



# WAGO Power Supply Systems

Edition 2025/1



# WAGO Full Line Catalogs



## WAGO Installation Connectors

- Splicing Connectors with Levers
- Inline Splicing Connectors with Levers
- Lighting Connectors
- PUSH WIRE® Splicing Connectors
- PUSH WIRE® Inline Splicing Connectors
- Luminaire Disconnect Connectors
- Gelboxes for Splicing Connectors
- Junction Box
- Cable Repair Set
- Splicing Connector Sets
- Accessories and Tools



## WAGO TOPJOB® S Rail-Mount Terminal Block Systems

- Rail-Mount Terminal Blocks TOPJOB® S
- Rail-Mount Terminal Blocks with a Pluggable Connector X-COM®-SYSTEM
- Installation Rail-Mount Terminal Blocks TOPJOB® S
- Miniature Rail-Mount Terminal Blocks TOPJOB® S
- High-Current Rail-Mount Terminal Blocks
- Accessories and Tools



## WAGO Rail-Mount Terminal Blocks Classic

- Rail-Mount Terminal Blocks Classic
- Rail-Mount Terminal Blocks with a Pluggable Connector X-COM®-SYSTEM
- Patchboard Systems
- Busbar Terminal Blocks
- Rail-Mount Terminal Blocks Mini
- Modular Terminal Blocks and WAGO Terminal Strips
- Chassis-Mount Terminal Strips
- Field-Wiring Terminal Blocks



## WAGO PCB Terminal Blocks and Connectors

- PCB Terminal Blocks (THT; THR; SMD)
- *MULTI CONNECTION SYSTEM (MCS)*
- *picoMAX®; picoMAX® eCom*
- Pluggable PCB Terminal Blocks
- Feedthrough Terminal Strips
- Special Connectors
- Modulare Empty Housing
- Accessories and Tools



## WAGO Pluggable Connection System WINSTA®

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



### WAGO Automation Technology

Edition 2023/1



## WAGO Automation Technology

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



### WAGO Interface Electronics

Edition 2023/1



## WAGO Interface Electronics

- Coupler Relays
- Solid-State Relays
- Signal Conditioners and Isolation Amplifiers
- Energy Measurement Technology
- System Wiring
- Component Modules
- Empty Housing
- Protective Devices and Protective Electronics
- Accessories and Tools



### WAGO Power Supply Systems

Edition 2023/1



## WAGO Power Supply Systems

- Power Supplies; 1-Phase
- Power Supplies; 3-Phase
- Special Supplies
- Circuit Protection
- DC/DC Converters
- UPS-Charger and Controllers and Capacitive Buffer Modules
- Redundancy Modules
- Energy Measurement Technology
- Potential Distribution
- Accessories and Tools



### WAGO Marking

Edition 2023/1



## WAGO Marking

- Thermal Transfer Smart Printer
- Digital Engineering – Smart Data
- Products for the Smart Printer
- Printed Products
- Plain Products
- Marker Carriers

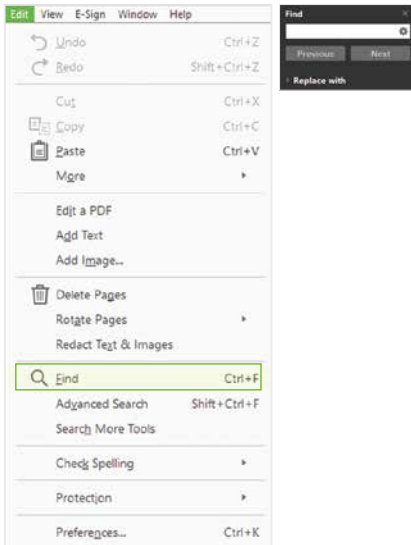
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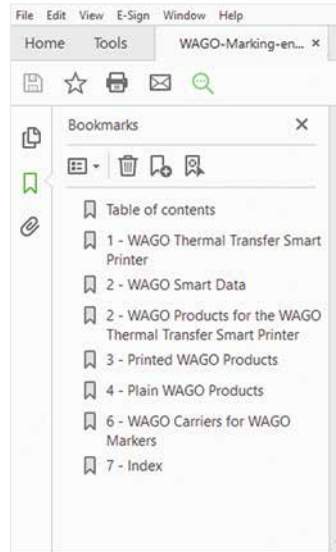
- Open the search dialog via **Edit > Find** or by clicking the **magnifying glass icon**. Alternatively, use the **Ctrl + F** keyboard shortcut.
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### Navigating with the Table of Contents

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You can also find additional clickable page numbers in the selection guides and the item number index.

### Links

To help you access additional information easily, this catalog includes links to various websites. These links may provide further product details, installation notes or quick access to important documents such as data sheets.

One example is our **item numbers**, which contain links to the corresponding product detail pages on our website. Simply click an item number to open the relevant product detail page.

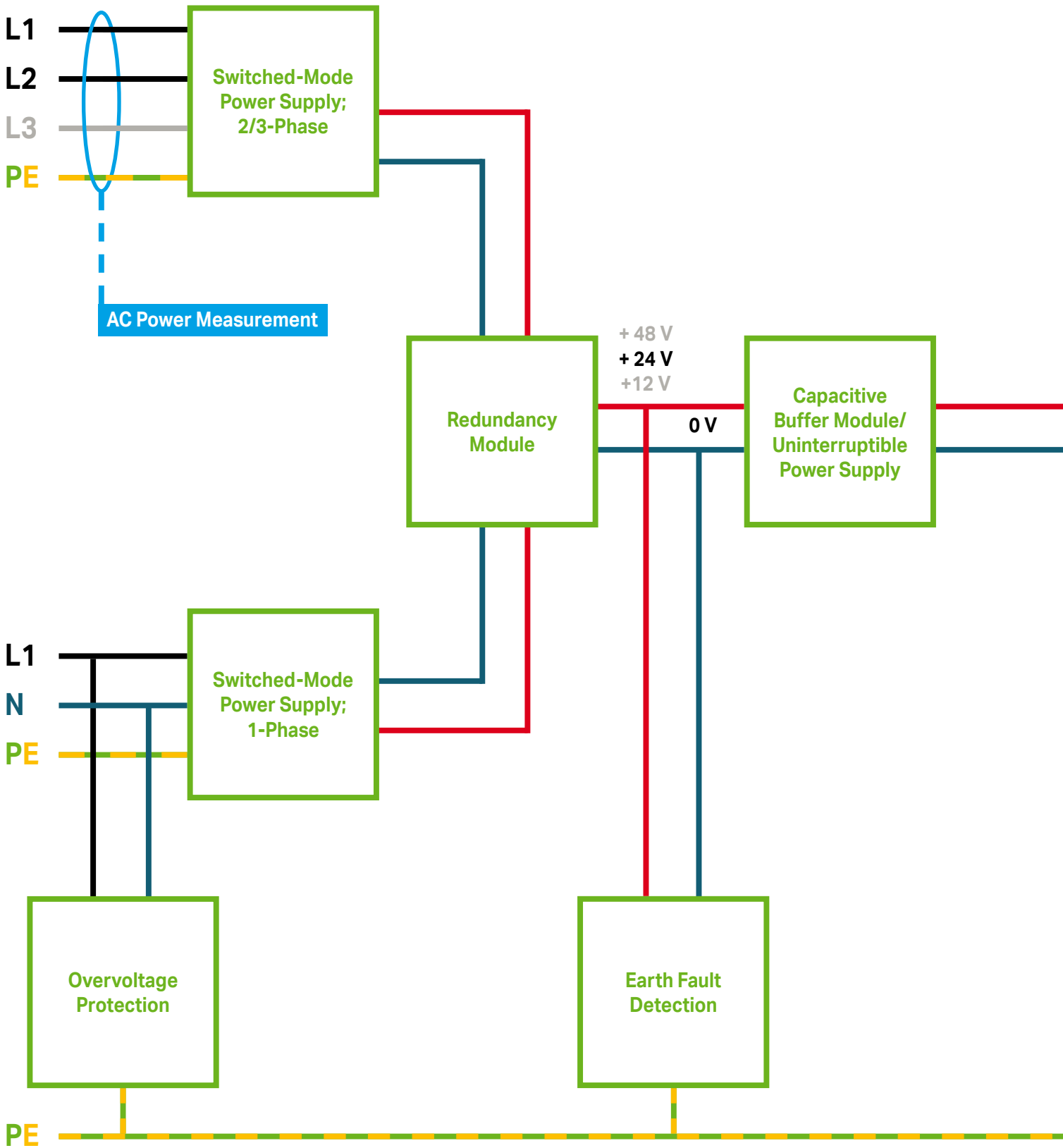


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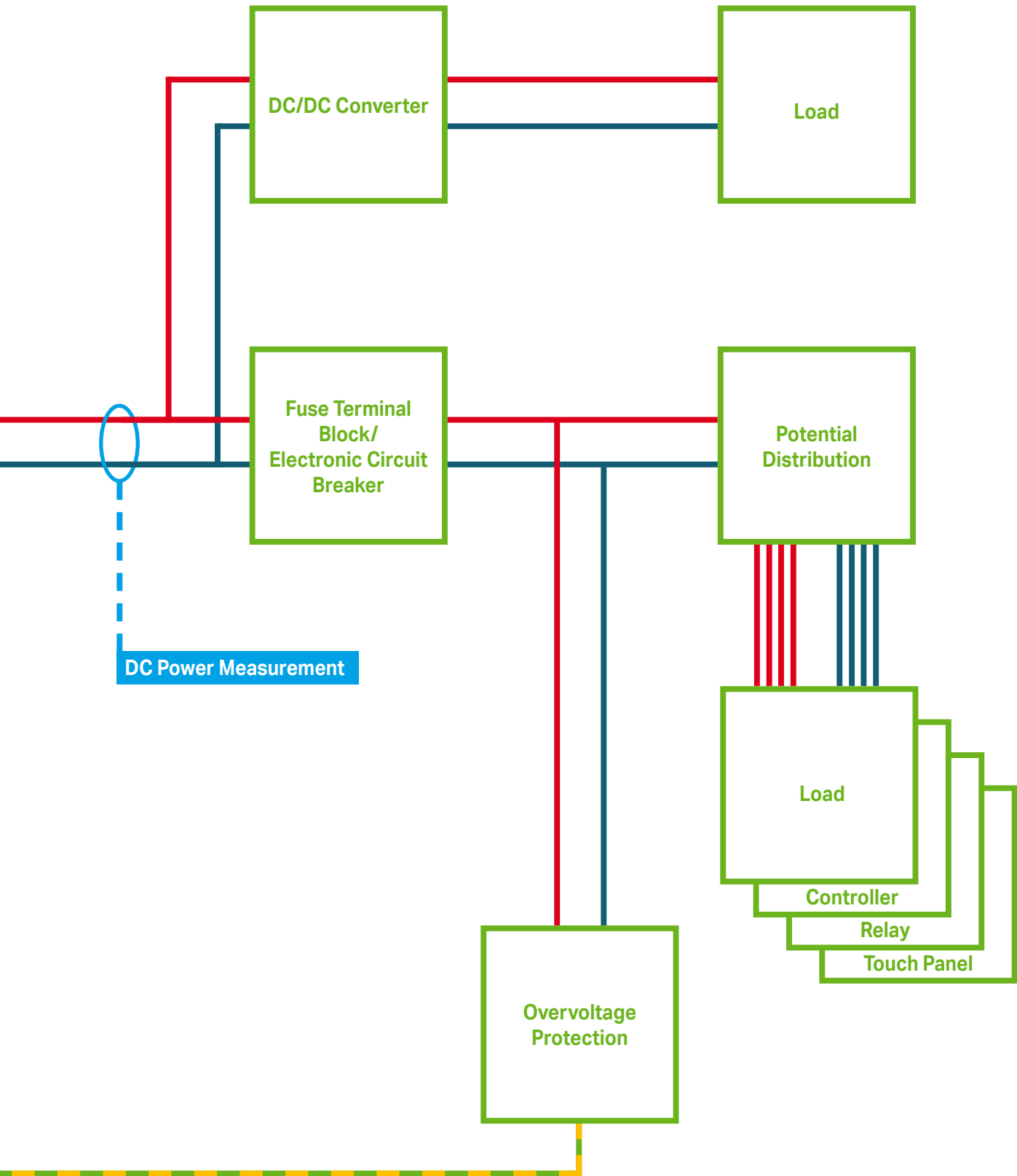
## WAGO Power Supply Systems 2025/1

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# WAGO Power Supplies System Overview



# WAGO Power Supplies System Overview



## WAGO Power Supplies



### WAGO Power Supplies Pro 2

New Generation of Professional Power Supplies for Applications Requiring High Performance, Efficiency and Reliability

WAGO's Pro 2 Power Supplies offer tremendous added value thanks to flexible configuration and comprehensive monitoring via optional communication interface (WAGO USB Communication Cable and IO-Link Communication Module).

#### Advantages:

- TopBoost function: Up to 600% output current for 15 ms
- PowerBoost function: 150% output power for 5 s
- High efficiency thanks to a CCFL inverter topology
- Single- and three-phase power supplies with output voltages of 24 VDC and nominal output currents from 5 to 40 A
- Communication interface for configuring threshold values, overload and DI/DO behavior, as well as monitoring output variables, warning and error messages
- Permanent communication via IO-Link through an optional pluggable communication module



### WAGO Power Supplies Pro

Applications with high output requirements call for professional power supplies capable of reliably handling power peaks. WAGO's Pro Power Supplies are ideally suited for such applications.

- TopBoost function: Multiplies the nominal current for up to 50 ms
- PowerBoost function: Provides 200% of output power for four seconds
- Single- and three-phase power supplies with output voltages of 12/24/48 VDC and nominal output currents from 5 to 40 A for nearly every application
- LineMonitor (option): Easy parameter setting and input/output monitoring
- Potential-free contact/stand-by input: Switch off output with no wear and minimize power consumption
- Serial RS-232 interface (option): Communicate with PC or PLC



### WAGO Power Supplies Classic

Classic is the robust power supply with optional TopBoost integration. A wide input range and extensive list of international approvals open up WAGO's Classic Power Supplies to a wide variety of applications.

- TopBoost: cost-effective, secondary-side fusing via standard circuit breakers ( $\geq 120$  W)
- Nominal output voltage: 12, 24, 30.5 and 48 VDC
- DC OK signal/contact for easy remote monitoring
- Wide input voltage range and UL/GL approvals for worldwide applications
- CAGE CLAMP® Connection Technology: maintenance-free and time-saving
- Slim, compact design saves valuable cabinet space



## WAGO Power Supplies



### WAGO Power Supplies Eco

Many applications only require 24 VDC. Here, WAGO's ECO Power Supplies are the economical solution.

- Output current: 1.25 ... 40 A
- Wide input voltage range for use internationally: 90 ... 264 VAC
- Economically supports basic applications
- CAGE CLAMP® Connection Technology: maintenance-free and time-saving
- LED status indication: output voltage availability (green), overcurrent/short circuit (red)
- Flexible mounting on DIN-rail and variable installation via screw-mount clips – perfect for every application
- Flat, rugged metal housing: compact and stable design



### WAGO Power Supplies Eco 2

The Eco line of power supplies now includes WAGO Eco 2 Power Supplies with push-in technology and integrated WAGO levers. The new devices' compelling features include fast, reliable and tool-free lever connections, as well as an excellent price/performance ratio. At 25 mm and 38 mm wide, the power supplies are slim and compact. The devices are also extremely durable and reliable with their high efficiency of  $\geq 88\%$  (2687-2142) and lower thermal generation.

- Power supplies with a wide input voltage range of 90 ... 264 VAC (100 ... 373 VDC) Output voltage: 24 VDC, adjustable; Output power: 30 W (2687-2142) and 120 W (2687-2144)
- Integrated, tool-free lever-actuated push-in connection technology
- Slim design, high efficiency, good price/performance ratio
- Reliability, long service life (high MTBF)
- Quick, easy, maintenance- and tool-free connection technology



### WAGO Power Supplies Compact

WAGO's compact, high-performance Compact Power Supplies in DIN-rail-mount housings are available with output voltages of 5, 12, 18 and 24 VDC, as well as nominal output currents up to 6.5 A.

- Wide input voltage range for use internationally: 85 ... 264 VAC
- Flexible mounting on DIN-rail and variable installation via screw-mount clips
- Push-in CAGE CLAMP® Connection Technology (option): maintenance-free and time-saving
- Improved cooling due to a removable front plate: ideal for alternative mounting positions
- Dimensions per DIN 43880: suitable for installation in distribution and meter boards

## WAGO Power Supplies



### Uninterruptible Power Supply (UPS)

Consisting of a 24 V UPS charger and controller with one or more connected batteries, WAGO's Uninterruptible Power Supply reliably powers an application for several hours. Trouble-free machine or system operation is guaranteed – even in the event of brief power supply failures.

- Slim charging and control units save control cabinet space
- Integrated display and RS-232 interface (option) simplify visualization and configuration
- Pluggable CAGE CLAMP® Connection Technology: maintenance-free and time-saving
- Battery control technology for predictive maintenance that extends battery life



### Capacitive Buffer Modules

In addition to reliably ensuring trouble-free machine and system operation – even through brief power failures – WAGO's Capacitive Buffer Modules offer power reserves that may be required when starting heavy motors or triggering a fuse.

Decoupled output: integrated diodes for decoupling buffered loads from unbuffered loads

- Maintenance-free and time-saving connections via pluggable connectors equipped with CAGE CLAMP® Connection Technology
- Unlimited parallel connections possible
- Adjustable switching threshold
- Maintenance-free, high-energy gold caps



### Redundancy Modules

WAGO's Redundancy Modules are ideal for reliably increasing power supply availability. These modules decouple two parallel-connected power supplies and are ideal for applications where an electrical load must be reliably supplied – even in the event of a power supply failure.

- Integrated power diodes with overload capability: suitable for Top-Boost or PowerBoost
- Potential-free contact (option) for input voltage monitoring
- Reliable connection via pluggable connectors equipped with CAGE CLAMP® or terminal strips with integrated operating levers: maintenance-free and time-saving
- Solutions for 12, 24 and 48 VDC supply, up to 76 A supply: suitable for nearly every application

## WAGO Power Supplies



### Electronic Circuit Breakers (ECBs)

WAGO's ECBs are the space-saving and precision solution for fusing DC voltage circuits.

- 1-, 2-, 4- and 8-channel ECBs with fixed or adjustable currents ranging from 0.5 to 12 A
- High switch-on capacity: >50,000  $\mu\text{F}$
- Communication capability: remote monitoring and reset
- Pluggable CAGE CLAMP® Connection Technology (option): maintenance-free and time-saving
- Comprehensive range of approvals: many applications



### DC/DC Converters

Instead of using an additional power supply, WAGO's DC/DC Converters are ideal for specialty voltages, allowing sensors and actuators to be reliably supplied.






DC/DC Converters can be used instead of an additional power supply for applications with specialty voltages.

- Slim design: "True" 6.0 mm (0.23 inch) width maximizes panel space
- Wide operating temperature range
- Ready for worldwide use in many industries, thanks to UL listing
- Common profile with 857 and 2857 Series Signal Conditioners and Relays: Enables full commoning of the supply voltage



# WAGO Power Supplies; 1-Phase

## WAGO Power Supplies; 1-Phase

		Seite
	<b>Pro/Pro 2</b> Switched Mode Power Supply; 787 / 2787 Series	12
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# WAGO Power Supplies; 1-Phase Selection Guide

1

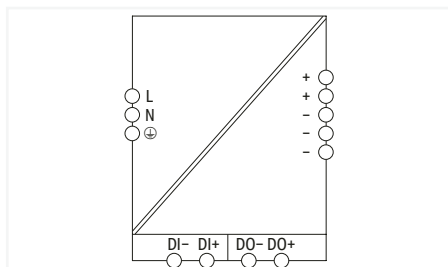
Product Family	Nominal voltage (output)	SELV / PELV	Nominal current (output) [ACD]	Input, 1-phase	Input, 2-phase	Standards/Approvals						DC OK LED	DC OK signal	DC OK contact	Communication capability	TopBoost	PowerBoost with protective coating	Efficiency typ.	Surrounding air temperature	Item No.
						EN 60335	UL 60950	UL 508	UL 61010	DNV	ANSI/SA 12.12.1									
Compact	5 V	■	5.5 A	■		■	■		■			■						75 %	-25 ... +60 °C	787-1020
Compact	12 V	■	2 A	■		■	■		■			■						80 %	-25 ... +60 °C	787-1001
Eco	12 V	■	2 A	■		■	■		■			■						80 %	-20 ... +60 °C	787-1701
Classic	12 V	■	2 A	■		■	■		■			■						82 %	-25 ... +70 °C	787-1601
Compact	12 V	■	2.5 A	■		■	■		■			■						88 %	-25 ... +70 °C	787-1201
Compact	12 V	■	4 A	■		■	■		■			■						85 %	-25 ... +60 °C	787-1011
Eco	12 V	■	4 A	■		■	■		■			■						80 %	-20 ... +60 °C	787-1711
Classic	12 V	■	4 A	■		■	■		■			■						86 %	-25 ... +70 °C	787-1611
Compact	12 V	■	5 A	■		■	■		■			■						88.5 %	-25 ... +70 °C	787-1211
Compact	12 V	■	6.5 A	■		■	■		■			■						87 %	-25 ... +60 °C	787-1021
Classic	12 V	■	7 A	■		■	■		■			■						86 %	-25 ... +70 °C	787-1621
Compact	12 V	■	8 A	■		■	■		■			■						91.5 %	-25 ... +70 °C	787-1221
Eco	12 V	■	8 A	■		■	■		■			■						80 %	-20 ... +60 °C	787-1721
Pro 2	12 V	■	10 A	■		■	■		■			■	■	■	■	■		93.8 %	-25 ... +70 °C	2787-2134
Classic	12 V	■	15 A	■		■	■		■			■		■	■	■		90 %	-25 ... +70 °C	787-1631
Pro 2	12 V	■	15 A	■		■	■		■			■	■	■	■	■		95.3 %	-25 ... +70 °C	2787-2135
Compact	18 V	■	1.25 A	■		■	■		■			■						88 %	-25 ... +70 °C	787-2857
Compact	18 V	■	2.4 A	■		■	■		■			■						84 %	-25 ... +60 °C	787-1017
Compact	24 V	■	0.5 A	■		■	■		■			■						83 %	-25 ... +70 °C	787-1200
Classic	24 V	■	1 A	■		■	■		■			■						86 %	-25 ... +70 °C	787-1602
Compact	24 V	■	1.25 A	■		■	■		■			■						88 %	-25 ... +70 °C	787-2850
Eco	24 V	■	1.25 A	■		■	■		■			■						87 %	-20 ... +60 °C	787-1702
Eco 2	24 V	■	1.25 A	■		■	■		■			■						88 %	-25 ... +70 °C	2687-2142
Compact	24 V	■	1.3 A	■		■	■		■			■						82 %	-25 ... +60 °C	787-1002
Compact	24 V	■	1.3 A	■		■	■		■			■						87 %	-25 ... +70 °C	787-1202
Classic	24 V	■	2 A	■		■	■		■			■						89 %	-25 ... +70 °C	787-1606
Compact	24 V	■	2.5 A	■		■	■		■			■						88 %	-25 ... +60 °C	787-1012
Compact	24 V	■	2.5 A	■		■	■		■			■						89 %	-25 ... +70 °C	787-1212
Eco	24 V	■	2.5 A	■		■	■		■			■						86 %	-10 ... +70 °C	787-712
Eco	24 V	■	2.5 A	■		■	■		■			■						88 %	-20 ... +60 °C	787-1712
Pro	24 V	■	3 A	■		■	■		■			■		■	■	■		87.8 %	-25 ... +70 °C	787-818
Classic	24 V	■	3.8 A	■		■	■		■			■						87 %	-25 ... +70 °C	787-1616/000-1000
Compact	24 V	■	4 A	■		■	■		■			■						88 %	-25 ... +60 °C	787-1022
Classic	24 V	■	4 A	■		■	■		■			■				■		89 %	-25 ... +70 °C	787-1616/000-070
Classic	24 V	■	4 A	■		■	■		■			■						89 %	-25 ... +70 °C	787-1616
Pro	24 V	■	5 A	■		■	■		■			■		■	■	■		87.8 %	-25 ... +70 °C	787-822
0	24 V	■	4 A	■		■	■		■			■						92.3 %	-40 ... +85 °C	787-6716
Compact	24 V	■	4.2 A	■		■	■		■			■						90 %	-25 ... +70 °C	787-1216
Base	24 V	■	5 A	■		■	■		■			■						88 %	-30 ... +70 °C	2587-2144
Eco	24 V	■	5 A	■		■	■		■			■						86 %	-10 ... +60 °C	787-722
Eco	24 V	■	5 A	■		■	■		■			■						88 %	-20 ... +60 °C	787-1722
Eco 2	24 V	■	5 A	■		■	■		■			■						90 %	-25 ... +70 °C	2687-2144
Classic	24 V	■	5 A	■		■	■		■			■		■	■	■		89 %	-25 ... +70 °C	787-1622
Classic	24 V	■	5 A	■	■	■	■		■			■						89 %	-25 ... +70 °C	787-1628
Pro 2	24 V	■	5 A	■		■	■		■			■		■	■	■		93.8 %	-25 ... +70 °C	2787-2144
Pro 2	24 V	■	5 A	■		■	■		■			■		■	■	■		93.8 %	-25 ... +70 °C	2787-2144/000-030
Pro 2	24 V	■	5 A	■		■	■		■			■		■	■	■		93.8 %	-25 ... +70 °C	2787-2144/000-070
Compact	24 V	■	6 A	■		■	■		■			■						90 %	-25 ... +70 °C	787-1226
Base	24 V	■	10 A	■		■	■		■			■						91 %	-30 ... +70 °C	2587-2146
Eco	24 V	■	10 A	■		■	■		■			■						86 %	-10 ... +70 °C	787-732
Eco	24 V	■	10 A	■		■	■		■			■						91 %	-20 ... +60 °C	787-1732
Eco 2	24 V	■	10 A	■		■	■		■			■						93 %	-25 ... +70 °C	2687-2146
Classic	24 V	■	10 A	■		■	■		■			■		■	■	■		91 %	-25 ... +70 °C	787-1632/000-070
Classic	24 V	■	10 A	■		■	■		■			■		■	■	■		91 %	-25 ... +70 °C	787-1632
Classic	24 V	■	10 A	■	■	■	■		■			■						89 %	-25 ... +70 °C	787-1638
Pro	24 V	■	10 A	■		■	■		■			■		■	■	■		90 %	-25 ... +70 °C	787-832
Pro 2	24 V	■	10 A	■		■	■		■			■		■	■	■		95.2 %	-25 ... +70 °C	2787-2146
Pro 2	24 V	■	10 A	■		■	■		■			■		■	■	■		95.2 %	-25 ... +70 °C	2787-2146/000-030
Pro 2	24 V	■	10 A	■		■	■		■			■		■	■	■		95.2 %	-25 ... +70 °C	2787-2146/000-070
Base	24 V	■	20 A	■		■	■		■			■						94 %	-30 ... +70 °C	2587-2147
Eco	24 V	■	20 A	■		■	■		■			■						90 %	-25 ... +70 °C	787-734
Classic	24 V	■	20 A	■		■	■		■			■		■	■	■		92 %	-25 ... +70 °C	787-1634

# WAGO Power Supplies; 1-Phase Selection Guide

1

Product Family	Nominal voltage (output)	SELV / PELV	Nominal current (output) [ACD]	Input, 1-phase	Input, 2-phase	Standards/Approvals						DC OK LED	DC OK signal	DC OK contact	Communication capability	TopBoost	PowerBoost	with protective coating	Efficiency typ.	Surrounding air temperature	Item No.
						EN 60335	UL 60950	UL 508	UL 61010	DNV	ANSI/SA 12.12.1										
Pro	24 V	■	20 A	■		■	■						■	■	■			91 %	-25 ... +70 °C	787-834	
Pro 2	24 V	■	20 A	■					■					■	■	■		95.4 %	-25 ... +70 °C	2787-2147	
Pro 2	24 V	■	20 A	■					■	■				■	■	■		95.4 %	-25 ... +70 °C	2787-2147/000-030	
Pro 2	24 V	■	20 A	■					■	■				■	■	■	■	95.4 %	-25 ... +70 °C	2787-2147/000-070	
Eco	24 V	■	40 A	■			■	■					■					90 %	-25 ... +70 °C	787-736	
Pro 2	24 V	■	40 A	■					■					■	■	■		96 %	-25 ... +70 °C	2787-2448	
Pro 2	24 V	■	40 A	■					■	■				■	■	■		96 %	-25 ... +70 °C	2787-2448/000-030	
Pro 2	24 V	■	40 A	■					■	■				■	■	■	■	96 %	-25 ... +70 °C	2787-2448/000-070	
Classic	48 V	■	2 A	■		■	■	■			■							86 %	-25 ... +70 °C	787-1623	
Pro 2	48 V	■	2.5 A	■					■					■	■	■		95.3 %	-25 ... +70 °C	2787-2154	
Classic	48 V	■	5 A	■			■	■					■		■			92 %	-25 ... +70 °C	787-1633	
Pro	48 V	■	5 A	■			■	■					■		■	■		91 %	-25 ... +70 °C	787-833	
Classic	48 V	■	10 A	■			■	■					■		■	■	■	93 %	-25 ... +70 °C	787-1635/000-070	
Classic	48 V	■	10 A	■			■	■		■			■		■			93 %	-25 ... +70 °C	787-1635	
Pro	48 V	■	10 A	■			■	■					■		■	■		91 %	-25 ... +70 °C	787-835	
Pro 2	48 V	■	10 A	■					■					■	■	■		95.3 %	-25 ... +70 °C	2787-2157	

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2134	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 1,3$ A
Inrush current	$\leq 9,6$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 40$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	12 VDC (SELV)
Output voltage range	12 ... 14 VDC (adjustable)
Nominal output current $I_{o, nom}$	10 A (12 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1,1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 0,8$ W (standby); $\leq 1,6$ W (no load); $\leq 10$ W (230 VAC; nominal load)
Efficiency (typ.)	93,8 %

Circuit protection	
Internal fuse	T 6,3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0,5 kVDC
Isolation voltage (sec.-signal)	0,5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

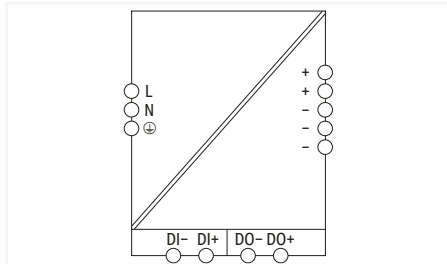
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0,08 ... 2,5 mm <sup>2</sup> / 0,08 ... 2,5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	35 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47



# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 15 A ▶ TopBoost ▶ PowerBoost



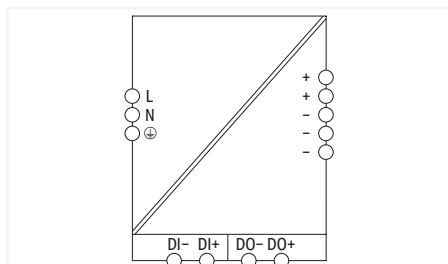
Item No.	PU
2787-2135	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 2 A (240 VAC; nominal load)
Inrush current	≤ 12 A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 40 ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	15 A (12 VDC)
Nominal output power	180 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 22.5 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Power loss $P_i$	≤ 0.8 W (standby); ≤ 2.3 W (no load); ≤ 14 W (230 VAC; nominal load)
Efficiency (typ.)	95.3 %
Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m.a.s.l.); II (> 2000 m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 1,200,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost



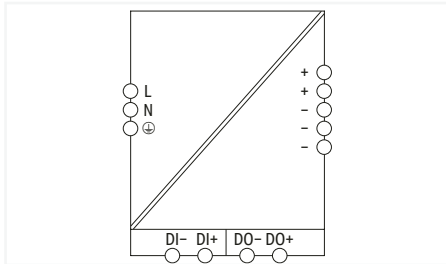
Item No.	PU
2787-2144	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 1$ A (240 VAC; nominal load); $\leq 1.8$ A (100 VAC; nominal load)
Inrush current	$\leq 9$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W (standby); $\leq 2$ W (no load); $\leq 10$ W (230 VAC; nominal load)
Efficiency (typ.)	93.8 % (230 VAC; 5 A; 25 °C)
Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	35 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2144/000-030	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 1 A (240 VAC; nominal load); ≤ 1.8 A (100 VAC; nominal load)
Inrush current	≤ 9 A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 20 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	≤ 1 W (standby); ≤ 2 W (no load); ≤ 10 W (230 VAC; nominal load)
Efficiency (typ.)	93.8 % (230 VAC; 5 A; 25 °C)

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

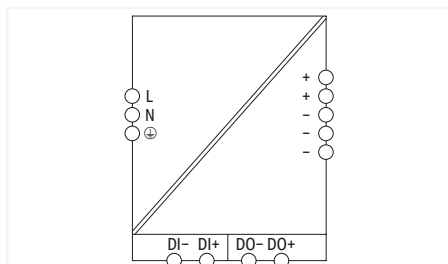
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 1,000,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	35 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2144/000-070	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 1 A (240 VAC; nominal load); ≤ 1.8 A (100 VAC; nominal load)
Inrush current	≤ 9 A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 20 ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	≤ 1 W (standby); ≤ 2 W (no load); ≤ 10 W (230 VAC; nominal load)
Efficiency (typ.)	93.8 % (230 VAC; 5 A; 25 °C)

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

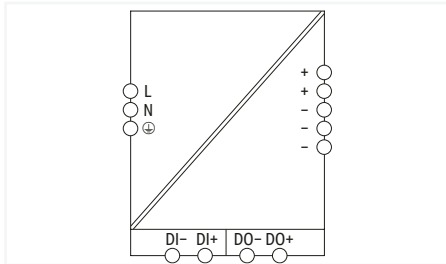
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 1,000,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	35 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; ISA S71.04:1985; G3 Group A; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



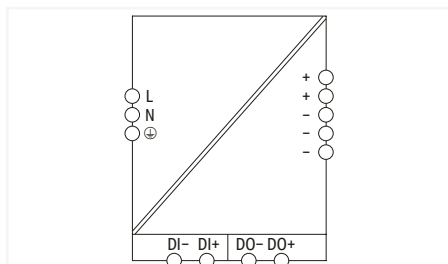
Item No.	PU
2787-2146	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 1.2$ A (240 VAC; nominal load); $\leq 2.7$ A (100 VAC; nominal load)
Inrush current	$\leq 11$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 25$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W (standby); $\leq 2.2$ W (no load); $\leq 12$ W (230 VAC; nominal load)
Efficiency (typ.)	95.2 % (230 VAC; 10 A; 25 °C)
Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 55$ °C and $U_i < 230$ VAC); -3 %/K ( $> 60$ °C and $U_i \geq 230$ VAC)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



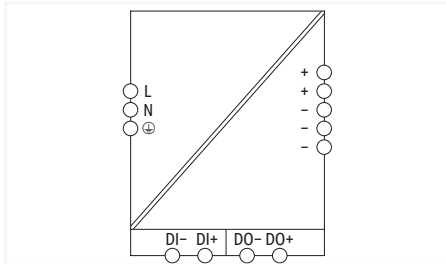
Item No.	PU
2787-2146/000-030	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 1.2$ A (240 VAC; nominal load); $\leq 2.7$ A (100 VAC; nominal load)
Inrush current	$\leq 11$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 25$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W (standby); $\leq 2.2$ W (no load); $\leq 12$ W (230 VAC; nominal load)
Efficiency (typ.)	95.2 % (230 VAC; 10 A; 25 °C)
Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 55$ °C and $U_i < 230$ VAC); -3 %/K ( $> 60$ °C and $U_i \geq 230$ VAC)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2146/000-070	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 1.2$ A (240 VAC; nominal load); $\leq 2.7$ A (100 VAC; nominal load)
Inrush current	$\leq 11$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 25$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W (standby); $\leq 2.2$ W (no load); $\leq 12$ W (230 VAC; nominal load)
Efficiency (typ.)	95.2 % (230 VAC; 10 A; 25 °C)

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

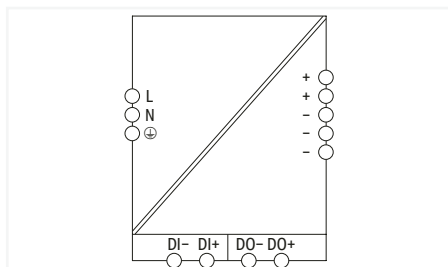
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 55$ °C and $U_i < 230$ VAC); -3 %/K ( $> 60$ °C and $U_i \geq 230$ VAC)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; ISA S71.04:1985; G3 Group A; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2147	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 2.2$ A (240 VAC; nominal load); $\leq 5.9$ A (100 VAC; nominal load)
Inrush current	$\leq 12$ A (after 1 ms)
Power factor	$\geq 0.98$ (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 24$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 1.3$ W (standby); $\leq 2.6$ W (no load); $\leq 24$ W (230 VAC; nominal load)
Efficiency (typ.)	95.4 % (230 VAC; 20 A; 25 °C)

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1 %/V ( $> 40$ °C and $U_i < 100$ VAC); -3 %/K ( $> 55$ °C and $U_i < 230$ VAC); -3 %/K ( $> 60$ °C and $U_i \geq 230$ VAC); -5 %/V ( $U_o > 24$ VDC)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

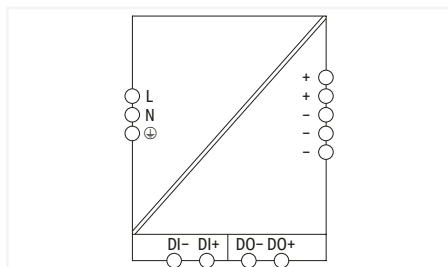


Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost

**Standards and specifications**

Conformity marking	CE
Standards/specifications	SEMI F47; EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2147/000-070	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 2.2$ A (240 VAC; nominal load); $\leq 5.9$ A (100 VAC; nominal load)
Inrush current	$\leq 12$ A (after 1 ms)
Power factor	$\geq 0.98$ (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 24$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 1.3$ W (standby); $\leq 2.6$ W (no load); $\leq 24$ W (230 VAC; nominal load)
Efficiency (typ.)	95.4 % (230 VAC; 20 A; 25 °C)

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1 %/V ( $> 40$ °C and $U_i < 100$ VAC); -3 %/K ( $> 55$ °C and $U_i < 230$ VAC); -3 %/K ( $> 60$ °C and $U_i \geq 230$ VAC); -5 %/V ( $U_o > 24$ VDC)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

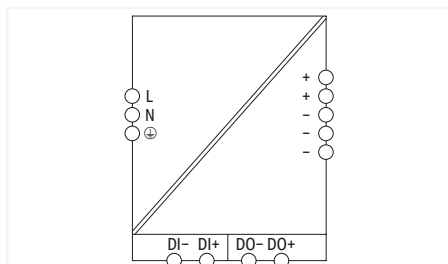
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating

**Standards and specifications**

Conformity marking	CE
Standards/specifications	SEMI F47; EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; ISA S71.04:1985; G3 Group A

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2147/000-030	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 2.2$ A (240 VAC; nominal load); $\leq 5.9$ A (100 VAC; nominal load)
Inrush current	$\leq 12$ A (after 1 ms)
Power factor	$\geq 0.98$ (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 24$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 1.3$ W (standby); $\leq 2.6$ W (no load); $\leq 24$ W (230 VAC; nominal load)
Efficiency (typ.)	95.4 % (230 VAC; 20 A; 25 °C)

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1 %/V ( $> 40$ °C and $U_i < 100$ VAC); -3 %/K ( $> 55$ °C and $U_i < 230$ VAC); -3 %/K ( $> 60$ °C and $U_i \geq 230$ VAC); -5 %/V ( $U_o > 24$ VDC)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

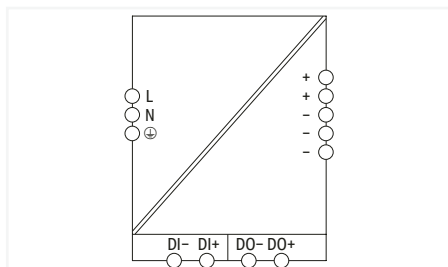
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost

**Standards and specifications**

Conformity marking	CE
Standards/specifications	SEMI F47; EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2448	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 200 ... 240 VAC
Input voltage range	1 x 180 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 4.3 A (240 VAC; nominal load); ≤ 5.1 A (200 VAC; nominal load)
Inrush current	≤ 10 A (after 1 ms)
Power factor	≥ 0.98 (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 25 ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 60 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	≤ 1.5 W (standby); ≤ 2.4 W (no load); ≤ 40 W (230 VAC; nominal load)
Efficiency (typ.)	96 % (230 VAC; 40 A; 25 °C); 96.3 % (230 VAC; 30 A; 25 °C)

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; ≤ 35 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 900,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 55 °C)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm² / 0.5 ... 10 mm² / 20 ... 8 AWG

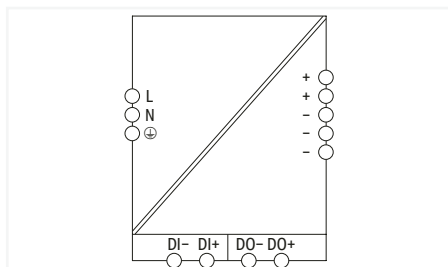
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost

**Standards and specifications**

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2448/000-030	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 200 ... 240 VAC
Input voltage range	1 x 180 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 4.3 A (240 VAC; nominal load); ≤ 5.1 A (200 VAC; nominal load)
Inrush current	≤ 10 A (after 1 ms)
Power factor	≥ 0.98 (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 25 ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 60 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	≤ 1.5 W (standby); ≤ 2.4 W (no load); ≤ 40 W (230 VAC; nominal load)
Efficiency (typ.)	96 % (230 VAC; 40 A; 25 °C); 96.3 % (230 VAC; 30 A; 25 °C)

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; ≤ 35 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 900,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 55 °C)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm² / 0.5 ... 10 mm² / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

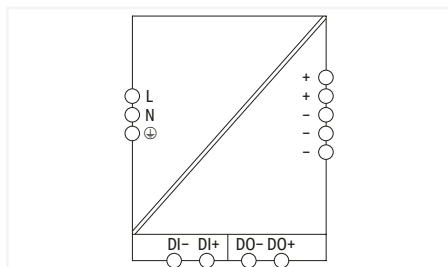


Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost

**Standards and specifications**

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2448/000-070	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 200 ... 240 VAC
Input voltage range	1 x 180 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 4.3 A (240 VAC; nominal load); ≤ 5.1 A (200 VAC; nominal load)
Inrush current	≤ 10 A (after 1 ms)
Power factor	≥ 0.98 (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 25 ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 60 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	≤ 1.5 W (standby); ≤ 2.4 W (no load); ≤ 40 W (230 VAC; nominal load)
Efficiency (typ.)	96 % (230 VAC; 40 A; 25 °C); 96.3 % (230 VAC; 30 A; 25 °C)

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; ≤ 35 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 900,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 55 °C)
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm² / 0.5 ... 10 mm² / 20 ... 8 AWG

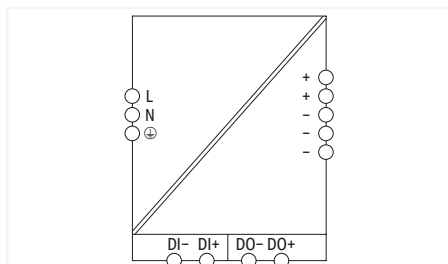
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; ISA S71.04:1985; G3 Group A; SEMI F47

1

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 2.5 A ▶ TopBoost ▶ PowerBoost



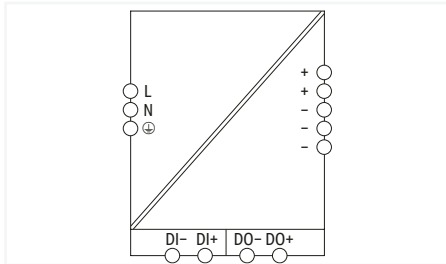
Item No.	PU
2787-2154	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 1.3$ A (240 VAC; nominal load)
Inrush current	$\leq 11$ A (after 1 ms)
Power factor correction (PFC)	Active
Output	
Nominal output voltage $U_{o, nom}$	48 VDC (SELV)
Output voltage range	48 ... 56 VDC (adjustable)
Nominal output current $I_{o, nom}$	2.5 A (48 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Power loss $P_i$	$\leq 0.8$ W (standby); $\leq 1.7$ W (no load); $\leq 9$ W (230 VAC; nominal load)
Efficiency (typ.)	95.3 %
Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 900,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	35 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

# Power supply ▶ Pro 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2157	1

## Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 5,9 A (240 VAC; nominal load)
Inrush current	≤ 12 A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 24 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	48 ... 56 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	≤ 1.3 W (standby); ≤ 2.6 W (no load); ≤ 24 W (230 VAC; nominal load)
Efficiency (typ.)	95.3 %

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 800,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Communication module ▶ EtherNet/IP™



1

Item No.	PU
2789-9023	1

**Features:**

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- EtherNet/IP™ + MQTT
- Suitable for monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Integrated ETHERNET switch for convenient wiring
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{I, nom}$	5 VDC (SELV)
Nominal input current at $U_N$	250 mA (max.)
Signaling and communication	
Signaling	1 x ERR LED (red); 1 x COM OK LED (green); 1 x LED LNK/ACTx (green) ; 1 x LED SPEEDx (orange)
Communications	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; SNTP; MQTT
Configuration options	Web-Based Management
Visualization	Web-Visu
Transmission rate	100 MBd ( (ETHERNET: 10/100 Mbit/s)
Transmission medium (communication/ fieldbus)	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Safety and protection/Environmental requirements	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/Protection type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Ambient temperature (operation)	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	EtherNet/IP™
Pluggable connector	2 x RJ-45
Cable length (max.)	100 m
Transmission medium	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 80 mm x 22 mm
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201

## Communication module ► IO-Link



Item No.	PU
2789-9080	1

### Features:

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- IO-Link device supports IO-Link specification 1.1
- Suitable for configuring and monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Pluggable connection technology
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{in, nom}$	24 VDC (SELV; via IO-Link Master)
Input voltage range	18 ... 30 VDC (SELV; via IO-Link Master)
Signaling and communication	
Signaling	1 x COM OK LED (green); 1 x ERR LED (red)
Communications	IO-Link
IO-Link version	1.1
Transmission rate	230.4 kBd ((COM 3))
Data width	5 bytes
Data update rate	25 ms
Safety and protection/Environmental requirements	
Isolation	0.63 kVDC
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	20 m (IO-Link)
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 95 mm x 22 mm
Note (dimensions)	Height with connector; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; UL HazLoc

## Communication module ▶ Modbus (TCP, UDP)



1

Item No.	PU
2789-9052	1

**Features:**

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- Modbus TCP/UDP
- Suitable for monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Integrated ETHERNET switch for convenient wiring
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{I, nom}$	5 VDC (SELV)
Nominal input current at $U_N$	210 mA (typ.)
Signaling and communication	
Signaling	1 x ERR LED (red); 1 x COM OK LED (green); 1 x LED LNK/ACTx (green) ; 1 x LED SPEEDx (orange)
Communications	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; SNTP
Configuration options	Web-Based Management
Visualization	Web-Visu
Transmission rate	100 MBd ( (ETHERNET: 10/100 Mbit/s)
Transmission medium (communication/ fieldbus)	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Safety and protection/Environmental requirements	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/Protection type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Ambient temperature (operation)	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Modbus TCP/UDP
Pluggable connector	2 x RJ-45
Cable length (max.)	100 m
Transmission medium	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 80 mm x 22 mm
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201



## Communication module ► Modbus RTU via RS-485



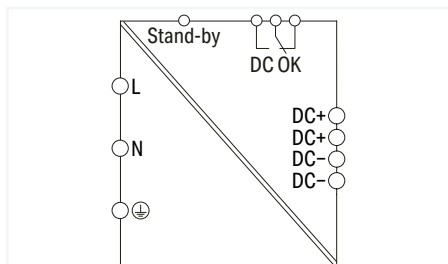
Item No.	PU
2789-9015	1

### Features:

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- Modbus RTU (RS-485)
- Suitable for monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Pluggable connection technology
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips
- Requires RJ-45 terminating resistor (120 Ω) for long cables (2789-9915)

Input	
Nominal input voltage $U_{in, nom}$	5 VDC (SELV)
Input voltage range	4.5 ... 5.5 VDC (SELV)
Signaling and communication	
Signaling	1 x LED PWR (green); 1 x LED RxD (yellow); 1 x LED TxD (yellow)
Communications	Modbus RTU via RS-485
Transmission rate	4.8 ... 115.2 kBd
Number of devices (max.)	247
Transmission medium (communication/fieldbus)	Shielded copper cable
Safety and protection/Environmental requirements	
Test voltage (input/output)	AC 2 kV; 50 Hz; 1 min
Test voltage (input/output/shield)	1 kVAC; 50 Hz; 1 min
Protection class/Protection type	III / IP20; per EN 60529
Insulation type	Functional insulation
Pollution degree	2
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Pluggable connector	2 x RJ-45
Transmission medium	Shielded copper cable
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 80 mm x 22 mm
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; UL HazLoc

# Power supply ▶ Pro ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 3 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-818	1

## Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-5 %/V (< 95 VAC)
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	≤ 0.51 A (240 VAC; 3 ADC)
Inrush current	≤ 30 A (peak)
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 70 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	3 A (24 VDC)
Nominal output power	72 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 6 A (4 s); DC 4.5 A (8 s)
TopBoost	14 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	≤ 0.5 W (standby); ≤ 3 W (no load); ≤ 8.8 W (nominal load)
Efficiency (typ.)	87.8 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

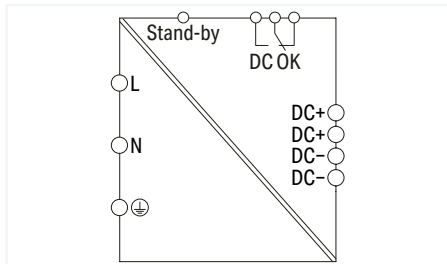
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 163 mm x 163 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-822	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 0.97$ A (240 VAC; 5 ADC)
Inrush current	$\leq 30$ A (peak)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 35$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 10 A (4 s); DC 7.5 A (8 s)
TopBoost	21 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.5$ W (standby); $\leq 5$ W (no load); $\leq 14.6$ W (nominal load)
Efficiency (typ.)	87.8 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

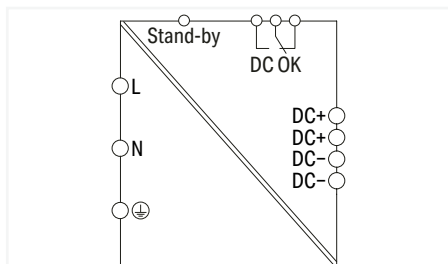
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 50$ °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 163 mm x 163 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

# Power supply ▶ Pro ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-832	1

## Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 1.2$ A (240 VAC; 10 ADC)
Inrush current	$\leq 8$ A (active power factor correction (PFC))
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 24$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 VDC (adjustable)
Nominal output current $I_{o, nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 20 A (4 s); DC 15 A (8 s)
TopBoost	60 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.8$ W (standby); $\leq 3.8$ W (no load); $\leq 24$ W (nominal load)
Efficiency (typ.)	90 %

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

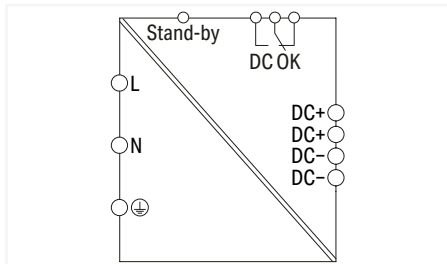
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70$ °C (device starts at $-40$ °C (type-tested))
Ambient temperature (storage)	$-25 \dots +85$ °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3$ %/K ( $> 50$ °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 163 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-834	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-1.5 %/V (< 110 VAC)
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	≤ 2.3 A (230 VAC; 20 ADC)
Inrush current	≤ 8 A (active power factor correction (PFC))
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 25 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 30 A (4 s); DC 25 A (8 s)
TopBoost	80 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_l$	≤ 0.8 W (standby); ≤ 4.8 W (no load); ≤ 43.2 W (nominal load)
Efficiency (typ.)	91 %

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

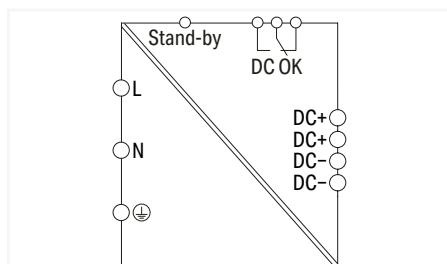
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm² / 0.5 ... 10 mm² / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm² / 0.08 ... 0.5 mm² / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	97 mm x 171 mm x 187 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

# Power supply ▶ Pro ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-833	1

## Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-1.5 %/V (< 110 VAC)
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	≤ 1.2 A (230 VAC; 5 ADC)
Inrush current	≤ 8 A (active power factor correction (PFC))
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 20 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	33 ... 52 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (48 VDC)
Nominal output power	240 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 10 A (4 s); DC 7.5 A (8 s)
TopBoost	30 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	≤ 0.8 W (standby); ≤ 7.4 W (no load); ≤ 21.6 W (nominal load)
Efficiency (typ.)	91 %

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

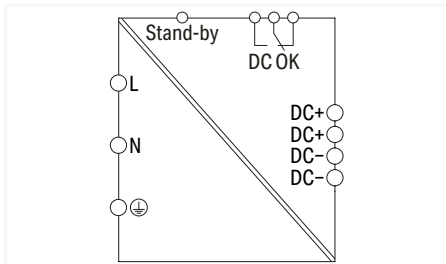
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 163 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-835	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-1.5 %/V (< 110 VAC)
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	≤ 2.3 A (230 VAC; 10 ADC)
Inrush current	≤ 8 A (active power factor correction (PFC))
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 20 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	33 ... 52 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 17.5 A (4 s); DC 15 A (8 s)
TopBoost	60 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	≤ 0.8 W (standby); ≤ 4.8 W (no load); ≤ 43.2 W (nominal load)
Efficiency (typ.)	91 %

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

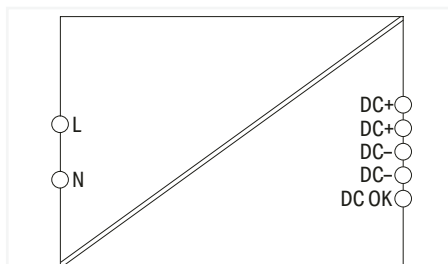
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm² / 0.5 ... 10 mm² / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm² / 0.08 ... 0.5 mm² / 28 ... 20 AWG

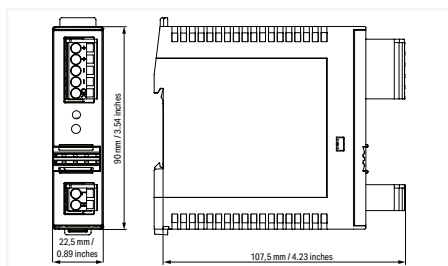
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	97 mm x 171 mm x 187 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 2 A ▶ DC OK signal



Item No.	PU
787-1601	1



## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.29$ A (240 VAC); $\leq 0.5$ A (100 VAC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 120$ ms (230 VAC); $\geq 15$ ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	11.5 ... 14.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2 A (12 VDC); 2.1 A (< 40 °C)
Nominal output power	24 W
Residual ripple	$\leq 20$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (12 VDC; 40 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 0.7$ W; $\leq 5.3$ W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max)}}$	5.7 W (100 VAC / 12 VDC; 2 A)
Efficiency (typ.)	82 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

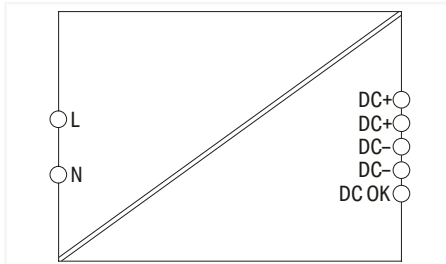
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	22.5 mm x 90 mm x 107.5 mm
Mounting type	DIN-35 rail

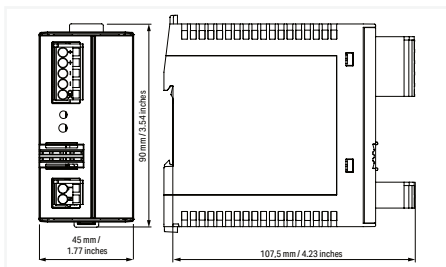
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47



## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 4 A ▶ DC OK signal



Item No.	PU
787-1611	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 0.46 A (240 VAC); ≤ 0.86 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 120 ms (230 VAC); ≥ 15 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	11.5 ... 14.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A (12 VDC); 4.2 A (< 40 °C)
Nominal output power	48 W
Residual ripple	≤ 20 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (12 VDC; 40 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 1 W; ≤ 8 W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	9.1 W (100 VAC / 12 VDC; 4 A)
Efficiency (typ.)	86 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

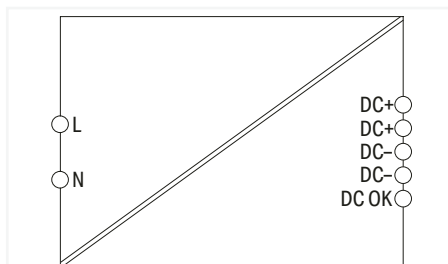
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 35 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

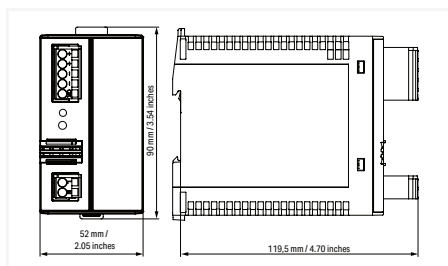
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	45 mm x 90 mm x 107.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ► Classic ► Phases: 1 ► Nominal output voltage (DC): 12 V ► Nominal output current: 7 A ► DC OK signal



Item No.	PU
787-1621	1



## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.9 \text{ A}$ (240 VAC); $\leq 1.66 \text{ A}$ (100 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80 \text{ ms}$ (230 VAC); $\geq 15 \text{ ms}$ (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	11.5 ... 14.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	7 A (12 VDC); 7.5 A (< 40 °C)
Nominal output power	84 W
Residual ripple	$\leq 20 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (12 VDC; 40 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1 \text{ W}$ ; $\leq 16.2 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	19.8 W (100 VAC / 12 VDC; 7 A)
Efficiency (typ.)	86 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

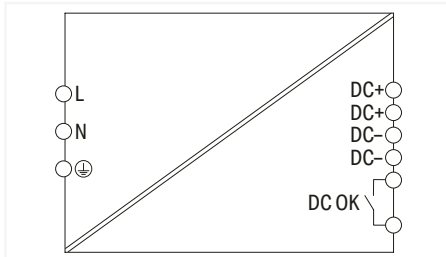
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 32 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	52 mm x 90 mm x 119 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 15 A ▶ TopBoost ▶ DC OK contact



Item No.	PU
787-1631	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 0.93 A (240 VAC); ≤ 2.05 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 28 ms (230 VAC); ≥ 28 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	11.5 ... 15 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	15 A (12 VDC)
Nominal output power	180 W
Residual ripple	≤ 35 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 4.4 W; ≤ 21.8 W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	24.7 W (100 VAC / 12 VDC; 15 A)
Efficiency (typ.)	90 %

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

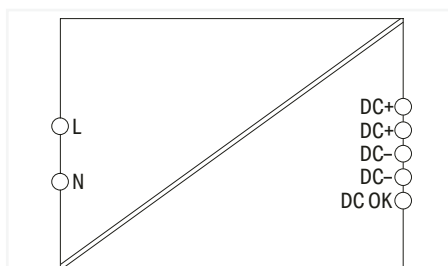
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 20 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

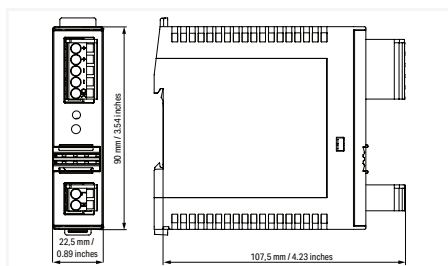
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 172 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 1 A ▶ DC OK signal



Item No.	PU
787-1602	1



## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.28$ A (240 VAC); $\leq 0.49$ A (100 VAC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 120$ ms (230 VAC); $\geq 20$ ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	1 A (24 VDC); 1.2 A (< 40 °C)
Nominal output power	24 W
Residual ripple	$\leq 20$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (24 VDC; 20 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W; $\leq 4$ W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{max}}$	5 W (100 VAC / 24 VDC; 1 A)
Efficiency (typ.)	86 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

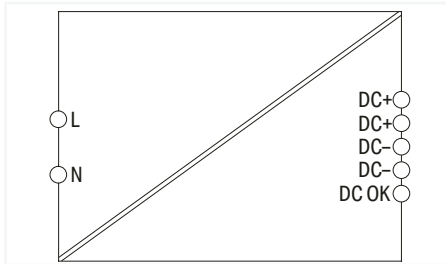
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 39$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

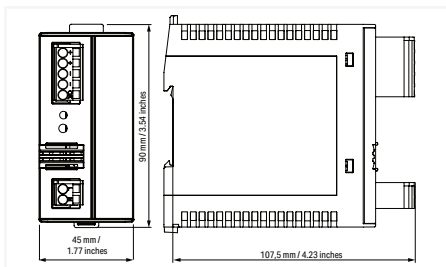
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	22.5 mm x 90 mm x 107.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2 A ▶ DC OK signal



Item No.	PU
787-1606	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 0.48 A (240 VAC); ≤ 0.82 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 120 ms (230 VAC); ≥ 20 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2 A (24 VDC); 2.2 A (< 40 °C)
Nominal output power	48 W
Residual ripple	≤ 20 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (24 VDC; 20 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 1 W; ≤ 6 W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	7 W (100 VAC / 24 VDC; 2 A)
Efficiency (typ.)	89 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

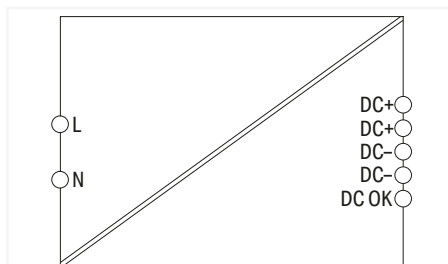
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 37 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

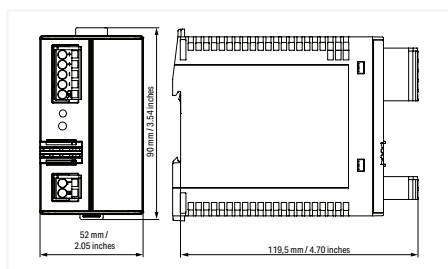
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	45 mm x 90 mm x 107.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 3.8 A ▶ DC OK signal



Item No.	PU
787-1616/000-1000	1



## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.95$ A (240 VAC); $\leq 1.73$ A (100 VAC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80$ ms (230 VAC); $\geq 15$ ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	3.8 A (24 VDC)
Nominal output power	91.2 W
Residual ripple	$\leq 20$ mV (peak-to-peak)
Current limitation	3.8 A (3.2 A at $U_o > 25$ VDC); LPS per NEC Class 2
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (24 VDC; 20 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.8$ W; $\leq 14$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	20 W (100 VAC / 91 W)
Efficiency (typ.)	87 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

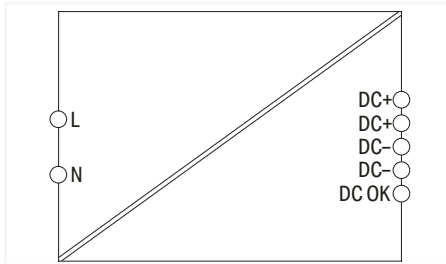
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 50$ °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

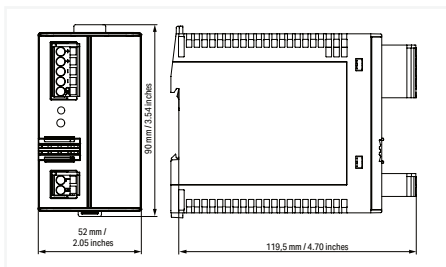
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	52 mm x 90 mm x 119 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; UL 1310; DNV

## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 4 A ▶ DC OK signal



Item No.	PU
787-1616	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 0.98 A (240 VAC); ≤ 1.82 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 80 ms (230 VAC); ≥ 15 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A (24 VDC); 4.2 A (< 40 °C)
Nominal output power	96 W
Residual ripple	≤ 20 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (24 VDC; 20 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 1 W; ≤ 12.4 W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	15 W (100 VAC / 24 VDC; 4 A)
Efficiency (typ.)	89 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 40 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

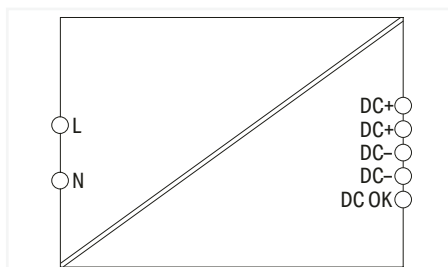
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	52 mm x 90 mm x 119.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

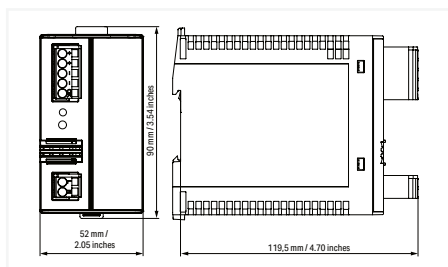
# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 4 A ▶ DC OK signal ▶ Protective coating



Similar to illustration



Item No.	PU
787-1616/000-070	1



## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.98 \text{ A}$ (240 VAC); $\leq 1.82 \text{ A}$ (100 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80 \text{ ms}$ (230 VAC); $\geq 15 \text{ ms}$ (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A (24 VDC); 4.2 A (< 40 °C)
Nominal output power	96 W
Residual ripple	$\leq 20 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (24 VDC; 20 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1 \text{ W}$ ; $\leq 12.4 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	15 W (100 VAC / 24 VDC; 4 A)
Efficiency (typ.)	89 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (Coated PCB, no condensation permissible)
Derating	-3 %/K (> 50 °C)

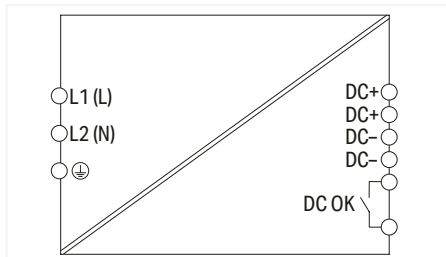
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	52 mm x 90 mm x 119.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508



## Power supply ▶ Classic ▶ Phases: 1; 2 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ DC OK contact



Item No.	PU
787-1628	1

### Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204

Input	
Phases	1 / 2
Nominal input voltage $U_{i, \text{nom}}$	(1 / 2) x 200 ... 500 VAC
Input voltage range	(1 / 2) x 180 ... 550 VAC; 254 ... 780 VDC
Input voltage derating	-0.5 %/V (< 200 VAC); -0.4 %/V (< 280 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.25$ A (200 VAC); $\leq 0.67$ A (500 VAC)
Inrush current	$\leq 30$ A (NTC)
Power factor	$\geq 0.52$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 126$ ms (500 VAC); $\geq 15$ ms (200 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 30$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 0.94$ W; $\leq 16.36$ W (230 VAC; nominal load); $\leq 14.55$ W (400 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	18.2 W (200 VAC / 24 VDC; 5 A)
Efficiency (typ.)	89 %

Circuit protection	
Internal fuse	T 3.15 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

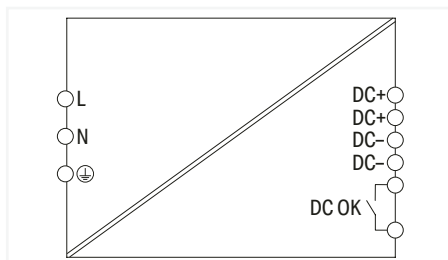
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K (> 55 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	42 mm x 127 mm x 143.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ DC OK contact



Item No.	PU
787-1622	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

## Input

Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 97 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.24$ A (230 VAC); $\leq 2.3$ A (100 VAC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80$ ms (230 VAC); $\geq 10$ ms (100 VAC)

## Output

Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 30$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

## Signaling and communication

Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

## Efficiency/power losses

Power loss $P_i$	$\leq 1.2$ W; $\leq 14.6$ W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{max}}$	19.4 W (100 VAC / 24 VDC; 5 A)
Efficiency (typ.)	89 %

## Circuit protection

Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

## Safety and protection/Environmental requirements

Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 41$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

## Connection data

Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

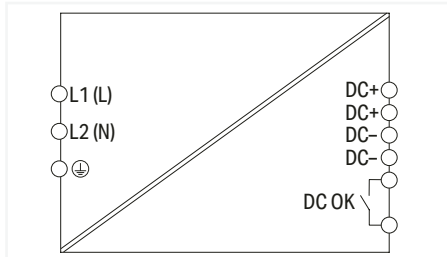
## Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	42 mm x 127 mm x 137.5 mm
Mounting type	DIN-35 rail

## Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

## Power supply ▶ Classic ▶ Phases: 1; 2 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK contact



Item No.	PU
787-1638	1

### Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204

Input	
Phases	1 / 2
Nominal input voltage $U_{i, \text{nom}}$	(1 / 2) x 200 ... 500 VAC
Input voltage range	(1 / 2) x 180 ... 550 VAC; 254 ... 780 VDC
Input voltage derating	-0.5 %/V (< 200 VAC); -0.4 %/V (< 280 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.975$ A (230 VAC); $\leq 1.36$ A (230 VAC)
Inrush current	$\leq 30$ A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 78$ ms (400 VAC); $\geq 20$ ms (200 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 30$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1.3$ W; $\leq 27.8$ W (230 VAC; nominal load); $\leq 20.3$ W (400 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	27.8 W (230 VAC / 24 VDC; 10 A)
Efficiency (typ.)	89 % (230 VAC); 92.5 % (400 VAC)

Circuit protection	
Internal fuse	T 6.3 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

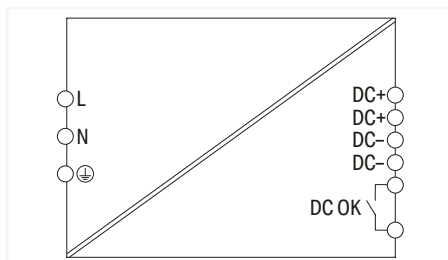
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K ( $> 55$ °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 146.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ DC OK contact



Item No.	PU
787-1632	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval

## Input

Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 100 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC); -1 %/V (< 130 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.25 \text{ A}$ (230 VAC); $\leq 2.74 \text{ A}$ (100 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 17 \text{ ms}$ (230 VAC); $\geq 15 \text{ ms}$ (100 VAC)

## Output

Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 50 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

## Signaling and communication

Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

## Efficiency/power losses

Power loss $P_i$	$\leq 6.6 \text{ W}$ ; $\leq 24.4 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	31.3 W (100 VAC / 24 VDC; 10 A)
Efficiency (typ.)	91 %

## Circuit protection

Internal fuse	T 6.3 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

## Safety and protection/Environmental requirements

Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

## Connection data

Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

## Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 172 mm
Mounting type	DIN-35 rail

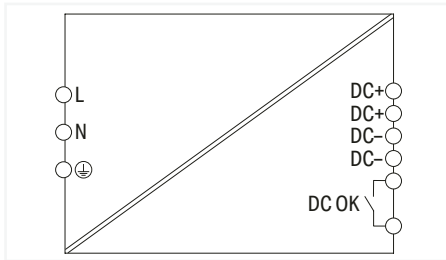
## Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ DC OK contact ▶ Protective coating



Similar to illustration



Item No.	PU
787-1632/000-070	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- Coated PCBs (with Bectron PL 1104 or Voltatex 2010), resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 100 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC); -1 %/V (< 130 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 1.25 A (230 VAC); ≤ 2.74 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 17 ms (230 VAC); ≥ 15 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	≤ 50 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 6.6 W; ≤ 24.4 W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	31.3 W (100 VAC / 24 VDC; 10 A)
Efficiency (typ.)	91 %

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

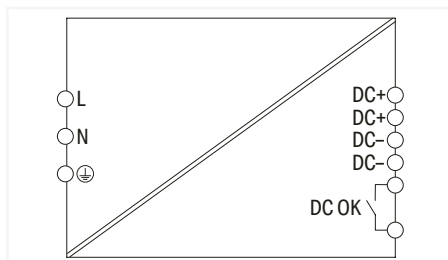
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 40 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 172 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ DC OK contact



Item No.	PU
787-1634	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval

## Input

Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-1.8 %/V (< 105 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 2.23 \text{ A}$ (230 VAC); $\leq 5.56 \text{ A}$ (100 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (230 VAC); $\geq 8 \text{ ms}$ (100 VAC)

## Output

Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

## Signaling and communication

Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

## Efficiency/power losses

Power loss $P_i$	$\leq 7.2 \text{ W}$ ; $\leq 42.4 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	68.3 W (100 VAC / 24 VDC; 20 A)
Efficiency (typ.)	92 %

## Circuit protection

Internal fuse	T 10 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

## Safety and protection/Environmental requirements

Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

## Connection data

Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

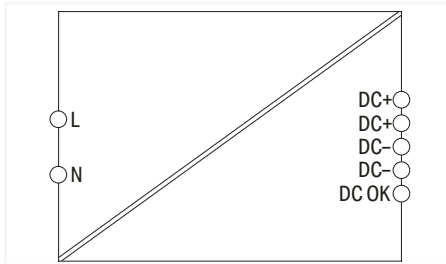
## Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	95 mm x 127 mm x 170 mm
Mounting type	DIN-35 rail

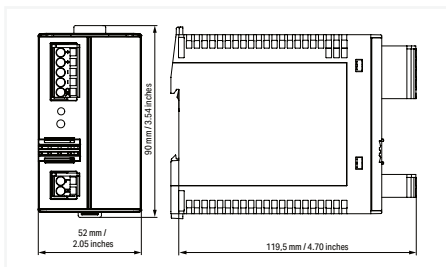
## Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 2 A ▶ DC OK signal



Item No.	PU
787-1623	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 0.97 A (240 VAC); ≤ 1.84 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 80 ms (230 VAC); ≥ 15 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	40 ... 53 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2 A (48 VDC); 2.1 A (< 40 °C)
Nominal output power	96 W
Residual ripple	≤ 20 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Active signal output DC OK (48 VDC; 10 mA)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 1 W; ≤ 16.2 W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	19.8 W (100 VAC / 48 VDC; 2 A)
Efficiency (typ.)	86 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

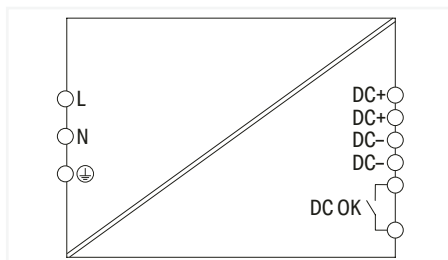
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 60 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	52 mm x 90 mm x 119 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ DC OK contact



Item No.	PU
787-1633	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.25 \text{ A}$ (230 VAC); $\leq 2.74 \text{ A}$ (100 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 21 \text{ ms}$ (230 VAC); $\geq 21 \text{ ms}$ (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	40 ... 56 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (48 VDC)
Nominal output power	240 W
Residual ripple	$\leq 30 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 7 \text{ W}$ ; $\leq 40.8 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	26.5 W (100 VAC / 48 VDC; 5 A)
Efficiency (typ.)	92 %

Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 60 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

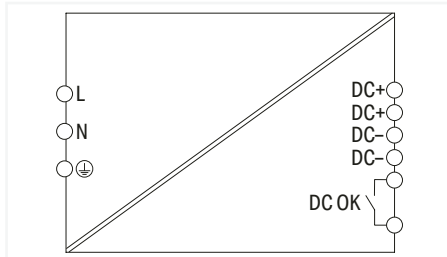
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection technology	Push-in CAGE CLAMP®

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 172 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47



## Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ DC OK contact



Item No.	PU
787-1635	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- DNV approval

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 2.23$ A (230 VAC); $\leq 5.56$ A (100 VAC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (230 VAC); $\geq 20$ ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	40 ... 56 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	$\leq 80$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 11.7$ W; $\leq 36.3$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	64.9 W (100 VAC / 48 VDC; 10 A)
Efficiency (typ.)	93 %

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 60$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

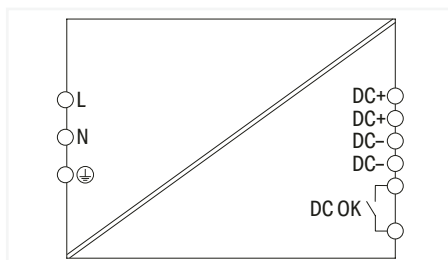
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	95 mm x 127 mm x 170 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

# Power supply ▶ Classic ▶ Phases: 1 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ DC OK contact ▶ Protective coating



Similar to illustration



Item No.	PU
787-1635/000-070	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- Coated PCBs (with Bectron PL 1104 or Voltatex 2010), resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 2.23 \text{ A}$ (230 VAC); $\leq 5.56 \text{ A}$ (100 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (230 VAC); $\geq 20 \text{ ms}$ (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	40 ... 56 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	$\leq 80 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
TopBoost	See instruction leaflet

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 11.7 \text{ W}$ ; $\leq 36.3 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	64.9 W (100 VAC / 48 VDC; 10 A)
Efficiency (typ.)	93 %

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Oversvoltage protection; secondary	Internal protective circuit; $\leq 60 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 60 °C, 196 ... 264 VAC); -2.5 %/K (> 50 °C, 85 ... 195 VAC)

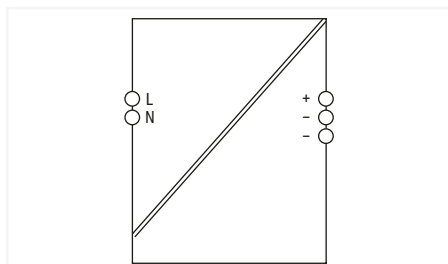
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	95 mm x 127 mm x 170 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508



# Power supply ▶ Eco 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 1.25 A ▶ DC OK LED



Item No.	PU
2687-2142	1

### Features:

- Optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination and tool-free lever operation
- Electrically isolated output voltage (SELV/PELV) per EN 61010/UL 61010
- Marker slot (2789-1223, not included) for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 0.3$ A (230 VAC; nominal load); $\leq 0.6$ A (100 VAC; nominal load)
Inrush current	$\leq 10$ A (after 1 ms)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 120$ ms (230 VAC); $\geq 15$ ms (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 29 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	1.25 A (24 VDC)
Nominal output power	30 W
Residual ripple	$\leq 30$ mV (peak-to-peak, at 230 VAC)
Overload behavior	Constant power up to 125 %; shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.2$ W (no load); $\leq 4.3$ W (nominal load)
Efficiency (typ.)	88 %

Circuit protection	
Internal fuse	T 1 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)

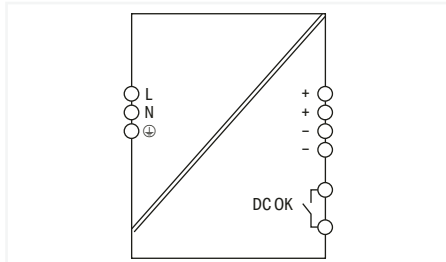
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70$ °C (device starts at $-40$ °C (type-tested))
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	Siehe Typenschild/Handbuch
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 4 mm <sup>2</sup> / 0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	25 mm x 100 mm x 90 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Eco 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ DC OK contact



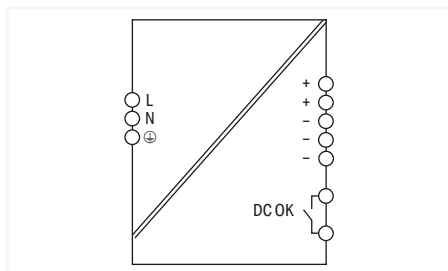
Item No.	PU
2687-2144	1

### Features:

- Signal output, optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination and tool-free lever operation
- Electrically isolated output voltage (SELV/PELV) per EN 61010/UL 61010
- Marker slot (2789-1233, not included) for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 0.8$ A (230 VAC; nominal load); $\leq 1.5$ A (100 VAC; nominal load)
Inrush current	$\leq 20$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 75$ mV (peak-to-peak)
Overload behavior	Constant power up to 125 %; shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	Optical status indication (overload); Optical status indication (DC OK); Digital signal output (DO)
Efficiency/power losses	
Power loss $P_i$	$\leq 3$ W (no load); $\leq 12$ W (nominal load)
Efficiency (typ.)	90 %
Circuit protection	
Internal fuse	T 3.15 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K, $> 55$ °C; -10 %/V, $> 24$ V
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 4 mm <sup>2</sup> / 0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	38 mm x 130 mm x 130 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

# Power supply ▶ Eco 2 ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK contact



Item No.	PU
2687-2146	1

## Features:

- Signal output, optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination and tool-free lever operation
- Electrically isolated output voltage (SELV/PELV) per EN 61010/UL 61010
- Marker slot (2789-1233, not included) for WAGO marking cards (WMB) and WAGO marking strips

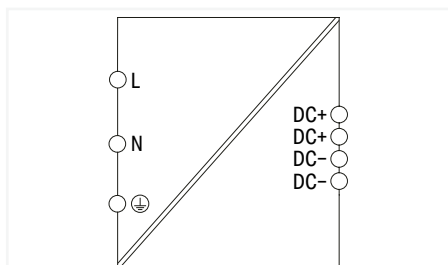
Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 1.1$ A (230 VAC; nominal load); $\leq 2.7$ A (100 VAC; nominal load)
Inrush current	$\leq 25$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 25$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	23 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 75$ mV (peak-to-peak)
Overload behavior	Constant current up to 105 ... 110 %; shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	Optical status indication (overload); Optical status indication (DC OK); Digital signal output (DO)
Efficiency/power losses	
Power loss $P_i$	$\leq 3$ W (230 VAC; no load); $\leq 13$ W (230 VAC; nominal load)
Efficiency (typ.)	93 %
Circuit protection	
Internal fuse	T 6.3 A / 250 VAC
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 45$ °C)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output/signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 4 mm <sup>2</sup> / 0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201



# Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 2 A ▶ DC OK LED



Similar to illustration



Item No.	PU
787-1701	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

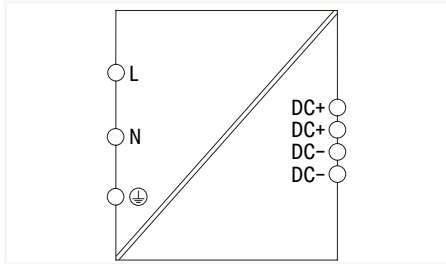
Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0.7$ A (100 VAC)
Inrush current	$\leq 18$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, nom}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o, nom}$	2 A (12 VDC; 110 ... 240 VAC); 1.6 A (12 VDC; 100 ... 240 VAC)
Nominal output power	24 W
Residual ripple	$\leq 150$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 6$ W (230 VAC; 12 VDC; 2 A)
Efficiency (typ.)	80 % (230 VAC; 2 ADC)
Circuit protection	
Internal fuse	F 1 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	30 mm x 90 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 61558-2-6; EN 62368-1; SEMI F47



## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 4 A ▶ DC OK LED



Similar to illustration



Item No.	PU
787-1711	1

### Features:

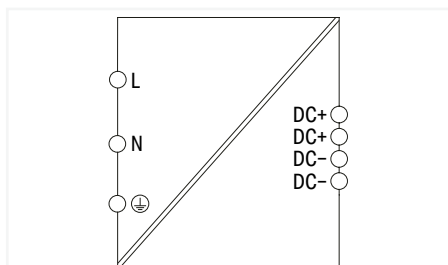
- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 1.8$ A (100 VAC)
Inrush current	$\leq 18$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A (12 VDC; 110 ... 240 VAC); 3.2 A (12 VDC; 100 ... 240 VAC)
Nominal output power	48 W
Residual ripple	$\leq 150$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 9.6$ W (230 VAC; 12 VDC; 4 A)
Efficiency (typ.)	80 % (230 VAC; 4 ADC)
Circuit protection	
Internal fuse	F 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 90 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 61558-2-6; EN 62368-1; SEMI F47

# Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 8 A ▶ DC OK LED



Similar to illustration



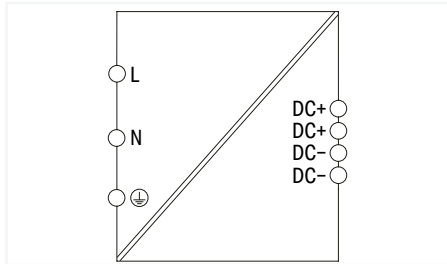
Item No.	PU
787-1721	1

**Features:**

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3$ A (100 VAC)
Inrush current	$\leq 18$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, nom}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o, nom}$	8 A (12 VDC; 110 ... 240 VAC); 6.4 A (12 VDC; 100 ... 240 VAC)
Nominal output power	96 W
Residual ripple	$\leq 150$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 20$ W (230 VAC; 12 VDC; 8 A)
Efficiency (typ.)	80 % (230 VAC; 8 ADC)
Circuit protection	
Internal fuse	F 3.15 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-3 %/K (> 40 °C)
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	60 mm x 130 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 61558-2-6; EN 62368-1; SEMI F47

## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 1.25 A ▶ DC OK LED



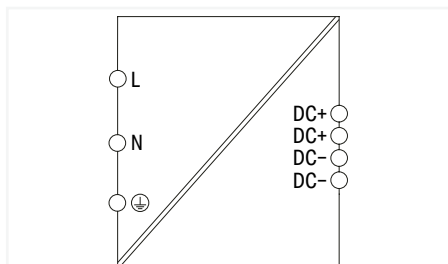
Item No.	PU
787-1702	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0,3 \text{ A}$ (230 VAC); $\leq 0,6 \text{ A}$ (115 VAC)
Inrush current	$\leq 18 \text{ A}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10 \text{ ms}$ (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	1.25 A (24 VDC; 110 ... 240 VAC); 1 A (24 VDC; 100 ... 240 VAC)
Nominal output power	30 W
Residual ripple	$\leq 200 \text{ mV}$ (peak-to-peak)
Overload behavior	Constant power (in overload range: $1,05 \dots 1,4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 6 \text{ W}$ (230 VAC; 24 VDC; 1.25 A)
Efficiency (typ.)	87 % (230 VAC; 1.25 ADC)
Circuit protection	
Internal fuse	F 1 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	30 mm x 90 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508; SEMI F47

## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2.5 A ▶ DC OK LED



Item No.	PU
787-712	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 90 ... 373 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0.7$ A (230 VAC); $\leq 1.2$ A (115 VAC)
Inrush current	$\leq 30$ A
Power factor	$\geq 0.5$ (230 VAC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 20$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	2.5 A (24 VDC)
Nominal output power	60 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 8.3$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	11.5 W (110 VAC / 24 VDC; 2.75 A)
Efficiency (typ.)	86 % (230 VAC)

Circuit protection	
Internal fuse	F 2.5 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

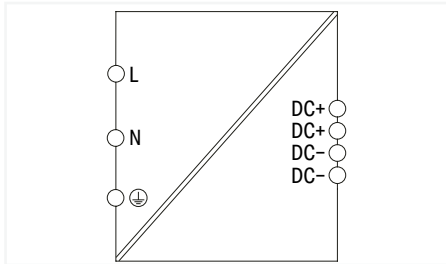
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overtoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	480,000 h (per IEC 61709)
Ambient temperature (operation)	-10 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	-3.3 %/K (> 50 °C; 230 VAC)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 4 mm <sup>2</sup> / 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 92 mm x 136 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3; cURus 60950-1; cULus 508; ANSI/ISA 12.12.01 (Class I Div. 2); ATEX; IECEx; SEMI F47; UL HazLoc

## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2.5 A ▶ DC OK LED



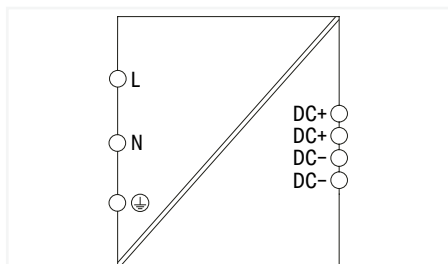
Item No.	PU
787-1712	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0.6$ A (230 VAC); $\leq 1.2$ A (115 VAC)
Inrush current	$\leq 18$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2.5 A (24 VDC; 110 ... 240 VAC); 2 A (24 VDC; 100 ... 240 VAC)
Nominal output power	60 W
Residual ripple	$\leq 200$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 12$ W (230 VAC; 24 VDC; 2.5 A)
Efficiency (typ.)	88 % (230 VAC; 2.5 ADC)
Circuit protection	
Internal fuse	F 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	$> 300,000$ h (per IEC 61709)
Ambient temperature (operation)	$-20 \dots +60$ °C
Ambient temperature (storage)	$-25 \dots +75$ °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	$-4$ %/K ( $> 45$ °C)
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 90 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508; SEMI F47

# Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ DC OK LED



Item No.	PU
787-722	1

## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 61010-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 110 ... 240 VAC
Input voltage range	1 x 100 ... 264 VAC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0.7$ A (230 VAC); $\leq 1.6$ A (115 VAC)
Power factor correction (PFC)	Active

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 W
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 19.5$ W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max)}}$	23.5 W (110 VAC / 24 VDC; 5.5 A)
Efficiency (typ.)	86 % (230 VAC)

Circuit protection	
Internal fuse	F 3.15 A / 250 VAC
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

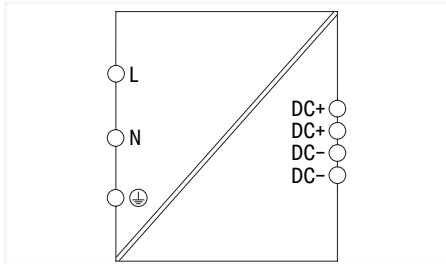
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3000 V
Isolation voltage (pri.-PE, AC)	1500 V
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
Ambient temperature (operation)	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	10 ... 96 % (no condensation permissible)
Derating	-4 %/K (> 40 °C; 230 VAC)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 4 mm <sup>2</sup> / 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	75 mm x 92 mm x 136 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE; UKCA
Standards/specifications	EN 61010-1; EN 61204-3; UL 61010-1; SEMI F47; UL 121201; EN IEC 61010-2-201; UL 61010-2-201

## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ DC OK LED



Item No.	PU
787-1722	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 1$ A (230 VAC); $\leq 2$ A (115 VAC)
Inrush current	$\leq 18$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A (24 VDC; 110 ... 240 VAC); 4 A (24 VDC; 100 ... 240 VAC)
Nominal output power	120 W
Residual ripple	$\leq 200$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 19$ W
Efficiency (typ.)	88 % (230 VAC; 5 ADC)

Circuit protection	
Internal fuse	F 2.5 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10

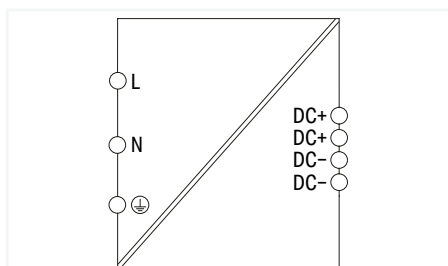
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	60 mm x 130 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508; SEMI F47

# Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK LED



Item No.	PU
787-732	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 110 ... 240 VAC
Input voltage range	1 x 100 ... 264 VAC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 1.2$ A (230 VAC); $\leq 3.2$ A (115 VAC)
Power factor correction (PFC)	Active

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 37.5$ W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max)}}$	53 W (110 VAC / 24 VDC; 11 A)
Efficiency (typ.)	86 % (230 VAC)

Circuit protection	
Internal fuse	F 5 A / 250 VAC
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3000 V
Isolation voltage (pri.-PE, AC)	1500 V
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
Ambient temperature (operation)	-10 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-2.33 %/K (> 40 °C; 230 VAC)

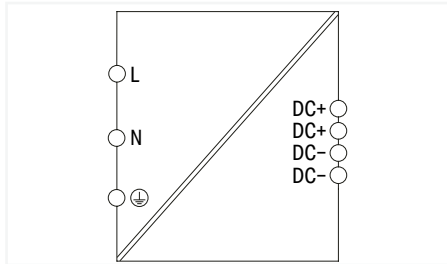
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 4 mm <sup>2</sup> / 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	110 mm x 136 mm x 92 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE; UKCA
Standards/specifications	EN 61010-1; EN 61204-3; UL 61010-1; UL 61010-2-201; UL 121201; SEMI F47; EN IEC 61010-2-201



## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK LED



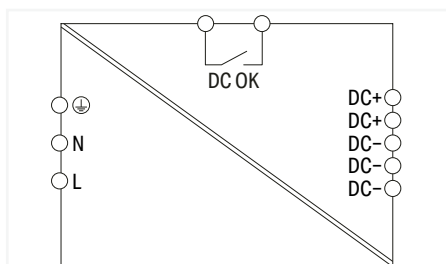
Item No.	PU
787-1732	1

### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204
- DIN-35 rail mountable in different positions
- Direct installation on mounting plate via cable grip

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 2$ A (230 VAC); $\leq 4$ A (115 VAC)
Inrush current	$\leq 18$ A
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 10$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC; 110 ... 240 VAC); 8 A (24 VDC; 100 ... 240 VAC)
Nominal output power	240 W
Residual ripple	$\leq 200$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 38$ W (230 VAC; 24 VDC; 10 A)
Efficiency (typ.)	91 % (230 VAC; 10 ADC)
Circuit protection	
Internal fuse	F 3.15 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: B6, B10
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 165 mm x 99 mm
Mounting type	DIN-35 rail; Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508; SEMI F47

# Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ DC OK contact



Item No.	PU
787-734	1

## Features:

- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated PCB terminal blocks
- Bounce-free switching signal (DC OK) via optocoupler
- Parallel operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 110 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 130 ... 373 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3$ A (230 VAC); $\leq 6.3$ A (115 VAC)
Inrush current	$\leq 30$ A
Power factor	$\geq 0.94$ (230 VAC); $\geq 0.98$ (115 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (230 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (optocoupler as make contact; max. 31.2 V; 20 mA)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 65$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	107 W (110 VAC / 24 VDC; 23 A)
Efficiency (typ.)	90 %

Circuit protection	
Internal fuse	T 10 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 10 A, 16 A; Tripping characteristic: B or C

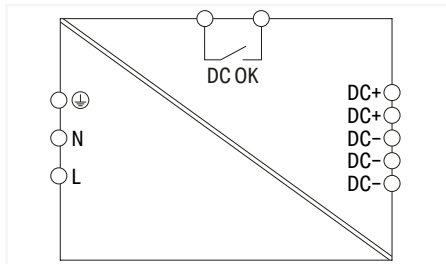
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 250,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	See instruction manual

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Connection type	Output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	1.5 ... 16 mm <sup>2</sup> / 1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	115 mm x 136 mm x 144 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3; EN 61000-6-2; EN 61000-6-4; UL 60950-1; UL 508; SEMI F47

## Power supply ▶ Eco ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ DC OK contact



Item No.	PU
787-736	1

### Features:

- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated PCB terminal blocks
- Bounce-free switching signal (DC OK) via optocoupler
- Parallel operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 110 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 373 VDC
Input voltage derating	-2 %/V (< 100 VAC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 6 A (230 VAC); ≤ 12 A (115 VAC)
Inrush current	≤ 30 A
Power factor	≥ 0.94 (230 VAC); ≥ 0.98 (115 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 17 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.15 ... 1.4 x $I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (optocoupler as make contact; max. 31.2 V; 20 mA)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	≤ 107 W (230 VAC; nominal load)
Efficiency (typ.)	90 %

Circuit protection	
Internal fuse	T 20 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 13 A, 16 A, 20 A; Tripping characteristic: B or C

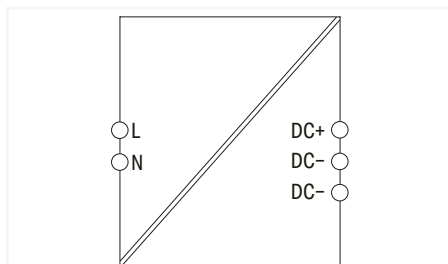
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 250,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm² / 0.5 ... 6 mm² / 20 ... 10 AWG
Connection type	Output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	1.5 ... 16 mm² / 1.5 ... 16 mm² / 16 ... 6 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	170 mm x 136 mm x 150 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3; EN 61000-6-2; EN 61000-6-4; UL 60950-1; UL 508; SEMI F47

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 0.5 A ▶ DC OK LED



Item No.	PU
787-1200	1

## Features:

- Switched-mode power supply
- Stepped profile, ideal for distribution boards/boxes
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Series operation
- Electrically isolated output voltage (SELV) per EN 62368/UL 62368 and EN 60335-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Input voltage derating	-2 %/V (< 100 VAC)
Nominal mains frequency range	47 ... 63 Hz
Input current $I_i$	≤ 0.27 A (100 VAC; 0.5 ADC)
Inrush current	≤ 30 A (NTC)
Power factor	≥ 0.5
Power factor correction (PFC)	None
Mains failure hold-up time	≥ 100 ms (230 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	0.5 A
Nominal output power	12 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.2 W
Power loss (max.) $P_{i(\text{max})}$	2.5 W (100 VAC / 24 VDC; 0.5 A)
Efficiency (typ.)	83 % (230 VAC; nominal load); 82 % (110 VAC; nominal load)

Circuit protection	
Internal fuse	T 1 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

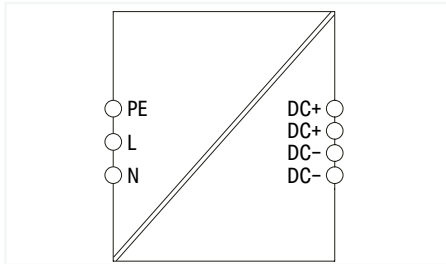
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Reverse voltage protection	Yes
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	≤ 31 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/Yes, for 2 devices of the same type
MTBF	> 700,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-2.6 %/K (> 55 °C)

Connection data	
Connection type 1	Input
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG
Cable length (max.)	30 m

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	18 mm x 90 mm x 52.5 mm
Mounting type	DIN-35 rail; Screw mount (back/side)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368; UL 62368; UL 508

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 2.5 A ▶ DC OK LED



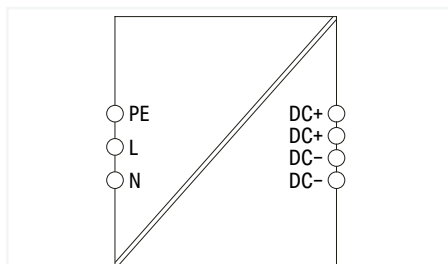
Item No.	PU
787-1201	1

### Features:

- Stepped profile for installation in standard distribution boards
- Removable front panel and screw mounts for alternative installation in distribution boxes or devices
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC; 140 ... 340 VDC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Input voltage derating	-1.5 %/V (< 100 VAC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 0.6 A (100 VAC; 2.5 ADC)
Inrush current	≤ 30 A (NTC)
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 1000 ms (230 VAC)
Output	
Nominal output voltage $U_{o,nom}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o,nom}$	2.5 A
Nominal output power	30 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.35 x $I_{o,nom}$ ); Shutdown and automatic restart in the event of a short circuit or permanent overload
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	≤ 0.5 W
Power loss (max.) $P_{i(max)}$	4.5 W (100 VAC / 12 VDC; 2.5 A)
Efficiency (typ.)	88 % (230 VAC; nominal load); 87.5 % (110 VAC; nominal load)
Circuit protection	
Internal fuse	T 1 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A or higher; Tripping characteristic: B
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Oversvoltage protection; secondary	≤ 20 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes, for devices of the same type/Yes, for 2 devices of the same type
MTBF	> 3,500,000 h (at 25 °C; per IEC 61709); > 800,000 h (at 40 °C; per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-0.8 %/K (> 45 °C)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Cable length (max.)	30 m
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	54 mm x 90 mm x 52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; UL 508

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 5 A ▶ DC OK LED



Item No.	PU
787-1211	1

## Features:

- Switched-mode power supply
- Stepped profile for installation in standard distribution boards
- Removable front panel and screw mounts for alternative installation in distribution boxes or devices
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC; 140 ... 340 VDC
Input voltage range	1 x 85 ... 264 VAC; 125 ... 375 VDC
Input voltage derating	-2 %/V (< 100 VAC); -1.33 %/V (< 140 VDC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 0.6 A
Inrush current	≤ 30 A (NTC)
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 600 ms (230 VAC); ≥ 12 ms (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5 A
Nominal output power	60 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.22 ... 1.7 x $I_{o, \text{nom}}$ ); Hiccup in the event of a short circuit or permanent overload

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.6 W
Power loss (max.) $P_{i, \text{(max.)}}$	9 W (100 VAC / 12 VDC; 2.5 A)
Efficiency (typ.)	88.5 % (230 VAC; nominal load); 87.5 % (110 VAC; nominal load)

Circuit protection	
Internal fuse	T 3.15 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A or higher; Tripping characteristic: B

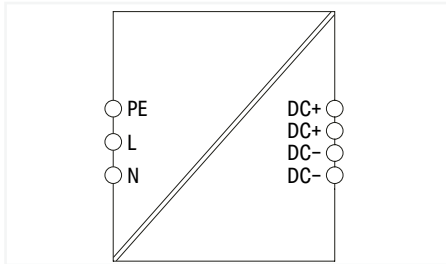
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Reverse voltage protection	Yes
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	≤ 20 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes, for devices of the same type/Yes, for 2 devices of the same type
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-3 %/K (> 45 °C and $U_o = 90$ VAC); -2.3 %/K (> 50 °C and $U_o = 230$ VAC)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Cable length (max.)	30 m

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 90 mm x 52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 8 A ▶ DC OK LED



Item No.	PU
787-1221	1

### Features:

- Stepped profile for installation in standard distribution boards
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC; 140 ... 340 VDC
Input voltage range	1 x 90 ... 264 VAC; 125 ... 375 VDC
Input voltage derating	-2 %/V (< 100 VAC); -1.33 %/V (< 140 VDC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 1.6 A (100 VAC; 8 ADC)
Inrush current	≤ 30 A (NTC)
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 50 ms (230 VAC)

Output	
Nominal output voltage $U_{o,nom}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o,nom}$	8 A
Nominal output power	96 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.35 x $I_{o,nom}$ ); Shutdown and automatic restart in the event of a short circuit or permanent overload

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.7 W
Power loss (max.) $P_{i(max)}$	11.8 W (100 VAC / 12 VDC; 8 A)
Efficiency (typ.)	91.5 % (230 VAC; nominal load); 90 % (110 VAC; nominal load)

Circuit protection	
Internal fuse	T 3.15 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A or higher; Tripping characteristic: B

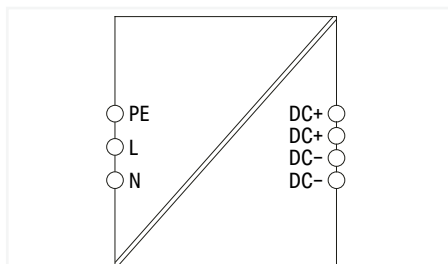
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	≤ 20 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 1,300,000 h (at 25 °C; per IEC 61709); > 250,000 h (at 40 °C; per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-2 %/K (> 45 °C)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Cable length (max.)	30 m

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	108 mm x 90 mm x 52.5 mm
Mounting type	DIN-35 rail; Screw mount (back)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; UL 508

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 1.3 A ▶ DC OK LED



Item No.	PU
787-1202	1

## Features:

- Switched-mode power supply
- Stepped profile for installation in standard distribution boards
- Removable front panel and screw mounts for alternative installation in distribution boxes or devices
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 125 ... 375 VDC
Input voltage derating	-2 %/V (< 100 VAC); -1.33 %/V (< 140 VDC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 0.6 A
Inrush current	≤ 20 A
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 70 ms

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, nom}$	1.3 A
Nominal output power	31.2 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.35 x $I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit or permanent overload

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.43 W
Power loss (max.) $P_{i, (max)}$	5.5 W (100 VAC / 24 VDC; 1.3 A)
Efficiency (typ.)	87 % (230 VAC); 82 % (110 VAC)

Circuit protection	
Internal fuse	T 1 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	≤ 31 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 700,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)

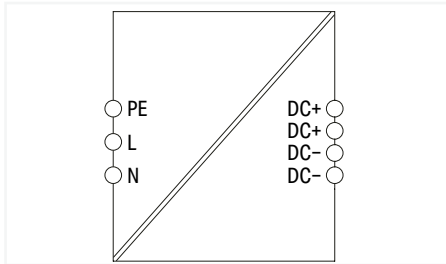
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	54 mm x 90 mm x 52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508



## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2.5 A ▶ DC OK LED



Item No.	PU
787-1212	1

### Features:

- Switched-mode power supply
- Stepped profile for installation in standard distribution boards
- Removable front panel and screw mounts for alternative installation in distribution boxes or devices
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 125 ... 375 VDC
Input voltage derating	-2 %/V (< 100 VAC); -1.33 %/V (< 140 VDC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 1.5 A
Inrush current	≤ 20 A
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 60 ms

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2.5 A; 2 A (< 110 VAC)
Nominal output power	60 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.35 x $I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit or permanent overload

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.6 W
Power loss (max.) $P_{i(\text{max})}$	9 W (100 VAC / 24 VDC; 2.5 A)
Efficiency (typ.)	89 % (230 VAC); 87 % (110 VAC)

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

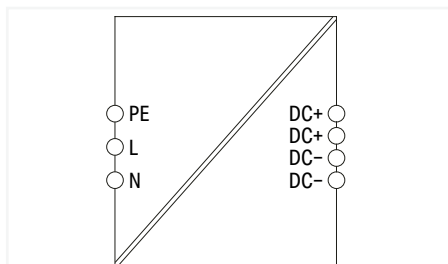
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	≤ 31 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 90 mm x 52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 4.2 A ▶ DC OK LED



Item No.	PU
787-1216	1

## Features:

- Switched-mode power supply
- Stepped profile for installation in standard distribution boards
- Screw mounts for alternative installation in distribution boxes or devices
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 125 ... 375 VDC
Input voltage derating	-2 %/V (< 100 VAC); -1.33 %/V (< 140 VDC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 2.5 A
Inrush current	≤ 20 A
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 50 ms

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4.2 A; 3.3 A (< 110 VAC)
Nominal output power	100 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.35 x $I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit or permanent overload

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.7 W
Power loss (max.) $P_{i, \text{(max.)}}$	15 W (100 VAC / 24 VDC; 4.2 A)
Efficiency (typ.)	90 % (230 VAC); 87 % (110 VAC)

Circuit protection	
Internal fuse	T 3.15 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

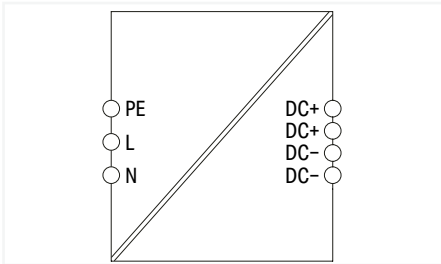
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	≤ 31 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	108 mm x 90 mm x 52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 6 A ▶ DC OK LED



Item No.	PU
787-1226	1

### Features:

- Switched-mode power supply
- Stepped profile for installation in standard distribution boards
- Screw mounts for alternative installation in distribution boxes or devices
- Pluggable *picoMAX*® Connection Technology (tool-free)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60335-1 and UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 120 VAC; 200 ... 240 VAC
Input voltage range	1 x 90 ... 132 VAC; 180 ... 264 VAC; 250 ... 375 VDC
Input voltage derating	-2 %/V (< 100 VAC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	≤ 3.8 A
Inrush current	≤ 20 A
Power factor	≥ 0.5
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 30 ms

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 27 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	6 A; 4.8 A (< 110 VAC)
Nominal output power	150 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.35 x $I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit or permanent overload

Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.4 W
Power loss (max.) $P_{i(\text{max})}$	16.5 W (100 VAC / 24 VDC; 6 A)
Efficiency (typ.)	90 % (230 VAC); 89 % (110 VAC)

Circuit protection	
Internal fuse	T 3.15 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

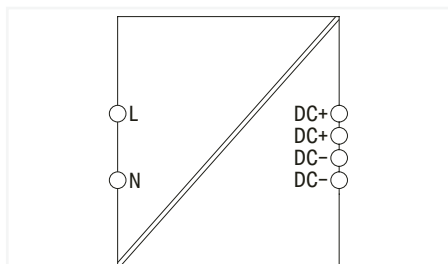
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	≤ 31 VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG

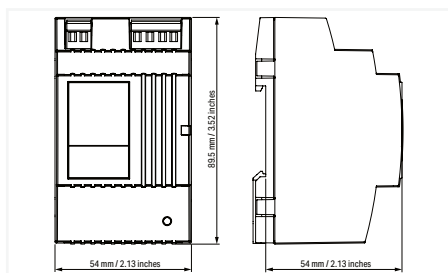
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	144 mm x 90 mm x 52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 2 A



Item No.	PU
787-1001	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 1.5 \text{ A}$ (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.4 \text{ A}$ (230 VAC); $\leq 0.6 \text{ A}$ (110 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80 \text{ ms}$ (230 VAC); $\geq 10 \text{ ms}$ (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	10.5 ... 18 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2 A (12 VDC); 1.4 A (12 VDC; in any mounting position); 0.75 A (18 VDC)
Nominal output power	24 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.6 \text{ W}$ ; $\leq 6 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	6 W (100 VAC / 12 VDC; 2 A)
Efficiency (typ.)	80 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

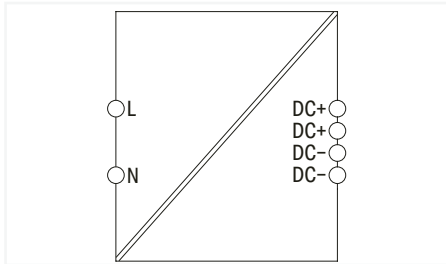
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 30 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +60 °C (device starts at -40 °C (type-tested))
Ambient temperature UL (operation at $U_o$ )	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +80 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

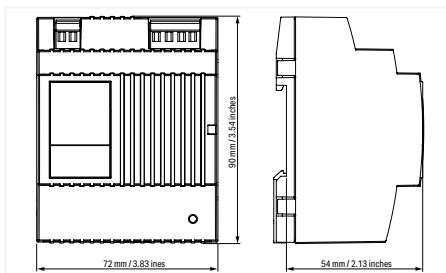
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	54 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 4 A



Item No.	PU
787-1011	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 3.5 \text{ A} (< 100 \text{ VAC})$
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.5 \text{ A} (230 \text{ VAC}); \leq 0.9 \text{ A} (110 \text{ VAC})$
Inrush current	$\leq 30 \text{ A} (\text{NTC})$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80 \text{ ms} (230 \text{ VAC}); \geq 10 \text{ ms} (110 \text{ VAC})$

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	10.5 ... 15.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A (12 VDC); 2.4 A (in any mounting position)
Nominal output power	48 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.2 \text{ W}; \leq 8.5 \text{ W} (230 \text{ VAC}; \text{nominal load})$
Power loss (max.) $P_{i(\text{max})}$	9 W (100 VAC / 12 VDC; 4 A)
Efficiency (typ.)	85 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

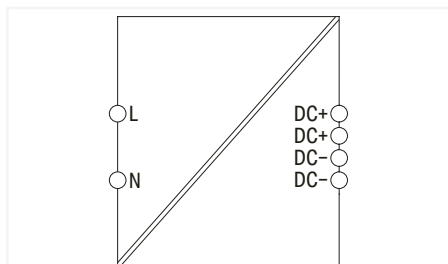
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 30 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ (type-tested))
Ambient temperature UL (operation at $U_o$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \%/K (> 45 \text{ }^\circ\text{C})$

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

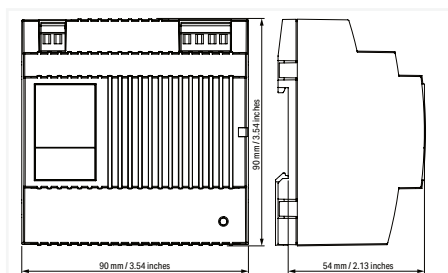
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 6.5 A



Item No.	PU
787-1021	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 6 \text{ A}$ (< 100 VAC); $I_o \leq 5.5 \text{ A}$ (< 90 VAC)
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0.9 \text{ A}$ (230 VAC); $\leq 1.6 \text{ A}$ (110 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 100 \text{ ms}$ (230 VAC); $\geq 15 \text{ ms}$ (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	10.5 ... 15.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	6.5 A (12 VDC); 3.9 A (12 VDC; in any mounting position)
Nominal output power	78 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1 \text{ W}$ ; $\leq 15 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	15 W (100 VAC / 12 VDC; 6.5 A)
Efficiency (typ.)	87 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

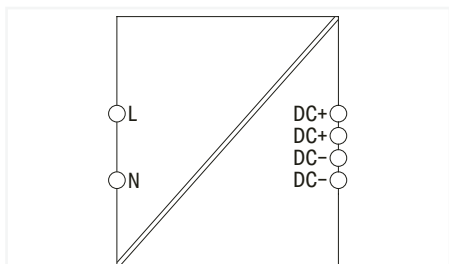
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 30 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +60 °C (device starts at -40 °C (type-tested))
Ambient temperature UL (operation at $U_o$ )	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +80 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

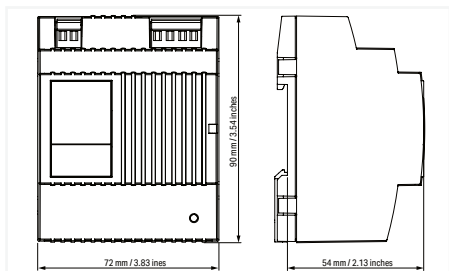
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	90 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 18 V ▶ Nominal output current: 2.4 A



Item No.	PU
787-1017	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 2 \text{ A}$ (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.5 \text{ A}$ (230 VAC); $\leq 0.9 \text{ A}$ (110 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10 \text{ ms}$ (230 VAC); $\geq 10 \text{ ms}$ (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	18 VDC (SELV)
Output voltage range	15 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2.4 A (18 VDC); 2 A (24 VDC; in horizontal mounting position)
Nominal output power	43 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.6 \text{ W}$ ; $\leq 8.1 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	8.2 W (100 VAC / 18 VDC; 2.4 A)
Efficiency (typ.)	84 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

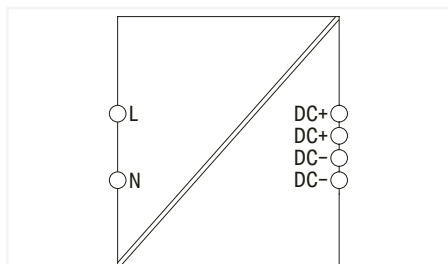
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ (type-tested))
Ambient temperature UL (operation at $U_o$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \text{ }^\circ\text{C/K}$ ( $> 45 \text{ }^\circ\text{C}$ )

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

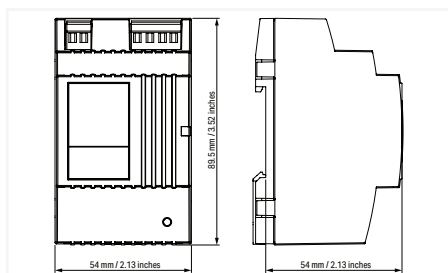
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 1.3 A



Item No.	PU
787-1002	1



## Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 1 \text{ A}$ (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.5 \text{ A}$ (230 VAC); $\leq 0.7 \text{ A}$ (110 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80 \text{ ms}$ (230 VAC); $\geq 10 \text{ ms}$ (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 26.4 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	1.3 A (24 VDC); 0.9 A (in any mounting position)
Nominal output power	31.2 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.6 \text{ W}$ ; $\leq 7 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max)}}$	7.3 W (100 VAC / 24 VDC; 1.3 A)
Efficiency (typ.)	82 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +60 °C (device starts at -40 °C (type-tested))
Ambient temperature UL (operation at $U_o$ )	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +80 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)

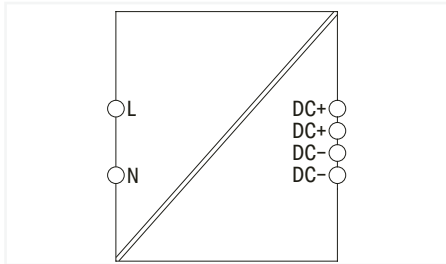
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	54 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

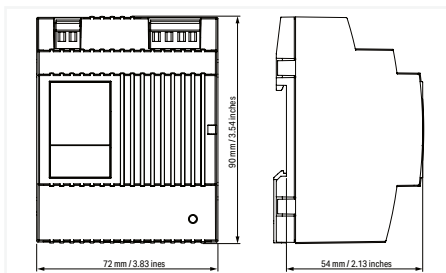
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV



## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2.5 A



Item No.	PU
787-1012	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 2 \text{ A}$ (< 100 VAC); $I_o \leq 1.8 \text{ A}$ (< 90 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.6 \text{ A}$ (230 VAC); $\leq 1.4 \text{ A}$ (110 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80 \text{ ms}$ (230 VAC); $\geq 10 \text{ ms}$ (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 26.4 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	2.5 A (24 VDC); 1.6 A (in any mounting position)
Nominal output power	60 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.2 \text{ W}$ ; $\leq 8.5 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	10.5 W (100 VAC / 24 VDC; 2.5 A)
Efficiency (typ.)	88 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

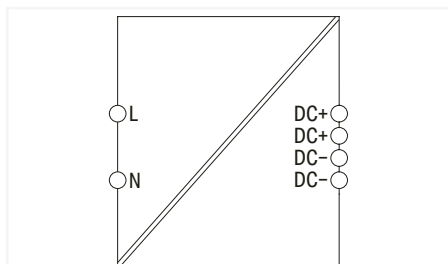
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ (type-tested))
Ambient temperature UL (operation at $U_o$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \%/K$ ( $> 45 \text{ }^\circ\text{C}$ )

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

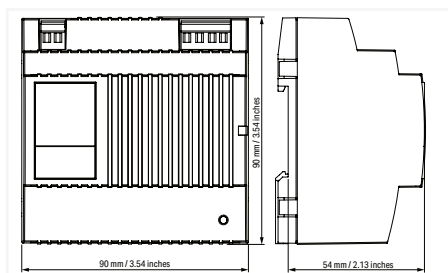
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 4 A



Item No.	PU
787-1022	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	Upon request
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.9 \text{ A}$ (230 VAC); $\leq 1.6 \text{ A}$ (110 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 100 \text{ ms}$ (230 VAC); $\geq 15 \text{ ms}$ (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 26.4 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A (24 VDC); 2.4 A (in any mounting position)
Nominal output power	96 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 0.8 \text{ W}$ ; $\leq 13.1 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	14.8 W (264 VAC / 24 VDC; 4 A)
Efficiency (typ.)	88 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

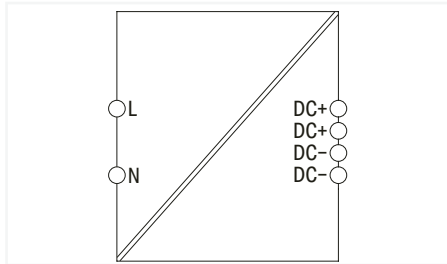
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ (type-tested))
Ambient temperature UL (operation at $U_N$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \%/K$ ( $> 45 \text{ }^\circ\text{C}$ )

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

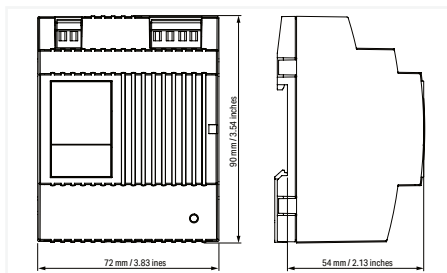
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	90 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 5 V ▶ Nominal output current: 5.5 A ▶ DC OK signal



Item No.	PU
787-1020	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Overhead mounting is possible with derating
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 61010-2-201/UL 60950-1; PELV per EN 60204

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.29$ A (230 VAC); $\leq 0.56$ A (110 VAC)
Inrush current	$\leq 30$ A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 80$ ms (230 VAC); $\geq 10$ ms (110 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	5 VDC (SELV)
Output voltage range	4.5 ... 8.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	5.5 A (5 VDC); 3.5 A (in any mounting position)
Nominal output power	27.5 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.4$ W; $\leq 9.4$ W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{(max.)}}$	9.9 W (264 VAC / 5 VDC; 5.5 A)
Efficiency (typ.)	75 %

Circuit protection	
Internal fuse	T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A (C characteristic), 10 A (B characteristic) or higher

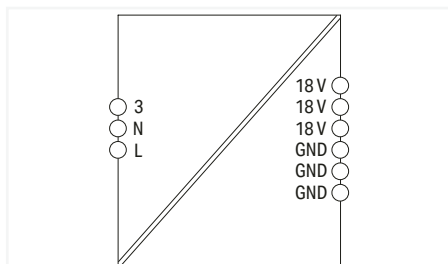
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 16$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +60 °C (device starts at -40 °C (type-tested))
Ambient temperature UL (operation at $U_o$ )	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +80 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 45$ °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 18 V ▶ Nominal output current: 1.25 A ▶ DC OK LED



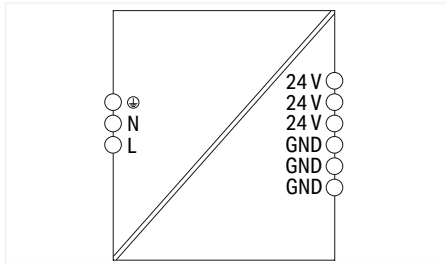
Item No.	PU
787-2857	1

## Features:

- WAGO's 787-2857 Switched-Mode Power Supply is specially designed to supply the 753-647 DALI Multi-Master Module.
- Several DALI Multi-Master Modules can be supplied in parallel.
- Stepped profile for installation in standard distribution boards
- Connection technology with Push-in CAGE-CLAMP®
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN/UL 61010-1 or EU/UL 61010-2-201

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 100 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 0.4$ A (100 VAC); $\leq 0.2$ A (240 VAC)
Inrush current	$\leq 24$ A (NTC)
Mains failure hold-up time	$\geq 95$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, nom}$	18 VDC (SELV)
Nominal output current $I_{o, nom}$	1.25 A (18 VDC)
Nominal output power	22 W
Residual ripple	$\leq 60$ mV (peak-to-peak)
Overload behavior	Hiccup
Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 0.5$ W (230 VAC; no load); $\leq 4$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	5 W (110 VAC / 24 VDC; 1.35 A)
Efficiency (typ.)	88 %
Circuit protection	
Internal fuse	T 1.25 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3920 V
Isolation voltage (pri.-PE, AC)	2470 V
Isolation voltage (sec.-PE)	0.5 VDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Overvoltage protection; secondary	$\leq 32$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 2,500,000$ h (per EN/IEC 61709 at +40 °C)
Ambient temperature (operation)	-25 ... +70 °C (nominal mounting position); -25 ... +55 °C (in any mounting position)
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1.7 %/K ( $> 55$ °C)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.25 ... 2.5 mm <sup>2</sup> / 0.25 ... 2.5 mm <sup>2</sup> / 20 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Cable length (max.)	30 m
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	36 mm x 90 mm x 55 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 61010-1; EN 61010-2-201; cULus 61010-1; cULus 61010-2-201; DNV

## Power supply ▶ Compact ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 1.25 A



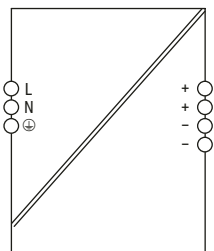
Item No.	PU
787-2850	1

### Features:

- Stepped profile for installation in standard distribution boards
- Connection technology with Push-in CAGE CLAMP®
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 110 ... 240 VAC
Input voltage range	1 x 100 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 0.55 \text{ A}$ (110 VAC); $\leq 0.33 \text{ A}$ (240 VAC)
Inrush current	$\leq 24 \text{ A}$ (NTC)
Mains failure hold-up time	$\geq 95 \text{ ms}$ (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 24 VDC (fixed setting)
Nominal output current $I_{o, \text{nom}}$	1.25 A (24 VDC)
Nominal output power	30 W
Residual ripple	$\leq 60 \text{ mV}$ (peak-to-peak)
Overload behavior	Hiccup
Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 0.5 \text{ W}$ ; $\leq 4 \text{ W}$ (230 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	5 W (110 VAC / 24 VDC; 1.35 A)
Efficiency (typ.)	88 %
Circuit protection	
Internal fuse	T 1.25 A / 250 VAC
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3920 V
Isolation voltage (pri.-PE, AC)	2470 V
Isolation voltage (sec.-PE)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overtoltage category	III
Pollution degree	2
Overtoltage protection; secondary	$\leq 32 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 2,500,000 \text{ h}$ (per EN/IEC 61709 at +40 °C)
Ambient temperature (operation)	-25 ... +70 °C (nominal mounting position; -25 ... +55 °C (in any mounting position))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1.7 %/K ( $> 55 \text{ °C}$ )
Connection data	
Connection type 1	Input
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.25 ... 2.5 mm <sup>2</sup> / 0.25 ... 2.5 mm <sup>2</sup> / 20 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Cable length (max.)	30 m
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	36 mm x 90 mm x 55 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 61010-1; EN 61010-2-201; cULus 61010-1; cULus 61010-2-201; DNV; SEMI F47

# Power supply ▶ Base ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ DC OK LED



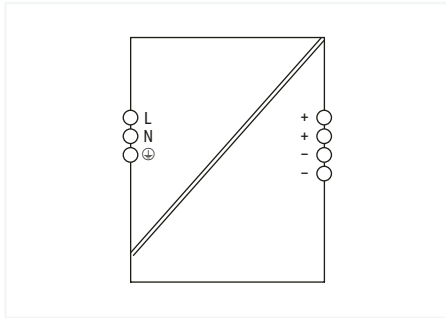
Item No.	PU
2587-2144	1

### Features:

- Optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination
- Electrically isolated output voltage (SELV) per EN 62368-1/UL 61010-1

Input	
Phases	1
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC (Derating -1 %/V for voltage < 100 VAC)
Nominal mains frequency range	50 Hz / 60 Hz
Input current $I_i$	≤ 4 A
Inrush current	≤ 35 A (at 230 VAC / 25 °C)
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 50 ms (230 VAC)
Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	23.5 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	Optical status indication (DC OK)
Efficiency/power losses	
Power loss $P_i$	≤ 5 W (standby); ≤ 16.8 W (Full load)
Efficiency (typ.)	88 %
Circuit protection	
Internal fuse	T 5 A / 250 V
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2210 V
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m); II (> 2000 m)
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 1,000,000 h (at 25 °C; per IEC 61709; SN 29500)
Ambient temperature (operation)	-30 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.4 W/°C (> 45 °C and < 200 V); -2.4 W/°C (> 50 °C and ≥ 200 V)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 6 mm <sup>2</sup> / 0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	35 mm x 125 mm x 110 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 55032; EN 55035; EN IEC 61000-3-2; EN 61000-3-3; EN IEC 61000-6-4; EN IEC 61000-6-2; UL 61010-1; UL 61010-2-201

## Power supply ▶ Base ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK LED



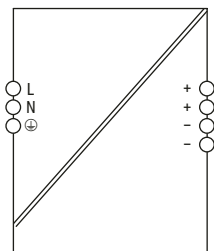
Item No.	PU
2587-2146	1

### Features:

- Optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination
- Electrically isolated output voltage (SELV) per EN 62368-1/UL 61010-1

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC (Derating -1 %/V for voltage < 100 VAC)
Nominal mains frequency range	50 Hz / 60 Hz
Input current $I_i$	≤ 3.5 A
Inrush current	≤ 15 A (at 230 VAC / 25 °C)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 22 ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23.5 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	Optical status indication (DC OK)
Efficiency/power losses	
Power loss $P_i$	≤ 5 W (230 VAC; no load); ≤ 24.6 W (230 VAC; nominal load)
Efficiency (typ.)	91 %
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2210 V
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m); II (> 2000 m)
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 1,000,000 h (at 25 °C; per IEC 61709; SN 29500)
Ambient temperature (operation)	-30 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-4.8 W/°C (> 45 °C and < 200 V); -4.8 W/°C (> 50 °C and ≥ 200 V)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 6 mm <sup>2</sup> / 0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	52 mm x 125 mm x 117 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 55032; EN 55035; EN IEC 61000-3-2; EN 61000-3-3; EN IEC 61000-6-4; EN IEC 61000-6-2; UL 61010-1; UL 61010-2-201

# Power supply ▶ Base ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ DC OK LED



Item No.	PU
2587-2147	1

## Features:

- Optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination
- Electrically isolated output voltage (SELV) per EN 62368-1/UL 61010-1

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC (Derating -1 %/V for voltage < 100 VAC)
Nominal mains frequency range	50 Hz / 60 Hz
Input current $I_i$	≤ 7 A
Inrush current	≤ 20 A (at 230 VAC / 25 °C)
Power factor	≥ 0.98 (230 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 16 ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23.5 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A
Nominal output power	480 W
Residual ripple	≤ 100 mV (peak-to-peak)
Overload behavior	Shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	Optical status indication (DC OK)
Efficiency/power losses	
Power loss $P_i$	≤ 5 W (no load); ≤ 32.5 W (Full load)
Efficiency (typ.)	94 %
Circuit protection	
Internal fuse	T 8 A / 250 V
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2210 V
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m); II (> 2000 m)
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 1,000,000 h (at 25 °C; per IEC 61709; SN 29500)
Ambient temperature (operation)	-30 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-9.6 W/°C (> 45 °C and < 200 V); -9.6 W/°C (> 50 °C and ≥ 200 V)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 10 mm <sup>2</sup> / 0.2 ... 10 mm <sup>2</sup> / 24 ... 8 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	56 mm x 125 mm x 138 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 55032; EN 55035; EN IEC 61000-3-2; EN 61000-3-3; EN IEC 61000-6-4; EN IEC 61000-6-2; UL 61010-1; UL 61010-2-201










# WAGO Power Supplies; 3-Phase

## WAGO Power Supplies; 3-Phase

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	<b>Eco/Eco 2</b> Switched-Mode Power Supplies; 787 / 2687 Series	144

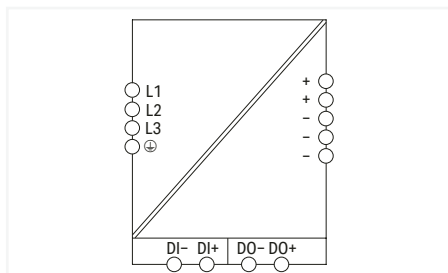
# WAGO Power Supplies; 3-Phase Selection Guide

2

Product Family	Nominal voltage (output)	SELV / PELV	Nominal current (output) [ACD]	Input, 2-phase	Input, 3-phase	Standards/Approvals					DC OK LED	DC OK signal	DC OK contact	Communication capability	TopBoost	PowerBoost with protective coating	Efficiency typ.	Surrounding air temperature	Item No.
						UL 60950	UL 508	UL 61010	DNV	ANSI/SA 12.12.1									
Pro 2	24 V	■	5 A	■	■			■					■	■	■	92.5 %	-25 ... +70 °C	2787-2344	
Pro 2	24 V	■	5 A	■	■			■	■				■	■	■	92.5 %	-25 ... +70 °C	2787-2344/000-030	
Pro 2	24 V	■	5 A	■	■			■	■				■	■	■	92.5 %	-25 ... +70 °C	2787-2344/000-070	
Eco	24 V	■	6.25 A	■	■	■	■					■				87 %	-25 ... +70 °C	787-738	
Eco	24 V	■	10 A	■	■	■	■					■				89 %	-25 ... +70 °C	787-740	
Eco 2	24 V	■	10 A	■	■			■				■				92.5 %	-25 ... +70 °C	2687-2346	
Classic	24 V	■	10 A	■	■	■	■		■			■				90 %	-25 ... +70 °C	787-1640	
Pro	24 V	■	10 A	■	■	■	■					■				91.7 %	-25 ... +70 °C	787-840	
Pro	24 V	■	10 A	■	■	■	■			■			■	■	■	91.7 %	-25 ... +70 °C	787-850	
Pro 2	24 V	■	10 A	■	■			■					■	■	■	94.1 %	-25 ... +70 °C	2787-2346	
Pro 2	24 V	■	10 A	■	■			■	■				■	■	■	94.1 %	-25 ... +70 °C	2787-2346/000-030	
Pro 2	24 V	■	10 A	■	■			■	■				■	■	■	94.1 %	-25 ... +70 °C	2787-2346/000-070	
Eco	24 V	■	20 A	■	■	■	■					■				90 %	-25 ... +70 °C	787-742	
Eco	24 V	■	20 A	■	■	■	■					■				92 %	-20 ... +70 °C	787-2742	
Classic	24 V	■	20 A	■	■	■	■		■			■				92 %	-25 ... +70 °C	787-1642	
Pro	24 V	■	20 A	■	■	■	■					■		■	■	92.9 %	-25 ... +70 °C	787-842	
Pro	24 V	■	20 A	■	■	■	■			■			■	■	■	92.9 %	-25 ... +70 °C	787-852	
Pro 2	24 V	■	20 A	■	■			■					■	■	■	95.9 %	-25 ... +70 °C	2787-2347	
Pro 2	24 V	■	20 A	■	■			■	■				■	■	■	95.9 %	-25 ... +70 °C	2787-2347/000-030	
Pro 2	24 V	■	20 A	■	■			■	■				■	■	■	95.9 %	-25 ... +70 °C	2787-2347/000-070	
Eco	24 V	■	40 A	■	■							■				92.3 %	-20 ... +70 °C	787-2744	
Classic	24 V	■	40 A	■	■	■	■		■			■				92 %	-25 ... +70 °C	787-1644	
Pro	24 V	■	40 A	■	■	■	■					■		■	■	93.6 %	-25 ... +55 °C	787-844	
Pro	24 V	■	40 A	■	■	■	■					■		■	■	93.6 %	-25 ... +55 °C	787-844/000-002	
Pro	24 V	■	40 A	■	■	■	■			■			■	■	■	93.6 %	-25 ... +55 °C	787-854	
Pro 2	24 V	■	40 A	■	■			■					■	■	■	96.1 %	-25 ... +70 °C	2787-2348	
Pro 2	24 V	■	40 A	■	■			■	■				■	■	■	96.1 %	-25 ... +70 °C	2787-2348/000-070	
Pro 2	24 V	■	40 A	■	■			■	■				■	■	■	96.1 %	-25 ... +70 °C	2787-2348/000-030	
Eco 2	24 V	■	5 A	■	■			■				■				88 %	-25 ... +70 °C	2687-2344	
Pro	48 V	■	10 A	■	■	■	■					■		■	■	93 %	-25 ... +70 °C	787-845	
Pro 2	48 V	■	10 A	■	■			■					■	■	■	95 %	-25 ... +70 °C	2787-2357	
Pro	48 V	■	20 A	■	■	■	■					■		■	■	94.4 %	-25 ... +70 °C	787-847	
Pro 2	48 V	■	20 A	■	■			■					■	■	■	96 %	-25 ... +70 °C	2787-2358	

2

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2344	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.4$ A (400 VAC; 24 VDC / 5 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Efficiency (typ.)	92.5 % (230 VAC; 5 A; 25 °C)

Circuit protection	
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,400,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

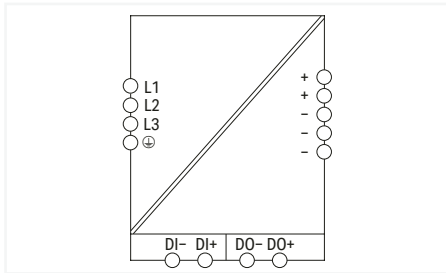
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost



Similar to illustration



Item No.	PU
2787-2344/000-030	1

### Features:

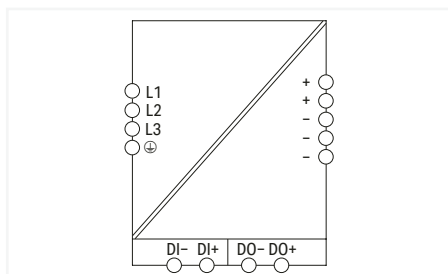
- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

<b>Input</b>	
Phases	3
Nominal input voltage $U_{i,nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.4$ A (400 VAC; 24 VDC / 5 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o,nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %
<b>Signaling and communication</b>	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
<b>Efficiency/power losses</b>	
Efficiency (typ.)	92.5 % (230 VAC; 5 A; 25 °C)
<b>Circuit protection</b>	
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)
<b>Safety and protection/Environmental requirements</b>	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overtoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overtoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,400,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m
<b>Connection data</b>	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
<b>Physical data/Mechanical data/Material Data</b>	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Similar to illustration



Item No.	PU
2787-2344/000-070	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.4$ A (400 VAC; 24 VDC / 5 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 7.5 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Efficiency (typ.)	92.5 % (230 VAC; 5 A; 25 °C)

Circuit protection	
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,400,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

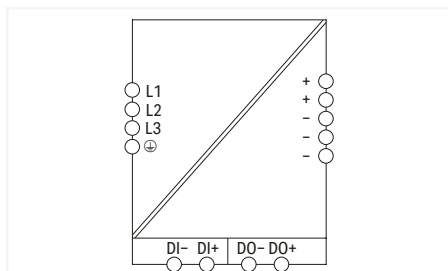
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; ISA S71.04:1985; G3 Group A; SEMI F47



2

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2346	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.6$ A (400 VAC; 24 VDC / 10 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 3$ W (standby); $\leq 3$ W (no load); $\leq 18$ W (400 VAC; nominal load)
Efficiency (typ.)	94.1 % (400 VAC; 10 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 2.5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

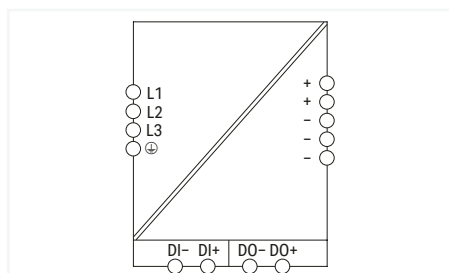
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2346/000-030	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.6$ A (400 VAC; 24 VDC / 10 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 3$ W (standby); $\leq 3$ W (no load); $\leq 18$ W (400 VAC; nominal load)
Efficiency (typ.)	94.1 % (400 VAC; 10 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 2.5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

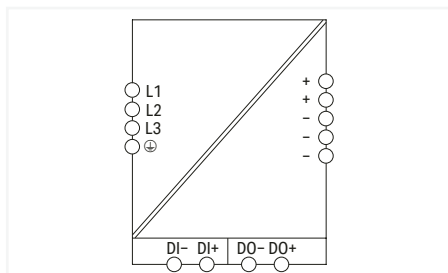
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost

**Standards and specifications**

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2346/000-070	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.6$ A (400 VAC; 24 VDC / 10 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 3$ W (standby); $\leq 3$ W (no load); $\leq 18$ W (400 VAC; nominal load)
Efficiency (typ.)	94.1 % (400 VAC; 10 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 2.5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail

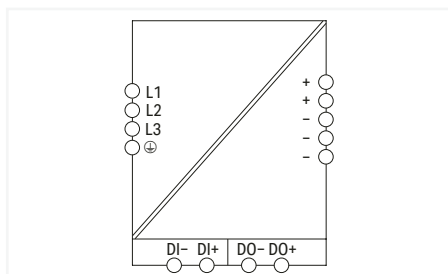
Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; ISA S71.04:1985; G3 Group A; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost



Similar to illustration



Item No.	PU
2787-2347	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.8 \text{ A}$ (400 VAC; 24 VDC / 20 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 3.6 \text{ W}$ (standby); $\leq 4.4 \text{ W}$ (no load); $\leq 21 \text{ W}$ (400 VAC; nominal load)
Efficiency (typ.)	95.9 % (400 VAC; 20 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 2.5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000 \text{ m a.s.l.}$ ); II ( $> 2000 \text{ m a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

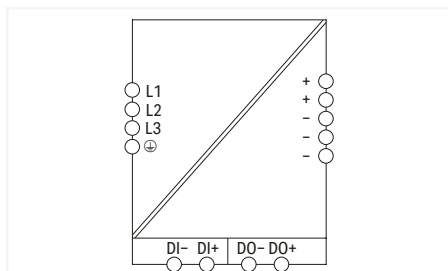


Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost

**Standards and specifications**

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2347/000-070	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.8 \text{ A}$ (400 VAC; 24 VDC / 20 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 3.6 \text{ W}$ (standby); $\leq 4.4 \text{ W}$ (no load); $\leq 21 \text{ W}$ (400 VAC; nominal load)
Efficiency (typ.)	95.9 % (400 VAC; 20 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 2.5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000 \text{ m.a.s.l.}$ ); II ( $> 2000 \text{ m.a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

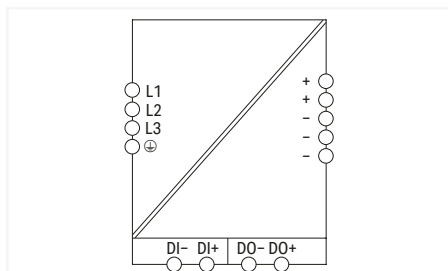
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; ISA S71.04:1985; G3 Group A; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2347/000-030	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.8 \text{ A}$ (400 VAC; 24 VDC / 20 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Power loss $P_i$	$\leq 3.6 \text{ W}$ (standby); $\leq 4.4 \text{ W}$ (no load); $\leq 21 \text{ W}$ (400 VAC; nominal load)
Efficiency (typ.)	95.9 % (400 VAC; 20 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 2.5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000 \text{ m.a.s.l.}$ ); II ( $> 2000 \text{ m.a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

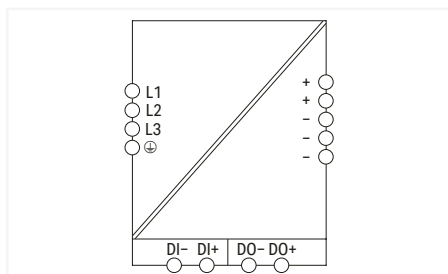
Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost



Similar to illustration



Item No.	PU
2787-2348	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 1.7 \text{ A}$ (400 VAC; 24 VDC / 40 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 60 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Efficiency (typ.)	96.1 % (400 VAC; 40 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 3.2 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

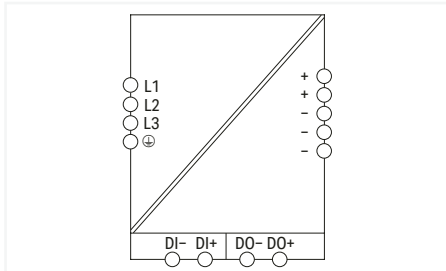
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000 \text{ m.a.s.l.}$ ); II ( $> 2000 \text{ m.a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit; $\leq 35 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2348/000-030	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 1.7 \text{ A}$ (400 VAC; 24 VDC / 40 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 60 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Efficiency (typ.)	96.1 % (400 VAC; 40 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 3.2 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

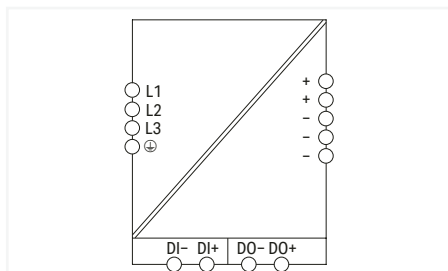
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	III ( $\leq 2000 \text{ m a.s.l.}$ ); II ( $> 2000 \text{ m a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Oversvoltage protection; secondary	Internal protective circuit; $\leq 35 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70 \text{ °C}$ (device starts at $-40 \text{ °C}$ (type-tested))
Ambient temperature (storage)	$-40 \dots +85 \text{ °C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost ▶ Protective coating



Item No.	PU
2787-2348/000-070	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 1.7 \text{ A}$ (400 VAC; 24 VDC / 40 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 60 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)

Efficiency/power losses	
Efficiency (typ.)	96.1 % (400 VAC; 40 A; 25 °C)

Circuit protection	
Internal fuse	3 x T 3.2 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)

Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	III ( $\leq 2000 \text{ m.a.s.l.}$ ); II ( $> 2000 \text{ m.a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Oversvoltage protection; secondary	Internal protective circuit; $\leq 35 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m

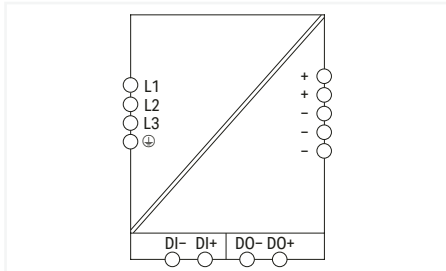
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; DNV; UL HazLoc; ISA S71.04:1985; G3 Group A; SEMI F47



## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost



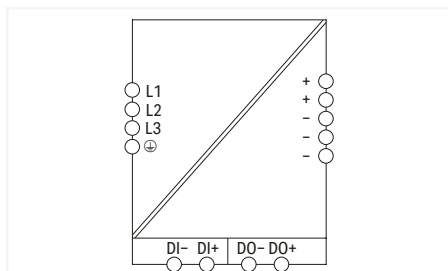
Item No.	PU
2787-2357	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 0.8 \text{ A}$ (400 VAC; 48 VDC / 10 A)
Inrush current	$\leq 15 \text{ A}$ (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (3 x 400 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 15 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Power loss $P_i$	$\leq 3.6 \text{ W}$ (standby); $\leq 4.4 \text{ W}$ (no load); $\leq 21 \text{ W}$ (nominal load)
Efficiency (typ.)	95 %
Circuit protection	
Internal fuse	3 x T 3.15 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversoltage category	III ( $\leq 2000 \text{ m a.s.l.}$ ); II ( $> 2000 \text{ m a.s.l.}$ )
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 900,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ (type-tested))
Ambient temperature (storage)	$-40 \dots +85 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	70 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Pro 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost



Item No.	PU
2787-2358	1

### Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Phases	3
Nominal input voltage $U_{i, nom}$	3 x 400 ... 500 VAC (connection without neutral conductor)
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 1.6$ A (400 VAC; 48 VDC / 20 A)
Inrush current	$\leq 15$ A (after 1 ms)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (3 x 400 VAC)
Output	
Nominal output voltage $U_{o, nom}$	48 VDC (SELV)
Output voltage range	48 ... 56 VDC (adjustable)
Nominal output current $I_{o, nom}$	20 A (48 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	DC 30 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Optical status indication (DC OK; load; warning and error states); Digital signal input and output (DI/DO)
Communications	USB (750-923 Communication Cable); EtherNet/IP™ (2789-9023 Communication Module); IO-Link (2789-9080 Communication Module); Modbus RTU (Communication Module 2789-9015); Modbus TCP (2789-9052 Communication Module)
Efficiency/power losses	
Efficiency (typ.)	96 %
Circuit protection	
Internal fuse	2 x T 5 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x 16 A (for USA/Canada: 3 x 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	III ( $\leq 2000$ m.a.s.l.); II ( $> 2000$ m.a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 800,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See instruction leaflet
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	120 mm x 130 mm x 130 mm
Note (dimensions)	Height without connector; Height with connector: 169 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; SEMI F47

2

## Communication module ▶ EtherNet/IP™



Item No.	PU
2789-9023	1

**Features:**

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- EtherNet/IP™ + MQTT
- Suitable for monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Integrated ETHERNET switch for convenient wiring
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{I, nom}$	5 VDC (SELV)
Nominal input current at $U_N$	250 mA (max.)
Signaling and communication	
Signaling	1 x ERR LED (red); 1 x COM OK LED (green); 1 x LED LNK/ACTx (green) ; 1 x LED SPEEDx (orange)
Communications	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; SNTP; MQTT
Configuration options	Web-Based Management
Visualization	Web-Visu
Transmission rate	100 MBd ( (ETHERNET: 10/100 Mbit/s)
Transmission medium (communication/ fieldbus)	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Safety and protection/Environmental requirements	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/Protection type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Ambient temperature (operation)	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	EtherNet/IP™
Pluggable connector	2 x RJ-45
Cable length (max.)	100 m
Transmission medium	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 80 mm x 22 mm
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201

## Communication module ► IO-Link



Item No.	PU
2789-9080	1

### Features:

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- IO-Link device supports IO-Link specification 1.1
- Suitable for configuring and monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Pluggable connection technology
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{in, nom}$	24 VDC (SELV; via IO-Link Master)
Input voltage range	18 ... 30 VDC (SELV; via IO-Link Master)
Signaling and communication	
Signaling	1 x COM OK LED (green); 1 x ERR LED (red)
Communications	IO-Link
IO-Link version	1.1
Transmission rate	230.4 kBd ((COM 3))
Data width	5 bytes
Data update rate	25 ms
Safety and protection/Environmental requirements	
Isolation	0.63 kVDC
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	20 m (IO-Link)
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 95 mm x 22 mm
Note (dimensions)	Height with connector; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; UL HazLoc

## Communication module ▶ Modbus (TCP, UDP)



2

Item No.	PU
2789-9052	1

### Features:

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- Modbus TCP/UDP
- Suitable for monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Integrated ETHERNET switch for convenient wiring
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{I, nom}$	5 VDC (SELV)
Nominal input current at $U_N$	210 mA (typ.)
Signaling and communication	
Signaling	1 x ERR LED (red); 1 x COM OK LED (green); 1 x LED LNK/ACTx (green) ; 1 x LED SPEEDx (orange)
Communications	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; SNTP
Configuration options	Web-Based Management
Visualization	Web-Visu
Transmission rate	100 MBd ( (ETHERNET: 10/100 Mbit/s)
Transmission medium (communication/ fieldbus)	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Safety and protection/Environmental requirements	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/Protection type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Ambient temperature (operation)	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection type 1	Modbus TCP/UDP
Pluggable connector	2 x RJ-45
Cable length (max.)	100 m
Transmission medium	ETHERNET: Twisted pair S-UTP; 100 Ω; Cat. 5
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 80 mm x 22 mm
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201

## Communication module ► Modbus RTU via RS-485



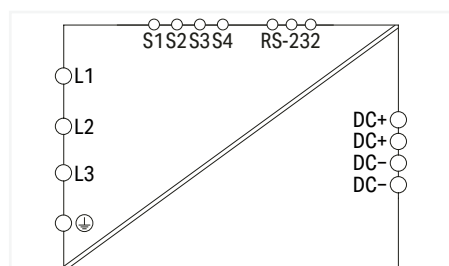
Item No.	PU
2789-9015	1

### Features:

- WAGO's communication module snaps onto a Pro 2 Power Supply's communication interface.
- Modbus RTU (RS-485)
- Suitable for monitoring the subordinate power supply
- Function blocks for standard control systems available upon request
- Pluggable connection technology
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips
- Requires RJ-45 terminating resistor (120 Ω) for long cables (2789-9915)

Input	
Nominal input voltage $U_{in, nom}$	5 VDC (SELV)
Input voltage range	4.5 ... 5.5 VDC (SELV)
Signaling and communication	
Signaling	1 x LED PWR (green); 1 x LED RxD (yellow); 1 x LED TxD (yellow)
Communications	Modbus RTU via RS-485
Transmission rate	4.8 ... 115.2 kBd
Number of devices (max.)	247
Transmission medium (communication/fieldbus)	Shielded copper cable
Safety and protection/Environmental requirements	
Test voltage (input/output)	AC 2 kV; 50 Hz; 1 min
Test voltage (input/output/shield)	1 kVAC; 50 Hz; 1 min
Protection class/Protection type	III / IP20; per EN 60529
Insulation type	Functional insulation
Pollution degree	2
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Pluggable connector	2 x RJ-45
Transmission medium	Shielded copper cable
Physical data/Mechanical data/Material Data	
Width x Height x Depth	35 mm x 80 mm x 22 mm
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 61010-1; UL 61010-2-201; UL HazLoc

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ DC OK signal



Item No.	PU
787-850	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- LineMonitor for parameter setting and monitoring
- RS-232 serial interface
- Four signal outputs

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 0.6 \text{ A}$ (340 VAC; 10 ADC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive (adjustable via software/display)
Mains failure hold-up time	$\geq 22 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	adjustable (constant current/fuse mode)
PowerBoost	DC 20 A (4 s); DC 15 A (16 s)
TopBoost	70 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Warning LED (yellow); 1 x Error LED (red); LCD; 4 x Signal output (24 VDC; max. 25 mA); 1 x RS-232 interface
Communications	RS-232 serial interface
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 7.8 \text{ W}$ ; $\leq 19.9 \text{ W}$ (nominal load)
Efficiency (typ.)	91.7 %

Circuit protection	
Internal fuse	3 x T 2.5 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 1.6 A; Setting range: 1.6 ... 2.5 A

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Oversvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

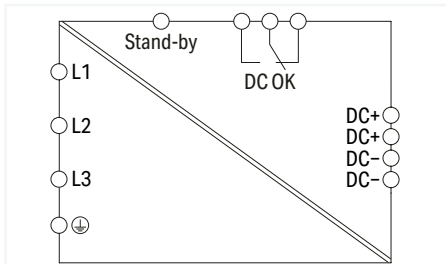
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 163 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508



## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-840	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 0.6 \text{ A}$ (340 VAC; 10 ADC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 22 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 20 A (4 s); DC 15 A (16 s)
TopBoost	70 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 7.8 \text{ W}$ ; $\leq 19.9 \text{ W}$ (nominal load)
Efficiency (typ.)	91.7 %

Circuit protection	
Internal fuse	3 x T 2.5 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 1.6 A; Setting range: 1.6 ... 2.5 A

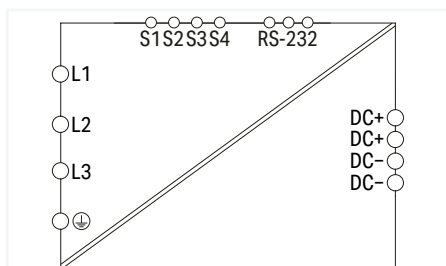
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 163 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ DC OK signal



Item No.	PU
787-852	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- LineMonitor for parameter setting and monitoring
- RS-232 serial interface
- Four signal outputs

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 1.1 \text{ A}$ (340 VAC; 20 ADC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive (adjustable via software/display)
Mains failure hold-up time	$\geq 13 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	adjustable (constant current/fuse mode)
PowerBoost	DC 40 A (4 s); DC 30 A (16 s)
TopBoost	80 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Warning LED (yellow); 1 x Error LED (red); LCD; 4 x Signal output (24 VDC; max. 25 mA); 1 x RS-232 interface
Communications	RS-232 serial interface
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 8.3 \text{ W}$ ; $\leq 34.1 \text{ W}$ (nominal load)
Efficiency (typ.)	92.9 %

Circuit protection	
Internal fuse	3 x T 2.5 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 2.5 A; Setting range: 2.5 ... 4 A

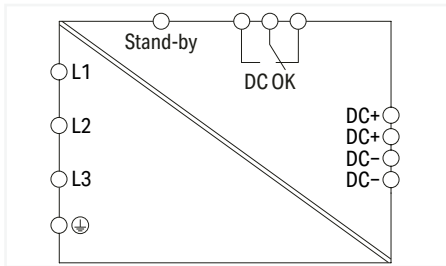
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	77 mm x 171 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-842	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 1.1 \text{ A}$ (340 VAC; 20 ADC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 13 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 40 A (4 s); DC 30 A (16 s)
TopBoost	80 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 8.3 \text{ W}$ ; $\leq 34.1 \text{ W}$ (nominal load)
Efficiency (typ.)	92.9 %

Circuit protection	
Internal fuse	3 x T 2.5 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 2.5 A; Setting range: 2.5 ... 4 A

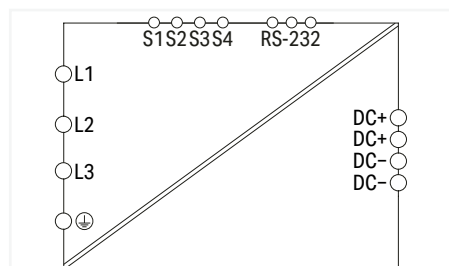
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	77 mm x 171 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost ▶ DC OK signal



Item No.	PU
787-854	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- LineMonitor for parameter setting and monitoring
- RS-232 serial interface
- Four signal outputs

Input	
Phases	2 / 3
Nominal input voltage $U_{i, nom}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2 \text{ A}$ (340 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive (adjustable via software/display)
Mains failure hold-up time	$\geq 15 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o, nom}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.)
Overload behavior	adjustable (constant current/fuse mode)
PowerBoost	DC 60 A (4 s); DC 50 A (16 s)
TopBoost	100 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Warning LED (yellow); 1 x Error LED (red); LCD; 4 x Signal output (24 VDC; max. 25 mA); 1 x RS-232 interface
Communications	RS-232 serial interface
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 7 \text{ W}$ ; $\leq 61.5 \text{ W}$ (nominal load)
Efficiency (typ.)	93.6 %

Circuit protection	
Internal fuse	3 x T 3.2 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 3.2 A; Setting range: 2.5 ... 4 A

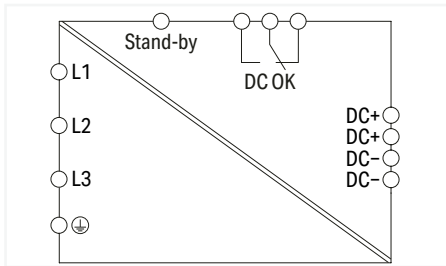
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overtoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +55 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 45 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	128 mm x 171 mm x 205 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-844	1
787-844/000-002	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2 \text{ A}$ (340 VAC; 40 ADC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 15 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 60 A (4 s); DC 50 A (16 s)
TopBoost	100 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 7 \text{ W}$ ; $\leq 61.5 \text{ W}$ (nominal load)
Efficiency (typ.)	93.6 %

Circuit protection	
Internal fuse	3 x T 3.2 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 3.2 A; Setting range: 2.5 ... 4 A

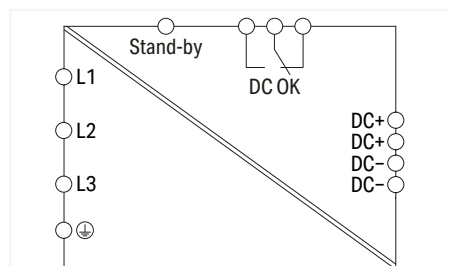
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +55 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 45 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	128 mm x 171 mm x 205 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 10 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-845	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 1.1 \text{ A}$ (340 VAC; 10 ADC)
Inrush current	$\leq 30 \text{ A}$ (peak)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 12 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	39 ... 53 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 15 A (4 s); DC 12.5 A (16 s)
TopBoost	55 ADC (50 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.8 \text{ W}$ (standby); $\leq 8.2 \text{ W}$ (no load); $\leq 38 \text{ W}$ (nominal load)
Efficiency (typ.)	93 %

Circuit protection	
Internal fuse	3 x T 2.5 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 2.5 A; Setting range: 2.5 ... 4 A

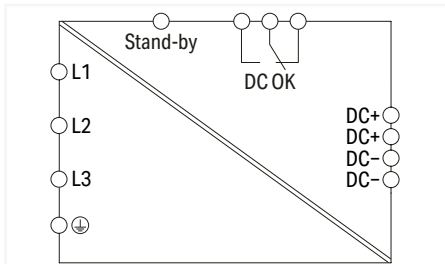
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	77 mm x 171 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Pro ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 48 V ▶ Nominal output current: 20 A ▶ TopBoost ▶ PowerBoost ▶ DC OK contact



Item No.	PU
787-847	1

### Features:

- Switched-mode power supply with PowerBoost and TopBoost
- Switch off the output and minimize power consumption via stand-by input
- Output monitoring via DC OK contact
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 550 VAC; 480 ... 780 VDC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2 \text{ A}$ (340 VAC; 20 ADC)
Inrush current	$\leq 30 \text{ A}$ (peak)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 15 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC (SELV)
Output voltage range	39 ... 53 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (48 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 30 A (4 s); DC 25 A (16 s)
TopBoost	80 ADC (25 ms)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Error LED (red); 1 x Stand-by input; 1 x DC OK relay contact (changeover contact)
Operation status indicator	Green LED (DC OK); Red LED (error)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.8 \text{ W}$ (standby); $\leq 5.2 \text{ W}$ (no load); $\leq 59.2 \text{ W}$ (nominal load)
Efficiency (typ.)	94.4 %

Circuit protection	
Internal fuse	3 x T 3.2 A / 440 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C; Alternative: motor circuit breaker; Setpoint: 3.2 A; Setting range: 2.5 ... 4 A

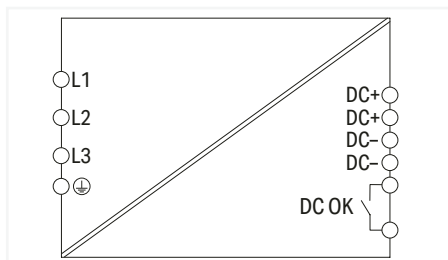
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-5 %/K (> 45 °C)

Connection data	
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	128 mm x 171 mm x 205 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Power supply ▶ Classic ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK contact



Item No.	PU
787-1640	1

### Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 320 ... 575 VAC; 450 ... 800 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 0.73 \text{ A}$ (400 VAC); $\leq 3 \times 0.66 \text{ A}$ (500 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 50 \text{ ms}$ (500 VAC); $\geq 21 \text{ ms}$ (400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 50 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC / DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2.1 \text{ W}$ ; $\leq 27.9 \text{ W}$ (400 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	28.3 W (500 VAC / 24 VDC; 10 A)
Efficiency (typ.)	90 %

Circuit protection	
Internal fuse	No
Backup fusing (required)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C, 20 A (max.); Alternative: motor circuit breaker; An external DC fuse is required for the DC input voltage.

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 41 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K (> 55 °C)

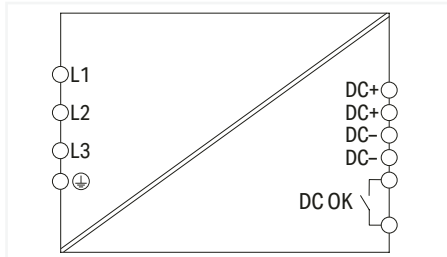
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 171 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47



## Power supply ▶ Classic ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ DC OK contact



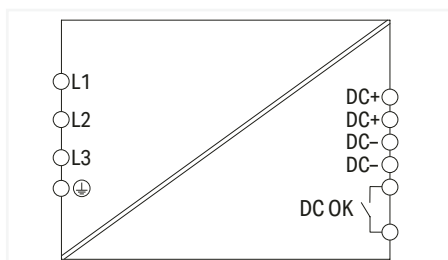
Item No.	PU
787-1642	1

### Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 320 ... 575 VAC; 450 ... 800 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 1.21 \text{ A}$ (400 VAC); $\leq 3 \times 1.03 \text{ A}$ (500 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 25 \text{ ms}$ (500 VAC); $\geq 15 \text{ ms}$ (400 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 15 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current
Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	$\leq 5.8 \text{ W}$ ; $\leq 42.8 \text{ W}$ (400 VAC; nominal load)
Power loss (max.) $P_{i, \text{max}}$	47.6 W (500 VAC / 24 VDC; 20 A)
Efficiency (typ.)	92 %
Circuit protection	
Internal fuse	No
Backup fusing (required)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C, 20 A (max.); Alternative: motor circuit breaker; An external DC fuse is required for the DC input voltage.
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K (> 55 °C)
Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	80 mm x 127 mm x 180 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

## Power supply ▶ Classic ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ DC OK contact



Item No.	PU
787-1644	1

### Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 320 ... 575 VAC; 450 ... 800 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2.15 \text{ A}$ (400 VAC); $\leq 3 \times 1.82 \text{ A}$ (500 VAC)
Inrush current	$\leq 30 \text{ A}$ (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 25 \text{ ms}$ (500 VAC); $\geq 15 \text{ ms}$ (400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 30 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x DC OK contact (make contact; max. 30 VAC / DC; 1 A)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 4.2 \text{ W}$ ; $\leq 83.9 \text{ W}$ (400 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	83.9 W (500 VAC / 24 VDC; 40 A)
Efficiency (typ.)	92 %

Circuit protection	
Internal fuse	No
Backup fusing (required)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C, 20 A (max.); Alternative: motor circuit breaker; An external DC fuse is required for the DC input voltage.

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K (> 55 °C)

Connection data	
Connection type 1	Input/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	126 mm x 127 mm x 198 mm
Mounting type	DIN-35 rail

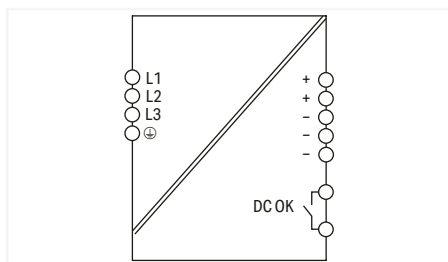
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV; SEMI F47

2

## Power supply ▶ Eco 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A ▶ DC OK contact



Similar to illustration



Item No.	PU
2687-2344	1

### Features:

- Signal output, optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination and tool-free lever operation
- Electrically isolated output voltage (SELV/PELV) per EN 61010/UL 61010
- Marker slot (Item No. 2789-1233, not included) for WAGO's marking cards (WMB) and WAGO's marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	47 ... 63 Hz
Inrush current	$\leq 20$ A (after 1 ms)
Power factor	$\geq 0.5$ (400 VAC; nominal load)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV/PELV)
Output voltage range	24 ... 26.4 VDC
Nominal output current $I_{o, \text{nom}}$	5 A
Nominal output power	120 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant current up to 125 %; shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	Optical status indication (overload); Optical status indication (DC OK); Digital signal output (DO)

Efficiency/power losses	
Power loss $P_I$	$\leq 3$ W (400 VAC; no load)
Efficiency (typ.)	88 %

Safety and protection/Environmental requirements	
Protection class/Protection type	I
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 600,000$ h (at 25 °C)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$\leq -3$ %/K at $T_U \geq 50$ °C
Operating altitude (max.)	2000 m

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 0.4 mm <sup>2</sup> / 0.2 ... 0.4 mm <sup>2</sup> / 24 ... 12 AWG

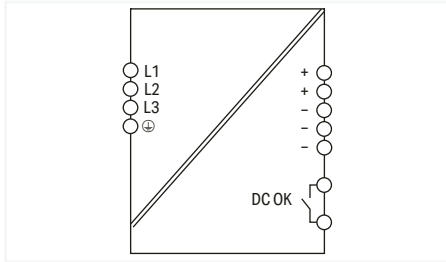
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	49.5 mm x 130 mm x 130 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-2; UL 61010-1; UL 61010-2-201

## Power supply ▶ Eco 2 ▶ Phases: 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK contact



Similar to illustration



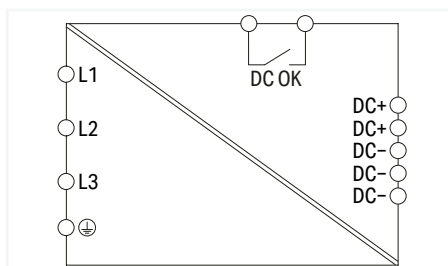
Item No.	PU
2687-2346	1

### Features:

- Signal output, optical status indication
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Connection technology with push-in termination and tool-free lever operation
- Electrically isolated output voltage (SELV/PELV) per EN 61010/UL 61010
- Marker slot (Item No. 2789-1233, not included) for WAGO's marking cards (WMB) and WAGO's marking strips

Input	
Phases	3
Nominal input voltage $U_{i, \text{nom}}$	3 x 400 ... 500 VAC
Input voltage range	3 x 340 ... 550 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 0.68$ A (400 VAC; nominal load); $\leq 0.58$ A (500 VAC; nominal load)
Inrush current	$\leq 25$ A (after 1 ms)
Power factor	$\geq 0.5$ (400 VAC; nominal load)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 20$ ms (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant current up to 110 %; shutdown and automatic restart in the event of a short circuit
Signaling and communication	
Signaling	Optical status indication (DC OK, green LED); Optical status indication (overload, red LED); Signal output (DC OK)
Efficiency/power losses	
Power loss $P_i$	$\leq 1.1$ W (no load); $\leq 20$ W (nominal load)
Efficiency (typ.)	92.5 %
Circuit protection	
Internal fuse	No
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC)	3510 V
Isolation voltage (pri.-PE, AC)	2200 V
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000$ m a. s.l.); II ( $> 2000$ m a. s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 700,000$ h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 45$ °C)
Operating altitude (max.)	5000 m
Connection data	
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 0.4 mm <sup>2</sup> / 0.2 ... 0.4 mm <sup>2</sup> / 24 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 130 mm x 138 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-2; UL 61010-1; UL 61010-2-201; SEMI F47

## Power supply ▶ Eco ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 6.25 A ▶ DC OK contact



Item No.	PU
787-738	1

### Features:

- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated PCB terminal blocks
- Bounce-free switching signal (DC OK) via optocoupler
- Parallel operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, nom}$	(2 / 3) x 340 ... 500 VAC
Input voltage range	(2 / 3) x 306 ... 550 VAC; 500 ... 650 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 0.6$ A (400 VAC; 24 VDC / 6.25 A)
Inrush current	$\leq 25$ A
Power factor	$\geq 0.5$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 17$ ms (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	6.25 A (24 VDC)
Nominal output power	150 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (optocoupler as make contact; max. 31.2 V; 20 mA)
Operation status indicator	Green LED ( $U_o$ ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 18.5$ W
Power loss (max.) $P_{i(max)}$	20 W
Efficiency (typ.)	87 %

Circuit protection	
Internal fuse	3 x T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker $\geq 6$ A; Tripping characteristic: B or C; Alternative: motor circuit breaker

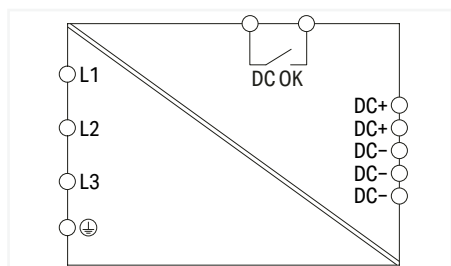
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 250,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-2.5 %/K (> 50 °C; 400 VAC)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Connection type	Signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 92 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3 (Class A); UL 60950-1; UL 508; SEMI F47

## Power supply ▶ Eco ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 10 A ▶ DC OK contact



Item No.	PU
787-740	1

### Features:

- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated PCB terminal blocks
- Bounce-free switching signal (DC OK) via optocoupler
- Parallel operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 340 ... 500 VAC; 500 ... 650 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 1.2 \text{ A}$ (400 VAC; 24 VDC / 10 A)
Inrush current	$\leq 25 \text{ A}$
Power factor	$\geq 0.5$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 17 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (optocoupler as make contact; max. 31.2 V; 20 mA)
Operation status indicator	Green LED ( $U_o$ ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 32.5 \text{ W}$
Power loss (max.) $P_{i(\text{max})}$	36 W
Efficiency (typ.)	89 %

Circuit protection	
Internal fuse	3 x T 2 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker $\geq 6 \text{ A}$ ; Tripping characteristic: B or C; Alternative: motor circuit breaker

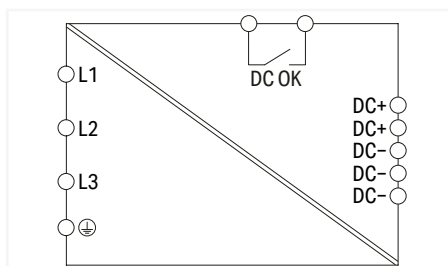
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 250,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-40 \dots +85 \text{ }^\circ\text{C}$
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	$-1.25 \text{ \%}/\text{K}$ ( $> 50 \text{ }^\circ\text{C}$ ; 400 VAC)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Connection type	Signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	65 mm x 130 mm x 130 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3 (Class A); UL 60950-1; UL 508; SEMI F47

## Power supply ▶ Eco ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ DC OK contact



Item No.	PU
787-742	1

### Features:

- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated PCB terminal blocks
- Bounce-free switching signal (DC OK) via optocoupler
- Parallel operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Input	
Phases	2 / 3
Nominal input voltage $U_{i, nom}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 360 ... 575 VAC; 500 ... 650 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2 \text{ A}$ (400 VAC; 24 VDC / 20 A)
Inrush current	$\leq 30 \text{ A}$
Power factor	$\geq 0.5$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 17 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, nom}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 100 \text{ mV}$ (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.15 \dots 1.4 \times I_{o, nom}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (optocoupler as make contact; max. 31.2 V; 20 mA)
Operation status indicator	Green LED ( $U_o$ ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 50 \text{ W}$
Power loss (max.) $P_{i, (max)}$	55 W
Efficiency (typ.)	90 %

Circuit protection	
Internal fuse	3 x T 5 A / 250 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker $\geq 6 \text{ A}$ ; Tripping characteristic: B or C; Alternative: motor circuit breaker

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	> 250,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-2 %/K (> 50 °C; 400 VAC)

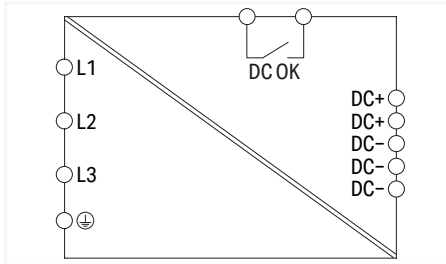
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Connection type	Signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	110 mm x 130 mm x 151 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3 (Class A); UL 60950-1; UL 508; SEMI F47



## Power supply ▶ Eco ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 20 A ▶ DC OK contact



Item No.	PU
787-2742	1

### Features:

- Economical power supply for standard applications
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated terminal blocks with push-in connection technology
- DC OK signal output
- Parallel operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204-1

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 480 VAC
Input voltage range	(2 / 3) x 325 ... 575 VAC; 560 ... 700 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 1.2 \text{ A}$ (400 VAC)
Inrush current	$\leq 30 \text{ A}$ (400 VAC)
Power factor	$\geq 0.7$ (400 VAC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 150 \text{ mV}$ (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (PhotoMOS as make contact; can be loaded with max. 31.2 V / 100 mA) Green LED ( $U_o$ ); Red LED (overload)
Operation status indicator	Green LED ( $U_o$ ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 2.15 \text{ W}$ (400 VAC; no load); $\leq 42.5 \text{ W}$ (400 VAC; nominal load)
Efficiency (typ.)	92 %

Circuit protection	
Internal fuse	3 x T 3.15 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker $\geq 10 \text{ A}$ ; Tripping characteristic: B or C

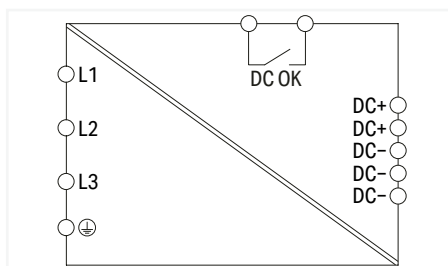
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/2 devices (max.)
MTBF	$> 1,800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	-20 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-2 %/K ( $> 45 \text{ °C}$ )
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27); Vibration: 1g (per EN 60068-2-6)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Connection type	Signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	80 mm x 130 mm x 170 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE; EAC
Standards/specifications	EN 61204-3; EN 62368-1; cURus 60950-1; cURus 62368-1; cULus 508; CSA C22.2; SEMI F47

## Power supply ▶ Eco ▶ Phases: 2; 3 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ DC OK contact



Item No.	PU
787-2744	1

### Features:

- Economical power supply for standard applications
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Fast and tool-free termination via lever-actuated terminals with push-in connection technology
- DC OK signal output
- Parallel operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204-1

Input	
Phases	2 / 3
Nominal input voltage $U_{i, \text{nom}}$	(2 / 3) x 400 ... 480 VAC
Input voltage range	(2 / 3) x 325 ... 575 VAC; 560 ... 700 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2.5 \text{ A}$ (400 VAC)
Inrush current	$\leq 30 \text{ A}$ (400 VAC)
Power factor	$\geq 0.7$ (400 VAC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10 \text{ ms}$ (3 x 400 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 150 \text{ mV}$ (peak-to-peak)
Overload behavior	Constant power (in overload range: $1.05 \dots 1.4 \times I_{o, \text{nom}}$ ); Shutdown and automatic restart in the event of a short circuit

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red); 1 x DC OK signal output (PhotoMOS as make contact; can be loaded with max. 31.2 V / 100 mA)
Operation status indicator	Green LED ( $U_o$ ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 6.2 \text{ W}$ (400 VAC; nominal load); $\leq 64.3 \text{ W}$ (400 VAC; nominal load)
Efficiency (typ.)	92.3 %

Circuit protection	
Internal fuse	3 x T 6.3 A / 500 VAC
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	3 x Circuit breaker $\geq 10 \text{ A}$ ; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Isolation voltage (sec.-signal)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/2 devices (max.)
MTBF	$> 1,300,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation)	$-20 \dots +70 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-40 \dots +85 \text{ }^\circ\text{C}$
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	$-2 \text{ } \%/ \text{K}$ ( $> 45 \text{ }^\circ\text{C}$ )
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27); Vibration: 1g (per EN 60068-2-6)

Connection data	
Connection type 1	Input
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Connection type	Output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Connection type	Signaling
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 1.5 mm <sup>2</sup> / 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	140 mm x 130 mm x 170 mm
Mounting type	DIN-35 rail





Standards and specifications	
Conformity marking	CE; EAC
Standards/specifications	EN 61204-3; EN 62368-1; cURus 60950-1; cURus 62368-1; cULus 508; CSA C22.2; SEMI F47

2

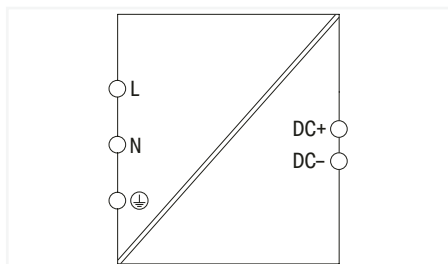


## Special WAGO Power Supplies

## Special WAGO Power Supplies

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## Power supply ▶ Phases: 1 ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 4 A ▶ PowerBoost



Item No.	PU
787-6716	1

### Features:

- Switched-mode power supply with PowerBoost
- Low-profile, compact design
- Extremely robust, fully encapsulated housing (IP67)
- Active power factor correction
- High efficiency up to 92.3 %
- Surrounding air temperature up to 85 °C
- Suitable for both parallel and series operation

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	100 ... 240 VAC/VDC
Input voltage range	90 ... 265 VAC/VDC
Nominal mains frequency range	47 ... 63.6 Hz; 0 Hz
Input current $I_i$	$\leq 0.5$ A (250 VAC); $\leq 1.1$ A (100 VAC)
Inrush current	$\leq 9$ A
Power factor	$\geq 0.98$
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 45$ ms

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$\pm 2$ %
Nominal output current $I_{o, \text{nom}}$	4 A
Nominal output power	96 W
Residual ripple	$\leq 100$ mV (peak-to-peak); $\leq 20$ mV (rms)
Overload behavior	Constant current
PowerBoost	DC 6 A (5 s; without voltage drop)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Overload LED (red)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W; $\leq 7.9$ W (nominal load)
Efficiency (typ.)	92.3 % (230 VAC)

Circuit protection	
Internal fuse	T 6.3 A
Backup fusing (recommended)	Circuit breaker: 4 ... 20 A; Characteristic: C; T 20 A in building installations

Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP67
Overvoltage protection; secondary	$\leq 30$ VDC (per IEC 61131)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	3 devices (max.)/2 devices (max.)
MTBF	$> 960,000$ h
Ambient temperature (operation)	$-40 \dots +85$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	4 ... 100 %
Derating	$-3.84$ W/K ( $> 60$ °C)

Connection data	
Connection type 1	Input
Connection technology	7/8"; 3-pole plug
Connection type	Output
Connection technology	7/8"; 5-pole socket

Physical data/Mechanical data/Material Data	
Width x Height x Depth	111 mm x 141 mm x 54 mm
Mounting type	Screw mount

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204; UL 508

3

# Accessories for IP67 Power Pluggable Connector 787 Series



Operating data	
Operating voltage	600 VAC/VDC
Operating current	9 A
Safety and protection/Environmental requirements	
Rated surge voltage	4 kV
Protection type	IP67
Ambient temperature (operation at $U_N$ )	-25 ... +80 °C
Connection data	
Sheathed cable diameter	7.4 mm

**Features:**

- 7/8" screw connection: Industry-proven connection technology for a large selection of different conductors
- High protection class for safe field applications
- Vibration- and shock-resistant via integrated locking mechanism
- PUR coating

3



Similar to pictured device

Pluggable connector, 7/8 inch; 3-pole; Socket, angled		
	Item No.	PU
	787-6716/9400-000	1

Pluggable connector, 7/8 inch; 3-pole; Plug, straight		
	Item No.	PU
	787-6716/9100-000	1





# Accessories for IP67 Power Pluggable Connector 787 Series

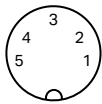


Pluggable connector, 7/8 inch; 5-pole; Plug, straight		
Item No.	PU	
787-6716/9500-000	1	

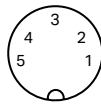
Pluggable connector, 7/8 inch; 5-pole; Plug, angled		
Item No.	PU	
787-6716/9600-000	1	

Pluggable connector, 7/8 inch; 5-pole; Socket, straight		
Item No.	PU	
787-6716/9700-000	1	

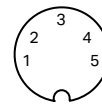
3



7/8" plug



7/8" plug



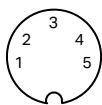
7/8" socket



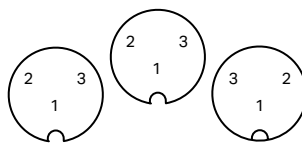
Pluggable connector, 7/8 inch; 5-pole; Socket, angled		
Item No.	PU	
787-6716/9800-000	1	

Pluggable connector, 7/8 inch; 3-pole		
Item No.	PU	
787-6716/9000-1000	1	

Pluggable connector, 7/8 inch; 3-pole; Socket, straight		
Item No.	PU	
787-6716/9300-000	1	



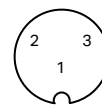
7/8" socket



7/8" socket

7/8" socket

7/8" plug



7/8" socket

# Accessories for IP67 Power Supply Cable

## 787 Series



Operating data	
Operating voltage	600 VAC/VDC
Operating current	9 A
Safety and protection/Environmental requirements	
Rated surge voltage	4 kV
Protection type	IP67
Ambient temperature (operation at $U_n$ )	-25 ... +80 °C
Connection data	
Sheathed cable diameter	7.4 mm

### Features:

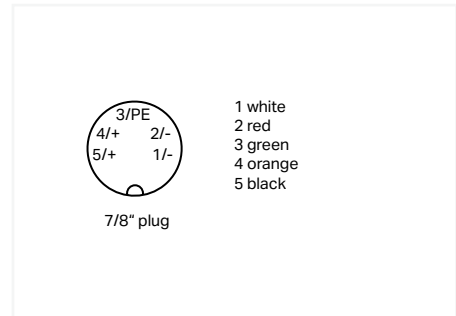
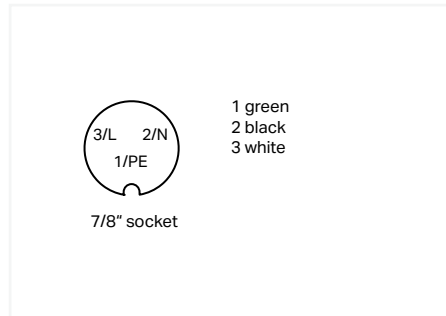
- 7/8" screw connection: Industry-proven connection technology for a large selection of different conductors
- High protection class for safe field applications
- Vibration- and shock-resistant via integrated locking mechanism
- PUR coating



Similar to pictured device

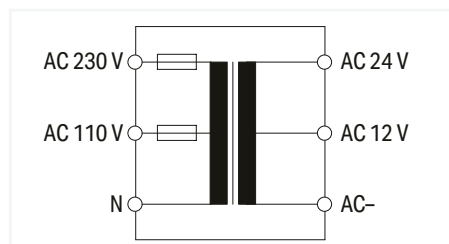
Supply cable, pre-assembled, 7/8 inch; 7/8 inch; 3-pole; Socket, straight		
Length	Item No.	PU
3 m	787-6716/9310-030	1
5 m	787-6716/9310-050	1
10 m	787-6716/9310-100	1

Supply cable, pre-assembled, 7/8 inch; 7/8 inch; 5-pole; Plug, straight		
Length	Item No.	PU
1,5 m	787-6716/9510-015	1
3 m	787-6716/9510-030	1
5 m	787-6716/9510-050	1





## Transformer power supply ▶ Input voltage (AC): 230 V ▶ Nominal output voltage (AC): 12 V; 24 V ▶ Nominal output power: 40 VA



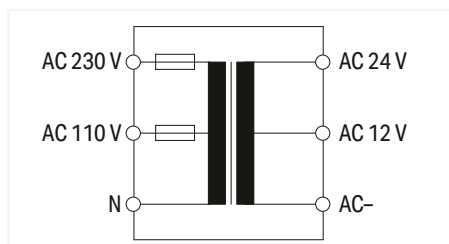
Item No.	PU
787-974	1

### Features:

- Maintenance-free, DIN-rail-mount safety transformer for 12 / 24 VAC
- Center tap-off modules provide variable input/output voltage.
- Enables brief performance peaks
- Peak output power of 45 VA for 1 min/h

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 115 VAC; 230 VAC
Input voltage range	1 x 0 ... 230 VAC
Nominal mains frequency range	50 ... 60 Hz
Output	
Nominal output voltage $U_{o, \text{nom}}$	12 / 24 VAC
Nominal output current $I_{o, \text{nom}}$	3.3 A (12 VAC); 1.67 A (24 VAC)
Nominal output power	40 VA
Overload behavior	Safety fuse in the primary circuit
Efficiency/power losses	
Power loss $P_i$	$\leq 0.6$ W
Circuit protection	
Internal fuse	T 1.25 A / 250 VAC; T 0.63 A / 250 VAC
Safety and protection/Environmental requirements	
Isolation voltage (AC)	4.2 kVAC
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	III
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/Yes (with identical power supply)
Ambient temperature (operation)	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 90$ %
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	126 mm x 90 mm x 54 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 5085; EN 61558-2-6

## Transformer power supply ▶ Input voltage (AC): 230 V ▶ Nominal output voltage (AC): 12 V; 24 V ▶ Nominal output power: 63 VA



Item No.	PU
787-976	1

### Features:






- Maintenance-free, DIN-rail-mount safety transformer for 12 / 24 VAC
- Center tap-off modules provide variable input/output voltage.
- Enables brief performance peaks
- Peak output power of 70 VA for 1 min/h

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 115 VAC; 230 VAC
Input voltage range	1 x 0 ... 230 VAC
Nominal mains frequency range	50 ... 60 Hz
Output	
Nominal output voltage $U_{o, \text{nom}}$	12 / 24 VAC
Nominal output current $I_{o, \text{nom}}$	5.2 A (12 VAC); 2.6 A (24 VAC)
Nominal output power	63 VA
Overload behavior	Safety fuse in the primary circuit
Efficiency/power losses	
Power loss $P_i$	≤ 0.8 W
Circuit protection	
Internal fuse	T 2 A / 250 VAC; T 1.6 A / 250 VAC
Safety and protection/Environmental requirements	
Isolation voltage (AC)	4.2 kVAC
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	III
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/Yes (with identical power supply)
Ambient temperature (operation)	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	≤ 90 %
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	144 mm x 90 mm x 54 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 5085; EN 61558-2-6



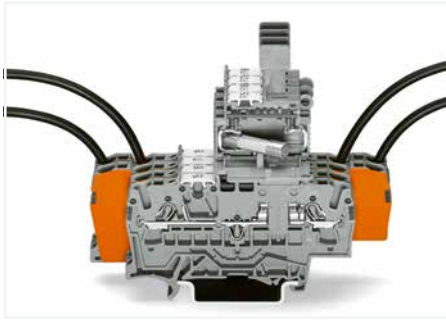
# WAGO Protective Devices and Electronics

## WAGO Protective Devices and Electronics

		Page
	<b>TOPJOB® S</b> Fuse Terminal Blocks; 2002 / 2006 Series	164
	<b>Classic</b> Fuse Terminal Blocks; Fuse Plugs; 281 / 282 / 811 Series	166
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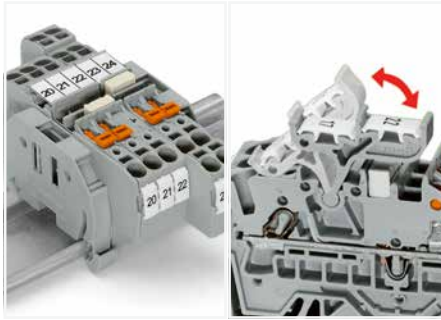
# Fuse Terminal Blocks; TOPJOB® S Description and Installation

## Fuse terminal blocks



Fuse plug with blown fuse indication on a 2-conductor carrier terminal block

## Commoning and marking



Dual jumper slots, in the same position as the 2002 Series terminal blocks. Commoning options in front of or behind the knife disconnect, depending on the power supply direction; additional marking option via pivoting marker carriers.

## Fuse replacement 1



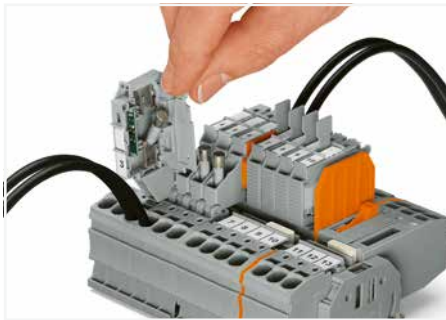
Before replacing the fuse, pivot the fuse holder into the locked open position.

## Commoning



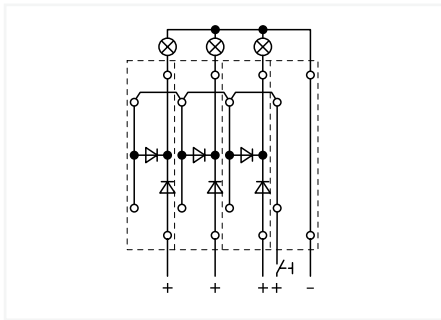
Custom circuit design via push-in type jumper bars. Example shows "lamp test circuit."

## Fuse replacement 2



One end of the fuse is automatically ejected from the holder when opening the cover.

## Application



Lamp test circuit

4

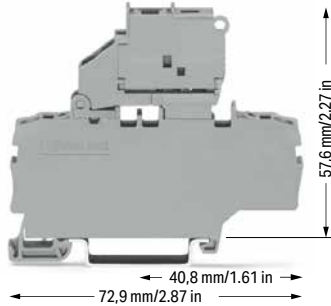


# Fused Disconnect Terminal Block with Pivoting Fuse Holder TOPJOB® S; for 5 x 20 mm, 5 x 30 mm and 1/4" x 1 1/4" Miniature Metric Fuse

## TOPJOB® S; 2.5 (4) mm<sup>2</sup>; 2002 Series; 6 (10) mm<sup>2</sup>; 2006 Series

### Technical data

0.25 ... 2.5 (4) mm <sup>2</sup> ①	22 ... 12 AWG
250 V/6 kV/3 ③	30 V, 6.3 A ④
I <sub>N</sub> 6.3 A	
Terminal block width: 6.2 mm / 0.244 inch	
10 ... 12 mm / 0.39 ... 0.47 inch	



2-conductor fused disconnect terminal block with a pivoting fuse holder; with additional jumper slot; for (5 x 20) mm miniature metric fuse; without blown fuse indication  
Electrical ratings are given by the fuse

Color	Item No.	Pack. Unit
gray ⑤	2002-1911 ⑥	50

2-conductor fused disconnect terminal block with a pivoting fuse holder; with additional jumper slot; for (5 x 20) mm miniature metric fuse; with blown fuse indication by LED; gray  
Electrical ratings are given by the fuse and blown fuse indication. Leakage current in case of a blown fuse: LED 2 mA

	Item No.	Pack. Unit
12 ... 30 V ⑤	2002-1911/1000-541 ⑥	50
30 ... 65 V ⑤	2002-1911/1000-542 ⑥	50
120 V ⑤	2002-1911/1000-867 ⑥	50
230 V ⑤	2002-1911/1000-836 ⑥	50

### Accessories; item-specific

End plate for fuse terminal blocks; 2 mm thick

	orange	2002-992	100 (25)
	gray	2002-991	100 (25)

Staggered jumper; insulated; I<sub>N</sub> 25 A; light gray

	2-way	2002-472	25
	...		
	12-way	2002-482	25

Adjacent jumper for continuous commoning; insulated; I<sub>N</sub> 25 A, light gray

	2-way	2002-400	25
	1 to 3	2002-423	25

Push-in type jumper bar; insulated; I<sub>N</sub> 25 A; light gray

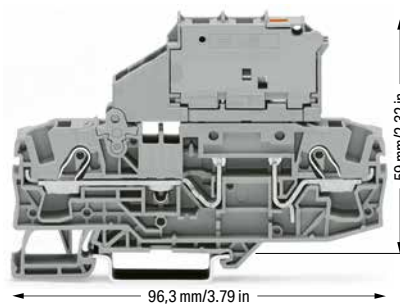
	2-way	2002-402	25
	...		
	10-way	2002-410	25

Marking strip; plain; 11 mm wide; 50 m reel

	white	2009-110	1
--	-------	----------	---

### Technical data

0.5 ... 6 (10) mm <sup>2</sup> ②	20 ... 8 AWG
800 V/8 kV/3 ④	30 V, 15 A ④
I <sub>N</sub> 10 A	30 V, 15 A ④
Terminal block width: 7.5 mm / 0.295 inch	
13 ... 15 mm / 0.51 ... 0.59 inch	



2-conductor fused disconnect terminal block with a pivoting fuse holder; gray; with blown fuse indication by LED  
Electrical ratings are given by the fuse and blown fuse indication. Leakage current in case of a blown fuse: LED 2 mA

for (5 x 20) mm miniature metric fuse

	Item No.	Pack. Unit
12 ... 30 V	2006-1611/1000-541	25
30 ... 65 V	2006-1611/1000-542	25
120 V	2006-1611/1000-867	25
230 V	2006-1611/1000-836	25

for (5 x 30) mm miniature metric fuse

	Item No.	Pack. Unit
12 ... 30 V	2006-1621/1000-541	25
30 ... 65 V	2006-1621/1000-542	25
120 V	2006-1621/1000-867	25
230 V	2006-1621/1000-836	25
380 ... 500 V	2006-1621/1000-859	25

for 1/4" x 1 1/4" miniature metric fuse

	Item No.	Pack. Unit
12 ... 30 V	2006-1631/1000-541	25
30 ... 65 V	2006-1631/1000-542	25
120 V	2006-1631/1000-867	25
230 V	2006-1631/1000-836	25
380 ... 500 V	2006-1631/1000-859	25

### Accessories; item-specific

End plate for fuse terminal blocks; 2 mm thick

	orange	2006-992	100 (25)
	gray	2006-991	100 (25)

Push-in type jumper bar; insulated; I<sub>N</sub> 41 A; light gray

	2-way	2006-402	25
	3-way	2006-403	25
	4-way	2006-404	25
	5-way	2006-405	25

Push-in type jumper bar; insulated; I<sub>N</sub> 41 A; light gray

	1 to 3	2006-433	25
	1 to 4	2006-434	25
	1 to 5	2006-435	25

Star point jumper; insulated; I<sub>N</sub> = I<sub>N</sub> terminal block; light gray

	1-3-5	2006-405/011-000	25
--	-------	------------------	----

WMB marking card; white; 10 strips with 10 markers/card; 5 ... 5.2 mm stretchable

	plain	793-5501	5
--	-------	----------	---

① Conductor range: 0.25 ... 4 mm<sup>2</sup> "s+f-st"; Push-in termination: 1 ... 4 mm<sup>2</sup> "s" and 1 ... 2.5 mm<sup>2</sup> "insulated ferrules, 12 mm"  
Depending on the conductor characteristic, a conductor with a smaller cross section can also be inserted via push-in termination.

② Conductor range: 0.5 ... 10 mm<sup>2</sup> "s+f-st"; Push-in termination: 2.5 ... 10 mm<sup>2</sup> "s" and 2.5 ... 6 mm<sup>2</sup> "insulated ferrules; 12 mm"  
Depending on the conductor characteristic, a conductor with a smaller cross section can also be inserted via push-in termination.

③ 250 V = rated voltage  
6 kV = rated impulse voltage  
3 = pollution degree

④ 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree

⑤ Terminal blocks with an Ex mark are suitable for Ex ec IIc applications.

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

### Glass cartridge fuses 5 x 20

Series Item No.	Overload and short circuit protection		Short circuit protection only	
	Individual argmt.	Group argmt.	Individual argmt.	Group argmt.
Fuse terminal blocks				
2002-1911	1.6 W	1.6 W	2.5 W	2.5 W
2002-1911/.....	1.6 W	1.6 W	2.5 W	2.5 W

### Glass cartridge fuses

Series Item No.		Overload and short circuit protection		Short circuit protection only	
		Individual argmt.	Group argmt.	Individual argmt.	Group argmt.
Fused disconnect terminal blocks					
2006-1611	7.5	1.6 W	1.6 W	2.5 W	2.5 W
2006-1621	7.5	1.6 W	1.6 W	2.5 W	2.5 W
2006-1631	7.5	1.6 W	1.6 W	2.5 W	2.5 W
2006-1631 /099-...	10.4	2.5 W	2.5 W	2.5 W	2.5 W
2006-1631 /1099-...	10.4	2.5 W	2.5 W	2.5 W	2.5 W

When selecting miniature metric fuses, make sure that the maximum power loss listed below is not exceeded. The power loss is determined according to IEC or EN 60947-7-3/VDE 0611-6 at 23°C. The temperature rise of the terminal blocks must be checked according to their application and mounting. Higher ambient temperatures represent an additional impact on miniature fuses. Therefore, in such applications, the rated current must be reduced if necessary. More details are available from the manufacturers.

# Fuse Terminal Blocks and Fuse Plugs; Classic Description and Installation

## Fuse terminal blocks



Blown fuse indication by LED or neon lamp

## Fuse plug

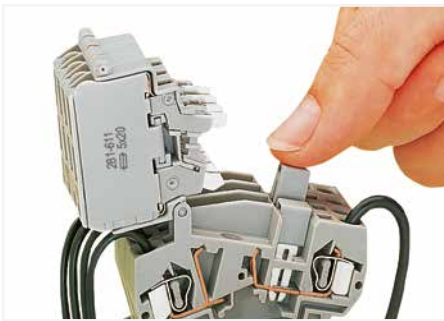


Fuse plug with blown fuse indication on a 3-conductor carrier terminal block.

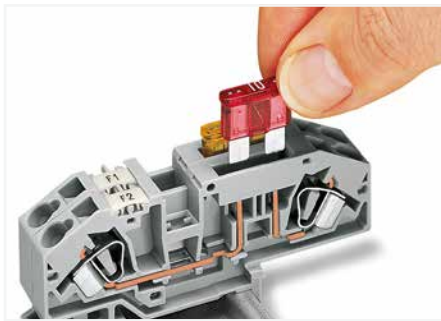


Conductor termination: Open the clamping unit via integrated lever.

## Commoning



Distributing current to several fuse-protected circuits via insulated touch-proof jumpers.



Inserting a fuse.

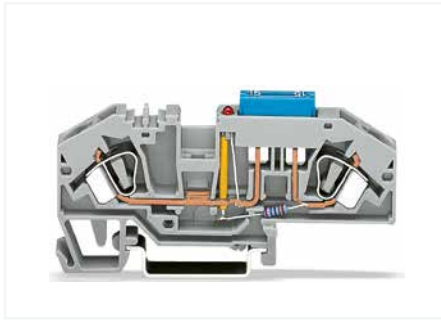


Open and close lever via screwdriver.

## Fuse replacement 1



Before replacing the fuse, pivot the fuse holder into the locked open position.

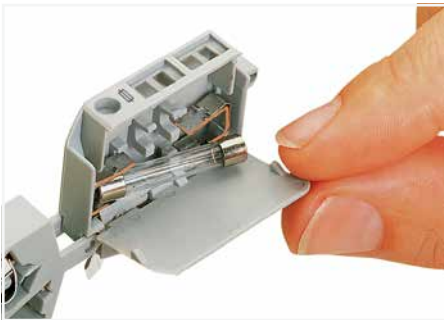


2-conductor fuse terminal block with mini-automotive blade-style fuse



Jumper bar for quick and convenient commoning

## Fuse replacement 2



One end of the fuse is automatically ejected from the holder when opening the cover.



Blown fuse indication by LED



Inserting a fuse.

4

# Fuse Terminal Blocks and Fuse Plugs

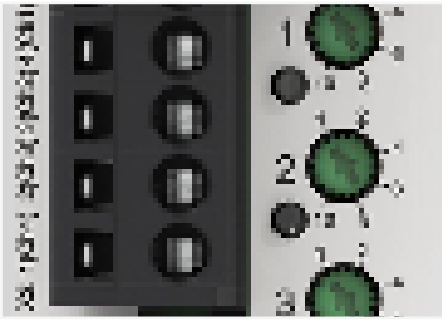
## Classic; 281 / 282 / 811 Series

Image	Description	Miniature Fuse	Nominal Current	Nominal Voltage	Blown Fuse Indication	Color	Item No.	PU	
	Fuse disconnect terminal block with pivoting fuse holder; without blown fuse indication 800 V / 10 A (6.3 A) 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG	5 x 20 mm				○ gray	281-611	50	
		5 x 20 mm				● orange	281-616	50	
		5 x 25 mm					○ gray	281-612	50
		5 x 30 mm					○ gray	281-622	50
		1/4" x 1"					○ gray	281-613	50
		1/4" x 1 1/4"					○ gray	281-623	50
	Fuse disconnect terminal block with pivoting fuse holder; with blown fuse indication by LED 800 V / 10 A (6.3 A) 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG	5 x 20 mm			15 ... 30 V	○ gray	281-611/281-541	50	
		5 x 20 mm			30 ... 65 V	○ gray	281-611/281-542	50	
		5 x 25 mm			15 ... 30 V	○ gray	281-612/281-541	50	
		5 x 25 mm			30 ... 65 V	○ gray	281-612/281-542	50	
		5 x 30 mm			15 ... 30 V	○ gray	281-622/281-541	50	
		5 x 30 mm			30 ... 65 V	○ gray	281-622/281-542	50	
		1/4" x 1"			15 ... 30 V	○ gray	281-613/281-541	50	
		1/4" x 1"			30 ... 65 V	○ gray	281-613/281-542	50	
	Fuse disconnect terminal block with pivoting fuse holder; with blown fuse indication by neon lamp 800 V / 10 A (6.3 A) 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG	5 x 20 mm			230 V	○ gray	281-611/281-417	50	
		5 x 20 mm			120 V	○ gray	281-611/281-418	50	
		5 x 25 mm			230 V	○ gray	281-612/281-417	50	
		5 x 25 mm			120 V	○ gray	281-612/281-418	50	
		5 x 30 mm			230 V	○ gray	281-622/281-417	50	
		5 x 30 mm			120 V	○ gray	281-622/281-418	50	
		1/4" x 1"			230 V	○ gray	281-613/281-417	50	
		1/4" x 1"			120 V	○ gray	281-613/281-418	50	
	Adjacent jumper, insulated, I <sub>N</sub> = I <sub>N</sub> terminal block					○ gray	281-402	200	
	End and intermediate plate, 2.5 mm thick					● orange	281-309	100	
					○ gray	281-311	100		
	Fuse plugs on carrier terminal blocks	for 5 x 20 mm and 5 x 25 mm miniature metric fuses	6.3 A	250 V		○ gray	281-511	50	
					LED, 48 VDC	○ gray	281-512/281-414	50	
					LED, 24 V AC/DC	○ gray	281-512/281-501	50	
					Neon lamp, 120 V AC/DC	○ gray	281-512/281-418	50	
					Neon lamp, 230 V AC/DC	○ gray	281-512/281-417	50	
	Fuse terminal blocks for mini-automotive, blade-style fuses 0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG		25 A	400 V	12 V; LED; circuit I	○ gray	282-698/281-429	25	
					12 V; LED; circuit II	○ gray	282-698/281-449	25	
					24 V; LED; circuit I	○ gray	282-698/281-413	25	
					24 V; LED; circuit II	○ gray	282-698/281-434	25	
					Without blown fuse indication	○ gray	282-696	25	
						○ gray	282-402	100	
	Adjacent jumper, insulated, I <sub>N</sub> 41 A					○ gray	282-402	100	
	3-conductor through terminal block		41 A	800 V		○ gray	282-699	25	
					● blue	282-694	25		
	End and intermediate plate, 2 mm thick					● orange	282-333	100	
						○ gray	282-334	100	
	Fuse terminal block for cylindrical fuses	10 x 38 mm	32 A	DC 1000 V	Without blown fuse indication, 1-pole	○ light gray	811-316	12	
					Blown fuse indication, 1-pole	○ light gray	811-317	12	
	Fuse terminal block for cylindrical fuses 2.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG	10 x 38 mm	32 A	AC 690 V; DC 1000 V	Without blown fuse indication, 1-pole	○ light gray	811-310	12	
					Without blown fuse indication, 2-pole	○ light gray	811-320	6	
					Without blown fuse indication, 3-pole	○ light gray	811-330	4	
					Blown fuse indication, 1-pole	○ light gray	811-311	12	
					Blown fuse indication, 2-pole	○ light gray	811-321	6	
					Blown fuse indication, 3-pole	○ light gray	811-331	4	
	Blown fuse indication, 24 V, 1-pole	○ light gray	811-314	12					
	Fuse terminal block for class CC fuses 2.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG				Without blown fuse indication, 1-pole	○ light gray	811-410	12	
					Without blown fuse indication, 2-pole	○ light gray	811-420	6	
					Without blown fuse indication, 3-pole	○ light gray	811-430	4	
					Blown fuse indication, 1-pole	○ light gray	811-411	12	
					Blown fuse indication, 2-pole	○ light gray	811-421	6	
					Blown fuse indication, 3-pole	○ light gray	811-431	4	
	Blown fuse indication, 24 V, 1-pole	○ light gray	811-414	12					
	Push-in type jumper bar, I <sub>N</sub> 63 A, 1000 V	2-way				○ light gray	811-472	50	
		12-way				○ light gray	811-482	20	

# WAGO Electronic Circuit Breakers Selection Guide

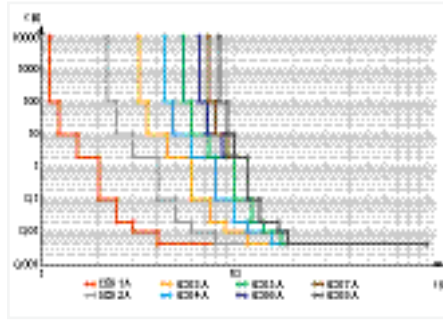
Input/ Output	Output			Communication							Standards/ specifications				Dimensions and Environmental Requirements				Item no.
	Channels	Nominal current [ADC]	Active current limitation	Signal, high-side switching	Signal, low-side switching	Potential-free Signal	Manchester Protocol	Remote control input	IO-Link	NEC Class 2	UL 61010-2-201	UL 2367	UL 508	DNV	Width	Height	Depth from upper-edge of DIN-rail	Surrounding air temperature	
12 VDC	4	2 ... 10 A		■			■	■			■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-100
24 VDC	1	0,5 ... 4 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/004-020
24 VDC	1	0,5 ... 4 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/004-1020
24 VDC	1	0,5 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/050-000
24 VDC	1	0,5 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/050-1000
24 VDC	1	1 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/100-000
24 VDC	1	1 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/100-1000
24 VDC	1	1 ... 8 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/108-020
24 VDC	1	2 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/200-000
24 VDC	1	2 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/200-1000
24 VDC	1	4 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/400-000
24 VDC	1	4 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/400-1000
24 VDC	1	6 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/600-000
24 VDC	1	8 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-3861/800-000
24 VDC	1	0,5 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/050-000
24 VDC	1	1 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/100-000
24 VDC	1	1 ... 8 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/108-020
24 VDC	1	2 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/200-000
24 VDC	1	4 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/400-000
24 VDC	1	6 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/600-000
24 VDC	1	8 A		■				■		■	■	■	■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2861/800-000
24 VDC	2	2 ... 10 A		■			■	■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1662
24 VDC	2	2 ... 10 A		■		■		■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1662/000-054
24 VDC	2	3,8 A; 3,2 A	■	■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1662/004-1000
24 VDC	2	0,5 ... 6 A	■	■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1662/006-1000
24 VDC	2	1 ... 6 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1662/106-000
24 VDC	4	2 ... 10 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664
24 VDC	4	2 ... 10 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-004
24 VDC	4	2 ... 10 A		■	■			■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-011
24 VDC	4	2 ... 10 A		■		■		■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-054
24 VDC	4	1 ... 10 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-080
24 VDC	4	3,8 A; 3,2 A	■	■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/004-1000
24 VDC	4	0,5 ... 6 A	■	■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/006-1000
24 VDC	4	0,5 ... 6 A	■	■		■		■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/006-1054
24 VDC	4	1 ... 6 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/106-000
24 VDC	4	1 ... 6 A		■	■			■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/106-011
24 VDC	4	2 ... 12 A	■	■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/212-1000
24 VDC	8	2 ... 10 A		■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668
24 VDC	8	2 ... 10 A		■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/000-004
24 VDC	8	2 ... 10 A		■		■		■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/000-054
24 VDC	8	1 ... 10 A		■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/000-080
24 VDC	8	0,5 ... 6 A	■	■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/006-1000
24 VDC	8	0,5 ... 6 A	■	■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/006-1054
24 VDC	8	1 ... 6 A		■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/106-000
24 VDC	8	1 ... 6 A		■		■		■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/106-054
48 VDC	2	2 ... 10 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1662/000-250
48 VDC	4	2 ... 10 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-200
48 VDC	4	2 ... 10 A		■				■		■	■	■	■	■	45 mm	90 mm	115.5 mm	-25 ... +70 °C	787-1664/000-250
48 VDC	8	2 ... 10 A		■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/000-200
48 VDC	8	2 ... 10 A		■				■		■	■	■	■	■	42 mm	127 mm	142.5 mm	-25 ... +70 °C	787-1668/000-250

4



Intuitive status display

- Output channels with backlit buttons for on/off switching and acknowledgement
- Integrated, multi-color LEDs indicate the operating status of each channel



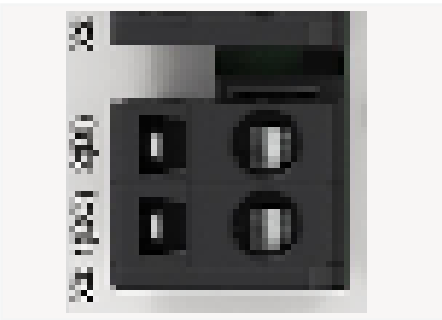
Trip characteristics

- Reliable, precise disconnection in case of overcurrent or short circuit
- Nominal currents can be set separately for each channel in 1 A, 2 A, 4 A, 6 A and 10 A increments
- Parallel connection of channels for higher nominal currents of 11, 12, 14 and 16 A



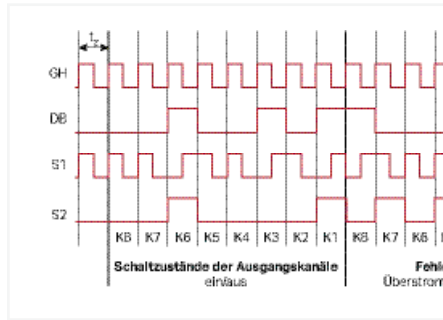
Rotary switch

- Nominal current can be individually adjusted for each channel 1 ... 16 A
- The setting is visible even when no voltage is applied
- Switchable electronic key lock protects against incorrect operation



Communication 1.0

- Remote digital input DI for switching and resetting all tripped channels
- Digital output DO as a group message indicating whether one of the channels was tripped by an overcurrent



Communication 2.0

- Remote digital input MDI (S1) for switching specific channels on and off via pulse sequence (Manchester protocol)
- Digital output MDO (S2) for transmitting the current status (on/off/tripped/overcurrent) of each individual channel
- Optional transmission of input voltage and output/nominal current value for each channel



Communication 3.0

- Modbus RTU or IO-Link interface
- Readout of status, nominal current setting, current voltage values and current values for each channel
- Setting the nominal current, as well as switch-on/off and reset of individual channels

## Overvoltage Protection

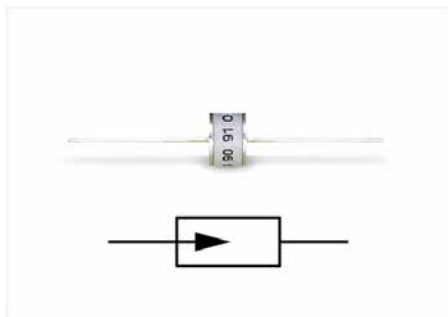
### Overvoltage Protection for Increased Safety and Longer On-Line Operation

On-the-line overvoltages cause most operating failures for measuring, control, data and power lines. Failure of electronic and semiconductor components due to surges can cause operating interruptions. The overvoltage (also called transients) can be generated by switching electrical equipment on or off or by lightning discharges. Depending on the application, protective measures for systems and devices can be broken down into:

- Coarse protection
- Medium protection
- Fine protection

The boundaries between these levels of protection may not be sharply defined. To implement the appropriate protection measures, various components are used for discharging transient overvoltage, depending on the protection type. The following components have proven performance in these applications:

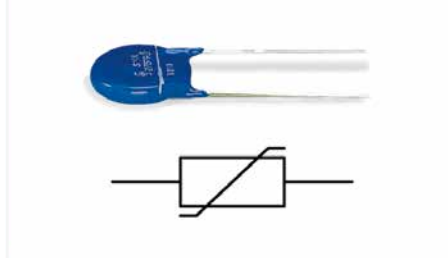
#### Gas-Filled Surge Arrester



The gas filled surge arrester is comprised of two electrodes in a ceramic or glass tube filled with a pressurized inert gas.

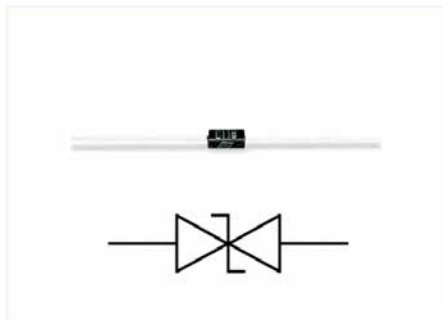
Once the ignition voltage is reached, resistance drops due to ionization and current begins to flow. The resistance of the device drops from high to low as it conducts. The voltage across the device after the arc is struck is typically 10 ... 30 V. Therefore, the current will continue to flow until the voltage drops below this level. As this is not a guaranteed occurrence in typical power situations, a fuse must precede the device to ensure disconnection from the supply. This is always the case if the nominal voltage of the protected network is greater than 12 VDC and the nominal voltage of the power supply and the protected circuit is greater than 100 mA.

#### Varistor



A varistor is a voltage-dependent resistor, in which the resistance becomes low after their "nominal voltage" is exceeded and for the voltage range above it, and can thus cut off any overvoltages through high discharge currents. Varistors can age with continued surge conduction, resulting in lower impedance even in the lower voltage range. However, this normally only occurs when a varistor frequently discharges transients. In this case, they must be replaced and specific time intervals.

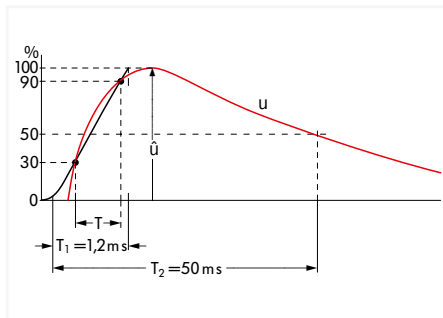
### Suppressor Diode



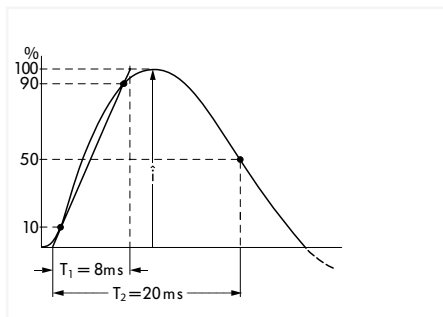
Suppressor diodes have electrical characteristics similar to Zener diodes, but are rated for surge currents. Once the rated breakdown voltage is exceeded (in the non-conductive direction), the diode becomes a conductor. The suppressor diode differs from a Zener in its higher current carrying capability and faster response time (in the picosecond range).

#### Test Impulse

Surge arresters are subject to standardized test pulses in order to classify capabilities; the effectiveness of protection measures with reference to dissipation capacity and voltage arresting. The form and level of the test pulses are defined by IEC 60060-1 and EN 62475:2010. Preference is given to voltage pulses of 1.2/50 and current pulses of 8/20.



Voltage pulses 1.2/50 per IEC 60060-1



Current pulses 8/20 per EN 62475:2010

### Application Recommendations

The advantages of gas-filled surge arresters lie in their high current carrying capacity, making them ideal for coarse protection. One disadvantage, particularly in the medium protection range, is the relatively long response time, as well as the power follow current.

Varistors have a considerably shorter response time; however they also have lower leakage currents. This makes them more suitable for medium protection as they offer limited applications for coarse protection.

If the connection lines of electronic equipment are already "fine" protected, general coarse and medium protection measures are sufficient. If this is not the case, suppressor diodes with a very short response time may be employed as fine protection. WAGO offers a complete range of modular terminal blocks with integrated surge arresters for coarse, medium and fine protection.

Depending on the application, one can choose the appropriate type from the previously mentioned surge arresters. These are electrically connected in the modular terminal blocks between the connection point and mounting rail. Snapping the terminal block onto the grounded (earthed) mounting rail automatically ensures the required overvoltage protection.



Double-deck terminal block, with varistor direct connection to DIN-35 rail

Frequently, only one surge arrester is fitted for cost reasons. However, due to the fact that one surge arrester alone cannot optimally ensure several protection functions, combinations are recommended. Care must be taken to ensure that the single-stage protection devices are decoupled sufficiently by inductors or resistors.

# Overvoltage Protection

Interference suppression modules are a special category here.

In addition to overvoltage protection, a high frequency interference filter can be added to the circuitry. This filter cannot only protect the equipment from high frequency energy transmitted by connecting wires, but also prevents a transmission of disturbances to the supply lines. The main component of a filter is an LC network, which produces a mismatch between the filter impedance and the impedance of the disturbance path. This reflects any disturbance back to its source.

### Definition of Several Important Technical Terms

#### Nominal Operating Voltage ( $U_{\text{BN}}$ )

The nominal operating voltage corresponds to the voltage which may be permanently connected to the appropriate connection terminals of the overvoltage protection module. Alternating voltages are quoted as effective values.

#### Max. Operating Voltage ( $U_{\text{Bmax}}$ )

The maximum operating voltage corresponds to the voltage which may be permanently connected to the appropriate connection terminals without the operating properties changing or activating the individual module's protection elements.

#### Nominal Current ( $I_{\text{N}}$ )

The nominal current corresponds to the current which may permanently flow through the connection terminals of the overvoltage protection device.

#### Nominal Discharge Current ( $I_{\text{SN}}$ )

The nominal discharge current is the maximum value of a current having the 8/20  $\mu\text{s}$  waveform, which can flow through the surge arrester five times within a time period of 30 seconds (VDE) without destroying it.

#### Max. Surge Current ( $I_{\text{Smax}}$ )

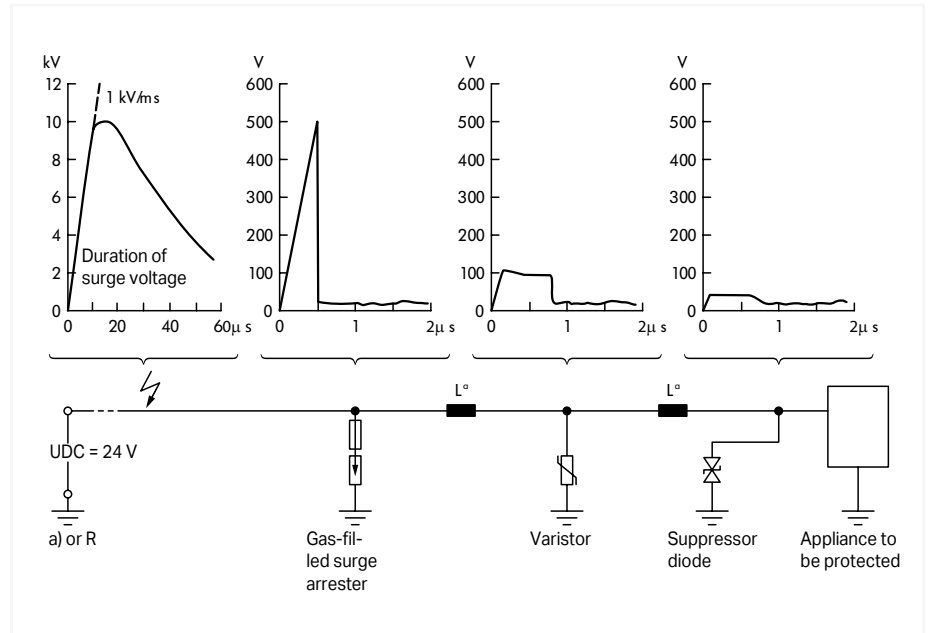
The maximum surge current  $I_{\text{Smax}}$  defines the maximum value of a current having the 8/20  $\mu\text{s}$  waveform, which can flow through the surge arrester once without destroying it.

#### Protection Level ( $U_p$ )

The protection level is the value of the residual voltage occurring on the "protected" side of the surge arrester when applying the rated discharge current.

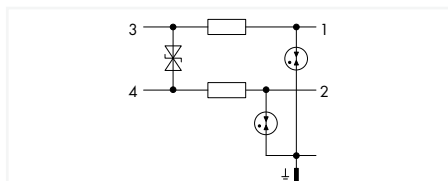
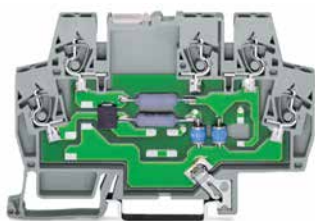
#### Response Time ( $t_{\text{resp}}$ )

The response time is primarily based on the physical properties of the surge arresters and is dependent upon the wave front duration of the surge voltage. WAGO's data refers to a voltage rise 1kV/ $\mu\text{s}$ .

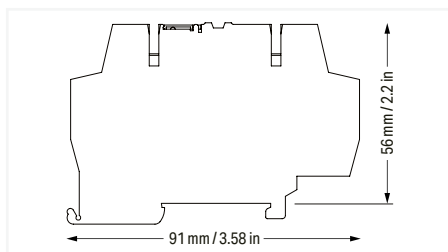


Function diagram of a multi-stage surge voltage protection module

## Surge suppression module for signal technology ▶ Nominal operating voltage: 24 VDC ▶ for 2 signal paths with common surge arrester; for symmetric interfaces; Two-stage ▶ Width: 6 mm



Item No.	PU
792-801	1



### Short description:

Provides surge protection for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage).

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

### Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

### Note

The coordination characteristics of the surge arrester provide information about its discharge capacity and protection capability.

### Electrical data

Nominal operating voltage	24 VDC
Maximum continuous voltage	23 VAC / 33 VDC
Nominal current	0.5 A
Nominal discharge current (8/20 μs) (line)	5 kA
Nominal discharge current (8/20 μs) (total)	10 kA
Protection level (line/line) (cat. C2 at I <sub>N</sub> )	≤ 50 V
Protection level (line/protected ground) (cat. C2 at I <sub>N</sub> )	≤ 750 V
Protection level (line/line) (cat. C3 at I <sub>N</sub> )	≤ 45 V
Protection level (line/protected ground) (cat. C3 at I <sub>N</sub> )	≤ 650 V
Response time (line/protected ground)	≤ 100 ns
Limit frequency (line/line)	6 MHz
Limit frequency (line/protected ground)	6 MHz
Impedance	1.8 Ω
Capacitance (line/line)	≤ 10 nF
Capacitance (line/protected ground)	≤ 5 pF

### Safety and protection/Environmental requirements

Protection type	IP00; IP20 with end and intermediate plate
Ambient temperature (operation)	-40 ... +80 °C
Ambient temperature (storage)	-40 ... +80 °C

### Connection data

Connections (number)	5
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches

### Physical data/Mechanical data/Material Data

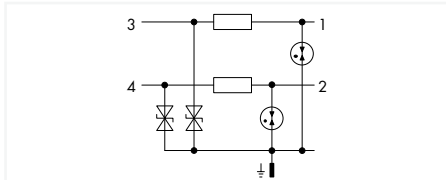
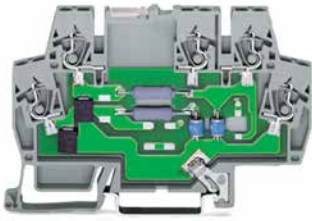
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 91 mm x 56 mm
Mounting type	DIN-35 rail

### Standards and specifications

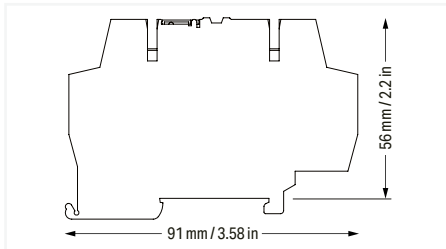
Standards/specifications	IEC 61643-21
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## Surge suppression module for signal technology ▶ Nominal operating voltage: 24 VDC ▶ for 2 signal paths with common surge arrester; for unbalanced interfaces; Two-stage ▶ Width: 6 mm



Item No.	PU
792-800	1



### Short description:

Provides surge protection for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage).

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

### Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

### Note

The coordination characteristics of the surge arrester provide information about its discharge capacity and protection capability.

### Electrical data

Nominal operating voltage	24 VDC
Maximum continuous voltage	23 VAC / 33 VDC
Nominal current	0.5 A
Nominal discharge current (8/20 μs) (line)	5 kA
Nominal discharge current (8/20 μs) (total)	10 kA
Protection level (line/line) (cat. C2 at I <sub>n</sub> )	≤ 110 V
Protection level (line/protected ground) (cat. C2 at I <sub>n</sub> )	≤ 65 V
Protection level (line/line) (cat. C3 at I <sub>n</sub> )	≤ 90 V
Protection level (line/protected ground) (cat. C3 at I <sub>n</sub> )	≤ 45 V
Response time (line/protected ground)	≤ 1 ns
Limit frequency (line/line)	6 MHz
Limit frequency (line/protected ground)	6 MHz
Impedance	1.8 Ω
Capacitance (line/line)	≤ 5 nF
Capacitance (line/protected ground)	≤ 1 nF

### Safety and protection/Environmental requirements

Protection type	IPO0; IP20 with end and intermediate plate
Ambient temperature (operation)	-40 ... +80 °C
Ambient temperature (storage)	-40 ... +80 °C

### Connection data

Connections (number)	5
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches


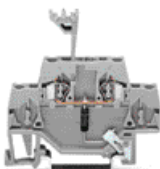

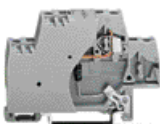
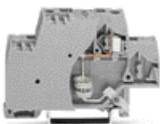
### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	6 mm x 91 mm x 56 mm
Mounting type	DIN-35 rail

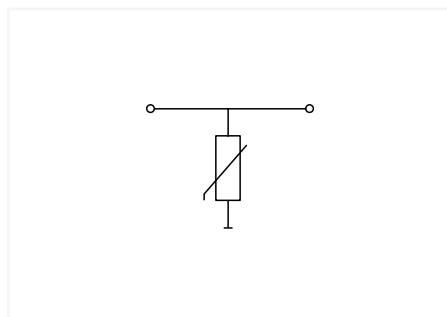
### Standards and specifications

Standards/specifications	IEC 61643-21
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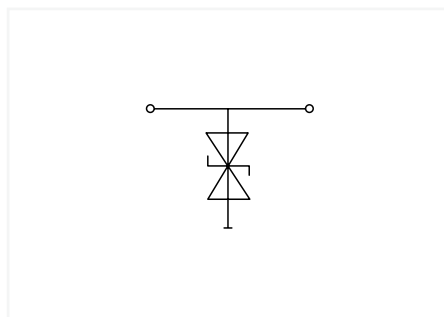
## Component Terminal Block; with Surge Arrester; for DIN-35 Rail 280 Series

Image	Description	Nominal Operating Voltage	Item No.	PU
	Component terminal block; double-deck; with varistor; with direct connection to DIN-35 rail	24 VDC	280-502/281-609	50
		48 VDC	280-502/281-610	50
		60 VDC	280-502/281-611	50
		110 VDC	280-502/281-612	50
		24 VAC	280-502/281-613	50
		115 VAC	280-502/281-614	50
			Component terminal block; double-deck; with direct connection to DIN-35 rail	24 VDC
48 VDC	280-502/281-603			50
60 VDC	280-502/281-604			50
110 VDC	280-502/281-605			50
24 VAC	280-502/281-606			50
115 VAC	280-502/281-607			50
230 VAC	280-502/281-608			50
	Component terminal block; double-deck; with varistor; with end plate; with direct connection to DIN-35 rail	24 VDC	280-502/281-582	25
		48 VDC	280-502/281-583	25
		60 VDC	280-502/281-584	25
		110 VDC	280-502/281-585	25
		24 VAC	280-502/281-586	25
		115 VAC	280-502/281-587	25
		230 VAC	280-502/281-588	25
	Component terminal block; double-deck; with end plate; with direct connection to DIN-35 rail	24 VDC	280-502/281-589	25
		48 VDC	280-502/281-590	25
		60 VDC	280-502/281-591	25
		110 VDC	280-502/281-592	25
		24 VAC	280-502/281-593	25
		115 VAC	280-502/281-594	25
		230 VAC	280-502/281-595	25
	Component terminal block; double-deck; with Gas-Filled Surge Arrester; with end plate; with direct connection to DIN-35 rail	24 VAC/VDC	280-503/281-579	25
		115 VAC/VDC	280-503/281-580	25
		230 VAC/VDC	280-503/281-581	25

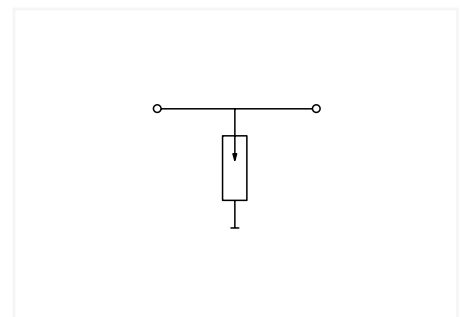
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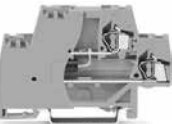
Component Terminal Block with Varistor

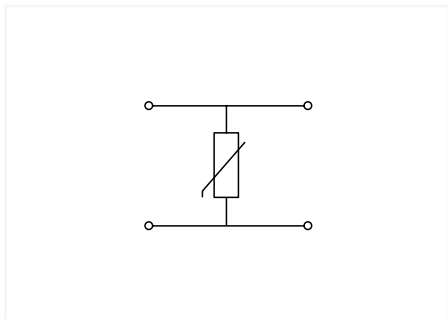


Component Terminal Block with TVS Diode

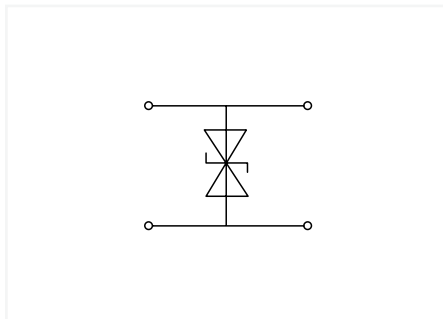


Component Terminal Block with Gas-Filled Surge Arrester

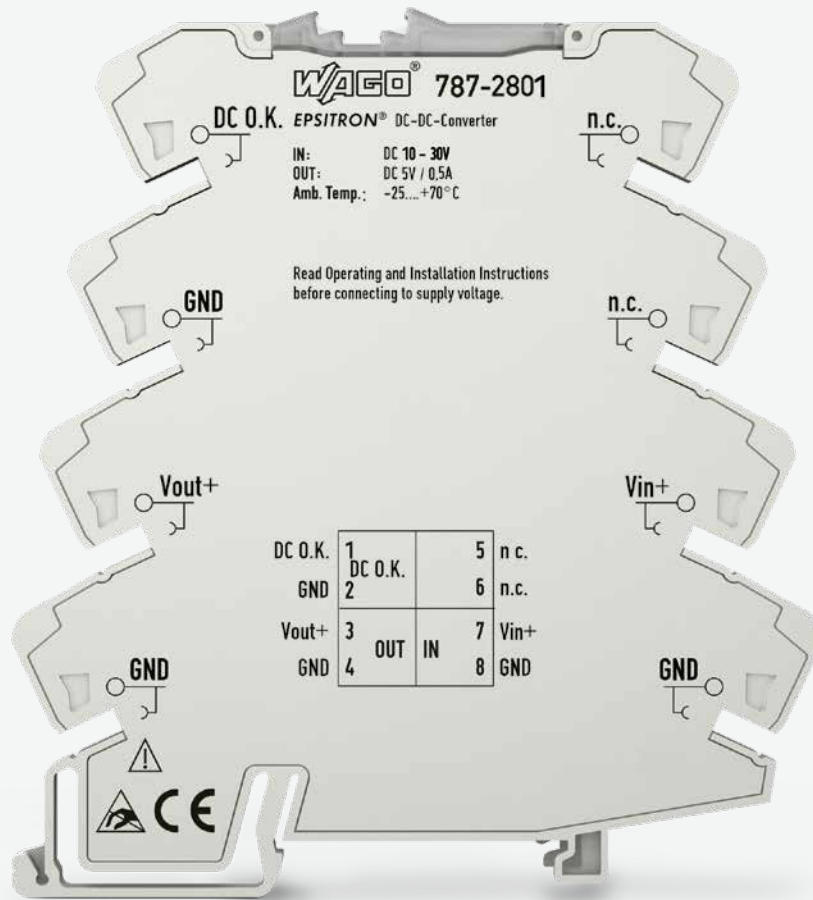
Image	Description	Nominal Operating Voltage	Item No.	PU
	Component terminal block; double-deck; with varistor; with end plate	24 VDC	280-504/281-582	25
		48 VDC	280-504/281-583	25
		60 VDC	280-504/281-584	25
		110 VDC	280-504/281-585	25
		24 VAC	280-504/281-586	25
		115 VAC	280-504/281-587	25
		230 VAC	280-504/281-588	25
	Component terminal block; double-deck; with end plate			
	with 1.5KE33C TVS diode	24 VDC	280-944/281-589	25
	with 1.5KE62C TVS diode	48 VDC	280-944/281-590	25
	with 1.5KE82C TVS diode	60 VDC	280-944/281-591	25
	with 1.5KE150C TVS diode	110 VDC	280-944/281-592	25
	with 1.5KE39CA TVS diode	24 VAC	280-944/281-593	25
	with 1.5KE-C TVS diode	115 VAC	280-944/281-594	25
with 1.5KE-C TVS diode	230 VAC	280-944/281-595	25	



Component Terminal Block with Varistor





Component Terminal Block with TVS Diode



# WAGO DC/DC Converters

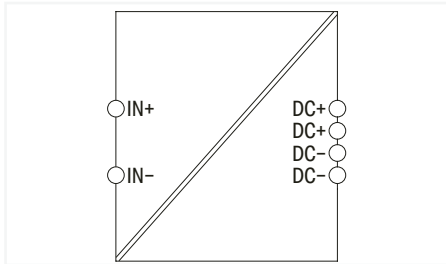
## WAGO DC/DC Converters

	Page
	<b>Compact</b> DC/DC Converters; 787 Series 179
	<b>DC/DC Converters; 787 Series</b> 184

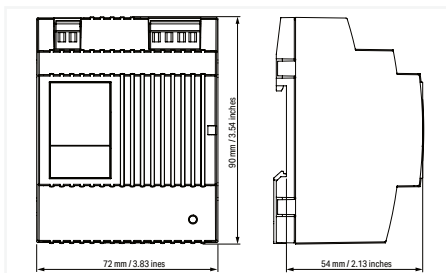
## WAGO DC/DC Converters Selection Guide

Input	Output		Standards/Approvals				Signaling		Dimensions and Environmental Requirements				Item No.
Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal current [A]	EN 50125	EN 50121-3-2	UL 61010	DNV	DC OK LED	1 x Active signal output	Width	Height	Depth from upper-edge of DIN-rail	Surrounding air temperature	
24 VDC	5 V	0.5 A			■		■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2801
24 VDC	5 V; 10 V; 12 V	0.5 A			■		■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2810
24 VDC	10 V	0.5 A			■		■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2802
24 VDC	12 V	4 A					■		45 mm	90 mm	107.5 mm	-25 ... +70 °C	787-1650
24 VDC	12 V	0.5 A			■		■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2805
48 VDC	24 V	0.5 A			■		■	■	6 mm	94 mm	97.8 mm	-25 ... +70 °C	787-2803
72 VDC	12 V	4 A	■	■		■	■		72 mm	89 mm	55 mm	-40 ... +70 °C	787-1015/072-000
72 VDC	24 V	2 A		■		■	■		72 mm	89 mm	55 mm	-40 ... +70 °C	787-1014/072-000
110 VDC	24 V	2 A		■		■	■		72 mm	89 mm	55 mm	-40 ... +70 °C	787-1014

## DC/DC converter ▶ Compact ▶ Nominal input voltage (DC): 110 VDC ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2 A



Item No.	PU
787-1014	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1
- Control deviation:  $\pm 1\%$  ( $\pm 10\%$  within the application range of EN 50121-3-2)
- Suitable for railway applications

Input	
Nominal input voltage $U_{i, \text{nom}}$	110 VDC
Input voltage range	77 ... 140 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.77$ A (77 VDC); $\leq 0.42$ A (140 VDC)
Inrush current	$\leq 30$ A (NTC)
Mains failure hold-up time	$\geq 8$ ms (77 VDC); $\geq 25$ ms (140 VDC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	2 A (24 VDC); 1.6 A (in any mounting position)
Nominal output power	48 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1.9$ W (110 VDC; no load); $\leq 9.9$ W (110 VDC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	9.9 W (77 VDC / 24 VDC; 2 A)
Efficiency (typ.)	85 %

Circuit protection	
Internal fuse	T 4 A / 125 VDC
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A; Tripping characteristic: B or C

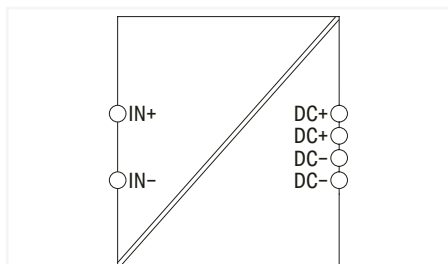
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	$-40 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	5 ... 96 % (Coated PCB)
Derating	$-1.5$ %/K ( $> 55$ °C)
Resistance to shock and vibration	Category 1, Class B (per EN 61373:2010)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

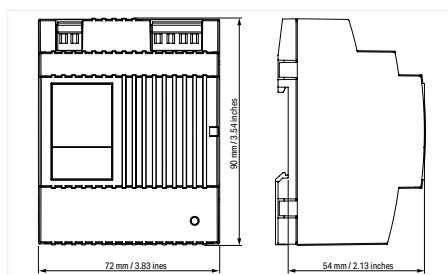
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 50121-3-2; DNV
Standards/specifications (pending)	EN 50125; UL 60950; UL 508

## DC/DC converter ▶ Compact ▶ Nominal input voltage (DC): 72 VDC ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 4 A



Item No.	PU
787-1015/072-000	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1
- Control deviation:  $\pm 1\%$  ( $\pm 10\%$  within the application range of EN 50121-3-2)
- Suitable for railway applications

Input	
Nominal input voltage $U_{i, \text{nom}}$	72 VDC
Input voltage range	40 ... 90 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.79$ A (72 VDC)
Inrush current	$\leq 30$ A (NTC)
Mains failure hold-up time	$\geq 8$ ms (72 VDC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	4 A (24 VDC); 3.1 A (in any mounting position)
Nominal output power	48 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1.2$ W (72 VDC; no load); $\leq 8.6$ W (72 VDC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	9.7 W (40 VDC / 12 VDC; 4 A)
Efficiency (typ.)	85 %

Circuit protection	
Internal fuse	T 4 A / 125 VDC
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 21.5$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	$-40 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	5 ... 96 % (Coated PCB)
Derating	$-1.5\%/K$ ( $> 55$ °C)
Resistance to shock and vibration	Category 1, Class B (per EN 61373:2010)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

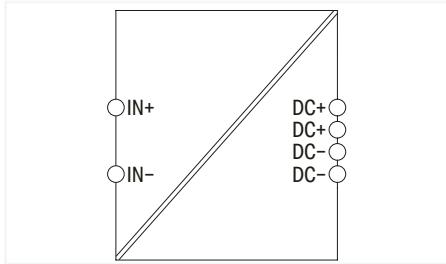
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 50121-3-2; EN 50125; DNV



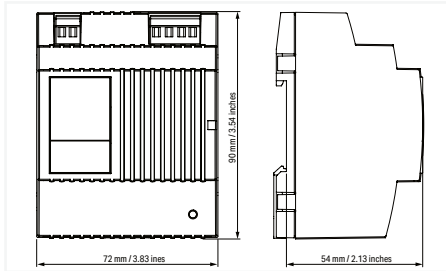
## DC/DC converter ▶ Compact ▶ Nominal input voltage (DC): 72 VDC ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 2 A



Similar to illustration



Item No.	PU
787-1014/072-000	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1
- Control deviation:  $\pm 1\%$  ( $\pm 10\%$  within the application range of EN 50121-3-2)
- Suitable for railway applications

Input	
Nominal input voltage $U_{i, \text{nom}}$	72 VDC
Input voltage range	40 ... 90 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.79$ A (72 VDC)
Inrush current	$\leq 30$ A (NTC)
Mains failure hold-up time	$\geq 8$ ms (72 VDC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Nominal output current $I_{o, \text{nom}}$	2 A (24 VDC); 1.6 A (in any mounting position)
Nominal output power	48 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 2$ W (72 VDC; no load); $\leq 9$ W (72 VDC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	10.5 W (40 VDC / 24 VDC; 2 A)
Efficiency (typ.)	84 %

Circuit protection	
Internal fuse	T 4 A / 125 VDC
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A; Tripping characteristic: B or C

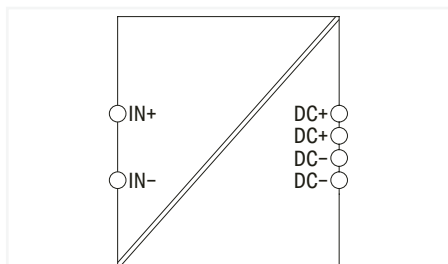
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	$-40 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	5 ... 96 % (Coated PCB)
Derating	$-1.5$ %/K ( $> 55$ °C)
Resistance to shock and vibration	Category 1, Class B (per EN 61373:2010)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

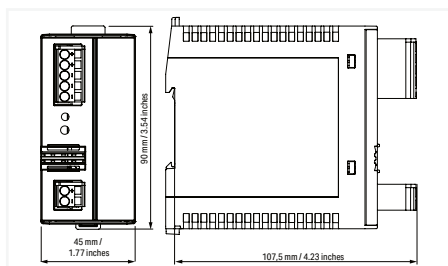
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 89 mm x 55 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 50121-3-2; DNV
Standards/specifications (pending)	EN 50125; UL 60950; UL 508

## DC/DC converter ▶ Classic ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 4 A



Item No.	PU
787-1650	1



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1
- Control deviation:  $\pm 1\%$

### Input

Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	18 ... 60 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 2.56$ A (24 VDC); $\leq 0.96$ A (60 VDC); $\leq 3.39$ A (18 VDC)
Inrush current	$\leq 60$ A (NTC)
Mains failure hold-up time	$\geq 5$ ms (24 VDC)

### Output

Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	11.5 ... 14.5 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	4 A
Nominal output power	48 W
Residual ripple	$\leq 50$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)
Overload behavior	Constant current

### Signaling and communication

Signaling	1 x Status indication LED (green)
Operation status indicator	Green LED ( $U_o$ )

### Efficiency/power losses

Power loss $P_i$	$\leq 1$ W; $\leq 11.7$ W ( $DC_{in}$ 24 V / 4 A); $\leq 1.28$ W (48 VDC; 40 A)
Power loss (max.) $P_{i, \text{(max)}}$	15 W ( $DC_{in}$ 18 V / 4 A)
Efficiency (typ.)	84 %

### Circuit protection

Internal fuse	T 4 A / 250 VDC
Backup fusing (recommended)	T 6.3 A

### Safety and protection/Environmental requirements

Protection class/Protection type	III / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70$ °C
Ambient temperature (storage)	$-25 \dots +85$ °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-2\%/K$ ( $> 55$ °C)

### Connection data

Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	45 mm x 90 mm x 107.5 mm
Mounting type	DIN-35 rail

### Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16

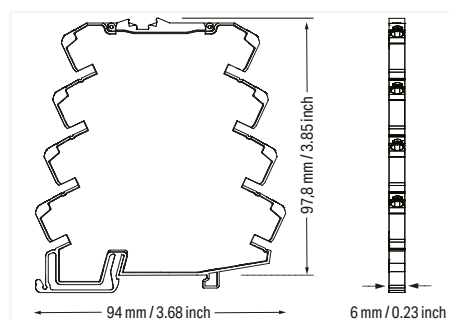
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## DC/DC converter ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 5 V ▶ Nominal output current: 0.5 A ▶ DC OK contact



DC OK	1	DC OK	5	n.c.
GND	2		6	n.c.
V <sub>out</sub> +	3	OUT	7	V <sub>in</sub> +
GND	4	IN	8	GND

Item No.	PU
787-2801	1



### Features:

- DC/DC converter in a compact 6 mm housing
- DC/DC converters (787-28xx) supply devices with 5, 10, 12 or 24 VDC from a 24 or 48 VDC power supply with an output power up to 12 W.
- Output voltage monitoring via DC OK signal output
- Can be commoned with 857 and 2857 Series devices
- Comprehensive range of approvals for multiple applications

Input	
Nominal input voltage U <sub>i,nom</sub>	24 VDC
Input voltage range	10 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current I <sub>i</sub>	≤ 0.34 A
Inrush current	≤ 0.5 A (at nominal input voltage)

Output	
Nominal output voltage U <sub>o,nom</sub>	5 VDC
Output voltage range	±3 %
Nominal output current I <sub>o,nom</sub>	0.5 A
Nominal output power	2.5 W
Residual ripple	≤ 20 mV (peak-to-peak)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Short circuit LED (red); 1 x Active signal output (U <sub>s</sub> , max. 4 mA)
Operation status indicator	Green LED (U <sub>s</sub> ); Red LED (short circuit)

Efficiency/power losses	
Power loss P <sub>i</sub>	≤ 0.13 W; ≤ 0.6 W (nominal load)
Efficiency (typ.)	82.5 % (at nominal input voltage and nominal output)

Circuit protection	
Internal fuse	No

Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/No
MTBF	> 1,800,000 h
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

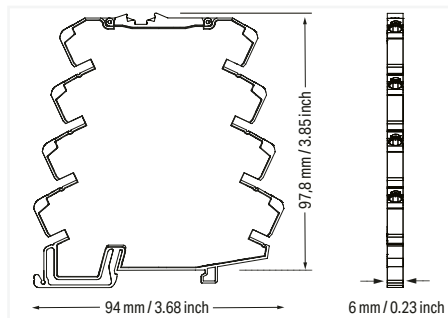
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

## DC/DC converter ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 10 V ▶ Nominal output current: 0.5 A ▶ DC OK contact



DC OK	1	DC OK	5	n.c.
GND	2		6	n.c.
V <sub>out</sub> +	3	OUT	7	V <sub>in</sub> +
GND	4	IN	8	GND

Item No.	PU
787-2802	1



### Features:

- DC/DC converter in a compact 6 mm housing
- DC/DC converters (787-28xx) supply devices with 5, 10, 12 or 24 VDC from a 24 or 48 VDC power supply with an output power up to 12 W.
- Output voltage monitoring via DC OK signal output
- Can be commoned with 857 and 2857 Series devices
- Comprehensive range of approvals for multiple applications

Input	
Nominal input voltage U <sub>i,nom</sub>	24 VDC
Input voltage range	15 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current I <sub>i</sub>	≤ 0.42 A
Inrush current	≤ 0.5 A (at nominal input voltage)

Output	
Nominal output voltage U <sub>o,nom</sub>	10 VDC
Output voltage range	±2 %
Nominal output current I <sub>o,nom</sub>	0.5 A
Nominal output power	5 W
Residual ripple	≤ 20 mV (peak-to-peak)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Short circuit LED (red); 1 x Active signal output (U <sub>a</sub> , max. 4 mA)
Operation status indicator	Green LED (U <sub>a</sub> ); Red LED (short circuit)

Efficiency/power losses	
Power loss P <sub>i</sub>	≤ 0.19 W; ≤ 0.7 W (nominal load)
Efficiency (typ.)	89 % (at nominal input voltage and nominal output)

Circuit protection	
Internal fuse	No

Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/No
MTBF	> 1,800,000 h
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

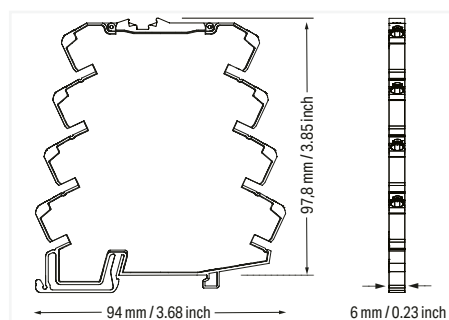
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

## DC/DC converter ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 12 V ▶ Nominal output current: 0.5 A ▶ DC OK contact



DC OK	1	DC OK	5	n.c.
GND	2		6	n.c.
V <sub>out</sub> +	3	OUT	7	V <sub>in</sub> +
GND	4	IN	8	GND

Item No.	PU
787-2805	1



### Features:

- DC/DC converter in a compact 6 mm housing
- DC/DC converters (787-28xx) supply devices with 5, 10, 12 or 24 VDC from a 24 or 48 VDC power supply with an output power up to 12 W.
- Output voltage monitoring via DC OK signal output
- Can be commoned with 857 and 2857 Series devices
- Comprehensive range of approvals for multiple applications

Input	
Nominal input voltage U <sub>i,nom</sub>	24 VDC
Input voltage range	15 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current I <sub>i</sub>	≤ 0.5 A
Inrush current	≤ 0.5 A (at nominal input voltage)

Output	
Nominal output voltage U <sub>o,nom</sub>	12 VDC
Output voltage range	±2 %
Nominal output current I <sub>o,nom</sub>	0.5 A
Nominal output power	6 W
Residual ripple	≤ 20 mV (peak-to-peak)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Short circuit LED (red); 1 x Active signal output (U <sub>i</sub> , max. 4 mA)
Operation status indicator	Green LED (U <sub>i</sub> ); Red LED (short circuit)

Efficiency/power losses	
Power loss P <sub>i</sub>	≤ 0.21 W; ≤ 0.7 W (nominal load)
Efficiency (typ.)	90 % (at nominal input voltage and nominal output)

Circuit protection	
Internal fuse	No

Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/No
MTBF	> 1,800,000 h
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

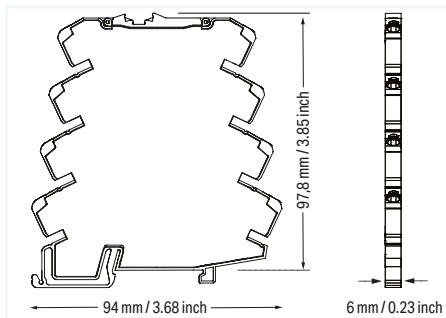
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

## DC/DC converter ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 5 V; 10 V; 12 V ▶ Nominal output current: 0.5 A ▶ DC OK contact



DC OK	1	DC OK	5	n.c.
GND	2		6	n.c.
V <sub>out</sub> +	3	OUT	7	V <sub>in</sub> +
GND	4	IN	8	GND

Item No.	PU
787-2810	1



### Features:

- DC/DC converter in a compact 6 mm housing
- DC/DC converters (787-28xx) supply devices with 5, 10, 12 or 24 VDC from a 24 or 48 VDC power supply with an output power up to 12 W.
- Output voltage monitoring via DC OK signal output
- Can be commoned with 857 and 2857 Series devices
- Comprehensive range of approvals for multiple applications

Input	
Nominal input voltage U <sub>i,nom</sub>	24 VDC
Input voltage range	15 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current I <sub>i</sub>	≤ 0.5 A
Inrush current	≤ 0.5 A (at nominal input voltage)

Output	
Nominal output voltage U <sub>o,nom</sub>	5 / 10 / 12 VDC (adjustable via DIP switch)
Output voltage range	±3 %
Nominal output current I <sub>o,nom</sub>	0.5 A
Nominal output power	2.5 W
Residual ripple	≤ 20 mV (peak-to-peak)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Short circuit LED (red); 1 x Active signal output (U <sub>a</sub> , max. 4 mA)
Operation status indicator	Green LED (U <sub>a</sub> ); Red LED (short circuit)

Efficiency/power losses	
Power loss P <sub>i</sub>	≤ 0.21 W; ≤ 0.7 W (nominal load)
Efficiency (typ.)	82.5 % (at nominal input voltage and nominal output)

Circuit protection	
Internal fuse	No

Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/No
MTBF	> 1,800,000 h
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

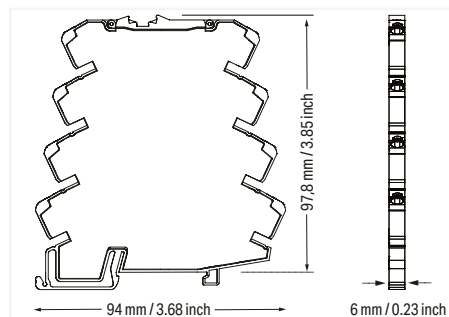
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

## DC/DC converter ▶ Nominal input voltage (DC): 48 VDC ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 0.5 A ▶ DC OK contact



DC OK	1	DC OK	5	n.c.
GND	2		6	n.c.
V <sub>in</sub> +	3	IN	7	V <sub>out</sub> +
GND	4	OUT	8	GND

Item No.	PU
787-2803	1



### Features:

- DC/DC converter in a compact 6 mm housing
- DC/DC converters (787-28xx) supply devices with 5, 10, 12 or 24 VDC from a 24 or 48 VDC power supply with an output power up to 12 W.
- Output voltage monitoring via DC OK signal output
- Can be commoned with 857 and 2857 Series devices
- Comprehensive range of approvals for multiple applications

Input	
Nominal input voltage U <sub>i,nom</sub>	48 VDC
Input voltage range	40 ... 55 VDC
Nominal mains frequency range	0 Hz
Input current I <sub>i</sub>	≤ 0.34 A
Inrush current	≤ 0.5 A (at nominal input voltage)

Output	
Nominal output voltage U <sub>o,nom</sub>	24 VDC
Output voltage range	±3 %
Nominal output current I <sub>o,nom</sub>	0.5 A
Nominal output power	12 W
Residual ripple	≤ 20 mV (peak-to-peak)

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Short circuit LED (red); 1 x Active signal output (U <sub>s</sub> , max. 4 mA)
Operation status indicator	Green LED (U <sub>s</sub> ); Red LED (short circuit)

Efficiency/power losses	
Power loss P <sub>i</sub>	≤ 0.29 W; ≤ 1.2 W (nominal load)
Efficiency (typ.)	91 % (at nominal input voltage and nominal output)

Circuit protection	
Internal fuse	No

Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Short-circuit-protected/Open-circuit-proof	Yes/Yes
Parallel operation/Series operation	No/No
MTBF	> 1,800,000 h
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95 % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201








5

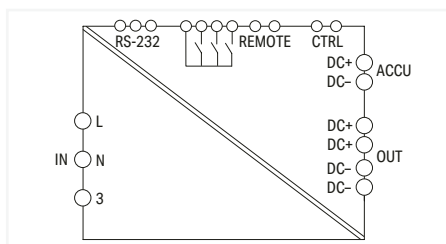


## WAGO UPS Charger and Controller and WAGO Capacitive Buffer Modules

## WAGO UPS Charger and Controller and WAGO Capacitive Buffer Modules

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## Switched-mode power supply with integrated charger and controller ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A



	Item No.	PU
	787-1675	1

### Features:

- Switched-mode power supply with integrated charger and controller for uninterruptible power supply (UPS)
- Battery control technology for smooth charging and predictive maintenance applications
- Potential-free contacts provide function monitoring
- Buffer time can be set on site via rotary switch
- Parameter setting and monitoring via RS-232 interface
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204

Input	
Nominal input voltage $U_{i, nom}$	100 ... 240 VAC
Input voltage range	85 ... 264 VAC; 120 ... 372 VDC
Input voltage derating	-1.5 %/V (< 110 VAC); -1 %/V (< 150 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.1$ A (230 VAC; 5 ADC); $\leq 2.2$ A (110 VAC; 5 ADC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive

Output	
Nominal output voltage $U_{o, nom}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (mains operation); 18.5 ... 27.5 VDC (buffer mode)
Nominal output current $I_{o, nom}$	5 A
Nominal output power	120 W
Residual ripple	$\leq 50$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, nom}$ (typ.); TopBoost
Overload behavior	Constant current

Energy storage systems	
Buffer time	1 s ... 20 min or constant; PC mode; configurable via software
Switch-on threshold (adjustable)	DC 20 ... 25.5 V (adjustable via software; 22 VDC (pre-configured))
Storage type	Lead-acid (AGM)
Charging current	0.3 ... 1 A
End-of-charge voltage	26 ... 29.5 VDC (temperature-controlled; optional fixed setting)
Recommended battery module	787-871, 787-872, 787-873, 787-876, 787-1671

Signaling and communication	
Signaling	1 x Alarm LED (red); 1 x Battery charge LED (yellow); 1 x LED DC OK (green); 3 x Signal output (24 VDC; max. 200 mA in total); 1 x RS-232 interface
Communications	RS-232 serial interface
Operation status indicator	Green LED (DC OK); Yellow LED (battery mode); Red LED (alarm)
Remote input	Switching buffer mode off

Efficiency/power losses	
Power loss $P_i$	$\leq 5.2$ W (buffer mode; 24 VDC; 5 A); $\leq 17$ W (Mains operation; 230 VAC; 24 VDC; 5 A); $\leq 22$ W
Power loss (max.) $P_{i, (max)}$	30 W (90 VAC; charging)
Efficiency (typ.)	88 %

Circuit protection	
Internal fuse	T 4 A / 250 VAC (input side)
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/Protection type	I / IP20; per EN 60529
Reverse voltage protection	Yes
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 38$ VDC (in the event of a fault)
Parallel operation/Series operation	Yes, max. 3 battery modules for buffer time extension/No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C (device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

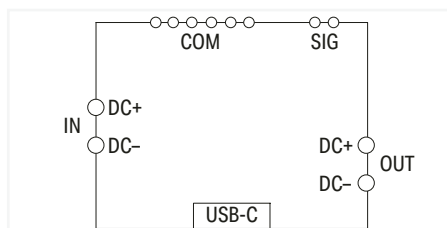
Connection data	
Connection type 1	Input/output/signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Interface
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG
Cable length (max.)	3 m (Output, battery control)

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	60 mm x 127 mm x 135.5 mm
Mounting type	DIN-35 rail

## Switched-mode power supply with integrated charger and controller ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 5 A

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508; DNV

## UPS charger and controller ► Nominal input voltage (DC): 24 VDC ► Nominal output voltage (DC): 24 V



Item No.	PU
2685-1002/601-204	1

### Features:

- DC UPS module for uninterruptible power supply (UPS)
- Potential-free contacts provide function monitoring
- Modbus RS-485 communication interface
- Configuration via USB-C

Input	
Nominal input voltage $U_{i, nom}$	24 VDC
Input voltage range	22.5 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 4.8$ A

Output	
Nominal output voltage $U_{o, nom}$	24 VDC
Output voltage range	$U_o$ (rated operation); 23.5 VDC ( $U_{in} - 0.5$ V) (battery voltage in buffer mode)
Nominal output current $I_{o, nom}$	4 A

Energy storage systems	
Buffer time	30 ... 35 s at $I_{out} = 4$ A
Storage type	Supercaps
Battery capacity	0.06625 Ah; 1.59 Ah; 5.724 Ah
Charging time (typ.)	4.5 min

Signaling and communication	
Signaling	1 x Isolated relay contact (max. 30 VDC; 1 A); 1 x LED status (green)
Operation status indicator	Static LED (green, mains operation); Flashing LED (green, 1 Hz, buffer mode)

Circuit protection	
Internal fuse	T 15 A (input)

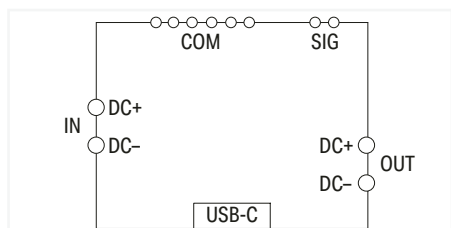
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	No/No
Ambient temperature (operation)	-20 ... +65 °C
Ambient temperature (storage)	-30 ... +65 °C
Relative humidity	5 ... 95 % (no condensation permissible)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG
Connection type	Relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Connection type	Communication
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	63 mm x 120 mm x 108 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	IEC 61010-1 (SELV); IEC 61010-2-201
Standards/specifications (pending)	CSA

## UPS charger and controller ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 24 V



Item No.	PU
2685-1002/408-206	1

### Features:

- DC UPS module for uninterruptible power supply (UPS)
- Potential-free contacts provide function monitoring
- Modbus RS-485 communication interface
- Configuration via USB-C

### Input

Nominal input voltage $U_{I, \text{nom}}$	24 VDC
Input voltage range	22.5 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_I$	$\leq 6.2$ A

### Output

Nominal output voltage $U_{O, \text{nom}}$	24 VDC
Output voltage range	$U_{\text{le}}$ (rated operation); 23.5 VDC ( $U_{\text{vin}} - 0.5$ V) (battery voltage in buffer mode)
Nominal output current $I_{O, \text{nom}}$	6 A

### Energy storage systems

Buffer time	1 s ... 11 min at $I_{\text{out}} = 4$ A
Storage type	LiFePO4
Battery capacity	1.375 Ah; 33 Ah; 118.8 Ah
Charging time (typ.)	60 min

### Signaling and communication

Signaling	1 x Isolated relay contact (max. 30 VDC; 1 A); 1 x LED status (green)
Operation status indicator	Static LED (green, mains operation); Flashing LED (green, 1 Hz, buffer mode)

### Circuit protection

Internal fuse	T 15 A (input)
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### Safety and protection/Environmental requirements

Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	No/No
Ambient temperature (operation)	-20 ... +50 °C
Ambient temperature (storage)	-30 ... +55 °C
Relative humidity	5 ... 95 % (no condensation permissible)

### Connection data

Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG
Connection type	Relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Connection type	Communication
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG

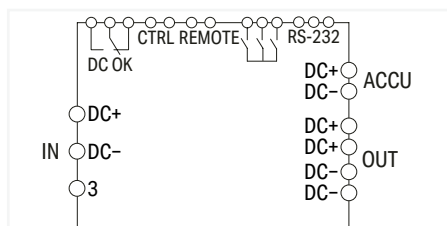
### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	63 mm x 120 mm x 108 mm
Mounting type	DIN-35 rail

### Standards and specifications

Conformity marking	CE
Standards/specifications	IEC 61010-1 (SELV); IEC 61010-2-201
Standards/specifications (pending)	CSA

## UPS charger and controller ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 24 V



Item No.	PU
787-870	1

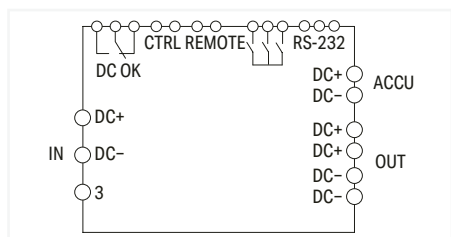
### Features:

- Charger and controller for uninterruptible power supply (UPS)
- Current and voltage monitoring, as well as parameter setting via LCD and RS-232 interface
- Active signal outputs for function monitoring
- Remote input for deactivating the buffered output
- Input for temperature control of connected battery
- Battery control (from manufacturing no. 215563 onwards) detects both battery life and battery type

<b>Input</b>	
Nominal input voltage $U_{i, nom}$	24 VDC
Input voltage range	22 ... 29 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.1$ A (no load); $\leq 0.8$ A (Charging); $\leq 10.8$ A
Inrush current	$\leq 4$ A (no load)
<b>Output</b>	
Nominal output voltage $U_{o, nom}$	24 VDC
Output voltage range	$U_i - 1$ VDC (rated operation); 20 ... 25.5 VDC (buffer mode)
Nominal output current $I_{o, nom}$	10 A
Current limitation	1.1 ... 1.4 x $I_{o, nom}$ (typ.)
<b>Energy storage systems</b>	
Buffer time	10 s ... 10 min or constant; adjustable
Switch-on threshold (adjustable)	DC 20 ... 25.5 V
Storage type	Lead-acid (AGM)
Charging current	$\leq 0.6$ A
End-of-charge voltage	26 ... 29.5 VDC (temperature-controlled; optional fixed setting)
Recommended battery module	787-871, 787-872, 787-873, 787-876, 787-1671
<b>Signaling and communication</b>	
Signaling	1 x LED DC OK (green); 1 x Warning LED (yellow); 1 x Error LED (red); LCD; 3 x Signal output (24 VDC; max. 25 mA); 1 x Isolated relay contact (max. 30 VDC; 1 A); 1 x RS-232 interface; Battery control (C+; C-)
Communications	RS-232 serial interface
Operation status indicator	Green LED ( $U_i$ ); Yellow LED (warning); Red LED (error)
Remote input	Switching buffer mode off
<b>Efficiency/power losses</b>	
Power loss $P_i$	$\leq 15$ W; $\leq 20$ W (nominal load)
Efficiency (typ.)	95 %
<b>Circuit protection</b>	
Internal fuse	T 15 A
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes, max. 3 battery modules for buffer time extension (temperature measurement evaluation is only possible via one battery module)/No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
<b>Connection data</b>	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Cable length (max.)	3 m (Input, output, battery control)
<b>Physical data/Mechanical data/Material Data</b>	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 163 mm x 163 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; UL 60950; UL 508; EN 61000-6-2; EN 61000-6-3



## UPS charger and controller ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 24 V



Item No.	PU
787-875	1

### Features:

- Charger and controller for uninterruptible power supply (UPS)
- Current and voltage monitoring, as well as parameter setting via LCD and RS-232 interface
- Active signal outputs for function monitoring
- Remote input for buffered output deactivation
- Input for temperature control of connected battery
- Battery control (from manufacturing no. 215563) detects both battery life and battery type

Input	
Nominal input voltage $U_{i, nom}$	24 VDC
Input voltage range	22 ... 29 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.1$ A (no load); $\leq 1.5$ A (Charging); $\leq 21.5$ A
Inrush current	$\leq 4$ A (no load)
Output	
Nominal output voltage $U_{o, nom}$	24 VDC
Output voltage range	$U_i - 1$ VDC (rated operation); 20 ... 25.5 VDC (buffer mode)
Nominal output current $I_{o, nom}$	20 A
Current limitation	1.1 ... 1.3 x $I_{o, nom}$ (typ.)
Energy storage systems	
Buffer time	10 s ... 10 min or constant; adjustable
Switch-on threshold (adjustable)	DC 20 ... 25.5 V
Storage type	Lead-acid (AGM)
Charging current	$\leq 1$ A
End-of-charge voltage	26 ... 29.5 VDC (temperature-controlled; optional fixed setting)
Recommended battery module	787-871, 787-872, 787-873
Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Warning LED (yellow); 1 x Error LED (red); LCD; 3 x Signal output (24 VDC; max. 25 mA); 1 x Isolated relay contact (max. 30 VDC; 1 A); 1 x RS-232 interface ; Battery control (C+; C-)
Communications	RS-232 serial interface
Operation status indicator	Green LED ( $U_o$ ); Yellow LED (warning); Red LED (error)
Remote input	Switching buffer mode off
Efficiency/power losses	
Power loss $P_l$	$\leq 15$ W; $\leq 30$ W (nominal load)
Efficiency (typ.)	95 %
Circuit protection	
Internal fuse	T 25 A
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes, max. 3 battery modules for buffer time extension (temperature measurement evaluation is only possible via one battery module)/No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Cable length (max.)	3 m (Input, output, battery control)
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 171 mm x 163 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 60950; UL 60950; UL 508; EN 61000-6-2; EN 61000-6-3

## UPS charger and controller ► Nominal input voltage (DC): 24 VDC ► Nominal output voltage (DC): 24 V



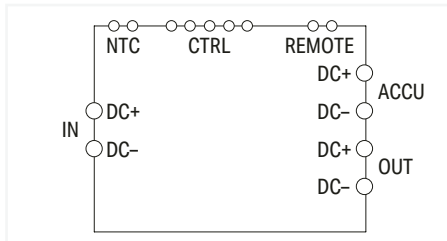
Item No.	PU
2685-1001/601-220	1

### Features:

- DC UPS module for uninterruptible power supply (UPS)
- Potential-free contacts provide function monitoring
- Remote function via digital signals
- Integrated memory can be expanded with additional modules
- Konfiguration via USB-C

Input	
Nominal input voltage $U_{i, nom}$	24 VDC
Input voltage range	23.5 ... 29 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.1$ A (no load); $\leq 4$ A (Charging); $\leq 44$ A
Output	
Nominal output voltage $U_{o, nom}$	24 VDC
Output voltage range	22 ... 28 VDC
Nominal output current $I_{o, nom}$	20 A; 40 A
Energy storage systems	
Buffer time	41 s (1 A) / 1 s (20 A)
Storage type	Supercaps
Battery capacity	0.0196 Ah; 0.4704 Ah; 1.69344 Ah
Charging time (typ.)	4.3 min
Signaling and communication	
Signaling	2 x Isolated relay contact (max. 30 VDC; 1 A); 3 x LED (green/red/yellow)
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Parallel operation/Series operation	No/No
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG
Connection type	Relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Connection type	Communication
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 1.5 mm <sup>2</sup> / 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 127 mm x 131.5 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61140; UL 61010-1
Standards/specifications (pending)	DNV

## UPS charger and controller ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 24 V



Item No.	PU
787-915	1

### Features:

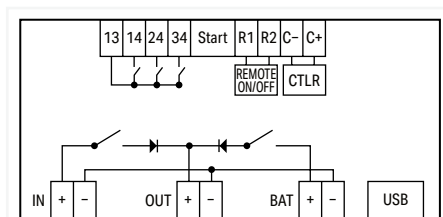
- DC UPS module for uninterruptible power supply (UPS)
- Potential-free contacts provide function monitoring
- Remote input for buffered output deactivation
- Input for temperature control of connected battery
- Battery internal resistance measurement for diagnosing batteries, including the connection cable and fuse

### Safety Information

For North America: Use only batteries with appropriate safety approvals!

Input	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	22 ... 28 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.16$ A (no load); $\leq 4$ A (Charging); $\leq 44$ A
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i$ (rated operation); 19.5 ... 26.5 VDC (battery voltage in buffer mode)
Nominal output current $I_{o, \text{nom}}$	40 A
Energy storage systems	
Buffer time	load-dependent
Switch-on threshold (adjustable)	DC 21.5 ... 22.5 V
Storage type	Lead-acid (AGM)
Charging current	1 ... 4 A (adjustable in 1 A steps via DIP switch; Default setting: 2 A)
End-of-charge voltage	26.4 ... 29 VDC (temperature-controlled with NTC; without temperature sensor: 27.2 VDC)
Recommended battery module	Typ: VRLA 24 V; 7 ... 40 Ah
Signaling and communication	
Signaling	1 x Power LED (green); 1 x UPS LED (yellow); 1 x Warning LED (red); 2 x Isolated relay contact (max. 30 VDC; 1 A)
Operation status indicator	Green LED (operation); Yellow LED (buffer mode/charging); Red LED (warning)
Remote input	Switching buffer mode off
Efficiency/power losses	
Power loss $P_i$	$\leq 4$ W; $\leq 22.5$ W (nominal load)
Efficiency (typ.)	97 % (Rated operation); 85 % (Charging)
Circuit protection	
Internal fuse	T 6.3 A (charging circuit)
Backup fusing (recommended)	T 50 A
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	No/No
MTBF	600,000 h (40 °C; per SN 29500)
Ambient temperature (operation)	0 ... +50 °C
Ambient temperature (storage)	-20 ... +55 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	68 mm x 181 mm x 162 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61000-6-2; EN 61000-6-3
Standards/specifications (pending)	CSA

## UPS charger and controller ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 24 V



Item No.	PU
2685-2001/100-240	1

### Features:

- DC UPS module for uninterruptible power supply (UPS)
- Potential-free contacts provide function monitoring
- Remote function via digital signals
- Active signal outputs for watchdog functions
- Parallel operation of multiple connected storage modules
- Battery control for recognition of battery type and condition
- Configuration via USB-C

Input	
Nominal input voltage $U_{i, nom}$	24 VDC
Input voltage range	18 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.1$ A (no load); $\leq 7$ A (Charging); $\leq 40$ A (max.)
Output	
Nominal output voltage $U_{o, nom}$	24 VDC
Output voltage range	18 ... 30 VDC
Nominal output current $I_{o, nom}$	40 A
Energy storage systems	
Storage type	Lead-acid (AGM)
Signaling and communication	
Signaling	3 x Isolated relay contact parameterizable for alarm/battery mode/loading mode; 1 x Digital input for start in battery mode; 1 x Interruption contact for remote shutdown in buffer mode; 3 x Status LED (red/yellow/green)
Operation status indicator	Green LED (DC OK); LED yellow (charging/buffer mode); Red LED (error)
Circuit protection	
Internal fuse	No
Safety and protection/Environmental requirements	
Protection class/Protection type	I / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	No/No
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Connection data	
Connection type 1	Input/output/external energy storage
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	45 mm x 127 mm x 128.5 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1 (SELV); EN 61010-2-201 (PELV); UL 61010
Standards/specifications (pending)	DNV

## UPS charger and controller ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output voltage (DC): 24 V



Item No.	PU
2685-2501/603-240	1

### Features:

- DC UPS module for uninterruptible power supply (UPS)
- Potential-free contacts provide function monitoring
- Communications interface Modbus RS485
- Konfiguration via USB-C

Input	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.1$ A (no load); $\leq 4$ A (Charging); $\leq 44$ A
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	22 ... 28 VDC
Nominal output current $I_{o, \text{nom}}$	40 A
Energy storage systems	
Storage type	Supercaps
Battery capacity	0.133 Ah; 3.192 Ah; 11.4912 Ah
Charging time (typ.)	32 min
Signaling and communication	
Signaling	3 x LED (green/red/yellow)
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Parallel operation/Series operation	Yes/No
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	77 mm x 127 mm x 139 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1 (SELV); EN 61010-2-201 (PELV); UL 61010-1
Standards/specifications (pending)	DNV

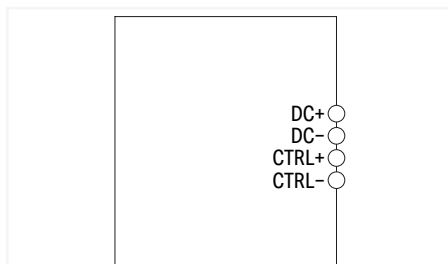
### Accessories



UPS charger and controller; 24 VDC input voltage; 24 VDC output voltage; 20 A output current; communication capability

Item No.	PU
2685-1001/601-220	1

## Lead-acid AGM battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 5 A ▶ Battery capacity: 0.8 Ah ▶ Battery control (C+; C-)



Item No.	PU
787-1671	1

### Features:

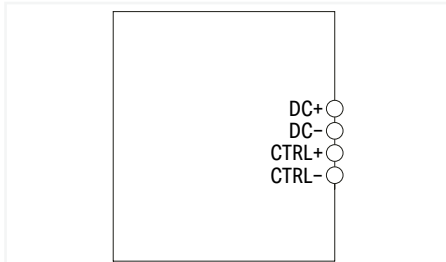
- Lead-acid, absorbed glass mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to both 787-870/875 UPS Charger/Controller and 787-1675 Power Supply with integrated UPS charger and controller
- Parallel operation provides higher buffer time
- Built-in temperature sensor
- DIN-35-rail mountable
- Battery control (from manufacturing no. 216570) detects both battery life and battery type

### Note

For parallel connection, please switch battery capacity setting to "OFF" in the UPS charger and controller.

Input	
Nominal input voltage $U_{i, nom}$	24 VDC
Output	
Nominal output voltage $U_{o, nom}$	24 VDC
Nominal output current $I_{o, nom}$	5 A
Energy storage systems	
Storage type	Lead-acid (AGM)
Battery capacity	0.8 Ah; 19.2 Ah; 69.12 Ah
Charging current	0.2 A (recommended)
End-of-charge voltage	27 VDC (25 °C)
Signaling and communication	
Signaling	Battery control (C+; C-)
Circuit protection	
Internal fuse	T 10 A / 250 VAC
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-15 ... +40 °C (-20 ... +40 °C (during discharge))
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
Connection data	
Connection type 1	Input/output/battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	72 mm x 97 mm x 124 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201
Standards/specifications (pending)	UL 508

## Lead-acid AGM battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 7.5 A ▶ Battery capacity: 1.2 Ah ▶ Battery control (C+; C-)



Item No.	PU
787-876	1

### Features:

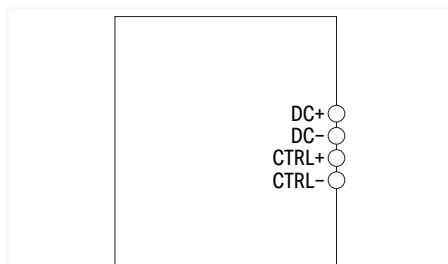
- Lead-acid, absorbed glass mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to both 787-870 UPS Charger and Controller and 787-1675 Power Supply with integrated UPS charger and controller
- Parallel operation provides higher buffer time
- Built-in temperature sensor
- DIN-35-rail mountable
- Battery control (from manufacturing no. 216570) detects both battery life and battery type

### Note

For parallel connection, please switch battery capacity setting to "OFF" in the UPS charger and controller.

<b>Input</b>	
Nominal input voltage $U_{I, \text{nom}}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{O, \text{nom}}$	24 VDC
Nominal output current $I_{O, \text{nom}}$	7.5 A
<b>Energy storage systems</b>	
Storage type	Lead-acid (AGM)
Battery capacity	1.2 Ah; 28.8 Ah; 103.68 Ah
Charging current	≤ 0.3 A
End-of-charge voltage	27 VDC (25 °C)
<b>Signaling and communication</b>	
Signaling	Battery control (C+; C-)
<b>Circuit protection</b>	
Internal fuse	T 15 A
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
<b>Connection data</b>	
Connection type 1	Input/output/battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m (Input, output, battery control)
<b>Physical data/Mechanical data/Material Data</b>	
Width x Height x Depth from upper-edge of DIN-rail	55 mm x 153 mm x 126.6 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

## Lead-acid AGM battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 20 A ▶ Battery capacity: 3.2 Ah ▶ Battery control (C+; C-)



Item No.	PU
787-871	1

### Features:

- Lead-acid, absorbed glass mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to both 787-870 or 787-875 UPS Charger and Controller, as well as to the 787-1675 Power Supply with integrated UPS charger and controller
- Parallel operation provides higher buffer time
- Built-in temperature sensor
- Mounting plate via continuous carrier rail
- Battery-Control (from manufacturing no. 213987) detects both battery life and battery type

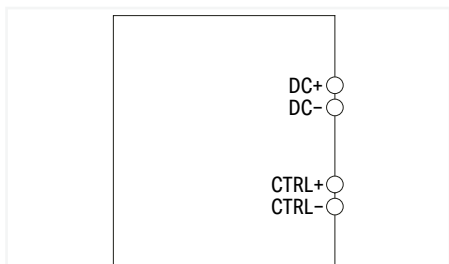
### Note

For parallel connection, please switch battery capacity setting to "OFF" in the UPS charger and controller.

Input	
Nominal input voltage $U_{i, nom}$	24 VDC
Output	
Nominal output voltage $U_{o, nom}$	24 VDC
Nominal output current $I_{o, nom}$	20 A
Energy storage systems	
Storage type	Lead-acid (AGM)
Battery capacity	3.2 Ah
Charging current	$\leq 0.8$ A
End-of-charge voltage	27 VDC (25 °C)
Signaling and communication	
Signaling	Battery control (C+; C-)
Circuit protection	
Internal fuse	T 25 A
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
Connection data	
Connection type 1	Input/output/battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m (Input, output, battery control)
Physical data/Mechanical data/Material Data	
Width x Height x Depth	76.2 mm x 168 mm x 175.5 mm
Mounting type	Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508



## Lead-acid AGM battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 40 A ▶ Battery capacity: 12 Ah ▶ Battery control (C+; C-)



Item No.	PU
787-873	1

### Features:

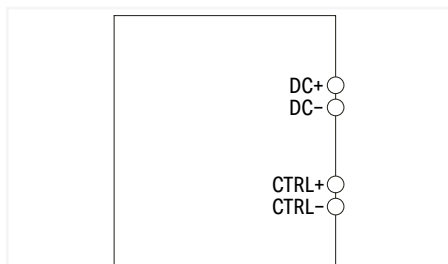
- Lead-acid, absorbed glass mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to both 787-870 or 787-875 UPS Charger and Controller, as well as to the 787-1675 Power Supply with integrated UPS charger and controller
- Parallel operation provides higher buffer time
- Built-in temperature sensor
- Mounting plate installation via continuous DIN-rail
- Battery control (from manufacturing no. 213412) detects both battery life and battery type

### Note

For parallel connection, please switch battery capacity setting to "OFF" in the UPS charger and controller.

Input	
Nominal input voltage $U_{I, \text{nom}}$	24 VDC
Output	
Nominal output voltage $U_{O, \text{nom}}$	24 VDC
Nominal output current $I_{O, \text{nom}}$	40 A
Energy storage systems	
Storage type	Lead-acid (AGM)
Battery capacity	12 Ah
Charging current	≤ 3 A
End-of-charge voltage	27 VDC (25 °C)
Signaling and communication	
Signaling	Battery control (C+; C-)
Circuit protection	
Internal fuse	2 x T 25 A
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m (Input, output, battery control)
Physical data/Mechanical data/Material Data	
Width x Height x Depth	120.5 mm x 239 mm x 217.5 mm
Mounting type	Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

## Lead-acid AGM battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 40 A ▶ Battery capacity: 7 Ah ▶ Battery control (C+; C-)



Item No.	PU
787-872	1

### Features:

- Lead-acid, absorbed glass mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to both 787-870 or 787-875 UPS Charger and Controller, as well as to the 787-1675 Power Supply with integrated UPS charger and controller
- Parallel operation provides higher buffer time
- Built-in temperature sensor
- Mounting plate installation via continuous DIN-rail
- Battery control (from manufacturing no. 213987) detects both battery life and battery type

### Note

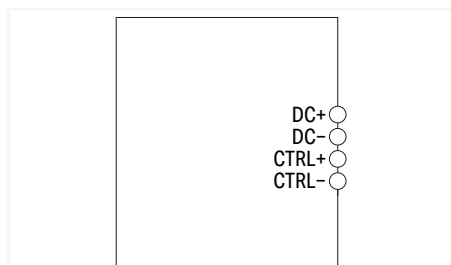
For parallel connection, please switch battery capacity setting to "OFF" in the UPS charger and controller.

Input	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Nominal output current $I_{o, \text{nom}}$	40 A
Energy storage systems	
Storage type	Lead-acid (AGM)
Battery capacity	7 Ah
Charging current	$\leq 1.8$ A
End-of-charge voltage	27 VDC (25 °C)
Signaling and communication	
Signaling	Battery control (C+; C-)
Circuit protection	
Internal fuse	2 x T 25 A
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m (Input, output, battery control)
Physical data/Mechanical data/Material Data	
Width x Height x Depth	86 mm x 239 mm x 217.5 mm
Mounting type	Screw mount
Standards and specifications	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

Pure lead battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 20 A ▶  
Battery capacity: 2.5 Ah ▶ Battery control (C+; C-)



Similar to illustration



Item No.	PU
787-878/000-2500	1

**Features:**

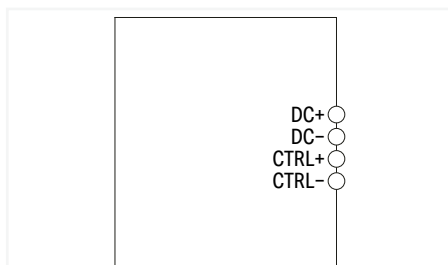
- Pure lead battery module: 12 x CYCLON battery (D cell) per module
- Various mounting options
- Intelligent battery management (battery control)
- Optional coated PCB
- Pluggable connection technology (WAGO MULTI CONNECTION SYSTEM)

Input	
Nominal input voltage $U_{I, \text{nom}}$	24 VDC
Output	
Nominal output voltage $U_{O, \text{nom}}$	24 VDC
Nominal output current $I_{O, \text{nom}}$	20 A
Energy storage systems	
Storage type	Pure lead
Battery capacity	2.5 Ah
Charging current	≤ 5 A
End-of-charge voltage	27 VDC (25 °C)
Signaling and communication	
Signaling	Battery control (C+; C-)
Circuit protection	
Internal fuse	T 25 A
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Overtoltage category	I
Pollution degree	2
Parallel operation/Series operation	Yes/No
Service life (typ.)	15 / 8 / 4 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-40 ... +60 °C
Ambient temperature (storage)	-40 ... +60 °C
Relative humidity	5 ... 80 % (no condensation permissible)
Self-discharge	3 % per month at 20 °C
Commissioning	6 months at 30 ... 40 °C
Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Connection type	Battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m
Physical data/Mechanical data/Material Data	
Width x Height x Depth	86 mm x 186 mm x 160 mm
Mounting type	Direct screw connection; Optional DIN-rail mount (EN 60715)
Standards and specifications	
Conformity marking	CE

Pure lead battery module ▶ Nominal input voltage (DC): 24 VDC ▶ Nominal output current: 40 A ▶  
Battery capacity: 13 Ah ▶ Battery control (C+; C-)



Similar to illustration



Item No.	PU
787-878/001-3000	1

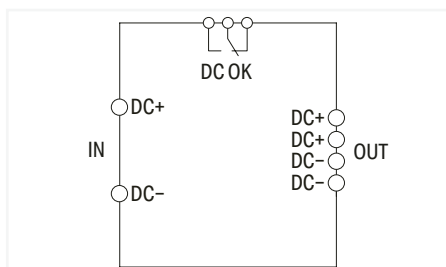
**Features:**

- Pure lead battery module: 2 x Genesis EPX battery per module
- Intelligent battery management (battery control)
- Optional coated PCB
- Pluggable connection technology (WAGO MULTI CONNECTION SYSTEM)

<b>Input</b>	
Nominal input voltage $U_{i, nom}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o, nom}$	24 VDC
Nominal output current $I_{o, nom}$	40 A
<b>Energy storage systems</b>	
Storage type	Pure lead
Battery capacity	13 Ah
Charging current	≤ 5 A
End-of-charge voltage	27 VDC (25 °C)
<b>Signaling and communication</b>	
Signaling	Battery control (C+; C-)
<b>Circuit protection</b>	
Internal fuse	2 x T 25 A
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Oversoltage category	I
Pollution degree	2
Parallel operation/Series operation	Yes/No
Service life (typ.)	15 / 8 / 4 a (20 / 30 / 40 °C)
Ambient temperature (operation)	-40 ... +60 °C
Ambient temperature (storage)	-40 ... +60 °C
Relative humidity	5 ... 80 % (no condensation permissible)
Self-discharge	3 % per month at 20 °C
Commissioning	6 months at 30 ... 40 °C
<b>Connection data</b>	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Battery control
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Cable length (max.)	3 m
<b>Physical data/Mechanical data/Material Data</b>	
Width x Height x Depth	217 mm x 186 mm x 199.5 mm
Mounting type	Direct screw connection
<b>Standards and specifications</b>	
Conformity marking	CE

6

Capacitive buffer module ▶ Nominal input voltage (DC): 24 V ▶ Nominal output voltage (DC): 24 V  
▶ Nominal output current: 10 A ▶ Buffer time: 0.06 ... 7.2 s depends on load current and switch-on threshold



Item No.	PU
787-880	1

#### Features:

- Capacitive buffer module bridges short duration voltage drops or load fluctuations
- For an uninterruptible power supply
- Internal diode between input and output enables operation with a decoupled output
- Buffer modules can be readily parallel-connected to increase buffer time or load current
- Potential-free contact for charge condition monitoring

Input	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	20 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.06$ A (no load); $\leq 1$ A (Charging); $\leq 11$ A

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 0.5$ VDC (rated operation); 20.4 ... 24 VDC (buffer mode)
Nominal output current $I_{o, \text{nom}}$	10 A
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)

Energy storage systems	
Buffer time	0.06 ... 7.2 s depends on load current and switch-on threshold
Switch-on threshold (adjustable)	DC 20 ... 24 V
Storage type	Supercaps
Charging time (typ.)	5 min

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Charge LED (yellow); 1 x DC not OK LED (red); 1 x Isolated relay contact (max. 30 VDC; 1 A)
Operation status indicator	Green LED ( $U_o > 20$ V); Yellow LED (charging); Red LED ( $U_o < 20$ V)

Efficiency/power losses	
Power loss $P_i$	$\leq 1.5$ W; $\leq 6.5$ W (nominal load)

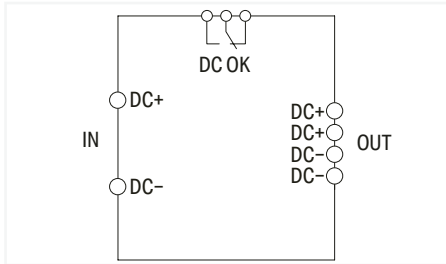
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	typ. 87,600 h (at 25 °C); typ. 30,500 h (at 40 °C)
Ambient temperature (operation)	-10 ... +50 °C
Ambient temperature (storage)	-10 ... +60 °C
Relative humidity	5 ... 96 % (no condensation permissible)

Connection data	
Connection type 1	Input/output/relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 163 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 60950; UL 508; EN 61000-6-2; EN 61000-6-3

Capacitive buffer module ► Nominal input voltage (DC): 24 V ► Nominal output voltage (DC): 24 V ► Nominal output current: 20 A ► Buffer time: 0.17 ... 16.5 s depends on load current and switch-on threshold



Item No.	PU
787-881	1

#### Features:

- Capacitive buffer module bridges short duration voltage drops or load fluctuations.
- For an uninterruptible power supply
- Internal diode between input and output enables operation with a decoupled output.
- Buffer modules can be readily parallel-connected to increase buffer time or load current.
- Potential-free contact for charge condition monitoring

Input	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	20 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.06 \text{ A}$ (no load); $\leq 1 \text{ A}$ (Charging); $\leq 22 \text{ A}$

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 1 \text{ VDC}$ (rated operation); 20.4 ... 24 VDC (buffer mode)
Nominal output current $I_{o, \text{nom}}$	20 A
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.)

Energy storage systems	
Buffer time	0.17 ... 16.5 s depends on load current and switch-on threshold
Switch-on threshold (adjustable)	DC 20 ... 24 V
Storage type	Supercaps
Charging time (typ.)	5 min

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x Charge LED (yellow); 1 x DC not OK LED (red); 1 x Isolated relay contact (max. 30 VDC; 1 A)
Operation status indicator	Green LED ( $U_o > 20 \text{ V}$ ); Yellow LED (charging); Red LED ( $U_o < 20 \text{ V}$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1.5 \text{ W}$ ; $\leq 15 \text{ W}$ (nominal load)

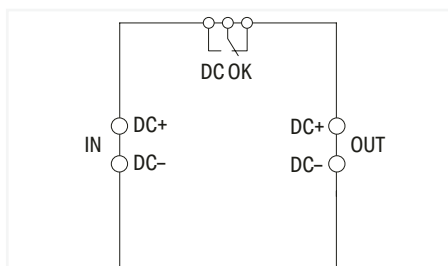
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	typ. 87,600 h (at 25 °C); typ. 30,500 h (at 40 °C)
Ambient temperature (operation)	-10 ... +50 °C
Ambient temperature (storage)	-10 ... +60 °C
Relative humidity	5 ... 96 % (no condensation permissible)

Connection data	
Connection type 1	Input/output
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	57 mm x 181 mm x 179 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 60950; UL 508; EN 61000-6-2; EN 61000-6-3

## Capacitive buffer module ▶ Nominal input voltage (DC): 24 V ▶ Nominal output voltage (DC): 24 V ▶ Nominal output current: 40 A ▶ Buffer time: 0.3 ... 6.6 s depends on load current and temperature



Item No.	PU
787-916	1

### Features:

- Capacitive buffer module bridges short duration voltage drops or load fluctuations.
- Internal diode between input and output enables operation with a decoupled output.
- Potential-free contact for charge condition monitoring

Input	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	23 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.06$ A (no load); $\leq 0.8$ A (Charging); $\leq 40.8$ A

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 0.5$ VDC (mains operation; $I_o = 20$ A); $U_i - 0.8$ VDC (mains operation; $I_o = 40$ A); 20 ... 29 VDC (buffer mode)
Nominal output current $I_{o, \text{nom}}$	40 A

Energy storage systems	
Buffer time	0.3 ... 6.6 s depends on load current and temperature
Storage type	Supercaps
Nominal voltage	32.4 V
Effective energy content (typ.)	500 Ws
Charging time (typ.)	2.5 min

Signaling and communication	
Signaling	1 x LED DC OK (green); 1 x UPS LED (yellow); 1 x Warning LED (red); 1 x Isolated relay contact (max. 30 VDC; 1 A)
Operation status indicator	Green LED (DC OK); Yellow LED (buffer mode/charging); Red LED (warning)

Efficiency/power losses	
Power loss $P_i$	$\leq 1.9$ W (operation without decoupled output); $\leq 11.5$ W (Operation with uncoupled output; $I_o = 20$ A); $\leq 33.5$ W (Operation with uncoupled output; $I_o = 40$ A)
Efficiency (typ.)	96.5 %

Circuit protection	
Internal fuse	No
Backup fusing (recommended)	T 40 A

Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	No/No
Service life	74,000 h (25 °C; $I_o = 40$ A); 28,200 h (40 °C; $I_o = 40$ A)
Ambient temperature (operation)	-10 ... +50 °C
Ambient temperature (storage)	-10 ... +60 °C
Relative humidity	5 ... 95 % (no condensation permissible)

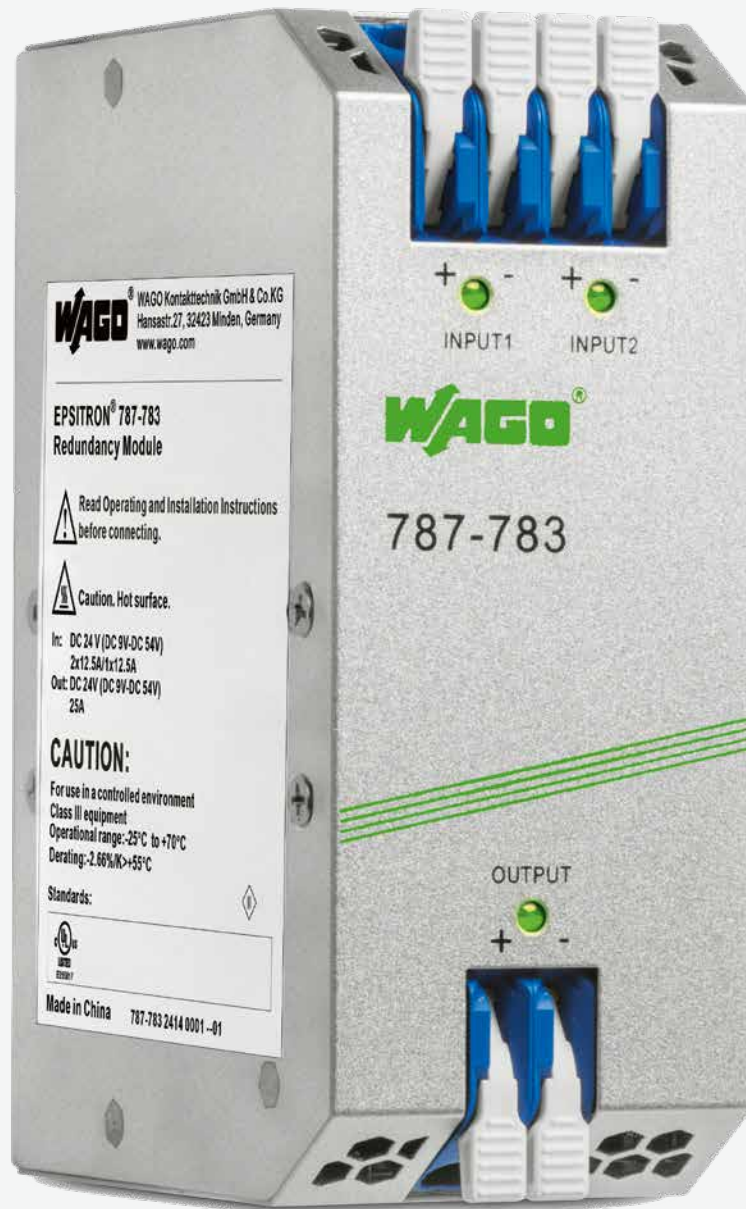
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	68 mm x 181 mm x 162 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61000-6-2; EN 61000-6-3
Standards/specifications (pending)	CSA



6



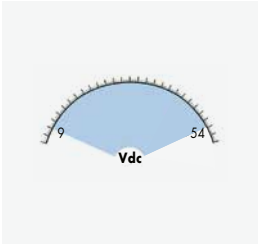
## WAGO Redundancy Modules

# WAGO Redundancy Modules



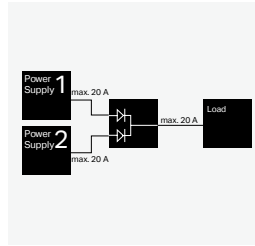
**Redundancy Modules**  
787 Series

Seite  
217



**Highly Versatile**

- The diode redundancy modules (787-783 and -785) can be used for the 12 V, 15 V, 24 V, or 48 V power supplies thanks to their wide voltage range



**High Overload Capability**

- Power diodes in each input path feature a high overload capacity and are also suitable for power supplies with TopBoost or PowerBoost
- Output currents up to 76 A thanks to parallel connection of the input paths



**Signaling**

- Three LEDs indicate the presence of an input or output voltage
- An isolated signal contact optionally indicates a power supply failure on the input\*

\*only for 787-885 and -886

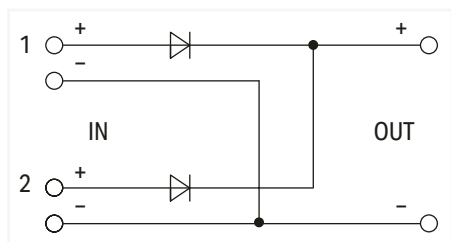


**Low Power Dissipation**

- Low power dissipation via active-switching MOSFETs\*
- Includes MOSFET function monitoring\*

\*only for 787-1685

## Redundancy module ▶ Nominal input voltage (DC): 2 x 24 VDC ▶ Input current: 2 x 40 A ▶ Nominal output voltage (DC): 24 V ▶ Output current: 76 A



Item No.	PU
787-785	1

### Features:

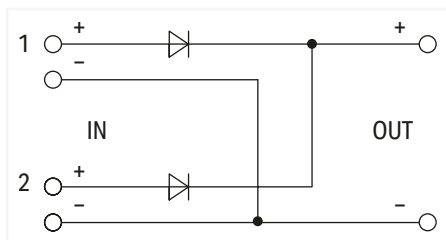
- Redundancy module with two inputs decouples two power supplies.
- For redundant and fail-safe power supply
- With LED for input voltage monitoring on site and remotely

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 9 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 40$ A (per path); $\leq 76$ A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ – voltage drop)
Voltage drop	$\leq 500$ mV (Input/output)
Nominal output current $I_{o, \text{nom}}$	40 A (redundancy operation); 76 A (Parallel operation); 65 A (Parallel operation [UL])
Nominal output power	1824 W
Signaling and communication	
Signaling	1 x IN1 LED (green); 1 x IN2 LED (green); 1 x OUT LED (green)
Operation status indicator	2 x Green LED ( $U_i > 7.5$ VDC); 1 x Green LED ( $U_o > 7.5$ VDC)
Efficiency/power losses	
Power loss $P_i$	$\leq 38$ W (nominal load)
Efficiency (typ.)	97 %
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Oversvoltage protection; secondary	No
Short-circuit-protected/Open-circuit-proof	No/Yes
Parallel operation/Series operation	Yes/No
MTBF	$> 10$ million h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	-2.66 %/K (55 °C $< T_u \leq 70$ °C)
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	1.5 ... 16 mm <sup>2</sup> / 1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	83 mm x 130 mm x 153 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508

## Redundancy module ▶ Nominal input voltage (DC): 2 x 24 VDC ▶ Input current: 2 x 40 A ▶ Nominal output voltage (DC): 24 V ▶ Output current: 76 A



Similar to illustration



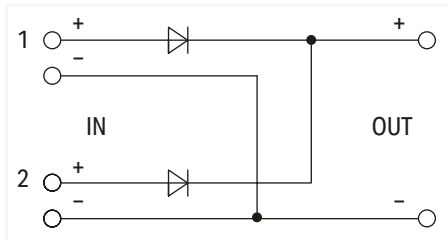
Item No.	PU
787-785/000-040	1

**Features:**

- Redundancy module with two inputs decouples two power supplies.
- For redundant and fail-safe power supply
- With LED for input voltage monitoring on site and remotely

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 9 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 40$ A (per path); $\leq 76$ A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ – voltage drop)
Voltage drop	$\leq 500$ mV (Input/output)
Nominal output current $I_{o, \text{nom}}$	40 A (redundancy operation); 76 A (Parallel operation); 65 A (Parallel operation [UL])
Nominal output power	1824 W
Signaling and communication	
Signaling	1 x IN1 LED (green); 1 x IN2 LED (green); 1 x OUT LED (green)
Operation status indicator	2 x Green LED ( $U_i > 7.5$ VDC); 1 x Green LED ( $U_o > 7.5$ VDC)
Efficiency/power losses	
Power loss $P_i$	$\leq 38$ W (nominal load)
Efficiency (typ.)	97 %
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Overvoltage protection; secondary	No
Short-circuit-protected/Open-circuit-proof	No/Yes
Parallel operation/Series operation	Yes/No
MTBF	$> 10$ million h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	-2.66 %/K ( $55$ °C $< T_a \leq 70$ °C)
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	1.5 ... 16 mm <sup>2</sup> / 1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	83 mm x 130 mm x 153 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508; ATEX; IECEx; ANSI/ISA 12.12.01 (Class I Div. 2)

## Redundancy module ▶ Nominal input voltage (DC): 2 x 24 VDC ▶ Input current: 2 x 12.5 A ▶ Nominal output voltage (DC): 24 V ▶ Output current: 25 A



Item No.	PU
787-783	1

### Features:

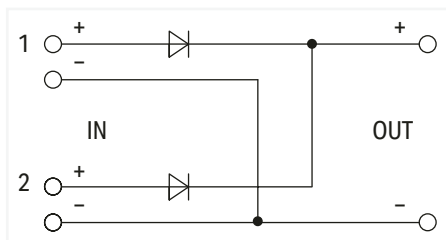
- Redundancy module with two inputs decouples two power supplies.
- For redundant and fail-safe power supply
- With LED for input voltage monitoring on site and remotely

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 9 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 12.5$ A (per path); $\leq 25$ A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ – voltage drop)
Voltage drop	$\leq 0.8$ V (Input/output)
Nominal output current $I_{o, \text{nom}}$	12.5 A (redundancy operation); 25 A (Parallel operation)
Nominal output power	600 W
Signaling and communication	
Signaling	1 x IN1 LED (green); 1 x IN2 LED (green); 1 x OUT LED (green)
Operation status indicator	2 x Green LED ( $U_i > 7.5$ VDC); 1 x Green LED ( $U_o > 7.5$ VDC)
Efficiency/power losses	
Power loss $P_i$	$\leq 19$ W (nominal load)
Efficiency (typ.)	96 %
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Overvoltage protection; secondary	No
Short-circuit-protected/Open-circuit-proof	No/Yes
Parallel operation/Series operation	Yes/No
MTBF	> 10 million h (per IEC 61709)
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	-2.66 %/K ( $55$ °C < $T_u \leq 70$ °C)
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 92 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508

## Redundancy module ▶ Nominal input voltage (DC): 2 x 24 VDC ▶ Input current: 2 x 12.5 A ▶ Nominal output voltage (DC): 24 V ▶ Output current: 25 A



Similar to illustration



Item No.	PU
787-783/000-040	1

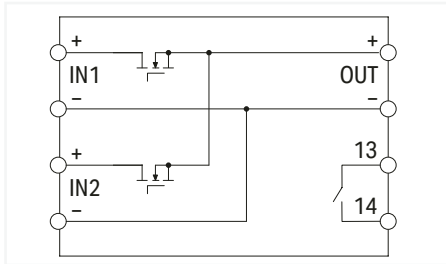
### Features:

- Redundancy module with two inputs decouples two power supplies.
- For redundant and fail-safe power supply
- With LED for input voltage monitoring on site and remotely

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 9 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 12.5$ A (per path); $\leq 25$ A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ – voltage drop)
Voltage drop	$\leq 0.8$ V (Input/output)
Nominal output current $I_{o, \text{nom}}$	12.5 A (redundancy operation); 25 A (Parallel operation)
Nominal output power	600 W
Signaling and communication	
Signaling	1 x IN1 LED (green); 1 x IN2 LED (green); 1 x OUT LED (green)
Operation status indicator	2 x Green LED ( $U_i > 7.5$ VDC); 1 x Green LED ( $U_o > 7.5$ VDC)
Efficiency/power losses	
Power loss $P_i$	$\leq 19$ W (nominal load)
Efficiency (typ.)	96 %
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Overvoltage protection; secondary	No
Short-circuit-protected/Open-circuit-proof	No/Yes
Parallel operation/Series operation	Yes/No
MTBF	$> 10$ million h (per IEC 61709)
Ambient temperature (operation)	$-25 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	$-2.66$ %/K ( $55$ °C $< T_u \leq 70$ °C)
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	50 mm x 130 mm x 92 mm
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508; ATEX; IECEx; ANSI/ISA 12.12.01 (Class I Div. 2)



## Redundancy module ▶ Nominal input voltage (DC): 2 x 24 VDC ▶ Input current: 2 x 40 A ▶ Nominal output voltage (DC): 24 V ▶ Output current: 40 A



Item No.	PU
787-1685	1

### Features:

- Redundancy module with low-loss MOSFET decouples two power supplies.
- For redundant and fail-safe power supply
- Continuous output current: 40 ADC, in any ratio of both inputs (e.g., 20 A / 20 A or 0 A / 40 A)
- Suitable for power supplies with PowerBoost and TopBoost
- Same profile as CLASSIC Power Supplies
- Electrically isolated output voltage (SELV/PELV) per EN 61140/UL 60950-1

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 10 ... 36 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	≤ 40 A (per path); ≤ 40 A (in total)
PowerBoost input	DC 60 A (4 s); DC 50 A (8 s)
TopBoost input	DC 100 A (50 ms)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	10 ... 36 VDC ( $U_o$ – voltage drop)
Voltage drop	≤ 100 mV (Input/output)
Nominal output current $I_{o, \text{nom}}$	40 A (redundancy operation); 40 A (Parallel operation)
Nominal output power	960 W
Switching frequency	5 kHz
PowerBoost	DC 120 A (4 s); DC 100 A (8 s)
TopBoost	200 ADC (50 ms)

Signaling and communication	
Signaling	1 x IN1 LED (green); 1 x IN2 LED (green); 1 x DC OK signal contact (IN1 and IN2 > 10 VDC)
Operation status indicator	2 x Green LED ( $U_o > 10$ VDC)

Efficiency/power losses	
Power loss $P_i$	≤ 1.5 W; ≤ 9.5 W (nominal load)
Efficiency (typ.)	99.5 %

Circuit protection	
Internal fuse	No

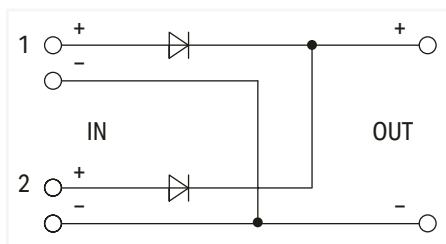
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1.5 %/K (> 65 °C)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	42 mm x 127 mm x 139.5 mm
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 60950; UL 508; DNV; EN 61140

## Redundancy module ▶ Nominal input voltage (DC): 2 x 24 VDC ▶ Input current: 2 x 20 A ▶ Nominal output voltage (DC): 24 V ▶ Output current: 40 A



Item No.	PU
787-885	1

### Features:

- Redundancy module with two inputs decouples two power supplies
- For redundant and fail-safe power supply
- With LED and potential-free contact for input voltage monitoring on site and remotely

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 18 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 20$ A (per path); $\leq 40$ A (in total)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	18 ... 30 VDC ( $U_o$ – voltage drop)
Voltage drop	$\leq 0.6$ V (Input/output)
Nominal output current $I_{o, \text{nom}}$	20 A (redundancy operation); 40 A (Parallel operation)
Nominal output power	960 W

Signaling and communication	
Signaling	1 x OUT LED (green); 1 x IN1 LED (yellow); 1 x IN2 LED (yellow); 1 x Isolated relay contact (max. 30 VDC; 1 A)
Operation status indicator	Green LED ( $U_o$ ); 2 x Yellow LED ( $U_i$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1.5$ W; $\leq 14$ W (24 VDC; 20 A); $\leq 26$ W (48 VDC; 40 A)
Efficiency (typ.)	97 %

Circuit protection	
Internal fuse	No

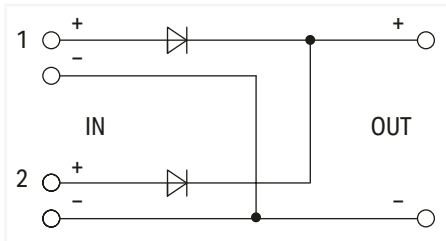
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation)	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)

Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 181 mm x 163 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 60950; UL 60950; UL 508; EN 61000-6-2; EN 61000-6-3

## Redundancy module ▶ Nominal input voltage (DC): 2 x 48 VDC ▶ Input current: 2 x 20 A ▶ Nominal output voltage (DC): 48 V ▶ Output current: 40 A



	Item No.	PU
	787-886	1

### Features:







- Redundancy module with two inputs decouples two power supplies
- For redundant and fail-safe power supply
- With LED and potential-free contact for input voltage monitoring on site and remotely

Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 48 VDC
Input voltage range	2 x 36 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	≤ 20 A (per path); ≤ 40 A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	48 VDC
Output voltage range	36 ... 54 VDC ( $U_o$ – voltage drop)
Voltage drop	≤ 1 V (Input/output)
Nominal output current $I_{o, \text{nom}}$	20 A (redundancy operation); 40 A (Parallel operation)
Nominal output power	1920 W
Signaling and communication	
Signaling	1 x OUT LED (green); 1 x IN1 LED (yellow); 1 x IN2 LED (yellow); 1 x Isolated relay contact (max. 30 VDC; 1 A)
Operation status indicator	Green LED ( $U_o$ ); 2 x Yellow LED ( $U_i$ )
Efficiency/power losses	
Power loss $P_i$	≤ 1.7 W (48 VDC; no load); ≤ 20 W (48 VDC; 20 A); ≤ 40 W (48 VDC; 40 A)
Efficiency (typ.)	96 %
Circuit protection	
Internal fuse	No
Safety and protection/Environmental requirements	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation/Series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation)	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Connection data	
Connection type 1	Input/output
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Connection type	Relay
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	40 mm x 181 mm x 163 mm
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 60950; EN 61000-6-2; EN 61000-6-3
Standards/specifications (pending)	UL 60950; UL 508

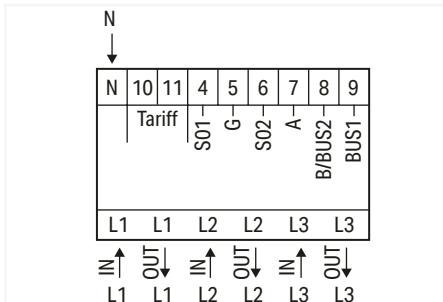


# WAGO Energy Measurement Technology

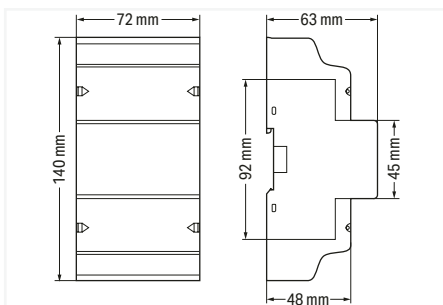
## WAGO Energy Measurement Technology

		Page
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Energy meter ▶ for direct connection ▶ Input current  $I_i \leq 65 \text{ A}$  ▶ Nominal input voltage  $U_{i \text{ nom}}$ :  $3 \times 230 \dots 400 \text{ VAC}$  ▶ Frequency range:  $45 \dots 60 \text{ Hz}$  ▶ Modbus®; M-Bus; Bluetooth® ▶ RS-485 (2-wire); 2 x S0 interfaces (configurable) ▶ 4PU ▶ MID



Item No.	PU
879-3000	1



#### Short description:

Optimizing energy consumption requires comprehensive energy measurement. WAGO's portfolio has energy meters that make that easier while offering several key advantages. They use push-in connection technology with a lever, making them connect quickly and easily. The devices have a width of just 72 mm for direct measurement. These slim profiles save a tremendous amount of control cabinet space. In addition to the values for active and reactive energy, the energy meters also record the mains frequency, as well as current, voltage and power for all phases. And the user can conveniently scan all of these energy characteristics at a glance on a large, illuminated display.

#### Features:

- Time savings at every stage thanks to Push-in CAGE CLAMP® and lever
- Real space savings: 72 mm wide (4PU)
- The communications pro: M-Bus/Modbus® interface and two S0 pulse outputs
- Full transparency at a glance: display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: touch-sensitive controls and configuration app via Bluetooth®

#### Configuration

Configuration options Touch-sensitive controls; Configuration app via Bluetooth®

#### Input

Input signal type	Voltage; Current
Network configuration	Two-wire, three-wire and four-wire networks
Reference current $I_{\text{ref}}$	5 A
Measured variable	Voltage; Current; Electrical output; Mains frequency
Nominal input voltage $U_{i \text{ nom}}$	$3 \times 230 \dots 400 \text{ VAC}$
Input voltage range	$\pm 20 \%$
Input current $I_i$	$\leq 65 \text{ A}$
Frequency range	$45 \dots 60 \text{ Hz}$

#### Communication

Communications	Modbus®; M-Bus; Bluetooth®
Interface	RS-485 (2-wire); 2 x S0 interfaces (configurable)
Indicators	LCD with backlight
Rate control input	230 VAC

#### Signal processing

Measured variables (calculated)	Active and reactive energy in supply and reference direction
Measurement type (load profile)	No
Measured value acquisition	for direct connection

#### Measurement error

Accuracy class	Class B (= 1 % error); Active energy per EN 50470-3
Calibration validity period	8 years

#### Power supply

Power supply type	Via measurement circuit
Power consumption $P_{\text{max}}$ (phase; active power)	2 W
Power consumption $P_{\text{max}}$ (phase; apparent power)	10 VA

#### Safety and protection/Environmental requirements

Dielectric strength	4 kV; 1 min
Impulse withstand voltage (1.2/50 $\mu\text{s}$ )	6 kV
Pollution degree	2
Protection class	II
Protection type	IP51 / IP20; IP51 (front side); IP20 (connection)
Ambient temperature (operation)	$-40 \dots +70 \text{ }^\circ\text{C}$
Relative humidity	$\leq 75 \%$ (for storage $\leq 95 \%$ )

#### Connection data

Connection position	Output bottom (PU)
Design	4PU

#### Connection object type 1

Connection type 1	Voltage/current
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 2616 Series
Actuation type	Lever
Strip length	18 ... 20 mm / 0.71 ... 0.79 inches
Solid/fine-stranded/AWG	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG

#### Connection object type 2

Connection type	Communication/rate control input
Connection technology	Push-in CAGE CLAMP®
WAGO connector 2	WAGO 2604 Series
Actuation type	Lever
Strip length	9 ... 11 mm / 0.35 ... 0.43 inches
Solid/fine-stranded/AWG	0.2 ... 4 mm <sup>2</sup> / 0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG

#### Accessories



Communication module; Modbus TCP

Item No.	PU
879-9000	1

Energy meter ▶ for direct connection ▶ Input current  $I_i \leq 65 \text{ A}$  ▶ Nominal input voltage  $U_{i \text{ nom}}$ : 3 x 230 ... 400 VAC ▶ Frequency range: 45 ... 60 Hz ▶ Modbus®; M-Bus; *Bluetooth*® ▶ RS-485 (2-wire); 2 x S0 interfaces (configurable) ▶ 4PU ▶ MID

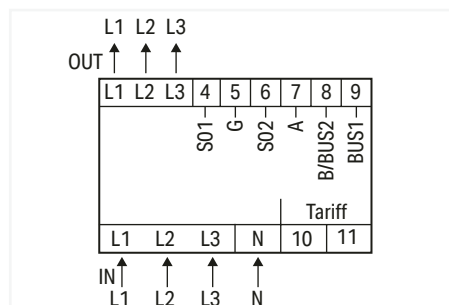
#### Physical data/Mechanical data/Material Data

Note (dimensions)	Height without cover: 92 mm
Width x Height x Depth	72 mm x 140 mm x 63 mm
Mounting type	DIN-35 rail
Housing design	DIN-rail-mount enclosure
Housing material	PC 940A

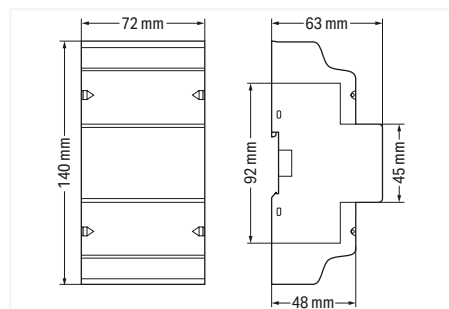
#### Standards and specifications

Conformity marking	CE
Standards/specifications	EN 50470-1/3
Accounting guideline	MID

Energy meter ▶ for direct connection ▶ Input current  $I_i \leq 65 \text{ A}$  ▶ Nominal input voltage  $U_{i \text{ nom}}$ :  $3 \times 230 \dots 400 \text{ VAC}$  ▶ Frequency range:  $45 \dots 60 \text{ Hz}$  ▶ Modbus®; M-Bus; Bluetooth® ▶ RS-485 (2-wire); 2 x S0 interfaces (configurable) ▶ 4PS ▶ MID



Item No.	PU
879-3020	1



#### Short description:

Crucial for trimming costs, comprehensive energy measurement is necessary to optimize energy consumption. WAGO's portfolio has energy meters that simplify this task while offering several key advantages. They use push-in connection technology with a lever, making them connect quickly and easily. The devices have a width of just 72 mm for direct measurement. These slim profiles save a tremendous amount of control cabinet space. In addition to the values for active and reactive energy, the energy meters also record the mains frequency, as well as current, voltage and power for all phases. And the user can conveniently scan all of these energy characteristics at a glance on a large, illuminated display.

#### Features:

- Push-in CAGE CLAMP® and lever save time at every stage
- Real space savings: 72 mm wide (4PS)
- Measurement of supply and purchase
- Energy measurement in four tariffs
- The communications pro: M-Bus/Modbus® interface and two S0 pulse outputs
- Full transparency at a glance: display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: touch-sensitive controls and configuration app via Bluetooth®

#### Configuration

Configuration options Touch-sensitive controls; Configuration app via Bluetooth®

#### Input

Input signal type Voltage; Current  
 Network configuration Two-wire, three-wire and four-wire networks  
 Reference current  $I_{\text{ref}}$  5 A  
 Measured variable Voltage; Current; Electrical output; Mains frequency  
 Nominal input voltage  $U_{i \text{ nom}}$   $3 \times 230 \dots 400 \text{ VAC}$   
 Input voltage range  $\pm 20 \%$   
 Input current  $I_i \leq 65 \text{ A}$   
 Frequency range  $45 \dots 60 \text{ Hz}$

#### Communication

Communications Modbus®, M-Bus; Bluetooth®  
 Interface RS-485 (2-wire); 2 x S0 interfaces (configurable)  
 Indicators LCD with backlight  
 Rate control input 230 VAC

#### Signal processing

Measured variables (calculated) Active and reactive energy in supply and reference direction  
 Measurement type (load profile) No  
 Measured value acquisition for direct connection

#### Measurement error

Accuracy class Class B (= 1 % error); Active energy per EN 50470-3  
 Calibration validity period 8 years

#### Power supply

Power supply type Via measurement circuit  
 Power consumption  $P_{\text{max}}$  (phase; active power) 2 W  
 Power consumption  $P_{\text{max}}$  (phase; apparent power) 10 VA

#### Safety and protection/Environmental requirements

Dielectric strength 4 kV; 1 min  
 Impulse withstand voltage (1.2/50  $\mu\text{s}$ ) 6 kV  
 Pollution degree 2  
 Protection class II  
 Protection type IP51 / IP20; IP51 (front side); IP20 (connection)  
 Ambient temperature (operation)  $-40 \dots +70 \text{ }^\circ\text{C}$   
 Relative humidity  $\leq 75 \%$  (for storage  $\leq 95 \%$ )

#### Connection data

Connection position Output top (PS)  
 Design 4PS

#### Connection object type 1

Connection type 1 Voltage/current  
 Connection technology Push-in CAGE CLAMP®  
 WAGO connector WAGO 2616 Series  
 Actuation type Lever  
 Strip length  $18 \dots 20 \text{ mm} / 0.71 \dots 0.79 \text{ inches}$   
 Solid/fine-stranded/AWG  $0.75 \dots 16 \text{ mm}^2 / 0.75 \dots 25 \text{ mm}^2 / 18 \dots 4 \text{ AWG}$

#### Connection object type 2

Connection type Communication/rate control input  
 Connection technology Push-in CAGE CLAMP®  
 WAGO connector 2 WAGO 2604 Series  
 Actuation type Lever  
 Strip length  $9 \dots 11 \text{ mm} / 0.35 \dots 0.43 \text{ inches}$   
 Solid/fine-stranded/AWG  $0.2 \dots 4 \text{ mm}^2 / 0.2 \dots 4 \text{ mm}^2 / 24 \dots 12 \text{ AWG}$

#### Accessories



Communication module; Modbus TCP

Item No.	PU
879-9000	1



Energy meter ▶ for direct connection ▶ Input current  $I_i \leq 65 \text{ A}$  ▶ Nominal input voltage  $U_{i \text{ nom}}$ :  
 3 x 230 ... 400 VAC ▶ Frequency range: 45 ... 60 Hz ▶ Modbus®; M-Bus; *Bluetooth*® ▶ RS-485  
 (2-wire); 2 x S0 interfaces (configurable) ▶ 4PS ▶ MID

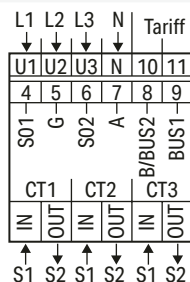
#### Physical data/Mechanical data/Material Data

Note (dimensions)	Height without cover: 92 mm
Width x Height x Depth	72 mm x 140 mm x 63 mm
Mounting type	DIN-35 rail
Housing design	DIN-rail-mount enclosure
Housing material	PC 940A

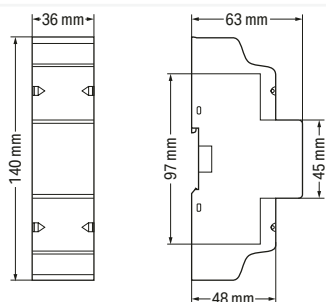
#### Standards and specifications

Conformity marking	CE
Standards/specifications	EN 50470-1/3
Accounting guideline	MID

Energy meter ▶ for transformer connection; ▶ Input current  $I_i \leq 5 \text{ A}$  ▶ Nominal input voltage  $U_{i, \text{nom}}$ : 3 x 230 ... 400 VAC ▶ Frequency range: 45 ... 60 Hz ▶ Modbus®; M-Bus; Bluetooth® ▶ RS-485 (2-wire); 2 x S0 interfaces (configurable) ▶ 2PU CT ▶ MID



Item No.	PU
879-3040	1



#### Short description:

Crucial for trimming costs, comprehensive energy measurement is necessary to optimize energy consumption. WAGO's portfolio has energy meters that simplify this task while offering several key advantages. They use push-in connection technology with a lever, making them connect quickly and easily. Versions for current transformers are even slimmer at only 35 mm. These slim profiles save a tremendous amount of control cabinet space. In addition to the values for active and reactive energy, the energy meters also record the mains frequency, as well as current, voltage and power for all phases. And the user can conveniently scan all of these energy characteristics at a glance on a large, illuminated display.

#### Features:

- Push-in CAGE CLAMP® and lever save time at every stage
- Real space savings: 35 mm wide (2PU CT)
- Measurement of supply and purchase
- Energy measurement in four tariffs
- The communications pro: M-Bus/Modbus® interface and two S0 pulse outputs
- Full transparency at a glance: display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: touch-sensitive controls and configuration app via Bluetooth®

#### Configuration

Configuration options Touch-sensitive controls; Configuration app via Bluetooth®

#### Input

Input signal type Voltage; Current  
 Network configuration Two-wire, three-wire and four-wire networks  
 Reference current  $I_{\text{ref}}$  1 A  
 Current transformer (secondary) 1; 5 A  
 Current transformer ratio 1:1 ... 9999 : 1 / 5:5 ... 9995 : 5  
 Measured variable Voltage; Current; Electrical output; Mains frequency  
 Nominal input voltage  $U_{i, \text{nom}}$  3 x 230 ... 400 VAC  
 Input voltage range  $\pm 20 \%$   
 Input current  $I_i$   $\leq 5 \text{ A}$   
 Frequency range 45 ... 60 Hz

#### Communication

Communications Modbus®, M-Bus; Bluetooth®  
 Interface RS-485 (2-wire); 2 x S0 interfaces (configurable)  
 Indicators LCD with backlight  
 Rate control input 230 VAC

#### Signal processing

Measured variables (calculated) Active and reactive energy in supply and reference direction  
 Measurement type (load profile) No  
 Measured value acquisition for transformer connection;

#### Measurement error

Accuracy class Class B (= 1 % error); Active energy per EN 50470-3  
 Calibration validity period 8 years

#### Power supply

Power supply type Via measurement circuit  
 Power consumption  $P_{\text{max}}$  (phase; active power) 2 W  
 Power consumption  $P_{\text{max}}$  (phase; apparent power) 10 VA

#### Safety and protection/Environmental requirements

Dielectric strength 4 kV; 1 min  
 Impulse withstand voltage (1.2/50  $\mu\text{s}$ ) 6 kV  
 Pollution degree 2  
 Protection class II  
 Protection type IP51 / IP20; IP51 (front side); IP20 (connection)  
 Ambient temperature (operation)  $-40 \dots +70 \text{ }^\circ\text{C}$   
 Relative humidity  $\leq 75 \%$  (for storage  $\leq 95 \%$ )

#### Connection data

Connection position Output bottom (PU)  
 Design 2PU CT

#### Connection object type 1

Connection type 1 Voltage/current  
 Connection technology Push-in CAGE CLAMP®  
 WAGO connector WAGO 2604 Series  
 Actuation type Lever  
 Strip length 9 ... 11 mm / 0.35 ... 0.43 inches  
 Solid/fine-stranded/AWG 0.2 ... 4 mm<sup>2</sup> / 0.2 ... 4 mm<sup>2</sup> / 24 ... 12 AWG

#### Connection object type 2

Connection type Communication/rate control input  
 Connection technology Push-in CAGE CLAMP®  
 WAGO connector 2 WAGO 2604 Series  
 Actuation type Lever  
 Strip length 9 ... 11 mm / 0.35 ... 0.43 inches  
 Solid/fine-stranded/AWG 0.2 ... 4 mm<sup>2</sup> / 0.2 ... 4 mm<sup>2</sup> / 24 ... 12 AWG

#### Accessories



Communication module; Modbus TCP

Item No.	PU
879-9000	1

Energy meter ▶ for transformer connection; ▶ Input current  $I_i \leq 5 \text{ A}$  ▶ Nominal input voltage  $U_{i \text{ nom}}$ : 3 x 230 ... 400 VAC ▶ Frequency range: 45 ... 60 Hz ▶ Modbus®; M-Bus; *Bluetooth*® ▶ RS-485 (2-wire); 2 x S0 interfaces (configurable) ▶ 2PU CT ▶ MID

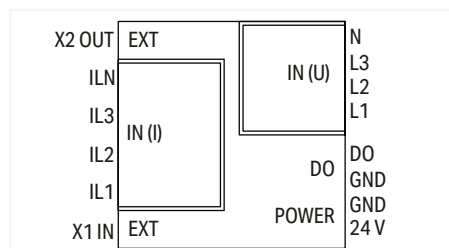
#### Physical data/Mechanical data/Material Data

Note (dimensions)	Height without cover: 97 mm
Width x Height x Depth	36 mm x 140 mm x 63 mm
Mounting type	DIN-35 rail
Housing design	DIN-rail-mount enclosure
Housing material	PC 940A

#### Standards and specifications

Conformity marking	CE
Standards/specifications	EN 50470-1/3
Accounting guideline	MID

## Power measurement module ▶ Input signal (voltage): 277 VAC (ULN); 480 VAC (ULL) ▶ Input signal (current): 1 AAC (current transformer) ▶ Modbus RTU ▶ Nominal supply voltage $U_s$ : 24 VDC (SELV)



Item No.	PU
2857-570/024-001	1

### Short description:

WAGO's 3-Phase Power Measurement Module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level. Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus® interface. In addition, the measured variables can be stored on a microSD card.

### Features:

- Current measurement via 1 A current transformer
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® interface
- Configurable digital signal output as pulse output

### Note

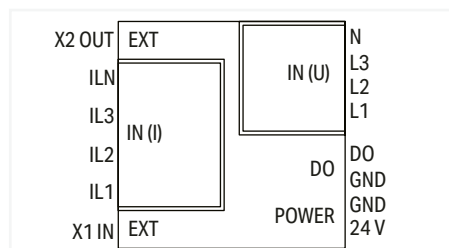
Additional setting options via the WAGO Interface Configuration Software

Configuration	
Configuration options	WAGO Interface Configuration Software
Input	
Input signal type	Voltage; Current; RTD sensors
Network configuration	3-phase power measurement with N-conductor (4-conductor); 3-phase power measurement without N-conductor (3-conductor)
Input current (max.)	1 AAC
Response threshold	10 mA
Resolution (current)	10 mA
Measured variable	Voltage; Current; Electrical output; Power factor; RTD
Input signal (voltage)	277 VAC (ULN); 480 VAC (ULL)
Input signal (current)	1 AAC (current transformer)
Frequency range	50 ... 60 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Input resistance (current input)	22 mΩ
Input resistance (voltage input)	1.5 MΩ
Output – Modbus®	
Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	2 x RJ-45 (daisy chain configuration)
Output – digital	
Configurable functions (DO)	Threshold value switch; Pulse output (S0 interface)
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Communication	
Communications	Modbus RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32
Addressing	Via interface configuration software
Signal processing	
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage; Outputs; Energy sources; Power factors; Mains frequency; Harmonics analysis (up to 41st harmonic); Total Harmonic Distortion (THD)
Signal form	any periodic signals (considering the threshold frequencies)
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Limit frequency	15.9 kHz
Measurement error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
Power supply	
Power supply type	24 VDC
Nominal supply voltage $U_s$	24 VDC (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ $I_{b0}$ )
Safety and protection/Environmental requirements	
Rated Voltage	600 V
Overvoltage category	III
Pollution degree	2
Safe isolation	Input/supply and communication per EN 61010-1
Requirement (N input)	Neutral conductors that are part of the mains circuit are considered dangerous voltage.
IL <sub>x</sub> input requirement	Coils/converters with basic insulation
Protection type	IP20
Test voltage (input/output/supply)	3.51 kVAC; 50 Hz; 1 min
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)

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Ej gZci'/'&'668 EJ gZci ig/ch[dbg Zg' B dYW h'GI J 'Cdb cVahj eean'kda\Z'J μ' ) K98 H: AKf

Connection data	
8dccZxidg	' mG?) * YVhnX] VcXdc[λj gi dci
Connection object type 1	
8dccZxi'dc'ineZ'&	Kda\Z
8dccZxi'dc'izX] cda\ n	Ej h] "c'86<: '8A6BE,
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Connection object type 2	
8dccZxi'dc'ineZ	8j gZci \$dl Zghj eean\$D
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Standards and specifications	
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HiVc'YVg/h'sheZX' f'XVi' d'ch	: C'+&%&%& '&

## Power measurement module ▶ Input signal (voltage): 277 VAC (ULN); 480 VAC (ULL) ▶ Input signal (current): 5 AAC (current transformer) ▶ Modbus RTU ▶ Nominal supply voltage $U_s$ : 24 VDC (SELV)



Item No.	PU
2857-570/024-005	1

### Short description:

WAGO's 3-Phase Power Measurement Module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level. Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus® interface. In addition, the measured variables can be stored on a microSD card.

### Features:

- Current measurement via 5 A current transformer
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® interface
- Configurable digital signal output as pulse output

### Note

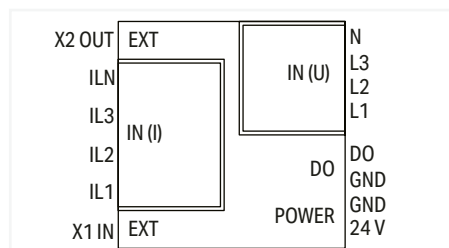
Additional setting options via the WAGO Interface Configuration Software

Configuration	
Configuration options	WAGO Interface Configuration Software
Input	
Input signal type	Voltage; Current; RTD sensors
Network configuration	3-phase power measurement with N-conductor (4-conductor); 3-phase power measurement without N-conductor (3-conductor)
Input current (max.)	5 AAC
Response threshold	5 mA
Resolution (current)	0.15 mA
Measured variable	Voltage; Current; Electrical output; Power factor; RTD
Input signal (voltage)	277 VAC (ULN); 480 VAC (ULL)
Input signal (current)	5 AAC (current transformer)
Frequency range	50 ... 60 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Input resistance (current input)	5 mΩ
Input resistance (voltage input)	1.5 MΩ
Output – Modbus®	
Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	2 x RJ-45 (daisy chain configuration)
Output – digital	
Configurable functions (DO)	Threshold value switch; Pulse output (S0 interface)
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Communication	
Communications	Modbus RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32
Addressing	Via interface configuration software
Signal processing	
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage; Outputs; Energy sources; Power factors; Mains frequency; Harmonics analysis (up to 41st harmonic); Total Harmonic Distortion (THD)
Signal form	any periodic signals (considering the threshold frequencies)
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Limit frequency	15.9 kHz
Measurement error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
Power supply	
Power supply type	24 VDC
Nominal supply voltage $U_s$	24 VDC (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ $I_{b0}$ )
Safety and protection/Environmental requirements	
Rated Voltage	600 V
Overvoltage category	III
Pollution degree	2
Safe isolation	Input/supply and communication per EN 61010-1
Requirement (N input)	Neutral conductors that are part of the mains circuit are considered dangerous voltage.
IL <sub>x</sub> input requirement	Coils/converters with basic insulation
Protection type	IP20
Test voltage (input/output/supply)	3.51 kVAC; 50 Hz; 1 min
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)

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Connection data	
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Connection object type 1	
8dccZXi' dci neZ' &	KdaVZ
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Connection object type 2	
8dccZXi' dci neZ	8j gZci \$dl Zghj eean\$D
8dccZXi' dci 1ZX] cda\ n	Ej h] "c' 86<: ' 8A6B E,
L 6<D XdccZXidg'	L 6<D'- %' HZgZh
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Physical data/Mechanical data/Material Data	
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Standards and specifications	
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HiVcYVg/ h' h' eZX' f' XVi' d' ch	: C'+ &%&%& &

## Power measurement module ▶ Input signal (voltage): 277 VAC (ULN); 480 VAC (ULL); 90 mVAC (WAGO Rogowski Coils RC xxx) ▶ Modbus RTU ▶ Nominal supply voltage $U_S$ : 24 VDC (SELV)



Item No.	PU
2857-570/024-000	1

### Short description:

WAGO's 3-phase power measurement module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level.

Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus® interface. In addition, the measured variables can be stored on a microSD card.

### Features:

- Current measurement via Rogowski Coils RC xxx
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® interface
- Configurable digital signal output as pulse output

### Note

Additional setting options via the WAGO Interface Configuration Software

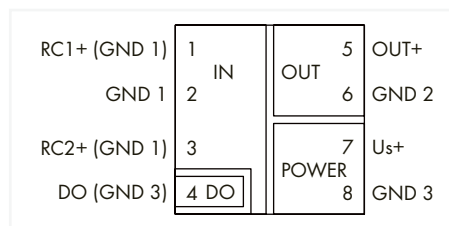
Configuration	
Configuration options	WAGO Interface Configuration Software
Input	
Input signal type	Voltage; Current; RTD sensors
Network configuration	3-phase power measurement with N-conductor (4-conductor); 3-phase power measurement without N-conductor (3-conductor)
Sensitivity	22.5 mV/kA (WAGO Rogowski Coils RC xxx)
Measured variable	Voltage; Current; Electrical output; Power factor; RTD
Input signal (voltage)	277 VAC (ULN); 480 VAC (ULL); 90 mVAC (WAGO Rogowski Coils RC xxx)
Measurement range (current)	4 x AC 4000 A (WAGO Rogowski Coils RC xxx)
Frequency range	50 ... 60 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Output – Modbus®	
Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	2 x RJ-45 (daisy chain configuration)
Output – digital	
Configurable functions (DO)	Threshold value switch; Pulse output (S0 interface)
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Communication	
Communications	Modbus RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32
Addressing	Via interface configuration software
Signal processing	
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage; Outputs; Energy sources; Power factors; Mains frequency; Harmonics analysis (up to 41st harmonic); Total Harmonic Distortion (THD)
Signal form	any periodic signals (considering the threshold frequencies)
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Limit frequency	15.9 kHz
Measurement error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
Power supply	
Power supply type	24 VDC
Nominal supply voltage $U_S$	24 VDC (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ $I_{D0}$ )
Safety and protection/Environmental requirements	
Rated Voltage	600 V
Overvoltage category	III
Pollution degree	2
Safe isolation	Input/supply and communication per EN 61010-1
Requirement (N input)	Neutral conductors that are part of the mains circuit are considered dangerous voltage.
$I_L$ input requirement	Coils/converters with basic insulation
Protection type	IP20
Test voltage (input/output/supply)	3.51 kVAC; 50 Hz; 1 min
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)



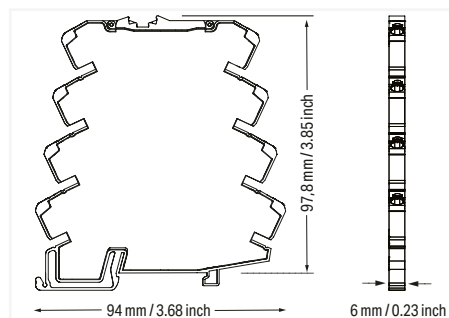
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Connection data	
8dccZXidg	' mG?) * pVhnX] VcXdc[λj gi dci
Connection object type 1	
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8dccZXi' dci'1ZX] cda\ n	Ej h] "c'86<: '8A6BE,
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Connection object type 2	
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Physical data/Mechanical data/Material Data	
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Standards and specifications	
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Hi Vc' YVg' h' s' e' X' f' X' Vi' d' ch	: C'+&%&%& '&

## Current signal conditioner ▶ Input signal type: Voltage ▶ Output signal type: Current; Voltage ▶ Digital output (DO); Clipping ▶ Width: 6 mm



Item No.	PU
857-552	1



### Short description:

WAGO's Rogowski signal conditioner records RMS values from alternating currents via Rogowski coil, converting the input signal into an standard analog signal on the output side.

### Digital switching output:

The digital output (DO) allows signaling of a message. Two switching behaviors can be selected for the edge:

**GND switching:** For all values below the lower threshold or above the upper threshold, the digital output switches to "GND".

**Us switching:** For all values below the lower threshold or above the upper threshold, the digital output (DO) matches the supply voltage level.

The preset switching thresholds are 0% and 100% of the input measurement range. These thresholds can be adjusted via the PC configuration interface. The switching threshold hysteresis is 5 mA.

### Features:

- PC configuration interface
- Supports different Rogowski coil types
- Digital switching output (configurable switching thresholds)
- Configurable output signal
- Configuration via DIP switch
- 3-way electrical isolation with 2.5 kV test voltage
- No current bar interruption during installation
- Measurement range overflow indication

### Safety Information

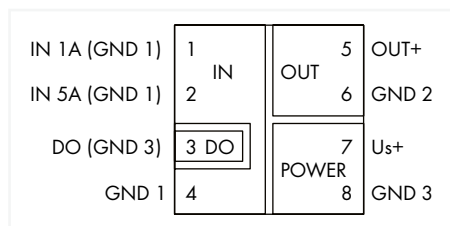
Input and output must be safely isolated from any hazardous live parts!

### Note

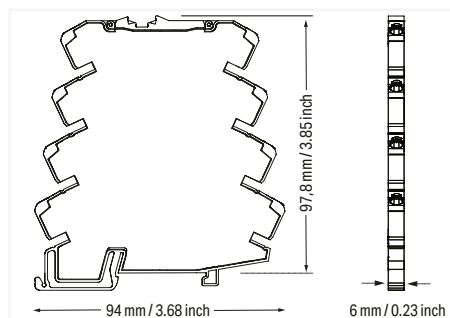
Additional setting options via the WAGO Interface Configuration Software

Configuration	
Configuration options	DIP switch; WAGO Interface Configuration Software
Input	
Input signal type	Voltage
Input signal (voltage)	50 Hz sinusoidal signals: 10.05 mVAC (RC1); 40.2 mVAC (RC2A); 90 mVAC (RC2B)
Sensitivity	RC2B: 22.5 mV/kA
Measurement range (current)	AC 500 A (RC1); AC 2000 A (RC2A); AC 4000 A (RC2B)
Frequency range	50 Hz (Sinusoidal signals)
Response threshold	≤ 1 % (of measurement range nominal value)
Resolution (current)	250 mA (RC1); 1 A (RC2A); 1.5 A (RC2B)
Output – analog	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω
Output – digital	
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)
Signal processing	
Limit frequency	2 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms
Measurement error	
Transmission error (max.)	≤ 1 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K
Power supply	
Power supply type	24 VDC (SELV)
Nominal supply voltage Us	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA (+ I <sub>bo</sub> )
Safety and protection	
Protection type	IP20
Test voltage	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Insulation coordination	
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection data	
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail
Insulation material (main housing)	Polyamide (PA66)
Environmental requirements	
Ambient temperature (operation)	-25 ... +70 °C (individual arrangement; -25 ... +60 °C (block arrangement))
Ambient temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	≥ (T <sub>ambient</sub> + 15 K)
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-2-201

## Current signal conditioner ▶ Input signal type: Current ▶ Output signal type: Current; Voltage ▶ Digital output (DO); Clipping ▶ Width: 6 mm



	Item No.	PU
	857-550	1



### Short description:

WAGO's current signal conditioner measures both 0 ... 1 A and 0 ... 5 A AC/DC currents, converting the input signal to an standard analog signal at the output.

### Digital switching output:

The digital output (DO) allows signaling of a message. Two switching behaviors can be selected for the edge:

**GND switching:** For all values below the lower threshold or above the upper threshold, the digital output switches to "GND".

**Us<sub>s</sub> switching:** For all values below the lower threshold or above the upper threshold, the digital output (DO) matches the supply voltage level.

The preset switching thresholds are 0% and 100% of the input measurement range. These thresholds can be adjusted via the PC configuration interface. The switching threshold hysteresis is 5 mA.

### Features:

- PC configuration interface
- True RMS measurement or arithmetic mean value
- Digital switching output (configurable switching thresholds)
- Switchable filter function
- Calibrated measurement range switching
- 3-way electrical isolation with 2.5 kV test voltage
- Extremely fast response times
- Measurement range overflow indication

### Safety Information

Input and output must be safely isolated from any hazardous live parts!

### Note

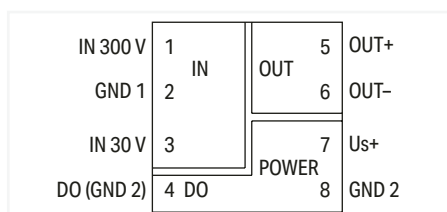
Additional setting options via the WAGO Interface Configuration Software

### Use shielded signal lines!

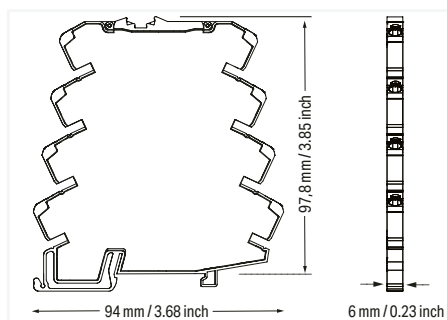
Only use shielded signal lines for analog output signals. Only then can you ensure that the accuracy and interference immunity specified for the device can be achieved, even in the presence of interference acting on the signal cable.

Configuration	
Configuration options	DIP switch; WAGO Interface Configuration Software
Input	
Input signal type	Current
Input signal (current)	0 ... 1 AAC/ADC (IN 1); 0 ... 5 AAC/ADC (IN 2)
Frequency range	16 ... 400 Hz
Input resistance (current input)	47 mΩ (IN 1); 10 mΩ (IN 2)
Input current (max.)	10 A (IN 1; 5 s); 15 A (IN 2; 5 s)
Response threshold	2 mA (IN 1); 4 mA (IN 2)
Output – analog	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ (Temperature range restrictions may occur.)
Load impedance (current output)	≤ 600 Ω (Temperature range restrictions may occur.)
Output – digital	
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)
Signal processing	
Measurement method	True RMS measurement; Arithmetic mean value
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms
Measurement error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Transmission error (max.)	≤ 0.4 % of upper-range value
Temperature coefficient	≤ 0.01 %/K
Power supply	
Power supply type	24 VDC (SELV)
Nominal supply voltage U <sub>s</sub>	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA (+ I <sub>DD</sub> )
Safety and protection	
Protection type	IP20
Test voltage	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Insulation coordination	
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection data	
Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail
Insulation material (main housing)	Polyamide (PA66)
Environmental requirements	
Ambient temperature (operation)	-25 ... +70 °C (at nominal current, individual arrangement; -25 ... +60 °C (block arrangement))
Ambient temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	≥ (T <sub>ambient</sub> + 15 K)
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	EN 50121-3-2; DNV; EN 61010-2-201

## Voltage signal conditioner ▶ Input signal type: Voltage ▶ Output signal type: Current; Voltage ▶ Digital output (DO); Clipping ▶ Width: 6 mm



Item No.	PU
857-560	1



### Short description:

WAGO's voltage signal conditioner measures AC/DC voltages up to 300 V, converting the input signal into a standard analog signal at the output.

### Features:

- Two isolated measurement inputs for 30 and 300 V AC/DC
- RMS measurement or arithmetic mean value
- A digital signal output reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values).
- Switchable filter function
- 3-way electrical isolation with 2.5 kV test voltage

### Configuration

Configuration options	DIP switch; WAGO Interface Configuration Software
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### Input

Input signal type	Voltage
Input signal (voltage)	300 VAC/VDC (IN 1); 30 VAC/VDC (IN 2)
Measurement frequency	10 ... 100 Hz (AC)
Frequency range	10 ... 100 Hz (AC)
Input resistance (voltage input)	≥ 300 kΩ
Response threshold	300 mV (IN 1); 30 mV (IN 2)
Resolution (voltage)	30 mV (IN 1); 3 mV (IN 2)

### Output – analog

Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (can be inverted, also bipolar)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (can be inverted, also bipolar)
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω

### Output – digital

Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

### Signal processing

Measurement method	RMS measurement; Arithmetic mean value
Limit frequency	2 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	30 ms

### Measurement error

Transmission error (max.)	≤ 0.5 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K

### Power supply

Power supply type	24 VDC
Nominal supply voltage $U_s$	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 46 mA (+ $I_{DO}$ )

### Safety and protection

Rated Voltage	300 V; 150 V (UL)
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	<b>Danger:</b> Configuration via the service interface must only be performed with a voltage-free measurement input! The digital output (DO) is at the potential of the supply.
Protection type	IP20

### Test voltage

Test voltage (input/analog output/supply/service interface)	2.5 kVAC; 50 ... 60 Hz; 1 min
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### Insulation coordination (UL)

Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Reinforced insulation (safe isolation)

### Insulation coordination

Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Double insulation (impedance and basic insulation); Requirement: The GND 1 input is dangerous when active and the measurement is conducted as a low-side measurement!

### Connection data

Connection technology	Push-in CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.34 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail
Insulation material (main housing)	Polyamide (PA66)

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## Environmental requirements

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## Standards and specifications

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: B 8' b b j c' tñid' 'ciZgZgcXZ	: C'+&%%&"+'" O C'+&(' +'" "(O C'^%&' &('"
: B 8 Zb' h' h' d' d' 'ciZgZgcXZ	: C'+&%%&"+"(O C'+&(' +'" "(O C'^%&' &('"
HiVcYVg'h'sheZX↑XVi' dch	: C'+&%%&%"&O C'+&,(O C'^%&' &('"

# 8j g'zci hZchdgi ↑] Wj hXdccZXi d'c B dYWj hGI J ▶ Cdb cVahj eean'kdá\AZJ\_H ) K98 ▶ L Yi] (\* b b



Item No.	EJ
789-621	&

**Short description:**

L 6<D h'ciZa\Zci Xj g'zci hZchdgi dc f dgh'hdá/geá/cih' dg'ckZgZgh[dg98 b ZVhj g'z b Zcih1 ↑] cVahjZ Xj g'zci b ZVhj g'z b Zci g'c\Z# ] Z hZchdgi h b dj ciZY dc 9<C" (\* g'z/

Input	
æej i h^cVaineZ	8j g'zci
GZhdj i d'c PWR	&* Wth
B ZVhj g'YkvGVWZ	8j g'zci
æej i h^cVáXj g'zci	%...&)%698

Output – Modbus®	
Cj b WZgd[YZkXZhTb Vm#	('
8dccZXidg	G?) *
7j h'á'c\i] Tb Vm#	& %%%b
I Zgb cVi c\ g'hhidg	&*% BVCVZ VXi kViZY kV9-E hl ↑X] &l

Communication	
8db b j c XVi d'ch	B dYWj hGI J
æiZgVXZ	GH") - *
I g'vchb h'h'dc X] VccZá	=Vá'Yj eá'm0 "Wt'YViV0&hi de Wt
Cj b WZgd[YZkXZhTb Vm#	('
Evgtn	: kZc
I Zgb cVi c\ g'hhidg	&*% BVCVZ VXi kViZY kV9-E hl ↑X] &l
7j h'á'c\i] Tb Vm#	≤& %%%b
I g'vchb h'h'dc g'fZ	& # ^ 7Y

Measurement error	
I g'vchb h'h'dc Zgggüne#	≤%# / 'd[] eeZg'g'c\Z kVá Z 1%...-%60Vi'gldb iZb eZg'fij g'Zl0s &/ 'd[] j eeZg'g'c\Z kVá Z 1%...-%60Vi'gldb iZb eZg'fij g'Zl
I Zb eZg'fij g'ZdZ[[X'Zci	≤%#% / \$e'l' %...+%18l0s %&/ \$e't+%...; %18l

Power supply	
Cdb cVahj eean'kdá\AZJ_H	' ) K98
8j g'zci Xdchj b ei d'c Vi cdb cVahj eean'kdá\AZ	≤- b 6

Safety and protection/Environmental requirements	
EgtlZXi d'c i'neZ	£' %
6b WZci iZb eZg'fij g'ZdeZg'f' d'cl	"" %...Z, %18
6b WZci iZb eZg'fij g'Zhidg\Zl	") %...Z - * 18

Connection data	
: ZZYi] g'j \ ] [dgb ZVhj g'z b Zci XdcYj Xidg	μ &* b b
8dccZXidg	G?) *

Physical data/Mechanical data/Material Data	
L Yi] m'eZ\ ] i m9Zei] [g'lb j eeZgZY\Z'	(* b b m' %b b m' * b b d[9<C" g'/a
B dj ci c\ i'neZ	9<C" (* g'/a
=dj h'c\ YZh\c	9<C" g'/á b dj ci ZcXáhij g'Z

Standards and specifications	
8dc[dgb f'nb Vg c\	8:
: B 8' b j c f'n i d' c i ZgZg'cXZ	: C+&%%&%"
: B 8 Zb h'h'dc d[ c i ZgZg'cXZ	: C+&%%&%"
HiVcYVg'h\$eZXf'XVi d'ch	9<C: C*%&, -

**Accessories**

	æiZgVXZ b dYj á0 n6?) *CE87iZg' b cVáWáX' h'Ydj WZ"gdll Ocb dj ci c\` XvggZg		æiZgVXZ b dYj á0 n6?) *CE87iZg' b cVáWáX' h'Ydj WZ"gdll Ocb dj ci c\` XvggZgdl ↑] h] Zá'XdccZXi d'c								
<table border="1"><thead><tr><th>Item No.</th><th>EJ</th></tr></thead><tbody><tr><td>289-965</td><td>* 1&amp;l</td></tr></tbody></table>	Item No.	EJ	289-965	* 1&l		<table border="1"><thead><tr><th>Item No.</th><th>EJ</th></tr></thead><tbody><tr><td>289-966</td><td>* 1&amp;l</td></tr></tbody></table>	Item No.	EJ	289-966	* 1&l	
Item No.	EJ										
289-965	* 1&l										
Item No.	EJ										
289-966	* 1&l										

	: I =: GC: I 'G?' ) * XdccZXidg'-E' %0 : I =: GC: I '%&%%&B Wt'\$Qdg['Zá' VhZb Vh	<table border="1"><thead><tr><th>Item No.</th><th>EJ</th></tr></thead><tbody><tr><td>750-975</td><td>&amp;</td></tr></tbody></table>	Item No.	EJ	750-975	&
Item No.	EJ					
750-975	&					



## Selection Guide: Current Transformers

### The Right Solution for Every Application


Current Transformers 855 Series	Split-Core Current Transformers	Plug-In Current Transformers with CAGE CLAMP® Connection Technology
		
Application	Retrofit	New systems
Coil bobbin	Separable	Closed
Connection technology	Connection cable (color coded)	CAGE CLAMP®
Mounting	Round cable (insulated), copper current bar (insulated)	Round cable, copper current bar, DIN-rail, mounting plate
Compatibility with other WAGO components	750-493; (750-493/000-001); 750-494; (750-494/000-001); 750-495; (750-495/000-001); 857-550; 2857-570/024-001; 2857-570/024-005	
Primary rated current	60 ... 1000 A	50 ... 2500 A
Secondary rated current	1 A / 5 A	1 A / 5 A
Accuracy class	0,5; 1 oder 3	1 oder 3
Surrounding air temperature	-10 ... +55 °C	-5 ... +50 °C
Standards	EN 61869-2	EN 61869-2
Approvals	–	
Connection examples		

\* In the measurement range between 0.8 and 32 A and in combination with WAGO's 3-Phase Power Measurement Modules, accuracy class 0.5 per EN 61869-2 is achieved.

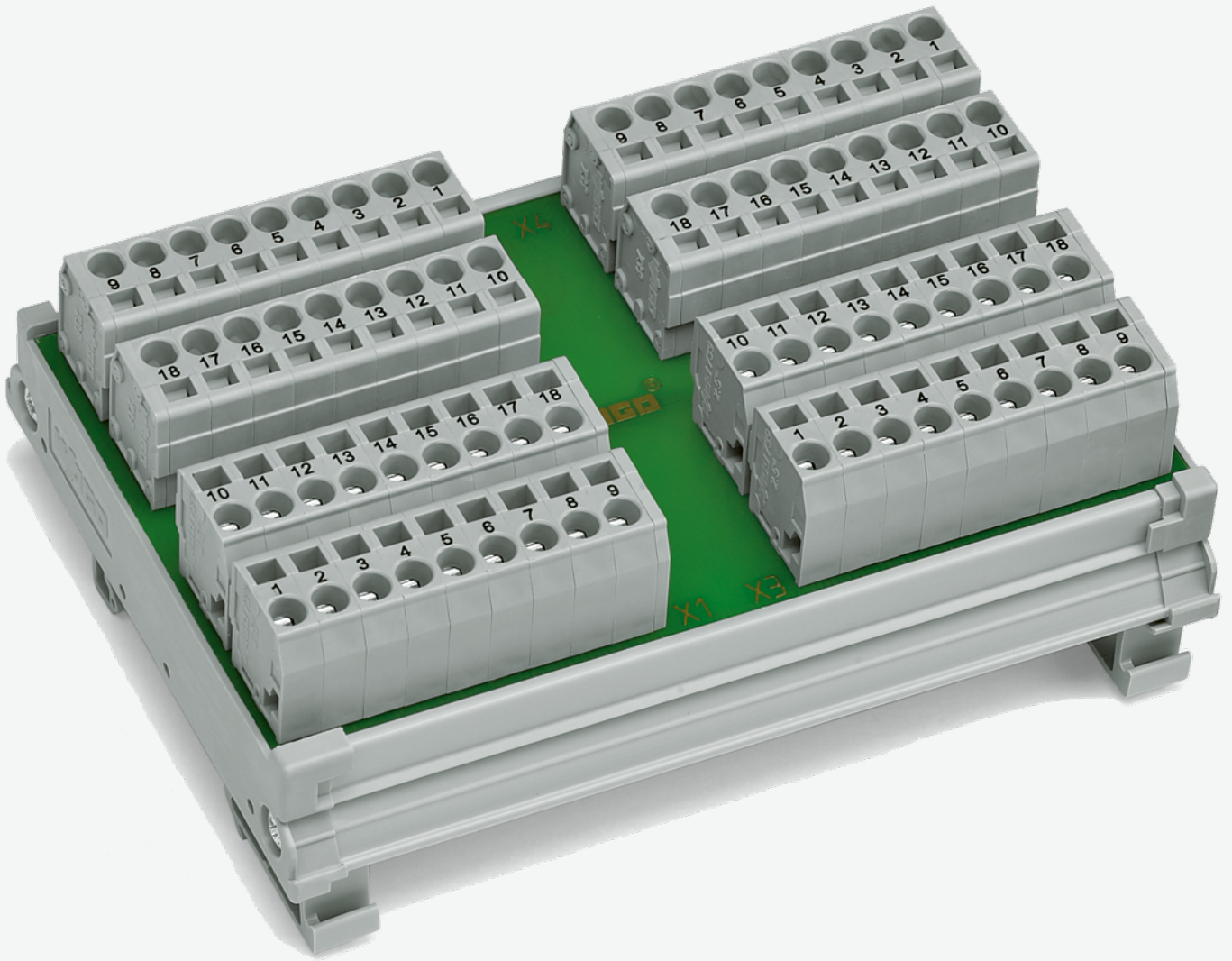


Plug-In Current Transformers with <i>picoMAX</i> ® Pluggable Connectors	Rogowski Coils RC 70 / RC 125 / RC 175	Current and Voltage Taps
---	--	--------------------------






New systems		Retrofit	New systems
Closed		Bayonet connector, separable	Closed
<i>picoMAX</i> ®		Connecting cable	Push-in CAGE CLAMP®
Round cable, copper current bar, mounting plate		Round cable, copper current bar	Jumper slot of the 285 series 2-Conductor Through Teremin Blocks 285-150; 285-195; 285-1185; 285-141; 285-181; 285-1161
750-493; 750-494; 750-495; 857-550; 2857-570/024-001		750-495/000-002; 857-552; 2857-570/024-000	750-493; 750-494; 750-495; 857-550; 2857-570/024-001
32 A	35 / 64 A	Up to 4000 A	150 ... 350 A
320 mA	1 A	22.5 mV/kA	1 A
0.5*	1	0.5	0.5
-10 ... +55 °C		-40 ... +80 °C	-25 ... +70 °C
EN 61869-2		IEC 61010-1 / EN 61869-2	EN 61869-2, EN 60947-7-3, IEC 60068-2-6
-		UL-Zulassung	-





# WAGO Potential Distribution

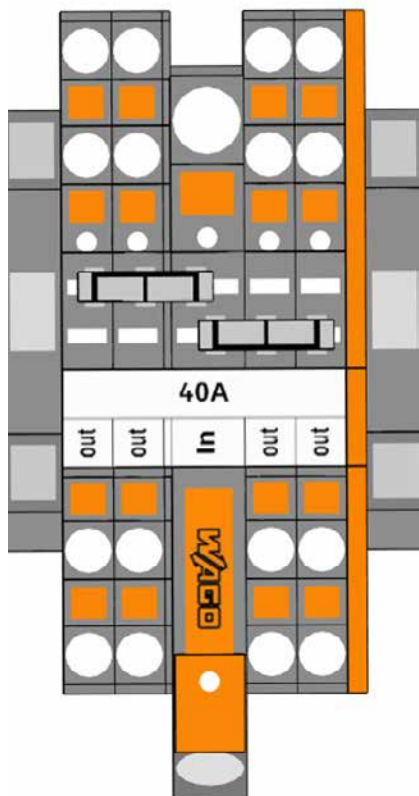
## WAGO Potential Distribution

		Page
	<b>Potential Distribution Blocks</b>	248
	<b>Busbar Terminal Blocks</b> 812 Series	250
	<b>DIN-Rail-Mount Potential Distribution Modules</b> 288 / 830 / 787 / 2006 / 2016 / 2206 / 2216 Series	252

## WAGO Potential Distribution Blocks

Potential distribution can be seamlessly implemented using WAGO's TOPJOB® S Rail-Mount Terminal Blocks with mixed conductor cross-sections. If required, jumpers can be used to easily provide additional connection points. Some standard setups are shown below. For more information on rail-mount terminal block operation and other accessories, visit [www.wago.com](http://www.wago.com).

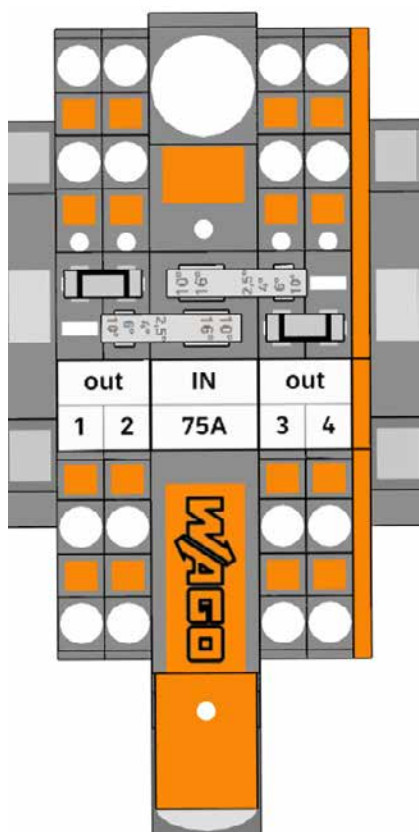
### Potential Distribution Blocks; 40 A



#### Part list:

1x	2-conductor through terminal block; with lever and push-button; 6 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2106-5201
4x	4-conductor through terminal block; with push-button; 2.5 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2202-1401
2x	End and intermediate plate; 0.8 mm thick	2002-1491/2
2x	Push-in type jumper bar; insulated; 3-way; Nominal current 25 A	2002-403

### Potential Distribution Blocks; 75 A



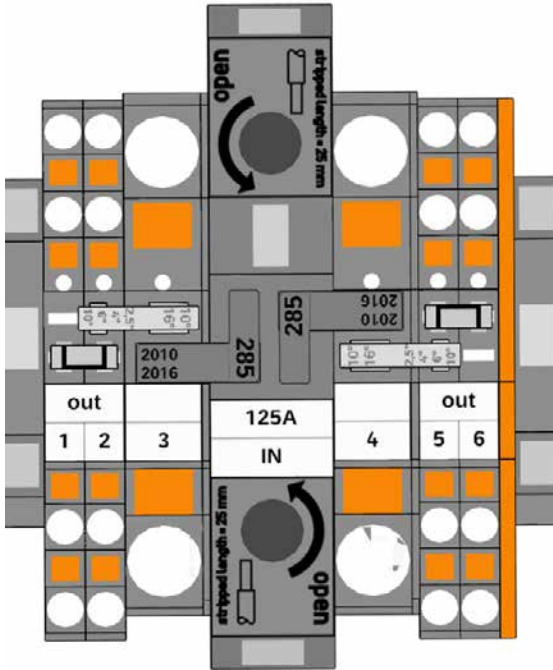
#### Part list:

1x	2-conductor through terminal block; with lever and push-button; 16 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2116-5201
4x	4-conductor through terminal block; with push-button; 2.5 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2202-1401
1x	End and intermediate plate; 0.8 mm thick	2002-1492
2x	Step-down jumper; insulated; from 16/10 mm <sup>2</sup> to 10/6/4/2.5 mm <sup>2</sup> ; Nominal current 57 A	2016-499
2x	Push-in type jumper bar; insulated; 3-way; Nominal current 25 A	2002-403

# WAGO Potential Distribution Blocks

The setups and individual compilations below, e.g., with power supply and ECB can be easily created and documented via WAGO's Smart Designer Configuration Software (available at [www.wago.com](http://www.wago.com)), and then ordered as a custom rail assembly.

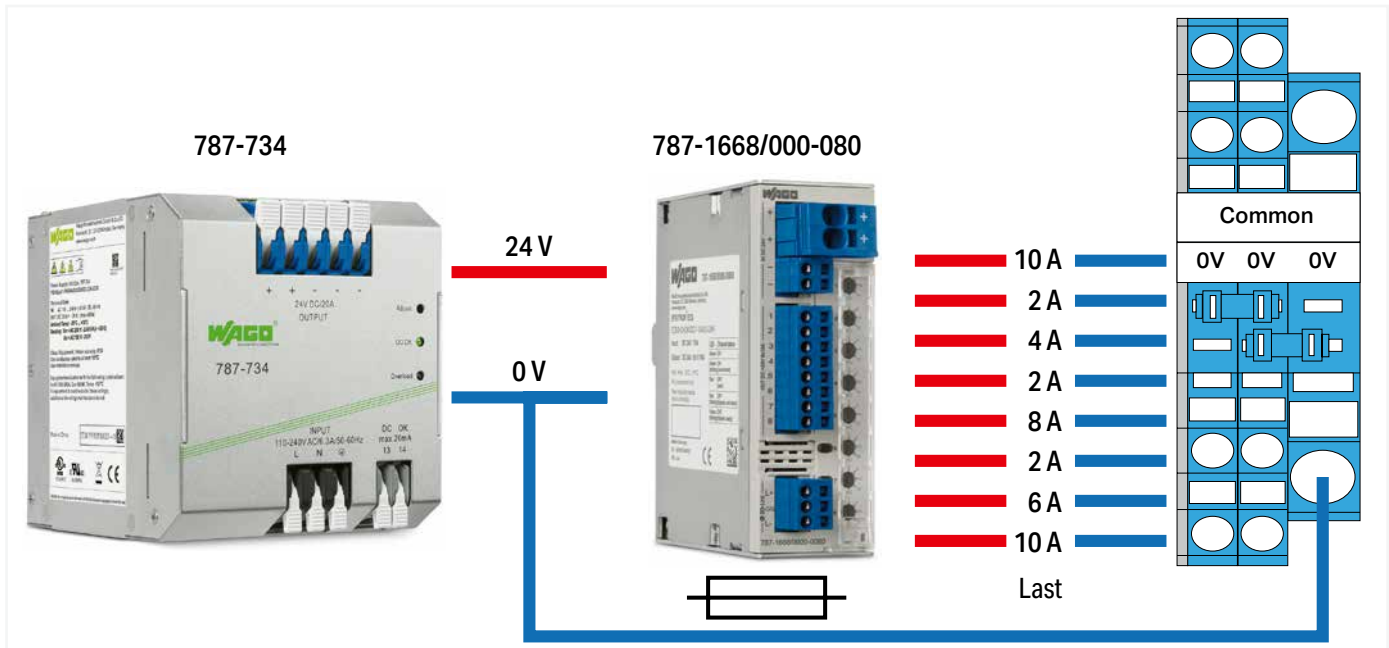
## Potential Distribution Blocks; 125 A



### Part list:

1x	2-conductor through terminal block; 35 mm <sup>2</sup> ; lateral marker slots; only for DIN 35 x 15 rail; 2.3 mm thick; copper; POWER CAGE CLAMP	285-135
2x	2-conductor through terminal block; with push-button; 10 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2210-1201
4x	4-conductor through terminal block; with push-button; 2.5 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2202-1401
2x	End and intermediate plate; 1 mm thick	2020-1291
1x	End and intermediate plate; 1 mm thick	2020-1492
2x	Step-down jumper; insulated; from 285-13x to 2010 and 2016 Series TOPJOB® S terminal blocks; Nominal current 90 A	285-430
2x	Step-down jumper; insulated; from 16/10 mm <sup>2</sup> to 10/6/4/2.5 mm <sup>2</sup> ; Nominal current 57 A	2016-499
2x	Push-in type jumper bar; insulated; 3-way; Nominal current 25 A	2002-403

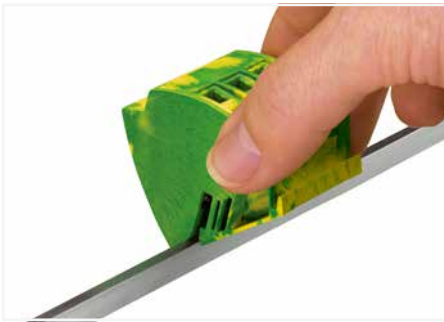
## Application example



## Busbar Terminal Blocks

### 812 Series

#### Description and Installation

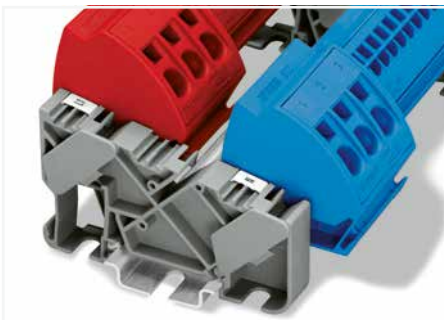


Snapping a ground busbar terminal block onto the N-busbar.



Unlock right and left positions to remove the ground busbar terminal block. Then pull up the block from the busbar.

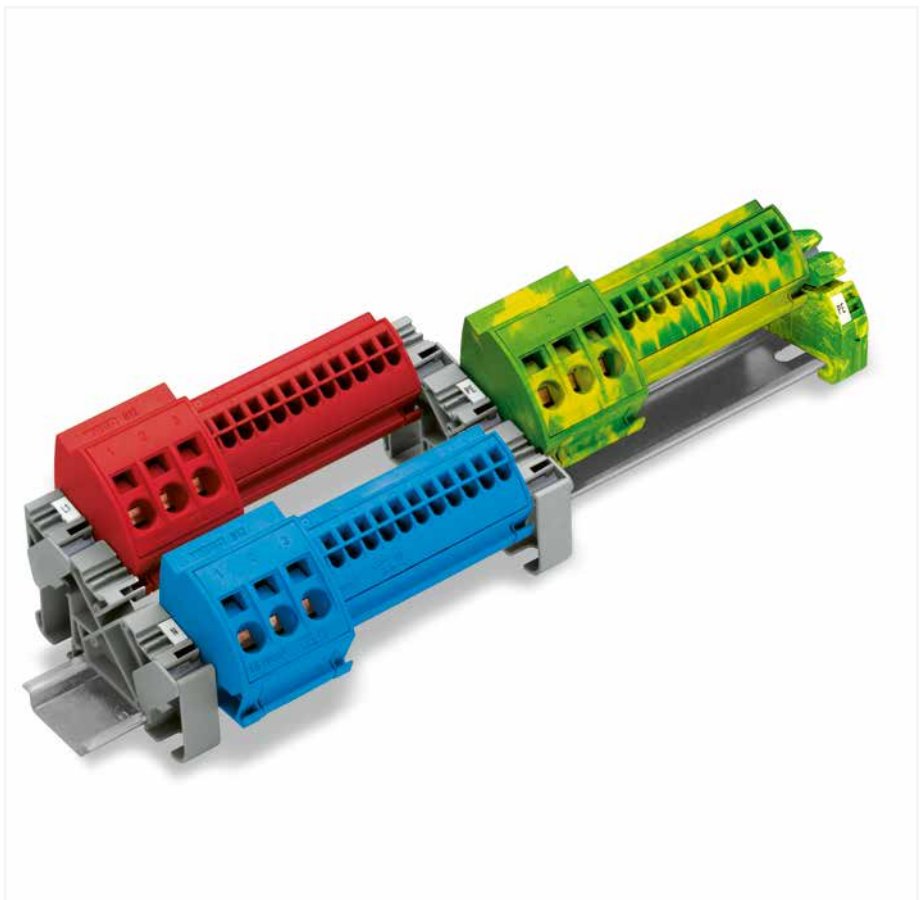
Using the 812 Series Busbar Terminal Blocks in switch-gear cabinets and distribution boards permits simple and safe potential distribution on standard (10 x 3) mm busbars. Tool-free snapping of self-locking busbar terminal blocks onto the busbar enables quick and easy assembly, as well as subsequent extension. The busbar terminal blocks are available in two different versions for conductors ranging from 1.5 to 16 mm<sup>2</sup> (16–6 AWG).  
Current carrying capacity: With a maximum total current of 96 A, the clamping units of the busbar terminal block can be loaded with the rated current of the conductor cross sections approved. This only applies when (10 x 3) mm busbars are used.



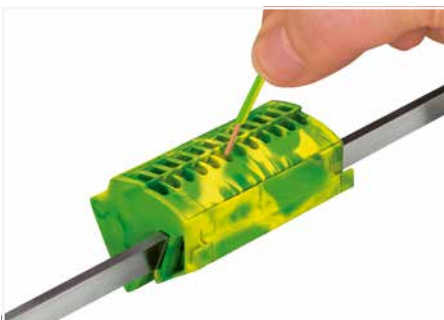
**Busbar carrier (812-140):**  
Offers three receptacles for (10 x 3) mm busbars with locking device for easy mounting of the busbars. The carrier can be snapped onto the DIN-35 rail or screwed on a panel.



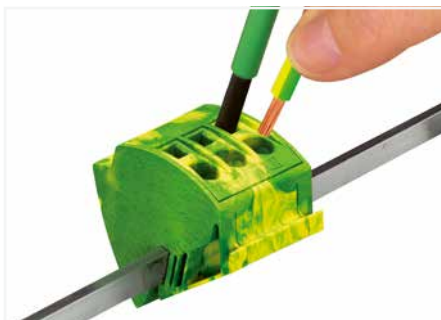
**Ground busbar carrier (812-141):**  
Offers a receptacle with locking device for (10 x 3) mm busbar. Contact between the busbar and rail is made automatically by simply snapping the carrier onto the DIN-35 rail. One end of the busbar is mounted onto the ground busbar carrier, the other end is inserted into the middle position of the insulated busbar carrier.



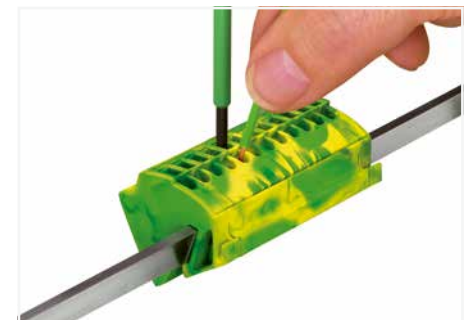
Mixed 4 mm<sup>2</sup> (12 AWG) and 16 mm<sup>2</sup> (6 AWG) busbar terminal blocks



**Conductor termination (4 mm<sup>2</sup>/12 AWG):**  
With Push-in CAGE CLAMP®, solid conductors can be terminated by simply pushing them into the 12 x 4 mm<sup>2</sup> busbar terminal block, significantly reducing wiring time.



**Conductor termination (16 mm<sup>2</sup>/6 AWG):**  
Open the clamping unit with an operating tool when terminating solid, stranded and fine-stranded conductors.



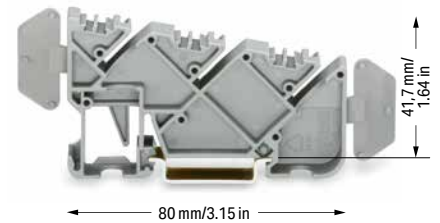
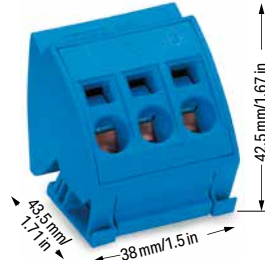
**Conductor removal (4 mm<sup>2</sup>/12 AWG and 16 mm<sup>2</sup>/6 AWG):**  
Open the clamping unit using an operating tool.

# Busbar Terminal Block 4 mm<sup>2</sup> and 16 mm<sup>2</sup>; 812 Series

Technical data	
0.5 ... 4 mm <sup>2</sup>	20 ... 12 AWG
1000 V/6 kV/3	600 V, 20 A
I <sub>N</sub> 96 A	600 V, 95 A
Terminal block width: 75 mm / 2.953 inch	
11 mm / 0.43 inch	



Technical data	
1.5 ... 16 mm <sup>2</sup>	14 ... 6 AWG
1000 V/6 kV/3	600 V, 20 A
I <sub>N</sub> 96 A	600 V, 95 A
Terminal block width: 38 mm / 1.496 inch	
12 mm / 0.47 inch	



Busbar terminal block 4 mm <sup>2</sup> ; with Push-in CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
blue	812-104	10
light gray	812-101	10
dark gray	812-102	10
red	812-103	10

Busbar terminal block 16 mm <sup>2</sup> ; with CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
blue	812-114	12
light gray	812-111	12
dark gray	812-112	12
red	812-113	12

Insulated busbar carrier; 12 mm wide		
Color	Item No.	Pack. Unit
gray	812-140	25

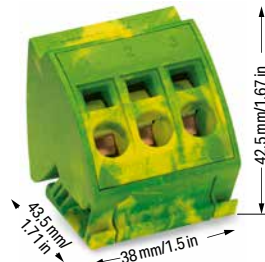
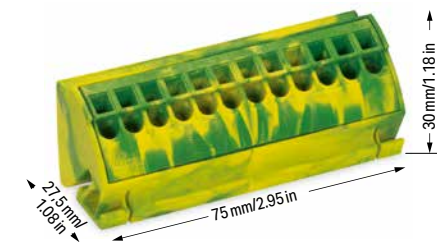
Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



Finger guard; touch-proof cover protects unused conductor entries		
yellow	284-400	100 (25)



Ground busbar terminal block 4 mm <sup>2</sup> ; with Push-in CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
green-yellow	812-100	10

Ground busbar terminal block 16 mm <sup>2</sup> ; with CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
green-yellow	812-110	12

Ground busbar carrier; with DIN-35 rail contact; 11 mm wide		
Color	Item No.	Pack. Unit
green-yellow	812-141	25

Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



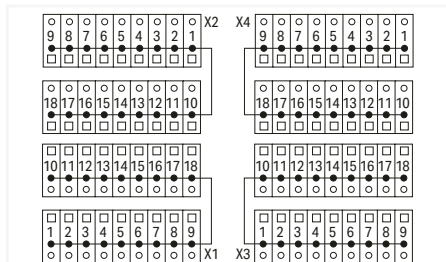
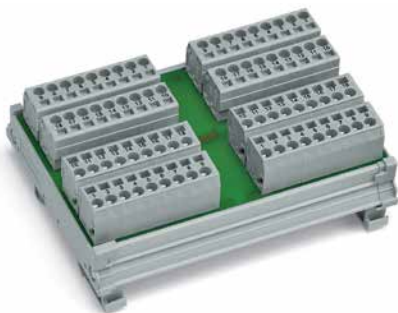
Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



Finger guard; touch-proof cover protects unused conductor entries		
yellow	284-400	100 (25)



## Potential distribution module ▶ Total number of potentials: 4 ▶ Clamping units: 18



Item No.	PU
288-825	5

### Electrical data

Operating voltage	≤ 250 VAC/VDC
Current per connection (max.)	12 A
Total current per potential (max.)	12 A

### Safety and protection/Environmental requirements

Rated Voltage	250 V
Rated impulse withstand voltage	4 kV
Pollution degree	2
Ambient temperature (operation)	-20 ... +50 °C
Ambient temperature (storage)	-40 ... +80 °C

### Connection data

Total number of potentials	4
Clamping units	18

### Connection 1

Connection technology	CAGE CLAMP®
WAGO connector	WAGO 739 Series
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Mating direction	vertical

### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	115 mm x 85 mm x 39 mm
Mounting type	DIN-35 rail
Housing design	Mounting carrier

### Accessories

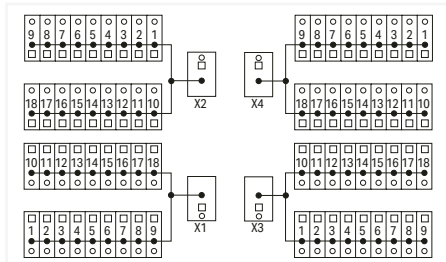
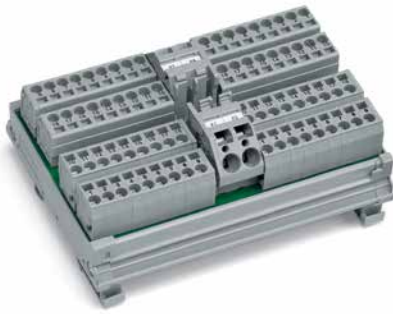


Jumper; 2-way; unplated; silver-colored

Item No.	PU (SPU)
745-382	250 (50)



## Potential distribution module ▶ Total number of potentials: 4 ▶ Clamping units: 19



Item No.	PU
288-837	4

### Electrical data

Operating voltage	≤ 250 VAC/VDC
Current per connection (max.)	12 A
Total current per potential (max.)	32 A

### Safety and protection/Environmental requirements

Rated Voltage	250 V
Rated impulse withstand voltage	4 kV
Pollution degree	2
Ambient temperature (operation)	-20 ... +50 °C
Ambient temperature (storage)	-40 ... +80 °C

### Connection data

Total number of potentials	4
Clamping units	19

#### Connection 1

Connection type 1	Power supply
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 745 Series
Solid/fine-stranded/AWG	0.2 ... 6 mm <sup>2</sup> / 0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	11 ... 12 mm / 0.43 ... 0.47 inches
Mating direction	45°

#### Connection 2

Connection type	Connection points
Connection technology	CAGE CLAMP®
WAGO connector 2	WAGO 739 Series
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	115 mm x 85 mm x 45 mm
Mounting type	DIN-35 rail
Housing design	Mounting carrier

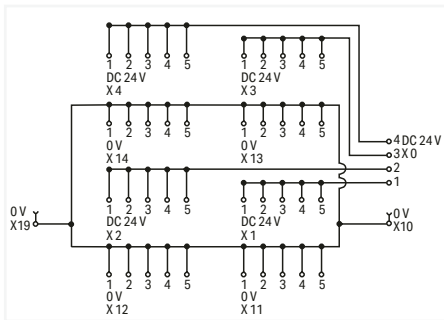
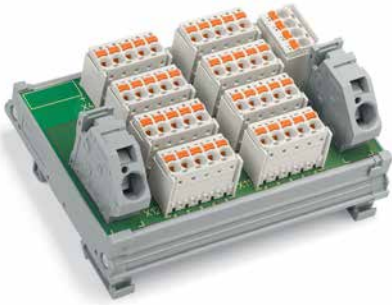
### Accessories



Jumper; 2-way; unplated; silver-colored

Item No.	PU (SPU)
745-382	250 (50)

## Potential distribution module ▶ Total number of potentials: 4 ▶ Clamping units: 28



Item No.	PU
288-870/000-030	1

### Features:

- May be used with electronic circuit breakers for 24 and 0 VDC power distribution, as a substitute for rail-mount terminal blocks
- Pre-wiring and electrical isolation of current paths via pluggable *picoMAX*® Female Headers
- Optional coding pins (2092-1610) protect against any inadvertent mixing of female headers
- Optional gripping plates with sliding connector release (2092-1601/002-000 or 2092-1602/002-000) provide conductor strain relief
- 0 V may be supplied to the adjacent modules via comb-style jumper bar (745-682)

### Electrical data

Nominal operating voltage	24 VDC
Current per connection (max.)	10 A
Total current per potential (max.)	10 A
Total current 0 V (max.)	40 A

### Safety and protection/Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C (without condensation)
Ambient temperature (storage)	-40 ... +85 °C

### Connection data

Total number of potentials	4
Clamping units	28

#### Connection 1

Connection type 1	Power supply 0 V
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 745 Series
Solid/fine-stranded/AWG	0.2 ... 16 mm <sup>2</sup> / 0.2 ... 16 mm <sup>2</sup> / 24 ... 6 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	12 ... 13 mm / 0.47 ... 0.51 inches
Mating direction	45°

#### Connection 2

Connection type	Power supply 24 V; connection points
Connection technology	Push-in CAGE CLAMP®
WAGO connector 2	<i>picoMAX</i> ® 5.0 (WAGO 2092 Series)
Solid/fine-stranded/AWG	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	100 mm x 85 mm x 49 mm
Mounting type	DIN-35 rail
Housing design	Mounting carrier

### Accessories



Jumper; 2-way; unplated; silver-colored

Item No.	PU (SPU)
745-682	400 (50)



Gripping plate

Item No.	PU (SPU)
2092-1601/002-000	100 (25)



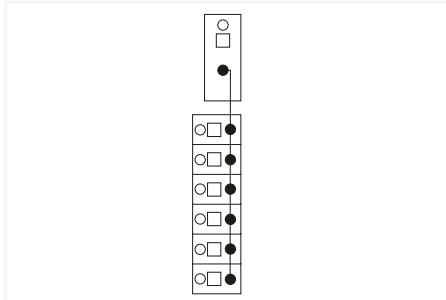
Coding key carrier; orange

Item No.	PU (SPU)
2092-1610	100 (25)

## Potential distribution module ▶ Lever ▶ Total number of potentials: 1 ▶ with 1 input clamping point; with 6 output clamping points



Similar to illustration



Item No.	PU
830-800/000-312/000-006	10

Electrical data	
Operating voltage	≤ 250 VAC/VDC
Current per connection (max.)	12 A
Total current per potential (max.)	65 A
Specialty functions	with 1 input clamping point; with 6 output clamping points

Safety and protection/Environmental requirements	
Ambient temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (without condensation)

Connection data	
Total number of potentials	1

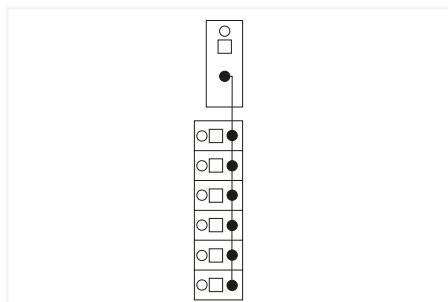
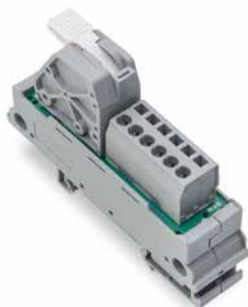
Connection 1	
Connection type 1	Input
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 2716 Series
Solid/fine-stranded/AWG	1.5 ... 16 mm <sup>2</sup> / 1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	12 ... 13 mm / 0.47 ... 0.51 inches
Mating direction	30°

Connection 2	
Connection type	Output
Connection technology	CAGE CLAMP®
WAGO connector 2	WAGO 739 Series
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data/Mechanical data/Material Data	
Width x Height x Depth from upper-edge of DIN-rail	21 mm x 85 mm x 49 mm
Mounting type	DIN-35 rail
Housing design	Mounting carrier

Standards and specifications	
Standards/specifications	cULus 61010-2-201

## Potential distribution module ▶ Lever ▶ Total number of potentials: 1 ▶ with 1 input clamping point; with 6 output clamping points



Item No.	PU
830-800/000-312	10

### Electrical data

Operating voltage	≤ 250 VAC/VDC
Current per connection (max.)	12 A
Total current per potential (max.)	65 A
Specialty functions	with 1 input clamping point; with 6 output clamping points

### Safety and protection/Environmental requirements

Ambient temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (without condensation)

### Connection data

Total number of potentials	1
----------------------------	---

#### Connection 1

Connection type 1	Input
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 2716 Series
Solid/fine-stranded/AWG	1.5 ... 16 mm <sup>2</sup> / 1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	12 ... 13 mm / 0.47 ... 0.51 inches
Mating direction	30°

#### Connection 2

Connection type	Output
Connection technology	CAGE CLAMP®
WAGO connector 2	WAGO 739 Series
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

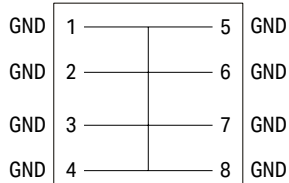
### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	21 mm x 85 mm x 49 mm
Mounting type	DIN-35 rail
Housing design	Mounting carrier

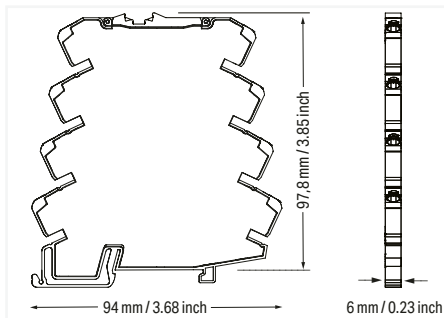
### Standards and specifications

Standards/specifications	cULus 61010-2-201
--------------------------	-------------------

## Potential distribution module ▶ Total number of potentials: 1 ▶ with 4 clamping points (0 V)



Item No.	PU
787-3861/000-1000	1



### Note

The device is designed for use in SELV circuits.

### Electrical data

Nominal operating voltage	24 VDC
Operating voltage	0 ... 30 VDC
Limiting continuous current	20 A; 15 A (UL)
Specialty functions	with 4 clamping points (0 V)

### Safety and protection/Environmental requirements

Pollution degree	2
Protection type	IP20; per EN 60529
Protection class	III
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

### Connection data

Total number of potentials	1
Clamping units	8
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 26 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

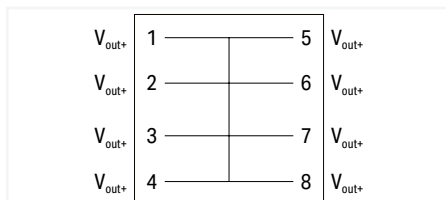
### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

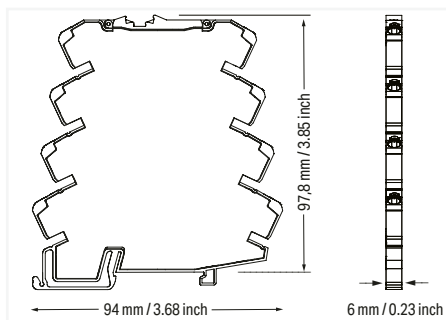
### Standards and specifications

Conformity marking	CE
--------------------	----

## Potential distribution module ▶ Total number of potentials: 1 ▶ with 4 clamping points (24 V)



Item No.	PU
787-3861/000-2000	1



### Note

The device is designed for use in SELV circuits.

### Electrical data

Nominal operating voltage	24 VDC
Operating voltage	0 ... 30 VDC
Limiting continuous current	20 A; 15 A (UL)
Specialty functions	with 4 clamping points (24 V)

### Safety and protection/Environmental requirements

Pollution degree	2
Protection type	IP20; per EN 60529
Protection class	III
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

### Connection data

Total number of potentials	1
Clamping units	8
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 26 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

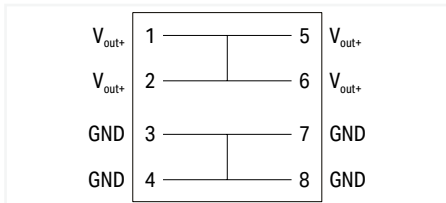
### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

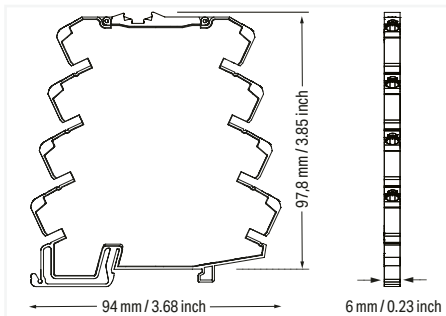
### Standards and specifications

Conformity marking	CE
--------------------	----

## Potential distribution module ▶ Total number of potentials: 2 ▶ with 4 clamping points each (0 V / 24 V)



Item No.	PU
787-3861/000-3000	1



### Note

The device is designed for use in SELV circuits.

### Electrical data

Nominal operating voltage	24 VDC
Operating voltage	0 ... 30 VDC
Limiting continuous current	20 A; 15 A (UL)
Specialty functions	with 4 clamping points each (0 V / 24 V)

### Safety and protection/Environmental requirements

Pollution degree	2
Protection type	IP20; per EN 60529
Protection class	III
Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

### Connection data

Total number of potentials	2
Clamping units	8
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 26 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

### Physical data/Mechanical data/Material Data

Width x Height x Depth from upper-edge of DIN-rail	6 mm x 94 mm x 97.8 mm
Mounting type	DIN-35 rail

### Standards and specifications

Conformity marking	CE
--------------------	----

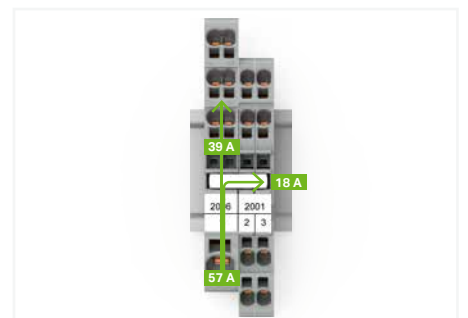
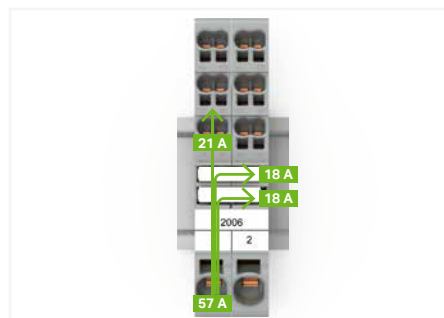
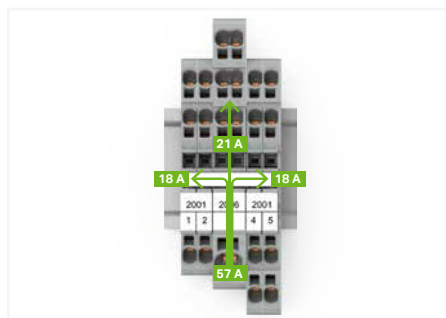
## Distribution terminal block; TOPJOB® S

1 x 6 mm<sup>2</sup> / 6 x 1.5 mm<sup>2</sup>; 1 x 16 mm<sup>2</sup> / 6 x 4 mm<sup>2</sup>; 2006 / 2016 / 2206 / 2216 Series

Illustration	Description	Color	Item No.	Pack. Unit	Dimensions (W x H x D)	Electrical Data
<b>Distribution terminal block; with push-button; 1 x 6 mm<sup>2</sup> und 6 x 1.5 mm<sup>2</sup>; 2206 Series ① ②</b>						
	Distribution terminal block; with integrated end plate; side and center marking	○ gray	2206-8031 ⑤	12	9 x 73.8 x 32.9 mm/ 0.35 x 2.91 x 1.3 inch	800 V / 8 kV / 3 ⑦; I <sub>N</sub> 41 A
		● red	2206-8033 ⑤	12		
		● blue	2206-8034 ⑤ ⑥	12		
		● black	2206-8035 ⑤	12		
<b>Distribution terminal block; with operating slots; 1 x 6 mm<sup>2</sup> und 6 x 1.5 mm<sup>2</sup>; 2006 Series ① ②</b>						
	Distribution terminal block; with integrated end plate; side and center marking	○ gray	2006-8031	12	9 x 73.8 x 32.9 mm/ 0.35 x 2.91 x 1.3 inch	800 V / 8 kV / 3 ⑦; I <sub>N</sub> 41 A
		● red	2006-8033	12		
		● blue	2006-8034	12		
		● black	2006-8035	12		
<b>Distribution terminal block; with push-button; 1 x 16 mm<sup>2</sup> und 6 x 4 mm<sup>2</sup>; 2216 Series ③ ④</b>						
	Distribution terminal block; with integrated end plate; side and center marking	○ gray	2216-8031 ⑤	7	12.8 x 87 x 36.9 mm/ 0.5 x 3.43 x 1.45 inch	800 V / 8 kV / 3 ⑦; I <sub>N</sub> 76 A
		● red	2216-8033 ⑤	7		
		● blue	2216-8034 ⑤ ⑥	7		
		● black	2216-8035 ⑤	7		
<b>Distribution terminal block; with operating slots; 1 x 16 mm<sup>2</sup> und 6 x 4 mm<sup>2</sup>; 2016 Series ③ ④</b>						
	Distribution terminal block; with integrated end plate; side and center marking	○ gray	2016-8031	7	12.8 x 87 x 36.9 mm/ 0.5 x 3.43 x 1.45 inch	800 V / 8 kV / 3 ⑦; I <sub>N</sub> 76 A
		● red	2016-8033	7		
		● blue	2016-8034	7		
		● black	2016-8035	7		

## Accessories

	Jumper; light gray			Marking strips; plain; width: 11 mm			Test plug adapter; gray	
	Jumper assignment	Item No. Pack. Unit		Color	Item No. Pack. Unit		Item No. Pack. Unit	
	1-2	2001-402 25	○ white	2009-110 1		2009-174 100 (25)		
	1-2-3	2001-403 25						
	Testing tap; gray							
	Item No. Pack. Unit	2009-182 100 (25)						



Commoning options for 2006/2206 Series Distribution Terminal Blocks and 2001 Series Terminal Blocks using 2001 Series Jumpers

## Note:

The total current flowing must not exceed the rating of the step-down jumper.

① Conductor range: 0.5 ... 10 mm<sup>2</sup> „s + f“;  
Push-in termination: 2.5 ... 10 mm<sup>2</sup> „s“ and 2.5 ... 6 mm<sup>2</sup>;  
„insulated ferrules; 12 mm“; 20 ... 8 AWG;  
Strip length: 13 ... 15 mm / 0.51 ... 0.59 inch

② Conductor range: 0.25 ... 2.5 mm<sup>2</sup> „s + f“;  
Push-in termination: 0.75 ... 2.5 mm<sup>2</sup> „s“ and 0.75 ... 1.5 mm<sup>2</sup>;  
„insulated ferrules; 12 mm“; 22 ... 14 AWG;  
Strip length: 9 ... 11 mm / 0.35 ... 0.43 inch

③ Conductor range: 0.5 ... 16 mm<sup>2</sup> „s + f“, 25 mm<sup>2</sup> „f“;  
Push-in termination: 6 ... 16 mm<sup>2</sup> „s“ und 6 ... 16 mm<sup>2</sup>;  
„insulated ferrules; 18 mm“; 20 ... 6 AWG;  
Strip length: 18 ... 20 mm / 0.71 ... 0.79 inch

④ Conductor range: 0.5 ... 6 mm<sup>2</sup> „s + f“;  
Push-in termination: 1.5 ... 6 mm<sup>2</sup> „s“ und 0.5 ... 4 mm<sup>2</sup>;  
„insulated ferrules; 20 mm“; 20 ... 10 AWG;  
Strip length: 11 ... 13 mm / 0.43 ... 0.51 inch

⑤ Suitable for Ex e II applications

⑥ Suitable for Ex i applications

⑦ 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree


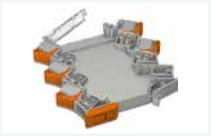














**WAGO Accessories and WAGO Tools**

## WAGO Accessories and WAGO Tools

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## Marking with Smart Printer



### Terminal Block Marking

- Multi-line marking strips for clear, detailed control cabinet labels
- WMB Inline markers on a reel are suitable for various terminal block sizes
- Same profile across all TOPJOB® S Rail-Mount Terminal Blocks ensures quick labeling



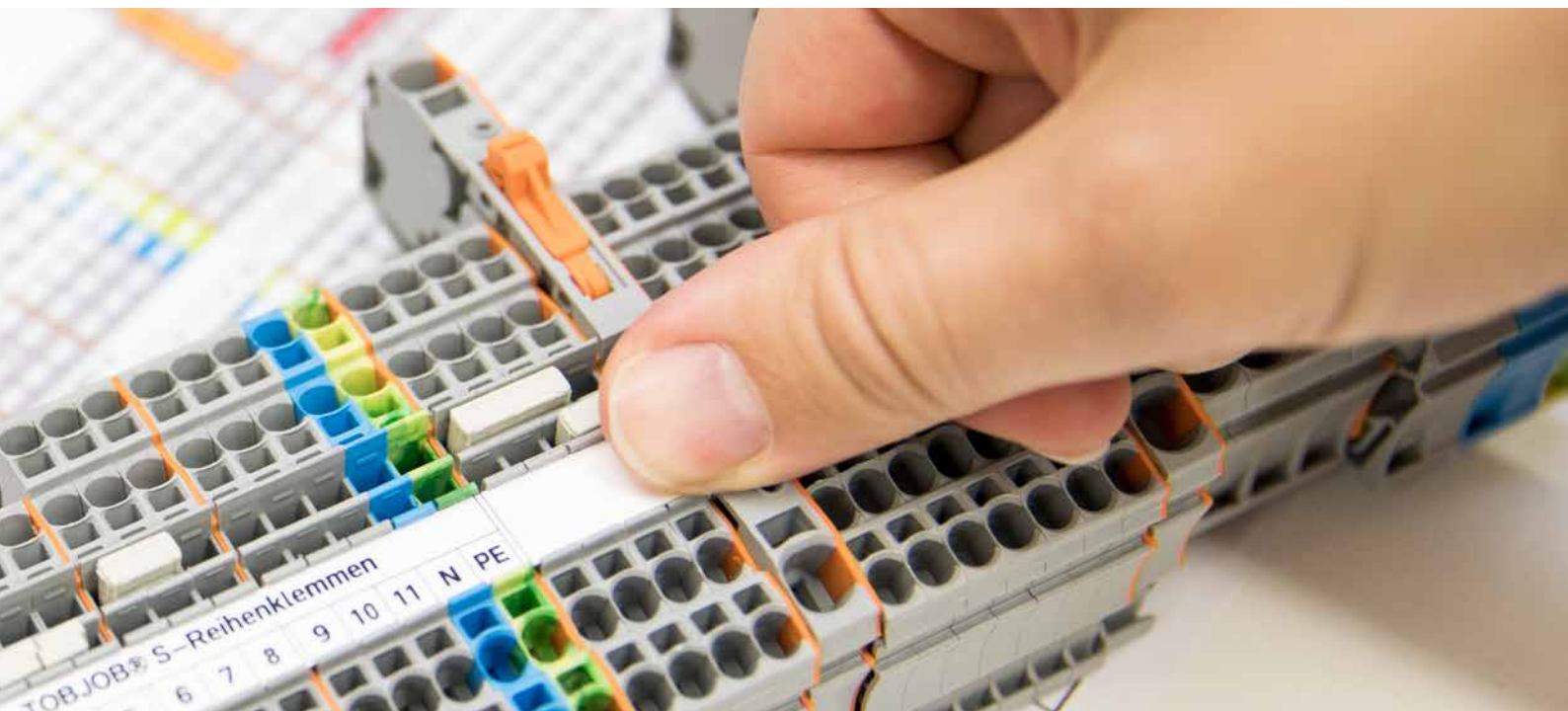
### Cable and Conductor Marking

- Different versions available: marking sleeves, self-laminating labels, conductor markers for thread-on mounting or shrink tubes
- Large variety of marking surface sizes



### Device Marking

- Broad selection of labels, type plates, fabric labels and type plates optimizes marking for devices and control cabinets
- Marking materials are available in a variety of colors and sizes

**Your Benefits:**

- Long-lasting, indelible, scratch-proof printing
- Lower purchase costs thanks to economical marking
- Save time on printing and affixing markings
- Universal application for all control cabinet marking tasks
- Easy installation

## Thermal Transfer Printer Smart Printer Installation



Open Smart Printer.



Smart Printer is open.



Secure the appropriate roller in the printer.



Insert the entire core of the ink ribbon at the bottom.



Insert the empty core at the top and twist until the empty core has been completely wrapped.

Use the tear-off edge to remove the printed material.



Insert the empty core at the top and twist until the empty core has been completely wrapped.

### Secure Material inside the Printer



Close Smart Printer.



Loosen the center bar, loosen the wing and place material on the bar.



Secure the second wing on the center bar, reseal the bar in the housing and loosely attach guide rails to the material.

Secure Material outside the Printer



Secure the material on the external unwinder.



Route material through the printer.



Guide the marker strip over the roller.



Place unwinder and material centrally behind the printer.



Loosely fit guide rails to the material.

External Unwinder



Set of external unwinder

Mobile Application



Secure Bluetooth® (258-5102) or WiFi Dongle (258-5103) in the USB-A interface.



Download WAGO Smart Script App and couple it to the desired printer in the print preview.



Optional use: Power bank 24 V (258-5104)

## WAGO Marking Software Smart Script Intuitive Marking Software

With its intuitive operation, this clearly structured marking software is suitable for all WAGO markers. Eliminate duplicated effort and simply export data from Excel or CAE systems for marking your terminal strips.

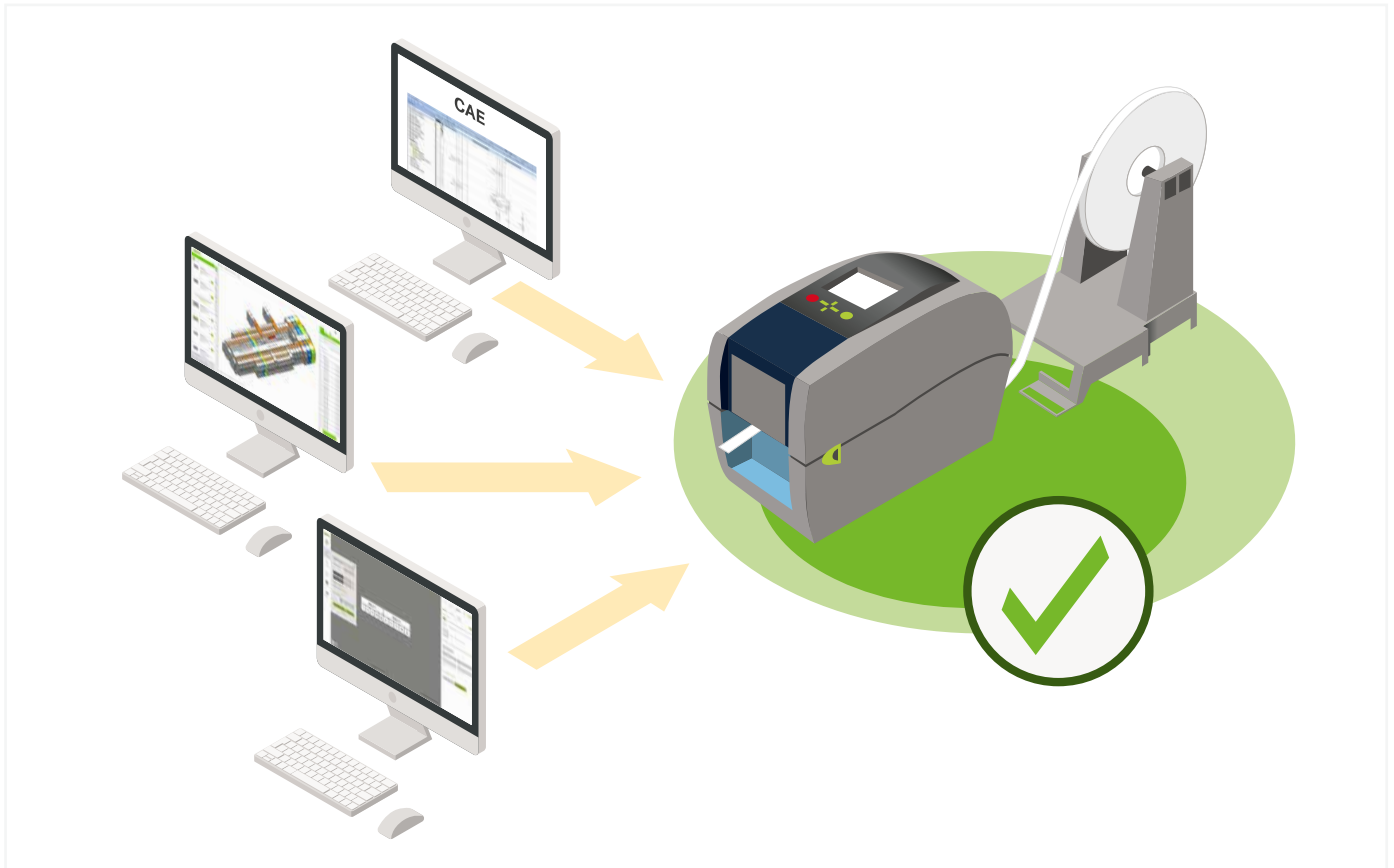
Combining superior usability with a modern design, Smart Script helps the user complete the task quickly and easily with just a few clicks. For example, Smart Script can be used to easily customize type labels, as well as define and print barcodes and graphic elements.

- Modern design and intuitive workflow
- Fast and easy use thanks to an integrated printer driver and printer settings
- A large selection of different marking media, including templates
- Optimized data interfaces to WAGO Configurator Smart Designer, EPLAN P8, Microsoft Excel, CSV





## Printing with the Thermal Transfer Smart Printer



### Direct Printing from a CAE System

With the perfect EPLAN interfaces, both terminal block markings and marking accessories for electrical equipment and conductors can be conveniently generated directly from a CAE system. Direct connection to the Thermal Transfer Smart Printer accelerates the manufacturing process.



### Generate Marking Data from the Configuration Software

Save time and reduce your costs by printing markings directly from WAGO's Smart Designer Configuration Software on the economical Thermal Transfer Smart Printer. Configured terminal strips can be printed with just a few mouse clicks.



### WAGO Marking Software Smart Script

With its intuitive operation, this clearly structured marking software is suitable for all WAGO markers. Eliminate duplicated effort and simply export data from Excel or CAE systems for marking your terminal strips.

## Marking device

### Printer model: Smart Printer



Connection data	
Interfaces	USB type A, (for BT and WiFi connection), USB type B (for PC connection), RS-232, ETHERNET 10/100 Mbps
System requirements	
Supported operating systems	Windows 7[ERROR:Textbaustein_Trenner_MultiValue]Windows 8[ERROR:Textbaustein_Trenner_MultiValue]Windows 10[ERROR:Textbaustein_Trenner_MultiValue]Windows 11[ERROR:Textbaustein_Trenner_MultiValue]Linux®
Memory	4 GB
Technical data	
Operating voltage	100 ... 240 VAC, 50 ... 60 Hz (automatic adjustment)
Print resolution	300 dpi (12 pixels/mm)
Print speed	Max. 127 mm/s (WAGO recommends 50.8 mm/s)
Print width (max.)	47 mm
Print length (max.)	762 mm
Print head	Glass layer, spring-mounted
See-through/reflective sensor	Yes, centrally mounted
Memory	8192 MB
Operating display	Color TFT LCD with navigation button
Safety approvals	CE (EMC)
Ink ribbon	External roll diameter: 40 mm; Internal core diameter: 12.7 mm (0.5 inch); Max. length: 110 m; Max. width: 58 mm
Mechanical data	
Dimensions W x H x D	(135 x 175 x 245) mm
Environmental requirements	
Ambient temperature (operation)	+5 ... +40 °C
Ambient temperature (storage)	-20 ... +50 °C

# Marking device

## Printer model: Smart Printer

Scope of delivery: USB Adapter *Bluetooth*® 5.0 Nano (258-5102), tool bag (large) (206-3010), power supply + cable, 2 rollers (258-5006 + 258-5007), 1 reel holder, 1 ink ribbon (258-5005), Smart Script marking software and driver, USB cable, external unwinder, 1 empty cardboard core

Scope of delivery: Power supply + cable, 2 rollers (258-5006 + 258-5007), 1 reel holder, 1 ink ribbon (258-5005), Smart Script marking software and driver, USB cable, external unwinder, 1 empty cardboard core, 1 reel each of marking strips (2009-110) and WMB Inline markers (2009-115)

Scope of delivery: Power supply + cable, 2 rollers (258-5006 + 258-5007), 1 roller holder, 1 ink ribbon (258-5005), Smart Script marking software and driver, USB cable, external unwinder, 1 empty cardboard core



258-5100

Item No.	PU
258-5100	1



258-5107

Item No.	PU
258-5107	1



258-5108

Item No.	PU
258-5108	1



Tool bag; empty; compatible with L-BOXX® 102; Capacity: 24 kg

Item No.	PU
206-3010	1



Tool bag; empty; compatible with L-BOXX® 102; Capacity: 24 kg

Item No.	PU
206-3010	1



USB Adapter 5.0 with Bluetooth®; for WAGO Thermal Transfer Smart Printer

Item No.	PU
258-5102	1



USB Adapter 5.0 with Bluetooth®; for WAGO Thermal Transfer Smart Printer

Item No.	PU
258-5102	1



WiFi USB Adapter; for WAGO Thermal Transfer Smart Printer

Item No.	PU
258-5103	1



Power Bank; 12 ... 24 V; 20100 mAh; for WAGO Thermal Transfer Smart Printer

Item No.	PU
258-5104	1

PU = packaging unit; SPU = subpackaging unit

## Accessories for marking devices

### Cutter



258-5030

Dimensions W x H x D: (60 x 107 x 131) mm

Item No.	PU
258-5030	1



Anforderungen an die Hardware:

- Druckermodell: Smart Printer
- Ab Herstellmonat/-jahr: 0814 – August 2014
- Firmwareversion: 1.UW7i
- Druckertreiber: Version 7.4.2

Anforderungen an die Software:

- WAGO Beschriftungssoftware Smart Script: Version 4.2 oder höher
- WAGO Druckereinstellungen: Version 2.4.0.0 oder höher

Zum Schneiden freigegebene Druckmaterialien:

- Beschriftungstreifen: 2009-110, 709-177, 709-178, 757-901/000-005
- Selbstklebende Beschriftungstreifen: 210-702, 210-870 ... -882/000-002
- Kabelbündelmarkierer: 211-835 ... -836, 211-836/000-002
- Selbstlaminierende Etiketten: 211-855 ... -857
- Adermarkierer zum Auffädeln: 211-861 ... -863
- Typenschilder: 210-801 ... -804, 210-812
- Endlosetiketten: 210-831 ... -834
- Etikett zur Stromkreiskennzeichnung: 210-813

Maße der Druckmaterialien:

- Breite max.: 46 mm
- Stärke max.: 250 µm

## Accessories for marking devices Thermal transfer ink ribbon

for all marking accessories from the WAGO product series (except 211-855, 211-856, 211-857)

only for 211-855/-856/-857



258-5005

Length: 74 m		
Color	Item No.	PU
● black	258-5005	1
● red	258-5005/000-005	1
○ white	258-5005/000-008	1



258-5014

Length: 74 m		
Color	Item No.	PU
● black	258-5014	1

PU = packaging unit; SPU = subpackaging unit

## Accessories for marking devices

Carrying case ▶ for Smart Printer ▶ With foam padding for printer



258-5015

Dimensions W x H x D: (500 x 260 x 230) mm

Color	Item No.	PU
○ white	258-5015	1

## Accessories for marking devices

### Roller

for marking strips, device and equipment markers, conductor and cable markers



258-5006

Item No.	PU
258-5006	1

for Micro WSB Inline markers



258-5011

Item No.	PU
258-5011	1

for Mini-WSB Inline markers



Item No.	PU
258-5008	1

for WMB Inline markers



258-5007

Item No.	PU
258-5007	1

for WMB Inline markers; for Phoenix Contact Rail-Mount Terminal Blocks



258-5009

Item No.	PU
258-5009	1

for WMB Inline markers; for Weidmüller Rail-Mount Terminal Blocks



258-5010

Item No.	PU
258-5010	1

PU = packaging unit; SPU = subpackaging unit

## Marking system

Terminal block width: 3.5 mm, 4 ... 4.2 mm and from 5 mm



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
3.5 mm	2000, 2020	-
4 ... 4.2 mm	279, 2001	-
5 ... 5.2 mm	270, 280, 780, 869, 870, 880, 2002, 2003, 2022	Terminal blocks with spacing > 5 ... 5.2 mm

WMB Inline ▶ plain ▶ 2.300 WMB markers (3.5 mm)/reel		
Color	3.5 mm Item No.	PU
○ white	2009-113	1

WMB Inline ▶ plain ▶ 2.000 WMB markers (4 mm)/reel ▶ stretchable 4 ... 4.2 mm		
Color	4 ... 4.2 mm Item No.	PU
○ white	2009-114	1

WMB Inline ▶ plain ▶ 1.500 WMB markers (5 mm)/reel ▶ stretchable 5 ... 5.2 mm		
Color	5 ... 5.2 mm Item No.	PU
○ white	2009-115	1



Use		
	Can be snapped onto the following terminal block series	
	2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2010, 2016, 2020, 2022	

Marking strip ▶ plain ▶ 11 mm wide ▶ 50 m reel		
Color	Item No.	PU
○ white	2009-110	1

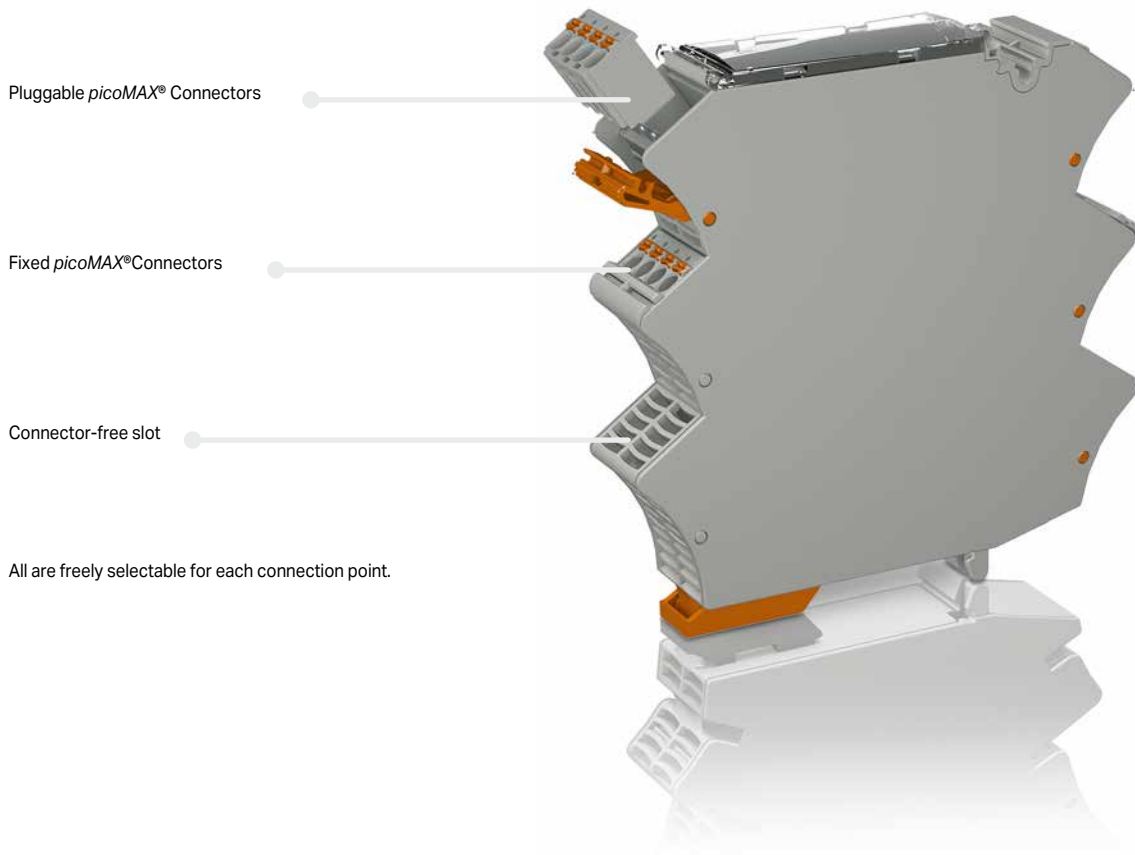




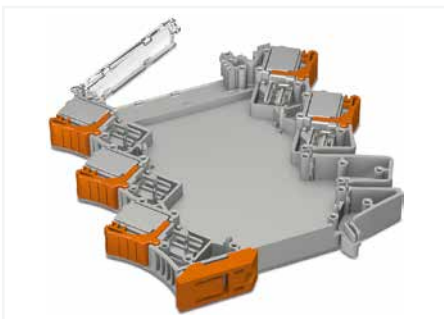
# Modular empty housings

## Overview and configuration

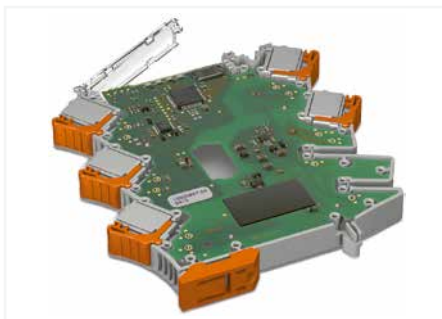
### 2857 Series



Supplied as a pre-assembled unit:



1. Pre-assembled unit










2. Insert and solder the PCB.



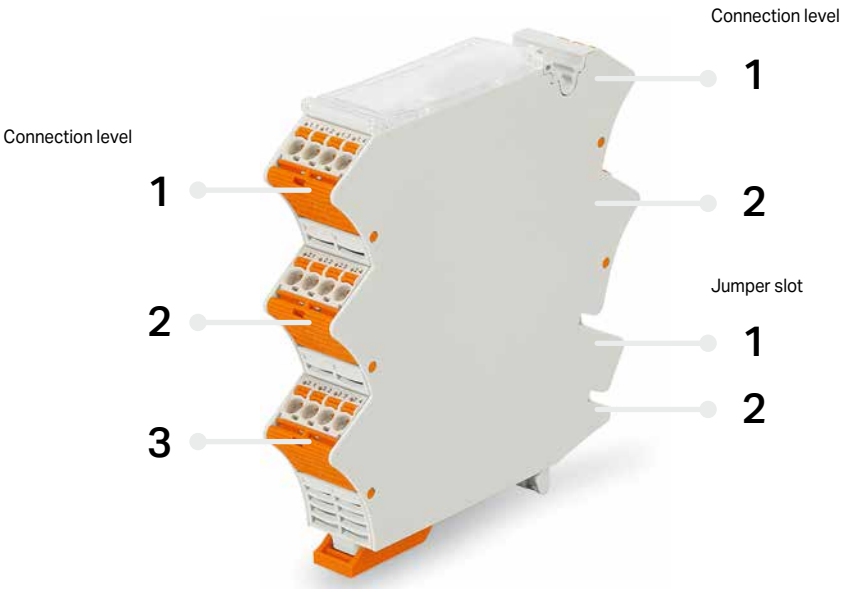
3. Snap on the side wall.

Housing configuration:

Housing width: 12.5 mm	 2857-101	 2857-102	 2857-103	-
Housing width: 22.5 mm	 2857-121	 2857-122	 2857-123	 2857-124
Connection levels	2-2	3-2	3-3	1-1
Jumper slots	2-2	0-2	0-0	2-2

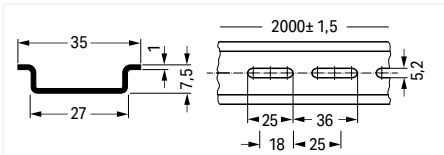
Mixed configuration (fixed/removable/empty slot) upon request!

Example of connection level and jumper slot assignment:



Connection levels	3-2
Jumper slots	0-2

## DIN-Rail; Rail End Cap; Angled Support Bracket and Collective Jumper Carrier



Steel DIN-rail ▶ I<sub>N</sub> 76 A (based on 1 m length) ▶ 35 x 7.5 mm ▶ 1 mm thick ▶ 2 m long ▶ per EN 60715

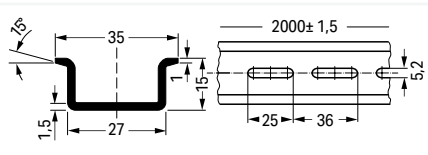
	Item No.	Pack. Unit
unslotted	210-113	10 (1)

Hole width: 25 mm ▶ Hole spacing: 36 mm

slotted	210-112	10 (1)
---------	---------	--------

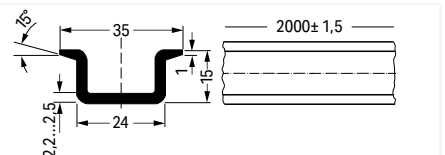
Hole width: 18 mm ▶ Hole spacing: 25 mm

slotted	210-115	1
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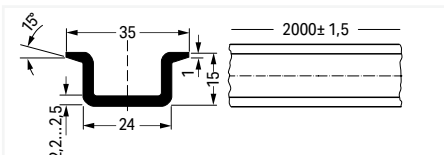
Steel DIN-rail ▶ I<sub>N</sub> 125 A (based on 1 m length) ▶ 35 x 15 mm ▶ 1.5 mm thick ▶ 2 m long ▶ similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-114	10 (1)
slotted	210-197	10 (1)



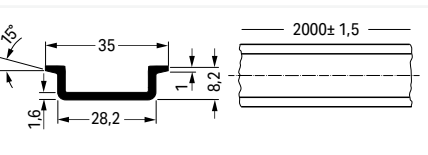
Steel DIN-rail ▶ I<sub>N</sub> 125 A (based on 1 m length) ▶ 35 x 15 mm ▶ 2.3 mm thick ▶ 2 m long ▶ per EN 60715

	Item No.	Pack. Unit
unslotted	210-118	10 (1)



Copper DIN-rail ▶ I<sub>N</sub> 309 A (based on 1 m length) ▶ 35 x 15 mm ▶ 2.3 mm thick ▶ 2 m long ▶ per EN 60715

	Item No.	Pack. Unit
unslotted	210-198	10 (1)



Aluminum DIN-rail ▶ I<sub>N</sub> 76 A (based on 1 m length) ▶ 35 x 8.2 mm ▶ 1.6 mm thick ▶ 2 m long ▶ similar to EN 60715

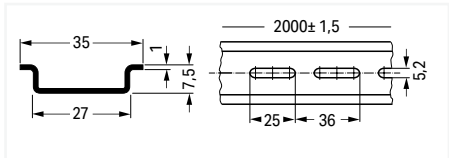
	Item No.	Pack. Unit
unslotted	210-196	20 (1)



Rail end cap ▶ for DIN-35 rail (7.5 mm high)

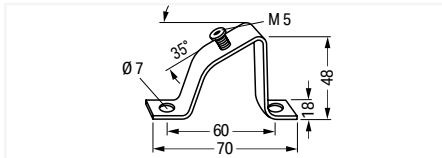
Color	Item No.	Pack. Unit
○ gray	209-109	50 (25)

PU = packaging unit; SPU = subpackaging unit



Steel DIN-rail ▶ I<sub>N</sub> 76 A (based on 1 m length) ▶ 35 x 7.5 mm ▶ 1 mm thick ▶ 2 m long ▶ per EN 60715

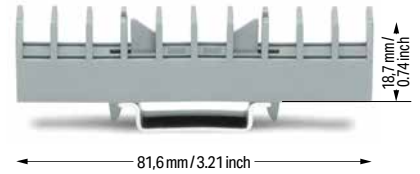
	Item No.	Pack. Unit
unslotted	210-505	1
slotted	210-504	1



Angled support bracket ▶ without screw

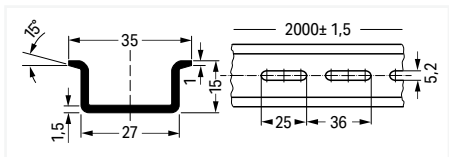
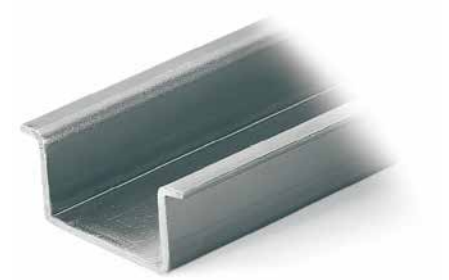
	Item No.	Pack. Unit
	210-148	10

Screw M5 x 8		
	210-149	100 (20)



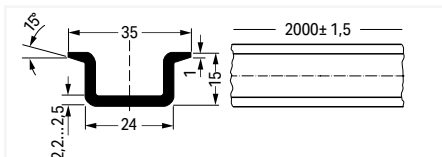
Collective jumper carrier ▶ for DIN-35 rail ▶ compatible with jumpers for transverse switching terminal block (282-811) and longitudinal switching disconnect terminal block (282-821)  
The collective carrier can be snapped onto DIN-35 rails. It stores jumpers during maintenance.

Color	Item No.	Pack. Unit
○ gray	282-369	25



Steel DIN-rail ▶ I<sub>N</sub> 125 A (based on 1 m length) ▶ 35 x 15 mm ▶ 1.5 mm thick ▶ 2 m long ▶ per EN 60715

	Item No.	Pack. Unit
unslotted	210-506	1
slotted	210-508	1



Carrier rail ▶ plastic  
Not suited for use with ground terminal blocks!

	Item No.	Pack. Unit
	210-509	10 (1)

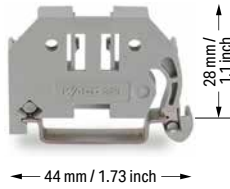


Collective carrier for adjacent jumpers ▶ for DIN-35 rail ▶ for adjacent jumpers (279 to 284 Series) ▶ for banana plugs (215 Series)  
The collective carrier can be snapped onto DIN-35 rails. It stores adjacent jumpers and banana plugs during maintenance.

Color	Item No.	Pack. Unit
○ gray	209-100	50 (25)

PU = packaging unit; SPU = subpackaging unit

## Screwless End Stop ▶ for DIN-35 Rail 249 Series



Screwless end stop ▶ for DIN-35 rail ▶ 6 mm wide

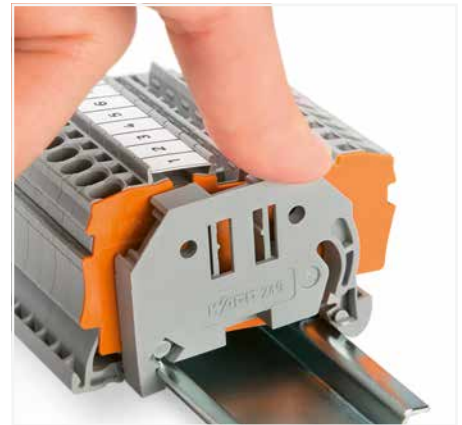
Color	Item No.	Pack. Unit
○ gray	249-116	100 (25)

Screwless end stop ▶ for DIN-35 rail ▶ 10 mm wide

○ gray	249-117	50 (25)
--------	---------	---------



Simply snap on – that's it!



Simply snap on – that's it!



Screwless end stop ▶ for DIN-35 rail ▶ 14 mm wide

Color	Item No.	Pack. Unit
○ gray	249-197	10



Simply snap on – that's it!



Removing an end stop from the DIN-rail.

Snap on – that's it! Assembling the WAGO Screwless End Stop is as simple and quick as snapping a rail-mount terminal block onto the rail.

### Tool free!

A tool-free design allows rail-mount terminal blocks to be safely and economically secured against any movement on all DIN-35 rails per DIN EN 60715 (35 x 7.5 mm; 35 x 15 mm).

### Screwless!

The "secret" to a perfect fit lies in the two small clamping plates which keep the end stop in position, even if the rails are mounted vertically.

### Simply snap on – that's it!

In addition, costs are significantly reduced when using large numbers of end stops.

Additional benefit: Three marker slots for all WAGO Rail-Mount Terminal Block Marking Systems and one snap-in hole for WAGO's adjustable height group marker carriers offer individual marking options.

PU = packaging unit; SPU = subpackaging unit

# Operating Tool



Operating tool with a partially insulated shaft ▶ Type 1, (2.5 x 0.4) mm blade		
Item No.	Pack. Unit	
210-719	50 (1)	



Operating tool with a partially insulated shaft ▶ Type 1 ▶ (2.5 x 0.4) mm blade ▶ short		
Item No.	Pack. Unit	
210-647	50 (1)	



Operating tool ▶ Blades: 3.5 mm and 2.5 mm ▶ for installation terminal blocks (TOPJOB® S)		
Item No.	Pack. Unit	
2009-309	50 (1)	

Operating tool with a partially insulated shaft ▶ Type 2, (3.5 x 0.5) mm blade		
210-720	50 (1)	

Operating tool with a partially insulated shaft ▶ (2.5 x 0.4) mm blade ▶ short ▶ angled		
210-648	50 (1)	

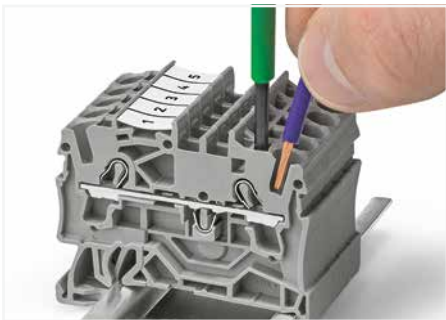
Operating tool ▶ Blades: 3.5 mm and 5.5 mm ▶ for installation terminal blocks (TOPJOB® S)		
2009-310	50 (1)	

Operating tool with a partially insulated shaft ▶ Type 3, (5.5 x 0.8) mm blade		
210-721	25 (1)	

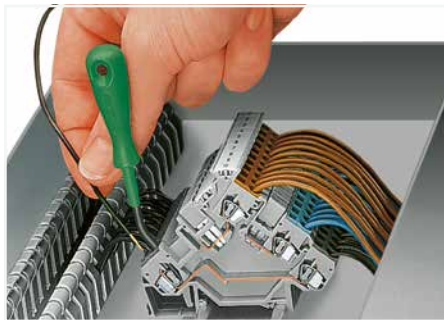
Operating tool with a partially insulated shaft ▶ (3.5 x 0.5) mm blade ▶ short		
210-657	50 (1)	

Set of operating tools with a partially insulated shaft ▶ Type 1, (2.5 x 0.4) mm blade ▶ Type 2, (3.5 x 0.5) mm blade ▶ Type 3, (5.5 x 0.8) mm blade		
210-722	1	

Operating tool with a partially insulated shaft ▶ (3.5 x 0.5) mm blade ▶ short ▶ angled		
210-658	50 (1)	



The blade of this operating tool with a partially insulated shaft is ideal for operating front-entry terminal blocks.



This operating tool with blade dimensions per DIN 5264 is ideal for front-entry sensor/actuator terminal blocks (280 Series).



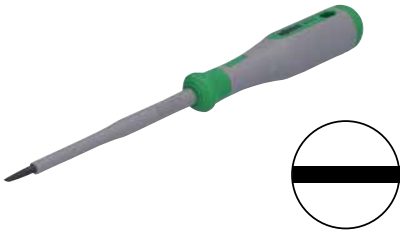
Open the clamping unit using an operating tool.



Set of operating tools in a box (Item No. 210-722)

PU = packaging unit; SPU = subpackaging unit

## Screwdriver ▶ VDE tested ▶ 1000 V ▶ insulated



Slot screwdriver ▶ (2,5 x 0,4) mm ▶ 75 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2111	1

Slot screwdriver ▶ (3,0 x 0,5) mm ▶ 100 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2112	1

Slot screwdriver ▶ (3,5 x 0,6) mm ▶ 100 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2113	1

Slot screwdriver ▶ (4,0 x 0,8) mm ▶ 100 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2114	1

Slot screwdriver ▶ (5,5 x 1,0) mm ▶ 125 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2115	1

Slot screwdriver ▶ (6,5 x 1,2) mm ▶ 150 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2116	1

Slot screwdriver ▶ (8,0 x 1,2) mm ▶ 175 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2117	1



Crosshead screwdriver ▶ PH0 ▶ 60 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2120	1

Crosshead screwdriver ▶ PH1 ▶ 80 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2121	1

Crosshead screwdriver ▶ PH2 ▶ 100 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2122	1

Crosshead screwdriver ▶ PH3 ▶ 150 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2123	1



Crosshead screwdriver ▶ PZ0 ▶ 60 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2130	1

Crosshead screwdriver ▶ PZ1 ▶ 80 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2131	1

Crosshead screwdriver ▶ PZ2 ▶ 100 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2132	1

Crosshead screwdriver ▶ PZ3 ▶ 150 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2133	1





Torx® screwdriver ▶ T8 ▶ 180 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2163	1

Torx® screwdriver ▶ T10 ▶ 180 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2164	1

Torx® screwdriver ▶ T15 ▶ 190 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2165	1

Torx® screwdriver ▶ T20 ▶ 190 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2166	1

Torx® screwdriver ▶ T25 ▶ 190 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2167	1

Torx® screwdriver ▶ T30 ▶ 215 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2169	1



Combination screwdriver ▶ Cross and slot ▶ +/- PH1/S ▶ 190 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2141	1

Combination screwdriver ▶ Cross and slot ▶ +/- PH2/S ▶ 215 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2142	1



Combination screwdriver ▶ Cross and slot ▶ +/- PZ1/S ▶ 190 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2151	1

Combination screwdriver ▶ Cross and slot ▶ +/- PZ2/S ▶ 215 mm long		
Color	Item No.	Pack. Unit
green/gray	206-2152	1



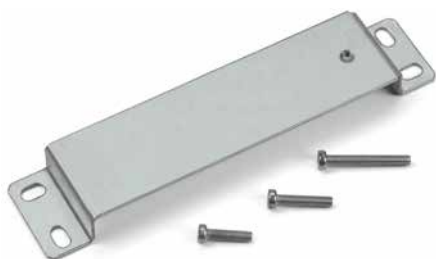
Screwdriver set ▶ PH1; PH2; PZ1; 2,5 x 0,4; 3,5 x 0,6; 5,5 x 0,8		
Color	Item No.	Pack. Unit
green/gray	206-2101	1



Torx® screwdriver set ▶ T8; T10; T15; T20; T25; T30		
Color	Item No.	Pack. Unit
green/gray	206-2102	1

PU = packaging unit; SPU = subpackaging unit

## Wall-Mount adapter 787 Series



### Geometric data/Mechanical data/Material data

Width x height x depth (mm)	35 x 15 x 158.5
Mounting type	Mounting holes: 4 slots, 5.3 mm x 9 mm; Mounting hole spacing: 143 mm x 19.5 mm
Mounting type	Wall-mount
Material	Sheet steel; galvanized
Weight	100 g

Wall-Mount Adapter ► for screw mounting 787-8xx devices on a mounting plate or wall without DIN-35 rail

Item No.	PU
787-895	5

The wall-mount adapter replaces the rail support of the 787-8xx device.  
The adapter is secured to the 787-8xx device via the provided screws.





## DIN-Rail adapter 787 Series



### Geometric data/Mechanical data/Material data

Width x height x depth (mm)	35 x 136.5 x 15.5
Mounting type	Slide both single parts into the guide slot and then screw
Mounting type	DIN-35 rail (EN 60715)
Material	Sheet steel; galvanized
Weight	81 g

DIN-Rail Adapter ► secures 787-8xx devices to a DIN-35 rail

	Item No.	PU
	787-896	1

WAGO's 787-896 DIN-Rail Adapter allows both vertical and horizontal mounting of 787-8xx devices. Mounting the adapter to the device is performed by sliding both single parts into the guide slots of the cooling element and then screwing, allowing the position to be easily changed.

## DIN-Rail adapter 787 Series



### Geometric data/Mechanical data/Material data

Width x height x depth (mm)	37 x 102.5 x 10.5
Mounting type	Press the adapter into the guide slot
Mounting type	DIN-35 rail (EN 60715)
Material	Zinc die-cast
Weight	96 g

DIN-Rail Adapter ► made of zinc die-cast ► secures 787-8xx devices to a DIN-34 rail

Item No.	PU
787-897	1

WAGO's 787-897 DIN-Rail Adapter allows horizontal mounting of 787-8xx devices. Mounting the adapter to the device is performed by sliding both single parts into the guide slots of the cooling element and then screwing, allowing the position to be easily changed.

## Mounting carrier ▶ 1.5 mm thick ▶ carbon steel ▶ for DIN-35 rail mounting ▶ 28 mm 2789 Series



### Physical data/Mechanical data/Material data

Width x Height x Depth from upper-edge of DIN-rail (mm) 28 x 101 x 1,5

Weight 46 g

Mounting carrier ▶ 1.5 mm thick ▶ carbon steel ▶  
for DIN-35 rail mounting ▶ 28 mm

Item No.	PU
2789-1128	1

## Mounting carrier ▶ 1.5 mm thick ▶ carbon steel ▶ for DIN-35 rail mounting ▶ 45 mm 2789 Series



### Physical data/Mechanical data/Material data

Width x Height x Depth from upper-edge of DIN-rail (mm)	45 x 96 x 1.5
Weight	68 g

Mounting carrier ▶ 1.5 mm thick ▶ carbon steel ▶  
for DIN-35 rail mounting ▶ 45 mm

	Item No.	PU
	2789-1145	1

## Communication cable ► with RS-232 Interface

### 787 Series



Similar to pictured device

RS-232 Communication Cable ► 1.8 m long		
for	Item No.	PU
787-8xx	787-890	1

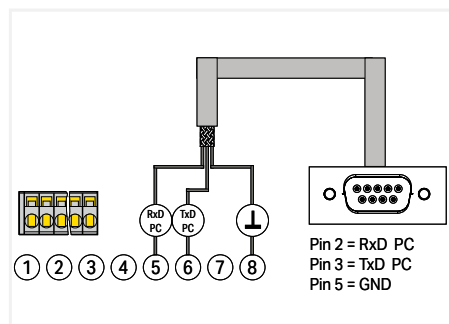
This communication cable is used for configuration and visualization via PC or controller.

It is suitable for all 787-8xx Series devices equipped with an RS-232 serial interface. Download the corresponding PC software for all 787 Series devices at [www.wago.com/epsitron](http://www.wago.com/epsitron).

Function modules for communication with the WAGO-I/O-SYSTEM 750 and other control systems are also available.

#### Note:

The 787-890 Communication Cable is not electrically isolated.



#### Signaling and communication

Signaling	1 x RS-232 cable
Communication	RS-232 interface

#### Safety and Protection/Environmental Requirements

Protection type	IP20 (per EN 60529)
Ambient temperature (operation)	-10 ... +70 °C

#### Connection data

Module side (787-8xx)	1 x 8-pole female connector (734-108) with strain relief
PC/controller side	1 x 9 pole D-sub socket
Cable type	3 x 0.34 mm <sup>2</sup> ; shielded

#### Geometric data/Mechanical data/Material data

Cable length	1.8 m
--------------	-------

#### Material data

Weight	113 g
--------	-------



## Communication cable ► with RS-232 Interface

### 787 Series



Similar to pictured device

RS-232 Communication Cable ► 1.8 m long ►  
for 787-1675

for	Item No.	PU
787-1675	787-892	1

This communication cable is used for configuration and visualization via PC or controller.  
The communication cable is suitable for 787-1675. Download the corresponding PC software for all 787 Series devices at [www.wago.com/epsitron](http://www.wago.com/epsitron).

Function modules for communication with the WAGO-I/O-SYSTEM 750 and other control systems are also available.

**Note:**

The 787-892 Communication Cable is not electrically isolated.

Signaling and communication	
Signaling	1 x RS-232 cable
Communication	RS-232 interface
Safety and Protection/Environmental Requirements	
Protection type	IP20 (per EN 60529)
Ambient temperature (operation)	-10 ... +70 °C
Connection data	
Module side (787-1675)	1 x 4-pole female connector (734-104) with strain relief
PC/controller side	1 x 9 pole D-sub socket
Cable type	3 x 0.34 mm <sup>2</sup> ; shielded
Geometric data/Mechanical data/Material data	
Cable length	1.8 m
Material data	
Weight	97 g



**Index**

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## Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

### PUSH-IN CAGE CLAMP®



Push-in CAGE CLAMP® terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection with an additional advantage:

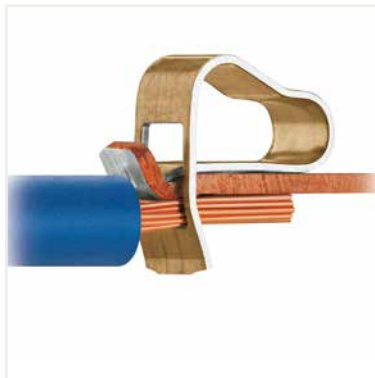
Push-in connection

Terminate solid and stranded (Class B 7 strands or less), as well as ferruled conductors, by simply pushing them in – no tools required.

Termination for all conductor types:

- Open clamping unit.
- Insert the conductor.
- Release clamp – done!

### CAGE CLAMP®



CAGE CLAMP® terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection for solid, stranded and fine-stranded conductors

Termination:

- Open clamping unit.
- Insert the conductor.
- Release clamp – done!

## Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

### POWER CAGE CLAMP®



POWER CAGE CLAMP terminates the following copper conductors:  
solid



stranded



fine-stranded,  
also with tinned  
single strands



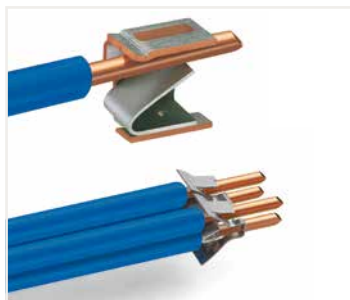
fine-stranded,  
with ferrule  
(gastight crimped)

The universal connection for conductors larger than 35 mm<sup>2</sup> (2 AWG)

Termination:

- Open clamp by turning a T-wrench counter-clockwise.
- Press the integrated latch to open clamping unit for hands-free wiring.
- Insert the conductor.
- A small counter-clockwise rotation closes the clamp, securing conductor.

### PUSH WIRE®



PUSH WIRE® terminates the following copper conductors:  
solid

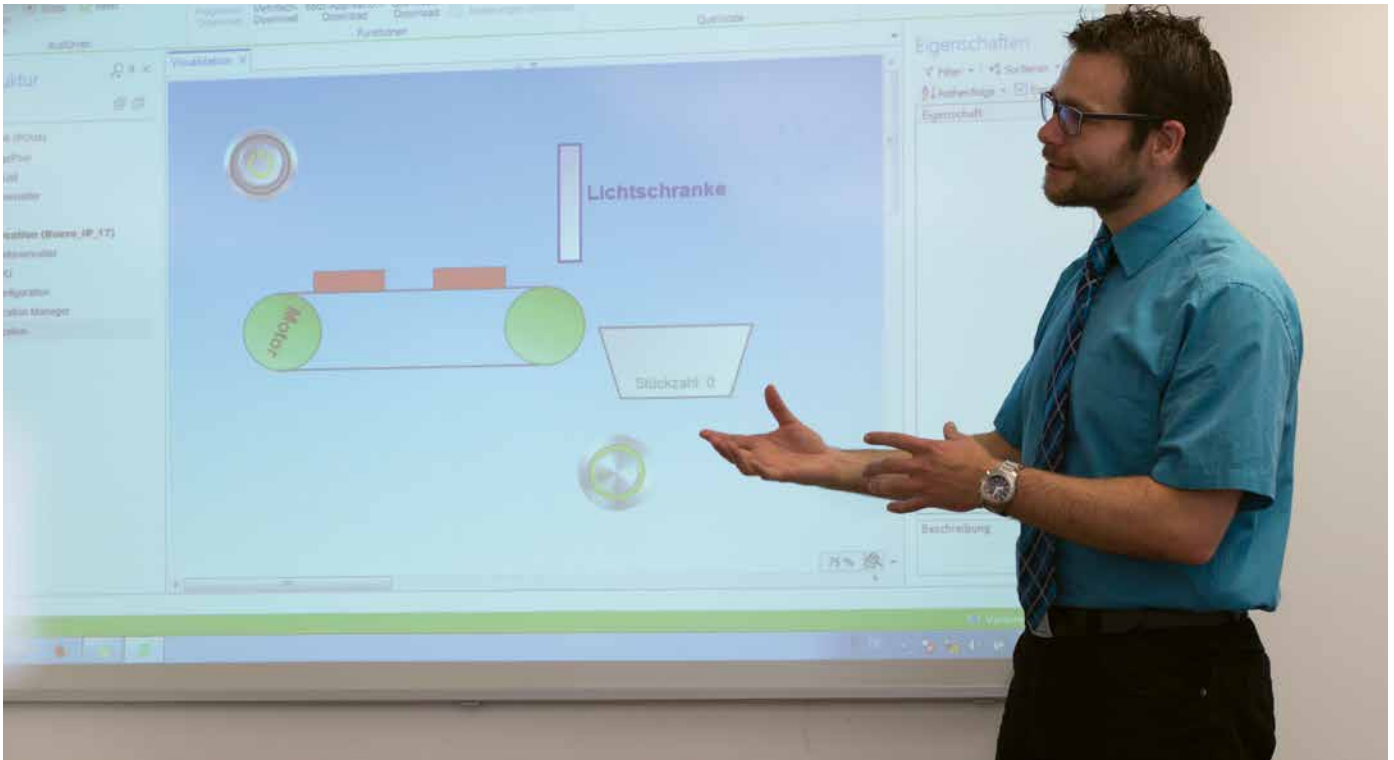
PUSH WIRE® connection for solid and stranded conductors (depending on the model used)

Termination:

Tool-free, twist-free terminations for solid and rigid stranded conductors – simply push into the unit.

## WAGO-Seminars

### Learn Today – Benefit Tomorrow



## Setting the Bar with Your Goals

### Product-Related and Customer-Specific Seminars



#### Small Groups

The small class sizes of WAGO training seminars ensures that no question goes unanswered and no one is overlooked.



#### Teamwork

Learning as a group is very effective. Ideas can be discussed and exchanged while experiences can be shared – all for the benefit of the participants.



#### Practical Topics

Experience has shown that practice makes perfect. This is why the focus of every WAGO training seminar is on practical, hands-on learning.

## WAGO-Seminars

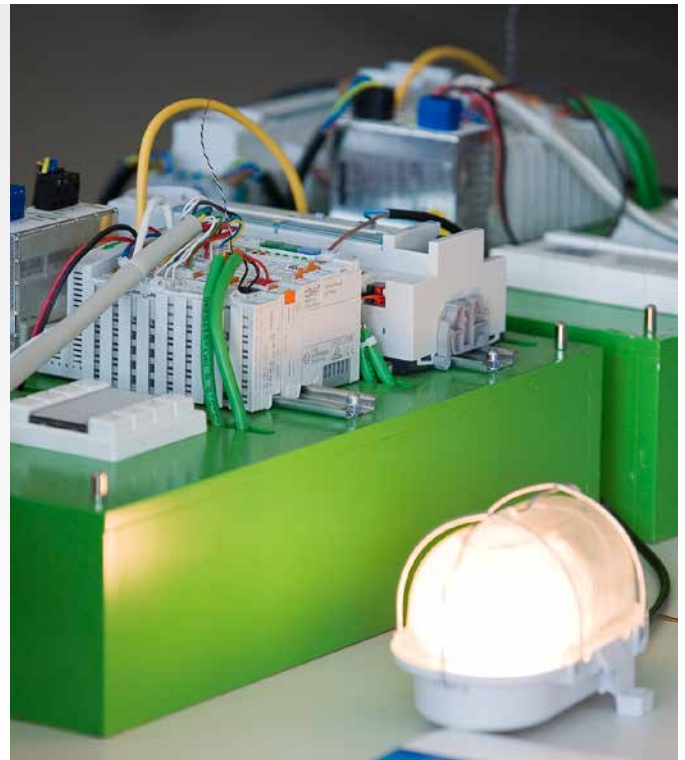
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- Programming of automation components
- Fieldbus systems

Current Seminars at:  
[www.wago.com](http://www.wago.com)

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Upon request, we can also conduct these courses at your location.

Special  
Corporate Seminars

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