NEW PRODUCTS
ISSUE 2024/2

DIGITAL SECURITY MOVES FURTHER INTO FOCUS

www.wago.com/global/c/product

Dear Readers,

The cybersecurity threat landscape in the smart factory, smart building and smart energy markets is growing rapidly. To address this, countries and the EU are developing guidelines, while industry experts are working on standards.

However, implementing and complying with these directives (e.g., the NIS2 directive) and standards (e.g., IEC 62443) can be challenging for companies. We recognize this challenge. That's why we offer comprehensive support through our future-certified products and **WAGO Cybersecurity Consulting** to assist you in your projects. With our new **WAGO Cybersecurity Network Sight** Intrusion Detection System, you can **monitor your OT network in real time** and actively respond to threats when unusual behavior is detected. Based on this data, our consultants use **WAGO Cybersecurity Analysis** to assess the current OT network status and develop recommendations to mitigate potential attack vectors. In the Smart Energy sector, we are enhancing cybersecurity by upgrading our **telecontrol technology** to meet **IEC 62351 standards**.

In addition to this, discover other innovations in factory and system automation, power engineering, control cabinet manufacturing, and electrical installation, such as the expanded **WAGO Solutions Platform**, which now allows even more convenient central management of field assets.

We are also expanding our WAGO PFC Series with the new **PFC300** to meet the demands of increasingly resource-intensive applications.

And you can look forward to the expansion of the **WAGO Edge Computer** series. We are launching two more powerful devices and offering the ability to expand Edge Computers with network interfaces, Wi-Fi and LTE through **extension housings and modules**.

We hope you enjoy this informative read!

Best regards,
Kilian Fröhlich
Business Developer CoE Digital Plant & IIoT

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WAGO POWER SUPPLY BASE

The WAGO Power Supply Base is characterized by low costs and basic functionality during operation.

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WAGO EDGE COMPUTERS

The two new WAGO Edge Computers are highly powerful, enabling faster and more optimized data processing.

CONTENTS

Cyberspace Threat Situation More Acute Than Ever: WAGO Strengthens Its OT Security

WAGO relies on a comprehensive security concept to mitigate cyber threats.

The growing digitalization in today's interconnected world presents both opportunities and significant risks, as it expands the potential attack surface for criminals. The global damage from cyberattacks is escalating dramatically, with the threat level in cyberspace more acute than ever: In 2023 alone, nearly 74% of cyberattacks in the European Union targeted critical infrastructure – failures of which could have led to supply shortages or severe public safety disruptions. This statistic is just one of many, clearly indicating that cybersecurity is no longer optional but a necessity.

CRA and NIS2: New EU Directives for Strengthening Cybersecurity

To sustainably enhance digital infrastructure, the European Commission has established new legal guidelines for manufacturers. The Cyber Resilience Act (CRA) is one such guideline, specifically aiming to protect networked products against unauthorized access and manipulation throughout their entire lifecycle. Because the new regulations affect not only end-user products but also industrial components within critical infrastructure, there are significant interdependencies between the CRA and the NIS2 Directive.

With NIS2, the EU is paving the way for a more comprehensive cybersecurity strategy. It requires companies and organizations to adhere to effective risk management and report significant cyber incidents to relevant national authorities. This approach allows for early detection and preemptive closure of security gaps. Compared to the existing NIS1, NIS2 extends its requirements to medium-sized companies with more than 50 employees and annual revenues exceeding ten million euros.

WAGO is also impacted by these new cybersecurity regulations and is already aligning its security framework with the complex rules expected to become mandatory for all EU companies by 2027. In addition to current development processes according to the IEC 62443 standard, which provides a solid foundation for meeting the CRA requirements, WAGO is expanding its solutions to include Security Consulting, offering users enhanced security.

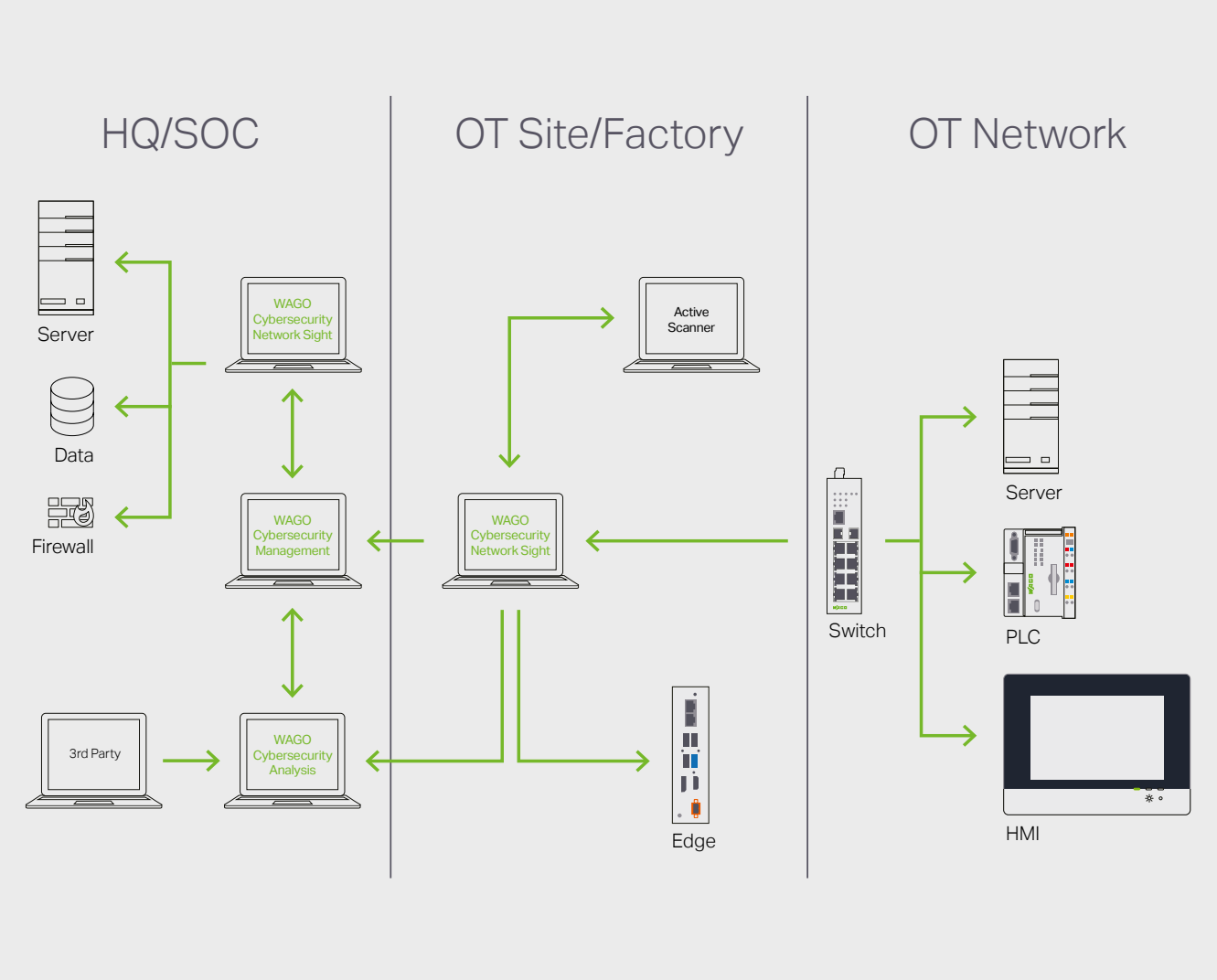
WAGO Relies on a Comprehensive Safety Concept

Cyberattacks on OT networks, systems and devices can disrupt operations, jeopardize security, and lead to substantial financial losses. To address potential threats, companies must focus on both OT and IT levels. Therefore, WAGO now offers OT security consulting services, complemented by a combination of hardware and software solutions. With this integrated approach, WAGO aims to effectively counter cyberthreats and help customers secure their OT networks as much as possible.

WAGO and Radiflow Join Forces

To enhance OT security for critical infrastructure and industrial processes globally, WAGO has partnered with Radiflow, a leading provider of cybersecurity and risk management solutions. This collaboration enables WAGO to offer a comprehensive security framework aimed at mitigating cyberthreats

By integrating Radiflow's cutting-edge cybersecurity software solutions into WAGO's industry-leading products and services, customers benefit from enhanced protection in numerous ways.



Your Benefits:

- **Advanced Threat Detection:**
  The WAGO Cybersecurity Network Sight software, built on Radiflow's iSID, enables real-time monitoring and detection of abnormal network behaviors. Continuous monitoring helps companies detect cyber threats early and respond as quickly as possible.

- **Increased Security through Network Segmentation:**
  WAGO Cybersecurity Analysis, based on Radiflow's CIARA, provides an automated risk assessment and management platform for companies in the industrial and building sectors. Based on the analysis, users can implement robust network segmentation strategies to significantly reduce the risk of unauthorized access.

- **Inventory and Risk Assessment:**
  Using WAGO Cybersecurity Analysis, a customer-specific resource management system is created, followed by a comprehensive risk assessment. This allows companies to take an updated inventory of implemented OT measures, proactively identify vulnerabilities, and measure the effectiveness of risk mitigation strategies.

Software

Item Numbers:

WAGO Cybersecurity Network Sight:
2764-0201/1119-1012
to
2764-0205/1119-1012

WAGO Cybersecurity Analysis:
2764-0101/1119-1012
to
2764-0105/1119-1012

WAGO Cybersecurity Management:
2764-0112/1119-1012
to
2764-0114/1119-1012

Available

Mastering the EU Cybersecurity Directives with WAGO

Radiflow's expertise in OT-focused cybersecurity complements WAGO's product portfolio in the industrial sector, offering customers integrated, comprehensive solutions. Together, they empower companies to harness the advantages of Industry 4.0 while minimizing the risks associated with cyber threats. With this comprehensive approach across all levels, WAGO is instrumental in helping companies comply with the stringent NIS2 Directive and other regulatory requirements.

Would you like to learn more about the consulting services and software solutions WAGO offers in OT security? Visit our website for more details, including how WAGO has successfully integrated EU cybersecurity directives, and why the IEC 62443 standard plays a key role in this effort. What are we waiting for? Let's work together to strengthen your OT networks and shape the future of cybersecurity!

FACTORY AND SYSTEM AUTOMATION

WAGO Expands Edge Computer Portfolio for Enhanced Flexibility

New Products and Accessories for Complex Automation Applications

With edge computing, users can integrate cloud functionality directly into machines and benefit from a seamless connection between IT and OT. To meet higher performance and speed demands, WAGO is expanding its portfolio with two additional, powerful Edge Computers. For greater flexibility, appropriate accessories are available: extension housings and modules, as well as WiFi and LTE kits for retrofitting WAGO Edge Computers.

Your Benefits:

- **Higher performance thanks to more powerful processors and larger memory**
- **Quick commissioning with pre-installed Debian Linux® and Portainer**
- **Enhanced security through TPM 2.0 chip and UEFI Boot Secure**

Item Numbers:
752-9412 (16 GB)
752-9813 (32 GB)

Available

Two New Powerful WAGO Edge Computers

As industrial processes require more computing power in the field, WAGO is introducing two new Edge Computers with 16 GB and 32 GB of RAM. These computers feature a higher-performance processor, larger memory, and an extended temperature range (-20°C to +60°C). These characteristics enable faster and optimized data processing in various application areas, such as the automotive industry, factory automation, and the energy sector (e.g., micro- and nanogrids).

In addition to their high performance, the new WAGO Edge Computers come with another benefit: thanks to the pre-installed Debian Linux® operating system and Portainer container management software, programmers and system integrators save significant time in commissioning, maintenance (e.g., updates) and system expansion (e.g., upgrades). The new M.2 slot enables the use of high-performance expansion cards. These new WAGO Edge Computers provide users with the flexibility to tailor systems to specific use cases and complex applications.

Expansion Housings and Modules for Maximum Flexibility

The new expansion housings and modules, compatible with both existing versions in the portfolio (hardware version V2 or higher) and new devices, perfectly complement the WAGO Edge Computers. The Edge Computer with an Atom processor can be fitted with one module, while the Edge Computer with an i7 processor can accommodate up to two expansion modules. This allows for customized configurations.

Each expansion module features dual interfaces, with WAGO providing RS-232, RS-422/-485 and ETHERNET for I/O expansion, and modules supporting CAN and ETHERNET-based protocols for fieldbus expansion. The Industrial ETHERNET Module can be configured for EtherCAT®, EtherNet/IP™ or PROFINET® protocols. With these expansions, the Edge Computer provides the appropriate interface for any custom solution, ensuring maximum flexibility across various applications.

Your Benefits:

- **Custom configuration of the Edge Computers**
- **Maximum flexibility thanks to modularity**
- **Broader application in greenfield and brownfield projects, including retrofits, enabled by a diverse range of interfaces**

Item Numbers:
758-9011 (RS-232)
758-9012 (RS-422/-485)
758-9013 (ETHERNET)
758-9016 (CAN)
758-9017 (Industrial ETHERNET, Master)
758-9018 (Industrial ETHERNET, Slave)

Available

Flexible Connections with the Edge Computer WiFi and LTE Kit

WAGO now offers Wi-Fi and LTE kits for enhanced flexibility: Depending on needs, Edge Computers (item number 752-94xx) with an Atom processor can be easily retrofitted with WLAN or LTE, allowing users to design versatile solutions with greater freedom.

Two WiFi Kit variants are available, one for standard temperature ranges and another for extreme conditions (-40 to +85°C). Additionally, the WiFi kits support new standards such as WiFi 6 and 6e, providing even greater flexibility in applications like factory automation.

The LTE kit is ideal for decentralized applications, such as photovoltaic power plants, offering reliable network connections even in areas with poor infrastructure, enabling optimal cloud connectivity.

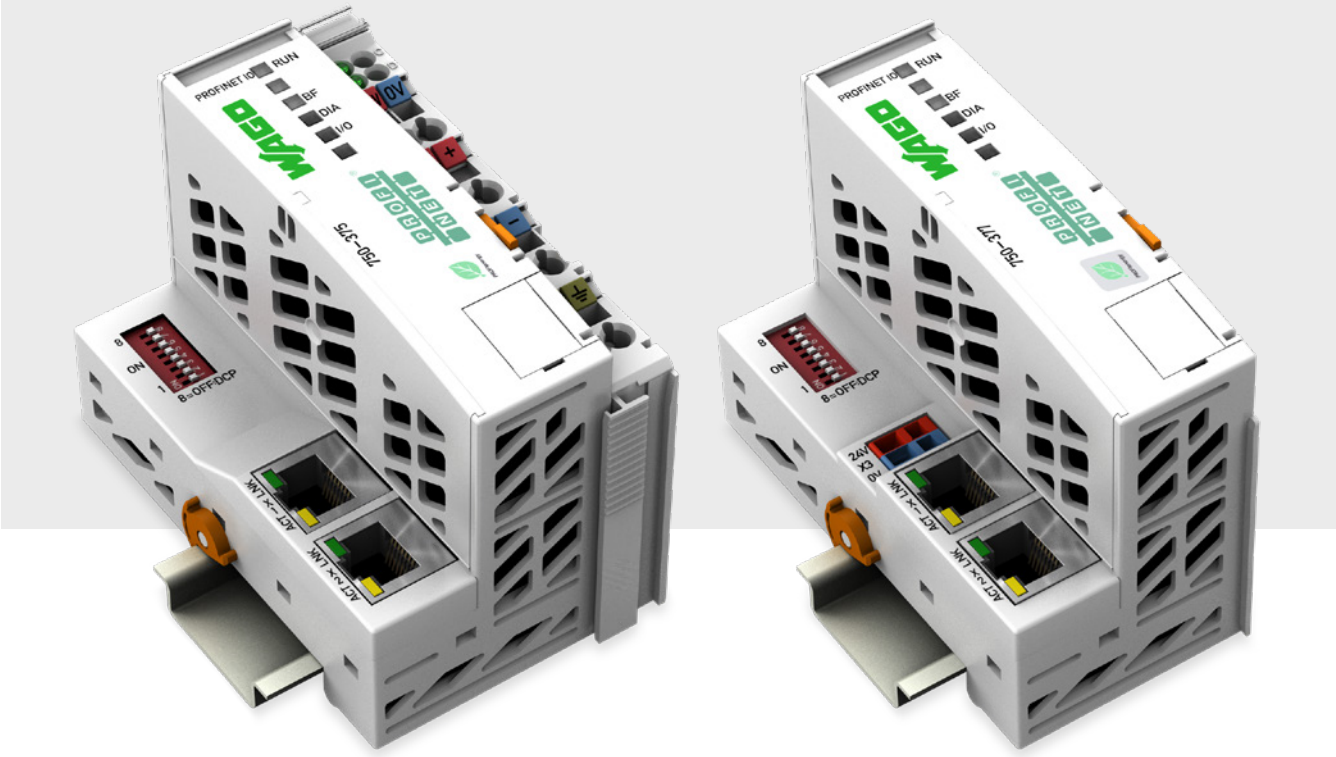
For seamless connectivity: Both the WiFi and LTE kits are CE- and FCC-certified, meeting the standards of both European and American markets and ensuring easy integration across a variety of applications.

Your Benefits:

- **High flexibility in applications thanks to wireless connection**
- **High-performance data transmission through new WiFi 6/6E standards**
- **LTE connectivity available even in areas with poor network infrastructure**

Item Numbers:
758-9051 (WiFi Kit)
758-9051 (WiFi kit, extended temperature)
758-9053 (LTE Kit)

Available:
Q4/2024



PROFINET IO Supports The S2 Redundancy Protocol

Fieldbus couplers now communicate with two redundant controllers.

The PROFINET IO Fieldbus Couplers (item numbers 750-375 and 750-377) connect the WAGO I/O System 750 to PROFINET IO, an open, industrial real-time ETHERNET standard for automation. The couplers now support the S2 redundancy protocol, enabling communication with two redundant controllers. In case of a failure in the primary controller, the system automatically switches to the second (redundant) controller, ensuring high system availability for critical production processes and minimizing costly downtimes. System availability is significantly increased by using redundant systems with PROFINET®.

High Availability Secured

For critical production systems and manufacturing processes, high system availability is essential to prevent costly downtime. In the event of a controller failure, the new fieldbus coupler automatically switches to the secondary controller. Additionally, support for PROFIenergy has been updated to the latest version (1.3).

Your Benefits:

- **S2 redundancy enables the creation of redundant systems**
- **Boost system availability by implementing redundant systems with PROFINET®**

Item Numbers:

750-375

750-377

Available

WAGO I/O System 750 XTR Passes Corrosive Gas Test per ISA S71.04 “G3”

The XTR Series' corrosion resistance to flowing mixed gases significantly broadens its application scope.

The WAGO I/O System 750 XTR has been withstanding extreme environmental conditions for over 10 years. The abbreviation “XTR” stands for extreme protection against climatic influences, vibrations, shocks and voltage surges. The system showcases its strengths, especially in demanding fields like shipbuilding, railway technology and the energy sector.

To further broaden its application range, the WAGO 750 XTR Series has successfully passed the corrosion test with flowing mixed gases according to ISA S71.04. This makes the system corrosion-resistant to the following gases:

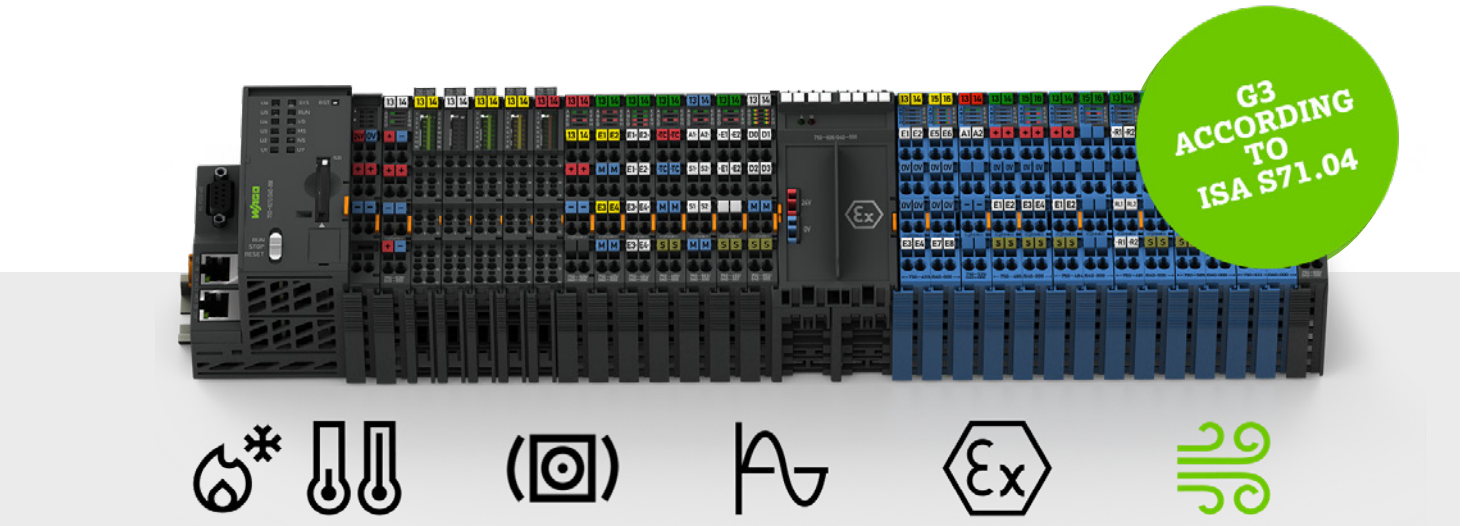
- **H_2S (hydrogen sulfide)**
- **SO_2 (sulfur dioxide)**
- **CL_2 (chlorine gas)**
- **No_x (nitrogen oxides)**

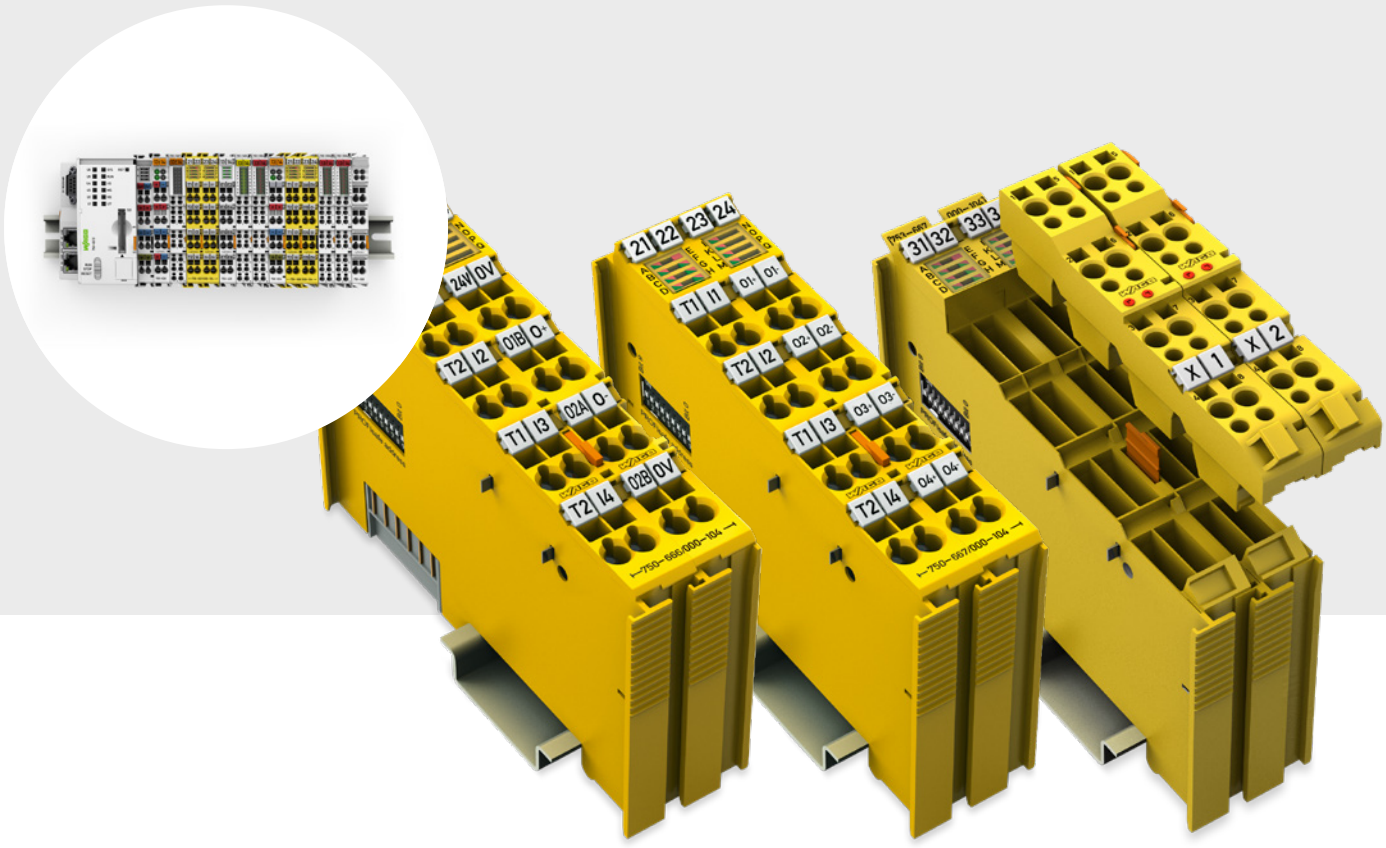
Easy Installation and Use

Customers can now utilize the WAGO 750 XTR Series in applications where these harmful gases are present in the air, posing a heightened risk of corrosion to electrical and electronic components and systems. The circuit boards of the 750 XTR Series are protected from moisture and harmful gases through a conformal coating, as confirmed by the successful testing in the high protection class “G3.”

Item Number:
750-xxxx/040-0xx

Available





Implement Safety Applications Without a Safety Controller

New safety modules can be operated with WAGO controllers.

WAGO's new logic modules now enable users to implement safety applications, such as two-hand control or door locking, without a dedicated safety controller. These logic modules can be integrated as a module behind WAGO controllers and couplers, resulting in faster reaction times at the lowest field level because communication via the fieldbus is eliminated. The safety logic is configured using the new WAGO Safety Editor. With these logic modules, a machine can now be realized, including a safety application, using WAGO controllers like the PFC.

Another advantage is that the module can also be integrated behind a safety controller using PROFIsafe. This integration allows for quicker safety response times and facilitates the creation of more compact safety solutions.

Your Benefits:

- **Cost-effective solution for safety applications**
- **Usable without a safety controller**
- **Faster safety response times, as the logic is executed directly in the module**

Item Numbers:
750-667/000-104
753-667/000-104
750-666/000-104

Available

Integration of Analog Signals via IO-Link

The WAGO I/O System Field now includes RTD Analog IO-Link Converters.

WAGO's Analog IO-Link Converters provide a simple and compact solution for integrating conventional analog sensors and actuators into an IO-Link system in the field. New converters are now available that can receive temperature signals from Pt100 and Pt1000 sensors and transmit them to an IO-Link master for further processing.

Compact Design and High Accuracy

With these Analog IO-Link Converters, customers gain a cost-effective and noise-resistant method for analog value transmission, as IO-Link reliably captures and outputs analog signals. The expanded portfolio allows users to efficiently monitor and manage temperature signals. Designed to meet IP69K standards, these converters can withstand high-pressure cleaning and extreme temperatures.

Their compact form factor and wide temperature range (-25 to +80 °C) make them ideal for cabinet-free automation. Integrated displays allow for on-site monitoring of switch status and supply voltage.

Your Benefits:

- **IP68, IP69K, high-pressure washer-resistant**
- **Supports Pt100 and Pt1000 sensing**
- **Wide temperature range with high resolution (0.01 K)**

Item Numbers:
765-2705/100-000
765-2706/100-000

Available

Simple Network Setup with Plug and Play

The new 16-port unmanaged ETHERNET switch is robust, fast to install and saves commissioning costs.

The new WAGO Industrial Eco Switch features 16 Gigabit Ethernet ports with a transmission rate of 10/100/1000 Mbps, making it the ideal solution for building small to medium-sized networks. Its slim design paired with a DIN-rail adapter simplifies installation in control cabinets, while providing high vibration and shock resistance. The Eco Switch is particularly suited for industrial applications in machine construction and general automation in decentralized control cabinets.

Automatic detection of transmission rates (auto-negotiation) and self-detection of send and receive lines (Auto MDI-X) facilitate easy plug-and-play operation, saving time and costs during commissioning.

Item Numbers:
852-1116

Available

Your Benefits:

- Simple, space-saving mounting on DIN 15 and 35 rails
- Robust housing with excellent vibration and shock resistance
- High density of Gigabit ETHERNET ports

Industrial Media Converter: WAGO's Solution for Long Distances

Easily extend copper-based networks beyond 100 meters.

Traditional communication networks using ETHERNET cables are limited to a maximum length of 100 meters. To bridge greater distances, WAGO introduces the new Industrial Media Converter in two variants. This device enhances copper-based networks with fiber optic technology, providing significant advantages such as extended transmission distances.

Equipped with a Gigabit ETHERNET port and an SFP port, the Industrial Media Converter connects decentralized ETHERNET devices to a network via fiber optics. It converts signals at junction points, enabling different technologies to communicate within a single network. Users can choose the necessary SFP module to communicate over distances of up to 80 kilometers. In the second variant (item number 852-1702), the ETHERNET port (IEEE 802.3at) can simultaneously power PoE devices.

Both variants feature a compact design with a DIN-rail adapter, allowing for easy installation in control cabinets or enclosures while maintaining high resistance to temperature, vibration and shock.

Another advantage is that the Industrial Media Converter supports plug-and-play operation with connected ETHERNET devices that use the same transmission speed. This provides a cost-effective solution to significantly extend the reach of a local network with minimal effort.

Your Benefits:

- **ETHERNET communication beyond 100 meters using fiber optics**
- **Compact design for flexible and easy control cabinet installation**
- **High temperature, vibration and shock resistance for industrial applications**

Item Numbers:
852-1701
(without PoE)
852-1702
(with PoE)

Available

Optimize Networks with the New Industrial PoE Injector

More Power with PoE++: Now you can supply decentralized systems with up to 90 watts of power and data over a single cable.

Power and data can be transmitted over a single ETHERNET cable for distances up to 100 meters – this is made possible by Power-over-Ethernet (PoE) technology. With PoE-enabled devices, users can not only exchange data but also power them through a single cable. The advantages are clear: in automation networks with many devices, every saved cable reduces wiring complexity, conserves space, and lowers material and labor costs. Additionally, this technology enables centralized control of PoE-enabled devices, such as surveillance cameras and IP phones, assisting control cabinet builders and planners in creating more efficient existing and new networks.

Integrating PoE into Networks

The new Industrial PoE Injector with two Gigabit ETHERNET ports addresses this need perfectly. It can be placed between a conventional network switch and a PoE-enabled device, providing a simple and cost-effective option for integrating Power-over-Ethernet into existing networks.

The standout feature of the Industrial PoE Injector is its ability to inject up to 90 W into an ETHERNET cable per port using four-pair wiring (4PPoE standard), powering decentralized systems. Automatic detection of transmission rates (Auto-negotiation) and self-detection of send and receive lines (Auto MDI-X) enable easy plug-and-play operation.

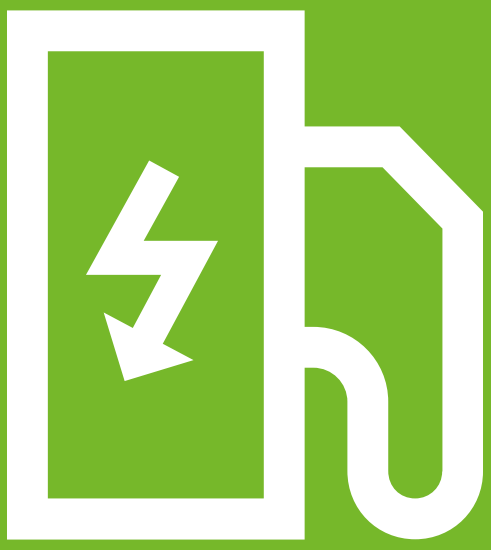
Additionally, the compact and robust design with a DIN-rail adapter allows for straightforward installation in control cabinets, ensuring high resistance to temperature, vibration and shock. The integrated voltage transformer supports operation with the standard 24 VDC power supply typically used in cabinets. Notable status LEDs, a redundant power supply and a DIP-switch configurable alarm contact further enhance the availability and usability of the Industrial PoE Injector. Moreover, a PoE splitter provides the option to power decentralized control cabinets through the ETHERNET cable.

Item Numbers:
852-1731
(up to 60 W)
852-1732
(up to 90 W)

Available

Your Benefits:

- **Wide supply voltage range from 24 to 57 VDC**
- **Extended operating temperature range: −40 … +75 °C**
- **Minimal space requirements on DIN 15 and 35 rails**



POWER ENGINEERING

The WAGO Controller for Complex Applications

Application Example: Substations – Reliable Processing of Large Data Volumes with the WAGO PFC300

Programming, controlling, and visualizing – this is achievable across industries with the PFC300. The PFC300 is capable of managing complex and resource-intensive applications that push other controllers to their limits. This is especially important for energy providers at transformer stations, where numerous consumers are connected, each with unique requirements. Energy suppliers must meet these demands by providing tailored applications for each customer, resulting in a multitude of end devices and significant data volumes that the controller needs to process. Thus, a high-performance control system is essential for complex applications.
Equipped with a dual-core 64-bit CPU and 2 GB of RAM, the PFC300 can quickly handle large data sets while offering maximum programming flexibility through its Linux® operating system. By default, it is programmable with CODESYS, but the PFC300 also supports Docker® and cloud capabilities, allowing energy providers to easily integrate existing third-party applications.

Item Number:
750-8302

Available

Your Benefits:

- **Meets current safety requirements, even in critical infrastructure**
- **High flexibility through the Linux® operating system and Docker® technology**
- **Manufacturer-independent programming with CODESYS V3.5**

WAGO Solutions Platform for Centralized Management

A Platform with Various Options

The WAGO Solutions Platform consolidates project and device management for distributed control systems in one central location. Monitoring, operation, and management are handled easily and efficiently with all WAGO controllers – from planning and commissioning to ongoing service.

In addition to compatibility with the PFC200 and PFC300, the WAGO Solutions Platform now also supports the WAGO Compact Controller 100 and WAGO Edge Devices. New functionalities integrated into device management provide even more convenience, such as the ability to roll out firmware updates at the press of a button.

Industry-specific solutions are available across devices on the WAGO Solutions Platform. The user interface has been further optimized for simple and intuitive handling, with a focus on easy management of diverse application areas.
For example, the WAGO Solutions Platform simplifies commissioning of the WAGO Application Grid Gateway for digitalizing substations. The corresponding WAGO Grid Monitoring App allows users to visualize and analyze data directly. Integrated grid condition monitoring helps prepare network operators for compliance with § 14a of the German Energy Act (EnWG).
In general, applications can be commissioned via the WAGO Solutions Platform by simply scanning QR codes.

Efficient Charging Park Control

The WAGO Load Management App for controlling charging parks is just as easy to implement. The dedicated app in the WAGO Solutions Platform offers remote configuration and user-specific views for monitoring the charging park.

Additionally, WAGO Application Lighting Management can be easily deployed through the platform.

Expanding Functionality

Additional apps, such as WAGO Charging Park Management (a feature extension of WAGO Application Load Management), expand the platform's offerings.

Users who wish to take full advantage of WAGO Solutions Platform can extend it with custom applications developed in CODESYS, other programming languages or open-source solutions.

The built-in patch and device management system automatically detects when an app or firmware needs an update. With just a few clicks, users can select the desired devices and perform updates remotely.
WAGO Solutions Platform can be hosted by WAGO in the cloud or operated on-premises on internal company servers.

Your Benefits:

- **Meets the highest security standards, even for critical infrastructure**
- **Automatic rollout of new firmware and applications via the platform**
- **User-friendly operation with intuitive software, no prior knowledge required**

Software

Available

Monitor the Condition of Your Charging Park

Stay Up-to-Date with WAGO Charging Park Management

The WAGO Solutions Platform simplifies project planning, commissioning, monitoring, visualization and control of multiple systems through its growing number of cross-device applications. For instance, the new WAGO Charging Park Management App plays a key role in the simultaneous management of multiple or larger charging parks, building upon the WAGO Application Load Management that regulates individual charging stations.

WAGO Charging Park Management consolidates key information for large charging parks into a single, real-time view of their current status.

Despite the complexity, the app remains user-friendly, allowing even non-technical staff to easily monitor charging point occupancy through a clear parking lot view. The app's focus on customer service ensures efficiency and ease of use.

The WAGO Solutions Platform streamlines the administration, operation and management of charging parks, making it ideal for parking management. It allows users to create overviews of parking availability and link them to charging park data, enabling easy monitoring of parking status and error reports.

All of this is possible without needing to log into a single controller. A central website provides all the necessary information for smooth operation, available online 24/7 from anywhere in the world. Any user with granted access can check the status of the charging infrastructure.

For simplified service, scenarios can be preconfigured in the WAGO Charging Park Management system to trigger automated alarms when certain conditions occur. These conditions could include user-defined thresholds, such as maximum park occupancy or other special circumstances. Technicians can remotely adjust the configuration of the charging park, ensuring flexibility. Additionally, the intuitive overview of all key performance parameters facilitates easier maintenance.

Monitor Energy Flows

WAGO Charging Park Management also enables comprehensive monitoring of energy flows. This includes tracking consumption data for one or all locations, as well as the status of the connected charging points. The performance data of the configured charging points and energy meters are part of the park's performance monitoring.

Optimize Capacities

With the data overview provided by WAGO Charging Park Management, users can optimize the use of available capacities. The data also enables informed decisions on expanding the charging infrastructure.

Traditionally, the configurations necessary for commissioning a charging park could only be carried out on-site by experts. Thanks to WAGO's solution, time-consuming and resource-intensive field deployments are no longer necessary. The entire configuration of the charging park can be performed remotely from the office, independent of the commissioning process. The setup of WAGO Charging Park Management is easily completed by scanning a QR code through the WAGO Solutions Platform. The application is used in the cloud or on-premises.

Your Benefits:

- **Meets the highest security standards, even for critical infrastructure**
- **Automatic rollout of new firmware and applications via the platform**
- **User-friendly operation with intuitive software, no prior knowledge required**

Software

Available

Available via the WAGO Solution Platform

§ 14a EnWG


WAGO
Apparent Power
more
257kW
Trafostation 228 257kW
Trafostation 697 240kW
Trafostation 269 233kW
Trafostation 587 -60kW
Trafostation 254 -80kW
Trafostation 68 -145kW
-125 kW
Transformer Load
more
Ø 10%
Ø -8%
Trafostation 228 70%
Trafostation 697 65%
Trafostation 269 62%
Trafostation 587 -20%
Trafostation 254 -22%
Trafostation 68 -25%
Minimal/Maximal Values
more
Alarms
Transformator Load
120 % at station 3
02.05.2023 08:58:47
Node Voltage
200 V at station 5, feeder 2
02.05.2023 08:58:47
Line Utilization
120 % at station 3, feeder 5
02.05.2023 08:58:47

WAGO Grid Stabilizer:

The Consistent Advancement of WAGO Grid Monitoring

The WAGO Grid Stabilizer is an effective solution for meeting the requirements of § 14a of the German Energy Industry Act (EnWG). Building on the development of WAGO Grid Monitoring – used for capturing and monitoring low-voltage grid data – the WAGO Grid Stabilizer takes a crucial step forward by enabling control of the low-voltage network.
Both applications operate as a comprehensive solution, starting with the WAGO Application Grid Gateway in substations and extending to cross-device functionality within the WAGO Solutions Platform, which can be deployed either on-premises or in the cloud.

With the WAGO Grid Stabilizer, each network operator can individually define the threshold values for their grid. When a risk of exceeding these limits arises, the system stabilizes the low-voltage network by dimming energy usage. This allows operators to regulate controllable devices, such as heat pumps and electric vehicle charging stations, through Smart Meter Gateways in the event of an impending grid bottleneck.
The WAGO Application Grid Gateway in substations serves as the data-providing foundation. A bidirectional communication with Smart Meter Gateways occurs via metering point operations.

This data enables network status assessments, helping to mitigate potential grid constraints before they become critical. The more data available from Smart Meter Gateways, the more accurate these calculations become. The WAGO Grid Stabilizer provides a live view of the low-voltage network and documents all control measures taken. This documentation ensures compliance with regulatory requirements for both typical and atypical grid constraints.

As part of the WAGO Solutions Platform, this solution can also be operated on-premises, making it adaptable to current network demands.

Your Benefits:

- **A solution for complying with § 14a EnWG**
- **Data acquisition, monitoring and control of the low-voltage network**
- **Complete documentation of all control measures**

Software

Available

Available via WAGO Solutions Platform

An Application for All Customer Substations

WAGO Application Customer Substation for All Types of Facilities

Whenever it comes to expanding an existing renewable energy system (EEG) – whether adding a solar or wind installation, storage systems or a charging station, or connecting multiple facilities like hybrid parks to an existing system – WAGO Application Customer Substation showcases its full capabilities. The new Version 2.10 supports all types of facilities.

In its standardized form, WAGO Application Customer Substation is pre-configured to meet the technical requirements of many grid operators and is compliant with the technical connection conditions (TAB). Given the rapid changes in EEG requirements and the unique challenges faced by operators, WAGO also supports the development of custom solutions, providing project-based assistance to customers. Customers are supported during the project.

Remote Integration

The required connection of the customer substation (KÜS) to the medium-voltage network is done remotely within just ten minutes. In addition to supporting new devices, Version V2.10 has been expanded to include the TAB of additional grid operators. The application also supports the CODESYS V3.5 software update.
For its deployment, primary and secondary substations can be defined, with the primary station being prioritized for energy distribution to secondary stations.

Improved Storage Capabilities

Thanks to the latest updates, WAGO Application Customer Substation also optimizes the management of battery storage systems. Now, it is possible to configure storage units as either battery masters or battery slaves, allowing various storage modules to be assembled.

Furthermore, the system allows for energy management prioritization, enabling customers to scale back facilities based on their importance. This is partly facilitated by the current certification of the EZA (Generating Plant) Controllers in accordance with TAB 4110 and 4120, which allows for the regulation of energy supply and feed-in. The KÜS variant includes the EZA controller by default. This certification also applies to the WAGO Compact Controller 100, offering a cost-effective alternative for small-scale systems in the low-voltage range.

Maximizing Capacity Utilization

The certified EZA controller simplifies the integration of renewable energy into distribution networks, supporting load management by continuously adjusting output and utilizing all available capacities. WAGO Application Customer Substation is highly scalable and compatible with common wallboxes and charging stations from various manufacturers.

Your Benefits:

- **Compliance with the highest security requirements, including critical infrastructure**
- **Energy management prioritization capabilities**
- **Optimized battery storage management**

Software

Item Number:
2759-2018/261-1000

Available

WAGO EZA Controller: Version 2.0 with Enhanced Features

Expansion into International Markets

Whenever renewable energy is fed into the grid, EZA (Generating Plant) Controllers monitor the feed-in and are, therefore, a central factor in ensuring grid stability. The WAGO EZA Controller, Version 2.0, integrates important updates into the central control system. Within a development project, customers can flexibly switch between different modules.

Controller Update

The programming of the EZA Controller is compatible with the industrial standard CODESYS V3.5, allowing the WAGO EZA Controller to be used on other WAGO controllers as well. With CODESYS V3.5, the libraries are applicable to WAGO controllers of the second generation of the PFC200 Series starting from firmware version V23, as well as on the WAGO Compact Controller CC 100.

Integration of Battery Charging

To ensure grid stability, the integration of battery storage systems into the customer substation (KÜS) is essential. The WAGO EZA Controller V2.0 manages not only the feed-in but also the battery charging process. It represents not only the generation but also incorporates the load, covering all four quadrants. Customers building their own CODESYS projects as a complete application around the EZA Controller particularly benefit from the ability to integrate batteries and battery controllers.

Certificates VDE-AR-N 4110 and 4120

The WAGO EZA Controller V2.0 is certified for the VDE standards 4110 and 4120. These standards encompass the technical connection guidelines for medium- and high-voltage systems. VDE-AR-N 4110 pertains to the connection to medium voltage, covering everything from system design and interfaces with setpoint specifications to return and measurement values, as well as the regulation and control of the generator with reactive power management and voltage regulation functions.

VDE-AR-N 4120, the technical connection guideline for high voltage, has been developed in accordance with European regulations. This application rule meets the requirements of the European Network Code "Requirements for Generators" (RfG).

Planned for Fall 2024: FSM and LFSM O/U

To accelerate the response to frequency changes, the new "Technical Connection Condition High Voltage" (TAR) will require all generation plants to quickly adjust their active power. Consequently, generation plants will need to respond faster to imbalances between load and generation in the future. The "Frequency Sensitivity Mode" (FSM) can adjust the active power at the connection point based on frequency. For minor deviations, primary control power is activated, while larger deviations will invoke the "Limited Frequency Sensitive Mode Over-/Underfrequency" (LFSM O/U). This is particularly relevant for large plants in the area of grid stabilization.

Certification for FSM and LFSM O/U is currently being pursued.

International

The international releases of the EZA Controller are based on the German version, modified according to national requirements.

US Release

The US release of the EZA Controller, available under the name DER (Distributed Energy Resource Controller), includes a pre-configured function block that meets the requirements of Standard 1547-2018, Sections 5 and 10. According to the specification from IEEE 1574-2018, the P(V) controller (Voltage and Active Power Control) implements a limitation of active power based on a defined characteristic curve, depending on the measured voltage.

AU Release

For the Australian market, a P(U) limiter function (Volt-Watt Response Mode) has been added. In conjunction with the charging and discharging management of energy storage systems, the PPC (Power Plant Controller) regulates active power based on the measured voltage. The envelope profile of the P(U) limiting function can be parameterized separately for generation and consumption sides.

Poland

The controller update is based on the version certified for Germany.

Your Benefits:

- **Controller update to CODESYS V3.5**
- **Certificates VDE-AR-N 4110 and 4120**
- **Meets the highest security standards, even for critical infrastructure**

Item Number:
2759-203/211-1000

Available:
EZA Controller:
Q4/2024
KÜS: Available

Remote Operation: The Right RTU for Every Application

WAGO's remote operation portfolio now expands to include two new “Remote Terminal Units” (RTUs).

TELECONTROL FUNCTION

VIA DRM LICENSE!

To meet the diverse requirements for monitoring, controlling, and automating decentralized systems, WAGO enables additional devices for remote operation. With the new Remote Terminal Units (RTUs), WAGO offers you reliable technology to cover all performance classes and application scenarios.

WAGO PFC300: High-Performance Multi-Core Device

Equipped with 2 GB of RAM and a 64-bit processor, the WAGO PFC300 is optimally designed for larger applications with up to 5,000 data points. If your application requires extensive computational procedures or virtualization, the PFC300 as an RTU will meet your needs. The use of Docker® simplifies and accelerates the deployment of software and applications.

Your Benefits:

- **Powerful controller for simultaneously evaluating large amounts of data**
- **Flexibility through an open Linux® operating system and utilization of Docker® technology**
- **Manufacturer-independent programming with CODESYS V3.5**
- **Compliance with current security requirements even in critical infrastructures**

Item Number:
750-8302

Available

WAGO PFC100: Scalable Small Controller for Cost-Sensitive Applications

With the upgrade of the PFC100 (2nd generation) for remote operation, WAGO now offers a scalable solution for small and micro plants with up to 2,000 data points. To adapt the controller flexibly for your specific application in district heating, gas distribution networks, water and wastewater management, or generation facilities, you can easily expand it via the local bus.

Your Benefits:

- **Cost-effective solution for small plants**
- **Scalable and flexible for customization**
- **Suitable for applications in electrical energy distribution networks, as well as water/wastewater and gas systems**

Item Numbers:
750-8110
(PFC100 G2 2ETH ECO)
750-8111
(PFC100 G2 2ETH)
750-8112
(PFC100 G2 2ETH RS)
750-8112/0025-0000
(PFC100 G2 2ETH RS/T)

Available

Certified Interoperability on Current Hardware

New certifications confirm compliance with IEC 61850 for the WAGO PFC200 (2nd generation).

The IEC 61850 protocol is widely adopted for the interoperability of energy generation and supply systems, both nationally and internationally. Some countries even require corresponding certification to deploy a control device in relevant installations. The international certification provider DNV has now officially confirmed that the WAGO PFC200 (2nd generation) meets the requirements as an IEC 61850 server and client.

Well-Prepared for Today's and Tomorrow's Market Demands

With the PFC200 (2nd generation) as a "Remote Terminal Unit" (RTU), users benefit from the advantages of the latest hardware and current software. Equipped with a 1 GHz Cortex-A8 processor and 512 MB of RAM, this controller is ideally suited for applications in the medium power range.

It also supports contemporary security requirements, such as TLS encryption. With CODESYS V3.5 as the engineering software, you gain the benefits of a modern development environment.

Your Benefits:

- **Internationally recognized certifications for both server and client sides**
- **Future-proof with modern hardware and up-to-date software**
- **Robust controller specifically designed for energy market demands (temperature range -40 … +70°C, increased immunity to impulse voltages and vibrations)**

Item Number:
750-8212/0040-0001

Available

Secure Communication in the Energy Sector

WAGO enhances its telecontrol technology in accordance with IEC 62351.

As safeguarding energy networks and other critical infrastructures against cyberattacks becomes increasingly important, the relevance of IEC 62351 as the applicable standard for cybersecurity in utility networks is also rising. To meet current requirements and comply with international standards, WAGO has upgraded a range of products for remote communication protocols, including IEC 60870, IEC 61850, and DNP3, in accordance with IEC 62351.

Your Benefits:

- **Gradual implementation of IEC 62351 for all telecontrol protocols**
- **Hardware-independent applicability**
- **Internationally recognized standard for global deployment**

TLS Encryption

Protocol-based TLS encryption prevents unauthorized users from reading or manipulating data. The goal is to ensure data privacy, data security, and data integrity during communication within critical infrastructures.

This functionality is available for:
- IEC 60870 Server
  (Item Number 2759-290/211-1000)
- DNP3 Server
  (Item Number 2759-2290/211-1000)
- IEC 61850 Client
  (Item Numbers 2759-2243/211-100 and 2759-2246/211-100)
- IEC 61850 Server
  (Item Number 2759-2240/211-1000)

Secure Authentication

Secure Authentication verifies whether a user within the network has the necessary permissions to perform specific actions. A corresponding security certificate is employed to prevent unauthorized users from executing switching actions or issuing setpoint commands.

This function is available for:
- IEC 60870 Server
  (Item Number 2759-290/211-1000)
- DNP3 Server
  (Item Number 2759-2290/211-1000)

DNV Certification According to IEC 62351

Internationally recognized certifications are crucial for ensuring that products can be deployed globally without issues. For this reason, WAGO has opted for certification of its remote communication technology by DNV. DNV certificates are globally acknowledged and represent the key standard for applications in the energy sector in many countries. WAGO is beginning the certification process for compliance with IEC 62351 with the IEC 60870 Server (Item Number: 2759-290/211-1000). Certification is currently underway and is expected to be available in December 2024.

DEVICE CONNECTION TECHNOLOGY

Customize PCB Terminal Blocks and Connectors Faster and Easier

WAGO Smart Designer Configurator receives an update.

With the WAGO Smart Designer Configurator, users can customize PCB terminal blocks and connectors specifically for their applications. Electrical planners and developers can now adjust the colors of modules and add personalized labels and codes.

The new user interface simplifies product selection, allowing users to find the right item based on current, voltage, pin spacing or pole number. Additionally, the configuration area has been redesigned for even more intuitive operation and is now optimized for mobile devices such as tablets.
A new feature is the configuration assistant for the *MCS* MINI and *MCS* MAXI PCB Connectors. This guided menu helps users customize the connectors effectively. The advantage of the assistant is that male and female connectors can be configured in one step as a complete connection solution.

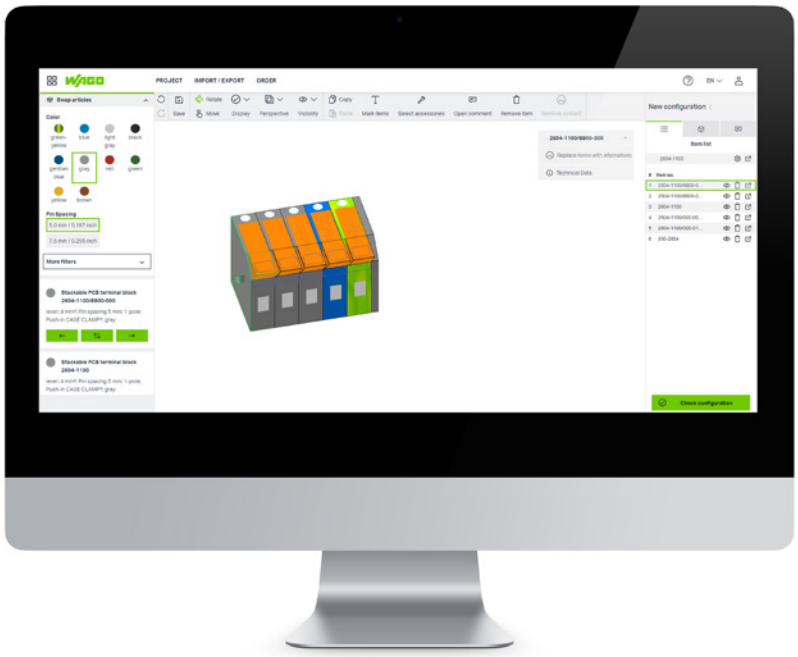
Moreover, users can now directly transfer and order samples of their customized products from the configurator to the WAGO website's sample service.

Your Benefits:

- **Individual customization of colors, labeling and coding**
- **Guided configuration for *MCS* MINI and *MCS* MAXI**
- **Direct sample ordering from the Smart Designer**

Software

Available



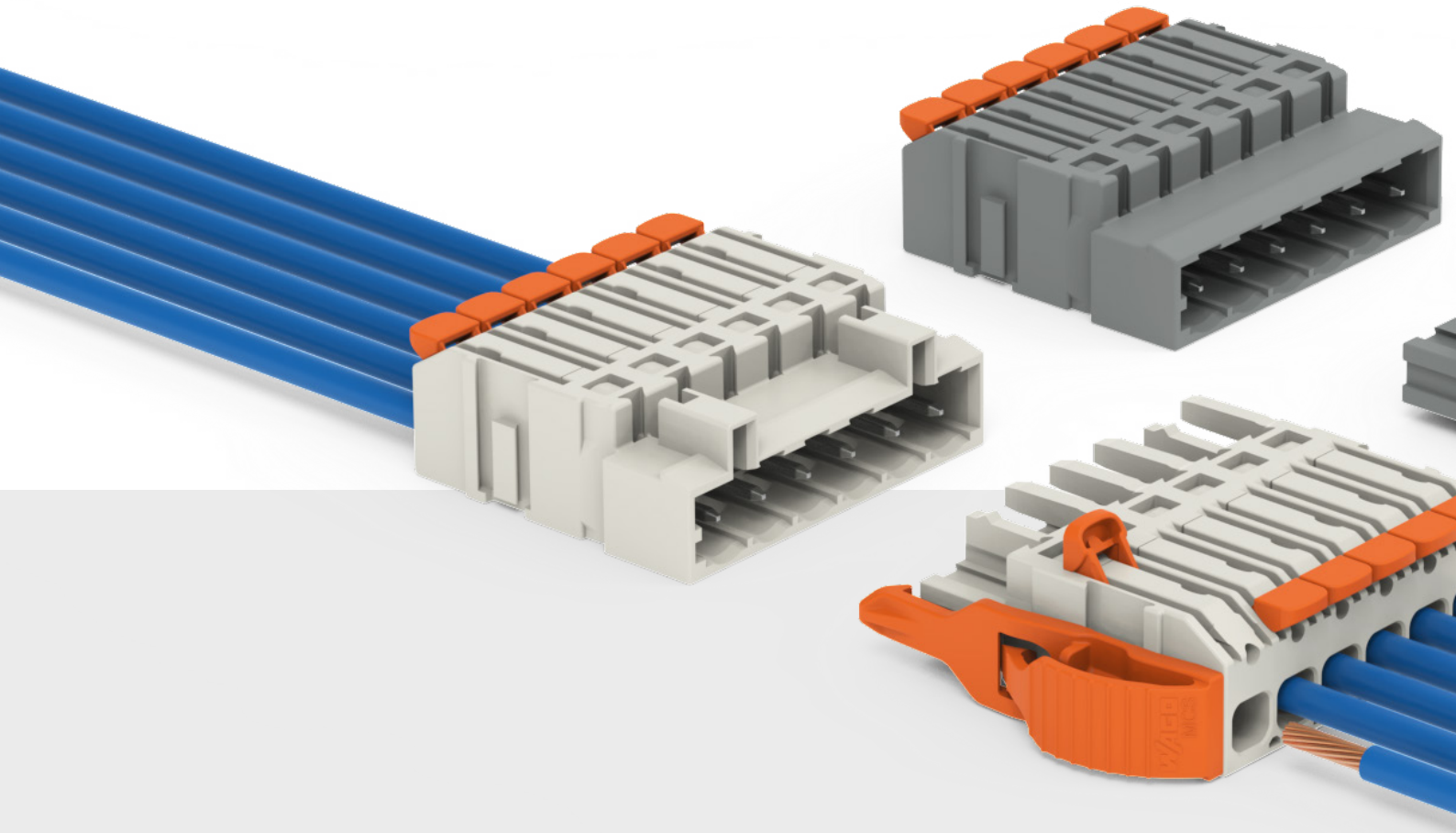
MULTI CONNECTION SYSTEM Portfolio Expansion Announcement

1-Conductor Male Header and 1-Conductor Female Connector with Tool-Free Lever Technology

The WAGO *MULTI CONNECTION SYSTEM* has been around for 40 years. Over the years, the system has steadily expanded. Initially, it was the first PCB pluggable connection system featuring spring pressure connection technology – a reconnectable cage clamp that is operated with a tool. This innovation significantly reduced the wiring effort compared to the more common screw connections.

In 2017, WAGO introduced the tool-free PCB connector with lever technology for conductor cross-sections up to 25 mm², using the Push-in CAGE CLAMP®. This made intuitive connections in factories and field applications possible for the first time. Since then, the range of available conductor cross-sections with Push-in CAGE CLAMP® and levers has been significantly expanded – WAGO now offers connectors for cross-sections ranging from 0.2 to 25 mm².

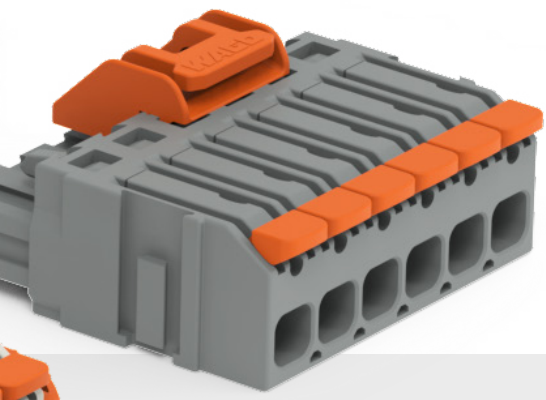
To provide a comprehensive portfolio of PCB connectors with this tool-free connection technology, WAGO continuously enhances the *MULTI CONNECTION SYSTEM*. New additions include 1-conductor male headers with levers featuring a pin spacing of 5 mm, as well as 1-conductor female connectors with levers with a pin spacing of 7.5 mm. Solid and fine-stranded conductors with ferrules can be directly inserted thanks to the Push-in CAGE CLAMP® technology. Available are the male headers and female connectors with 100% protection against mismating and the “Classic” interface.

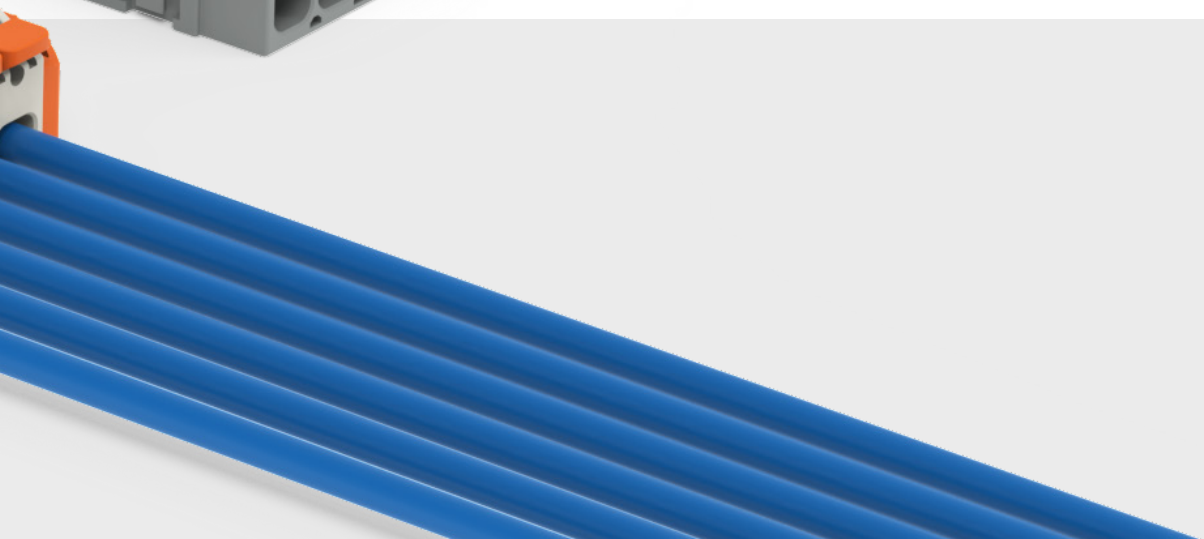


Wiring 1-Conductor Male Header with Levers, 5 mm Pin Spacing

The 1-conductor *MCS* MIDI Male Header (2231 and 2721 Series) allows for tool-free and intuitive wiring of board-to-wire and wire-to-wire connections, thanks to its lever technology. Designed with a 5 mm pin spacing, it accommodates conductors with cross-sections ranging from 0.2 to 2.5 mm².

For added convenience, especially in field connections, the male header can be easily removed and wired by hand without the need for tools. This is particularly advantageous in scenarios where access to the wiring location is difficult or constrained. The 1-conductor *MCS* MIDI Male Header is ideal for applications requiring a touch-protected device output with a THT female header for either board-to-wire or wire-to-wire connections.

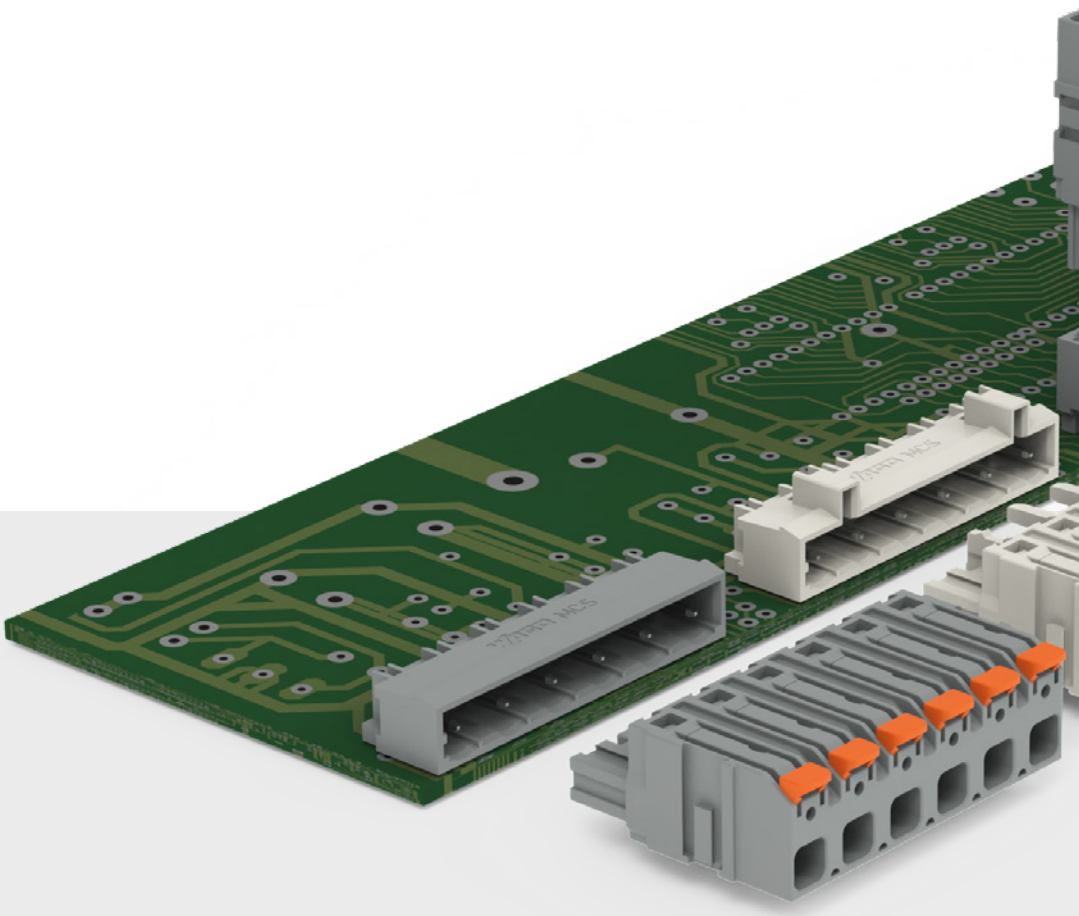




Tool-Free MCS MIDI PCB Connector, 7.5 mm Pin Spacing

With the new 1-conductor *MCS* MIDI Female Connector (2232 and 2722 Series) featuring 7.5 mm pin spacing, 3-phase power supply connections for devices operating at voltages up to 500 V (IEC) are now achievable, as well as 600 V in accordance with UL 1059, supporting a rated current of 20 A for international markets. The 1-conductor female connectors are equipped with levers for intuitive and tool-free field connections. *MCS* MIDI stands out with a combination of high-performance, compact design and convenient lever operation, allowing for easy wiring by hand.

The tool-free PCB connector with a pin spacing of 7.5 mm is the ideal complement to the larger MAXI 6 and MAXI 16 Series and offers a cost-effective alternative for devices with lower power requirements and compact designs.



The *MCS* MIDI is suitable for conductor cross-sections of up to 4 mm² with fine-stranded conductors. Conductors with ferrules or insulation can be accommodated up to 2.5 mm². With the *MCS* MIDI featuring levers and a pin spacing of 7.5 mm, the power connection for devices across a wide performance range can now be established with uniform, tool-free handling.

Your Benefits:

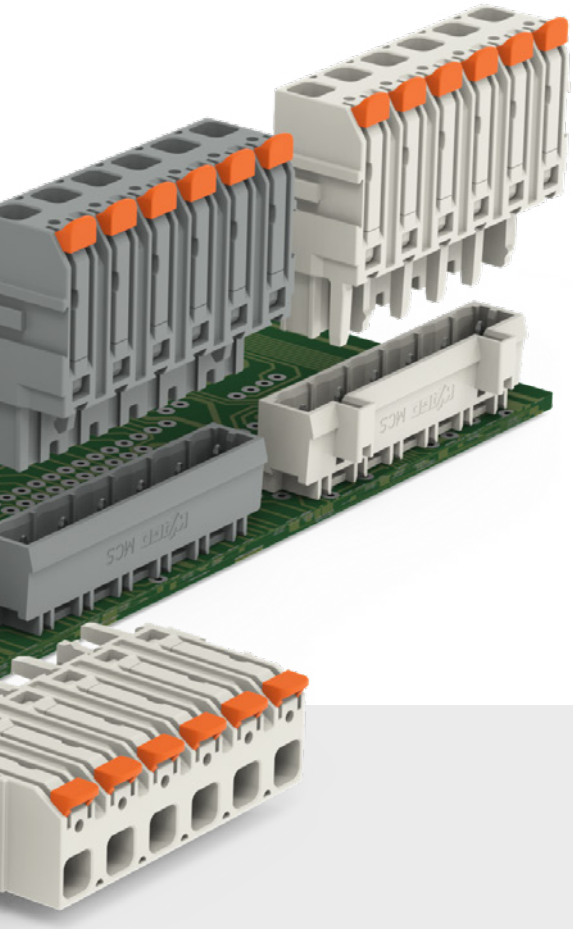
- **Lever operation for tool-free wiring by hand**
- **1-conductor male connector for flying leads**
- **High-performance 1-conductor female connector for 3-phase mains connection**

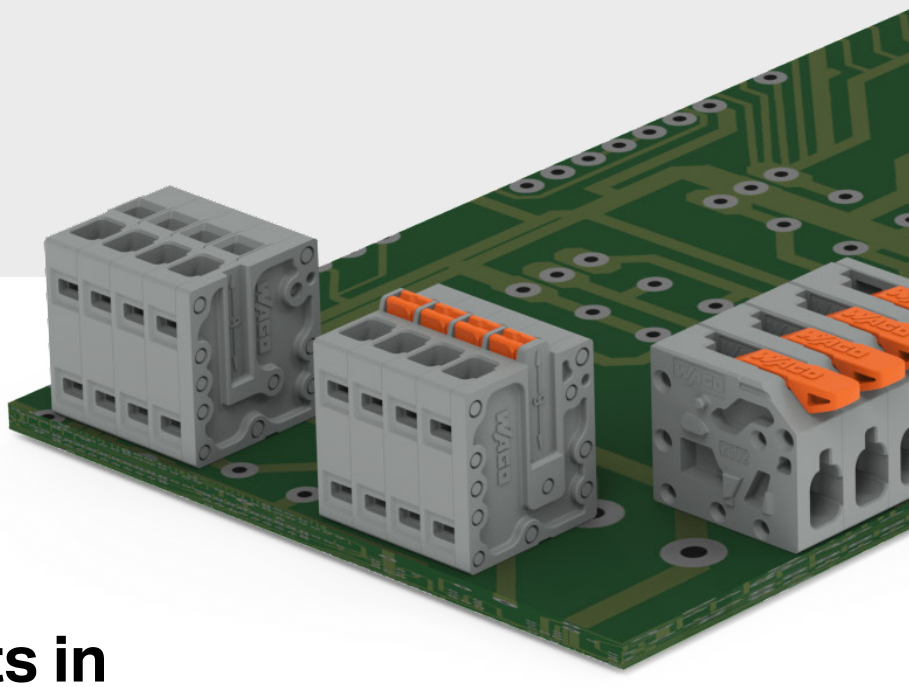
Item Numbers:

1-Conductor Male Header
2231-16xx (Classic)
2721-16xx
(100% protection against mismating)

1-Conductor Female Connector
2232-12xx/0xxx-0000
(Classic)
2722-12xx/0xxx-0000
(100% protection against mismating)

Available: Q1/2025





New Developments in PCB Connection Technology

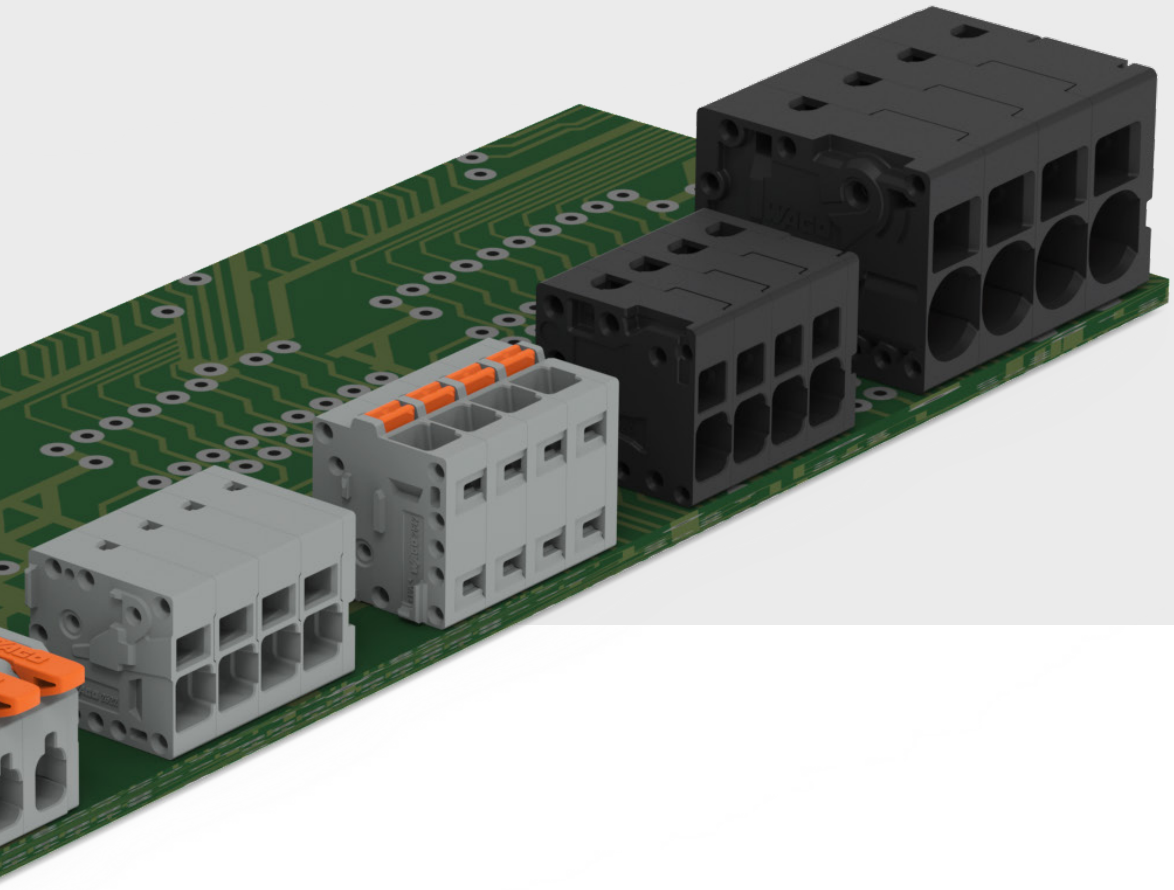
WAGO expands its portfolio of PCB terminal blocks for signal and power levels.

PCB Terminal Blocks for Cross-Sections up to 1.5 mm²

With the introduction of the 2621 and 2641 Series, WAGO expands its portfolio for small PCB cross-sections up to 1.5 mm². In addition to the 2601 Series with lever technology, the new 2621 and 2641 Series are designed for signal-level wiring. The terminal blocks are available with operating slots (2621 Series) and push-buttons (2641 Series), providing the right PCB terminal block for every application with the desired actuation variant.

PCB Terminal Blocks for Cross-Sections up to 2.5 mm²

To enhance device connectivity, WAGO adds the 2602, 2622 and 2642 Series to its PCB Terminal Blocks. These terminal blocks accommodate cross-sections up to 2.5 mm², allowing developers to select the appropriate actuation variant for their applications. The terminal blocks are available with levers (2602 Series), operating slots (2622 Series) and push-buttons (2642 Series). They are suitable for use in power supplies, wallboxes and industrial electronics.



PCBs for Automatic Assembly with Reflow

To simplify the automatic assembly process on the PCB, the new 2624 and 2626 Series PCB Terminal Blocks are now available in tape-and-reel packaging. These are reflow-capable, which reduces manufacturing effort compared to wave soldering. The PCB terminal blocks are available for cross-sections of 4 mm² (2624 Series) and 6 mm² (2626 Series). Both series feature Push-in CAGE CLAMP® for conductor termination.

Your Benefits:

- **Lever, Push-Button or Operating Slot: Choose the right actuation variant for every application.**
- **2624 and 2626 Series: Reflow-capable materials reduce manufacturing effort.**
- **2606 and 2626 Series: Now certified for hazardous areas according to ATEX 1007 U!**

2606, 2626, 2604, 2624 Series:

Now certified for hazardous areas according to ATEX 1007 U!

Item Numbers and Availability:

Cross-sections up to 1.5 mm²

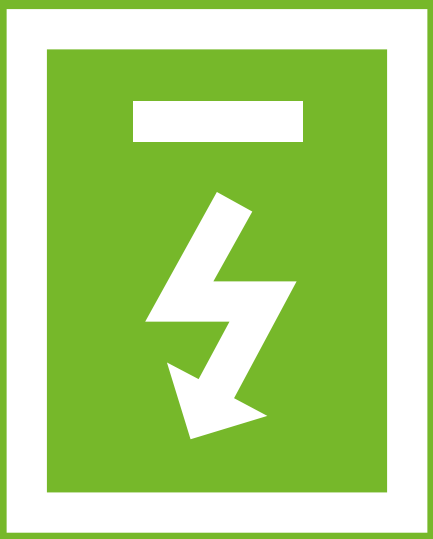
2621-1xxx, 2621-3xxx (operating slot, Q1/2025)
2641-1xxx, 2641-3xxx (push-button, Q1/2025)

Cross-sections up to 2.5 mm²

2602-11xx, 2602-31xx (lever actuation, available)
2622-1xxx, 2622-3xxx (operating slot, Q1/2025)
2642-1xxx, 2642-3xxx (push-button, Q1/2025)

In tape-and-reel packaging and reflow-capable

2624-1xxx/0004-0604, 2624-3xxx/0004-0604 (Q1-2025)
2626-1xxx/0024-0604, 2626-3xxx/0024-0604 (Q4-2024)



CONTROL CABINET MANUFACTURING AND ELECTRICAL INSTALLATION

The Foundation of All Power Supplies: WAGO's Power Supply Portfolio Continues to Grow

The new WAGO Power Supply Base impresses with its essential functionality and excellent price-performance ratio.

When it comes to power supplies, WAGO already offers a wide range of products that are continuously optimized and expanded. In addition to the current WAGO power supplies, today's market and customer demands require cost-effective solutions.

Therefore, WAGO is expanding its portfolio with a new series that will be established alongside the successful WAGO Power Supplies Pro 2 and Eco 2. The new WAGO Power Supply Base is characterized by low acquisition costs and basic operational functionality. This new product line also features the proven Push-in CAGE CLAMP® technology, ensuring quick, reliable, and tool-free connections, along with good efficiency. The integrated DC-OK LED allows for reliable monitoring of the output voltage status. Moreover, the new WAGO Power Supply family Base can operate in a wide temperature range from -30°C to +70°C.

Your Benefits:

- **Compact design with robust metal housing**
- **Front-entry wiring with Push-in CAGE CLAMP® connection technology**
- **Wide temperature range: -30 … +70°C**

Item Numbers:

2587-2144 (5 A)

2587-2146 (10 A)

2587-2147 (20 A)

Available

The Right UPS for Every Application

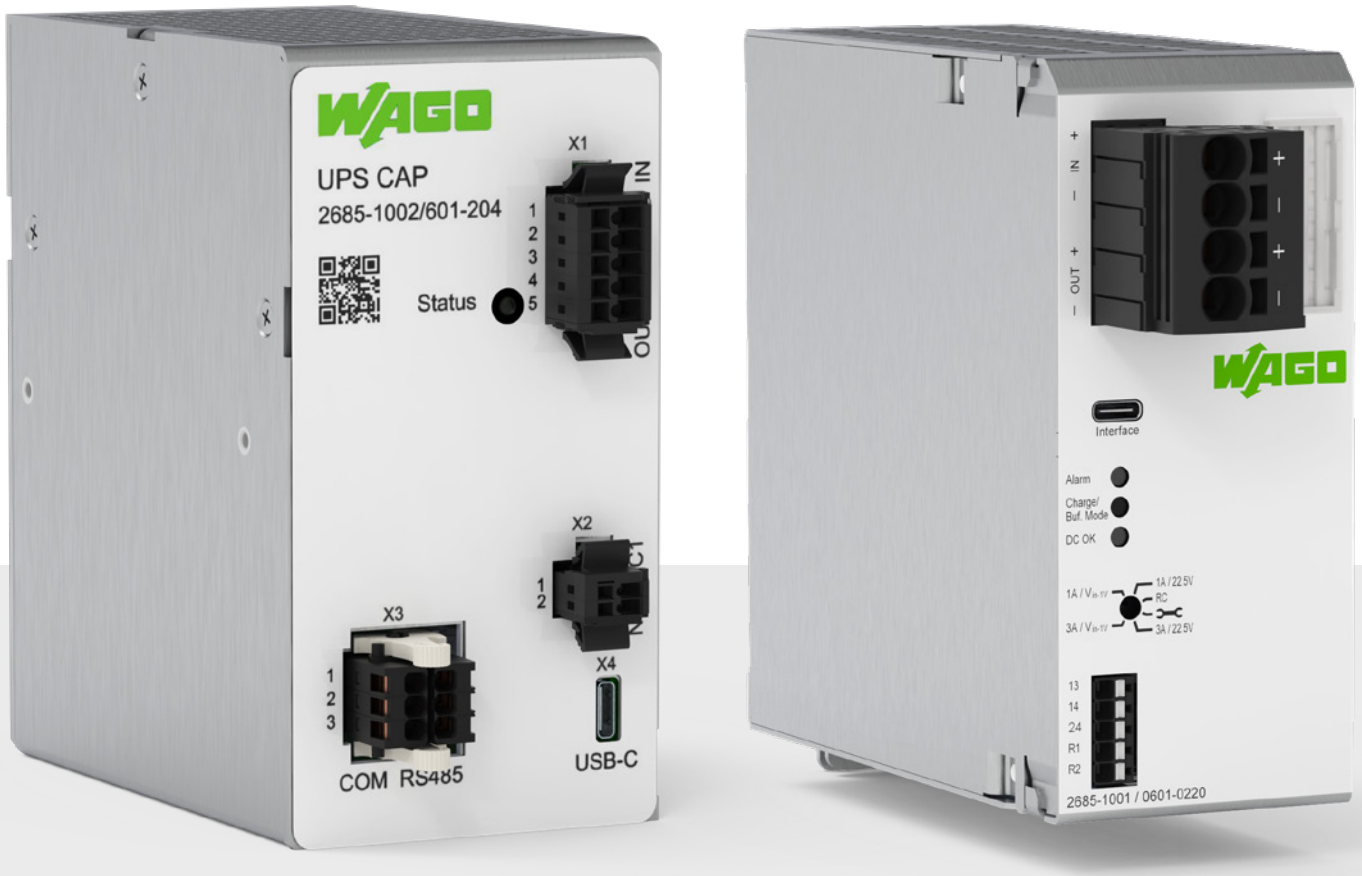
Five New Devices in the WAGO Portfolio: Featuring Integrated Supercapacitors, Built-in LiFePO4 Storage, Plus a Charger and Controller for External Lead Batteries

In the event of short-term power outages, WAGO's Uninterruptible Power Supplies (UPS) bridge instabilities and keep your system running safely.
For longer outages, critical processes can be safely maintained using UPS solutions to prevent unwanted impacts and data loss. The required buffer or bridging time, and thus the design of the uninterruptible power supplies, depends on the connected load and is determined before installation. This will dictate the type and size of the energy storage. WAGO is expanding its UPS portfolio to include five new products, ensuring the right storage form for every energy requirement.

UPS with Integrated Capacitive Storage (Supercapacitors)

The capacitive uninterruptible power supplies are suitable as base devices for critical applications and high system availability, such as interconnected industrial systems in the automotive sector or in intralogistics, as well as for high-current applications with short buffer times.

The two new products with integrated storage using supercapacitors (Item Numbers 2685-1001/0601-0220 and 2685-1002/601-204) are an excellent choice for short-term



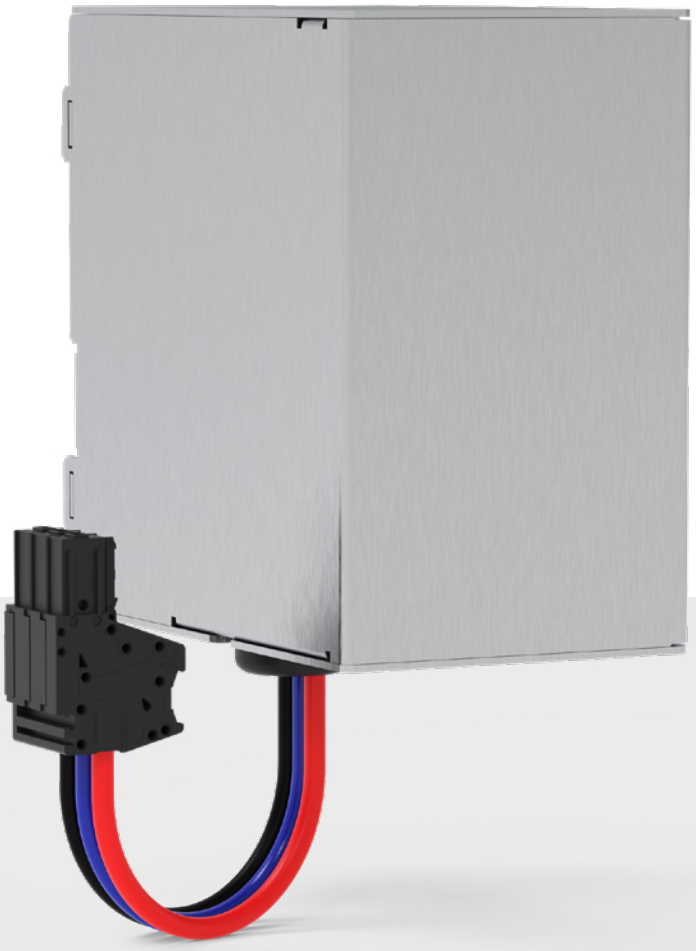
buffering of up to 0.47 Wh. The capacity and output current can be increased as needed through a connected expansion module. The new UPS Storage Module (Item Number 2685-2501/0603-0240) comes pre-configured for easy plug-and-play use. Configuring the new products is simple and intuitive via interface configuration software, with USB-C connection to the PC.

Your Benefits:

- **Long lifespan and maintenance-free operation, even in high and low temperature ranges**
- **Ideal for short to medium bridging times up to 1.59 Wh**
- **Regulated output voltage during backup operation with a short charging cycle**

Item Numbers:
2685-1001/0601-0220 (20 A)
2685-1002/601-204 (4 A)
2685-2501/0603-0240 (Expansion module up to 40 A)

Available



UPS with Integrated LiFePO4 Storage

From the range of UPS (Uninterruptible Power Supply) with integrated storage, a new product featuring a built-in lithium-ion battery (LiFePO4) is available for users (Item Number 2685-1002/408-206). This UPS is suitable for extended buffer times of up to 33 Wh, offering high energy and power density while being lighter in weight.
A standout feature of the new integrated UPS is its high cycle stability: no intervention in the device or early replacement of the storage unit is required. The minimal maintenance needed keeps operating costs to a minimum.

Your Benefits:

- **Extended buffer times for longer supply periods thanks to the large energy storage capacity (up to 33 Wh)**
- **Significant space and weight advantages compared to lead-acid batteries**
- **Suitable for safety-critical applications, with a stable battery chemistry providing a lifespan of at least ten years and over 6,000 full charge and discharge cycles**

Item Number:
2685-1002/408-206
(6 A)

Available

UPS with Charger and Controller for Lead Batteries

In addition to the products with integrated storage, WAGO has expanded its portfolio with a new UPS (Uninterruptible Power Supply) featuring a charger and controller for external batteries (Item Number 2685-2001/0100-0240 (40A)). This model impresses with an intelligent, temperature-controlled battery management system that allows for continuous monitoring of the batteries and early warning via LED or USB-C output before the end of the battery lifespan. The powerful and efficient battery management ensures short charging times even with large battery capacities, further enhancing lifespan. Additionally, great emphasis has been placed on compatibility, allowing the use of all standard lead-acid batteries of corresponding sizes.

Your Benefits:

- **Continuous monitoring of batteries, including early warning via LED**
- **Short charging times even with large battery capacities**
- **Extended lifespan through temperature-controlled battery management**

Item Number:
2685-2001/0100-0240 (40 A)

Available

Conclusion

Regardless of whether it's for fail-safe load monitoring, emergency operation, preventing data loss during power outages or for the controlled shutdown of a system – WAGO's uninterruptible power supplies provide users in building automation or machinery and plant engineering with optimal solutions.

New Split-Core Current Transformers with Direct Connection Technology and Short-Circuit Bridge

Portfolio Expansion for New and Existing Systems

Whether in buildings or directly in machinery, when active primary conductors should not be interrupted, WAGO's split-core current transformers are the solution. The existing portfolio of split-core current transformers has been expanded with 19 new products.

The new split-core current transformers feature robust housings made from flame-retardant polyamide. The click-off hinge allows for complete removal of the upper part, making installation easier even in difficult and tight spaces. Thanks to the integrated WAGO 221 Series Inline Splicing Connector with Levers, the new transformers are suitable for direct, tool-free connection of both fine-stranded and solid conductors and offer additional time savings. The integrated short-circuit bridge, which can be plugged into two positions (short-circuit position and storage position), ensures safe installation, commissioning and maintenance. The user can configure the connection cable themselves, allowing them to individually select the cross-section, length and other specifications. The new series covers primary rated currents from a maximum of 60 to 250 A and is also available with 1 A, 5 A and a transformation ratio of 333 mV. A sophisticated spring system ensures a constant contact pressure of the core halves, providing consistent and accurate measurements, even over the years.

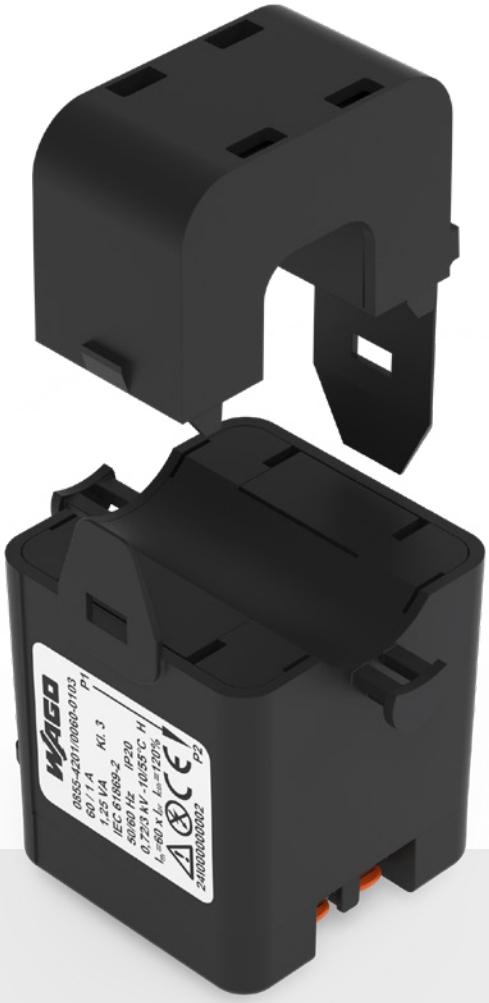
Item Numbers:

855-4201/xxx-xxx

855-4205/xxx-xxx

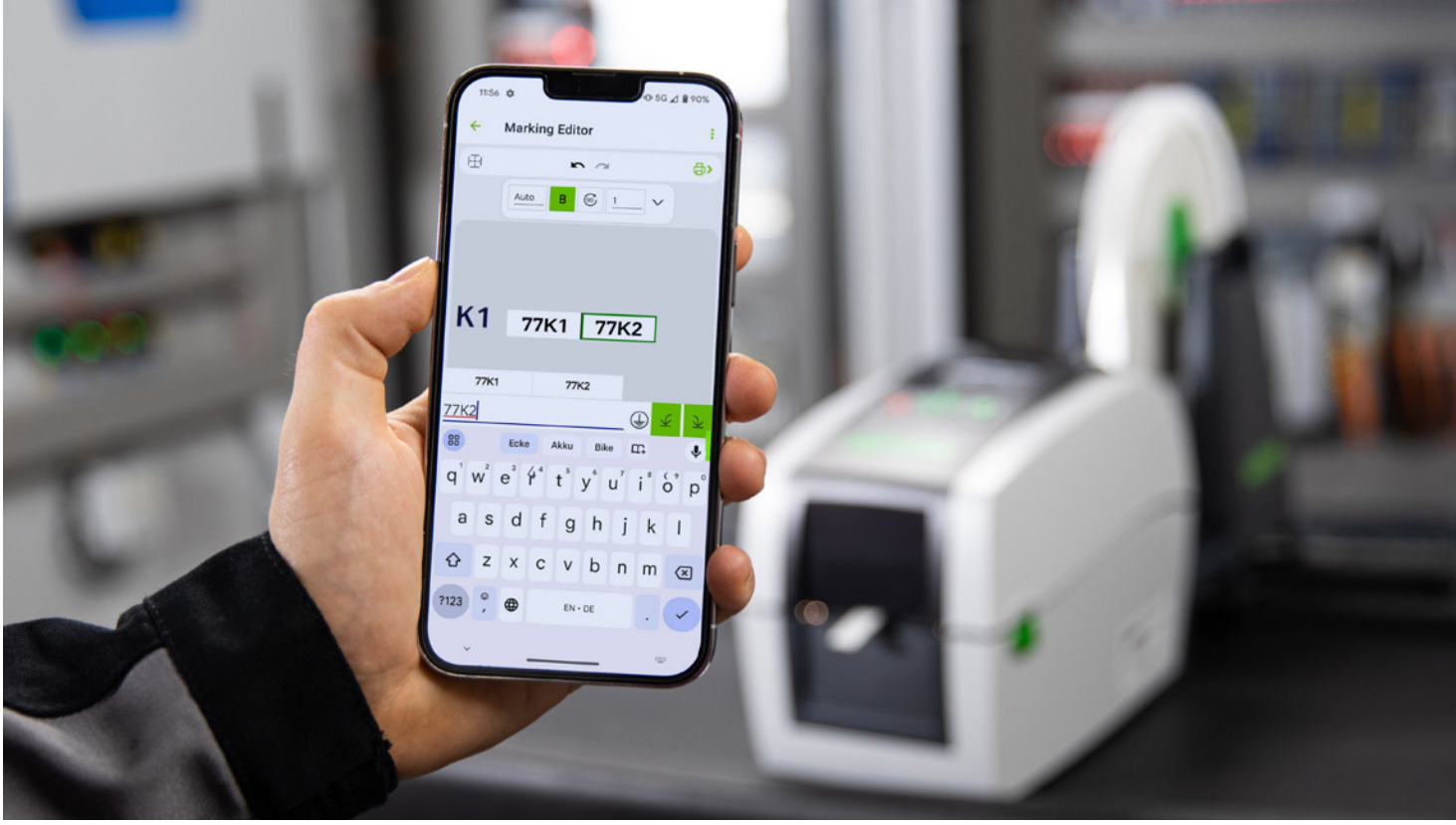
855-4209/xxxx-xxxx

Available



Your Benefits:

- **Easy installation thanks to a compact design with a fully detachable upper part and WAGO connection technology**
- **Integrated short-circuit bridge for safe installation, commissioning and maintenance**
- **Self-configurable connection cable length**



WAGO Thermal Transfer Smart Printer Now Controllable via WiFi Dongle

Expansion of the Mobile WAGO Marking System

The mobile WAGO Marking System, which includes a new model of the WAGO Thermal Transfer Smart Printer and a new, free WAGO Marking App, can already be operated via a *Bluetooth*® dongle. Now, the system has been expanded to include control via WiFi dongle. The WiFi connection offers a major advantage by making the printers wirelessly accessible within the company network, such as in the workshop. After a one-time registration in the company network, all available WiFi printers can be searched or manually added, making them visible in the print preview. With this extension, both the marking app and the desktop software can connect to the printers via the WiFi dongle.

The existing *Bluetooth*® option is ideal for short distances between the user and the printer, such as on a construction site. Users can easily pair with the desired device through the print preview in the marking app and start the print job. However, to switch users, the *Bluetooth*® connection must be disconnected.

The WAGO Marking App is available in both the Google Play Store and the App Store.

Your Benefits:

- **Intuitive WAGO Marking App now available in the Google Play Store and App Store**
- **In addition to *Bluetooth*®, WiFi connection is now available**
- **Convenient access to multiple printers in the workshop thanks to WiFi connection**

Item Numbers:
258-5107
Starter Kit
(with marking media)
258-5103
WiFi Dongle

Available

Go to the Google Play Store

Easily Configure WAGO Electrical Interconnect Products

New User Interface in the WAGO Smart Designer Configurator

WAGO's Smart Designer Configurator now features a new user interface that allows you to configure DIN-rails for control cabinets and other WAGO electrical interconnect products more intuitively and quickly in one place.

In addition to easier accessibility, the new interface also offers several new functionalities. For instance, the configuration template library provides suggestions for system, home or device connections. The import area now displays all the necessary information for operating the WAGO CAE interfaces at a glance. Additionally, the WAGO Smart Designer can now be operated even more effectively on a tablet, thanks to the optimized interface.

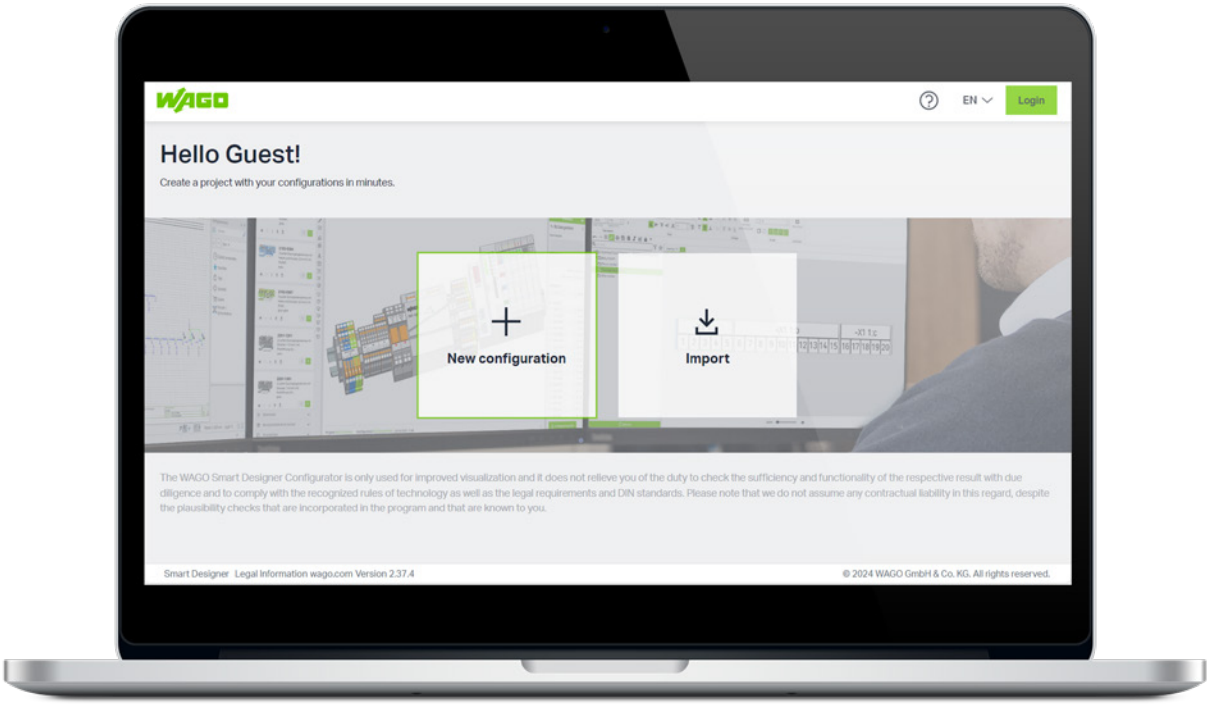
Your Benefits:

- **Easier accessibility**
- **Configuration templates for customized applications**
- **Improved operation via tablet**

Go to Smart Designer

Software

Available



Efficient Planning of Low-Voltage Circuits and Distributions

Integration of CAE and CAD Data into Hagercad

WAGO now also offers the integration of CAE and CAD data into the Hagercad system – a planning and design software primarily used for planning the distribution of control cabinets in buildings.

Hagercad stands out for its ease of use, providing users with greater planning reliability and significant time savings. A dedicated selection menu, which allows users to filter specifically for WAGO products – something only WAGO offers as a terminal block manufacturer – makes the process even faster and more efficient.

In addition to these benefits, users also gain from digital continuity, ensuring seamless data flow from distribution planning in the engineering system to the construction of the control cabinet.

Your Benefits:

- **User-friendly operation**
- **Digital continuity from distribution planning in the engineering system to the construction of the control cabinet**
- **Significant time savings**

Software

Available

Collect and Distribute More Connections in the Same Space

New 4-Conductor Through Terminal Blocks with 6 mm² Nominal Cross-Section

In the field of through terminal blocks, WAGO's product portfolio is expanding to include new 4-conductor through terminal blocks, complementing the existing 2- and 3-conductor variants for the 6 mm² terminal blocks. These new blocks are available with or without push-buttons and have a nominal cross-section of 6 mm² (max., but also 10 mm² can be connected).

Just like the previously available 2- and 3-conductor terminal blocks, the new 4-conductor through terminal blocks are versatile and find particular application in photovoltaic systems. The significant advantage is that the 4-conductor terminal blocks provide more connection points within the same width. This allows for more strings to be collected and distributed in the generator connection box, optimizing the available space while maintaining the same footprint. Of course, these advantages can also be utilized in other applications.

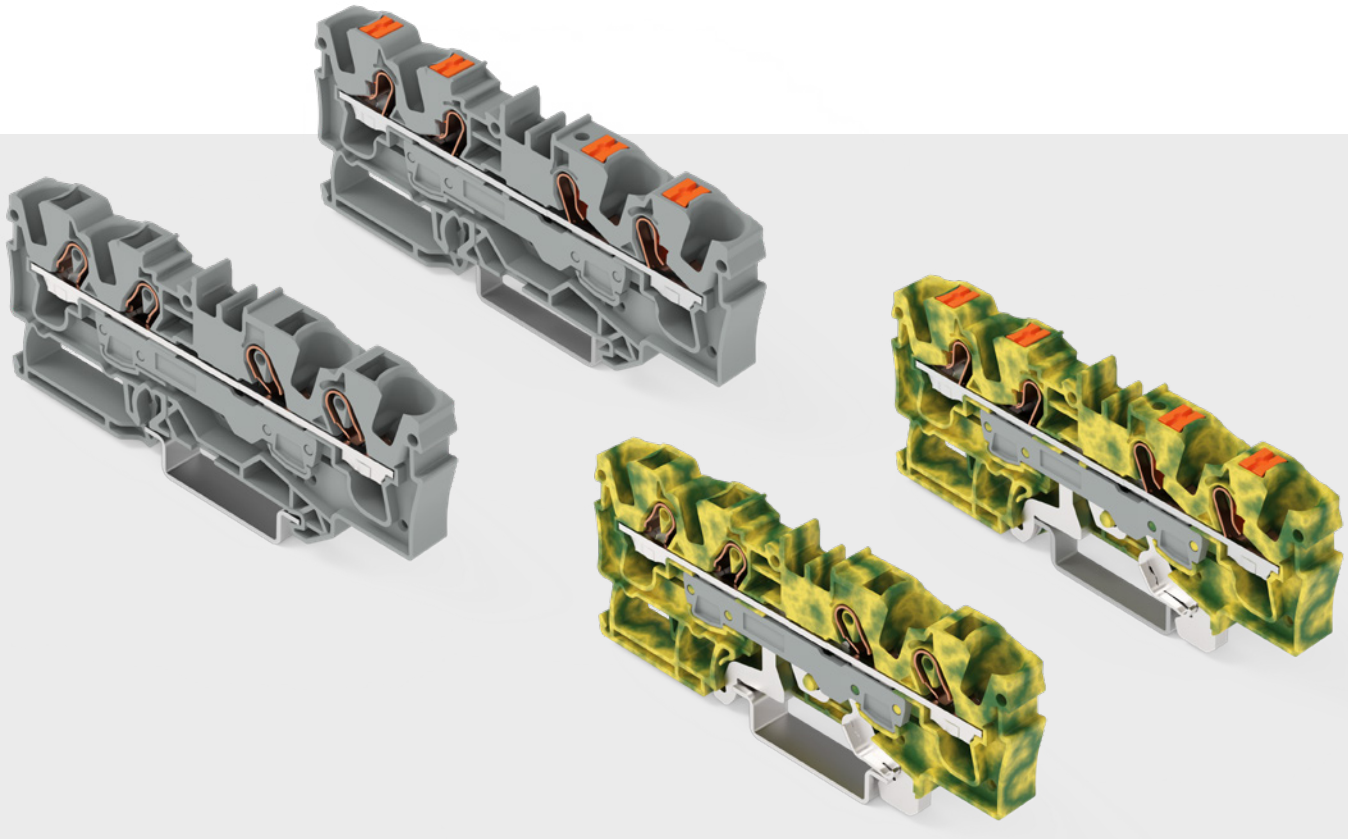
Your Benefits:

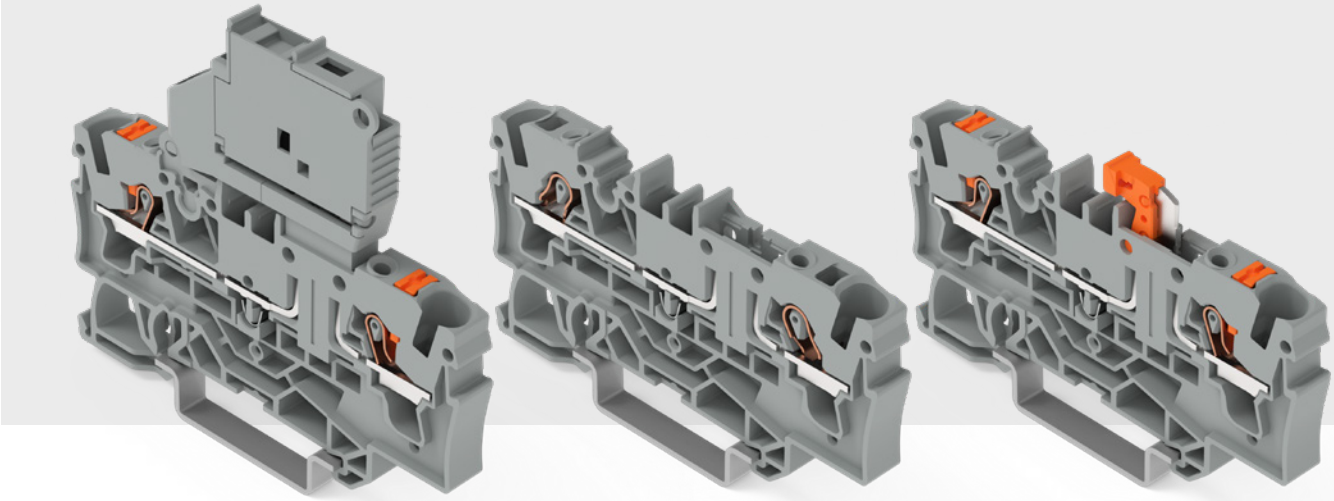
- **Increased connection points**
- **Space-saving design in the generator connection box**
- **Four connection points with a nominal cross-section of 6 mm²**

Item Numbers:

2006-1401
2006-1407
2206-1407
2206-1401

Available





Expansion of the Function Terminal Block Portfolio

New 4 mm² function terminal blocks fill the gap between 2.5 mm² and 6 mm² cross-sections.

The portfolio of function terminal blocks now also includes 4 mm² terminal blocks as 2-conductor variants with operating slots or push-buttons. Like the 2002/2202 and 2006/2206 Series Terminal Blocks, the new function terminal blocks are compatible with both the TOPJOB® S jumper and marking systems, seamlessly integrating into the existing range of function terminal blocks.

The 2-conductor function terminal blocks, available as base, fuse, through and disconnect terminal blocks, are compactly designed with a width of 6.2 mm. The fuse terminal block, compatible with 5 mm microfuses, does not require additional widening with an end plate. They are primarily used in the process industry and in device and system engineering, making them versatile.

Your Benefits:

- **Compact design**
- **Versatile applications**
- **Compatible with 2004 and 2204 Series jumper and marking systems**

Item Numbers:

2004/2204-1601
(Through terminal block)
2004/2204-1611
(Fuse terminal block with suffix number for blown fuse indication)
2004/2204-1661
(Carrier terminal block)
2004/2204-1671
(Disconnect terminal block)
2004/2204-1681
(Automotive)

Available

The 221 Series Family Continues to Grow

The 221 Series Splicing Connector with Levers are now available with ten connection points.

Pull the lever up, insert a conductor and push the lever back down – done! Wiring using the 221 Series Splicing Connectors with Levers is that simple. And now, the family is expanding! The new 221 Series Double-Deck Splicing Connector with Levers allows installers to easily connect up to ten conductors of the same potential without tools, thanks to its user-friendly design.

Item Numbers:

221-420

221-430

Green Range

221-490

Ex Area

221-5x9

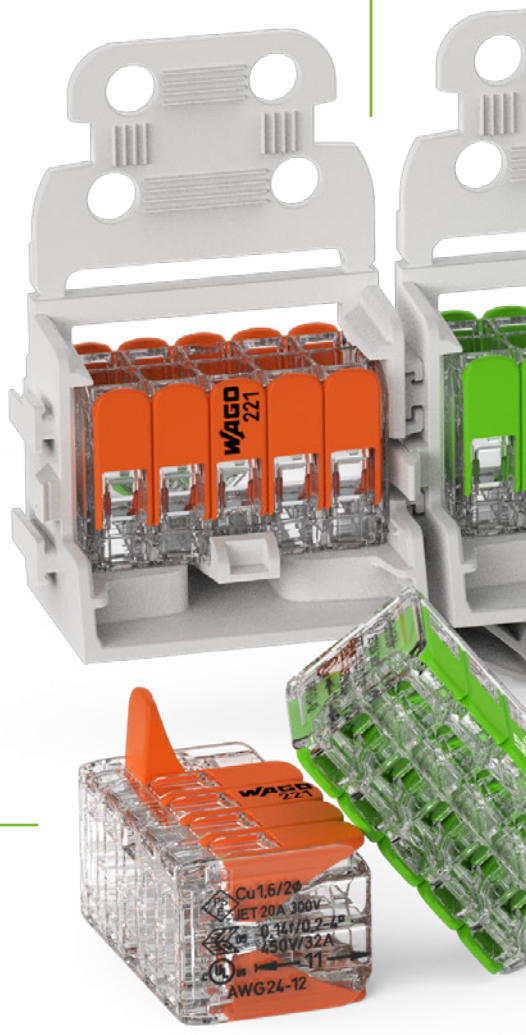
Mounting Carrier

Availability:

Q1/2025

No loss of conductor connections compared to commoning methods

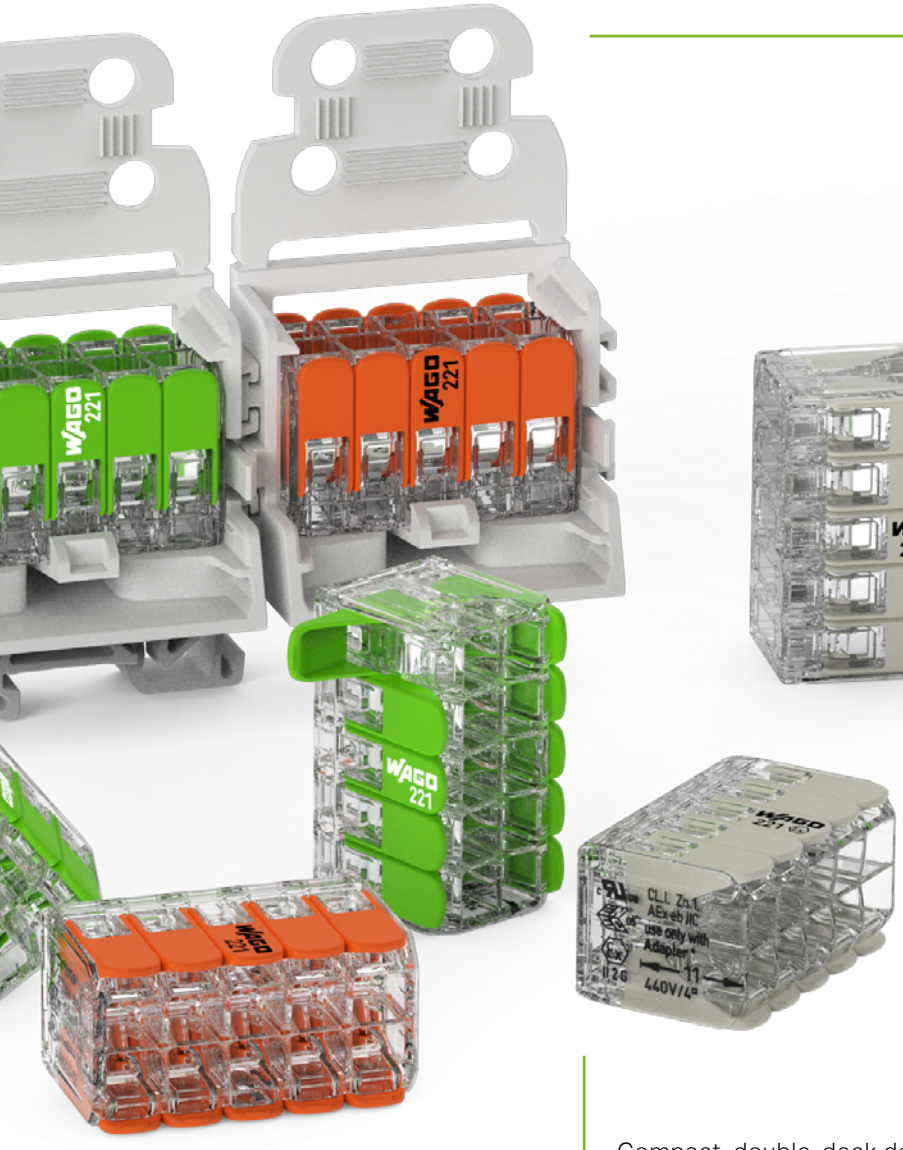
A must-have for every toolbox: Ideal for wiring heating distribution systems, junction boxes, suspended ceilings, lighting groups and more



Same technical features and certifications as the 2-, 3- and 5-conductor lever splicing connector of the 221 Series

Suitable for fine-stranded conductors from 0.14 to 4 mm², as well as stranded conductors from 0.2 to 4 mm²

Install spontaneously on site or planned and pre-wired



Versatile accessories for secure installation: Mounting carriers for vertical and horizontal mounting on the DIN-rail, with or without snap-in feet, as well as strain relief plates

Also available in versions for Ex areas and the Green Range (Green Range available from Q1/2025)

Compact, double-deck design saves space

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