004

Similar to illustration

Aluminum System Enclosures





Dimensions in mm
* internal dimension
** from upper-edge of DIN 35 rail

Item Description	IP65 System Enclosure; Aluminum			
Version	**Enclosure type in RAL 7032**			
Item No.	**850-825**	**850-826**	**850-827**	**850-828**
Order Text	ALU Enclosure; RAL7032 160mm CG11	ALU Enclosure; RAL7032 240mm CG7	ALU Enclosure; RAL7032 320mm CG10	ALU Enclosure; RAL7032 480mm CG4
Version	**Enclosure type in RAL 7035**			
Item No.		**850-826/002-000**	**850-827/002-000**	**850-828/002-000**
Order Text		ALU Enclosure; RAL7035 240mm CG7	ALU Enclosure; RAL7035 320mm CG10	ALU Enclosure; RAL7035 480mm CG4

Technical Data				
Number of M12 cable grips	9	14	17	35
Number of M16 cable grips	-	4	8	10
Number of M20 cable grips	4			
Recommended assembly dimension (A x B)	142 x 142 mm	222 x 142 mm	302 x 142 mm	462 x 142 mm
Dimensions W x H x D	160 x 100 x 160 mm	240 x 100 x 160 mm	320 x 100 x 160 mm	480 x 100 x 160 mm
Number of I/O modules	≤ 4*	≤ 11*	≤ 18*	≤ 31*
For data sheet and additional information, see:	wago.com/850-825	wago.com/850-826	wago.com/850-827	wago.com/850-828

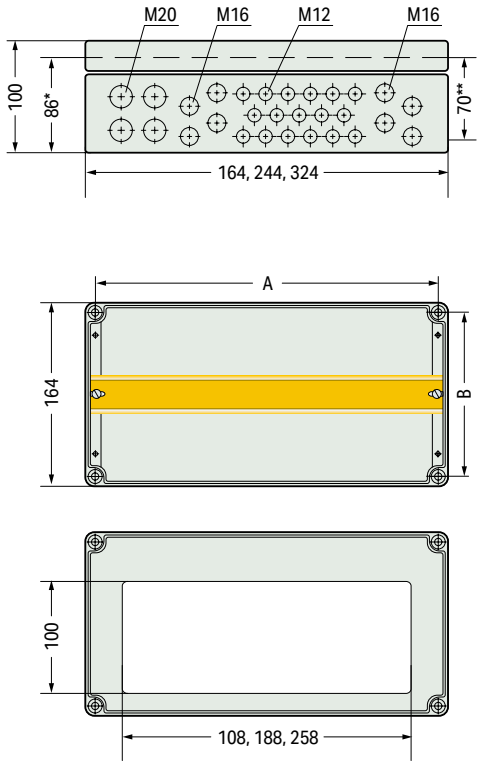
Accessories	Item No.
Pole Mount	850-903

*Both fieldbus coupler and end module are part of the system. This applies to 12 mm wide I/O modules. I/O modules with a width of 24 mm count as two I/O modules.

Included:
- Aluminum enclosure, G AL Si 12 alloy / DIN 1725
- Stainless steel cover screws, captive
- Inspection glass, incl. attachment panel for customer marking (marking not included in scope of supply)
- Mounting holes (4 mounting channels located outside the sealed enclosure)
- Metric cable glands (brass, nickel-plated), incl. blind plugs
- M12 cable grip, cable diameter 3 ... 6 mm
- M16 cable grip, cable diameter 5 ... 9 mm
- M20 cable grip, cable diameter 9 ... 13 mm
- 1x DIN-35/7.5 rail
- Tongue and groove system, seal with groove in enclosure cover
- Oil and petroleum-resistant neoprene round cord seal
- Grounding link in enclosure
- Pebble gray RAL 7032 or light gray RAL 7035

Polyester System Enclosures





Dimensions in mm
* internal dimension
** from upper-edge of DIN 35 rail

Item Description	IP65 System Enclosure; Polyester (RAL 7032)		
Version	WxHxD (164x100x164 mm); 9 x M12, 4 x M20	WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip
Item No.	850-834	850-835	850-836
Order Text	POL Enclosure; RAL7032 164mm CG11	POL Enclosure; RAL7032 244mm CG7	POL Enclosure; RAL7032 324mm CG10

Technical Data			
Number of M12 cable grips	9	14	17
Number of M16 cable grips	-	4	8
Number of M20 cable grips	4		
Recommended assembly dimension (A x B)	142 x 142 mm	222 x 142 mm	302 x 142 mm
Dimensions W x H x D	164 x 100 x 164 mm	244 x 100 x 164 mm	324 x 100 x 164 mm
Number of I/O modules	≤ 4*	≤ 11*	≤ 18*
For data sheet and additional information, see:	wago.com/850-834	wago.com/850-835	wago.com/850-836

Accessories	Item No.
Pole Mount	850-903

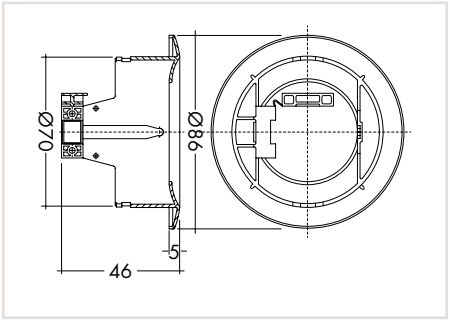
*Both fieldbus coupler and end module are part of the system. This applies to 12 mm wide I/O modules. I/O modules with a width of 24 mm count as two I/O modules.

Included:
- Polyester enclosure, glass-fiber-reinforced, halogen-free, as V0 version (self-extinguishing)
- Polyamide cover screws, captive
- Inspection glass, incl. attachment panel for customer marking (marking not included in scope of supply)
- Mounting holes (4 mounting channels located outside the sealed enclosure)
- Metric cable grips (polyamide PA 6), incl. blind plugs
- M12 cable grip, cable diameter 3 ... 6 mm
- M16 cable grip, cable diameter 5 ... 9 mm
- M20 cable grip, cable diameter 9 ... 13 mm
- 1x DIN-35/7.5 rail
- Oil and petroleum-resistant neoprene round cord seal
- Pebble gray, RAL 7032

DALI Multi-Sensors

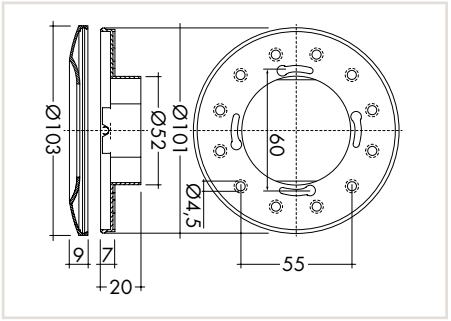
Ceiling Installation





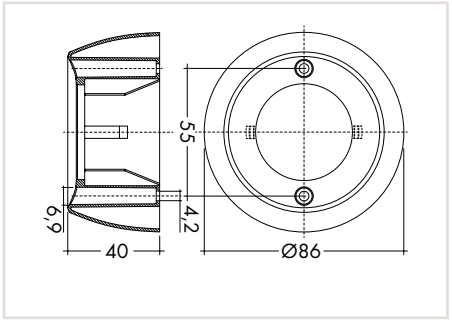
Wall Box Mounting





Surface Mounting





The WAGO DALI MSensor 02 is paired with DALI Master I/O modules (753-647 or 750-641) and has been designed for the following key applications:

- Individual offices
- Open-plan offices
- Training/presentation rooms
- Corridors, passageways and garages

WAGO's Multi-Sensor features both a motion/presence detector and a light sensor. It may also be operated with an optional remote control from Tridonic. The sensor enables both motion/presence detection and daylight-dependent lighting control, both of which can also be deactivated.

Addressing is performed via rotary switch or WAGO DALI Configurator. Parameters can be adjusted individually using the configurator.
Power supply is provided via the DALI line.
The number of sensors, which can be operated on a DALI line, depends on the total power consumption of the specific devices and the address range for the actuators and sensors. Due to the capacity of the DALI bus, a maximum of 16 DALI sensor couplers may be operated on a DALI Multi-Master Module (753-647).

Installation notes:

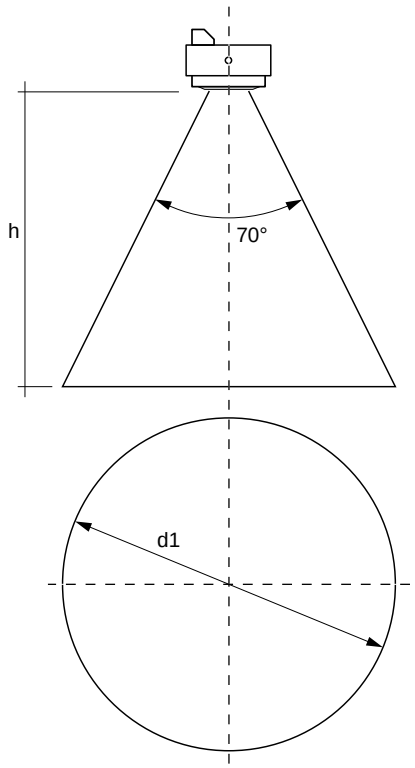
- The DALI MSensor 02 is supplied directly via DALI line.
- DALI is not SELV (Safety Extra Low Voltage). The installation instructions for mains voltage therefore apply.
- The sensor's detection range must be within the lighting area of the controlled luminaires.
- The sensors' detection ranges must not overlap as this may impair the lighting control.
- When installed at a height other than the recommended installation height (2.5 m), the presence and light sensor might show different characteristics. If installed at a greater height, the sensitivity is reduced; the range is also reduced when installed at a lower height.
- Heaters, fans, printers and copiers located in the detection range may cause incorrect presence detection.

Item Description	DALI MSensor 02 5DPI 41rc (Recessed Ceiling Installation)	DALI MSensor 02 5DPI 41w (Wall Box Mounting)	DALI MSensor 02 5DPI 41rs (Surface Mounting)
Item No.	**2851-8301**	**2851-8302**	**2851-8303**
Technical Data			
Diameter of detection range when installed at a height of 2.5 m	5 m		
Extension of the detection range	2 m (if mounted at a height of 2.5 m and swiveled through 15°)		-
Swivel design	Yes		No
Swivel range	± 15°		-
Detection angle	360°		
Light measurement at the sensor head	10 ... 650 lx (The measured value at the sensor head corresponds to approx. 15 to 2,000 lux on the surface measured.)		
Remote control range	5 m		
For data sheet and additional information, see:	wago.com/2851-8301	wago.com/2851-8302	wago.com/2851-8303

Technical Data	
Power supply	Via DALI line
Power consumption	6 mA from DALI line
Surrounding air temperature (operation)	0 … +50 °C
Surrounding air temperature (storage)	–25 … +55 °C
Protection type	IP20
Wire type and cross-section	Solid or fine-stranded wires ranging from 0.5 to 1.5 mm² (20 … 16 AWG)

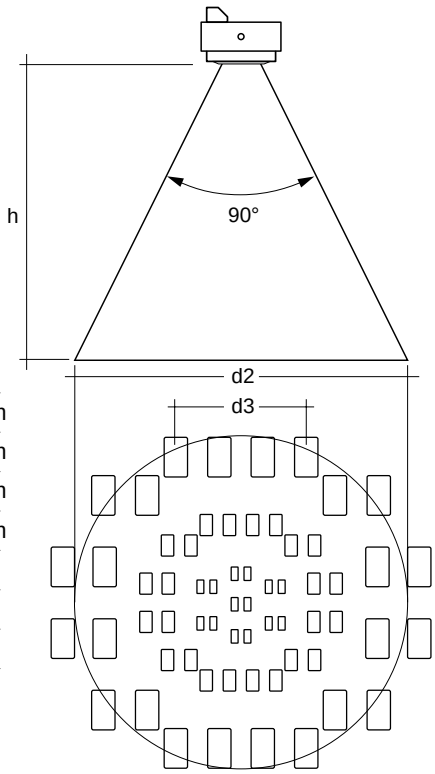
Technical Data	
General Settings	
Motion detector	Switching, on/off
Lighting control	Switching
Setpoint (lighting control)	150 lx
Power-on setting	No action
Bright-out timeout	10 min
Bright-out threshold	150 %
Control speed	4
Switch-on value	Automatic (calculated)
Rotary switch	0, broadcast
Motion Detector Settings	
Fade-in time	< 0.7 s
Presence value	Regulated
Run-on time	20 min
Fade time	5.6 s
Absence value	3 %
Switch-off delay	10 min
Fade-off time	5.6 s
Manual-off	10 min

Light Detection



h *	d1	d2	d3
1,7 m	2,4 m	3,4 m	1,36 m
2,0 m	2,8 m	4,0 m	1,60 m
2,3 m	3,2 m	4,6 m	1,84 m
2,5 m	3,5 m	5,0 m	2,00 m
2,7 m	3,8 m	5,4 m	-
3,0 m	4,2 m	6,0 m	-
3,5 m	4,9 m	7,0 m	-
4,0 m	5,6 m	8,0 m	-

Motion Detection (d2) and Presence Detection (d3)



*The recommended maximum room height for office applications is 3 m and for corridor applications 4 m, for example.

Calculation of the diameter:
$d = 2 \times \tan(0.5 \times \alpha) \times h$

WAGO DALI Multi-Sensor Kit

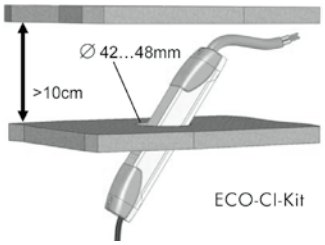
DALI Sensor Coupler



MULTI-3-CI Sensor



Eco-CI Kit



The WAGO DALI Multi-Sensor Kit is paired with the WAGO 753-647 DALI Multi-Master Module and includes the following three components:

- DALI Sensor Coupler (also available individually)
- Eco-CI Kit
- MULTI-3-CI Sensor

The DALI Sensor Coupler connects the MULTI-3-CI Sensor to a DALI bus system. For this, the MULTI-3-CI Sensor is connected to the DALI Sensor Coupler via RJ-10 socket. DALI terminals connect the DALI Sensor Coupler to both the DALI network and WAGO DALI Module.
The Eco-CI Kit contains two covers, which can be used as touch guards and strain relief for cables within the ceiling installation of the DALI Sensor Coupler.
The MULTI-3-CI Sensor has a motion and light sensor, enabling both motion detection and daylight-dependent lighting control. Power supply to the DALI Sensor Coupler is provided via DALI line. The DALI Sensor Coupler transmits measured values from the connected sensor channels as telegrams to the WAGO DALI Module via DALI line. Parameters can be adjusted individually via WAGO DALI Configurator.

The number of sensors, which can be operated on a DALI line, depends on the total power consumption of the specific devices and the address range for the actuators and sensors. Due to the capacity of the DALI bus, a maximum of 16 DALI Sensor Couplers may be operated on a DALI Multi-Master Module (753-647).

Installation
Sensor Connection
The MULTI-3-CI Sensor is connected to a 4-pole RJ-10 socket (4P4C), which is marked as "Sensor" on the housing cover.
For easy connection, the sensor plug is equipped with a quick-connect latch. Only one MULTI-3-CI Sensor must be connected to sensor coupler.

Ceiling Installation
For installation outside of a lighting fixture (e.g., suspended ceiling), the Eco-CI Kit must also be attached to both sides of the unit to ensure strain relief and touch protection.
The DALI Sensor Coupler can also be installed in lighting fixtures. The installation spaces available in lighting fixtures can be used, as the dimensions correspond to those of an electronic ballast.

Note:
The DALI Sensor Coupler is also available individually, allowing the unit to be combined with other multi-sensor models from OSRAM.

WAGO DALI Multi-Sensor Kit	
Delivery type	Item No.
Set includes: DALI Sensor Coupler, MULTI-3-CI Sensor, Eco-CI Kit	2851-8201
DALI Sensor Coupler	2851-8202

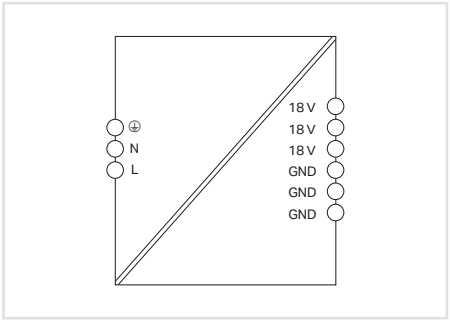
DALI Sensor Coupler	
Power supply	Via DALI line
Power consumption	5 mA (from the DALI line)
Input signal voltage/current	According to MULTI 3 CI Sensor
Conductor connection	Inputs: for MULTI-3-CI Sensor's modular plug 4p4c (RJ-10); Sensor cable length (max.): 5 m; DALI connection: Push-wire connectors; Strip length: 8.5 … 9.5 mm
Conductor cross-sections	0.5 … 1.5 mm² (s + f-st)
Dimensions W x H x D	118 x 21 x 30 mm
Weight	35 g
Surrounding air temperature (operation)	0 … +50 °C
Surrounding air temperature (storage)	−25 … +70 °C
Relative humidity	5 … 93 %; non-condensing
Protection type	IP20
Approvals	CE

Eco-CI Kit	
Installation opening diameter	42 … 48 mm
Minimum suspended ceiling clearance	25 mm

MULTI-3-CI Sensor	
Maximum total length of signal line (incl. all connections to the control units)	100 m
Dimensions (diameter x H)	50 x 25 mm
Light sensor detection range	20 … 600 lx (measured at sensor), beam angle approx. 90°
Recommended installation height	2 … 4 m
Motion detection range	Cone-shaped, beam angle approx. 80°, depending on installation level 4 … 8 m

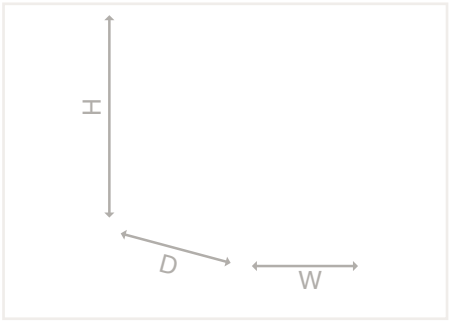
Power supply; Compact; 1-phase; 18 VDC / 1.25 A
787 Series





Power supply; Compact; 1-phase; 18 VDC output voltage; 1.25 A output current

	Item No.	PU
	787-2857	1



Features:
- Stepped profile for installation in standard distribution boards
- Connection technology with Push-in CAGE CLAMP®
- Parallel operation/series operation
- Electrically isolated output voltage (SELV) per EN/UL 61010-1 or EN/UL 61010-2-201

Input	
Nominal input voltage $U_{i\,nom}$	1 x 100 … 240 VAC
Input voltage range	100 … 264 VAC
Nominal mains frequency range	47 … 63 Hz
Input current I_i	≤ 0.4 A (110 VAC); ≤ 0.2 A (240 VAC)
Inrush current	≤ 24 A (NTC)
Mains failure hold-up time	≥ 95 ms (230 VAC)
Output	
Nominal output voltage $U_{o\,nom}$/Control deviation	18 VDC (SELV) / ≤ 2 %
Nominal output current $I_{o\,nom}$	1.25 A (18 VDC)
Nominal output power	22 W
Residual ripple	≤ 60 mV (peak-to-peak)
Overload behavior	Hiccup
Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED (U_o)
Efficiency/power losses	
Power loss P_l	≤ 0.5 W (230 VAC; No load); ≤ 4 W (230 VAC; Nominal load)
Power loss (max.) $P_{l\,(max.)}$	5 W (110 VAC / 24 VDC; 1,35 A)
Efficiency (typ.)	88 %
Circuit protection	
Internal fuse	T 1.25 A / AC 250 V
Recommended backup fusing	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec./pri.-PE/sec.-PE)	2.47 kVAC / 3.92 kVAC / 0,5 kVDC
Protection class/ Protection type	I / IP20 (per EN 60529)
Overvoltage category	III (≤ 2000 m a. s.l.); II (> 2000 m a. s.l.)
Short-circuit-protected	Yes
Parallel operation/series operation	Yes/yes
MTBF	> 2,500,000 h (per IEC 61709 at +40 °C)
Ambient air temperature (operation)	−25 … +70 °C (nominal mounting position; −20 … +55 °C in any mounting position)
Relative humidity	5 … 96 % (no condensation permissible)
Derating	-1.7 %/K (> 55 °C)
Pollution degree	2
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/signaling (solid/fine-stranded/AWG)	0.25 … 2.5 mm² / 0.25 … 2.5 mm² / 22 … 12 AWG
Output (solid/fine-stranded/AWG)	0.2 … 1.5 mm² / 0.2 … 1.5 mm² / 24 … 16 AWG
Physical data/ Mechanical data/ Material data	
Width x Height x Depth (mm)	36 x 90 x 62; depth from upper edge of DIN-rail: 55
Mounting type	DIN-35 rail
Weight	120 g
Standards and specifications	
Standards/Specifications	EN 61204-3; EN 61010-1; EN 61010-2-201; cULus 61010-1; cULus 61010-2-201, DNV

DALI Sensors



2852-7214

DALI Sensor		
	Item No.	PU
DALI Sensor; PD11-BMS-FLAT	2852-7210	1
DALI Sensor; PD4-BMS-GH	2852-7213	1
DALI Sensor; PD4N-BMS	2852-7214	1
Adapter; AP Assembly Kit IP54; Accessories for 2852-7214	2852-7215	1
DALI Sensor; MSensor G3 SRC 30 PIR 5DPI WH	2852-7220	1
DALI Sensor; IR Quattro HD DALI-2	2852-7230	1
DALI Sensor; IR Quattro SLIM XS DALI-2	2852-7231	1
DALI Sensor; IS3360 MX HIGH BAY DALI-2	2852-7232	1
DALI Sensor; IS345 MX HIGH BAY DALI-2	2852-7233	1



2852-7221

DALI Sensor		
	Item No.	PU
DALI Sensor; MSensor G3 SSM 30 10DPI WH	2852-7221	1
DALI XC Control Module with 4 Freely Programmable Inputs	2852-7225	1



2852-7225



2852-7601/000-001

Room Control Unit		
	Item No.	PU
Room Control Unit; Modbus®; RBG1; Display; Glass front; Aluminum frame; Black	2852-7601/000-001	1
Room Control Unit; Modbus®; RBG1; Display; Glass front; Aluminum frame; White	2852-7601/000-002	1

Room Control Units



2852-7110

Room Control Unit		
	Item No.	PU
WRF04-P Room Control Unit; Passive; Wall-Mount; Pt1000; 5 kOhm	2852-7110	1
WRF07-P Room Control Unit; Passive; Flush-Mount; Pt1000; 5 kOhm	2852-7111	1
SR04-P Room Control Unit; Radio; Wall-Mount; EnOcean	2852-7112	1
SR06-LCD Room Control Unit; Radio; Flush-Mount; EnOcean®; 2 Push-Buttons	2852-7113	1
WRF04-P-RS-485 Room Control Unit; Modbus®; Wall-Mount; Temperature; Set Point Value	2852-7114	1
WRF07-P-RS-485 Room Control Unit; Modbus®; Flush-Mount; Temperature; Set Point Value	2852-7115	1



2852-7510

Manually Operated Module		
	Item No.	PU
RBT10 Signaling Module; 12 LEDs	2852-7510	1
RBT20 Output Module; 4 Switches; 8 LEDs	2852-7511	1
RBT30 Output Module; 4 Push-Buttons; 4 LEDs + 12 LEDs	2852-7512	1
RBT40 Analog Module; 4 Rotary Encoders; 4 Bar Displays	2852-7513	1
RBT50 Operating Module; 2 Analog; 2 Digital	2852-7514	1

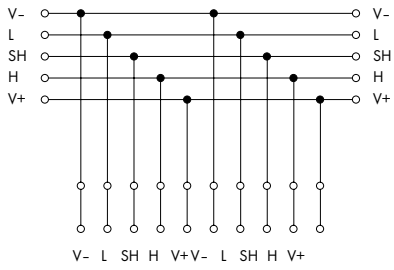


Connection Board		
	Item No.	PU
RBT-AK Connection Board for Robutec Series	2852-7515	1



Rack		
	Item No.	PU
RTR4050S Rack 4 HE, 50TE	2852-7516	1

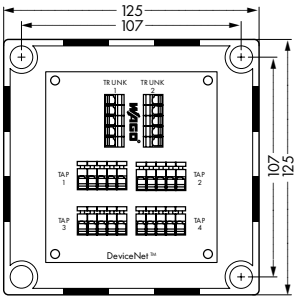
Multi Port Device Taps for DeviceNet

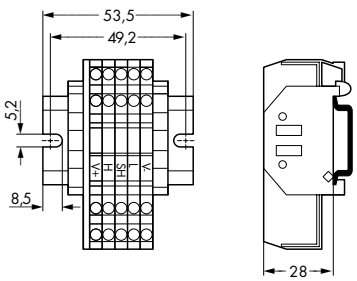






For DeviceNet, a terminating resistor must be connected to each end of the trunk cable. A metal film resistor with the following values must be used: 121 Ohm ± 1 %, ¼ W. Do not connect terminating resistors to the end of a drop cable, only connect to the ends of the trunk cable.





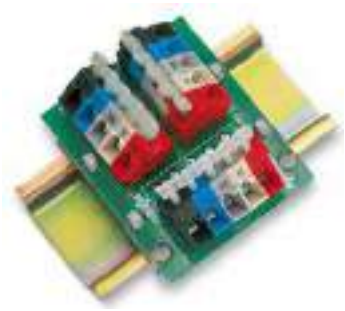
Item Description	Multi Port Device Tap; 2 trunk cables (input, output); 4 drop cables; Housing (IP65/NEMA 4)	Multi Port Device Tap; 2 trunk cables (input, output); 2 drop cables; Open style
Item No.	810-900/000-001	810-901/000-001
Technical Data		
Wire connection for trunk cables	2 x 256-405 (PCB terminal blocks)	
Wire connection for drop cables	4 x 255-405 (PCB terminal blocks)	
Housing	With cable entry holes	
Terminal block		5 x 280-633
End terminal block		2 x 249-116
DIN-rail		DIN 35, slotted
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG	0.08 … 2.5 mm² / 28 … 12 AWG
Cable diameter (trunk cable)*	10 … 14 mm Ø	
Cable diameter (drop cable)	6 … 12 mm Ø	
Protection type (housing)	IP65/NEMA 4	
For data sheet and additional information, see:	wago.com/810-900/000-001	wago.com/810-901/000-001

Accessories	Item No.	PU	Item No.	PU
Cable grip for trunk cable 10 …14 mm Ø	810-900/001-000	1		
Cable grip for drop cable 6 … 12 mm	810-900/002-000	1		
Terminating resistor	810-900/003-000	200	810-900/003-000	200
Test adapter for miniature banana plug	810-900/004-000	1	810-901/001-000	1

*when using the cable grip (available as accessories)

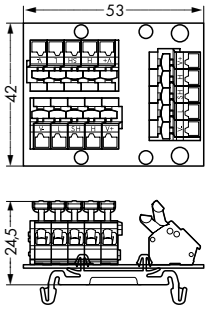
13

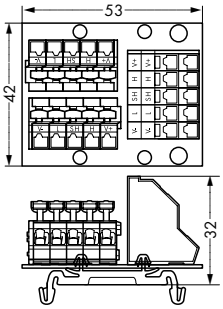
Multi Port Device Taps for DeviceNet





For DeviceNet, a terminating resistor must be connected to each end of the trunk cable. A metal film resistor with the following values must be used: 121 Ohm ± 1 %, ¼ W. Do not connect terminating resistors to the end of a drop cable, only connect to the ends of the trunk cable.





Item Description	Multi Port Device Tap with Mounting Foot; 2 trunk cables (input, output); 1 drop cable; Open style	Multi Port Device Tap with Mounting Foot; 2 trunk cables (input, output); 2 drop cables; Open style
Item No.	**810-902/000-001**	**810-902/000-002**
Technical Data		
Wire connection for trunk cables	2 x 5 x 256 Series (PCB terminal blocks)	2 x 5 x 256 Series (PCB terminal blocks)
Wire connection for drop cables	1 x 5 x 256 Series (PCB terminal blocks)	1 x 5 x 736 Series (PCB terminal blocks)
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG	0.08 … 2.5 mm² / 28 … 12 AWG
For data sheet and additional information, see:	wago.com/810-902/000-001	wago.com/810-902/000-002

Accessories	Item No.	PU	Item No.	PU
Terminating resistor	810-900/003-000	200	810-900/003-000	200
Test adapter for miniature banana plug	810-901/001-000	1	810-901/001-000	1

Shield Connection System, 790 Series
Application and Installation Instructions



Carrier with grounding foot* (790-113),
45 mm long, busbar 90° to the DIN-rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-114),
45 mm long, busbar parallel to the DIN-rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-115),
125 mm long, busbar parallel to the DIN-rail

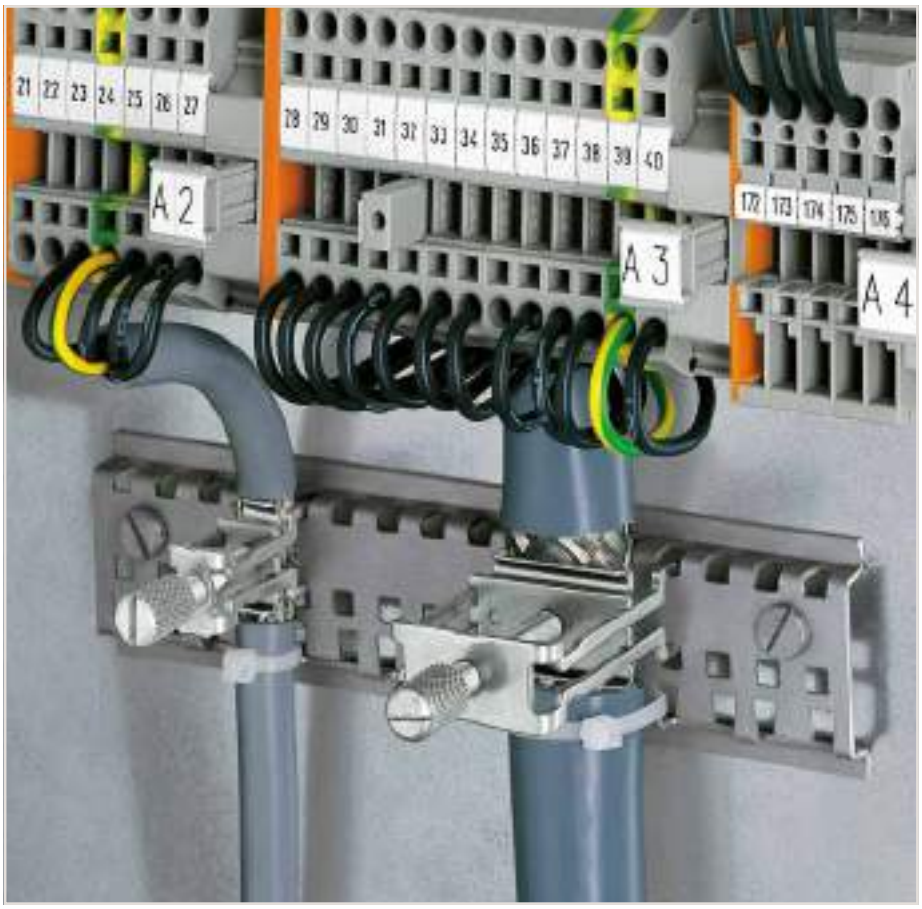
*for all shield clamping saddle sizes



Securing a spacer sleeve to a specialty slotted DIN-rail.



Securing an additional shield clamping saddle.





Tightening/removing a shield clamping saddle.

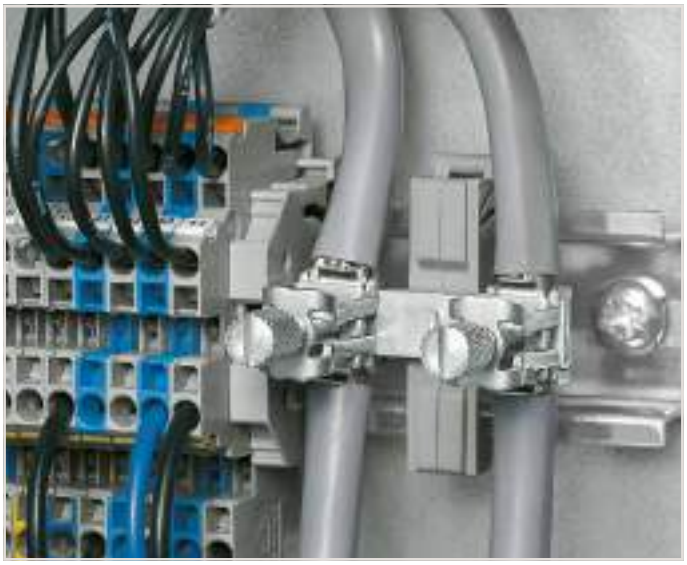


After connection, tighten the knurled screw to complete the installation. Recommended tightening torque: 0.5 Nm



To remove the clamping saddle, unscrew until ratcheted mechanism is released, then slightly tip saddle and remove the clamping saddle.

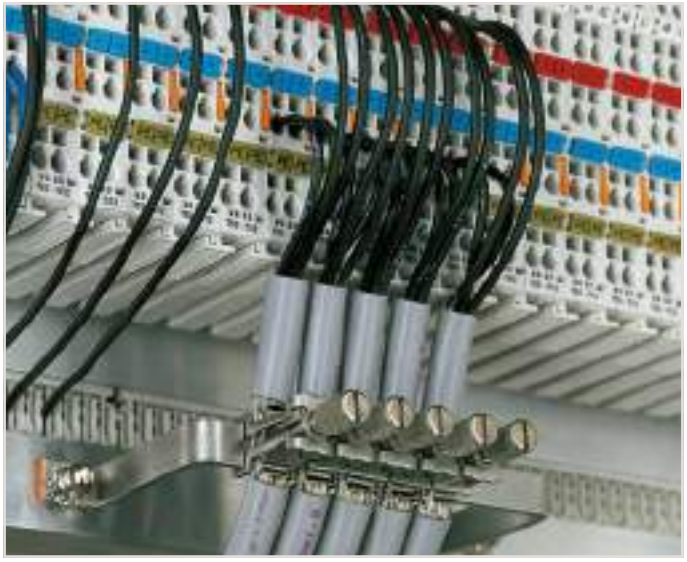
Shield Connection System, 790 Series
Application and Installation Instructions



Carrier with grounding foot – busbar parallel to the DIN-rail



Insulated mounting carriers for a common shield reference potential, independent of housing potential

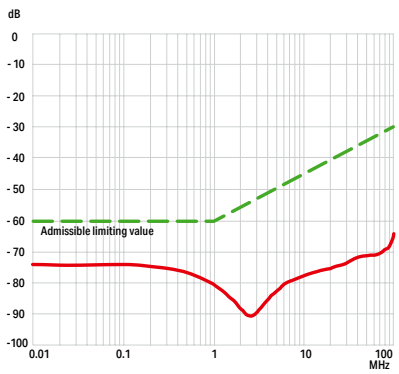


U-shaped (10 x 3) mm copper busbar



Snap shield clamping saddles into any metal plate (max. thickness: 3 mm).

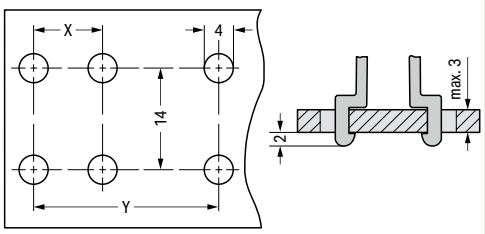
Negative Shield Attenuation



WAGO's shield connection system is highly effective because the clamping unit can be brought very close to the unshielded part of the cable.

Hole Dimensions for Panel Mounting

Shield clamping saddle size	
Distance	X
11 mm	9.5 mm
Distance	Y
19 mm	17.5 mm
27 mm	25.5 mm
43 mm	41.5 mm



Additionally, the spring material is part of the clamping saddle, providing a good electrical connection (the system also acts as a partial strain relief). The spring element integrated in the shield clamping saddle compensates for deformation and settling that results from a connected shield.

Shield Clamping Saddles
790 Series



Shield clamping saddle; 11 mm wide; max. shield diameter of 8 mm		
	Item No.	PU
	790-108	50 (10)



Shield clamping saddle; 19 mm wide; 7 … 16 mm shield diameter		
	Item No.	PU
	790-116	50 (10)



Shield clamping saddle; 27 mm wide; 6 … 24 mm shield diameter		
	Item No.	PU
	790-124	50 (10)



Shield clamping saddle, 43 mm wide, 22 … 40 mm shield diameter		
	Item No.	PU
	790-140	50 (10)

Installation

The shield clamping saddle is shipped ready for direct connection to the (10 x 3) mm busbar or a drilled mounting plate. After connection, tighten the knurled screw to complete the installation.
Maximum tightening torque: 0.5 Nm

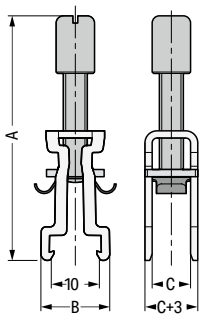


Removal

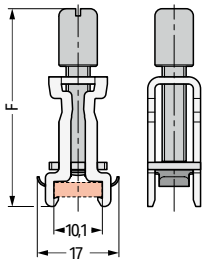
To remove the clamping saddle, unscrew until ratcheted mechanism is released, then slightly tip saddle and remove the clamping saddle.



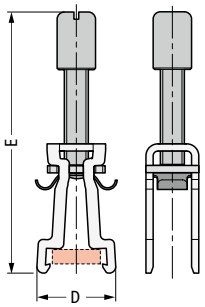
Delivery position
for direct snapping



Snapping position
closed



Release position



Dimensions in mm

Item No.	A	B	C	D	E	F
790-108	51	15	8	16	55	42
790-116	53	15	16	16	57	45
790-124	78	15	24	16	83	58
790-140	97	15	40	16	100	73

Spring-Equipped Shield Clamping Saddles
790 Series



Shield clamping saddle; 3 … 8 mm diameter; 12.4 mm wide		
	Item No.	PU
	790-208	50



Shield clamping saddle; 6 … 16 mm diameter; 21.8 mm wide		
	Item No.	PU
	790-216	25



Shield clamping saddle; 6 … 20 mm diameter; 30 mm wide		
	Item No.	PU
	790-220	25



Mounting a clamping saddle on a specialty slotted DIN-rail (790-145).
When releasing the saddle, do not place your finger under the clamping spring!



Removing the shield clamping saddle.



Shield clamping saddle contacts shield conductor and specialty slotted DIN-rail (790-145).



Application example

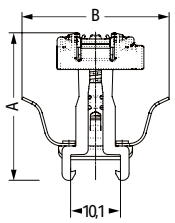


Labeling using a marking strip.

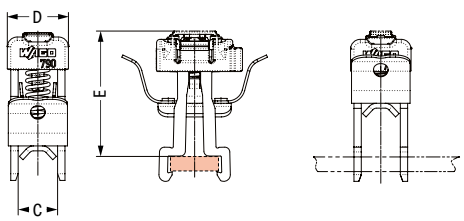


Labeling using WMB markers.

Delivery position



Mounting position



Dimensions in mm

Item No.	A	B	C	D	E*
790-208	30	29,9	8	12,4	25,8
790-216	34,6	28,3	16	21,8	30,2
790-220	45,6	28,3	24	30	41,2

*Height with WMB marker

13

Shield Clamps and Shield Terminations
791 and 709 Series



Shield clamp; 1.5 … 6.5 mm shield diameter; max. 40 mm high; 10 mm wide		
	Item No.	PU
	791-107	50

Shield clamp; 5 … 11 mm shield diameter; max. 47 mm high; 17 mm wide		
	Item No.	PU
	791-111	50

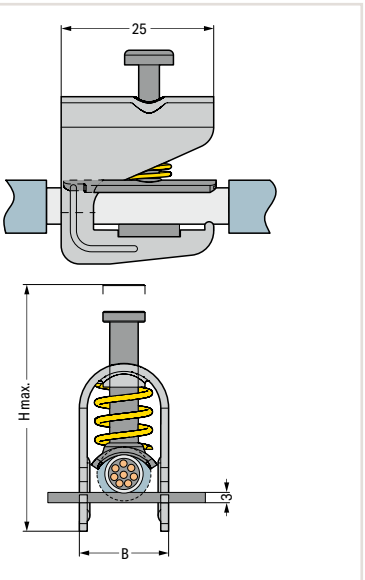
Shield clamp; 10 … 17 mm shield diameter; max. 63 mm high; 23 mm wide		
	Item No.	PU
	791-117	50

Shield clamp; 16 … 24 mm shield diameter; max. 78 mm high; 30 mm wide		
	Item No.	PU
	791-124	50



Shield termination; includes cable ties for 5 … 10 mm shield diameter; 60 mm long		
	Item No.	PU
	709-350	100 (25)

Shield termination; includes cable ties for 5 … 10 mm shield diameter; 150 mm long		
	Item No.	PU
	709-352	100 (25)



Dimensions in mm



Insert the shield termination into the female plug using the operating tool.



Fit the shield termination to the shield cable.



Secure both shield cable and shield termination to the strain relief plate using cable ties.



Shield termination connected to an X-COM® Female Plug

Accessories for Shield Connection Systems

















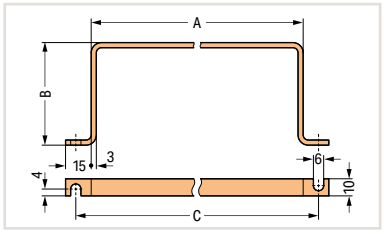






Item Description					
Carrier with Grounding Foot				**Item No.**	**PU**
Carrier with grounding foot; busbar parallel to the rail; 15 mm long; copper (10 x 3) mm; suitable for shield clamping saddles (790-108)				790-110	25
Carrier with grounding foot; busbar parallel to the rail; 25 mm long; copper (10 x 3) mm; suitable for shield clamping saddles (790-108; 790-116) and shield clamps (791-111; 791-117)				790-112	25
Carrier with grounding foot; busbar 90° to the DIN-rail; 45 mm long; copper (10 x 3) mm; suitable for shield clamping saddles (790 Series)				790-113	25
Carrier with grounding foot; busbar parallel to the DIN-rail; 45 mm long; copper (10 x 3) mm; suitable for shield clamping saddles (790 Series) and shield clamps (791 Series)				790-114	25
Carrier with 2 Grounding Feet				**Item No.**	**PU**
Carrier with 2 grounding feet; busbar parallel to the DIN-rail; 125 mm long; copper (10 x 3) mm				790-115	25
Busbar				**Item No.**	**PU**
Busbar; tin-plated; 1000 mm long; copper (10 x 3) mm				210-133	1
Busbar; tin-plated; 30 mm long; copper (10 x 3) mm				790-133	20
Busbar; tin-plated; 50 mm long; copper (10 x 3) mm				790-134	20
DIN-Rail; Specialty Slotted				**Item No.**	**PU**
DIN-rail; specialty slotted; 1000 mm long; tin-plated				790-145	1
Spacer sleeve; for DIN-rail; suitable for M5-size screw; specialty slotted				790-144	200 (100)
Insulated Mounting Foot				**Item No.**	**PU**
Insulated mounting foot; for busbar with M4 x 8 mm screw				790-100	50 (25)
Insulated mounting foot; for busbar with (3.5 x 9) mm sheet metal screw				790-101	50 (25)
U-Shaped Busbar; suitable for 750 Series I/O Modules	**A**	**B**	**C**	**Item No.**	**PU**
U-shaped busbar; copper (10 x 3) mm; for 5 I/O	63	60	83	790-190	25 (5)
U-shaped busbar; copper (10 x 3) mm; for 8 I/O	100	60	118	790-191	25
U-shaped busbar; copper (10 x 3) mm; for 5 I/O	63	35	83	790-192	25
U-shaped busbar; copper (10 x 3) mm; for 8 I/O	100	35	118	790-193	25

Dimensions in mm

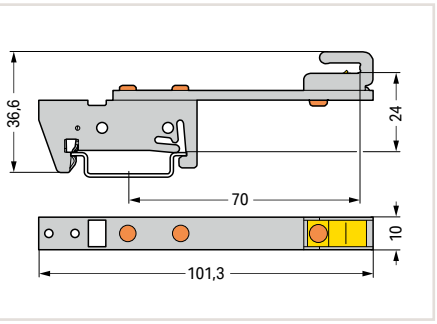


13

Busbar Carriers
790 Series



Dimensions in mm

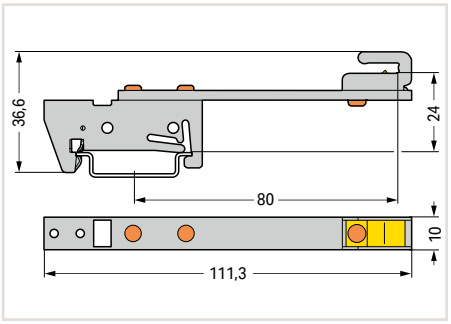


Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; snaps onto DIN-35 rail

Item No.	PU
790-300	10



Dimensions in mm

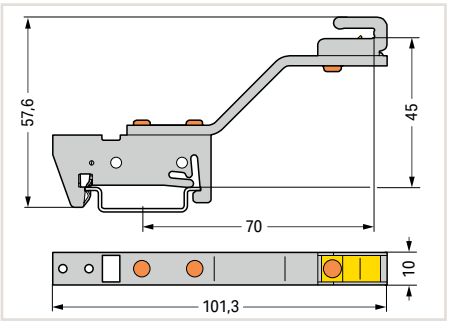


Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; snaps onto DIN-35 rail

Item No.	PU
790-302	10



Dimensions in mm

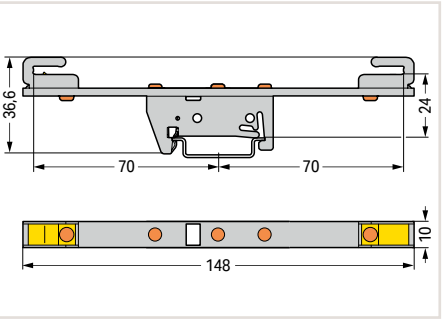


Busbar carrier; for (10 x 3) mm copper busbars; single side; angled; snaps onto DIN-35 rail

Item No.	PU
790-301	10



Dimensions in mm

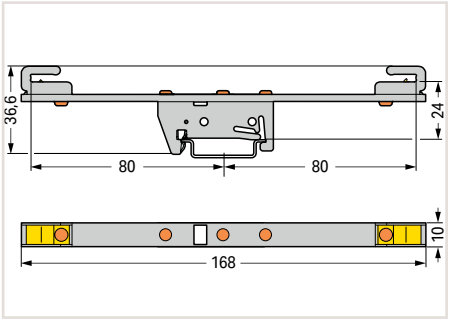


Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; snaps onto DIN-35 rail

Item No.	PU
790-310	10



Dimensions in mm

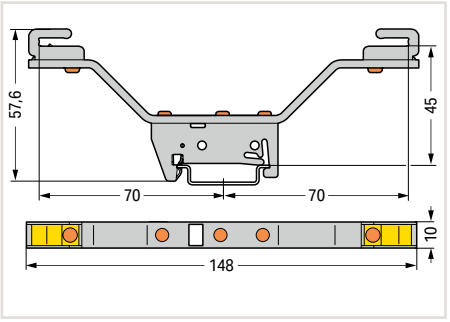


Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; snaps onto DIN-35 rail

Item No.	PU
790-312	10



Dimensions in mm



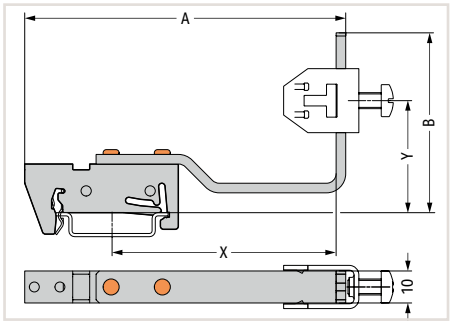
Busbar carrier; for (10 x 3) mm copper busbars; both sides; angled; snaps onto DIN-35 rail

Item No.	PU
790-311	10

Busbar Carriers
790 Series



Dimensions in mm

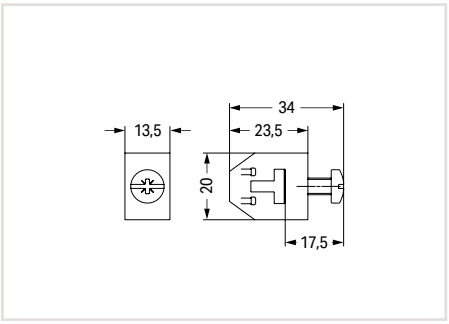


Busbar carrier; for (10 x 3) mm copper busbars; flexible; snaps onto DIN-35 rail

Item No.	PU
790-350/790-398	12
790-352/790-398	12
790-360/790-398	12
790-362/790-398	25



Dimensions in mm

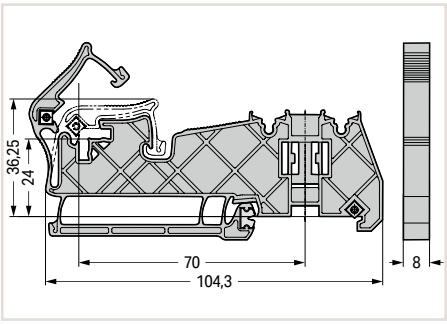


T-connector; for (10 x 3) mm copper busbars

Item No.	PU
790-398	10



Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; no contact to DIN-rail; insulated

Color	Item No.	PU
gray	790-400	20

Dimensions in mm

Item No.	A	B	X	Y
790-350/790-398	100	56	70	15 ... 52
790-352/790-398	100	99	70	15 ... 92
790-360/790-398	115	56	85	15 ... 52
790-362/790-398	115	99	85	15 ... 92



Horizontal mounting position of the busbar



Horizontal mounting position of the busbar



Vertical mounting position of the busbar



Vertical mounting position of the busbar

Mini-WSB Marker Card; as Card and Mini-WSB Inline; for Smart Printer; on Reel





Mini-WSB Marker Card; as card; not stretchable; plain; snap-on type		
Color	Item No.	PU
white	248-501	5
yellow	248-501/000-002	5
red	248-501/000-005	5
blue	248-501/000-006	5
gray	248-501/000-007	5
orange	248-501/000-012	5
light green	248-501/000-017	5
green	248-501/000-023	5
violet	248-501/000-024	5



Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 … 5.2 mm; plain; snap-on type		
Color	Item No.	PU
white	2009-145	1



Mini-WSB Marker Card; as card; with marking; not stretchable; horizontal marking; snap-on type				
Marking	No. of Markings	Color	Item No.	PU
0 V	100x	blue	247-506/000-006	5
0 V	100x	white	247-506	5
-	100x	blue	247-507/000-006	5
-	100x	white	247-507	5
24 V	100x	red	247-508/000-005	5
24 V	100x	white	247-508	5
+	100x	red	247-509/000-005	5
+	100x	white	247-509	5
⏚	100x	light green	247-552/000-017	5
⏚	100x	white	247-552	5
GND	100x	light green	248-578/000-017	5
GND	100x	white	248-578	5
A0 A1 … A8 A9	10x	white	247-510	5
E0 E1 … E8 E9	10x	white	247-511	5
X0 X1 … X8 X9	10x	white	247-512	5
00 … 09	10x	white	247-513	5
10 … 19	10x	white	247-514	5
20 … 29	10x	white	247-515	5
30 … 39	10x	white	247-516	5
40 … 49	10x	white	247-517	5
50 … 59	10x	white	247-518	5
60 … 69	10x	white	247-519	5
70 … 79	10x	white	247-520	5
80 … 89	10x	white	247-521	5
90 … 99	10x	white	247-522	5
00 … 49	2x	white	247-523	5
50 … 99	2x	white	247-524	5
100 … 149	2x	white	247-525	5
150 … 199	2x	white	247-526	5
200 … 249	2x	white	247-527	5
250 … 299	2x	white	247-528	5
300 … 349	2x	white	247-529	5
350 … 399	2x	white	247-530	5
400 … 449	2x	white	247-531	5
450 … 499	2x	white	247-532	5
500 … 549	2x	white	247-533	5
550 … 599	2x	white	247-534	5
600 … 649	2x	white	247-535	5
650 … 699	2x	white	247-536	5
700 … 749	2x	white	247-537	5
750 … 799	2x	white	247-538	5
800 … 849	2x	white	247-539	5
850 … 899	2x	white	247-540	5
900 … 949	2x	white	247-541	5
950 … 999	2x	white	247-542	5
.0 … .7 / free	10x/20x	white	247-543	5
.0 … .7 /-	10x/20x	white	247-544	5
.0 … .7 /-	10x/20x	blue	247-544/000-006	5
.0 … .7 /+	10x/20x	white	247-545	5
.0 … .7 /+	10x/20x	red	247-545/000-005	5
.0 … .7 /N	10x/20x	white	247-546	5
.0 … .7 /N	10x/20x	blue	247-546/000-006	5
.0 … .7 /L	10x/20x	white	247-547	5

Marker Card and Group Marker Carrier



Marker Card; as DIN A4 sheet; plain		
	Item No.	PU
	750-100	1



Figure: 750-103

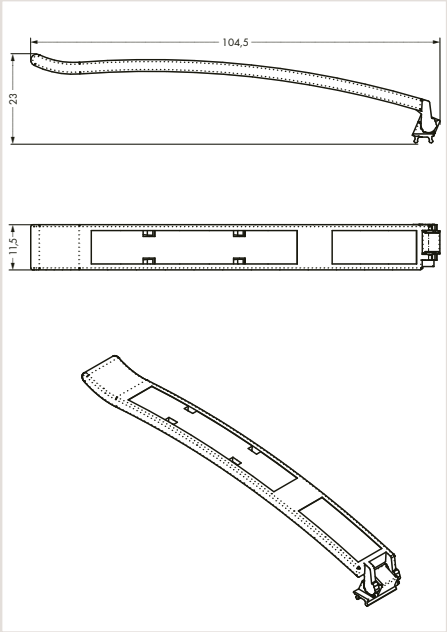




Figure: 750-106



Figure: 750-107

Item Description	Group Marker Carrier	Group Marker Carrier	
		4 LEDs (max.)	8/16 LEDs (max.)
Item No.	750-103	750-106	750-107
Technical Data			
Dimensions W x D	11.5 x 104.5 mm		
Material	Polycarbonate	Polycarbonate	
Weight	2.84 g	0.4 g	
For data sheet and additional information, see:	wago.com/750-103	wago.com/750-106	wago.com/750-107

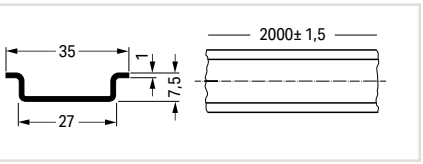
Accessories	Item No.	Item No.
Marking strip; on reel; 7.5 mm wide; not stretchable; plain, snap-on type	709-178	
Marker Card; as DIN A4 sheet; plain	750-105	
Marking strip; on reel; not stretchable; plain; snap-on type		2009-110
WMB Inline; for Smart Printer; on reel; stretchable 5 … 5.2 mm; plain; snap-on type		2009-115



Steel DIN-Rails
210 Series



Dimensions in mm

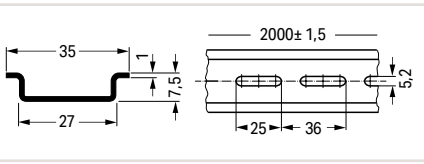


Steel DIN-rail; unslotted;
IN 76 A (based on 1 m length);
35 x 7.5 mm; 1 mm thick, 2 m long

	Item No.	PU
Per EN 60715	210-113	10
Continuously galvanized; per EN 60715	210-505	1



Dimensions in mm

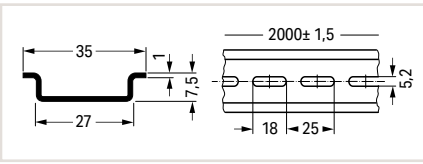


Steel DIN-rail; slotted;
IN 76 A (based on 1 m length);
35 x 7.5 mm; 1 mm thick; 2 m long;
25 mm hole width; 36 mm hole spacing

	Item No.	PU
Per EN 60715	210-112	10 (1)
Continuously galvanized; per EN 60715	210-504	1



Dimensions in mm

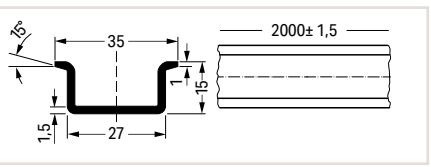


Steel DIN-rail; slotted;
IN 76 A (based on 1 m length);
35 x 7.5 mm; 1 mm thick; 2 m long;
18 mm hole width; 25 mm hole spacing

	Item No.	PU
Per EN 60715	210-115	1



Dimensions in mm

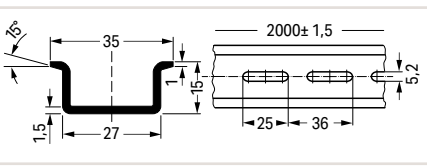


Steel DIN-rail; unslotted;
IN 125 A (based on 1 m length);
35 x 15 mm; 1.5 mm thick; 2 m long

	Item No.	PU
Similar to EN 60715	210-114	10
Continuously galvanized; similar to EN 60715	210-506	1



Dimensions in mm

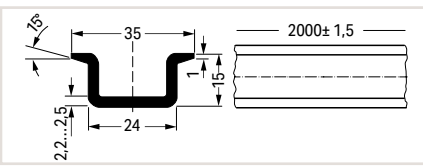


Steel DIN-rail; slotted;
IN 125 A (based on 1 m length);
35 x 15 mm; 1.5 mm thick; 2 m long;
25 mm hole width; 36 mm hole spacing

	Item No.	PU
Similar to EN 60715	210-197	10
Continuously galvanized; similar to EN 60715	210-508	1



Dimensions in mm



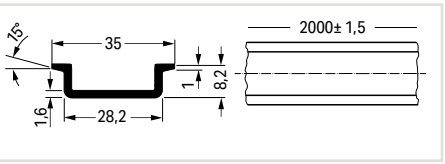
Steel DIN-rail; unslotted;
IN 125 A (based on 1 m length);
35 x 15 mm; 2.3 mm thick; 2 m long

	Item No.	PU
Per EN 60715	210-118	10

Aluminum DIN-Rail; Copper DIN-Rail; Angled Support Bracket; Rail End Cap
210 Series



Dimensions in mm

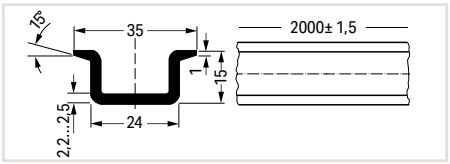


Aluminum DIN-rail; unslotted;
IN 76 A (based on 1 m length);
35 x 8.2 mm; 1.6 mm thick; 2 m long

	Item No.	PU
Similar to EN 60715	210-196	10



Dimensions in mm



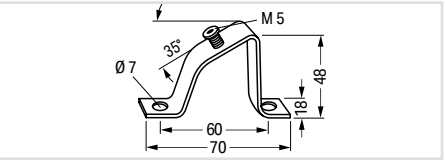
Copper DIN-rail; unslotted;
IN 309 A (based on 1 m length);
35 x 15 mm; 2.3 mm thick; 2 m long

	Item No.	PU
Per EN 60715	210-198	10





Dimensions in mm



Angled support bracket

	Item No.	PU
Without screw	**210-148**	10
Screw M5 x 8	**210-149**	100 (20)

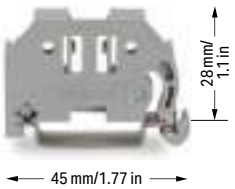


Rail end cap;
for DIN-35 rail (7.5 mm high)

Color	Item No.	PU
gray	**209-109**	50 (25)

13

Screwless End Stops
249 Series





Screwless end stop; 6 mm wide		
Color	Item No.	PU
gray	249-116	100 (25)

Screwless end stop; 14 mm wide		
Color	Item No.	PU
gray	249-197	10

Screwless end stop; 10 mm wide		
Color	Item No.	PU
gray	249-117	50 (25)

Snap on – that's it! Assembling the new WAGO Screwless End Stop is as simple and quick as snapping a WAGO Rail-Mount Terminal Block onto the DIN-rail.

Tool free!

A tool-free design allows rail-mount terminal blocks to be safely and economically secured against any movement on all DIN-35 rails per DIN EN 50022 (35 x 7.5 mm; 35 x 15 mm).

Screwless!

The "secret" to a perfect fit lies in the two small clamping plates which keep the end stop in position, even if the rails are mounted vertically.

Simply snap on – that's it!

In addition, costs are significantly reduced when using large numbers of end stops.

Additional benefit: Three marker slots for all WAGO Rail-Mount Terminal Block Marking Systems and one snap-in hole for WAGO's adjustable height group marker carriers offer individual marking options.


Snapping an end stop onto the DIN-rail.


Removing an end stop from the DIN-rail.

Operating Tools and Cable Cutter
210 and 206 Series



Operating tool with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade		
	Item No.	PU
	210-719	50 (1)

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade		
	Item No.	PU
	210-720	50 (1)

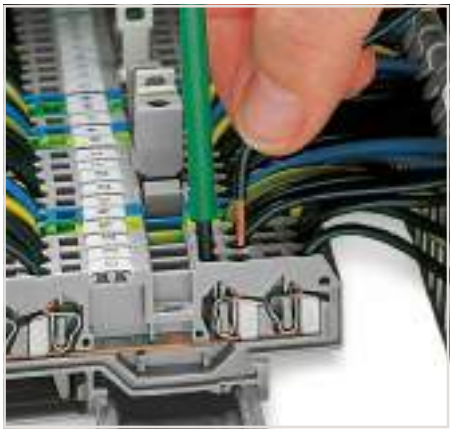
Operating tool with a partially insulated shaft; Type 3; (5.5 x 0.8) mm blade		
	Item No.	PU
	210-721	25 (1)



Set of operating tools with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade; Type 2; (3.5 x 0.5) mm blade; Type 3; (5.5 x 0.8) mm blade		
	Item No.	PU
	210-722	1



Cable cutter; for copper and aluminum cables up to 35 mm2		
	Item No.	PU
	206-118	1



The blade dimensions of the above-listed operating tools with a partially insulated shaft are ideal for easy operation of front-entry terminal blocks.



Cutting a cable.

Cable Knife
206 Series



Cable knife; for Ø 8 … 28 mm / 0.31 … 1.10 inch; with a unique, changeable cable bracket system; including cable bracket

Item No.	PU
206-1403	1



Cable knife set; for Ø 4 … 70 mm / 0.16 … 2.75 inch; including all cable brackets in a Sortimo® Box

Item No.	PU
206-1400	1

Never use this tool on or near live electrical circuits!



To replace the cable bracket, use the new bracket as an operating tool and pull it upwards.

Item-Specific Accessories

Cable bracket; for Ø 4 … 16 mm / 0.16 … 0.63 inch

206-1411 1



Cable bracket; for Ø 8 … 28 mm / 0.31 … 1.10 inch

206-1412 1



Cable bracket; for Ø 27 … 35 mm / 1.06 … 1.38 inch

206-1413 1



Cable bracket; for Ø 35 … 50 mm / 1.38 … 1.97 inch

206-1414 1



Cable bracket; for Ø 50 … 70 mm / 1.97 … 2.75 inch

206-1415 1





The cutting depth of the hook blade can be adjusted with the slider.

Accessories

Spare inside blade

206-1418 1

Spare hook blade

206-1419 1



The cutting depth of the inner knife can be adjusted with the screw.





Strip large cross sections with the hook blade.



Release the fuse before using the hook blade.

13

Cable Strippers
206 Series



In-socket cable stripper; for Ø 8 … 13 mm / 5/16 … 1/2 inch		
	Item No.	PU
	206-1441	1



Universal cable stripper; for Ø 8 … 13 mm / 5/16 … 1/2 inch		
	Item No.	PU
	206-1442	1



Data cable stripper; for Ø 4.5 … 10 mm / 3/16 … 3/8 inch		
	Item No.	PU
	206-1451	1



Product features:
- Extra-long design and improved force transmission simplifies stripping in deep device connection sockets
- Special four-blade design for an even more precise round cut
- No cutting depth adjustment required
- TiN-coated blades, TÜV/GS tested
- Ø 8 … 13 mm / 5/16 … 1/2 inch
- Strips all standard round cables, including NYM 3 x 1.5 mm²/16 AWG … 5 x 2.5 mm²/14 AWG



Sheath stripping: longitudinal cut

Product features:
- Secure grip achieved with soft padding for non-slip grips
- Enhanced functionality
- New locking mechanism prevents the unwanted opening of the tool
- Absolutely straightforward, quick and easy longitudinal cuts – with innovative internal cable duct
- Redesigned blade layout and intake to stop cable waste from jamming the tool
- Durable and ergonomically designed pocket clip
- Ø 8 … 13 mm / 5/16 … 1/2 inch



Product features:
- Strip outer insulation and foil sheathing with one tool
- Ideal for stripping PVC-insulated data cables with thin insulation (e.g., Cat. 5, Cat. 6, Cat. 7, twisted pair cable)
- TiN-coated blades
- Ø 4.5 … 10 mm / 3/16 … 3/8 inch





Stripping a cable sheath.



Built-in handy knife



Stripping the conductor insulation.

Stripping Pliers
206 Series





Never use this tool on or near live electrical circuits!

The stripping pliers for sensor cables have a blade geometry specially designed for sensor cables with a smaller cross-section and a working range from Ø 3.2 mm / 0.13 inch (for stranded cables and round cables with Ø 3.2 mm … 4.4 mm / 0.13 … 0.17 inch).

The stripping pliers for control cables are designed for stronger cables from Ø 4.4 mm / 0.17 inch (for stranded cables and round cables with Ø 4.4 mm … 7 mm / 0.17 … 0.27 inch).

These stripping pliers quickly and safely strip cables for connecting, e.g., sensor/actuator distribution boxes, bus couplers and pluggable connectors.

Suitable for:
- Halogen-free PUR sensor/actuator cables
- Highly flexible TPE-U cables
- Control cables
- PUR cables
- PUR/PVC cables
- PVC cables
- Multi-core cables
- Shielded and unshielded cables

Stripping pliers; for sensor cables; for Ø 3.2 … 4.4 mm / 0.13 … 0.17 inch		
	Item No.	PU
	206-1481	1

Item-Specific Accessories		
Replacement blade set; for Ø 3.2 … 4.4 mm / 0.13 … 0.17 inch		
	206-1491	1

Stripping pliers; for control cables; for Ø 4.4 … 7 mm / 0.17 … 0.27 inch		
	Item No.	PU
	206-1482	1

Item-Specific Accessories		
Replacement blade set; for Ø 4.4 … 7 mm / 0.17 … 0.27 inch		
	206-1492	1





Wire Stripper
206 Series



Wire stripper "Quickstrip Vario"; 0.03 … 16 mm² / 34 … 6 AWG; with wire cutter		
	Item No.	PU
	206-1125	1

Accessories		
Blade set; Standard; 0.03 … 16 mm² / 34 … 6 AWG		
	206-1126	1
Blade set; V-blade; 0.14 … 4 mm² / 24 … 12 AWG		
	206-1127	1
Blade set; Oval blade; 10 … 16 mm² / 8 … 6 AWG		
	206-1128	1
Spare stripping stop		
	206-1129	1
Spare cut protector		
	206-1131	1
Spare clamping jaws		
	206-1132	1



Cutting a conductor.



Partially stripping a conductor.

Wire Stripper:
- Automatically adjust to conductor size
- Stripping blades don't damage conductor strands
- Gripping pressure of jaws adjusts automatically to conductor insulation diameter
- Clamping jaws and stripping blades automatically open once the stripping process is completed – no splaying of the conductor strands
- Exact strip length may be set by sliding black setting stop
- Stripping blades can be replaced
- Self-sharpening, fully protected cutter (replaceable)
- Entire body made of glass-fiber-reinforced polyamide
- Cutting capacity of the wire cutter of fine-stranded conductors up to 16 mm² (6 AWG)

Crimping Tools
206 Series



"Variocrimp 4" crimping tool; for insulated and uninsulated ferrules; crimping range: 0.25 … 4 mm² (24 … 12 AWG)

Item No.	PU
206-1204	1

Item-Specific Accessories

Spring clamp; large



206-1205 1

Spring clamp; small



206-1206 1



"Variocrimp 16" crimping tool; for insulated and uninsulated ferrules; crimping range: 6 mm² (10 AWG), 10 mm² (8 AWG) and 16 mm² (6 AWG)

Item No.	PU
206-1216	1

Item-Specific Accessories

Spring clamp; small



206-1206 1

Application notes:
- The built-in crimping pressure control of "Variocrimp 4" automatically adjusts the crimping force to the conductor cross-section. Select the wire gauge on "Variocrimp 16" before crimping.
- Only one crimping station is needed to handle the specified conductor range.
- Uniform, compact crimping on all four sides for high conductor retention.
- No need to center the ferrules into the terminal blocks.
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.



Insert the ferruled conductor into the crimping station.



Squeeze handles until ratchet mechanism is released.



A perfect gas-tight crimp – both electrically and mechanically reliable



Only for "Variocrimp 16":
Adjust conductor cross-section with crimping tool in open position.

13

Crimping Tools
206 Series



Crimping tool 25; for insulated and uninsulated ferrules; crimping range: 10 mm² (8 AWG), 16 mm² (6 AWG) and 25 mm² (4 AWG)

	Item No.	PU
	206-1225	1



Insert the ferruled conductor into the crimping station.



Crimping tool 50; for insulated and uninsulated ferrules; crimping range: 35 mm² (2 AWG) and 50 mm² (1/0 AWG)

	Item No.	PU
	206-1250	1



Squeeze handles until ratchet mechanism is released.

Application notes:
- Improved crimping for higher conductor retention
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.

What is a "gas-tight" connection?

In a gas-tight connection, the conductor and the ferrule are compressed, eliminating all spaces. Under normal atmospheric conditions, neither a liquid nor gaseous medium can penetrate the crimped connection.

Oxidation between crimped single conductors is prevented, virtually eliminating the possibility of any increase in the crimped connection's resistance. In some exceptional cases, minute, isolated spaces may be present. However, these instances can be considered as closed off due to the twisted conductor.

Inadequate crimping can allow the conductor to be pulled out of the connection. Hollow spaces also remain, permitting oxidation formation and an increase in contact resistance.

Elevated resistance is detrimental for both signal transmission (signal flow is damped) and power transmission, resulting in power loss and contact heating (risk of fire).

Crimping tools with built-in ratchets are recommended (e.g., WAGO Crimping Tools). These tools open automatically after the crimping operation is complete. Space-saving crimping from all four sides is ideal for spring clamp termination.

Ferruled conductor cross-sections specified for WAGO products are based on this crimping method.

Test and Measurement Devices
206 Series



Profi-LCD+; 2-pole voltage tester with LCD display; removable 4 mm Ø test probes

Item No.	PU
206-707	1



Profi-LED+; 2-pole voltage tester with LED display; removable 4 mm Ø test probes

Item No.	PU
206-706	1



Spare test probes; 4 mm Ø (2 pieces)

Item No.	PU
206-808	25



Additional Profi-LCD+ features:
- Automatic measurement range selection
- Single-pole phase testing AC >100 V
- Two-pole sequence testing (R and L)
- Continuity testing
- RDC/RCD testing (30 mA) via buttons
- One-hand operation for SCHUKO® and CEE sockets
- LED torch lamp function
- Automatic backlight
- Auto power-off function
- CAT IV 1000 V
- TÜV/GS tested and approved
- IEC/EN 61243-3 (DIN VDE 0682-401)



Additional Profi-LED+ features:
- Automatic measurement range selection
- Single-pole phase testing AC >100 V
- Two-pole sequence testing (R and L)
- Continuity testing
- RDC/RCD testing (30 mA) via buttons
- One-hand operation for SCHUKO® and CEE sockets
- LED torch lamp function
- CAT IV 1000 V
- TÜV/GS tested and approved
- IEC/EN 61243-3 (DIN VDE 0682-401)



Profi-LED+:
- Improved socket contact via 4 mm Ø test probes
- Removable test probes for small test ports (suitable for all WAGO Terminal Blocks)





Test and Measurement Devices
206 Series



Testboy; with integrated flashlight, non-contact voltage tester		
	Item No.	PU
	206-804	1



A device that will reliably detect AC voltage in cables, sockets, fuses, switches, outlets and other installations.

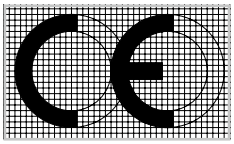
Testboy can detect the following:

- Live conductors
- Cable breaks
- Blown fuses (in cartridges or holders)
- Defective switches
- Defective lamps in strings of lights



Technical Section

Technical Section
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Approvals Overview

Controllers – PFC100/200, PFC200 XTR, Controllers 750

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	See Page
PFC100/PFC200 [1]		**Ex**				**Marine Approvals**							**UL**	
750-8100	PFC100; 2ETH; Eco	■		■		■			■	■			■	116
750-8101	PFC100; 2ETH	■		■		■			■	■			■	117
750-8102	PFC100; 2ETH RS	■		■		■			■	■			■	118
750-8208	PFC200; 2ETH RS CAN DPM	■				■				■			■	129
750-8210	PFC200; G2; 4ETH								■	■			■	119
750-8211	PFC200; G2; 2ETH 2SFP								■	■			■	120
750-8212	PFC200; G2; 2ETH RS	■		■					■	■			■	121
750-8213	PFC200; G2; 2ETH CAN	■		■					■	■			■	123
750-8214	PFC200; G2; 2ETH RS CAN	■		■					■	■			■	124
750-8215	PFC200; G2; 4ETH CAN USB	■		■					■	■			■	125
750-8216	PFC200; G2; 2ETH RS CAN DPS	■		■					■	■			■	126
750-8217	PFC200; G2; 2ETH RS; 4G	■		■					■	■			■	127
PFC200 XTR [1]														
750-8210/040-000	PFC200; G2; 4ETH; XTR	■		■		■		■		■		■	■	136
750-8211/040-000	PFC200; G2; 2ETH 2SFP; XTR	■		■		■		■		■		■	■	137
750-8212/040-000	PFC200; G2; 2ETH RS; XTR	■		■						■			■	138
750-8212/040-001	PFC200; G2; 2ETH RS; Tele; XTR	■		■						■			■	138
750-8212/040-010	PFC200 G2 2ETH M12 RS; XTR	■		■		■		■		■		■	■	139
750-8213/040-010	PFC200 G2 2ETH M12 CAN; XTR	■		■		■		■		■		■	■	140
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750-8000	Basic Controller 100; 2ETH; ECO												■	148
750-8001	Basic Controller 100; 2ETH												■	149
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750-815/300-000	Controller Modbus®; RS485; 115.2kBd	■		■	■	■	■	■	■	■	■		■	166
750-816/300-000	Controller Modbus®; RS232; 115.2kBd	■		■	■	■	■	■	■	■	■		■	167
750-823	Controller EtherNet/IP; Eco	■		■					■				■	160
750-829	Controller BACnet MS/TP			■									■	164
750-832	Controller BACnet/IP; G4; 2xETH; SD	■		■					■				■	163
750-833	Controller PROFIBUS Slave	■	■	■	■	■	■	■	■	■	■	■	■	168
750-837	Controller CANopen; M1; MCS	■	■	■	■	■	■	■	■	■	■	■	■	170
750-838	Controller CANopen; M1; DSub	■	■	■	■	■	■	■		■	■		■	171
750-842	Controller ETHERNET; G1	■	■	■	■	■	■	■	■	■	■	■	■	161
750-843	Controller ETHERNET; G1; Eco	■	■	■	■	■	■	■	■	■	■	■	■	162
750-862	Controller Modbus TCP; G4; Eco	■		■						■			■	158
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750-890	Controller Modbus TCP; G4; SD	■		■					■	■			■	156
750-891	Controller Modbus TCP; G4	■		■					■	■			■	157
750-893	Controller EtherNet/IP; SD	■		■						■			■	159

[1] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Controllers 750 XTR; Fieldbus Couplers – I/O System 750; Fieldbus Connectors

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR (Korean Register of Shipping)	HMB05880-AC001
LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK (Nippon Kaiji Kyokai)	TA17255M
Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
RINA (Registro Italiano Navale)	ELE343217XG
cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	See Page
Controllers 750 XTR [1]		**Ex**					**Marine Approvals**						**UL**	
750-838/040-000	Controller CANopen; M3 DSub XTR	■		■		■		■		■		■	■	168
750-890/040-000	Controller Modbus TCP; G4; SD; XTR	■		■		■		■		■		■	■	166
Fieldbus Couplers I/O System 750 [1]														
750-303	FC PROFIBUS; G1; 12MBd	■	■	■	■	■	■	■	■	■	■	■	■	204
750-304	FC INTERBUS	■	■	■									■	223
750-306	FC DeviceNet	■	■	■	■	■	■	■	■	■	■	■	■	217
750-310	FC CC-Link	■	■	■									■	225
750-315/300-000	FC Modbus®; RS485; 115.2kBd	■		■	■	■	■		■	■	■		■	215
750-316/300-000	FC Modbus®; RS232; 115.2kBd	■		■	■	■	■		■	■	■		■	216
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750-333	FC PROFIBUS; G2; 12MBd	■	■	■	■	■	■	■	■	■	■	■	■	205
750-337	FC CANopen; MCS	■	■	■	■	■	■	■	■	■	■	■	■	219
750-338	FC CANopen; DSub	■	■	■	■	■	■		■	■	■		■	220
750-342	FC ETHERNET; G1	■	■	■	■	■	■	■	■	■	■	■	■	211
750-343	FC PROFIBUS; 12MBd; Eco	■	■	■	■	■	■	■	■	■	■	■	■	206
750-344	FC INTERBUS; 500kbit/s; Eco	■	■	■									■	224
750-346	FC DeviceNet; Eco	■	■	■									■	218
750-347	FC CANopen; MCS; Eco	■	■	■	■	■	■	■	■	■	■	■	■	221
750-348	FC CANopen; DSub; Eco	■	■	■	■	■	■	■	■	■	■	■	■	222
750-354	FC EtherCAT®	■	■	■									■	213
750-362	FC Modbus TCP; G4	■		■					■	■			■	208
750-363	FC EtherNet/IP™	■		■					■	■			■	210
750-366	FC EtherNet/IP™; G4; DLR			■						■			■	209
750-375	FC PROFINET; G3; Adv	■		■		■				■			■	202
750-377	FC PROFINET; G3; Eco; Adv	■		■		■				■			■	203
Fieldbus Connectors														
750-960	Fieldbus Connector PROFIBUS; D-Sub; 9 Poles	■	■	■	■	■	■	■	■	■	■	■	■	691
750-961	Fieldbus Connector INTERBUS (IN); D-Sub; 9 Poles	■	■	■									■	694
750-962	Fieldbus Connector INTERBUS (OUT); D-Sub; 9 Poles	■	■	■									■	694
750-963	Fieldbus Connector CANopen; D-Sub; 9 Poles	■	■		■	■	■	■	■	■	■	■	■	693
750-965	Fieldbus Connector CC-Link; D-Sub; 9 Poles												■	695
750-975	ETHERNET Connector; RJ-45; Cat. 5; Straight; T568A				■	■	■	■	■	■	■	■		685
750-976	PROFINET Connector; RJ-45; Cat. 5; Straight					■				■				689

[1] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Digital Input Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

cULus LISTED	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
RINA	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
Ex	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex		Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Digital Input Modules														
750-400	2DI; 24 VDC; 3ms	■	■	■	■	■	■	■	■	■	■	■	■	233
750-401	2DI; 24 VDC; 0.2ms	■	■	■	■	■	■	■	■	■	■	■	■	243
750-402	4DI; 24 VDC; 3ms	■	■	■	■	■	■	■	■	■	■	■	■	234
750-403	4DI; 24 VDC; 0.2ms	■	■	■	■	■	■	■	■	■	■	■	■	244
750-405	2DI; 230 VAC	■	■	■	■	■	■	■	■	■	■	■	■	273
750-406	2DI; 120 VAC	■	■	■	■	■	■	■	■	■	■	■	■	272
750-407	2DI; 220 VDC												■	271
750-408	4DI; 24 VDC; 3ms; LSS	■	■	■	■	■	■	■	■	■	■		■	250
750-409	4DI; 24 VDC; 0.2ms; LSS	■	■	■									■	256
750-410	2DI; 24 VDC; 3ms; Proxi Sensor	■	■	■	■	■	■	■	■	■	■	■	■	260
750-411	2DI; 24 VDC; 0.2ms; Proxi Sensor	■	■	■	■	■	■	■	■	■	■	■	■	261
750-412	2DI; 48 VDC; 3ms	■	■	■									■	268
750-414	4DI; 5 VDC; 0.2ms			■									■	230
750-415	4DI; 24 VAC/VDC; 20ms	■	■	■	■	■	■	■	■	■	■	■	■	266
750-418	2DI; 24 VDC; 3ms; Acknol; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	232
750-421	2DI; 24 VDC; 3ms; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	232
750-422	4DI; 24 VDC; Pulse Extention	■	■	■									■	264
750-423	4DI; 24 VAC/VDC; 50ms	■	■	■	■	■	■	■	■	■	■	■	■	265
750-424	2DI; Intruder Detection	■	■	■	■	■	■	■	■	■	■	■	■	263
750-425	2DI; NAMUR	■	■	■	■	■	■	■	■	■	■	■	■	262
750-427	2DI; 110 VDC	■	■	■									■	270
750-428	4DI; 42 VAC/VDC; 20ms	■	■	■									■	267
750-430	8DI; 24 VDC; 3ms	■	■	■	■	■	■	■	■	■	■	■	■	237
750-431	8DI; 24 VDC; 0.2ms	■	■	■	■	■	■	■	■	■	■	■	■	247
750-432	4DI; 24 VDC; 3ms; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	235
750-433	4DI; 24 VDC; 0.2ms	■	■	■	■	■	■	■	■	■	■	■	■	245
750-435 [2]	1DI; NAMUR; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	433
750-436	8DI; 24 VDC; 3ms; LSS	■	■	■	■	■	■	■	■	■	■	■	■	252
750-437	8DI; 24 VDC; 0.2ms; LSS	■	■	■	■	■	■	■	■	■	■	■	■	258
750-438 [2]	2DI; NAMUR; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	434
750-439 [2]	8DI; NAMUR; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	435
750-1400	16DI; 24 VDC; 3ms; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	240
750-1402	16DI; 24 VDC; 3ms; LSS; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	255
750-1405	16DI; 24 VDC; 3ms	■	■	■	■	■	■	■	■	■	■	■	■	239
750-1406	16DI; 24 VDC; 0.2ms	■	■	■	■	■	■	■	■	■	■		■	249
750-1407	16DI; 24 VDC; 3ms; LSS	■	■	■	■	■	■	■	■	■	■	■	■	254
750-1415	8DI; 24 VDC; 3ms; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	238
750-1416	8DI; 24 VDC; 0.2ms; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	248
750-1417	8DI; 24 VDC; 3ms; LSS; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	253
750-1418	8DI; 24 VDC; 0.2ms; LSS; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	259
750-1420	4DI; 24 VDC; 3ms; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	236
750-1421	4DI; 24 VDC; 0.2ms; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	246
750-1422	4DI; 24 VDC; 3ms; LSS; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	251
750-1423	4DI; 24 VDC; 0.2ms; LSS; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	257
750-1425	8DI; PTC	■		■		■				■			■	275
753-429	2DI; 60 VDC; 3ms	■	■	■									■	269
753-434	8DI; 5/12 VDC; 0.2ms	■	■	■		■				■			■	231
753-440	4DI; 120/230 VAC	■	■	■									■	274

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.
[2] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview

Digital Output Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

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	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
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Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Digital Output Modules														
750-501	2DO; 24 VDC; 0.5A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	280
750-502	2DO; 24 VDC; 2A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	282
750-504	4DO; 24 VDC; 0.5A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	284
750-506	2DO; 24 VDC; 0.5A; Diagn	■*	■*	■*									■*	281
750-508	2DO; 24 VDC; 2A; Diagn	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	283
750-509	2DO; 230 VAC; 0.3A; SSR	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	302
750-512	2RO; 250 VAC; 2A; Relay2NO	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	305
750-513	2RO; 250 VAC; 2A; Potfree; Relay2NO	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	306
750-514	2RO; 125 VAC; 0.5A; Pot-free; Relay2CO				■*	■*	■*	■*	■*	■*	■*	■*	■*	303
750-515	4RO; 250 VAC; 2A; Pot-free; Relay4NO	■								■				308
750-516	4DO; 24 VDC; 0.5A; LSS	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	287
750-517	2RO; 250 VAC; 1A; Potfree; Relay2CO	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	304
750-519	4DO; 5 VDC; 20mA		■	■									■	278
750-523	1RO; 230 VAC; 16A; Pot-free; Relay1NO				■	■	■	■	■	■	■	■	■	309
750-527	4DO; 30V AC/DC; 2.0A; SSR													299
750-528	4DO; 30V AC/DC; 2.0A; SSR; Isolated													300
750-530	8DO; 24 VDC; 0.5A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	288
750-531	4DO; 24 VDC; 0.5A; 2-wire	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	285
750-532	4DO; 24 VDC; 0.5A; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	286
750-534	8DO; 12 VDC; 1A	■*	■*	■*		■*				■			■*	279
750-535 [2)]	2DO; 24 VDC; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	436
750-536	8DO; 24 VDC; 0.5A; LSS	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	291
750-537	8DO; 24 VDC; 0.5A; Diagn	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	289
750-538 [2)]	2RO; 100 VAC/ 30 VDC; Pot-free; Relay2CO; Ex i	■	■	■		■			■				■	438
750-539 [2)]	4DO; 24 VDC; Valve; Ex i	■							■	■				437
750-1500	16DO; 24 VDC; 0.5A; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	294
750-1501	16DO; 24 VDC; 0.5A; LSS; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	298
750-1502	8DIO; 24 VDC; 0.5A; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	296
750-1504	16DO; 24 VDC; 0.5A	■	■	■	■	■	■	■	■	■	■	■	■	293
750-1505	16DO; 24 VDC; 0.5A; LSS	■	■	■	■	■	■	■	■	■	■	■	■	297
750-1506	8DIO; 24 VDC; 0.5A	■	■	■	■	■	■	■	■	■	■	■	■	295
750-1515	8DO; 24 VDC; 0.5A; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	290
750-1516	8DO; 24 VDC; 0.5A; LSS; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	292
753-540	4DO; 230 VAC; 0.25A; SSR	■	■	■									■	301

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[2)] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Analog Input Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

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	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
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Item No.	Item Description	Ex		Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Analog Input Modules														
750-450	4AI; RTD; Adjust	■		■		■			■	■			■	348
750-451	8AI; RTD; Adjust	■		■		■			■	■			■	349
750-452	2AI; 0-20mA; Diff	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	312
750-453	4AI; 0-20mA; SE	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	317
750-454	2AI; 4-20mA; Diff	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	318
750-455	4AI; 4-20mA; SE	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	326
750-456	2AI; ±10 VDC; Diff	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	331
750-457	4AI; ±10 VDC; SE	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	334
750-459	4AI; 0-10 VDC; SE	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	338
750-461	2AI; Pt100/RTD	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	345
750-463	4AI; RTD;-30°C…+150°C	■		■									■	346
750-464	2/4AI; RTD; Adjust	■		■	■	■	■	■	■	■	■	■	■	346
750-465	2AI; 0-20mA; SE	■*		■*									■*	314
750-466	2AI; 4-20mA; SE	■*		■*									■*	321
750-467	2AI; 0-10 VDC; SE	■*		■*									■*	335
750-468	4AI; 0-10 VDC; SE	■		■	■	■		■	■	■	■	■	■	337
750-469	2AI; TC K; Diagn	■*		■*	■*	■*		■*	■*	■*	■*	■*	■*	350
750-470	2AI; 0-20mA; SE	■		■	■	■	■	■	■	■	■	■	■	315
750-471	4AI; U/I; Diff; Galv	■		■		■			■				■	342
750-472	2AI; 0-20mA; SE; 16bits	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	316
750-473	2AI; 4-20mA; SE	■		■	■	■	■	■	■	■	■	■	■	322
750-474	2AI; 4-20mA; SE; 16bits	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	325
750-475	2AI; 0-1A AC/DC; Diff	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	329
750-476	2AI; ±10 VDC; SE; 16bits	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	333
750-477	2AI; 0-10 VAC/VDC; Diff	■*		■*									■*	340
750-478	2AI; 0-10 VDC; SE; 16bits	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	336
750-479	2AI; ±10 VDC; Diff	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	332
750-480	2AI; 0-20mA; Diff	■*		■*									■*	313
750-482	2AI; 4-20mA HART	■*		■*									■*	323
750-483	2AI; 0-30 VDC; Diff	■*		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	341
750-484 [2]	2AI; 4-20mA HART; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	441
750-484/000-001 [2]	2AI 4-20mA HART NAMUR NE43 Ex i													442
750-485 [2]	4AI; 4-20mA; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	439
750-486 [2]	4AI; 0/4-20mA; NE43; Ex i	■				■			■	■				440
750-489 [2]	4AI; RTD/TC; Ex i	■		■					■	■			■	443
750-491	1AI; DMS													354
750-492	2AI; 4-20mA; Diff	■*	■*	■*									■*	320
750-493	3-PHASE POM; 480VAC 1A	■	■	■									■	356
750-494	3-PHASE POM; 480VAC 1A	■	■	■		■				■			■	358
750-495	3-PHASE POM; 690VAC 1A					■				■				359
750-496	8AI; 0/4-20mA; SE	■		■		■			■	■			■	328
750-497	8AI; 0-10 V/±10 VDC; SE			■		■			■	■			■	339
750-498	8AI; TC; Adjust	■		■						■			■	353
750-1491	2AI Resistor Bridge (Strain Gauge)			■									■	355

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	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Analog Output Modules														
750-550	2AO; 0-10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	370
750-552	2AO; 0-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	362
750-553	4AO; 0-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	363
750-554	2AO; 4-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	364
750-555	4AO; 4-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	365
750-556	2AO; ±10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	367
750-557	4AO; ±10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	368
750-559	4AO; 0-10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	371
750-560	2AO; 0-10 VDC; 10Bit; 100mW/ 24V	■	■	■									■	369
750-562	2AO; 0-10 V/±10 VDC; 16bits	■	■	■									■	372
750-563	2AO; 0/4-20mA; 16bits; 6-18 VDC	■	■	■		■				■			■	366
750-564	4AO U/I	■		■					■	■			■	374
750-585 [2]	2AO; 0-20mA; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	444
750-586 [2]	2AO; 4-20mA; Ex i	■	■	■		■			■	■			■	445
750-597	8AO; 0-10 V/±10 VDC	■		■									■	373

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[2] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Function, Technology and Communication Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex		Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Function, Technology and Communication Modules														
750-404	Up/Down Counter	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	378
750-511	2PWM; 24 VDC; 0.1A; 250Hz	■	■	■									■	382
750-630	SSI Interface; 24bits; 125kHz; Gray	■	■	■		■				■			■	384
750-631/000-004	Inc. Encoder; RS422; 16bits			■									■	387
750-632	Proportional Valve Module	■		■		■			■	■			■	395
750-633 [2)]	Up/Down Counter; Ex i	■	■	■		■			■	■	■		■	446
750-635	Digital Impulse Interface	■*	■	■*									■*	388
750-637	Inc. Encoder; RS422; 32bits	■	■	■	■	■	■	■	■	■	■	■	■	386
750-638	2Up/Down Counter; 16bits; 500Hz	■*	■	■*									■*	381
750-643	MP-Bus Master	■	■	■									■	409
750-645	2VIB VRMS/SPM Multi	■	■	■									■	389
750-650	RS232 C Interface; 9600Bd	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	398
750-651	TTY Interface; 9600Bd; N; 8/1			■	■	■	■	■	■	■	■	■	■	404
750-652	RS232/485 Interface	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	402
750-653	RS485 Interface	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	400
750-655	AS-Interface Master	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	412
750-657	IO-Link Master	■		■									■	413
750-658	CAN Gateway	■		■		■			■	■	■		■	414
750-661/000-004	4FDI; 24 VDC; PROFIsafe V2 iPar			■*									■*	422
750-662/000-004	8FDI; 24 VDC; PROFIsafe V2 iPar			■*									■*	423
750-663/000-003	4F-Ex i DI; 24 VDC; PROFIsafe V2 iPar	■	■	■		■				■			■	428
750-666/000-004	4FDI/2FDO; 24 VDC; 10A; PROFIsafe V2 iPar												■*	424
750-667/000-004	4FDI/4FDO; 24 VDC; 2A; PROFIsafe V2 iPar			■*									■*	425
750-668/000-004	4FAI 0/4-20 mA Diff PROFIsafe	■*		■*						■			■*	427
750-669/000-003	4FDI/4FRO; 48VAC/ 60VDC; 6A; PROFIsafe V2 iPar	■		■									■	426
750-670	Stepper Controller; RS422/24 VDC; 20mA	■	■	■									■	390
750-671	Stepper Controller; 24 VDC; 1.5A	■	■											391
750-677	4PWM; 24 VDC; 0.2A; 20kHz			■									■	383
753-646	KNX/EIB/TP1 Interface				■	■	■	■	■	■	■	■	■	406
753-647	DALI Multi-Master					■			■	■			■	407
753-648	LON® FTT Interface			■									■	408
753-649	M-Bus Master			■									■	410

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[2)] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Supply and Segment Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	See Page
Supply and Segment Modules		**Ex**					**Marine Approvals**						**UL**	
750-600	End Module	■	■	■	■	■	■	■	■	■	■	■	■	476
750-601 [3]	Power Supply; 24 VDC; Fuse	■	■	■	■	■	■	■	■	■	■	■	■	452
750-602 [3]	Power Supply; 24 VDC	■*	■	■*	■*	■*	■*	■	■*	■*	■	■*	■*	450
750-603	Potential Distribution; 8*24V	■*	■	■*	■*	■*		■	■*	■*	■*	■*	■*	461
750-604	Potential Distribution; 8*0V	■*	■	■*	■*	■*		■	■*	■*	■*	■*	■*	462
750-606	Power Supply; 24 VDC; Diagn; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	432
750-609	Power Supply; 230 VAC; Fuse	■	■	■	■	■	■	■	■	■	■	■	■	457
750-610 [3]	Power Supply; 24 VDC; Fuse; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	453
750-611	Power Supply; 230 VAC; Fuse; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	457
750-612 [4]	Power Supply; 0-230 VAC/VDC	■*	■	■*	■*	■*	■*	■	■*	■*	■	■*	■*	454
750-613 [1]	System Power Supply; 24 VDC	■	■	■	■	■	■	■	■	■	■	■	■	458
750-614	Potential Distribution	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	460
750-615	Power Supply; 120 VAC; Fuse	■	■	■									■	456
750-616	Distance Module	■	■	■	■	■	■	■	■	■	■	■	■	474
750-617	Power Supply; 24 VAC; Fuse												■	455
750-621	Distance Module	■	■	■									■	475
750-622	Binary Spacer Module	■	■	■									■	471
750-623	Power Supply; 24/5-15 VDC	■	■	■	■	■	■	■	■	■	■		■	451
750-624	Field Supply Filter; 24 VDC	■	■	■	■	■	■	■	■	■	■	■	■	466
750-625/000-001	Power Supply; 24 VDC; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	432
750-626	Supply Filter; 24 VDC	■	■	■	■	■	■	■	■	■	■	■	■	468
750-627	Bus Extension End Module				■					□	■		■	469
750-628	Bus Extension Coupler Module				■					□	■		■	470
750-1605	Potential Distribution; 16*24V	■	■	■	■	■	■	■	■	■	■	■	■	463
750-1606	Potential Distribution; 16*0V	■	■	■	■	■	■	■	■	■	■	■	■	464
750-1607	Potential Distribution; 8*24V/8*0V	■	■	■	■	■	■	■	■	■	■	■	■	465
753-620	DALI Multi-Master DC/DC-Converter					■			■	■			■	459
753-629/020-000	Spacer Module; Passive												■	473
753-1629	Spacer Module; Active												■	472

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[1] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval (observe power supply instructions)!

[3] Notice: WAGO's 750-624 Filter Module is mandatory for marine approval (observe power supply instructions)!

[4] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval at 24 VDC power supply (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

I/O System 750; Versions with an Extended Temperature Range

Surrounding Air Temperature (Operation): −20 … +60 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Controllers PFC100/PFC200 [1]														
750-8101/025-000	PFC100; 2ETH; T	■		■		■				■			■	117
750-8102/025-000	PFC100; 2ETH RS; T	■		■		■				■			■	118
750-8208/025-000	PFC200; 2ETH RS CAN DPM	■				■				■			■	129
750-8208/025-001	PFC200; 2ETH RS CAN DPM	■				■				■			■	129
750-8210/025-000	PFC200; G2; 4ETH; T									■			■	119
750-8212/025-000	PFC200; G2; 2ETH RS; T	■		■						■			■	121
750-8212/025-001	PFC200; G2; 2ETH RS; Tele; T	■		■						■			■	121
750-8212/025-002	PFC200; G2; 2ETH RS; Tele; T; Eco	■		■						■			■	121
750-8216/025-000	PFC200; G2; 2ETH RS CAN DPS; T	■		■						■			■	126
750-8216/025-001	PFC200; G2; 2ETH RS CAN DPS; Tele; T	■		■						■			■	126
750-8217/025-000	PFC200; G2; 2ETH RS; 4G; T									■				127
750-8217/625-000	PFC200; G2; 2ETH RS; 4G; Global; T									■			■	128
Controllers 750 [1]														
750-815/325-000	Controller Modbus®; RS485; 115.2kBd; T	■		■	■	■	■	■	■	■	■		■	168
750-833/025-000	Controller PROFIBUS Slave; T	■	■	■	■	■	■	■	■	■	■	■	■	170
750-890/025-000	Controller Modbus TCP; G4; SD; T	■		■						■			■	156
750-890/025-001	Controller Modbus TCP; G4; SD; Tele; T	■		■						■			■	156
750-890/025-002	Controller Modbus TCP; G4; SD; Tele; T; Eco	■		■						■			■	156
Fielbus Coupler														
750-333/025-000	FC PROFIBUS; G2; 12MBd; T	■	■	■	■	■	■	■	■	■	■	■	■	205
750-337/025-000	FC CANopen; MCS; T	■	■	■	■	■	■	■	■	■	■	■	■	220
750-375/025-000	FC PROFINET; G3; Adv; T	■		■		■				■			■	202
750-377/025-000	FC PROFINET; G3; Eco; Adv; T	■		■		■				■			■	203
Digital Input Modules														
750-400/025-000	2DI; 24 VDC; 3ms; T	■	■	■	■	■	■	■	■	■	■	■	■	233
750-402/025-000	4DI; 24 VDC; 3ms; T	■	■	■	■	■	■	■	■	■	■	■	■	234
750-408/025-000	4DI; 24 VDC; 3ms; LSS; T	■	■	■	■	■	■	■		■	■	■	■	250
750-430/025-000	8DI; 24 VDC; 3ms; T	■	■	■	■	■	■	■	■	■	■	■	■	237
Digital Output Modules														
750-504/025-000	4DO; 24 VDC; 0.5A; T	■	■	■	■	■	■	■	■	■	■	■	■	284
750-504/025-800	4DO; 24 VDC; 0.5A; IF; T	■	■	■	■	■	■	■	■	■	■	■	■	284
750-530/025-000	8DO; 24 VDC; 0.5A; T	■	■	■	■	■	■	■	■	■	■	■	■	288

[1] Notice: WAGO's Filter Module (750-626/…-…) is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

I/O System 750; Versions with an Extended Temperature Range

Surrounding Air Temperature (Operation): −20 … +60 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Analog Input Modules														
750-451/025-000	8AI; RTD; Adjust; T	■	■	■	■	■	■	■	■	■	■	■	■	349
750-454/025-000	2AI; 4-20mA; Diff; T	■	■	■	■	■	■	■	■	■	■	■	■	318
750-454/025-003	2AI; 4-20mA; Diff; T; EM	■	■	■	■	■	■	■	■	■	■	■	■	318
750-455/025-000	4AI; 4-20mA; SE; T	■	■	■	■	■	■	■	■	■	■	■	■	326
750-457/025-000	4AI; ±10 VDC; SE; T	■	■	■	■	■	■	■	■	■	■	■	■	334
750-461/025-000	2AI; Pt100/RTD; T	■	■	■	■	■	■	■	■	■	■	■	■	345
750-465/025-000	2AI; 0-20mA; SE; T	■	■	■									■	314
750-466/025-000	2AI; 4-20mA; SE; T	■	■	■									■	321
750-468/025-000	4AI; 0-10 VDC; SE; T	■	■	■	■	■		■	■	■	■	■	■	337
750-482/025-000	2AI; 4-20mA HART; T	■	■	■									■	323
750-493/025-000	3-PHASE POM; 480VAC 1A; T	■	■	■									■	356
750-494/025-000	3-PHASE POM; 480VAC 1A; T	■	■	■		■				■			■	358
750-494/025-001	3-PHASE POM; 480VAC 5A; T	■	■	■		■				■			■	358
Analog Output Modules														
750-552/025-000	2AO; 0-20mA; T	■	■	■	■	■	■	■	■	■	■	■	■	362
750-554/025-000	2AO; 4-20mA; T	■	■	■	■	■	■	■	■	■	■	■	■	364
750-559/025-000	4AO; 0-10 VDC; T	■	■	■	■	■	■	■	■	■	■	■	■	371
Function, Technology and Communication Modules														
750-638/025-000	2Up/Down Counter; 16bits; 500Hz; T	■	■	■									■	381
750-652/025-000	RS232/485 Interface; T	■	■	■	■	■	■	■	■	■	■	■	■	402
750-653/025-000	RS485 Interface; T	■	■	■	■	■	■	■	■	■	■	■	■	400
750-653/025-018	RS485 Interface; 9600Bd; N; 8/1	■	■	■	■	■	■	■	■	■	■	■	■	400
Supply and Segment Modules														
750-600/025-000	End Module; T	■	■	■	■	■	■	■	■	■	■	■	■	476
750-602/025-000 [3]	Power Supply; 24 VDC; T	■	■	■	■	■	■	■	■	■	■	■	■	450
750-626/025-000	Supply Filter; 24 VDC; T	■	■	■	■	■	■	■	■	■	■	■	■	468
750-626/025-001	Supply Filter; 24 VDC; HI; T	■	■	■	■	■	■	■	■	■	■	■	■	468

[3] Notice: WAGO's 750-624 Filter Module is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System 750 XTR
Surrounding Air Temperature (Operation): −40 … +70 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	See Page
Fieldbus Couplers I/O System 750 XTR [1]		**Ex**					**Marine Approvals**						**UL**	
750-333/040-000	FC PROFIBUS; G2; 12 MBd; XTR	■	■	■	■	■	■	■	■	■	■	■	■	486
750-338/040-000	FC CANopen; DSub; XTR	■	■	■	■	■	■	■	■	■	■	■	■	491
750-362/040-000	FC Modbus TCP; G4; XTR	■	■	■	■	■	■	■	■	■	■	■	■	487
750-363/040-000	FC EtherNet/IP; G4; XTR	■	■	■	■	■	■	■	■	■	■	■	■	489
750-364/040-000	FC Modbus TCP M12; G4; XTR	□	■	■	■	■	■	■	■	■	■	■	■	488
750-365/040-000	FC EtherNet/IP M12; G4; XTR	□	■	■	■	■	■	■	■	■	■	■	■	490
Digital Input Modules XTR														
750-407/040-000	2DI; 220 VDC; XTR	■	■	■	■	■	■	■	■	■	■	■	■	498
750-427/040-000	2DI; 110 VDC; XTR	■	■	■	■	■	■	■	■	■	■	■	■	497
750-429/040-001	2DI; 60 VDC; 3ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	496
750-430/040-000	8DI; 24 VDC; 3ms;; XTR	■	■	■	■	■	■	■	■	■	■	■	■	492
750-431/040-000	8DI; 24 VDC; 0.2ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	494
750-439/040-000 [2]	8DI; NAMUR; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	540
750-1405/040-000	16DI; 24 VDC; 3ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	493
750-1415/040-000	8DI; 24 VDC; 3ms; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■	■	■	492
750-1416/040-000	8DI; 24 VDC; 0.2ms; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■	■	■	494
750-1417/040-000	8DI; 24 VDC; 3ms; LSS; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■		■	495
Digital Output Modules XTR														
750-508/040-000	2DO; 24 VDC; 2A; Diagn; XTR	■	■	■	■	■	■	■	■	■	■	■	■	499
750-517/040-000	2RO; 250 VAC; 1A; Relay2CO; XTR	■	■	■	■	■	■	■	■	■	■	■	■	503
750-535/040-000 [2]	2DO; 24 VDC; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	541
750-537/040-000	8DO; 24 VDC; 0.5A; Diagn; XTR	■	■	■	■	■	■	■	■	■	■	■	■	500
750-1515/040-000	8DO; 24 VDC; 0.5A; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■	■	■	501
750-1516/040-000	8DO 24 VDC 0.5A LSS 2-wire XTR	■	■	■	■	■	■	■	■	■	■		■	502
Analog Input Modules XTR														
750-453/040-000	4AI; 0-20mA; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	504
750-455/040-000	4AI; 4-20mA; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	506
750-457/040-000	4AI; ±10 VDC; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	507
750-464/040-000	2/4AI; RTD; Adjust; XTR	■	■	■	■	■	■	■	■	■	■	■	■	511
750-468/040-000	4AI; 0-10 VDC; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	508
750-469/040-000	2AI; TC; Adjust; XTR	■	■	■	■	■	■	■	■	■	■	■	■	512
750-471/040-000	4AI U/I Diff Galv XTR	■	■	■	■	■	■	■	■	■	■		■	510
750-481/040-000 [2]	2AI; RTD; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	544
750-483/040-000	2AI; 0-30 VDC; Diff; XTR	■	■	■	■	■	■	■	■	■	■	■	■	509
750-484/040-000 [2]	2AI; 4-20mA HART; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	543
750-486/040-000 [2]	4AI; 0/4-20mA; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	542

[1] Notice: WAGO's 750-626/040-000 Filter Module is mandatory for marine approval (observe power supply instructions)!
[2] This I/O module shall only be used in connection with the 24 VDC Ex i XTR supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System 750 XTR
Surrounding Air Temperature (Operation): −40 … +70 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex		Marine Approvals					UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Analog Input Modules XTR														
750-492/040-001	2AI; 4-20mA; Diff; NE43; XTR	■		■		■		■		■		■	■	505
750-495/040-000	3-PHASE POM; 690VAC 1A; XTR	■		■		■		■		■		■	■	514
750-495/040-001	3-PHASE POM; 690VAC 5A; XTR	■		■		■		■		■		■	■	514
750-495/040-002	3-PHASE POM; 690VAC R.C.; XTR	■		■		■		■		■		■	■	514
Analog Output Modules XTR														
750-557/040-000	4AO; ±10V DC; XTR	■		■				■		■		■	■	516
750-559/040-000	4AO; 0-10V DC; XTR	■		■				■		■		■	■	517
750-563/040-000	2AO; 0/4-20mA; 16Bit; 6-18 VDC; XTR	■		■				■		■		■	■	515
750-585/040-000 [2]	2AO; 0-20mA; Ex i; XTR	■		■				■		■		■	■	545
Function/Technology Modules XTR														
750-404/040-003	Counter; Adjust; XTR	■		■		■		■		■		■	■	518
750-630/040-001	SSI Interface; Adjust; XTR	■		■		■		■		■		■	■	521
750-633/040-000 [2]	Up/Down Counter; Ex i; XTR	■		■		■		■		■		■	■	546
750-637/040-000	Inc. Encoder; RS422; 32Bit; XTR	■		■						■			■	520
750-637/040-001	Inc. Encoder; 24 VDC; Diff; 32Bit; XTR	■		■		■		■		■		■	■	520
Communication Modules XTR														
750-652/040-000	RS232/485 Interface; XTR	■		■		■		■		■		■	■	522
750-658/040-000	CAN Gateway; XTR	■		■		■		■		■		■	■	523
750-677/040-000	4PWM; 24 VDC; 0.2A; 20kHz; XTR	■		■						■			■	519
Supply and Segment Modules XTR														
750-600/040-000	End Module; XTR	■		■		■		■		■		■	■	536
750-601/040-000	Power Supply; 24 VDC; Fuse; XTR	■		■		■		■		■		■	■	525
750-602/040-000	Power Supply; 24 VDC; XTR	■		■		■		■		■		■	■	524
750-606/040-000	Power Supply; 24 VDC; Ex i; XTR	■		■		■		■		■		■	■	539
750-610/040-000	Power Supply; 24 VDC; Fuse Diagn; XTR	■		■		■		■		■		■	■	526
750-612/040-000	Power Supply; 0-230 VAC/VDC; XTR	■		■		■		■		■		■	■	527
750-613/040-000	System Power Supply; 24 VDC; XTR	■		■		■		■		■		■	■	528
750-614/040-000	Potential Distribution; XTR	■		■		■		■		■		■	■	529
750-616/040-000	Distance Module; XTR	■		■		■		■		■		■	■	535
750-624/040-000	Field Supply Filter; 24 VDC; HI; XTR	■		■		■		■		■		■	■	532
750-624/040-001	Field Supply Filter; 24 VDC; HI; NC; XTR	■		■		■		■		■		■	■	533
750-626/040-000	Supply Filter; 24 VDC; HI; XTR	■		■		■		■		■		■	■	534
750-1605/040-000	Potential Distribution; 16*24V; XTR	■		■		■		■		■		■	■	530
750-1606/040-000	Potential Distribution; 16*0V; XTR	■		■		■		■		■		■	■	531

[1] Notice: WAGO's 750-626/040-000 Filter Module is mandatory for marine approval (observe power supply instructions)!
[2] This I/O module shall only be used in connection with the 24 VDC Ex i XTR supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System Field

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18; TE/2190/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Fieldbus Modules														
765-1101/100-000	16DI FLD PN DC 24V												□	560
765-1102/100-000	16DIO FLD PN DC 24V												□	556
765-1103/100-000	16DO FLD PN DC 24V												□	558
765-1104/100-000	8DIO FLD PN DC 24V												□	557
765-1105/100-000	8DIO FLD PN DC 24V												□	559
765-1201/100-000	16DI FLD EC DC 24V												□	560
765-1202/100-000	16DIO FLD EC DC 24V												□	556
765-1203/100-000	16DO FLD EC DC 24V												□	558
765-1204/100-000	8DIO FLD EC DC 24V												□	557
765-1205/100-000	8DIO FLD EC DC 24V												□	559
765-1501/100-000	16DI FLD EI DC 24V												□	560
765-1502/100-000	16DIO FLD EI DC 24V												□	
765-1503/100-000	16DO FLD EI DC 24V												□	562
765-1504/100-000	8DIO FLD EI DC 24V												□	563
765-1505/100-000	8DIO FLD EI DC 24V												□	564
IO-Link Master														565
765-4101/100-000	8PORT IOL-A FLD PN DC 24V 2.0A												□	562
765-4102/100-000	8PORT IOL-B FLD PN DC 24V 2.0A												□	563
765-4103/100-000	4PORT IOL-A FLD PN DC 24V 2.0A												□	564
765-4104/100-000	4PORT IOL-B FLD PN DC 24V 2.0A												□	565
765-4201/100-000	8PORT IOL-A FLD EC DC 24V 2.0A												□	562
765-4202/100-000	8PORT IOL-B FLD EC DC 24V 2.0A												□	563
765-4203/100-000	4PORT IOL-A FLD EC DC 24V 2.0A												□	564
765-4204/100-000	4PORT IOL-B FLD EC DC 24V 2.0A												□	565
765-4501/100-000	8PORT IOL-A FLD EI DC 24V 2.0A												□	
765-4502/100-000	8PORT IOL-B FLD EI DC 24V 2.0A												□	566
765-4503/100-000	4PORT IOL-A FLD EI DC 24V 2.0A												□	568
765-4504/100-000	4PORT IOL-B FLD EI DC 24V 2.0A												□	570
IO-Link Hub														567
765-1701/200-000	8DIO FLD IOL-A HUB DC 24V 2.0A												□	569
765-1702/200-000	8DIO FLD IOL-A HUB DC 24V 2.0A												□	571
765-1703/200-000	16DIO FLD IOL-A HUB DC 24V 2.0A												□	564
765-1704/200-000	8DIO FLD IOL-B HUB DC 24V 2.0A												□	561
765-1705/200-000	8DIO FLD IOL-B HUB DC 24V 2.0A												□	563
765-1706/200-000	16DIO FLD IOL-B HUB DC 24V 2.0A												□	565

■ Approval is available. □ Approval is pending.

Approvals Overview
Operation and Monitoring – Touch Panels

cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR (Korean Register of Shipping)	HMB05880-AC001
LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK (Nippon Kaiji Kyokai)	TA17255M
Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18; TE/2190/880590/18
RINA (Registro Italiano Navale)	ELE343217XG
cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
Touch Panel; 600 Standard Line														
762-4101	Web Panel; TP600; 4.3; 480x272; PIO1; WP									■			■	76
762-4102	Web Panel; TP600; 5.7; 640x480; PIO1; WP									■			■	77
762-4103	Web Panel; TP600; 7.0; 800x480; PIO1; WP									■			■	78
762-4104	Web Panel; TP600; 10.1; 1280x800; PIO1; WP									■			■	79
762-4201/8000-001	Visu Panel; TP600; 4.3; 480x272; PIO2; VP									■			■	76
762-4202/8000-001	Visu Panel; TP600; 5.7; 640x480; PIO2; VP									■			■	77
762-4203/8000-001	Visu Panel; TP600; 7.0; 800x480; PIO2; VP									■			■	78
762-4204/8000-001	Visu Panel; TP600; 10.1; 1280x800; PIO2; VP									■			■	79
762-4205/8000-001	Visu Panel; TP600; 15.6; 1920x1080; PIO2; VP												■	80
762-4206/8000-001	Visu Panel; TP600; 21.5; 1920x1080; PIO2; VP												■	81
762-4301/8000-002	Control Panel; TP600; 4.3; 480x272; PIO3; CP									■			■	76
762-4302/8000-002	Control Panel; TP600; 5.7; 640x480; PIO3; CP									■			■	77
762-4303/8000-002	Control Panel; TP600; 7.0; 800x480; PIO3; CP									■			■	78
762-4304/8000-002	Control Panel; TP600; 10.1; 1280x800; PIO3; CP									■			■	79
762-4305/8000-002	Control Panel; TP600; 15.6; 1920x1080; PIO3; CP												■	80
762-4306/8000-002	Control Panel; TP600; 21.5; 1920x1080; PIO3; CP												■	81
Touch Panel; 600 Advanced Line														
762-5203/8000-001	Visu Panel; TP600; 7.0; 800x480; PIO2; VP									■			■	82
762-5204/8000-001	Visu Panel; TP600; 10.1; 1280x800; PIO2; VP									■			■	83
762-5205/8000-001	Visu Panel; TP600; 15.6; 1920x1080; PIO2; VP												■	84
762-5206/8000-001	Visu Panel; TP600; 21.5; 1920x1080; PIO2; VP												■	85
762-5303/8000-002	Control Panel; TP600; 7.0; 800x480; PIO3; CP									■			■	82
762-5304/8000-002	Control Panel; TP600; 10.1; 1280x800; PIO3; CP									■			■	83
762-5305/8000-002	Control Panel; TP600; 15.6; 1920x1080; PIO3; CP												■	84
762-5306/8000-002	Control Panel; TP600; 21.5; 1920x1080; PIO3; CP												■	85
Touch Panel; 600 Marine Line														
762-6201/8000-001	Visu Panel; TP600; 4.3; 480x272; PIO2; VP									■			■	86
762-6202/8000-001	Visu Panel; TP600; 5.7; 640x480; PIO2; VP									■			■	87
762-6203/8000-001	Visu Panel; TP600; 7.0; 800x480; PIO2; VP									■			■	88
762-6204/8000-001	Visu Panel; TP600; 10.1; 1280x800; PIO2; VP									■			■	89
762-6301/8000-002	Control Panel; TP600; 4.3; 480x272; PIO3; CP									■			■	86
762-6302/8000-002	Control Panel; TP600; 5.7; 640x480; PIO3; CP									■			■	87
762-6303/8000-002	Control Panel; TP600; 7.0; 800x480; PIO3; CP									■			■	88
762-6304/8000-002	Control Panel; TP600; 10.1; 1280x800; PIO3; CP									■			■	89

■ Approval is available. □ Approval is pending.

Approvals Overview
Infrastructure – Industrial Switches

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS; A-14050
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
Industrial Switches		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV	BV	ABS	OrdLoc	
852-101	Industrial-Switch; 5Port												■	597
852-102	Industrial-Switch; 8Port												■	598
852-103	Industrial-Switch; 8Port; 2-Slot 100BASE-FX												■	599
852-111	Industrial-Eco-Switch; 5Port									■			■	588
852-111/000-001	Industrial-Eco-Switch; 5Port												■	589
852-112	Industrial-Eco-Switch; 8Port												■	590
852-112/000-001	Industrial-Eco-Switch; 8Port												□	591
852-112/000-002	Industrial-Eco-Switch; 8Port												□	592
852-303	Managed-Switch; 8Port; 2-Slot 1000BASE-SX/LX									■			■	609
852-602	Managed-Switch; 8Port 100BASE-TX; PROFINET; T												■	614
852-603	Managed-Switch; 8Port 100BASE-TX; 2Slot 1000BASE-SX/LX; PROFINET; T												■	615
852-1102	Industrial-Switch; 8-Port Gb									■			■	600
852-1106	Industrial-Switch; 16-Port Gb									■			■	601
852-1111/000-001	Industrial-Eco-Switch; 5-Port Gb												■	593
852-1112	Industrial-Eco-Switch; 8-Port Gb												■	594
852-1305	Managed-Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX									■			■	610
852-1305/000-001	Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; USB												■	611
852-1322	Managed Switch; 8Port Gb; MACsec												■	607
852-1328	Managed Switch; 6Port Gb; 2FOC Gb; MACsec												■	608
852-1411	Industrial-Eco-Switch; 5Port Gb; 4PoE												■	595
852-1411/000-001	Industrial-Eco-Switch; 5Port Gb; 4PoE												■	595
852-1417	Industrial-Eco-Switch; 5Port Gb; 2-Slot 1000BASE-SX/LX; 4PoE												■	596
852-1505	Managed-Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX; 8PoE													612
852-1505/000-001	Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; EXT; 8PoE; USB									■			■	613
852-1605	Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; PROFINET; T												■	616
852-1812	Lean-Managed-Switch; 8 Ports 1000BASE-T												■	603
852-1813	Lean-Managed-Switch; 8 Ports 1000BASE-T; 2 Slots 1000BASE-SX/LX												■	604
852-1813/000-001	Lean-Managed-Switch; 8 Ports 1000BASE-T; 2 Slots 1000BASE-SX/LX; +PoE												■	605
852-1816	Lean-Managed-Switch; 16 Ports 1000BASE-T												■	606

■ Approval is available. □ Approval is pending.

Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

PUSH-IN CAGE CLAMP®







Push-in CAGE CLAMP® terminates the following copper conductors:
solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection with an additional advantage: Push-in connection
Terminate solid and stranded (Class B 7 strands or less), as well as ferruled conductors, by simply pushing them in – no tools required.

Termination for all conductor types:
- Open clamping unit.
- Insert the conductor.
- Release clamp – done!

CAGE CLAMP®







CAGE CLAMP® terminates the following copper conductors:
solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection for solid, stranded and fine-stranded conductors

Termination:
- Open clamping unit.
- Insert the conductor.
- Release clamp – done!

Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

POWER CAGE CLAMP®







POWER CAGE CLAMP terminates the following copper conductors:
solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, with ferrule (gastight crimped)

The universal connection for conductors larger than 35 mm² (2 AWG)

Termination:

- Open clamp by turning a T-wrench counter-clockwise.
- Press the integrated latch to open clamping unit for hands-free wiring.
- Insert the conductor.
- A small counter-clockwise rotation closes the clamp, securing conductor.

PUSH WIRE®







PUSH WIRE® terminates the following copper conductors:
solid

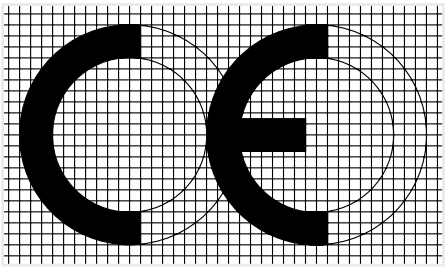
PUSH WIRE® connection for solid and stranded conductors (depending on the model used)

Termination:
Tool-free, twist-free terminations for solid and rigid stranded conductors – simply push into the unit.

CE Marking and EU Directives

CE Conformity Marking

The CE conformity marking consists of the characters "CE" with the following script:



Communauté Européenne
(European Community)

The CE conformity marking must be applied to all electrical equipment; should on-unit marking not be possible, mark the smallest packaging unit. With this marking, manufacturers attest conformity of their products to relevant directives.

In addition to the CE marking, manufacturers provide an EU "Declaration of Conformity" for their products. This declaration of conformity must be retained and submitted to a national surveillance authority upon request.

EU directives are legally binding specifications for the European Union. Their goal is aligning legal and administrative specifications in the various EU member countries, in order to prevent trading hindrances arising from different national specifications.

In order to launch a product on the market, it must comply with the relevant directives. Several directives may apply for one single product, for example, EMC and low voltage directives.

Low Voltage Directive (LVD)

The safety of electrical equipment is guaranteed by the Low Voltage Directive (LVD). The LVD covers all electrical equipment operating with a voltage between 50 and 1000 V and between 75 V and 1500 V. Products falling within the scope of the LVD that are designed in such a way that they can be used in other electrical devices and whose safety, for the most part, is dependant on how these components were built into the end product and what features the end product has are defined as basic components in accordance with the LVD. The LVD doesn't apply to basic components.

EMC Directive

The EMC Directive stipulates that a product must meet the limits on radiated electromagnetic disturbance and also requires that a product must be immune to electromagnetic interference. Electromagnetic passive components or components with no direct function, such as resistors, diodes, capacitors, switching relays or cables (in the form of passive printed circuit boards) are not considered as apparatus within the meaning of the EMC Directive.

Machinery Directive

The Machinery Directive does not apply to WAGO products.

Explosive Atmospheres Directive (ATEX)

Directive for devices and protective systems intended for use in hazardous locations.

Radio Equipment Directive

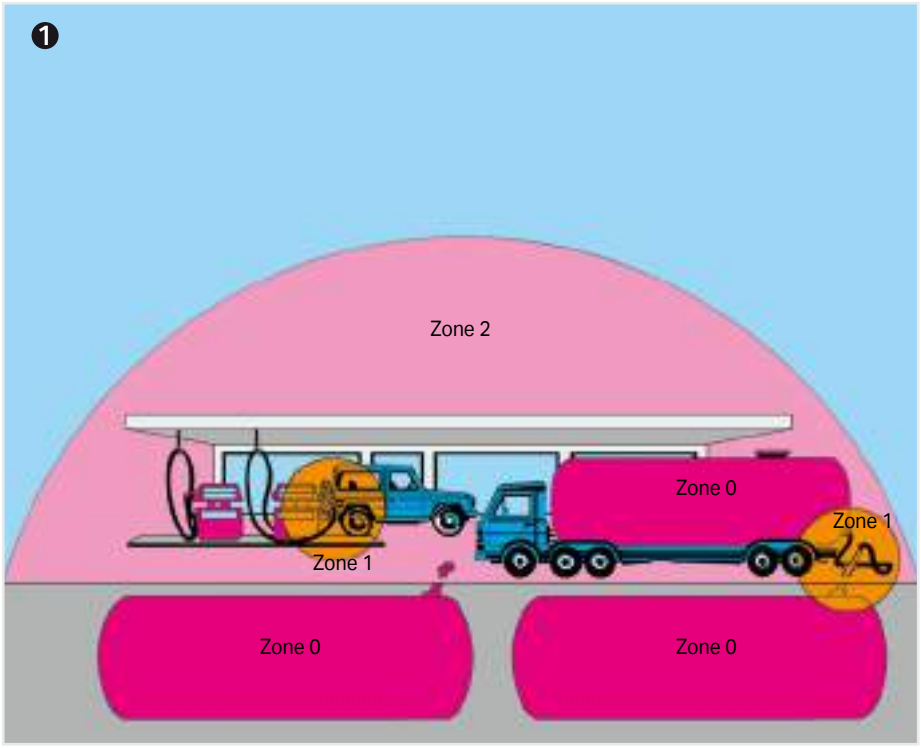
A device or relevant component thereof, capable of communication by emitting and/or receiving radio waves utilizing the spectrum allocated to terrestrial/space radio communication, falls within the scope of the Radio Equipment Directive. As such, these devices and components are tested and labeled accordingly. This label implicitly includes both Low Voltage and EMC Directives, since the Radio Equipment Directive also encompasses the safety targets for both of these directives.

General Technical Information
for Electrical Equipment Used in Hazardous Areas

Hazardous Areas

Hazardous areas are zones in which the atmosphere may become explosive. An explosive atmosphere is a mixture of flammable substances in the form of gases, vapors or mixtures with air under atmospheric conditions in critically mixed ratios such that excessive high temperature, arcs or sparks may cause an explosion.

DIN EN 1127-1 and all other well-known standards rank hazardous areas according to the likelihood of the occurrence of an explosive atmosphere into the following zones:



❶ Hazardous areas due to explosive gases, vapors and mists

Zone 0

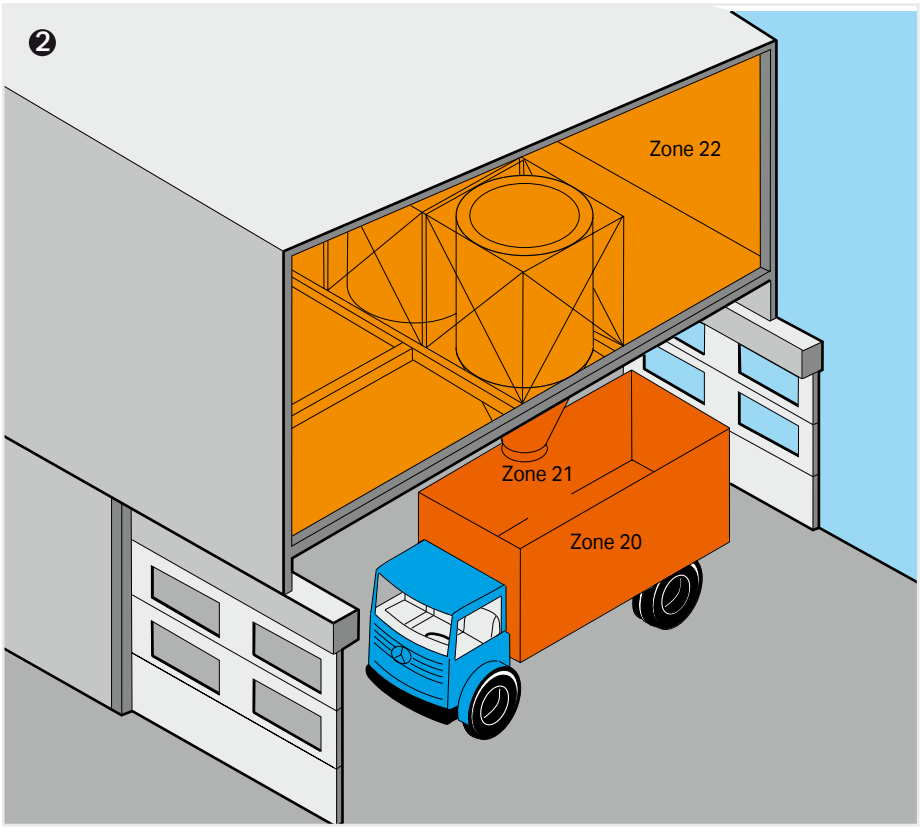
Areas in which an explosive atmosphere is present continuously, for long periods or frequently.

Zone 1

Areas in which an explosive atmosphere is likely to occur occasionally during normal operation.

Zone 2

Areas in which an explosive atmosphere is likely to occur rarely or only for a short period during normal operation.



❷ Hazardous areas due to explosive dust/air mixtures

Zone 20

Areas in which an explosive atmosphere due to dust/air mixtures is present continuously, for long periods or frequently and in which dust deposits of known or excessive thickness may form. Dust deposits alone do not constitute a Zone 20.

Zone 21

Areas in which the occurrence of an explosive atmosphere due to dust/air mixtures is to be expected occasionally and in which deposits or layers of combustible dust can generally be present.

Zone 22

Areas in which an explosive atmosphere due to dust/air mixtures is not likely to occur during normal operation and, if it occurs, will only exist for a short period, or in which accumulations or layers of combustible dust are present.

Please refer to the manuals for more information on explosion protection.

Electromagnetic Compatibility and Mechanical Strength (Industrial and Residential Environments)

Immunity for Industrial Environments per EN 61000-6-2

Test Specification		Test Value	Evaluation Criteria *)
EN 61000-4-2	ESD	4 kV/8 kV (contact/air)	B
EN 61000-4-3	Electromagnetic fields	10 V/m: 80 MHz ... 1 GHz	A
		3V/m: 1.4 ... 2.0 GHz	A
		1V/m: 2.0 ... 2.7 GHz	A
EN 61000-4-4	Burst	1 kV/2 kV (data/supply)	B
EN 61000-4-5	Surge	Data: - / 1 kV (line : line – line : ground)	B
		DC supply: 0.5 kV / 0.5 kV (line : line – line : ground)	B
		AC supply: 1 kV / 2 kV (line : line – line : ground)	B
EN 61000-4-6	RF interference	10 V/m, 80 % AM (0.15 ... 80 MHz)	A
EN 61000-4-8	Magnetic field	30 A/m, 50/60Hz	A
*)	Criteria A: The device must work in accordance with the regulations during and after the test. Criteria B: The device must work in accordance with the regulations after the test.		

Emission Standard for Residential Environments per EN 61000-6-3

Test Specification		Limits (Quasi-Peak)	Frequency Range	Distance
EN 55016-2-1	AC supply, conducted	66 ... 56 dB(µV)	150 ... 500 kHz	
		56 dB(µV)	500 kHz ... 5 MHz	
		60 dB(µV)	5 ... 30 MHz	
EN 55016-2-1	DC supply/data lines	79 dB(µV)	150 ... 500 kHz	
	Conducted	73 dB(µV)	500 kHz ... 30 MHz	
EN 55016-2-3	Radiated	30 dB(µV/m)	30 ... 230 MHz	10 m
		37 dB(µV/m)	230 MHz ... 1 GHz	10 m
EN 55022	Telecommunications/	84 ... 74 dB(µV)	150 ... 500 kHz	
	Mains connection, conducted	74 dB(µV)	500 kHz ... 30 MHz	

Emission Standard for Industrial Environments per EN 61000-6-4

Test Specification		Limits (Quasi-Peak)	Frequency Range	Distance
EN 55016-2-1	AC supply, conducted	79 dB(µV)	150 ... 500 kHz	
		73 dB(µV)	500 kHz ... 30 MHz	
EN 55016-2-3	Radiated	40 dB(µV/m)	30 ... 230 MHz	10 m
		47 dB(µV/m)	230 MHz ... 1 GHz	10 m
EN 55022	Telecommunications/	97 ... 87 dB(µV)	150 ... 500 kHz	
	Mains connection, conducted	87 dB(µV)	500 kHz ... 30 MHz	

Mechanical Strength per EN 61131-2

Test Specification		Frequency Range	Limits
IEC 60068-2-6	Vibration	5 Hz ≤ f < 9 Hz	1.75 mm amplitude (permanent)
			3.5 mm amplitude (short term)
		9 Hz ≤ f < 150 Hz	0.5g (permanent)
			1g (short term)
		Note on vibration test:	
		a) Frequency change: max. 1 octave/minute	
		b) Vibration direction: 3 axes	
IEC 60068-2-27	Shock		15g
		Note on shock test:	
		a) Type of shock: half sine	
		b) Shock duration: 11 ms	
		c) Shock direction: 3x in positive and 3x in negative direction for each of the three mutually perpendicular axes of the test specimen	

Electromagnetic Compatibility and Mechanical Strength (Marine Environments)

Immunity Standard for Marine Environments per Class Guideline DNVGL-CG-0339 (Harmonized with IACS E10)

Test Specification	EMC Class [1]	Designation	Test Value	Performance Criterion 2)
IEC 61000-4-2	A+B	ESD	6 kV (contact) 8 kV (air)	B
IEC 61000-4-3	A+B	Electromagnetic fields	10 V/m; 80 MHz ... 2 GHz	A
IEC 61000-4-4	A+B	Burst	1 kV (data ports) 2 kV (power supply/ground ports)	B
IEC 61000-4-5	A+B	Surge	0.5 kV; line-to-line 1.0 kV; line-to-ground	B
IEC 61000-4-6	A B	RF interference	3 V r.m.s.; 150 kHz ... 80 MHz; 80 % AM at 1000 Hz 10 V r.m.s.; 2/3/4/6.2/8.2/12.6/16.5/18.8/22/25 MHz (spot frequencies)	A
Performance test	A+B	AF disturbances (harmonics)	3 V r.m.s.; 2 W; 50 Hz ... 10 kHz	A
Performance test	-	High voltage	775 VDC 1500 VAC	-
1)	EMC Class A: All locations except bridge and open deck EMC Class B: All locations including bridge and open deck			
2)	Performance criteria A: The device must work in accordance with the regulations during and after the test. Performance criteria B: The device must work in accordance with the regulations after the test.			

Emission Standard for Marine Environments per Class Guideline DNVGL-CG-0339 (Harmonized with IACS E10)

Test Specification	EMC Class [1]	Emission	Frequency Range	Limits (Quasi-Peak)	Distance
Performance test	A	Radiated	0.15 ... 30 MHz	80 ... 50 dBµV/m	3 m
			30 ... 100 MHz	60 ... 54 dBµV/m	3 m
			100 ... 2000 MHz (except 156 ... 165 MHz)	54 dBµV/m 24 dBµV/m	3 m
Performance test	A	Conducted	10 ... 150 kHz	120 ... 69 dBµV	
			150 ... 500 kHz	79 dBµV	
			0.50 ... 30 MHz	73 dBµV	
Performance test	B	Radiated	150 ... 300 kHz	80 ... 52 dBµV/m	3 m
			0.30 ... 30 MHz	52 ... 34 dBµV/m	3 m
			30 ... 2000 MHz (except 156 ... 165 MHz)	54 dBµV/m 24 dBµV/m	3 m
Performance test	B	Conducted	10 ... 150 kHz	96 ... 50 dBµV	
			150 ... 350 kHz	60 ... 50 dBµV	
			0.35 ... 30 MHz	50 dBµV	
1)	EMC Class A: All locations except bridge and open deck EMC Class B: All locations including bridge and open deck				

Mechanical Strength per Class Guideline DNVGL-CG-0339 (Harmonized with IACS E10)

Test Specification	Vibration Class	Frequency Range	Amplitude	Location
IEC 60068-2-6	A	2 Hz (+3/-0) ≤ f < 13.2 Hz 13.2 Hz ≤ f < 100 Hz	1.0 mm (peak value) 0.7g (acceleration)	On bulkheads, beams, deck, bridge
IEC 60068-2-6	B	2 Hz (+3/-0) ≤ f < 25 Hz 25 Hz ≤ f < 100 Hz	1.6 mm (peak value) 4.0g (acceleration)	On machinery such as internal combustion engines, compressors, pumps, including piping on such machinery
		40 Hz ≤ f < 2000 Hz	10g (acceleration)	Only for equipment installed on the exhaust gas pipes of diesel engines
IEC 60068-2-6	C	2 Hz (+3/-0) ≤ f < 15 Hz 15 Hz ≤ f < 50 Hz	2.6 mm (peak value) 2.3g (acceleration)	Masts

Specifications and Test Results

The following standards apply to the design and application of the electrical components contained in this catalog:

DIN VDE 0100
Construction of high-current installations with nominal voltages up to 1000 V

EN 50110-1
VDE 0105-1
Operation of electrical installations

IEC 61140
EN 61140
VDE 0140-1
Protection against electric shock – Common aspects for installation and equipment

IEC 60664-1
EN 60664-1
VDE 0110-1
Insulation coordination for equipment within low-voltage systems
– Part 1: Principles, requirements and tests

IEC 60204-1
EN 60204-1
VDE 0113-1
Safety of machinery – Electrical equipment of machines – Part 1:
General requirements

EN 50178
VDE 0160
Electronic equipment for use in power installations

IEC 62305-1
EN 62305-1
VDE 0185-305-1
Protection against lightning
– Part 1: General principles

IEC 60060-1
HD 588.1 S1
VDE 0432-1
High-voltage test techniques
– Part 1: General specifications and test requirements

IEC 60085
EN 60085
VDE 0301-1
Electrical insulation – Thermal evaluation and designation

IEC 60529
EN 60529
VDE 0470-1
Degrees of protection provided by enclosures (IP code)

IEC 60603-1
EN 60603-1
Connectors for frequencies below 3 MHz for use with printed boards
– Part 1: Generic specification: General requirements and guide for the preparation of detail specifications, with assessed quality

IEC 61984
EN 61984
VDE 0627
/ Connectors – Safety requirements and tests

IEC 60999-1
EN 60999-1
VDE 0609-1
Connecting devices – Electrical copper conductors; Safety requirements for screw-type and screwless-type clamping units
– Part 1: General requirements and particular requirements for clamping units for conductors 0.2 mm^2 up to 35 mm^2

IEC 60617-2
EN 60617-2
Graphical symbols for diagrams
– Part 2: Symbol elements, qualifying symbols and other symbols having general application

IEC 61558-1
EN 61558-1
VDE 0570-1
Safety of power transformers, power supplies, reactors and similar products
– Part 1: General requirements and tests

IEC 60669-2-1
EN 60669-2-1
VDE 0632-2-1
Switches for household and similar fixed electrical installations
– Part 2-1: Particular requirements – Electronic switches

IEC 60947-7-1
EN 60947-7-1
VDE 0611-1
Low-voltage switchgear and controlgear
– Part 7-1: Ancillary equipment – Terminal blocks for copper conductors

IEC 60998-2-2
EN 60998-2-2
VDE 0613-2-2
Connecting devices for low-voltage circuits for household and similar purposes
– Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units

IEC 60947-1
EN 60947-1
VDE 0660-100
Low-voltage switchgear and controlgear
– Part 1: General rules

IEC 60947-5-6
EN 60947-5-6
VDE 0660-212
Low-voltage switchgear and controlgear
– Part 5-6: Control circuit devices and switching elements, DC interface for proximity sensors and switching amplifiers (NAMUR)

IEC 60439-1
EN 60439-1
VDE 0660-500
Low-voltage switchgear and controlgear assemblies
– Part 1: Type-tested and partially type-tested assemblies

IEC 60555-1
EN 60555 Part 1
VDE 0838-1
Disturbances in supply systems caused by household appliances and similar electrical equipment;
Part 1: definitions

IEC 60715
EN 60715
Dimensions of low-voltage switchgear and controlgear – Standardized mounting on rails for mechanical support of electrical devices in switchgear and controlgear installations

IEC 60950-1
EN 60950-1
VDE 0805-1
Information technology equipment – Safety
– Part 1: General requirements

IEC 60127-6
EN 60127-6
VDE 0820-6
Miniature fuses
– Part 6: Fuse-holders for miniature fuse-links

EN 50155
VDE 0115-200
Railway applications – Electronic equipment used on rolling stock

EN 50090-2-2
VDE 0829-2-2
Home and Building Electronic Systems (HBES)
– Part 2-2: System overview – General technical requirements; German version

IEC 60099-1
EN 60099-1
VDE 0675-1
Surge arresters
– Part 1: Non-linear resistor type gapped surge arresters for a.c. systems

IEC 61643-1
EN 61643-11
VDE 0675-6-11
Low-voltage surge protective devices –
Part 11: Surge protective devices connected to low-voltage power systems – Requirements and tests

IEC 61643-21
EN 61643-21
VDE 0845-3-1
Low voltage surge protective devices –
Part 21: Surge protective devices connected to telecommunications and signalling networks; Performance requirements and testing methods

IEC 61508-1
EN 61508-1
VDE 0803-1
Functional safety of electrical/electronic/programmable electronic safety-related systems
– Part 1: General requirements

IEC 62061
EN 62061
VDE 0113-50
Safety of machinery – Functional safety of safety-related electrical, electronic and programmable electronic control systems

Interfaces – Fieldbuses

DIN 66259-1
Electrical characteristics for unbalanced double-current interchange circuits

EN 50325-1
Industrial communications subsystem based ISO 11898 (CAN) for controller-device interfaces
– Part 1: General requirements

IEC 61784-1
EN 61784-1
Industrial communication networks – Profiles
– Part 1: Fieldbus profiles

IEC 61158-2
EN 61158-2
Industrial communication networks – Fieldbus specifications
– Part 2: Physical layer specification and service definition

IEC 61158-6-x
EN 61158-6-x
DIN EN 61158-6-x
Industrial communication networks – Fieldbus specifications
– Part 6-x

Explosion Protection

IEC 60079-0
EN 60079-0
VDE 0170-1
Electrical apparatus for explosive gas atmospheres
– Part 0: General requirements

IEC 60079-7
EN 60079-7
VDE 0170-6
Explosive atmospheres
– Part 7: Equipment protection by increased safety "e"
IEC 60079-11
EN 60079-11
VDE 0170-7
Explosive atmospheres
– Part 11: Equipment protection by intrinsic safety "i"

IEC 60079-14
EN 60079-14
VDE 0165-1
Explosive atmospheres
– Part 14: Electrical installations design, selection and erection

IEC 60079-15
EN 60079-15
VDE 0170-16
Electrical apparatus for explosive gas atmospheres
– Part 15: Construction, test and marking of type of protection "n" electrical apparatus

IEC 61241-0
EN 61241-0
VDE 0170-15-0
Electrical apparatus for use in the presence of combustible dust
– Part 0: General requirements

IEC 61241-1
EN 61241-1
VDE 0170-15-1
Electrical apparatus for use in the presence of combustible dust
– Part 1: Protection by enclosures "tD"

IEC 61241-11
EN 61241-11
VDE 0170-15-11
Electrical apparatus for use in the presence of combustible dust
– Part 11: Protection by intrinsic safety "iD"

Specifications and Test Results
(continued)

Environmental Testing

IEC 60068-2-6
EN 60068-2-6
VDE 0468-2-6
Environmental testing
– Part 2-6: Tests – Test Fc: Vibration (sinusoidal)

IEC 60068-2-27
EN 60068-2-27
Basic environmental testing procedures
– Part 2: Tests
– Test Ea and guidance: Shock

IEC 60068-2-42
EN 60068-2-42
Environmental testing
– Part 2-42: Tests
– Test Kc: Sulfur dioxide test for contacts and connections

IEC 60068-2-43
EN 60068-2-43
Environmental testing
– Part 2-43: Tests
– Test Kd: Hydrogen sulphide test for contacts and connections

EMC Requirements

IEC 61000-6-1
EN 61000-6-1
VDE 0839-6-1
Electromagnetic compatibility (EMC)
– Part 6-1: Generic standards
– Immunity for residential, commercial and light-industrial environments

IEC 61000-6-2
EN 61000-6-2
VDE 0839-6-2
Electromagnetic compatibility (EMC)
– Part 6-2: Generic standards
– Immunity for industrial environments

IEC 61000-6-3
EN 61000-6-3
VDE 0839-6-3
Electromagnetic compatibility (EMC)
– Part 6-3: Generic standards
– Emission standard for residential, commercial and light-industrial environments

IEC 61000-6-4
EN 61000-6-4
VDE 0839-6-4
Electromagnetic compatibility (EMC)
– Part 6-4: Generic standards
– Emission standard for industrial environments

IEC 61000-3-2
EN 61000-3-2
VDE 0838-2
Electromagnetic compatibility (EMC)
– Part 3-2: Limits
– Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

IEC/CISPR 11
EN 55011
VDE 0875-11
Industrial scientific and medical (ISM) radio-frequency equipment
– Electromagnetic disturbance characteristics
– Limits and methods of measurement

IEC/CISPR 22
EN 55022
VDE 0878-22
Information technology equipment
– Radio disturbance characteristics
– Limits and methods of measurement

IEC/CISPR 24
EN 55024
VDE 0878-24
Information technology equipment
– Immunity characteristics
– Limits and methods of measurement

IEC 61326-3-1
EN 61326-3-1
VDE 0843-20-3-1
Electrical equipment for measurement, control and laboratory use – EMC requirements
– Part 3-1: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) – General industrial applications

PLC

IEC 61131-1
EN 61131-1
Programmable Logic Controllers
– Part 1:
General Information

IEC 61131-2
EN 61131-2
VDE 0411-500
Programmable controllers
– Part 2: Equipment requirements and tests

IEC 61131-3
EN 61131-3
Programmable controllers
– Part 3: Programming languages

Relays

IEC 61810-1
EN 61810-1
VDE 0435-201
Electromechanical elementary relays
– Part 1: General requirements

IEC 61810-2
EN 61810-2
VDE 0435-120
Electromechanical elementary relays
– Part 2: Reliability

IEC 61810-5
EN 50205
VDE 0435-2022
Electromechanical non-specified time all-or-nothing relays
– Part 5: Insulation coordination

IEC 60255-5
EN 60255-5
VDE 0435-130
Electrical relays
– Part 5: Insulation coordination for measuring relays and protection equipment – Requirements and tests

UL Directives

UL 1059; ANSI 1059
Rail-Mount Terminal Blocks

UL 486E
Equipment wiring terminals for use with aluminum and/or copper conductors

UL 508
Industrial control equipment

ANSI/ISA12.12.01
Nonincendive electrical equipment for use in Class I and Class II, Division 2 and Class III hazardous (classified) locations

Ship Classifications

ABS (American Bureau of Shipping)
Steel Vessels
Part 4: Vessel Systems and Machinery

BV (Bureau Veritas)
Rules for the classification of steel ships and offshore units

DNV (Det Norsk Veritas)
Det Norsk Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norsk Veritas' Offshore Standards: 2007

GL (German Lloyd)
Rules for Classification and Construction
VI Additional Rules and Guidelines
7 Guidelines for the Performance of Type Test
2 Test Requirements for Electrical/Electronic Devices and Systems

LR (Lloyds Register)
Type Approval System
Test Specification Number 1

RINA (Registro Italiano Navale)
Rules for the classification of ships
Part C – Machinery, systems and fire protection Ch. 3, Sect. 6, Table 1

BSH (Federal Maritime and Hydrographic Agency)
Certificate measuring the safe distance to the standard magnetic and steering magnetic compass in accordance with ISO R 695 and DIN EN 60945 Section 11.2

KR (Korean Register of Shipping)
List of Approved Manufacturers and Type Approved Equipment; Pt. 6, Ch. 1, Sec. 3 of the Rules for Classification of Steel Ships

NKK (Nippon Kaiji Kyokai)
Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

PRS (Polski Rejestr Statkow)
Publication No. 11/P
Enviromental Tests on Marine Equipment

Electrical Engineering Laboratory
Product Safety for Our Customers

To use terminal blocks globally, they must satisfy certain standards and obtain test certificates. These requirements apply to every manufacturer. WAGO also conducts its own tests to increase standards and offer greater reliability with its products. Products undergo a full range of mechanical, electrical and climatic testing, and we'll share a few of those processes with you.

WAGO Test Lab

This means that WAGO's products can be used safely and reliably both in Europe and anywhere globally for a wide variety of applications. We heavily emphasize the importance of global acceptance during development. As a result, we can present documentation that verifies our high levels of product safety and reliability while ensuring the fulfillment and accuracy of technical data, which are the highest priorities for our customers and users worldwide.
On December 22, 2009, our test lab was accredited by the German Accreditation Association (Deutsche Gesellschaft für Akkreditierung GmbH) in accordance with DIN EN ISO/IEC 17025.

Pull-Out Test (per EN 60947-7-1, EN 60998-2-2)

During the pull-out force test, a conductor is pulled on until it is removed from the clamping unit. The design of the terminals means that extraction only occurs after the standard pull-out force has been exceeded many times over.



Vibration Test (per IEC/EN 60068-2-6)

Depending on the application, such as railway (per EN 61373) or marine (per GL, LR, DNV), there are various testing requirements to determine if the long-term effects of vibrations degrade electrical connections. The test specimen is subjected to different loads on three axes in an electrodynamic vibration system. The amplitude, the acceleration, and particularly the frequency of the vibration vary during the test. The test values are increased many times over the standard values to meet special customer requirements.



Shock Test (per IEC/EN 60068-2-27)

The shock test is very similar to the vibration test except that, instead of continuous vibrations, single shocks are applied to the test specimen. Shock tests are usually performed, for example, at an acceleration of 20g over a period of 11 ms. Tests for special requirements often call for much higher values and are also conducted in our laboratory..



Voltage Drop Test under Bending Stress (per WAGO test requirements)

The voltage drop test under bending stress simulates mechanical stress on the clamping unit. In everyday use, this stress can occur during installation, for example, when an electrician shoves connected conductors to the side in order to access a specific component. The quality of the clamping unit when moving a connected conductor can be validated by the constantly stable measured value of the voltage drop.



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Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass

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die Kompetenz nach DIN EN ISO/IEC 17025:2018 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

Elektrische und mechanische Prüfungen an Klemmen und Steckverbinder sowie Umweltsimulation

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 24.05.2019 mit der Akkreditierungsnummer D-PL-19704-01. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 08 Seiten.

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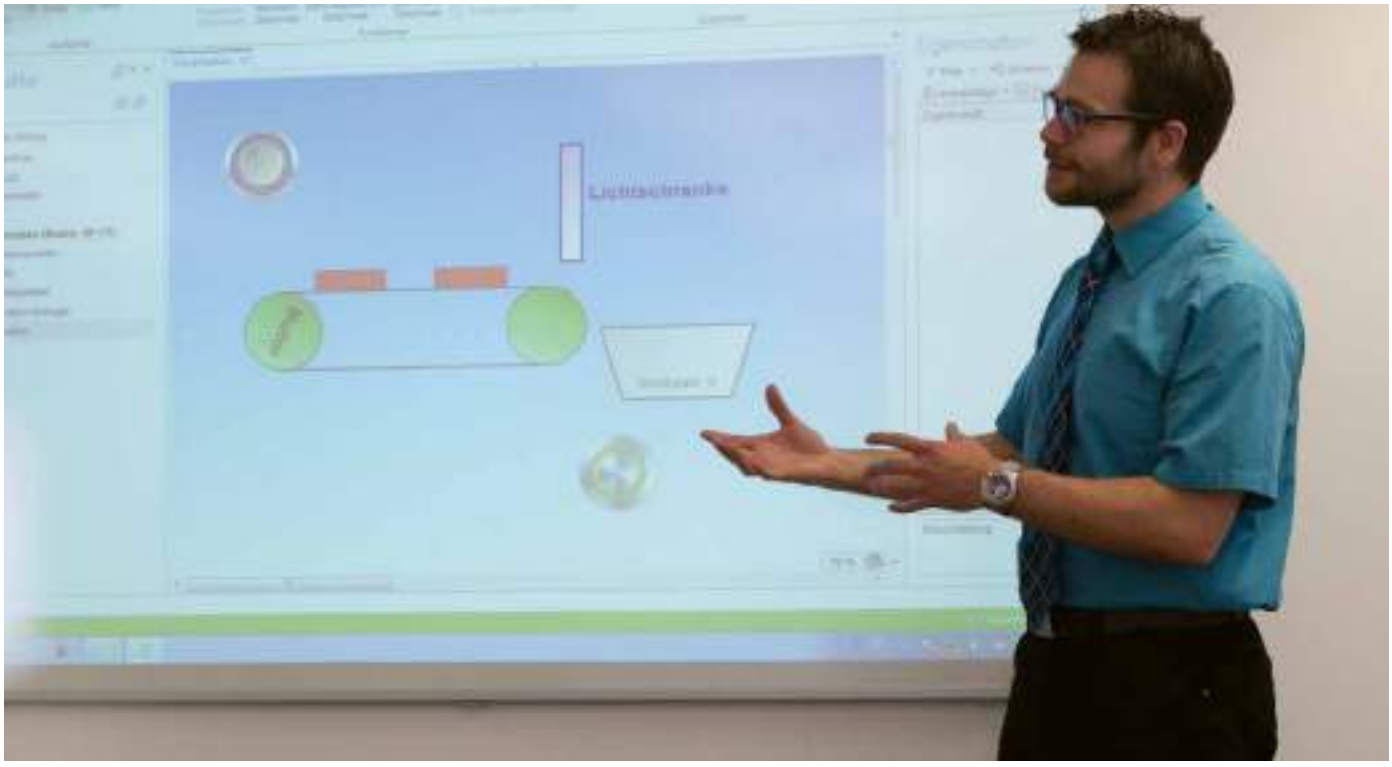
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Im Auftrag Dipl.-Ing. (FH) Ralf Egner
Abteilungsleiter

Die Urkunde samt Urkundenanlage gibt den Stand zum Zeitpunkt des Ausstellungsdatums wieder. Der jeweils aktuelle Stand des Geltungsbereiches der Akkreditierung ist der Datenbank akkreditierter Stellen der Deutschen Akkreditierungsstelle GmbH (DAkkS) zu entnehmen. https://www.dakks.de/content/datenbank-akkreditierter-stellen

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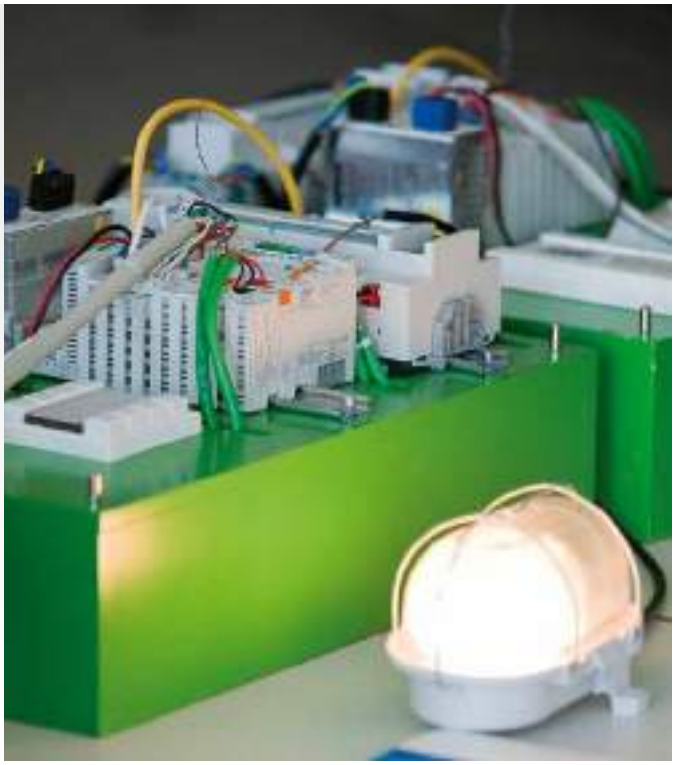
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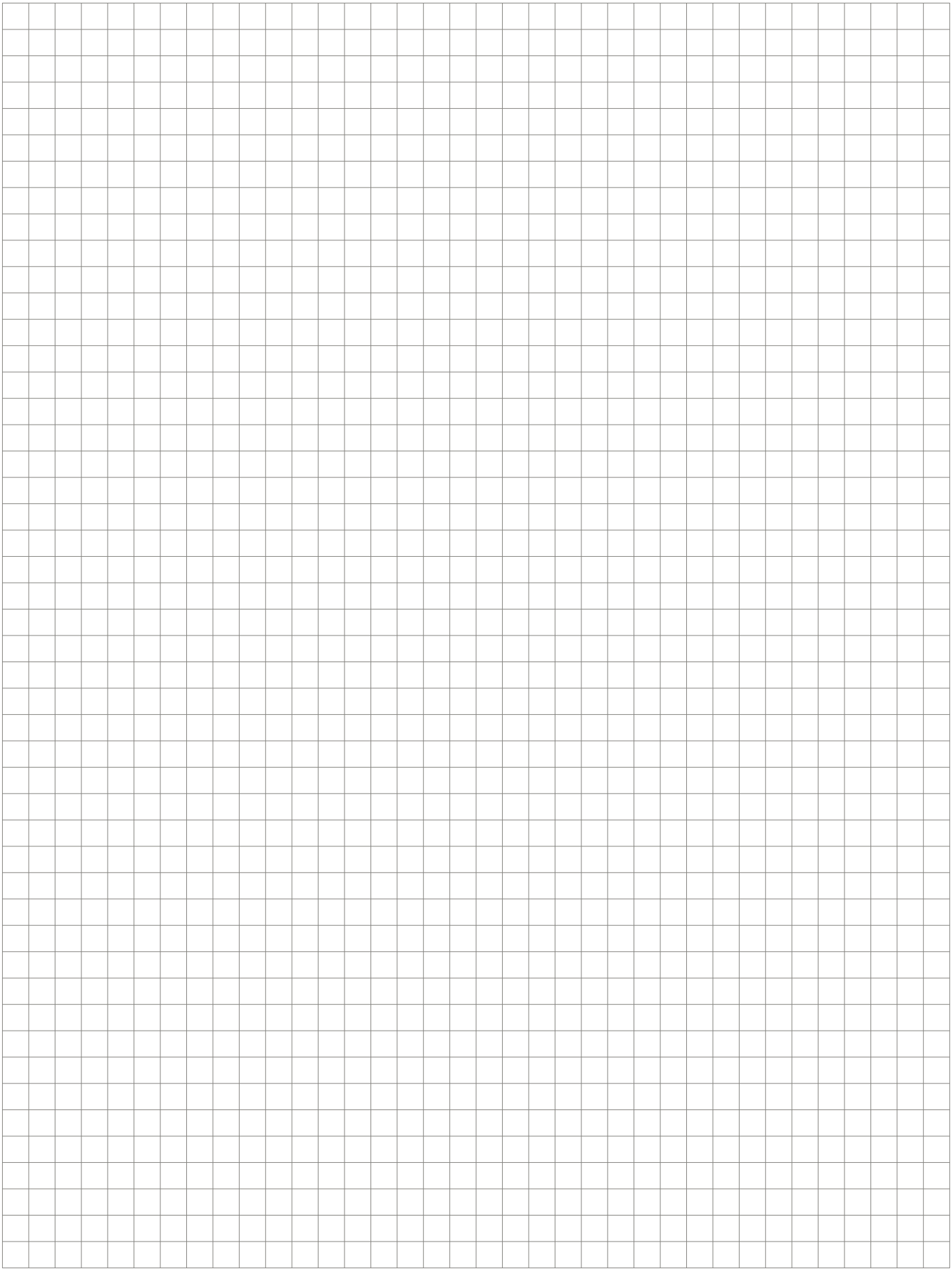
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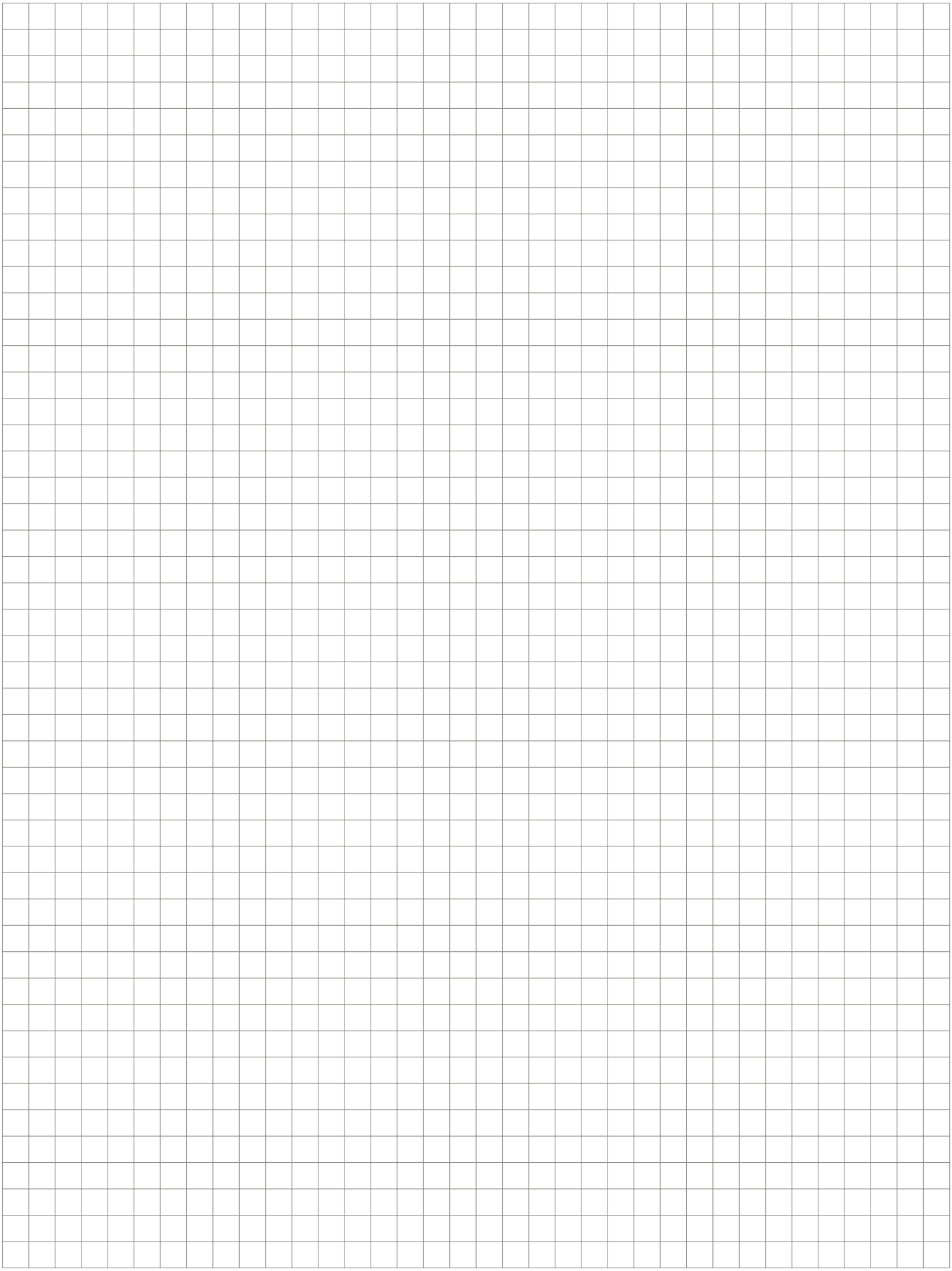


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