

# New Products 1/2017



# CONNECTION TECHNOLOGY

## RAIL-MOUNT TERMINAL BLOCKS

POWER CAGE CLAMP Terminal Blocks with Mounting Flanges, 50 and 95 mm<sup>2</sup> (2/0 and 4/0 AWG)

The 50 and 95 mm<sup>2</sup> (2/0 and 4/0 AWG) high-current, rail-mounted terminal block with mounting flange enables installation directly on a mounting plate. The POWER CAGE CLAMP family is exceptionally well-suited for high-performance applications.

### WHY WAGO?

Mounting flange → Alternative mounting option for high-current, rail-mount terminal blocks

Spring pressure connection technology → Fast connection; no conductor preparation necessary.

Mounting elements → Easy terminal block alignment

Gray-yellow housing – no contact with mounting frame → Easy to differentiate terminal block and functional ground

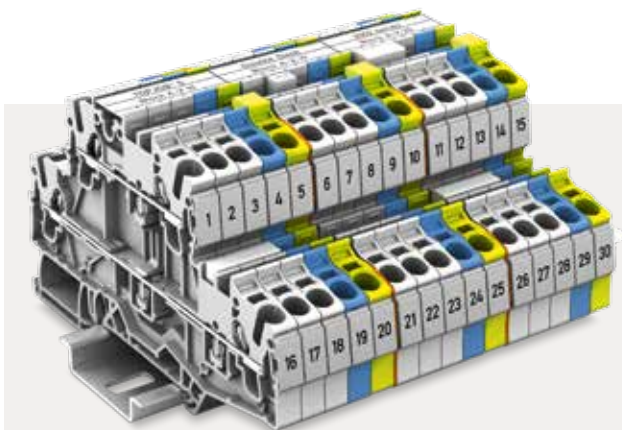
285-1xx expected availability: June 2017



Item No. 285-1xx

## TOPJOB® S Double-Deck Terminal Block with Vertical Conductor Entries

The design of the TOPJOB® S Double-Deck Terminal Blocks enable conductor termination from the top, making them ideal for confined spaces, e.g., in junction boxes or next to high cable ducts.



Item No. 2002xxxx

### WHY WAGO?

Vertical conductor entry and operation  
→ Easy to use in confined spaces

Dual jumper slot on both decks → Versatile commoning options

Angled marker slot on side  
→ Highly legible terminal block marking

Push-in CAGE CLAMP® → Direct push-in termination of stranded and fine-stranded conductors with ferrules

2002-xxxx expected availability: June 2017

## TOPJOB® S Sensor and Actuator Terminal Blocks with Pluggable Signal Level

**Sensor/Actuator Wiring Made Pluggable!**  
With this product, all signal paths and the power supply can be combined into a single pluggable connector within a terminal box.

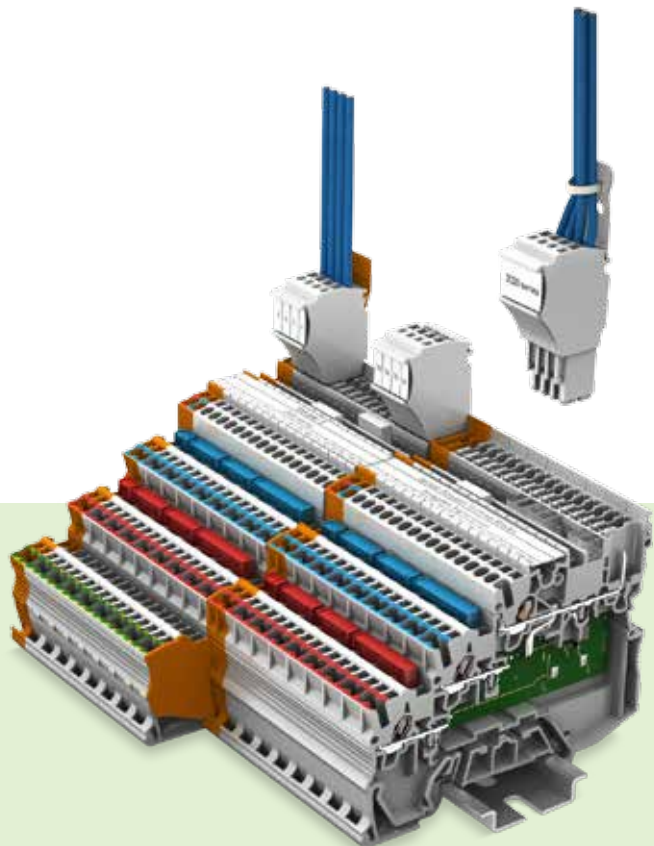
### WHY WAGO?

Pre-assembly possible → Faster, easier connections

Coding possible → Avoid wiring errors

Just 3.5 mm (1.38") spacing per sensor → Saves space on DIN rail

Two marker slots → Easy-to-read marking, regardless of installation angle

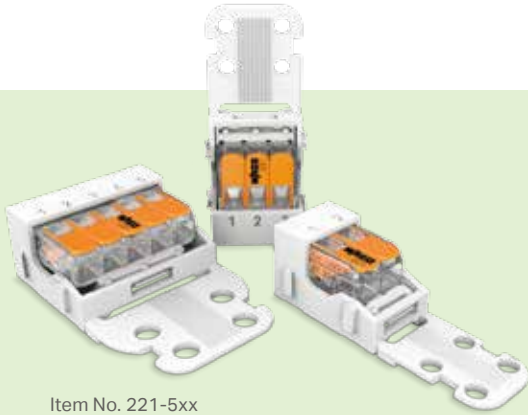


Item No. 2020-5xxx

# INSTALLATION CONNECTORS

## Mounting the 221 in Lighting and Electrical Equipment

This adapter enables the 221 Splicing Connectors to be mounted in lights and devices. Thus, convenient connection to the power system or simple internal wiring are guaranteed.



Item No. 221-5xx

### WHY WAGO?

Accepts Series 221 Splicing Connectors

→ Uses the most intuitive connection technology

Marking surface → Individual conductor connection identification

Screw mounting or snap-in foot → Efficient integration into the manufacturing process for lights and devices

Easily accessible terminal blocks → Convenient conductor connection in adapter

Expected Availability: April 2017

# MARKING

## smartPRINTER Cutter

The new cutter for the thermal transfer printer *smartPRINTER* consistently and cleanly separates marking accessories at the intended location.

### WHY WAGO?

Automatic cutting of printed materials

→ Saves time when printing

Processing of many labeling materials → For any marking application

Easy connections to the *smartPRINTER* → Quick commissioning



Item No. 258-5030

# PCB CONNECTORS

The new PCB Terminal Blocks for power electronics is comprised of six lines – each model is equipped with handy Push-in CAGE CLAMP® connection, either with or without a lever. They are designed for conductor cross sections of 4 mm<sup>2</sup>, 6 mm<sup>2</sup> and 16 mm<sup>2</sup> (12, 10 and 6 AWG), up

to a current of 76 A. In addition to convenient operation with or without lever, the compact, high-performance PCB terminal blocks also offer the greatest flexibility imaginable through different conductor connection directions with a cross section range from 0.2 ... 25 mm<sup>2</sup> (24 ... 4 AWG).

## PCB Terminal Blocks for Power Electronics with Push-in CAGE CLAMP®

### WHY WAGO?

Compact design → Ideal for device connections and space-restricted applications

Operation parallel to conductor entry → Housing cutouts for easy handling

Pin spacing and dimensions compatible to competitors with similar functions → No need to re-design circuit boards



## PCB Terminal Blocks for Power Electronics with Push-in CAGE CLAMP® and Lever

### WHY WAGO?

Lever actuation → Quick, intuitive wiring of all conductor types without tools

Simple and effortless lever actuation → Conductor contact is always secure

Lever clearly locks in position (open/close) → Safe intuitive handling



# INTERFACE ELECTRONICS

## SIGNAL CONDITIONERS AND ISOLATION AMPLIFIERS

Four New *JUMPFLEX*® Modules for Your Measurement Tasks

**Signal Splitter (857-424)** – variable signal splitting via configurable current/voltage outputs

**Voltage Signal Conditioner (857-560)** – detects DC and AC voltage up to 300 VAC/DC

**Power Signal Conditioner (857-569)** – parallel current and voltage measurement, conversion into power and output as analog standard signal

**Loop-Powered RTD Temperature Signal Conditioner (857-815)** – records Pt sensors and resistance up to 4.5 kOhm without additional supply voltage

### WHY WAGO?

Countless configuration options → **No programming experience required**

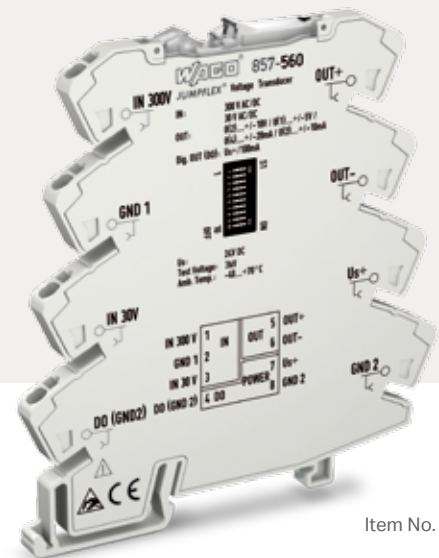
3-way isolation with 3 kV test voltage (per EN 61010-1) → **Secure protection from interferences**

Extended temperature range: -40 ... +70°C → **Ideal for Harsh Environments**

Type with same profile → **Fast and easy commoning options**

Narrow width: 6.0 mm (0.24") → **Saves switch cabinet space**

857-424 expected availability: May 2017



Item No. 857-560

# CURRENT TRANSFORMER AND VOLTAGE TAP

## Current and Voltage Tap

The combination of 2-conductor through terminal block (95 mm<sup>2</sup>; 4/0 AWG) with current and voltage tap is the perfect foundation for successful energy management. With this current and voltage tap, which combines current transformer and voltage tap into one device, energy data is tapped directly at the power supply. It inserts easily and quickly into the jumper slot of the 2-conductor through terminal blocks (285-195).

### WHY WAGO?

Integrated 250 A / 1 A current transformer; same width as a 2-conductor through terminal block → **Cost-effective and extremely compact**

Accuracy class 0.5 per EN 61869-2 → **For exact measurement results**

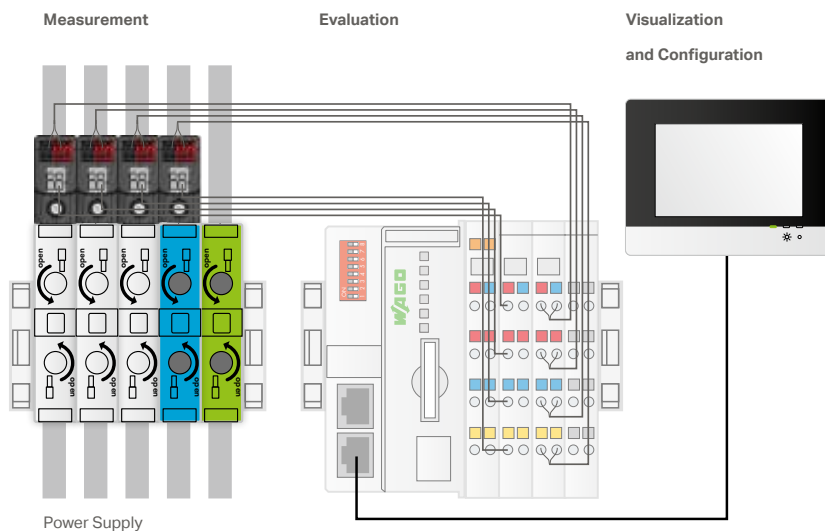
Fuse-protected voltage path → **Can protect downstream measurement devices**

Transformer short circuit and neutral point jumper → **No additional transformer terminal blocks needed**

Inserts into the jumper slot of the 2-conductor through terminal block → **Fast, easy installation**



Item No.: 855-951/250-000



# POWER SUPPLY

## EPSITRON® ECO Power

The new, economical power supplies *EPSITRON*® ECO Power for 3-phase feed with DC 24 V and 20 A or 40 A outputs ensure dependable supply for systems and machines.

### WHY WAGO?

DC OK contact → **Remote monitoring**

Front-panel adjustable output voltage → **Easily compensate for voltage drops over long lines**

Extended temperature range:  $-25 \dots +70^{\circ}\text{C}$  ( $-13 \dots 158^{\circ}\text{F}$ )  
→ **Can be used in nearly all environments**

Termination via lever-actuated terminal blocks equipped with Push-in CAGE CLAMP® connection technology  
→ **Fast, convenient tool-free wiring**

787-2742 (20 A) expected availability: June 2017

787-2744 (40 A) expected availability: August 2017

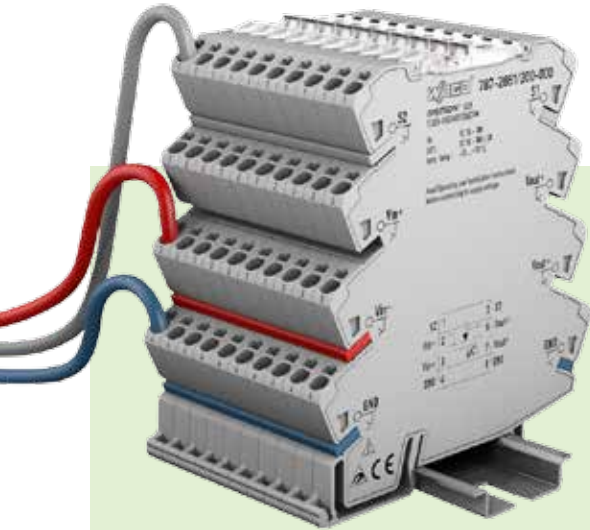


Item No.: 787-274x



## EPSITRON® – Single-Channel ECBs

The new electronic circuit breakers reliably protect the system against overcurrent and short circuits. They are available in six versions covering nominal currents of 1... 8 A.



Item No.: 787-2861/xxxx-xxxx

### WHY WAGO?

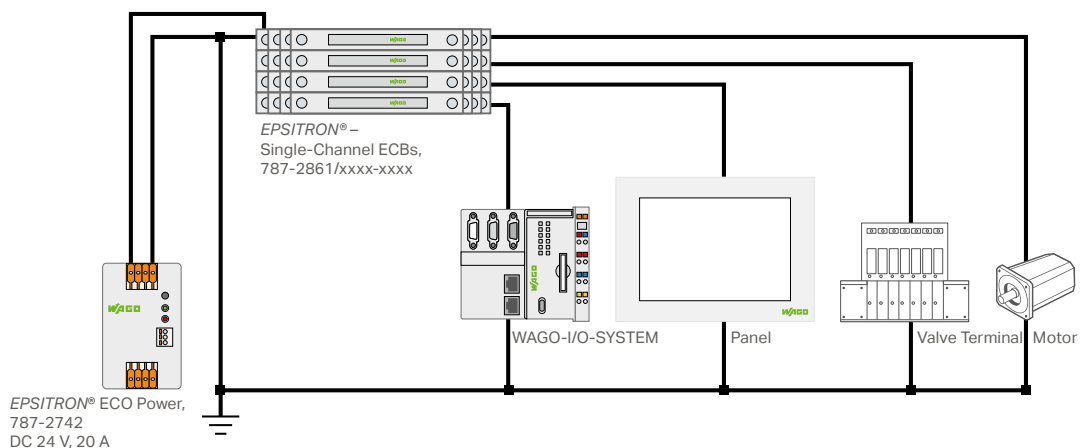
Narrow version (6.0 mm / 0.24" width) → Save valuable cabinet space

Triggering within just 4 ms in the event of a hard short-circuit → Maximum protection for systems and machines

Switch-on capacity: > 50,000  $\mu$ F → Less false tripping due to inrush currents

Adjustable variant with nominal current setting and digital message output configuration → One device for many applications, e.g., combination of electronic circuit breaker and current flow monitoring

787-2861/0108-0020 expected availability: June 2017



# AUTOMATION TECHNOLOGY

## SOFTWARE

### Cloud Connectivity for the PFC Control Generation

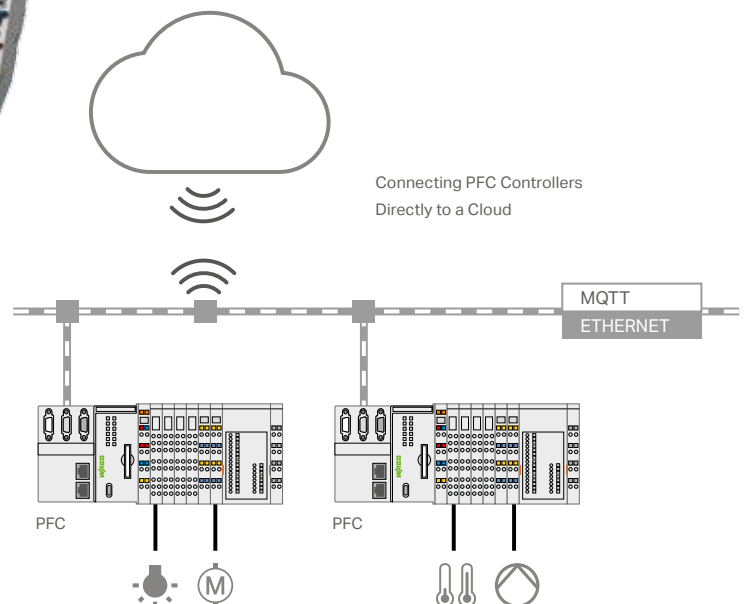
A simple MQTT software extension transforms all the PFC100 and PFC200 Controllers into IoT controllers that transmit data from the field level to the cloud. These data can be aggregated and used for analysis in the cloud – whether to increase production efficiency, implement energy management in buildings or further develop end customer services.

#### WHY WAGO?

Software extension for PFC controllers and libraries for *e!COCKPIT* and CODESYS 2.3 → **Easy, fast implementation of IoT connections**

Standardized MQTT protocol → **Wireless connection to clouds including Microsoft Azure, Amazon Web Services or IBM Bluemix**

TLS encryption → **For secure data transfer**



The MQTT software extension is expected to be available as a beta release for the PFC family in May 2017 upon request.

## e!COCKPIT – Engineering Software

Configure, program, visualize and diagnose with a single software tool – the new e!COCKPIT engineering software release provides numerous new features.

### WHY WAGO?

Categories and search function added to the message window. → Improved troubleshooting

Supports additional controllers and modules  
→ Opens new application areas

UML add-on → Simplifies object-oriented software modeling

Web-based management accessible via HTTPS IP address → Maximizes security



## WebVisu App Update

The Web-based management facilitates control and monitoring of important automation processes with a smartphone or tablet. In addition to CODESYS V2, now the new version supports HTML5-based e!COCKPIT-Web visualizations (available as free Android app in the Google Play Store and the Apple App Store).

### WHY WAGO?

Automatic Web visualization routing  
→ Simple control-independent calling

Joint management of CODESYS-V2 and e!COCKPIT Controllers → Fast selection and dialing

Expected availability: May 2017

# CONTROLLER

## WAGO Energy Data Management

The handy solution for collecting and managing energy data: After the new WAGO energy data application has been implemented, parameters can be easily set with the new PFC200 Application Controller (750-8202/000-022) instead of programming – no previous knowledge needed.



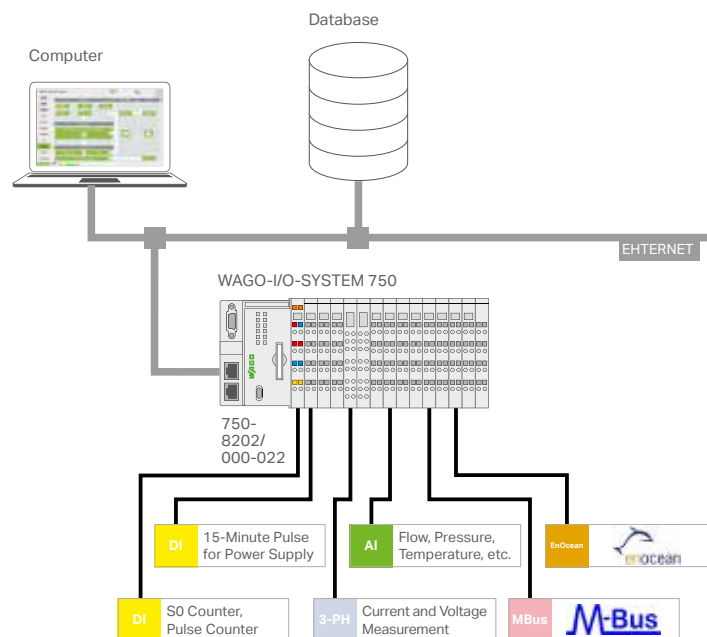
### WHY WAGO?

Modular energy and process data collection, management and visualization → **User-friendly energy data evaluation and derivation of efficiency plans**

Easy input parameterization via Web visualization → **No programming experience required**

Establish indicators to achieve DIN EN ISO 50001 → **Economical alternative to energy management software**

Connect existing sensors to the WAGO-I/O-SYSTEM → **Integrates into existing systems for flexibility and maximum return on investment**



Find out more:

[www.wago.com/energiemanagement/de](http://www.wago.com/energiemanagement/de)

## WAGO Lighting Management

WAGO Lighting Management is a proven concept based on a predefined application controller (750-8202/000-012) and preconfigured software that greatly simplifies planning, commissioning and operation of lighting installations.



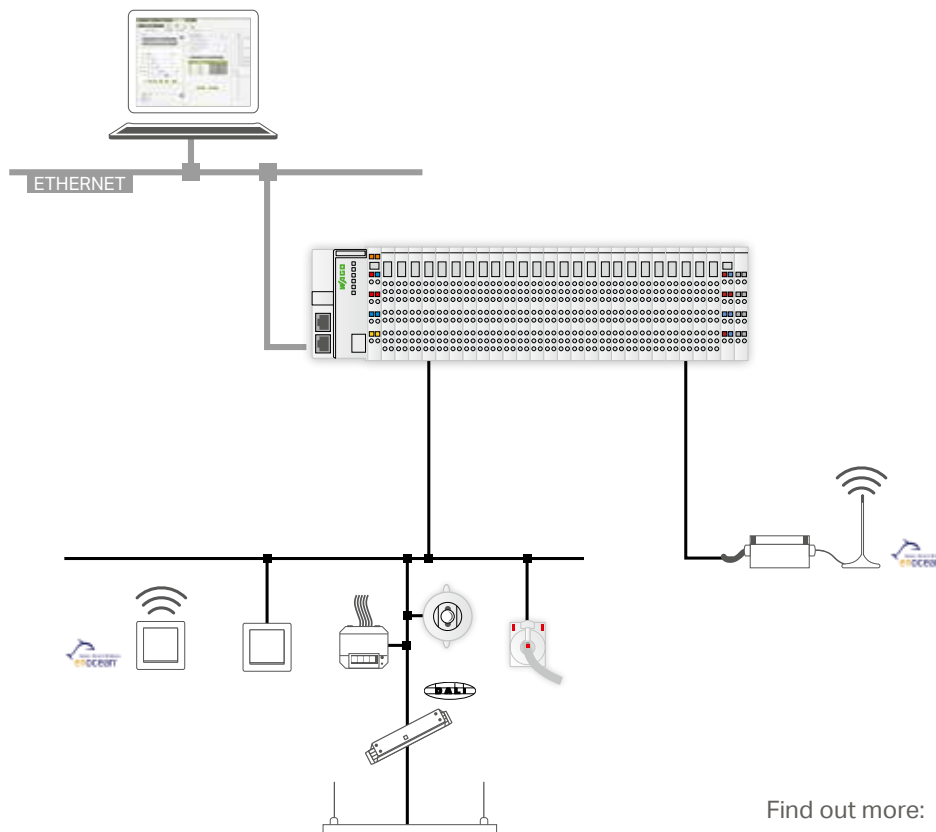
### WHY WAGO?

Straightforward operation via standard Web browser  
→ No software installation necessary

Comprehensive diagnostic features based on status displays and operating time logging → Support for maintenance scheduling to achieve proactive maintenance

Automatic documentation during commissioning  
→ Easy system documentation

Connect to higher-level management and control systems within industrial or building technology environments → System integrates into existing infrastructure



Find out more:  
[www.wago.com/lighting-management](http://www.wago.com/lighting-management)

# I/O-SYSTEM

## Intrinsically Safe I/O Modules for the WAGO-I/O-SYSTEM 750 XTR

With its latest innovation, the WAGO-I/O-SYSTEM 750 XTR is ready for hazardous areas. Besides the standard signals from the sensors and actuators from zone 2/22, a wide range of field devices from zones 0/20 and 1/21 can also be integrated via the eight new intrinsically safe I/O modules. Linking requirements for intrinsic safety with resistance to extreme ambient conditions makes this system a special asset for systems in the oil and gas industry, or for outdoor systems exposed to extreme changes in climate.

### WHY WAGO?

Intrinsically safe eXTRem → **More versatility and space savings thanks to Ex-i and standard signals in a single system.**

eXTRem temperatures: -40 ... +70°C (-40 ... 158°F)  
→ **It's possible to eliminate air conditioning**

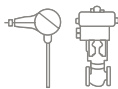
eXTRem vibration resistance → **Long service life and increased return on investment**

eXTRem isolation and immunity to interference  
→ **For faultless operation**



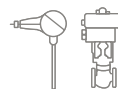
ATEX

Expected availability: July 2017

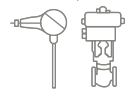


HART

Zone 2/22



Zone 1/21



Zone 0/20

Ex

## Intrinsically Safe I/O Modules for the WAGO-I/O-SYSTEM 750 XTR

The new 4-channel digital output module (750-539) and 4-channel analog output module (750-486) for Ex areas enable connection of Zone 0/20 and 1/21 field devices.



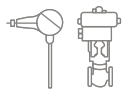
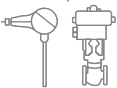
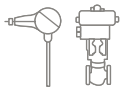
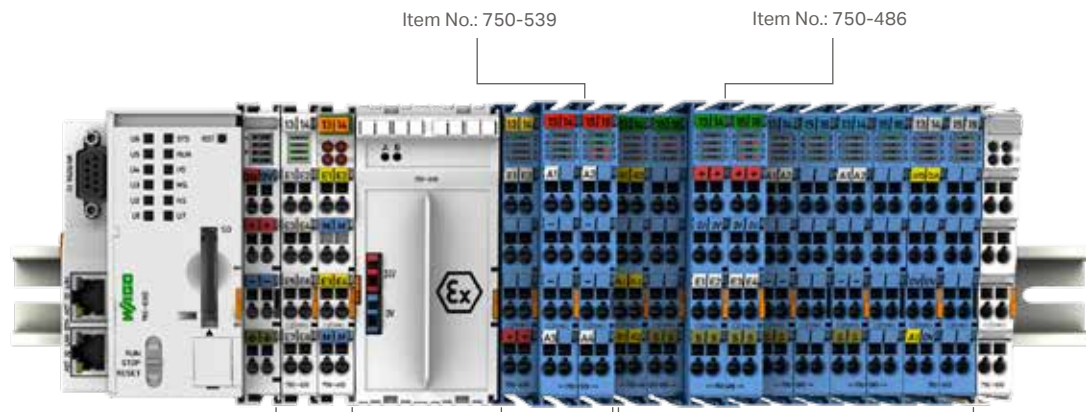
ATEX 

### WHY WAGO?

Channel-by-channel diagnosis for short circuits and wire breaks → **Simple, precise troubleshooting**

750-539: Output current of approx. 50 mA → **Possible to control various valve types from different manufacturers, such as Bosch, Festo and SMC**

750-486: Measurement ranges can be configured by individual channel to record standard signals of 0 ... 20 mA, 4 ... 20 mA und 3.6 ... 21 mA per NAMUR NE43 → **More flexibility when selecting encoders (e.g., signal conditioner, transmitter)**



# NAMUR

# I/O-SYSTEM

## CC-Link fieldbus coupler for WAGO-I/O-SYSTEM 750



Item No.: 750-325

The new WAGO CC-Link Fieldbus Coupler (750-325) connects the WAGO-I/O-SYSTEM 750 to the CC-Link fieldbus as a slave. With all its performance characteristics, this fieldbus coupler is ideal for the process industry or in machinery and equipment manufacturing.

### WHY WAGO?

Expanded process image with CC-Link V2.0  
→ Possible to link a higher number of I/O modules in series

Configuration of station address, baud rate, etc., via rotary and DIP switches → Easy handling with no programming

Connection to the WAGO-I/O-SYSTEM 750 → Flexible options for diverse potential applications

Integrated WAGO MCS Pluggable Connector with CAGE CLAMP® Connection Technology → Uncomplicated connection to CC-Link fieldbus



## 4-Channel Relay Module for the WAGO-I/O-SYSTEM 750

The new I/O Module with four relay outputs (750-515) convinces with double the channels, higher output current and narrower installation width. With a maximum switch voltage of 250 VAC/30 VDC, it is ready for universal application – for example, in the industrial, shipbuilding and building sectors, as well as in process and energy technology. Switch voltages up to 110 VDC are also possible at reduced switch currents.



Item No.: 750-515

### WHY WAGO?

Maximum switching current up to 2 A; for single-channel use, up to 5 A → Widened application areas, such as controlling valves

Four integrated relays → Saves space and costs

Galvanic isolation through potential-free make contacts → Switches different voltages per channel



### 3-Phase Power Measurement Module for the WAGO-I/O-SYSTEM 750

The new 3-Phase Power Measurement Modules (750-494/000-005) are used to measure and process all relevant metrics from a three-phase supply network. Thanks to the use of external shunts instead of a traditional current transformers, it is also possible to record high direct currents.



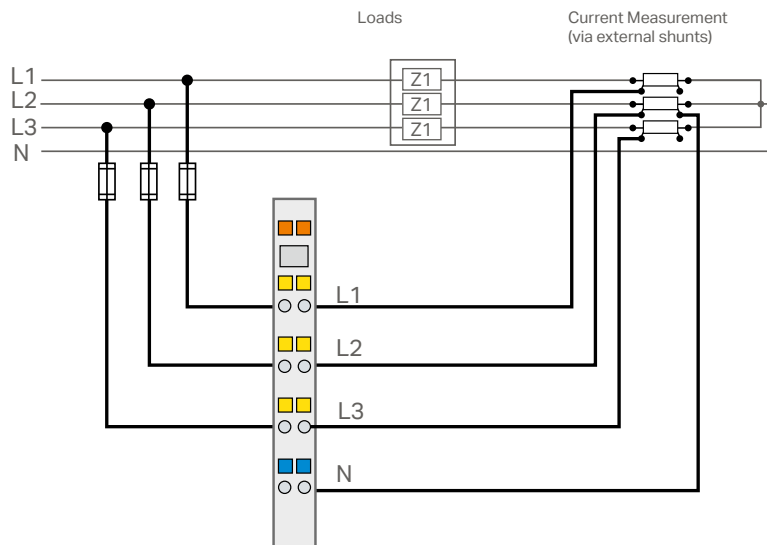
Item No.: 750-494/000-005

#### WHY WAGO?

Measure machine and system energy consumption values → **Saves energy and costs**

Records higher AC and DC currents up to 20,000 A via external shunts → **Opens new application areas, for example, in battery-powered systems**

Integrates into WAGO-I/O-SYSTEM 750 → **Fieldbus-independent, compact and flexible**



# I/O-SYSTEM

## Sun Protection with New SMI Master Module

Compact design paired with advanced technology: The SMI Master Modules (753-1630, 230 V) and (753-1631, LoVo) stand up to all requirements for the use of shades in buildings or industrial environments.

### WHY WAGO?

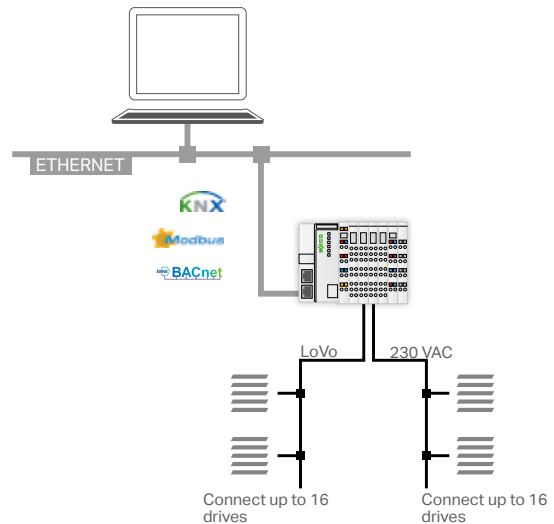
Direct connection of SMI actuators to the WAGO-I/O-SYSTEM → **Installation made easy**

Parallel actuation of up to sixteen drives.  
→ **Maximum flexibility when planning projects**

SMI Configurator → **Efficient configuration and commissioning**

Numerous predefined function blocks  
→ **User-friendly commissioning and programming**

753 Series modules only 12 mm (0.47") wide  
→ **Saves space on DIN rail**



Expected availability: June 2017

## M-Bus Master for Energy and Consumption Meters

Reduce costs, simplify installation and save space: The new 753-649 M-Bus Master Module directly connects up to 40 M-Bus devices to the I/O system to capture energy and consumption data.

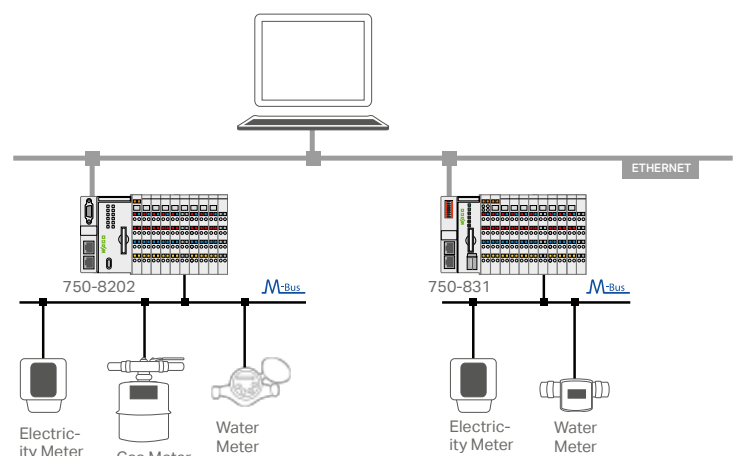
### WHY WAGO?

Direct connection of M-Bus devices to the WAGO-I/O-SYSTEM → **Simplified installation and commissioning**

Connect up to 40 M-Bus subscribers  
→ **Higher quantity structures created without a problem**

Ready for flexible combination with I/Os and interfaces → **Maximum flexibility for different applications**

753 Series modules only 12 mm (0.47") wide  
→ **Saves space on DIN rail**



Expected availability: May 2017

# INFRASTRUCTURE COMPONENTS

## Industrial Switches

Compelling new industrial switch features:  
With a higher throughput of 1 Gbit and easy configuration and installation, these switches are engineered for small- and medium-sized networks.

### WHY WAGO?

Redundant power supply (9 ... 57 V), including integrated alarm relays → Higher availability and simplified troubleshooting in case of failures

Extended temperature range: -40 ... +70°C  
→ Highest reliability under extreme application conditions

Fulfills requirements for PROFINET Conformance Class A (IEEE 802.1p) → Prioritization of data packets in PROFINET networks

Energy-Efficient Ethernet → Reduced energy consumption during inactive transmission times



Item No.: 852-1102



Item No.: 852-1112



Item No.: 852-1106

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