INTERFACE ELECTRONICS

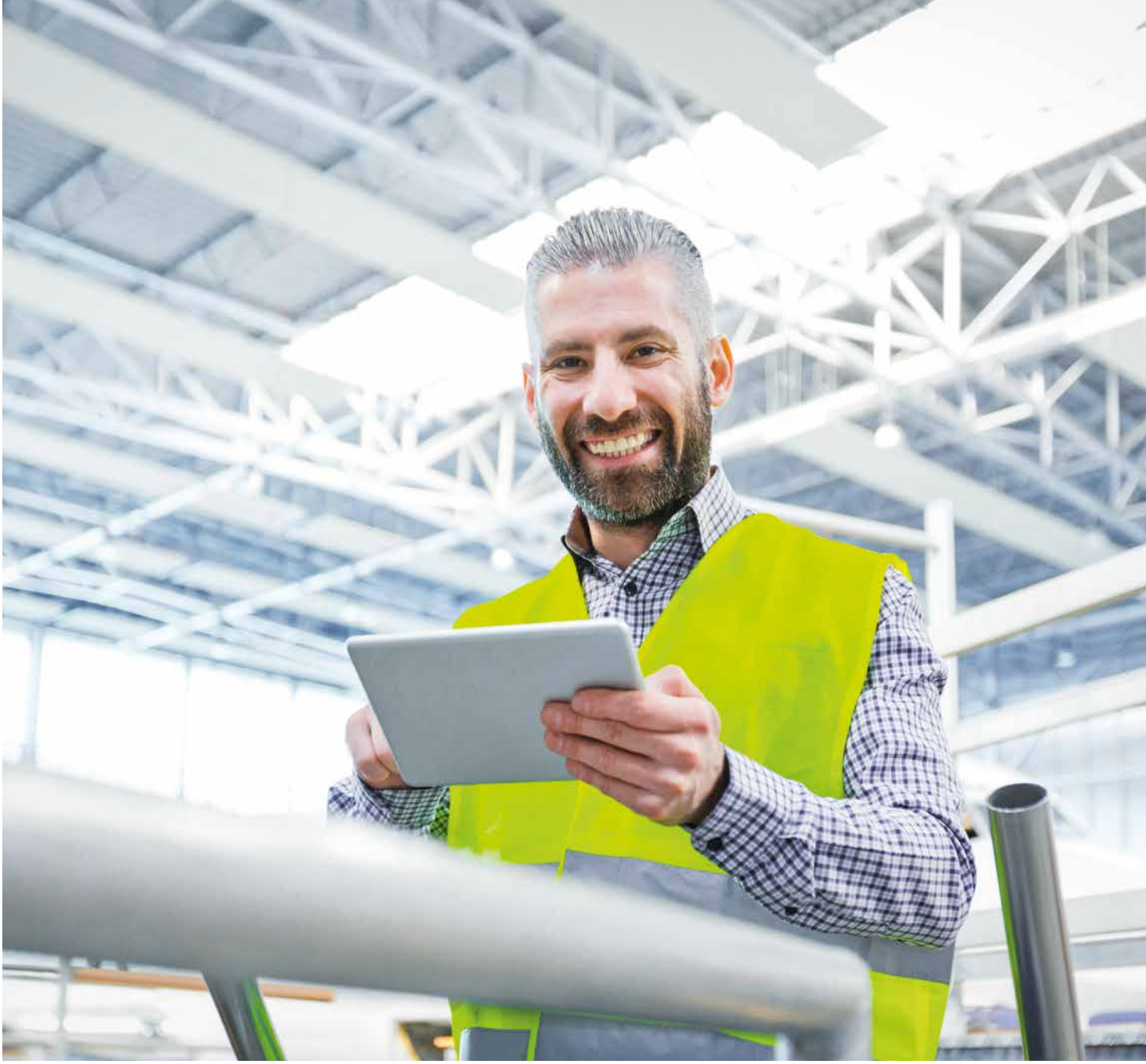
RELIABLE SYSTEMS FOR HIGH AVAILABILITY

UNPLANNED SYSTEM FAILURES COST TIME AND MONEY

In industry, system failures and unplanned downtime are among the biggest cost drivers. Making your company efficient requires reliable power supply solutions.

With its comprehensive portfolio of uninterruptible and redundant power supplies, WAGO systems ensure particularly high system availability.

For monitoring the mains supply, a comprehensive range of current transformers and voltage taps are also available, both for assessing grid stability and measuring energy consumption.



» Maximum productivity with uninterruptible and redundant power supplies «

RELIABLE
POWER SUPPLY

→ P. 6

Eco 2 Power Supply

Electronic Circuit Breaker (ECB)

Pro 2 Power Supply

Uninterruptible Power Supply (UPS)

PRECISE
MEASUREMENT

→ P. 18

Energy Meter (MID)

Modbus TCP Communication Module

Split-Core Current Transformer


RELIABL
POWER


LE
R SUPPLY

EXPERT POWER, PROTECTION AND MONITORING FOR MACHINES AND SYSTEMS

WAGO's broad product range offers perfectly coordinated solutions for setting up your power supply system – whether for basic requirements or high-end applications.

Long service life, low costs and a compact design: the ideal combination. Our power supply systems offer these with both the Eco 2 Series and our electronic circuit breakers.

Power Supply

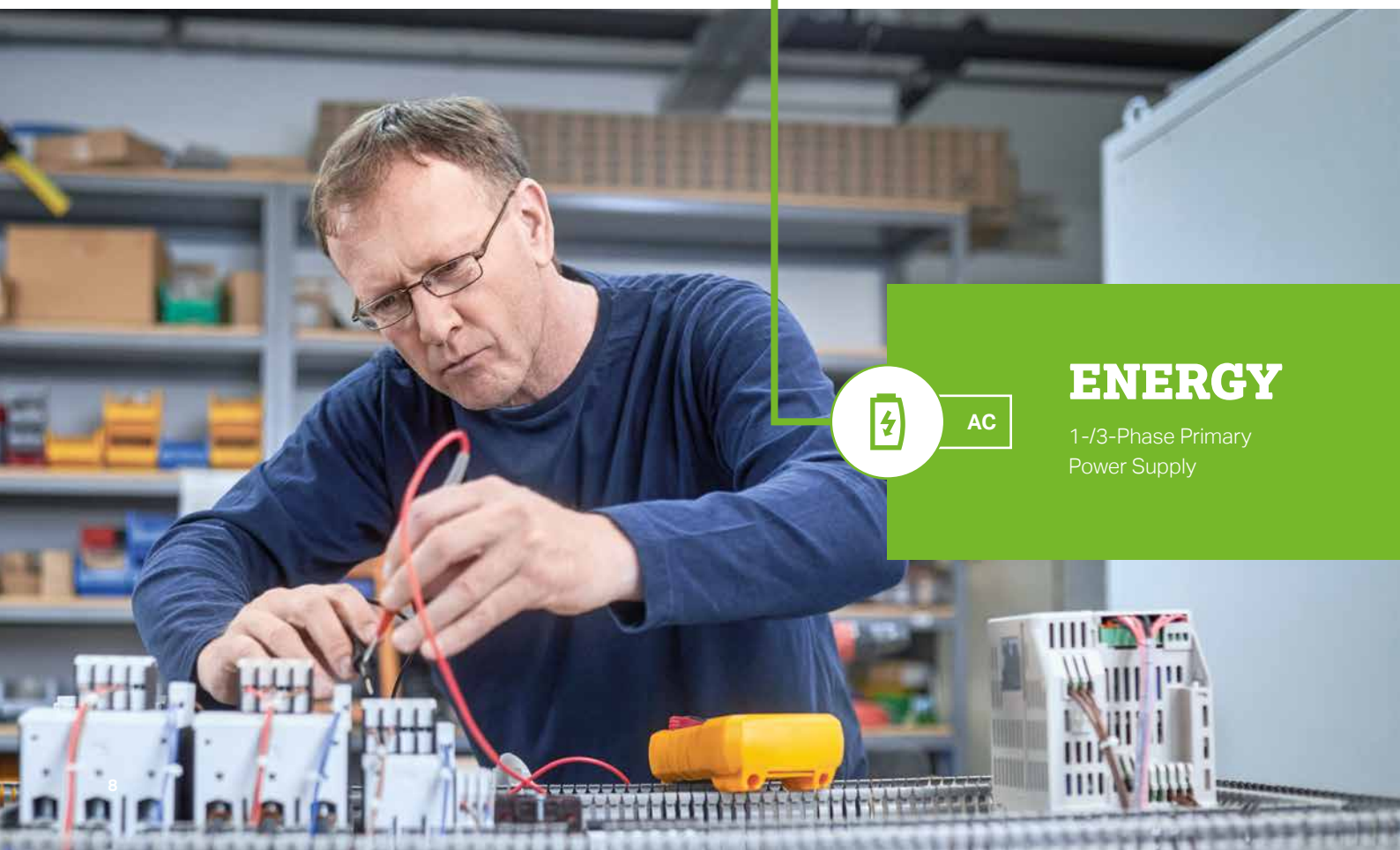
High efficiency thanks to cost-optimized design; fast and easy installation thanks to our lever connection technology

Protection

Protection of the system in the event of overload or short circuit thanks to our electronic circuit breakers

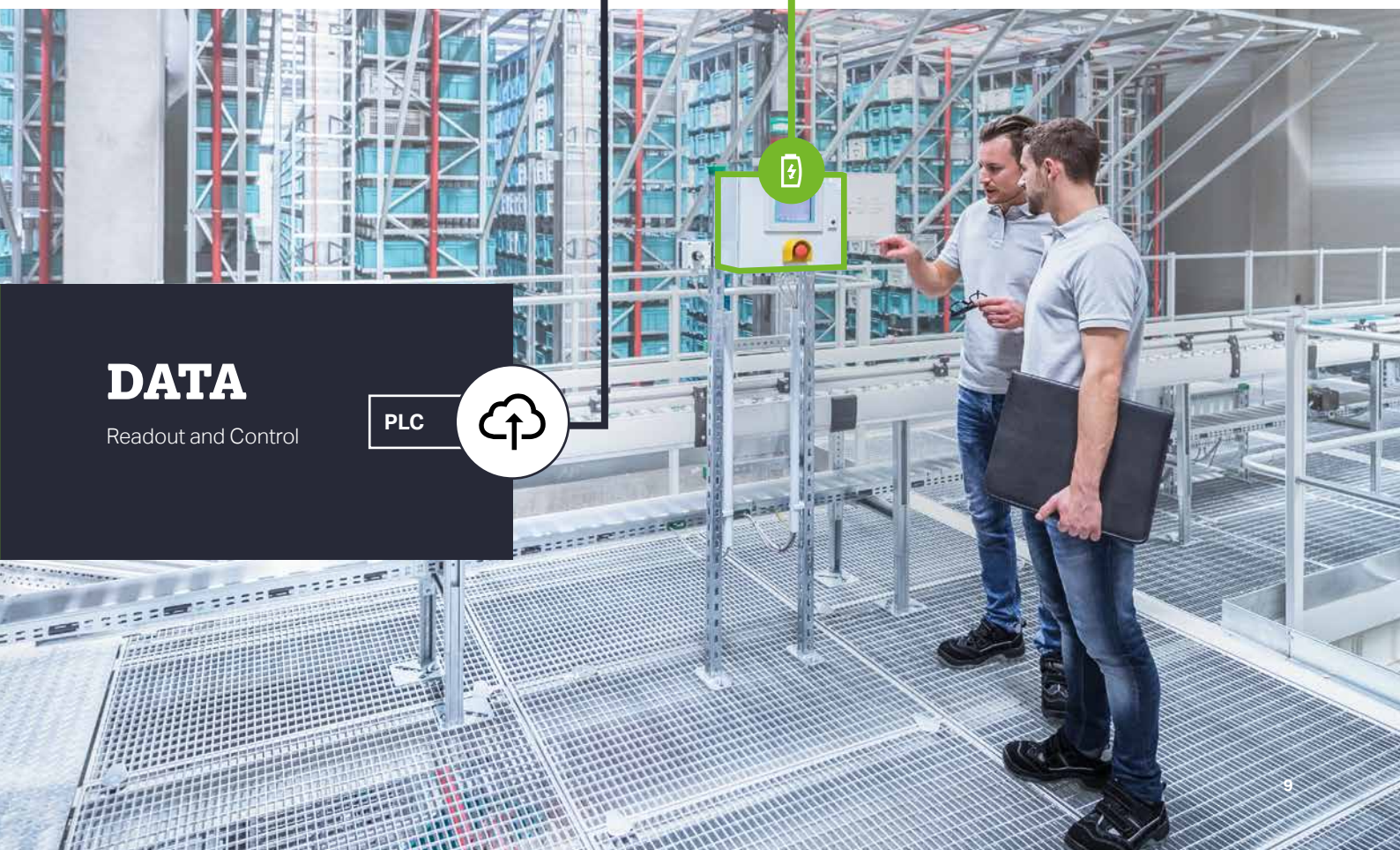
Monitoring

Easy to incorporate into control systems via integrated communication interfaces



Eco 2 Power Supply

Electronic Circuit Breaker (ECB)



DATA

Readout and Control

PLC

POWER SUPPLIES ECO 2

Economic Benefits

- High efficiency – and low power loss as a result
- Compact design reduces space requirements in the control cabinet
- Push-in CAGE CLAMP® and lever-operated terminal blocks reduce installation time

Technical Benefits

- Output voltage easily adjustable via potentiometer
- Flexible connection cables with ferrules can be connected directly via Push-in CAGE CLAMP®
- Compatible with our electronic circuit breakers and uninterruptible DC/DC power supplies

Eco 2 Power Supplies, Item Numbers:

2687-2142

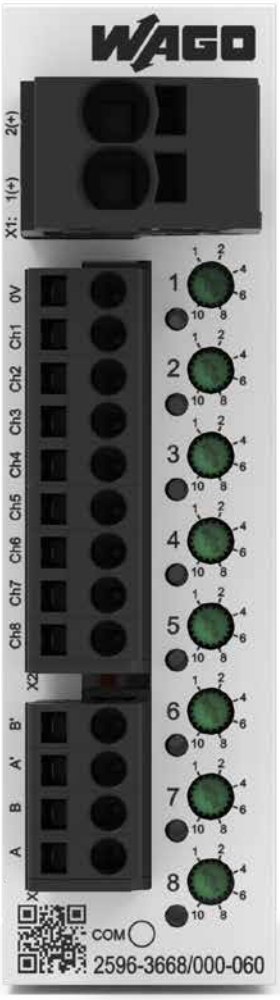
2687-2143
2687-2144
2687-2146
2687-2148
2687-2346

ELECTRONIC CIRCUIT BREAKERS (ECB)

Electronic Circuit Breakers, Item Numbers:

2596-3668/000-060

2596-3664/000-060
2596-3664/000-080
2596-3668/000-080
2596-3664/000-050
2596-3668/000-050



Economic Benefits

- Four or eight channels in a housing width of just 32 mm; saves control cabinet space
- Quick installation via pre-wired pluggable connectors with protection against mismating
- Easy to expand from four channels to eight, or reduce from eight channels to four, by swapping in devices of the same width (32 mm)

Technical Benefits

- Reliable disconnection of the affected circuit in the event of overload and short circuit
- An LED-illuminated on/off/reset button and a potential-free signal contact can be used for easy, reliable operation of each ECB channel and for setting the corresponding trip current
- Devices can be configured, controlled and monitored via IO-Link, Modbus RTU or Manchester protocol

HIGH SYSTEM AVAILABILITY THANKS TO REDUNDANCY

Additional redundantly installed power supplies, each supplied by a different AC network, ensure power to your system. If one power supply fails, the redundantly installed one takes over its load. This is also true if an AC network fails and the power supplies installed in parallel are supplied by another AC network. Integrated decoupling MOSFET eliminates the need for an external redundancy module. This reduces costs and also saves a lot of space.

- With 1+1 redundancy, the total load is distributed across two devices. If one power supply fails, the other takes over the full load.
- With n+1 redundancy, more than two power supplies are operated redundantly. This allows > 50 % utilization per power supply to be achieved in normal operation. That increases overall efficiency, which reduces costs and can even save space in the control cabinet.
- Optional pluggable communication modules can be used to monitor the power supplies; failures are detected immediately and can be remedied quickly. In addition, the load profiles of the individual power supplies can be analyzed continuously.

Pro 2 Power Supplies, Item Numbers:

2787-3146/000-030
2787-3147/000-030
2787-3448/000-030
2787-3347/000-030
2787-3348/000-030

Communication Modules, Item Numbers:

2789-9015
2789-9080
2789-9052
2789-9023

PLC

DATA

Communication via Modbus RTU, Modbus TCP, EtherNet/IPTM + MQTT, IO-Link

AC

ENERGY

1-/3-Phase Primary Power Supply

A RELIABLE POWER SUPPLY DESPITE UNSTABLE NETWORKS

In the event of brief power failures, our uninterruptible power supplies bridge periods of instability and can be trusted to keep your system in operation.

For prolonged power failures, the connected system can be shut down safely. 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 information determines the type and size of the energy storage device.

LiFePO4

Eco 2 Power Supply

UPS with Integrated LiFePO4 Battery

Greater buffer time for longer supply periods thanks to large energy storage units (up to 33 Wh)

AC

ENERGY

DATA

Supercaps

UPS with Integrated Supercaps

Rapid return to operational readiness and reliable buffering during brief outages (1.59 Wh)

Eco 2 Power Supply

Configuration via USB-C and continuous remote diagnostics via Modbus RTU

ENERGY

AC

UPS WITH INTEGRATED LIFEPO4 BATTERY

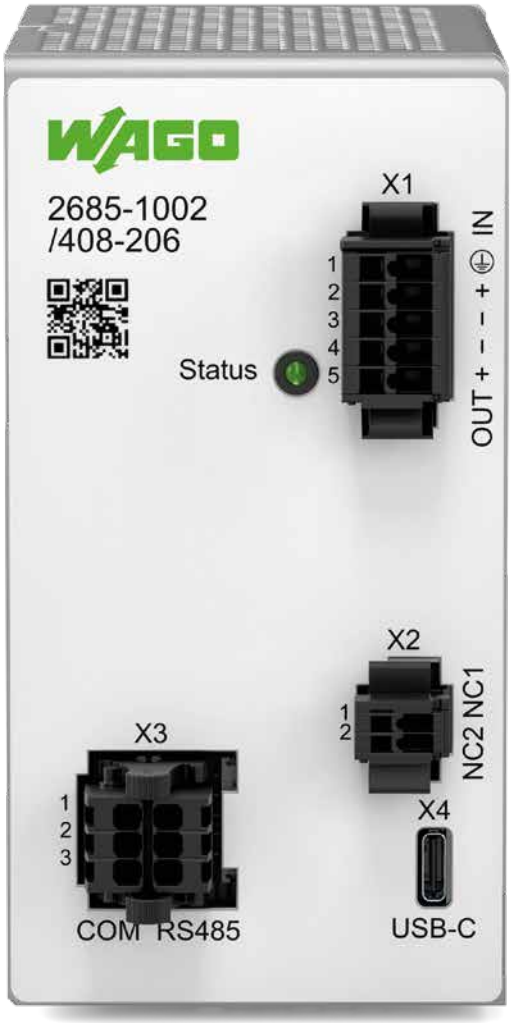
Economic Benefits

- Integrated controller, energy storage and communication interface in one device with a compact form factor
- The LiFePO4 battery pack offers especially impressive performance in safety-related applications due to its extremely stable battery chemistry, a service life of at least 10 years and more than 6000 full charging and discharging cycles
- Significant space and cost advantages over lead-acid batteries

Technical Benefits

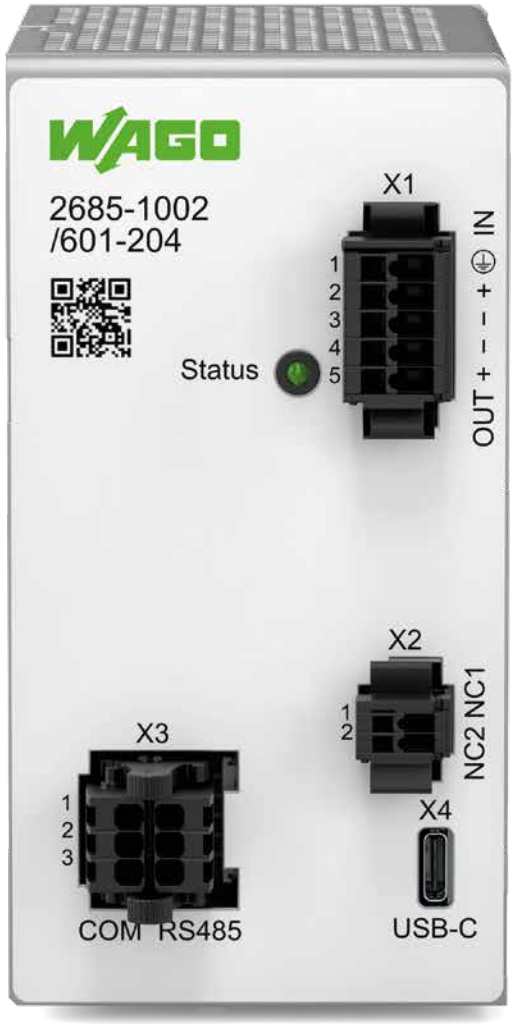
- Longer buffer times for up to 33 Wh and high energy and power density
- Lighter than lead-acid batteries
- The Battery Management System (BMS) offers optimal power control and guarantees the highest level of safety and reliability in any operating situation

UPS with Integrated LiFePO4 Battery, Item Number:
2685-1002/408-206



UPS WITH INTEGRATED SUPERCAPS

UPS with Integrated Supercaps,
Item Number:
2865-1002/601-204



Economic Benefits

- Integrated controller, energy storage and communication interface in one device with a compact form factor
- Long service life and maintenance-free operation – even in high and low temperature ranges
- Durable energy storage device with more than 500,000 charging and discharging cycles

Technical Benefits

- The UPS with supercaps is ideal for bridging short and medium-duration power failures for up to 1.59 Wh
- RS-485 Modbus communication interface supports status queries and advanced control
- Controlled output voltage in backup mode

PRECISE **MEASURE-MENT**

Split-Core Current Transformers

CONTINUOUS MONITORING OF ALL ENERGY VALUES

Greater energy consumption requires optimal utilization of the installed system to avoid unnecessarily cost increases.

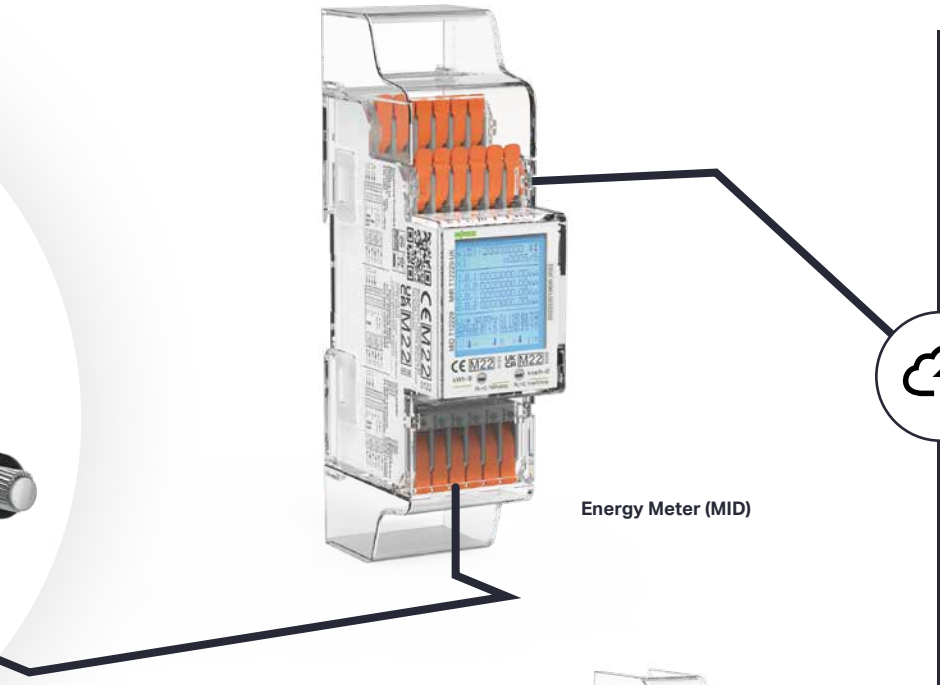
Continuous current monitoring helps previous overloads while enabling optimal utilization of load limits. Our new split-core current transformers allow retrofitting without the need to remove existing system parts. Connected energy meters handle data logging and transmission of the measured energy data to higher-level controllers.

Measurement

WAGO's new split-core current transformers with Push-in CAGE CLAMP® technology allow intuitive wiring; their hinged mechanism makes them ideal for retrofitting.

Monitoring

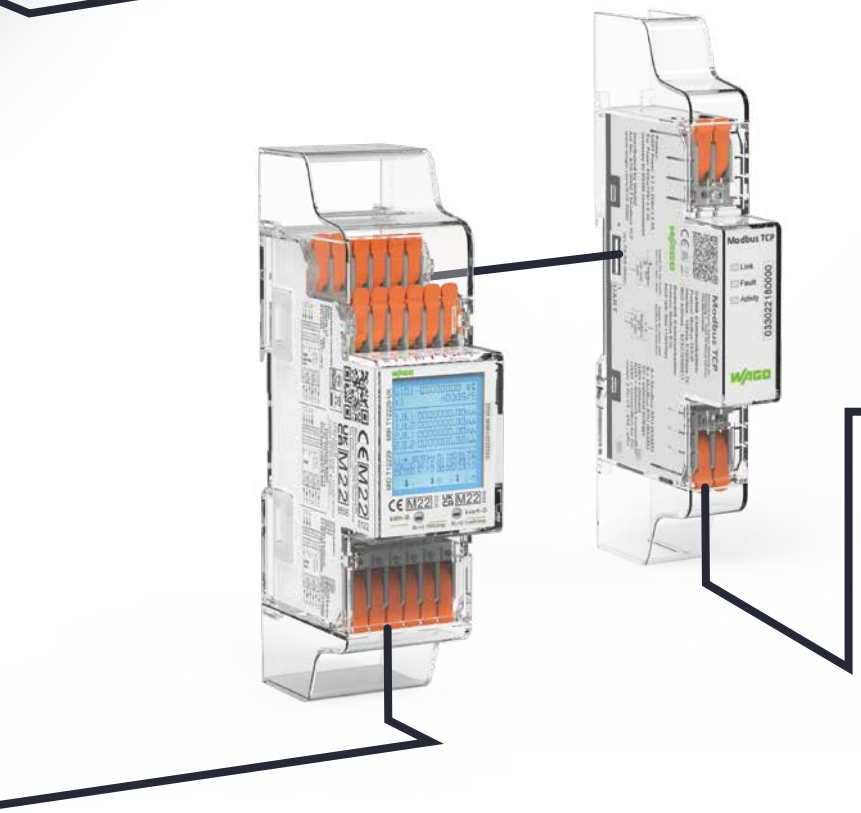
Our energy meters always come with a built-in M-Bus and Modbus RTU interface. If the data needs to be transmitted directly via ETHERNET, an additional TCP communication module handles the conversion.



Energy Meter (MID)

Option 1

Serial interface



Energy Meter (MID)

Modbus TCP Communication Module

Option 2

IP-based communication

ENERGY METERS (MID)

Economic Benefits

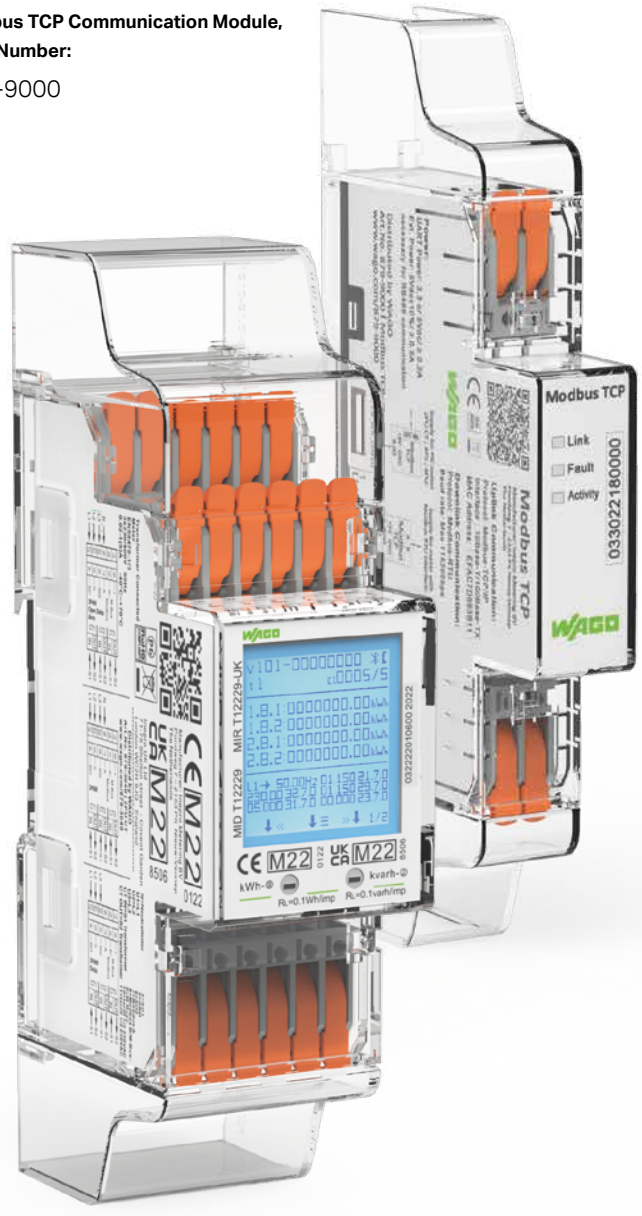
- Real space savings: 72 mm wide for direct meters and 35 mm wide for measurement transformer meters
- Proven WAGO CAGE CLAMP® connection technology with levers reduce installation time
- Transparent display of key energy figures in the app; can be exported for further evaluation
- Compliance with the MID Directive 2014/32/EU allows use in consumption billing applications

Technical Benefits

- Easy, intuitive configuration via configuration app or right on the device
- Comprehensive communication options: Modbus®, M-Bus and pulse output combined in one device
- UART interface on the side allows communication modules to be snapped on (e.g., Modbus TCP, item number 879-9000)

Energy Meters (MID), Item Numbers:
879-3000
879-3020

Modbus TCP Communication Module, Item Number:
879-9000



SPLIT-CORE CURRENT TRANSFORMERS

Split-Core Current Transformers, Item Numbers:

855-4201/060-103
855-4201/075-103
855-4201/100-103
855-4201/125-103
855-4201/150-203
855-4201/200-203
855-4201/250-303
855-4201/100-001
855-4201/125-001
855-4201/150-001
855-4201/200-101
855-4201/250-201
855-4205/150-001
855-4205/200-001
855-4205/250-001

Economic Benefits

- Fast installation and retrofit; can be pre-assembled in the system via built-in lever-actuated connectors
- Easy planning and design of the transformer connection cable with free cable length calculator from WAGO
- Reduced storage costs, since only a small number of different types are required to cover a wide range of applications

Technical Benefits

- The detachable hinge allows the upper part to be removed and ensures easy installation – even under difficult conditions and in tight spaces.
- Thanks to the integrated WAGO 221 Series Inline Splicing Connector, the transformers are suitable for direct, tool-free connection of flexible or rigid cables.
- The integrated shorting link, which can be plugged in at two positions, enables safe, reliable installation and commissioning.

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