



# WAGO Power Supplies

Edition 2023/2024



# WAGO Full Line Catalogs



## WAGO Rail-Mount Terminal Blocks and Connectors

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



## WAGO PCB Terminal Blocks and Connectors

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



## WAGO Pluggable Connection System WINSTA®

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



## WAGO Automation Technology

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



## WAGO Interface Electronics

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



## WAGO Power Supplies

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



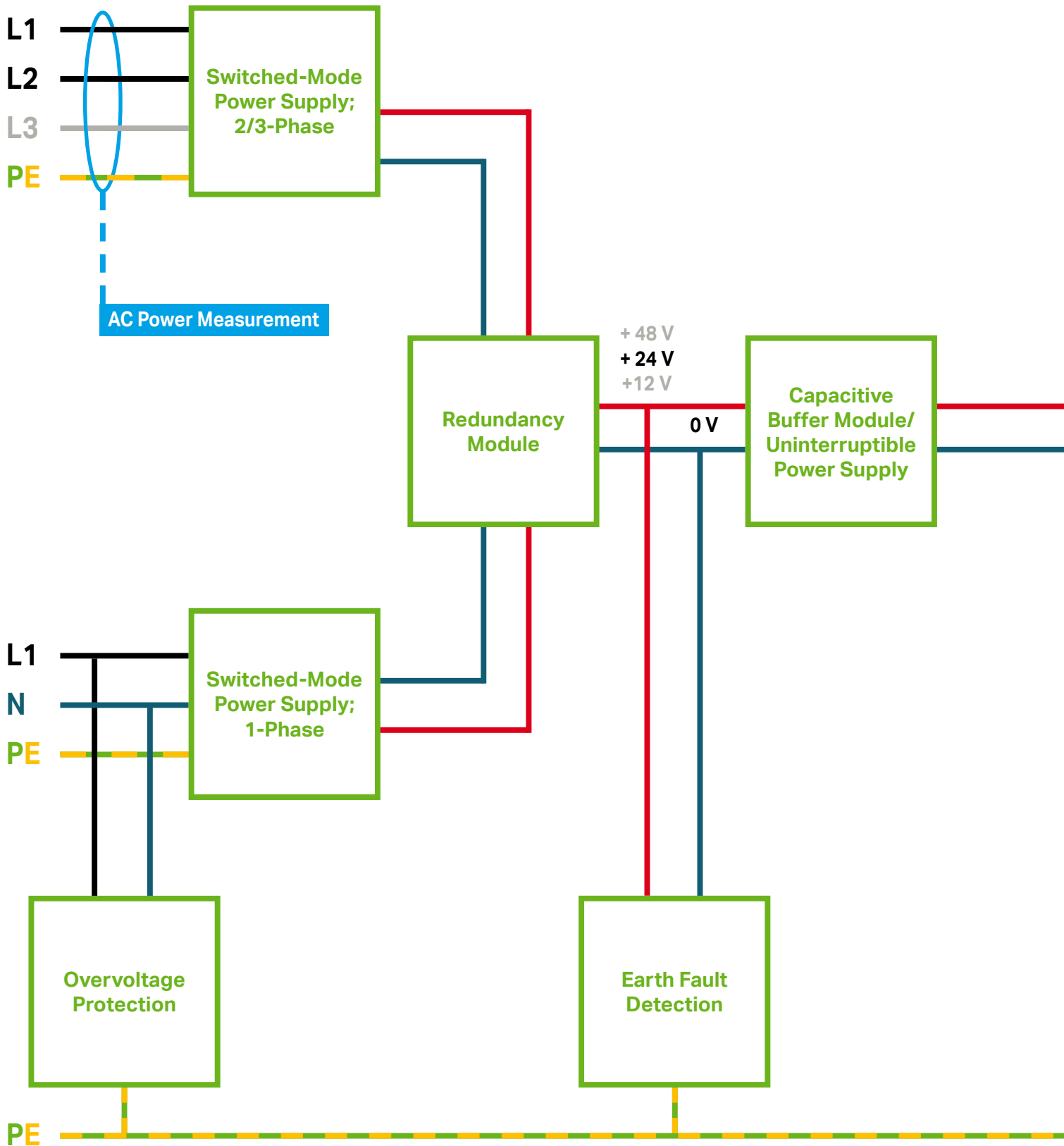
## WAGO Marking

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

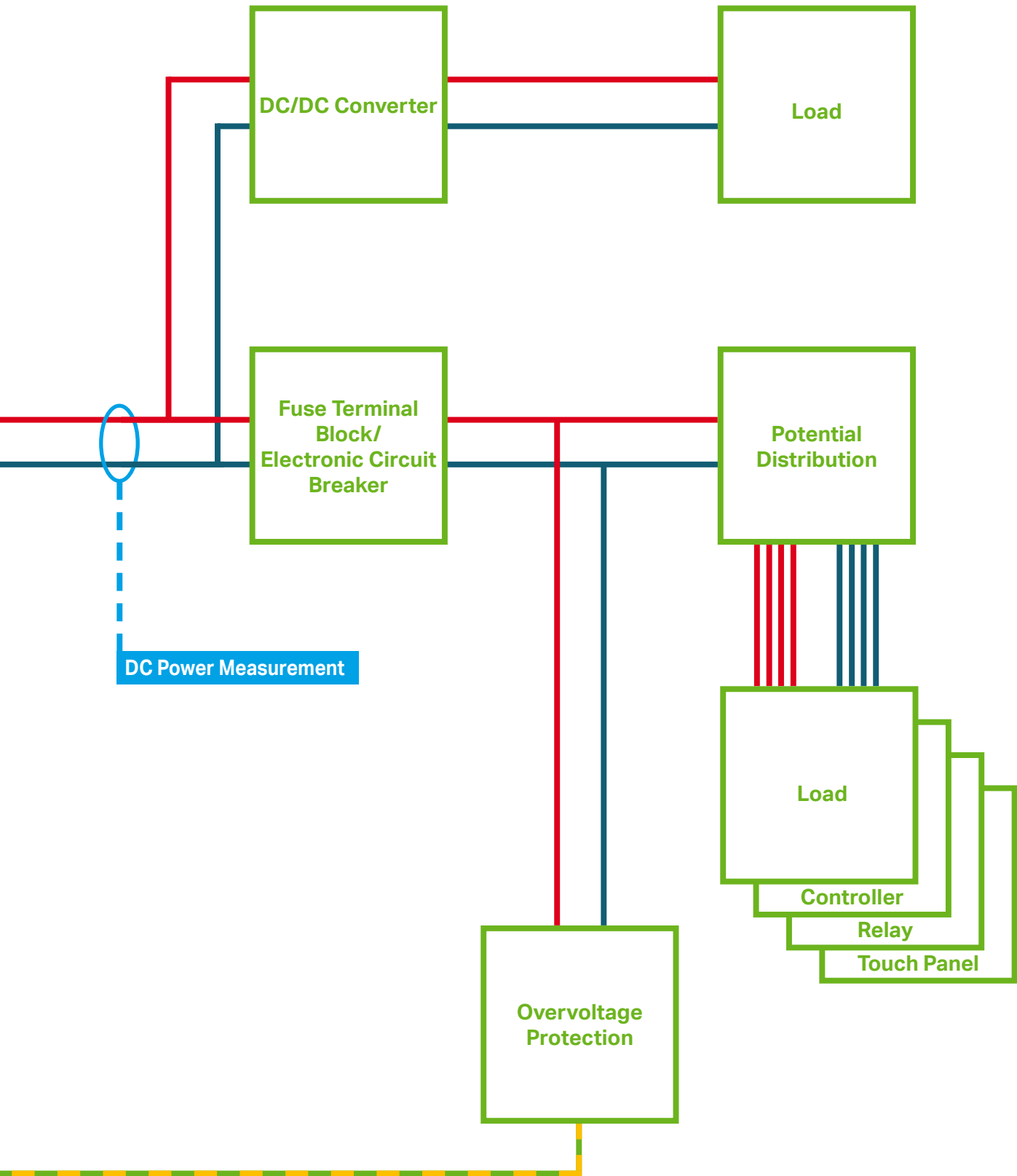
## WAGO Power Supplies 2023/2024

		Page	
	WAGO Power Supplies; 1-Phase	8	1
	WAGO Power Supplies; 3-Phase	80	2
	Special WAGO Power Supplies	110	3
	WAGO Circuit Protection	120	4
	WAGO DC/DC Converters	134	5
	WAGO UPS-Charger and Controllers and WAGO Capacitive Buffer Modules	146	6
	WAGO Redundancy Modules	164	7
	WAGO Energy Measurement Technology	174	8
	WAGO Potential Distribution	196	9
	WAGO Accessories and WAGO Tools	210	10
	Indexes	228	11

# 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 (≥ 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

		Page
	<b>Pro / Pro 2</b> Switched Mode Power Supply; 787 / 2787 Series	12
	<b>Classic</b> Switched Mode Power Supply; 787 Series	30
	<b>Eco / Eco 2</b> Switched Mode Power Supply; 787 / 2687 Series	46
	<b>Compact</b> Switched Mode Power Supply; 787 Series	61

# WAGO Power Supplies; 1-Phase Selection Guide

1

Nominal voltage (output)	Nominal current (output) [ADC]	Input, 1-phase	Input, 2-phase	Approvals						DC OK signal/contact	RS-232 interface	TopBoost <sup>1)</sup>	PowerBoost	Efficiency typ. [%]	Ambient temperature temperature [°C] <sup>4)</sup>	Item Number	Page
				EN 60935	cULus 60950	cULus 508	cULus 61010	DNV	ANSI/ISA 12.12.1								
5 VDC	5.5													75.0	-25 ... +60	787-1020	71
	2.0													82.0	-25 ... +70	787-1601 <sup>2)</sup>	30
12 VDC	2.0													80.0	-25 ... +60	787-1701	49
	2.0													80.0	-25 ... +60	787-1001	72
	2.5													88.0	-25 ... +70	787-1201	61
	4.0													86.0	-25 ... +70	787-1611 <sup>2)</sup>	31
	4.0													81.0	-25 ... +70	787-1711	50
	4.0													85.0	-25 ... +60	787-1011	73
	5.0													89.5	-25 ... +70	787-1211	62
	6.0													87.0	-25 ... +60	787-1021	74
	7.0													86.0	-25 ... +70	787-1621	32
	8.0													84.0	-25 ... +60	787-1721	51
	8.0													91.5	-25 ... +70	787-1221	63
	10.0													93.8	-25 ... +70	2787-2134	12
	15.0													95.3	-25 ... +70	2787-2135	13
	15.0													90.0	-25 ... +70	787-1631	33
DC 18 V	2.4													83.0	-25 ... +60	787-1017	75
	1.25													88.0	-25 ... +70	787-2857	69
24 VDC	0.5													83.0	-25 ... +70	787-1200	64
	1.0													86.0	-25 ... +70	787-1602 <sup>2)</sup>	34
	1.25													80.0	-20 ... +60	787-1702	52
	1.25													88.0	-25 ... +70	2687-2142	46
	1.25													88.0	-20 ... +70	787-2850	70
	1.3													82.0	-25 ... +60	787-1002	76
	1.3													87.0	-25 ... +70	787-1202	65
	2.0													89.0	-25 ... +70	787-1606 <sup>2)</sup>	35
	2.5													86.0	-10 ... +70	787-712	55
	2.5													81.0	-20 ... +60	787-1712	53
	2.5													88.0	-25 ... +60	787-1012	77
	2.5													89.0	-25 ... +70	787-1212	66
	3.0													87.8	-25 ... +70	787-818	24
	3.8													87.0	-25 ... +70	787-1616/000-1000 <sup>2)</sup>	36
	4.0													89.0	-25 ... +70	787-1616	37
	4.0													88.0	-25 ... +60	787-1022	78
	4.2													90.0	-25 ... +70	787-1216	67
	5.0													91.5	-25 ... +70	2787-2144	14
	5.0													87.8	-25 ... +70	787-822	25
	5.0													89.0	-25 ... +70	787-1622	38
	5.0													89.0	-25 ... +70	787-1628	44
	5.0													86.0	-10 ... +60	787-722	56
	5.0													84.0	-20 ... +60	787-1722	57
	5.0													90.0	-25 ... +70	2687-2144	47
6.0													90.0	-25 ... +70	787-1226	68	
10.0													93.0	-25 ... +70	2687-2146	48	
10.0													92.8	-25 ... +70	2787-2146	15	
10.0													90.0	-25 ... +70	787-832	25	
10.0													91.0	-25 ... +70	787-1632 <sup>5)</sup>	39	
10.0													90.0	-25 ... +70	787-1638	45	
10.0													86.0	-10 ... +70	787-732	59	
10.0													84.0	-20 ... +60	787-1732	58	
20.0													94.0	-25 ... +70	2787-2147	16	
20.0													91.0	-25 ... +70	787-834	27	
20.0													92.0	-25 ... +70	787-1634	40	
20.0													90.0	-25 ... +70	787-734	60	
40.0													95.0	-25 ... +70	2787-2448	17	
40.0													90.0	-25 ... +70	787-736	54	

Nominal voltage (output)	Nominal current (output) [ADC]	Input, 1-phase	Input, 2-phase	Approvals							DC OK signal/contact	RS-232 interface	TopBoost <sup>1)</sup>	PowerBoost	Efficiency typ. [%]	Ambient temperature temperature [°C] <sup>4)</sup>	Item Number	Page
				EN 60335	cURus 60950	cULus 508	cULus 61010	DNV	ANSI/ISA 12.12.1	ATEX/IEC Ex								
48 VDC	2.0	■		■	■	■	■	■	■	■	■	■	■	86.0	-25 ... +70	787-1623	41	
	5.0	■		■	■	■	■	■	■	■	■	■	■	95.3	-25 ... +70	2787-2154	18	
	5.0	■		■	■	■	■	■	■	■	■	■	■	91.0	-25 ... +70	787-833	28	
	5.0	■		■	■	■	■	■	■	■	■	■	■	92.0	-25 ... +70	787-1633	42	
	10.0	■		■	■	■	■	■	■	■	■	■	■	95.3	-25 ... +70	2787-2157	19	
	10.0	■		■	■	■	■	■	■	■	■	■	■	91.0	-25 ... +70	787-835	29	
	10.0	■		■	■	■	■	■	■	■	■	■	■	93.0	-25 ... +70	787-1635 <sup>5)</sup>	43	

■ Yes □ Pending

<sup>1)</sup>TopBoost enables magnetic tripping of circuit breakers in the output circuit.

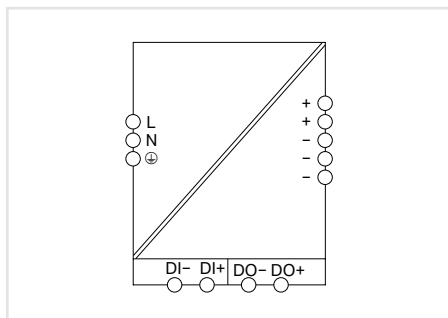
<sup>2)</sup>NEC Class 2 Power Unit per cURus 1310 or cURus 60950

<sup>3)</sup>With uninterruptible power supply (UPS)

<sup>4)</sup>Device starts at -40°C, type-tested for 787-8xx, -10xx, -16xx, 2787-2xxx

<sup>5)</sup>.../000-070 is optionally available with protective coating

# Power supply; Pro 2; 1-phase; 12 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 12 VDC output voltage;  
10 A output current; TopBoost + PowerBoost; Commu-  
nication capability

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	
Nominal input voltage $U_{i, nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
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	Digital signal input and output (DI/DO)
Communication	Communication interface, can be used with WAGO USB Communication Cable (750-923) or IO-Link Communication Module (2789-9080), Modbus RTU Communication Module (2789-9015) or Modbus TCP Communication Module (2789-9052)

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

Safety and protection	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)

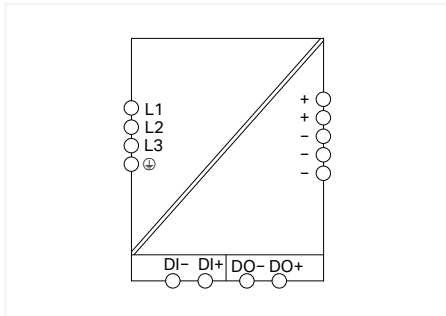
Connection data	
Connection technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	35 x 130 x 130 (mm) / 1.378 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 166 mm
Mounting type	DIN-35 rail
Weight	650 g

Environmental requirements	
Ambient temperature (operation at $U_i$ )	-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

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; Pro 2; 1-phase; 12 VDC output voltage; 15 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 12 VDC output voltage;  
15 A output current; TopBoost + PowerBoost; Commu-  
nication capability

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	
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 2$ A (240 VAC; nominal load)
Inrush current	$\leq 12$ 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)
Nominal output current $I_{o,nom}$	15 A (12 VDC)
Nominal output power	180 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 22.5 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.8$ W (standby); $\leq 2.3$ W (no load); $\leq 14$ W (230 VAC; nominal load)
Efficiency (typ.)	95.3 %

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)	16 A (for USA/Canada: 15 A)

Safety and protection	
Isolation voltage (sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)

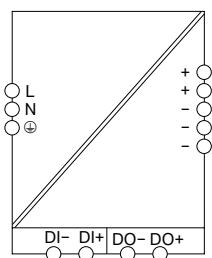
Connection data	
Connection technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	70 x 130 x 130 (mm) / 2.756 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 166 mm
Mounting type	DIN-35 rail
Weight	1000 g

Environmental requirements	
Ambient temperature (operation at $U_i$ )	-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

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

# Power supply; Pro 2; 1-phase; 24 VDC output voltage; 5 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 24 VDC output voltage; 5 A output current; TopBoost + PowerBoost; Communication capability

	Item No.	PU
	2787-2144	1
DNV	2787-2144/000-030	1
DNV + Protective coating	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
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
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	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)

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

Safety and protection	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	> 1,000,000 h (per IEC 61709)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

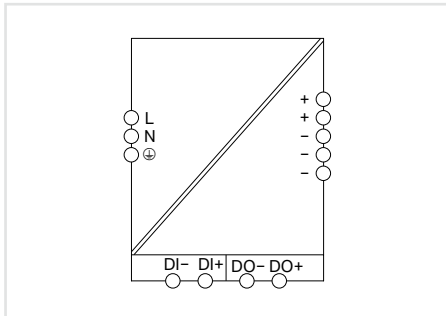
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	35 x 130 x 130 (mm) / 1.378 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 166 mm
Mounting type	DIN-35 rail
Weight	650 g

Environmental requirements	
Ambient temperature (operation at $U_N$ )	-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

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; Pro 2; 1-phase; 24 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 24 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability

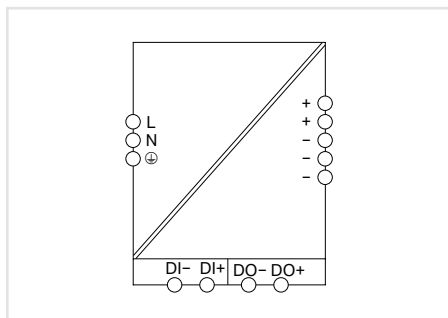
	Item No.	PU
	2787-2146	1
DNV	2787-2146/000-030	1
DNV + Protective coating	2787-2146/000-070	1

## 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
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
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 $U_{o,nom}$	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	Digital signal input and output (DI/DO)
Communication	Communication interface, can be used with WAGO USB Communication Cable (750-923) or IO-Link Communication Module (2789-9080), Modbus RTU Communication Module (2789-9015) or Modbus TCP Communication Module (2789-9052)
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 (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 1,200,000$ h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 130 x 130 (mm) / 1.969 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 166 mm
Mounting type	DIN-35 rail
Weight	1385 g
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; Pro 2; 1-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 24 VDC output voltage;  
20 A output current; TopBoost + PowerBoost; Commu-  
nication capability

	Item No.	PU
	2787-2147	1
DNV	2787-2147/000-030	1
DNV + Protective coating	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
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	≤ 2.2 A (240 VAC; nominal load); ≤ 5.9 A (100 VAC; nominal load)
Inrush current	≤ 12 A (after 1 ms)
Power factor	≥ 0.98 (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 24 ms (230 VAC)

Output	
Nominal output voltage $U_{o,nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Nominal output current $I_{o,nom}$	20 A (24 VDC)
Nominal output power	480 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 30 A (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)

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

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)	16 A (for USA/Canada: 15 A)

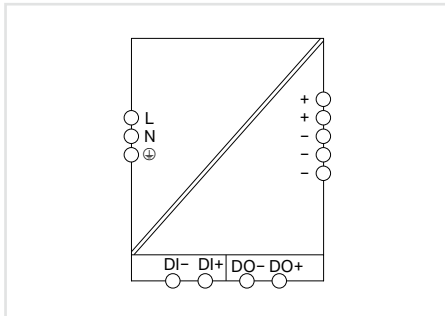
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit ≤ 35 VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 800,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (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	70x 130 x 130 (mm) / 2.756 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 169 mm
Mounting type	DIN-35 rail
Weight	1450 g

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; Pro 2; 1-phase; 24 VDC output voltage; 40 A output current; TopBoost + PowerBoost; Communication capability; Input voltage range: 200 ... 240 VAC 2787 Series



Power supply; Pro 2; 1-phase; 24 VDC output voltage;  
40 A output current; TopBoost + PowerBoost;  
Communication capability;  
Input voltage range: 200 ... 240 VAC

	Item No.	PU
	2787-2448	1
DNV	2787-2448/000-030	1
DNV + Protective coating	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
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Input	
Nominal input voltage $U_{i,nom}$	1 x AC 200 ... 240 V
Input voltage range	1 x AC 180 ... 264 V
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	Digital signal input and output (DI/DO)
Communication	Communication interface, can be used with WAGO USB Communication Cable (750-923) or IO-Link Communication Module (2789-9080), Modbus RTU Communication Module (2789-9015) or Modbus TCP Communication Module (2789-9052)

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

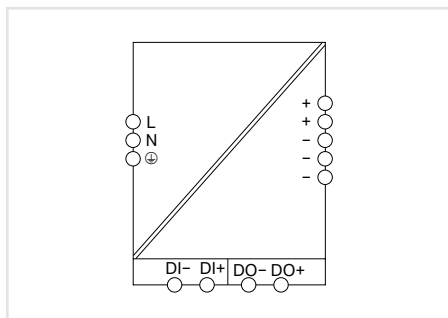
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit ≤ 35 VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 900,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP® / Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data	
Width x Height x Depth from upper-edge of DIN-rail	120 x 130 x 130 (mm) / 4.724 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 169 mm
Mounting type	DIN-35 rail
Weight	1900 g

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; Pro 2; 1-phase; 48 VDC output voltage; 2.5 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 48 VDC output voltage;  
2.5 A output current; TopBoost + PowerBoost; Commu-  
nication capability

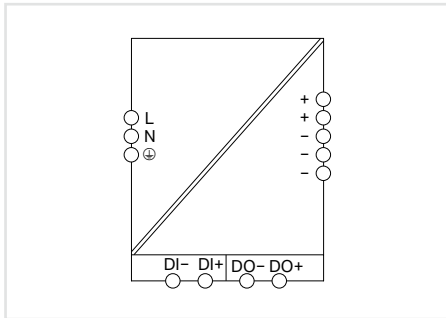
Item No.	PU
2787-2154	1

## 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	
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
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	Digital signal input and output (DI/DO)
Communication	Communication interface, can be used with WAGO USB Communication Cable (750-923) or IO-Link Communication Module (2789-9080), Modbus RTU Communication Module (2789-9015) or Modbus TCP Communication Module (2789-9052)
Efficiency/power losses	
Power loss PI	$\leq 0.8$ 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 (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 900,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 130 x 130 (mm) / 1.38 x 5.118 x 5.118 (inches)
Note (dimensions)	Height with connector: 166 mm
Mounting type	DIN-35 rail
Weight	650 g
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; Pro 2; 1-phase; 48 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 1-phase; 48 VDC output voltage;  
10 A output current; TopBoost + PowerBoost; Commu-  
nication capability

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	
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC; 130 ... 240 VDC
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 $U_{o,nom}$	48 VDC (SELV)
Output voltage range	48 ... 56 VDC (adjustable)
Nominal output current $I_{o,nom}$	10 A (48 VDC)
Nominal output power	480 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 15 A (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	Communication interface, can be used with WAGO USB Communication Cable (750-923) or IO-Link Communication Module (2789-9080), Modbus RTU Communication Module (2789-9015) or Modbus TCP Communication Module (2789-9052)
Efficiency/power losses	
Power loss PI	≤ 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 (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	16 A (for USA/Canada: 15 A)
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	> 800,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 130 x 130 (mm) / 2.756 x 5.118 x 5.118 (inches)
Note (dimensions)	Height without connector; Height with connector: 166 mm
Mounting type	DIN-35 rail
Weight	1450 g
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 TCP; Communication capability 2789 Series



### Communication module; Modbus TCP; Communication capability

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

<b>Input</b>	
Nominal input voltage $U_{i, nom}$	5 VDC (SELV)
Nominal input current at $U_N$	210 mA (typ.)
<b>Signaling and communication</b>	
Signaling	1 x ERR LED (red); 1 x COM OK LED (green); 1 x LED LNK/ACTx (green); 1 x LED SPEEDx (orange)
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; SNTP
Configuration options	Web-Based Management
Visualization	Web-Visu
Baud rate	100 MBd (ETHERNET: 10/100 Mbit/s)
Transmission medium (communication/fieldbus)	ETHERNET: Twisted pair S-UTP; 100 $\Omega$ ; Cat. 5
<b>Safety and protection</b>	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
<b>Connection data</b>	
Connection type	Modbus TCP/UDP
Connector	2 x RJ-45
Cable length (max.)	100 m
Transmission medium	ETHERNET: Twisted Pair S-UTP; 100 $\Omega$ ; Cat. 5
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth	35 x 80 x 22 (mm) / 1.378 x 3.15 x 0.866 inches
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	45 g
<b>Environmental requirements</b>	
Ambient temperature (operation at $U_N$ )	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
<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

## Communication module; Modbus RTU; RJ45; Communication capability 2789 Series



### Communication module; Modbus RTU; RJ45; Communication capability

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 $U_{i,nom}$	5 VDC (SELV)
Input voltage range	4.5 ... 5.5 VDC (SELV)
Input current $I_i$	≤ 0.04 A
Signaling and communication	
Signaling	1 x LED PWR (green); 1 x LED RxD (yellow); 1 x LED TxD (yellow)
Communication	Modbus RTU via RS-485
Baud rate	4.8 ... 115.2 kBd
Number of devices (max.)	247
Transmission medium (communication/fieldbus)	Shielded copper cable
Safety and protection	
Test voltage (input/output)	AC 2 kV; 50 Hz; 1 min
Test voltage (input/output/shield)	1 kVAC; 50 Hz; 1 min
Protection class/type	III / IP20; per EN 60529
Insulation type	Functional insulation
Pollution degree	2
Connection data	
Connector	2 x RJ-45
Transmission medium	Shielded copper cable
Physical data/Mechanical data/Material data	
Width x Height x Depth	35 x 80 x 22 (mm) / 1.378 x 3.15 x 0.866 inches
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	35 g
Environmental requirements	
Ambient temperature (operation at $U_{i,n}$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
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; IO-Link; Communication capability 2789 Series



Communication module; IO-Link; Communication capability

	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



<b>Input</b>	
Nominal input voltage $U_{i, nom}$	24 VDC (SELV; via IO-Link Master)
Input voltage range	18 ... 30 VDC (SELV; via IO-Link Master)
Input current $I_i$	$\leq 0.015$ A
<b>Signaling and communication</b>	
Signaling	1 x COM OK LED (green); 1 x ERR LED (red)
Communication	IO-Link
IO-Link version	1.1
Baud rate	230.4 kBd (COM 3)
Data width	5 bytes
Data update rate	25 ms
<b>Safety and protection</b>	
Isolation	0.63 kVDC
Protection class/type	III / IP20; per EN 60529
Pollution degree	2
<b>Connection data</b>	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth	35 x 95 x 22 (mm) / 1.378 x 3.74 x 0.866 (inches)
Note (dimensions)	Height with connector; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	35 g
<b>Environmental requirements</b>	
Ambient temperature (operation at $U_{i, nom}$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Operating altitude (max.)	5000 m
<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; UL HazLoc



## Communication module; EtherNet/IP; Communication capability 2789 Series



### Communication module; EtherNet/IP; Communication capability

Item No.	PU
2789-9023	1

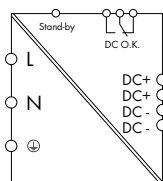
#### Features:

- 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)
Communication	EtherNet/IP/PTM
ETHERNET protocols	HTTP(S); BootP; DHCP; SNMP; MQTT
Configuration options	Web-Based Management
Visualization	Web-Visu
Baud rate	100 MBd (ETHERNET: 10/100 Mbit/s)
Transmission medium (communication/fieldbus)	ETHERNET: Twisted pair S-UTP; 100 $\Omega$ ; Cat. 5
Safety and protection	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Connection data	
Connection type	EtherNet/IP
Connector	2 x RJ-45
Cable length (max.)	100 m
Transmission medium	ETHERNET: Twisted pair S-UTP; 100 $\Omega$ ; Cat. 5
Physical data/Mechanical data/Material data	
Width x Height x Depth	35 x 80 x 22 (mm) / 1.378 x 3.15 x 0.866 (inches)
Note (dimensions)	Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	45 g
Environmental requirements	
Ambient temperature (operation at $U_N$ )	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
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

# Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 3 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 3 A output current; 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	
Nominal input voltage $U_{i, nom}$	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 $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 VDC (adjustable)
Nominal output current $I_{o, nom}$	3 A (24 VDC)
Nominal output power	72 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	6 ADC (4 s); 4.5 ADC (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

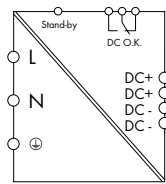
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Signaling (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 x 163 x 163 (mm) / 1.575 x 6.417 x 6.417 (inches)
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Weight	960 g

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

# Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 5 A output current; TopBoost + PowerBoost; DC OK contact 787 Series



Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 5 A output current; 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	
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 $I_i$	$\leq 0.97$ 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 $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 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/Constant current mode
PowerBoost	10 ADC (4 s); 7.5 ADC (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/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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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)

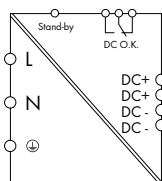
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Signaling (solid/fine-stranded/AWG)	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data	
Width	57 x 163 x 163 (mm) / 2.244 x 6.417 x 6.417 inches
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Weight	1268 g

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

# Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 10 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 10 A output current; 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	
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 $I_i$	$\leq 1.2$ 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 $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 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/Constant current mode
PowerBoost	20 ADC (4 s); 15 ADC (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

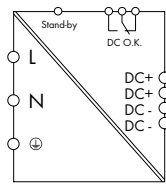
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	$-25 \dots +70$ °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 technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Signaling (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 x 163 x 179 (mm) / 2.244 x 6.417 x 7.047 (inches)
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Weight	1472.2 g

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

# Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; DC OK contact 787 Series



Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 20 A output current; 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	
Nominal input voltage $U_{i, nom}$	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
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 $U_{o, nom}$	24 VDC (SELV)
Output voltage range	22 ... 29.5 VDC (adjustable)
Nominal output current $I_{o, nom}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o, nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	30 ADC (4 s); 25 ADC (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 $P_i$	≤ 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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-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)

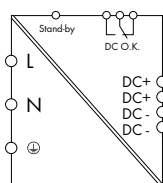
Connection data	
Connection technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (solid/fine-stranded/AWG)	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data	
Width	97 x 171 x 187 (mm) / 3.819 x 6.732 x 7.362 (inches)
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Weight	2300 g

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

# Switched-mode power supply; Pro; 1-phase; 48 VDC output voltage; 5 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 1-phase; 48 VDC output voltage; 5 A output current; 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	DC 33 ... 52 V (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	10 ADC (4 s); 7.5 ADC (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

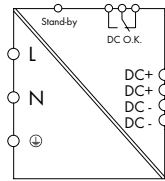
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-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 technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Signaling (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 x 163 x 179 (mm) / 2.244 x 6.417 x 7.047 (inches)
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Weight	1475 g

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

# Switched-mode power supply; Pro; 1-phase; 48 VDC output voltage; 10 A output current; TopBoost + PowerBoost; DC OK contact 787 Series



Switched-mode power supply; Pro; 1-phase; 48 VDC output voltage; 10 A output current; 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 $U_{i,nom}$	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 $U_{o,nom}$	48 VDC (SELV)
Output voltage range	DC 33 ... 52 V (adjustable)
Nominal output current $I_{o,nom}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	≤ 70 mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	17.5 ADC (4 s); 15 ADC (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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-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 technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm² / 0.5 ... 10 mm² / 20 ... 8 AWG
Signaling (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 x 171 x 187 (mm) / 3.819 x 6.732 x 7.362 (inches)
Note (dimensions)	Height with connector
Mounting type	DIN-35 rail
Weight	2460 g

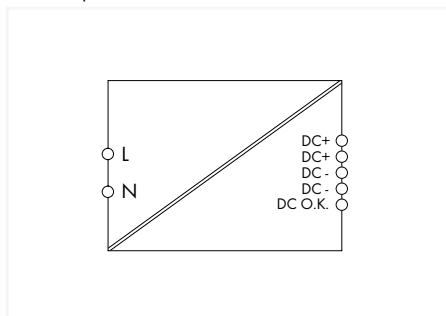
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

# Switched-mode power supply; Classic; 1-phase; 12 VDC output voltage; 2 A output current; NEC Class 2; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
12 VDC output voltage; 2 A output current;  
NEC Class 2; 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 $I_i$	≤ 0.29 A (240 VAC); ≤ 0.5 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 $I_{o, \text{nom}}$	2 A (12 VDC); 2.1 A (< 40 °C)
Nominal output power	24 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)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	≤ 0.7 W; ≤ 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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

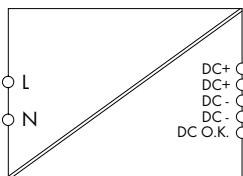
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	22.5 x 90 x 107.5 mm / 0.886 x 3.543 x 4.232 (inches)
Mounting type	DIN-35 rail
Weight	128 g

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



# Switched-mode power supply; Classic; 1-phase; 12 VDC output voltage; 4 A output current; NEC Class 2; DC OK signal

## 787 Series



Switched-mode power supply; Classic; 1-phase;  
12 VDC output voltage; 4 A output current;  
NEC Class 2; 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 $I_i$	$\leq 0.46$ A (240 VAC); $\leq 0.86$ 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 $I_{o, \text{nom}}$	4 A (12 VDC); 4.2 A (< 40 °C)
Nominal output power	48 W
Residual ripple	$\leq 20$ 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)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W; $\leq 8$ 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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 90 x 107.5 (mm) / 1.772 x 3.543 x 4.232 (inches)
Mounting type	DIN-35 rail
Weight	257.6 g

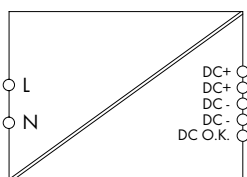
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Classic; 1-phase; 12 VDC output voltage; 7 A output current; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
12 VDC output voltage; 7 A output current;  
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 $U_{i,nom}$	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 $I_i$	≤ 0.9 A (240 VAC); ≤ 1.66 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 $U_{o,nom}$	12 VDC (SELV)
Output voltage range	11.5 ... 14.5 VDC (adjustable)
Nominal output current $I_{o,nom}$	7 A (12 VDC); 7.5 A (< 40 °C)
Nominal output power	84 W
Residual ripple	≤ 20 mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green)
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.) $P_{i(max)}$	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/type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 32 VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

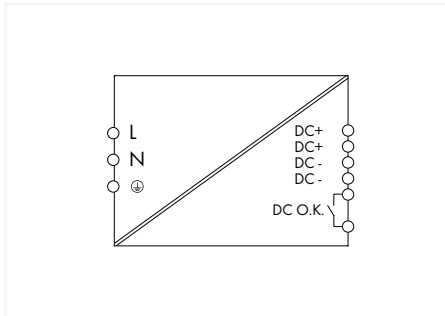
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	52 x 90 x 119 (mm) / 2.047 x 3.543 x 4.685 (inches)
Mounting type	DIN-35 rail
Weight	384 g

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

# Switched-mode power supply; Classic; 1-phase; 12 VDC output voltage; 15 A output current; TopBoost; DC OK contact 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
12 VDC output voltage; 15 A output current;  
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

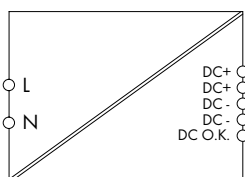
Input	
Phases	1
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	-2.5 %/V (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 0.93 A (240 VAC); ≤ 2.05 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 28 ms (230 VAC); ≥ 28 ms (100 VAC)
Output	
Nominal output voltage $U_{o,nom}$	12 VDC (SELV)
Output voltage range	DC 11.5 ... 15 V (adjustable)
Nominal output current $I_{o,nom}$	15 A (12 VDC)
Nominal output power	180 W
Residual ripple	≤ 35 mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	Constant current
Signaling and communication	
Signaling	1 x LED DC OK (green)
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.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 127 x 172 (mm) / 2.165 x 5 x 6.772 (inches)
Mounting type	DIN-35 rail
Weight	930 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 1 A output current; NEC Class 2; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 1 A output current;  
NEC Class 2; 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)
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.) $P_{1(\text{max})}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 90 x 107.5 (mm) / 0.886 x 3.543 x 4.232 (inches)
Mounting type	DIN-35 rail
Weight	128 g

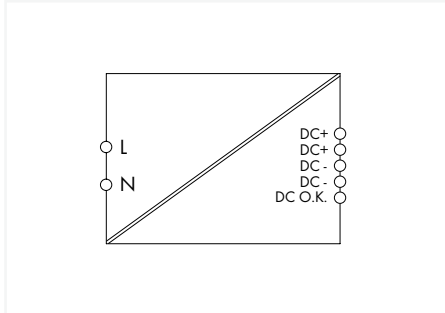
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 2 A output current; NEC Class 2; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 2 A output current;  
NEC Class 2; 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 $U_{i,nom}$	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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o,nom}$	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 $I_{o,nom}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green)
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.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 90 x 107.5 (mm) / 1.772 x 3.543 x 4.232 (inches)
Mounting type	DIN-35 rail
Weight	210 g

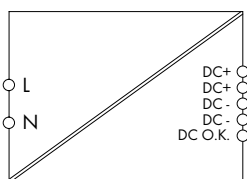
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 3.8 A output current; NEC Class 2; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 3.8 A output current;  
NEC Class 2; 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 $U_{i,nom}$	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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o,nom}$	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)
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.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 90 x 119 (mm) / 2.047 x 3.543 x 4.685 (inches)
Mounting type	DIN-35 rail
Weight	384 g

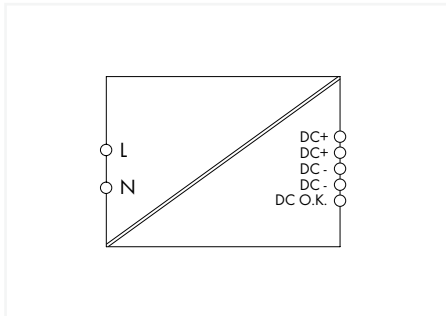
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; UL 1310; DNV

# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 4 A output current; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 4 A output current;  
DC OK signal

	Item No.	PU
	787-1616	1
With coated PCBs	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
- 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 $I_i$	$\leq 0.98$ A (240 VAC); $\leq 1.82$ 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 $I_{o, \text{nom}}$	4 A (24 VDC); 4.2 A (< 40 °C)
Nominal output power	96 W
Residual ripple	$\leq 20$ 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)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W; $\leq 12.4$ 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/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	
Parallel/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 90 x 119.5 (mm) / 2.047 x 3.543 x 4.705 (inches)
Mounting type	DIN-35 rail
Weight	384 g

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

# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 5 A output current; TopBoost; DC OK contact

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 5 A output current; 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 $U_{i,nom}$	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 $I_i$	≤ 1.24 A (230 VAC); ≤ 2.3 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 80 ms (230 VAC); ≥ 10 ms (100 VAC)

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

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

Efficiency/power losses	
Power loss $P_i$	≤ 1.2 W; ≤ 14.6 W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; ≤ 41 VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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, AC 196... 264 V); -2.5 %/K (> 50 °C, AC 85 ... 195 V)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output/Signaling (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 x 127 x 137.5 (mm) / 1.654 x 5 x 5.394 (inches)
Mounting type	DIN-35 rail
Weight	477.6 g

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



# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 10 A output current; TopBoost; DC OK contact 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 10 A output current; TopBoost;  
DC OK contact

	Item No.	PU
	787-1632	1
With coated PCBs	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
- DNV approval

Input	
Phases	1
Nominal input voltage $U_{i,nom}$	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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o,nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	≤ 50 mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green)
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.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 127 x 172 (mm) / 2.165 x 5 x 6.772 (inches)
Mounting type	DIN-35 rail
Weight	1140 g

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

# Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 20 A output current; TopBoost; DC OK contact 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
24 VDC output voltage; 20 A output current; 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 $U_{i,nom}$	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 $I_i$	$\leq 2.23$ 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); $\geq 8$ ms (100 VAC)

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

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

Efficiency/power losses	
Power loss $P_i$	$\leq 7.2$ W; $\leq 42.4$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (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 x 127 x 170 (mm) / 3.74 x 5 x 6.693 (inches)
Mounting type	DIN-35 rail
Weight	1600 g

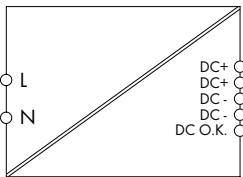
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Classic; 1-phase; 48 VDC output voltage; 2 A output current; DC OK signal

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
48 VDC output voltage; 2 A output current;  
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 $U_{i,nom}$	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 $I_i$	$\leq 0.97$ A (240 VAC); $\leq 1.84$ 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 $U_{o,nom}$	48 VDC (SELV)
Output voltage range	40 ... 53 VDC (adjustable)
Nominal output current $I_{o,nom}$	2 A (48 VDC); 2.1 A (< 40 °C)
Nominal output power	96 W
Residual ripple	$\leq 20$ mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	Constant current

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

Efficiency/power losses	
Power loss $P_i$	$\leq 1$ W; $\leq 16.2$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/type	II / 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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 90 x 119 (mm) / 2.047 x 3.543 x 4.685 (inches)
Mounting type	DIN-35 rail
Weight	590 g

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

# Switched-mode power supply; Classic; 1-phase; 48 VDC output voltage; 5 A output current; TopBoost; DC OK contact

## 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
48 VDC output voltage; 5 A output current; 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 $U_{i,nom}$	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 $I_i$	$\leq 1.25$ A (230 VAC); $\leq 2.74$ A (100 VAC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 21$ ms (230 VAC); $\geq 21$ ms (100 VAC)

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

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

Efficiency/power losses	
Power loss $P_i$	$\leq 7$ W; $\leq 40.8$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

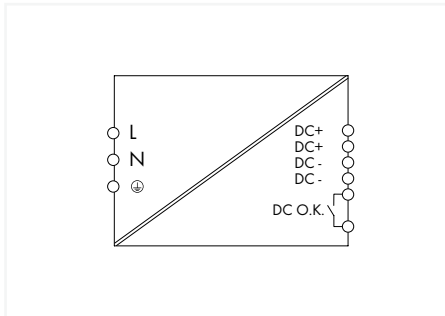
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	55 x 127 x 172 (mm) / 2.165 x 5 x 6.772 (inches)
Mounting type	DIN-35 rail
Weight	930 g

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

# Switched-mode power supply; Classic; 1-phase; 48 VDC output voltage; 10 A output current; TopBoost; DC OK contact 787 Series



Similar to pictured device



Switched-mode power supply; Classic; 1-phase;  
48 VDC output voltage; 10 A output current; TopBoost;  
DC OK contact

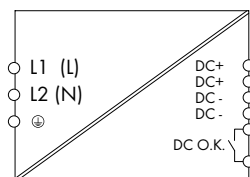
	Item No.	PU
	787-1635	1
With coated PCBs	787-1635/000-070	1

#### 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
- DNV approval

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
Input voltage derating	-2.5 %/V (< 100 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	≤ 2.23 A (230 VAC); ≤ 5.56 A (100 VAC)
Inrush current	≤ 30 A
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 20 ms (230 VAC); ≥ 20 ms (100 VAC)
Output	
Nominal output voltage $U_{o,nom}$	48 VDC (SELV)
Output voltage range	40 ... 56 VDC (adjustable)
Nominal output current $I_{o,nom}$	10 A (48 VDC)
Nominal output power	480 W
Residual ripple	≤ 80 mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	Constant current
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	≤ 11.7 W; ≤ 36.3 W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/type	I / 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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm² / 0.08 ... 2.5 mm² / 28 ... 12 AWG
Output (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	95 x 127 x 170 (mm) / 3.74 x 5 x 6.693 (inches)
Mounting type	DIN-35 rail
Weight	1600 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Classic; 2-phase; 24 VDC output voltage; 5 A output current; TopBoost; DC OK contact 787 Series



Switched-mode power supply; Classic; 2-phase;  
24 VDC output voltage; 5 A output current; TopBoost;  
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)
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

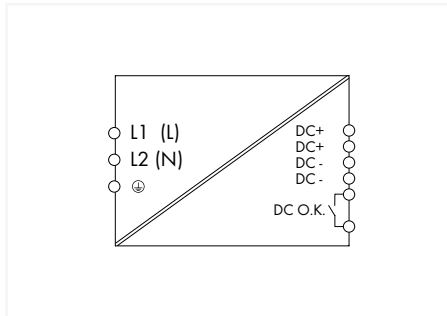
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit; $\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 127 x 143.5 (mm) / 1.654 x 5 x 5.65 (inches)
Mounting type	DIN-35 rail
Weight	600 g

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

# Switched-mode power supply; Classic; 2-phase; 24 VDC output voltage; 10 A output current; TopBoost; DC OK contact 787 Series



Switched-mode power supply; Classic; 2-phase;  
24 VDC output voltage; 10 A output current; TopBoost;  
DC OK contact

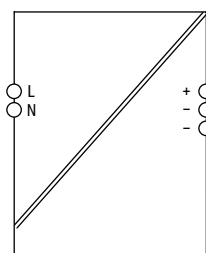
Item No.	PU
787-1638	1

## 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 $U_{i,nom}$	(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 $I_i$	≤ 1.975 A (230 VAC); ≤ 1.36 A (230 VDC)
Inrush current	≤ 30 A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 78 ms (400 VAC); ≥ 20 ms (200 VAC)
Output	
Nominal output voltage $U_{o,nom}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o,nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	≤ 30 mV (peak-to-peak)
Current limitation	1.1 x $I_{o,nom}$ (typ.)
Overload behavior	Constant current
Signaling and communication	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
Efficiency/power losses	
Power loss $P_i$	≤ 1.3 W; ≤ 27.8 W (230 VAC; nominal load); ≤ 20.3 W (400 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (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 x 127 x 146.5 (mm) / 2.165 x 5 x 5.768 (inches)
Mounting type	DIN-35 rail
Weight	830 g
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; Eco 2; 1-phase; 24 VDC output voltage; 1.25 A output current; DC OK LED 2687 Series



Power supply; Eco 2; 1-phase; 24 VDC output voltage;  
1.25 A output current; DC OK LED

Item No.	PU
2687-2142	1

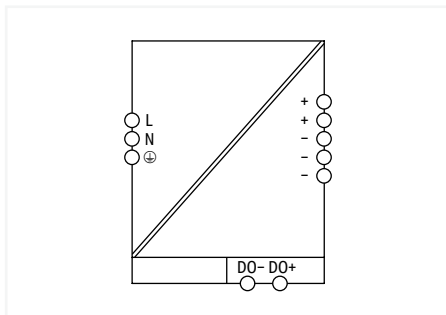
#### Features:

- 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)	3,510 V
Protection class/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/series operation	Yes/Yes
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	$-25 \dots +70$ °C (device starts at $-40$ °C, type-tested)
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	See type label/manual
Operating altitude (max.)	5000 m
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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 x 100 x 100 (mm) / 0.984 x 3.937 x 3.937 (inches)
Mounting type	DIN-35 rail
Weight	160 g
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 2; 1-phase; 24 VDC output voltage; 5 A output current; DC OK contact 2687 Series



Power supply; Eco 2; 1-phase; 24 VDC output voltage;  
5 A output current; DC OK contact

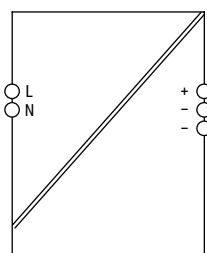
Item No.	PU
2687-2144	1

#### 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 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; $\leq 12$ 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)	3,510 V
Isolation voltage (pri.-PE, AC)	2,200 V
Isolation voltage (sec.-PE)	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/series operation	Yes/No
MTBF	$> 1,000,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 type label
Operating altitude (max.)	5000 m
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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 x 130 x 130 (mm) / 1.496 x 5.118 x 5.118 (inches)
Mounting type	DIN-35 rail
Weight	620 g
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 2; 1-phase; 24 VDC output voltage; 10 A output current; DC OK contact 2687 Series



Power supply; Eco 2; 1-phase; 24 VDC output voltage;  
10 A output current; 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

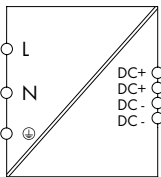
Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	≤ 1.1 A (230 VAC; nominal load); ≤ 2.7 A (100 VAC; nominal load)
Inrush current	≤ 25 A (after 1 ms)
Power factor correction (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	23 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	≤ 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 $P_i$	≤ 3 W (230 VAC; no load); ≤ 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)	3,510 V
Isolation voltage (pri.-PE, AC)	2,200 V
Isolation voltage (sec.-PE)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.)
Pollution degree	2
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
Ambient temperature (operation at $U_o$ )	-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 technology	Push-in CAGE CLAMP®
Input/Output (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 x 130 x 130 (mm) / 1.97 x 5.118 x 5.118 (inches)
Mounting type	DIN-35 rail
Weight	800 g
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

# Switched-mode power supply; Eco; 1-phase; 12 VDC output voltage; 2 A output current; DC OK LED

## 787 Series



Similar to pictured device



Switched-mode power supply; Eco; 1-phase; 12 VDC output voltage; 2 A output current; DC OK LED

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 ... 1.4 x $I_{o,nom}$ ); 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/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/series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

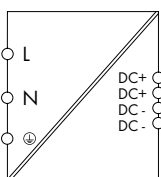
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	30 x 90 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	250 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 61558-2-6; EN 62368-1

# Switched-mode power supply; Eco; 1-phase; 12 VDC output voltage; 4 A output current; DC OK LED 787 Series



Similar to pictured device



Switched-mode power supply; Eco; 1-phase; 12 VDC output voltage; 4 A output current; DC OK LED

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 $U_{i,nom}$	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 $i_i$	≤ 1.8 A (100 VAC)
Inrush current	≤ 18 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 10 ms (230 VAC)

Output	
Nominal output voltage $U_{o,nom}$	12 VDC (SELV)
Output voltage range	10 ... 14 VDC (adjustable)
Nominal output current $I_{o,nom}$	4 A (12 VDC; 110 ... 240 VAC); 3.2 A (12 VDC; 100 ... 240 VAC)
Nominal output power	48 W
Residual ripple	≤ 150 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.4 x $I_{o,nom}$ ); 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 $P_i$	≤ 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/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/series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation at $U_{i,n}$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

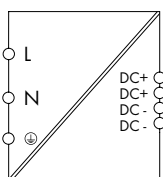
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	40 x 90 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	250 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 61558-2-6; EN 62368-1

# Switched-mode power supply; Eco; 1-phase; 12 VDC output voltage; 8 A output current; DC OK LED 787 Series



Similar to pictured device



Switched-mode power supply; Eco; 1-phase;  
12 VDC output voltage; 8 A output current; DC OK LED

	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 $I_i$	≤ 3 A (100 VAC)
Inrush current	≤ 18 A
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 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	≤ 150 mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.4 x $I_{o,nom}$ ); 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 <sub>o</sub> )

Efficiency/power losses	
Power loss $P_i$	≤ 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

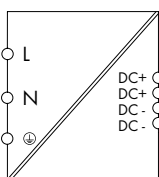
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-3 %/K (> 40 °C)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 x 130 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	520 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 61558-2-6; EN 62368-1

# Switched-mode power supply; Eco; 1-phase; 24 VDC output voltage; 1.25 A output current; DC OK LED 787 Series



Switched-mode power supply; Eco; 1-phase;  
24 VDC output voltage; 1.25 A output current;  
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 $I_i$	$\leq 0.3$ A (230 VAC); $\leq 0.6$ 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 $I_{o, \text{nom}}$	1.25 A (24 VDC; 110 ... 240 VAC); 1 A (24 VDC; 100 ... 240 VAC)
Nominal output power	30 W
Residual ripple	$\leq 200$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 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)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_i$	$\leq 6$ 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/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/series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)

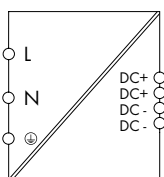
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	30 x 90 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	257 g

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

# Switched-mode power supply; Eco; 1-phase; 24 VDC output voltage; 2.5 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Eco; 1-phase;  
24 VDC output voltage; 2.5 A output current;  
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

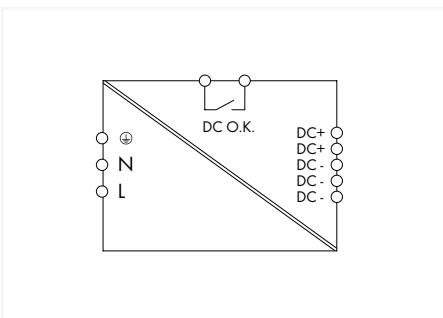
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes, for 2 devices of the same type
MTBF	$> 300,000$ h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	$-20 \dots +60$ °C
Ambient temperature (storage)	$-25 \dots +75$ °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	$-4$ %/K ( $> 45$ °C)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 x 90 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	300 g

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

# Switched-mode power supply; Eco; 1-phase; 24 VDC output voltage; 40 A output current; DC OK contact 787 Series



Switched-mode power supply; Eco; 1-phase;  
24 VDC output voltage; 40 A output current;  
DC OK contact

Item No.	PU
787-736	1

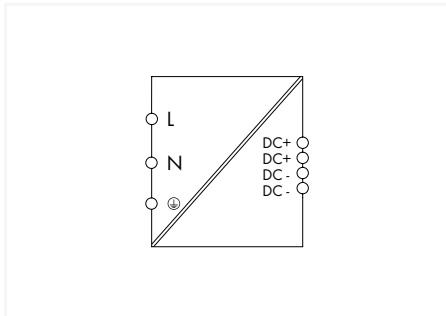
#### Features:

- 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)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)
Efficiency/power losses	
Power loss $P_l$	≤ 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
Protection class/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/series operation	Yes/Yes
MTBF	> 250,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95% (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)
Connection data	
Connection technology	CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Output (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 (mm)	170 x 136 x 150
Mounting type	DIN-35 rail
Weight	3500 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3; EN 61000-6-2; EN 61000-6-3; UL 60950-1; UL 508



# Power supply; Eco; 1-phase; 24 VDC output voltage; 2.5 A output current; DC OK LED 787 Series



Power supply; Eco; 1-phase; 24 VDC output voltage;  
2.5 A output current; DC OK LED

	Item No.	PU
	787-712	1

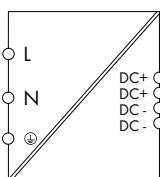
#### Features:

- 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 110 ... 240 VAC
Input voltage range	1 x 85 ... 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 ... 1.4 x $I_{o,nom}$ ); 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/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/series operation	Yes/Yes
MTBF	480,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output (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 (mm)	50 x 92 x 136
Mounting type	DIN-35 rail
Weight	470 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3; cULus 60950-1; cULus 508; ANSI/ISA 12.12.01 (Class I Div. 2); ATEX; IEC Ex

# Power supply; Eco; 1-phase; 24 VDC output voltage; 5 A output current; DC OK LED

## 787 Series



Power supply; Eco; 1-phase; 24 VDC output voltage;  
5 A output current; 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 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; 90 ... 373 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	$\leq 30$ 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 $I_{o,nom}$	5 A (24 VDC)
Nominal output power	120 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.15 ... 1.4 x $I_{o,nom}$ ); 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 $P_i$	$\leq 19.5$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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 (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/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/series operation	Yes/Yes
MTBF	480,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 95\%$ (no condensation permissible)
Derating	-5.33 %/K (> 45 °C; 230 VAC)

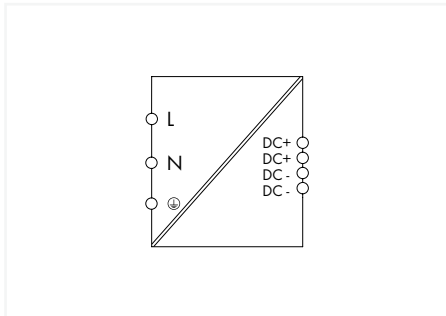
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 4 mm <sup>2</sup> / 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	75 x 92 x 136
Mounting type	DIN-35 rail
Weight	850 g

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; IEC Ex

# Switched-mode power supply; Eco; 1-phase; 24 VDC output voltage; 5 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Eco; 1-phase;  
24 VDC output voltage; 5 A output current; 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 $U_{i,nom}$	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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o,nom}$	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 ... 1.4 x $I_{o,nom}$ ); 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 $P_i$	$\leq 19$ 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/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/series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)

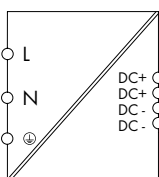
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	60 x 130 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	550 g

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

# Switched-mode power supply; Eco; 1-phase; 24 VDC output voltage; 10 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Eco; 1-phase;  
24 VDC output voltage; 10 A output current;  
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 ... 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)
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

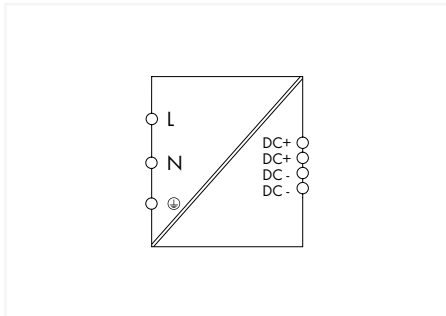
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I/IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes, for 2 devices of the same type
MTBF	> 300,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-4 %/K (> 45 °C)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	70 x 165 x 99
Mounting type	DIN-35 rail; Screw mount
Weight	840 g

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

# Power supply; Eco; 1-phase; 24 VDC output voltage; 10 A output current; DC OK LED 787 Series



Power supply; Eco; 1-phase; 24 VDC output voltage;  
10 A output current; DC OK LED

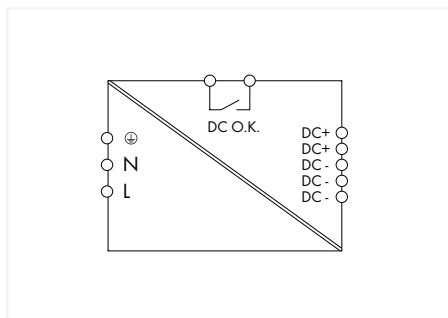
	Item No.	PU
	787-732	1

## 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 85 ... 264 VAC; 90 ... 373 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 1.5 \text{ A}$ (230 VAC); $\leq 3 \text{ A}$ (115 VAC)
Inrush current	$\leq 30 \text{ A}$
Power factor	$\geq 0.94$ (230 VAC); $\geq 0.98$ (115 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20 \text{ ms}$ (230 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o, \text{nom}}$	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 ... 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)
Operation status indicator	Green LED (24 VDC OK); Red LED (overload)
Efficiency/power losses	
Power loss $P_i$	$\leq 37.5 \text{ W}$ (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 (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/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/series operation	Yes/Yes
MTBF	480,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-10 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 95\%$ (no condensation permissible)
Derating	-2.33 %/K (> 40 °C; 230 VAC)
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	110 x 92 x 136
Mounting type	DIN-35 rail
Weight	1200 g
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; IEC Ex

# Switched-mode power supply; Eco; 1-phase; 24 VDC output voltage; 20 A output current; DC OK contact 787 Series



Switched-mode power supply; Eco; 1-phase;  
24 VDC output voltage; 20 A output current;  
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 ... 1.4 x $I_{o,nom}$ ); 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 $P_i$	$\leq 65$ 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
Protection class/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/series operation	Yes/Yes
MTBF	> 250,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 95\%$ (no condensation permissible)
Derating	See instruction manual

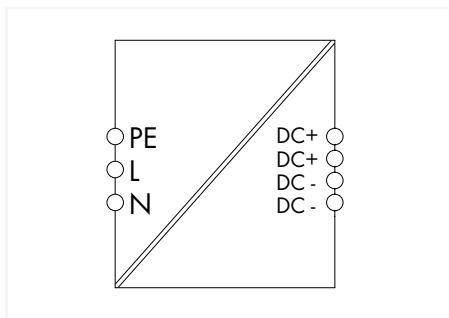
Connection data	
Connection technology	CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Output (solid/fine-stranded/AWG)	1.5 ... 16 mm <sup>2</sup> / 1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	115 x 136 x 144
Mounting type	DIN-35 rail
Weight	2120 g

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

# Switched-mode power supply; Compact; 1-phase; 12 VDC output voltage; 2.5 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
12 VDC output voltage; 2.5 A output current;  
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/type	I / IP20; per EN 60529
Overtoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overtoltage protection; secondary	≤ 20 VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/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 at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-0.8 %/K (> 45 °C)

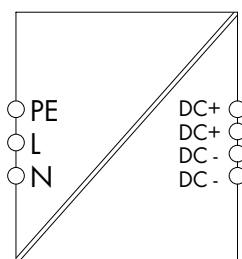
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Cable length (max.)	30 m

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	54 x 90 x 56
Depth from upper-edge of DIN-rail	52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)
Weight	318.5 g

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

# Switched-mode power supply; Compact; 1-phase; 12 VDC output voltage; 5 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
12 VDC output voltage; 5 A output current; DC OK LED

Item No.	PU
787-1211	1

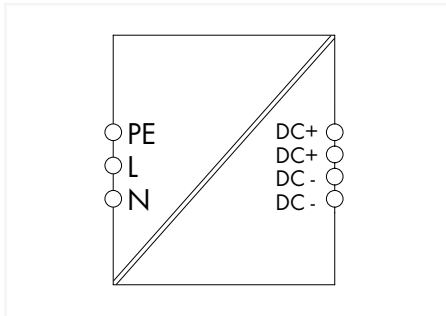
### Features:

- 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

<b>Input</b>	
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)
<b>Output</b>	
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
<b>Signaling and communication</b>	
Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED ( $U_o$ )
<b>Efficiency/power losses</b>	
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)
<b>Circuit protection</b>	
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
<b>Safety and protection/Environmental requirements</b>	
Protection class/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/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 at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-3 %/K (> +45 °C and $U_e = 90$ VAC); -2.3 %/K (> +50 °C and $U_e = 230$ VAC)
<b>Connection data</b>	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth (mm)	72 x 90 x 56
Depth from upper-edge of DIN-rail (mm)	52.5
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail
Weight	63 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508



# Switched-mode power supply; Compact; 1-phase; 12 VDC output voltage; 8 A output current; DC OK LED 787 Series



Switched-mode power supply; Compact; 1-phase;  
12 VDC output voltage; 8 A output current; 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/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/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 at $U_n$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-2 %/K (> 45 °C)

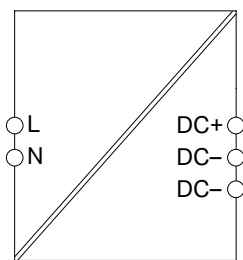
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Cable length (max.)	30 m

Physical data/Mechanical data/Material data	
Width x Height x Depth (mm)	108 x 90 x 56
Depth from upper-edge of DIN-rail (mm)	52.5
Note (dimensions)	DIN-35 rail; Screw mount (back)
Mounting type	
Weight	422.8 g

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

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 0.5 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 0.5 A output current;  
DC OK LED

Item No.	PU
787-1200	1

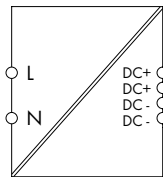
### Features:

- 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/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/series operation	No/Yes, for 2 devices of the same type
MTBF	> 700,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Output (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 (mm)	18 x 90 x 55
Depth from upper-edge of DIN-rail (mm)	52,5
Mounting type	DIN-35 rail; Screw mount (back/side)
Weight	63 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368; UL 62368; UL 508

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 1.3 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 1.3 A output current;  
DC OK LED

Item No.	PU
787-1202	1

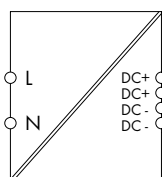
### Features:

- 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	31.2W
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/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/series operation	Yes/Yes
MTBF	> 700,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95% (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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 (mm)	54 x 90 x 56
Depth from upper-edge of DIN-rail (mm)	52.5
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)
Weight	239.3 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 2.5 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 2.5 A output current;  
DC OK LED

Item No.	PU
787-1212	1

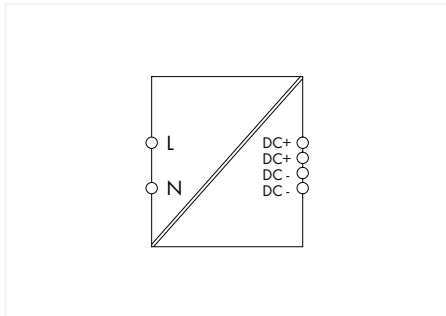
### Features:

- 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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95% (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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 (mm)	72 x 90 x 56
Depth from upper-edge of DIN-rail (mm)	52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)
Weight	288 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61204-3; EN 60335-1; EN 62368-1; UL 60950-1; UL 508

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 4.2 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 4.2 A output current;  
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 $U_{i,nom}$	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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	22 ... 26 VDC (adjustable)
Nominal output current $I_{o,nom}$	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 $I_{o,nom}$ ); 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.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95% (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)

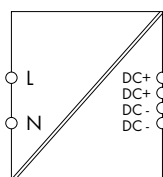
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth (mm)	108 x 90 x 56
Depth from upper-edge of DIN-rail	52.5 mm
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back/side)
Weight	456.9 g

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

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 6 A output current; DC OK LED

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 6 A output current; DC OK LED

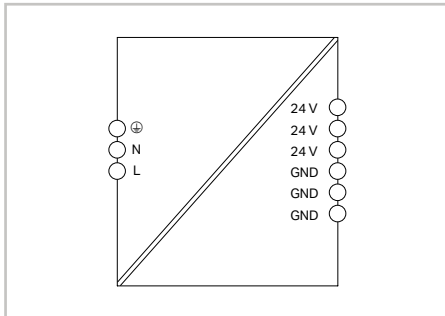
Item No.	PU
787-1226	1

### 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.) $P_i$ (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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 95% (no condensation permissible)
Derating	-2.66 %/K (> 55 °C)
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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 (mm)	144 x 90 x 56
Depth from upper-edge of DIN-rail	52.5
Note (dimensions)	Depth: 48 mm (without cover)
Mounting type	DIN-35 rail; Screw mount (back)
Weight	510 g
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; 1-phase; 18 VDC output voltage; 1.25 A output current; DC OK LED 787 Series



Power supply; Compact; 1-phase; 18 VDC output voltage; 1.25 A output current; DC OK LED

Item No.	PU
787-2857	1

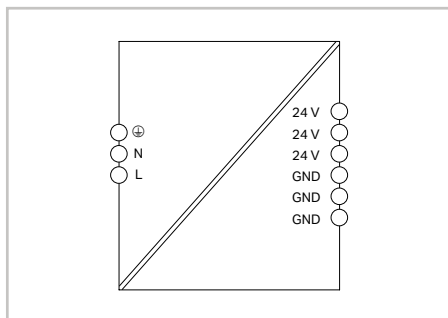
#### Features:

- This Switched-Mode Power Supply is specially designed to supply the 753-647 DALI Multi-Master module.
- Multiple parallel modules can be supplied.
- 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)	3,920 V
Isolation voltage (pri.-PE, AC)	2,470 V
Isolation voltage (sec.-PE)	0.5 VDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 2,500,000$ h (per EN/IEC 61709 at +40 °C)
Ambient temperature (operation at $U_n$ )	-25 ... +70 °C (Nominal mounting position); -20 ... +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 technology	Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.25 ... 2.5 mm <sup>2</sup> / 0.25 ... 2.5 mm <sup>2</sup> / 20 ... 12 AWG
Output (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 (mm)	36 x 90 x 62
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	120 g
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; 1-phase; 24 VDC output voltage; 1.25 A output current

## 787 Series



Power supply; Compact; 1-phase; 24 VDC output voltage; 1.25 A output current

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)	3,920V
Isolation voltage (pri.-PE, AC)	2,470V
Isolation voltage (sec.-PE)	0.5 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	III
Pollution degree	2
Overvoltage protection; secondary	$\leq 32 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 2,500,000 \text{ h}$ (per EN/IEC 61709 at +40 °C)
Ambient temperature (operation at $U_o$ )	-25 ... +70 °C (Nominal mounting position; -20 ... +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 technology	Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.25 ... 2.5 mm <sup>2</sup> / 0.25 ... 2.5 mm <sup>2</sup> / 20 ... 12 AWG
Output (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

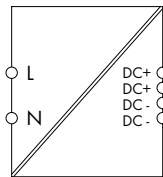
Physical data/Mechanical data/Material data	
Width x Height x Depth (mm)	36 x 90 x 62
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	120 g

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



# Switched-mode power supply; Compact; 1-phase; 5 VDC output voltage; 5.5 A output current; DC OK signal

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
5 VDC output voltage; 5.5 A output current;  
DC OK signal

Item No.	PU
787-1020	1

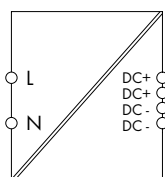
### Features:

- 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/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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_{iN}$ )	$-25 \dots +60$ °C (device starts at $-40$ °C, type-tested)
Ambient temperature (storage)	$-25 \dots +80$ °C
Ambient temperature UL (operation at $U_{iN}$ )	$-25 \dots +55$ °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3$ %/K ( $> 45$ °C)
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	72 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	240 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Compact; 1-phase; 12 VDC output voltage; 2 A output current

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
12 VDC output voltage; 2 A output current

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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-25 ... +60 °C (device starts at -40 °C, type-tested)
Ambient temperature (storage)	-25 ... +80 °C
Ambient temperature UL (operation at $U_N$ )	-25 ... +55 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)

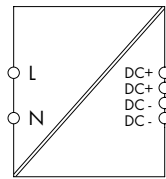
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth (mm)	54 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55 mm
Mounting type	DIN-35 rail
Weight	180 g

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

# Switched-mode power supply; Compact; 1-phase; 12 VDC output voltage; 4 A output current

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
12 VDC output voltage; 4 A output current

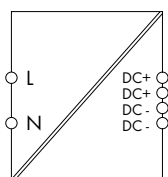
Item No.	PU
787-1011	1

### 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 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	$\geq 80 \text{ ms}$ (230 VAC); $\geq 10 \text{ ms}$ (110 VAC)
Output	
Nominal output voltage $U_{o, \text{nom}}$	12 VDC (SELV)
Output voltage range	10.5 ... 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 VAC; 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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ , type-tested)
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Ambient temperature UL (operation at $U_N$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \text{ } \%/ \text{K}$ ( $> 45 \text{ }^\circ\text{C}$ )
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	72 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	255 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Compact; 1-phase; 12 VDC output voltage; 6.5 A output current 787 Series



Switched-mode power supply; Compact; 1-phase;  
12 VDC output voltage; 6.5 A output current

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	$I_o \leq 6 \text{ A}$ ( $< 100 \text{ VAC}$ ); $I_o \leq 5.5 \text{ A}$ ( $< 90 \text{ VAC}$ )
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.) $P_{1(\text{max})}$	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

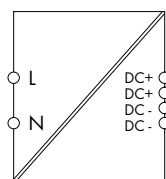
Safety and protection/Environmental requirements	
Protection class/type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 30 \text{ VDC}$ (in the event of a fault)
Short-circuit-protected/open-circuit-proof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

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	90 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	300 g

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

# Switched-mode power supply; Compact; 1-phase; 18 VDC output voltage; 2.5 A output current 787 Series



Switched-mode power supply; Compact; 1-phase;  
18 VDC output voltage; 2.5 A output current

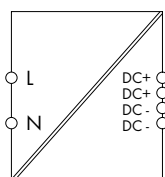
Item No.	PU
787-1017	1

#### 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 any 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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +60 °C (device starts at -40 °C, type-tested)
Ambient temperature (storage)	-25 ... +80 °C
Ambient temperature UL (operation at $U_N$ )	-25 ... +55 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 45 °C)
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	72 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	264 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 1.3 A output current 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 1.3 A output current

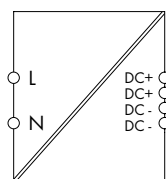
Item No.	PU
787-1002	1

#### 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 $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 85 ... 264 VAC; 120 ... 300 VDC
Input voltage derating	$I_o \leq 1 \text{ A}$ ( $< 100 \text{ VAC}$ )
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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	22.8 ... 26.4 VDC (adjustable)
Nominal output current $I_{o,nom}$	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	$1.1 \times I_{o,nom}$ (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.) $P_{i(max)}$	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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ , type-tested)
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Ambient temperature UL (operation at $U_o$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \text{ } \%/ \text{K}$ ( $> 45 \text{ }^\circ\text{C}$ )
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	54 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	180 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 2.5 A output current 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 2.5 A output current

Item No.	PU
787-1012	1

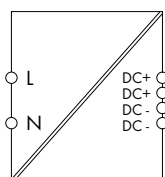
#### Features:

- 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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-25 \dots +60 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ , type-tested)
Ambient temperature (storage)	$-25 \dots +80 \text{ }^\circ\text{C}$
Ambient temperature UL (operation at $U_N$ )	$-25 \dots +55 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-3 \text{ } \%/ \text{K}$ ( $> 45 \text{ }^\circ\text{C}$ )
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	54 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	255 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; UL 60950-1; UL 508; DNV

# Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 4 A output current

## 787 Series



Switched-mode power supply; Compact; 1-phase;  
24 VDC output voltage; 4 A output current

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 $U_{i,nom}$	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 $I_i$	$\leq 0.9$ A (230 VAC); $\leq 1.6$ A (110 VAC)
Inrush current	$\leq 30$ A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 100$ ms (230 VAC); $\geq 15$ ms (110 VAC)

Output	
Nominal output voltage $U_{o,nom}$	24 VDC (SELV)
Output voltage range	22.8 ... 26.4 VDC (adjustable)
Nominal output current $I_{o,nom}$	4 A (24 VDC); 2.4 A (in any mounting position)
Nominal output power	96 W
Residual ripple	$\leq 100$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (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 $P_i$	$\leq 0.8$ W; $\leq 13.1$ W (230 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	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/type	II / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	$\leq 40$ VDC (in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +60 °C (device starts at -40 °C, type-tested)
Ambient temperature (storage)	-25 ... +80 °C
Ambient temperature UL (operation at $U_o$ )	-25 ... +55 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K ( $> 45$ °C)

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 (mm)	90 x 89 x 59
Depth from upper-edge of DIN-rail (mm)	55
Mounting type	DIN-35 rail
Weight	310 g

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










# WAGO Power Supplies; 3-Phase

## WAGO Power Supplies; 3-Phase

		Page
	<b>Pro / Pro 2</b> Power Supplies; Switched-Mode Power Supplies; 787 / 2787 Series	84
	<b>Classic</b> Switched-Mode Power Supplies; 787 Series	102
	<b>ECO</b> Switched-Mode Power Supplies; 787 Series	105

# WAGO Power Supplies; 3-Phase Selection Guide

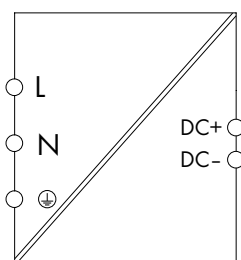
2

Nominal voltage (output)	Nominal current (output) [ADC]	Approvals						DC OK signal/contact	RS-232 interface	TopBoost <sup>1)</sup>	PowerBoost	Efficiency typ. [%]	Ambient temperature [°C] <sup>4)</sup>	Item Number	Page
		EN 60335	cULus 60950	cULus 508	cULus 61010	DNV	ANSI/ISA 12.12.1								
24 VDC	5,00				■							92,5	-25 ... +70	2787-2344	84
	6,25		■		■							87,0	-25 ... +70	787-738	105
	10,0				■							93,0	-25 ... +70	2787-2346	85
	10,0				■							95,0	-25 ... +70	2787-2357	88
	10,0		■		■							91,7	-25 ... +70	787-840	94
	10,0		■		■							91,7	-25 ... +70	787-850	97
	10,0		■		■			■				90,0	-25 ... +70	787-1640	102
	10,0		■		■							89,0	-25 ... +70	787-740	106
	20,0				■							94,8	-25 ... +70	2787-2347	86
	20,0				■							96,0	-25 ... +70	2787-2358	89
	20,0		■		■							92,9	-25 ... +70	787-842	95
	20,0		■		■							92,9	-25 ... +70	787-852	98
	20,0		■		■				■			92,0	-25 ... +70	787-1642	103
	20,0		■		■							90,0	-25 ... +70	787-742	107
	20,0		■		■							90,5	-20 ... +70	787-2742	108
	40,0				■							95,0	-20 ... +70	2787-2348	87
	40,0		■		■							93,6	-25 ... +55	787-844	96
40,0		■		■							93,6	-25 ... +55	787-854	99	
40,0				■							92,0	-25 ... +70	787-1644	104	
40,0				■							91,5	-20 ... +70	787-2744	109	
48 VDC	10,0		■		■							93,0	-25 ... +70	787-845	100
	20,0		■		■							94,4	-25 ... +70	787-847	101

■ yes

2

# Power supply; Pro 2; 3-phase; 24 VDC output voltage; 5 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 3-phase; 24 VDC output voltage;  
5 A output current; TopBoost + PowerBoost;  
Communication capability

	Item No.	PU
	2787-2344	1
DNV	2787-2344/000-030	1
DNV + Protective coating	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
- 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 $I_i$	$\leq 3 \times 0.4 \text{ A}$ (400 VAC; 24 VDC / 5 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 $I_{o, \text{nom}}$	5 A (24 VDC)
Nominal output power	120 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)

Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)

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)

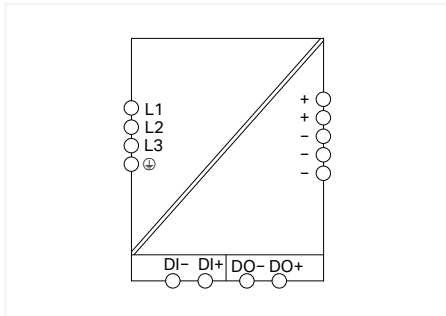
Safety and protection/Environmental requirements	
Isolation voltage (pri.-sec., AC/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	III ( $\leq 2000 \text{ m a.s.l.}$ ); II ( $> 2000 \text{ m a.s.l.}$ )
Pollution degree	2
Transient suppression (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/series operation	Yes/Yes
MTBF	$> 1,400,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_n$ )	$-25 \dots +70 \text{ }^\circ\text{C}$ (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 technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (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 (mm)	40 x 130 x 130; Height with connector: 166
Mounting type	DIN-35 rail
Weight	650 g

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; Pro 2; 3-phase; 24 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability Serie 2787



Power supply; Pro 2; 3-phase; 24 VDC output voltage;  
10 A output current; TopBoost + PowerBoost;  
Communication capability

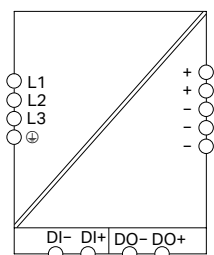
	Item No.	PU
	2787-2346	1
DNV	2787-2346/000-030	1
DNV + Protective coating	2787-2346/000-070	1

## 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
- 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 $I_i$	$\leq 3 \times 0.6 \text{ A}$ (400 VAC; 24 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 $U_{o,nom}$	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	$\leq 70 \text{ mV}$ (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	15 ADC (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)
Efficiency/power losses	
Power loss $P_i$	$\leq 3 \text{ W}$ (standby); $\leq 3 \text{ W}$ (no load); $\leq 18 \text{ W}$ (400 VAC; nominal load)
Efficiency (typ.)	93 % (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/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 1,000,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_{i,n}$ )	-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 technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (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 (mm)	50 x 130 x 130; Height with connector: 166
Mounting type	DIN-35 rail
Weight	1000 g
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; Pro 2; 3-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 3-phase; 24 VDC output voltage;  
20 A output current; TopBoost + PowerBoost;  
Communication capability

	Item No.	PU
	2787-2347	1
DNV	2787-2347/000-030	1
DNV + Protective coating	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
- 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
Input voltage derating	See instruction leaflet
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	30 ADC (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)

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/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_i$ )	$-25 \dots +70 \text{ °C}$ (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

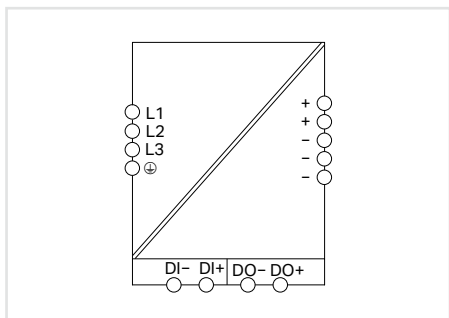
Connection data	
Connection technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	70 x 130 x 130; Height with connector: 169
Mounting type	DIN-35 rail
Weight	1400 g

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; Pro 2; 3-phase; 24 VDC output voltage; 40 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 3-phase; 24 VDC output voltage;  
40 A output current; TopBoost + PowerBoost;  
Communication capability

	Item No.	PU
	2787-2348	1
DNV	2787-2348/000-030	1
DNV + Protective coating	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
- 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
Input voltage derating	See instruction leaflet
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 3 \times 1.5$ A (400 VAC; 24 VDC / 40 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 $I_{o,nom}$	40 A (24 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	60 ADC (5 s)
TopBoost	Up to 600 %

Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)

Efficiency/power losses	
Efficiency (typ.)	96.1 % (400 VAC; 40 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/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 800,000$ h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-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

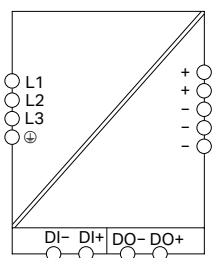
Connection data	
Connection technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	120 x 130 x 130; Height with connector: 169
Mounting type	DIN-35 rail
Weight	2000 g

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; Pro 2; 3-phase; 48 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability

## 2787 Series



Power supply; Pro 2; 3-phase; 48 VDC output voltage; 10 A output current; TopBoost + PowerBoost; Communication capability

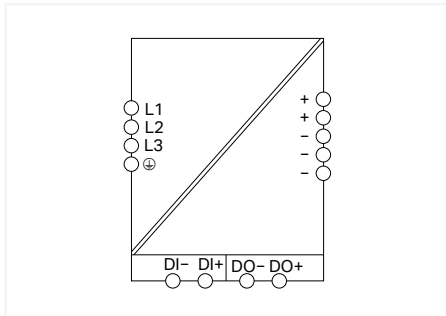
Item No.	PU
2787-2357	1

### 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	15 ADC (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)
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/pri.-PE, AC/sec.-PE)	3,510 V / 2,200 V / 0.5 kVDC
Protection class/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
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 900,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_N$ )	$-25 \dots +70 \text{ }^\circ\text{C}$ (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 technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (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 (mm)	70 x 130 x 130; Height with connector: 169
Mounting type	DIN-35 rail
Weight	1400 g
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; Pro 2; 3-phase; 48 VDC output voltage; 20 A output current; TopBoost + PowerBoost; Communication capability 2787 Series



Power supply; Pro 2; 3-phase; 48 VDC output voltage;  
20 A output current; TopBoost + PowerBoost;  
Communication capability

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 $I_i$	$\leq 3 \times 1.6 \text{ A}$ (400 VAC; 48 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 $U_{o,nom}$	48 VDC (SELV)
Output voltage range	DC 48 ... 56 V (adjustable)
Nominal output current $I_{o,nom}$	20 A (48 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	30 ADC (5 s)
TopBoost	Up to 600 %
Signaling and communication	
Signaling	Digital signal input and output (DI/DO)
Communication	USB (Communication Cable 750-923); Ethernet/IP (Communication Module 2789-9023); IO-Link (Communication Module 2789-9080); Modbus RTU (Communication Module 2789-9015); Modbus TCP (Communication Module 2789-9052)
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/pri.-PE, AC/sec.-PE)	3,510V / 2,200V / 0.5 kVDC
Protection class/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
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®/Push-in CAGE CLAMP®
Input/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (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 (mm)	120 x 130 x 130; Height with connector: 169
Mounting type	DIN-35 rail
Weight	2000 g
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 TCP; Communication capability

### 2789 Series



#### Communication module; Modbus TCP; Communication capability

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 $U_{i, \text{nom}}$	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)
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; SNTP
Configuration options	Web-Based Management
Visualization	Web-Visu
Baud rate	100 MBd (ETHERNET: 10/100 Mbit/s)
Safety and protection/Environmental requirements	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Ambient temperature (operation at $U_N$ )	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection Technology	Modbus TCP/UDP; 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 (mm)	35 x 80 x 22; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	45 g
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; RJ45; Communication capability 2789 Series



### Communication module; Modbus RTU; RJ45; Communication capability

	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 $U_{i,nom}$	5 VDC (SELV)
Input voltage range	DC 4.5 ... 5.5 V(SELV)
Input current $I_i$	≤ 0.04 A
Signaling and communication	
Signaling	1 x LED PWR (green); 1 x LED RxD (yellow); 1 x LED TxD (yellow)
Communication	Modbus RTU via RS-485
Baud rate	4.8 ... 115.2 kBd
Number of devices (max.)	247
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	III
Insulation type	Functional insulation
Protection type	IP20; per EN 60529
Pollution degree	2
Ambient temperature (operation at $U_n$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connector	2 x RJ-45
Transmission medium	Shielded copper cable
Physical data/Mechanical data/Material data	
Width x Height x Depth (mm)	35 x 80 x 22; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	35 g
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; IO-Link; Communication capability 2789 Series



### Communication module; IO-Link; Communication capability

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 $U_{i, nom}$	24 VDC (SELV; via IO-Link Master)
Input voltage range	18 ... 30 VDC (SELV; via IO-Link Master)
Input current $I_i$	$\leq 0.015$ A
Signaling and communication	
Signaling	1 x COM OK LED (green); 1 x ERR LED (red)
Communication	IO-Link
IO-Link version	1.1
Baud rate	230.4 kBd (COM 3)
Data width	5 bytes
Data update rate	25ms
Safety and protection/Environmental requirements	
Isolation	0.63 kVDC
Protection class/type	III / IP20; per EN 60529
Pollution degree	2
Ambient temperature (operation at $U_N$ )	-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 (mm)	35 x 95 x 22; Height with connector; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	35 g
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; EtherNet/IP; Communication capability 2789 Series



### Communication module; EtherNet/IP; Communication capability

	Item No.	PU
	2789-9023	1

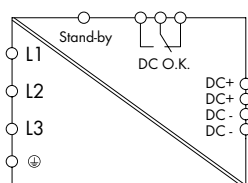
#### Features:

- 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)
Communication	
ETHERNET protocols	EtherNet/IP/TM; HTTP(S); BootP; DHCP; SNTP; MQTT
Configuration options	Web-Based Management
Visualization	Web-Visu
Baud rate	100 MBd (ETHERNET: 10/100 Mbit/s)
Safety and protection/Environmental requirements	
Test voltage (fieldbus)	0.775 kVAC; 50 Hz; 1 min
Protection class/type	III / IP20; per EN 60529
Insulation type	Functional insulation
Overvoltage category	III
Pollution degree	2
Ambient temperature (operation at $U_N$ )	-40 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	5000 m
Connection data	
Connection Technology	EtherNet/IP; 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 (mm)	35 x 80 x 22; Depth in mounted state
Mounting type	Snaps onto a Pro 2 Power Supply's communication interface (X4)
Weight	45 g
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

# Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 10 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 3-phase;  
24 VDC output voltage; 10 A output current;  
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 $U_{i,nom}$	(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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	22.8 ... 28.8 VDC (adjustable)
Nominal output current $I_{o,nom}$	10 A (24 VDC)
Nominal output power	240 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	20 ADC (4 s); 15 ADC (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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 ( $> 50 \text{ °C}$ )

Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Signaling (solid/fine-stranded/AWG)	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

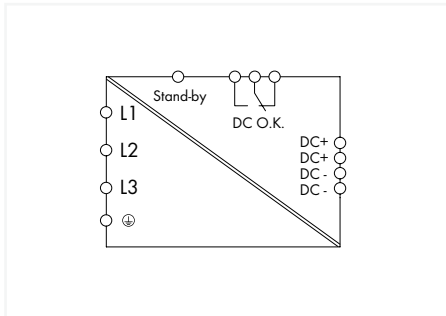
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	57 x 163 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1000 g

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



# Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 20 A output current; 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 $U_{i, nom}$	(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 $I_i$	$\leq 3 \times 1.1$ A (340 VAC; 20 ADC)
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 13$ 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 $I_{o, nom}$	20 A (24 VDC)
Nominal output power	480 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	40 ADC (4 s); 30 ADC (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 $P_i$	$\leq 8.3$ W; $\leq 34.1$ 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/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/series operation	Yes/Yes
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-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)

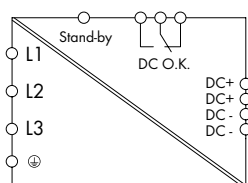
Connection data	
Connection technology	CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (solid/fine-stranded/AWG)	0.08 ... 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 (mm)	77 x 171 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1300 g

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

# Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 40 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 3-phase;  
24 VDC output voltage; 40 A output current;  
TopBoost + PowerBoost; DC OK contact

	Item No.	PU
	787-844	1
With lateral DIN-rail support	787-844/000-002	

### 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 $U_{i,nom}$	(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	$\geq 13 \text{ ms}$ (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 x $I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	60 ADC (4 s); 50 ADC (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: 2.5 A; Setting range: 2.5 ... 4 A

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 ( $> 45 \text{ °C}$ )

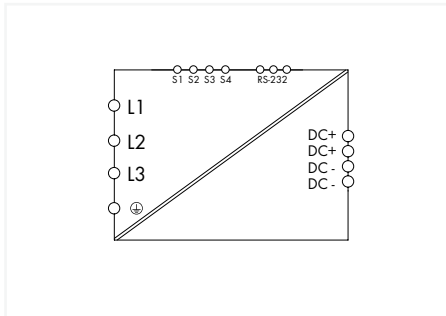
Connection data	
Connection technology	CAGE CLAMP® / Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (solid/fine-stranded/AWG)	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 (mm)	128 x 171 x 205; Height with connector
Mounting type	DIN-35 rail
Weight	2500 g

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

# Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 10 A output current; TopBoost + PowerBoost; LineMonitor; DC OK signal

## 787 Series



Switched-mode power supply; Pro; 3-phase;  
24 VDC output voltage; 10 A output current;  
TopBoost + PowerBoost; LineMonitor; 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	20 ADC (4 s); 15 ADC (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) LCD1 x RS-232 interface
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)
Communication	RS-232 serial interface

Efficiency/power losses	
Power loss PI	$\leq 7.8 \text{ W}$ ; $\leq 19.9 \text{ W}$ (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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-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 ( $> 50 \text{ °C}$ )

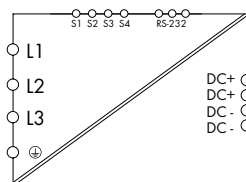
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Signaling (solid/fine-stranded/AWG)	0.08 ... 0.5 mm <sup>2</sup> / 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	57 x 163 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1000 g

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

# Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; LineMonitor; DC OK signal

## 787 Series



Switched-mode power supply; Pro; 3-phase;  
24 VDC output voltage; 20 A output current;  
TopBoost + PowerBoost; LineMonitor; 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	40 ADC (4 s); 30 ADC (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; 1 x RS-232 interface
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)
Communication	RS-232 serial interface

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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-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 ( $> 45 \text{ °C}$ )

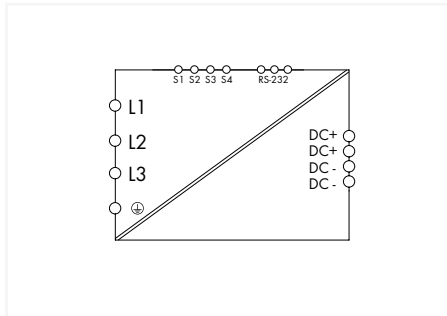
Connection data	
Connection technology	CAGE CLAMP®/ Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (solid/fine-stranded/AWG)	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 (mm)	77 x 171 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1300 g

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

# Switched-mode power supply; Pro; 3-phase; 24 VDC output voltage; 40 A output current; TopBoost + PowerBoost; LineMonitor; DC OK signal

## 787 Series



Switched-mode power supply; Pro; 3-phase;  
24 VDC output voltage; 40 A output current;  
TopBoost + PowerBoost; LineMonitor; 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; 20 ADC)
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	60 ADC (4 s); 50 ADC (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; 1 x RS-232 interface
Operation status indicator	Green LED (DC OK); Yellow LED (warning); Red LED (error)
Communication	RS-232 serial interface

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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-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 ( $> 45 \text{ °C}$ )

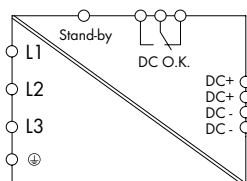
Connection data	
Connection technology	CAGE CLAMP®/ Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (solid/fine-stranded/AWG)	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 (mm)	128 x 171 x 205; Height with connector
Mounting type	DIN-35 rail
Weight	2300 g

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

# Switched-mode power supply; Pro; 3-phase; 48 VDC output voltage; 10 A output current; TopBoost + PowerBoost; DC OK contact

## 787 Series



Switched-mode power supply; Pro; 3-phase;  
48 VDC output voltage; 10 A output current;  
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	$\leq 30 \text{ A}$
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	15 ADC (4 s); 12.5 ADC (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

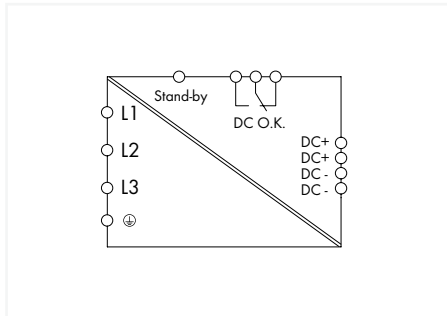
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_N$ )	-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 ( $> 50 \text{ °C}$ )

Connection data	
Connection technology	CAGE CLAMP® / Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (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 (mm)	77 x 171 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1883.3 g

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

# Switched-mode power supply; Pro; 3-phase; 48 VDC output voltage; 20 A output current; TopBoost + PowerBoost; DC OK contact 787 Series



Switched-mode power supply; Pro; 3-phase; 48 VDC output voltage; 20 A output current; 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 $U_{i,nom}$	(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 $U_{o,nom}$	48 VDC (SELV)
Output voltage range	39 ... 53 VDC (adjustable)
Nominal output current $I_{o,nom}$	20 A (48 VDC)
Nominal output power	960 W
Residual ripple	$\leq 70 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	30 ADC (4 s); 25 ADC (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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 ( $> 45 \text{ °C}$ )

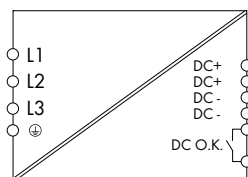
Connection data	
Connection technology	CAGE CLAMP®/ Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (solid/fine-stranded/AWG)	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 (mm)	128 x 171 x 205; Height with connector
Mounting type	DIN-35 rail
Weight	3270 g

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

# Switched-mode power supply; Classic; 3-phase; 24 VDC output voltage; 10 A output current; TopBoost; DC OK contact

## 787 Series



Switched-mode power supply; Classic; 3-phase;  
24 VDC output voltage; 10 A output current; TopBoost;  
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)
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)	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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-25 \dots +70 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ , type-tested)
Ambient temperature (storage)	$-25 \dots +85 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-2.5 \text{ } \%/ \text{K}$ ( $> 55 \text{ }^\circ\text{C}$ )

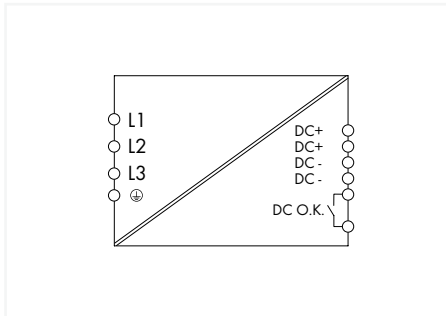
Connection data	
Connection type	Input/Output/Signaling
Connection technology	CAGE CLAMP®
Solid/fine-stranded/AWG	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	55 x 127 x 171
Mounting type	DIN-35 rail
Weight	1000 g

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



# Switched-mode power supply; Classic; 3-phase; 24 VDC output voltage; 20 A output current; TopBoost; DC OK contact 787 Series



Switched-mode power supply; Classic; 3-phase;  
24 VDC output voltage; 20 A output current; TopBoost;  
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 $U_{i,nom}$	(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 $I_i$	$\leq 3 \times 1.21$ A (400 VAC); $\leq 3 \times 1.03$ A (500 VAC)
Inrush current	$\leq 30$ A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 25$ ms (500 VAC); $\geq 15$ ms (400 VAC)

Output	
Nominal output voltage $U_{o,nom}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Nominal output current $I_{o,nom}$	20 A (24 VDC)
Nominal output power	480 W
Residual ripple	$\leq 15$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (typ.)
Overload behavior	Constant current

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

Efficiency/power losses	
Power loss $P_i$	$\leq 5.8$ W; $\leq 42.8$ W (400 VAC; nominal load)
Power loss (max.) $P_{i(max)}$	47.6 W (500 VAC / 24 VDC; 20 A)
Efficiency (typ.)	92 %

Circuit protection	
Internal fuse	No
Backup fusing (required)	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/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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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)

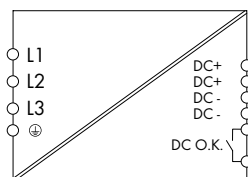
Connection data	
Connection technology	CAGE CLAMP®; Push-in CAGE CLAMP®
Input/ Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	80 x 127 x 180
Mounting type	DIN-35 rail
Weight	1623 g

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

# Switched-mode power supply; Classic; 3-phase; 24 VDC output voltage; 40 A output current; TopBoost; DC OK contact

## 787 Series



Switched-mode power supply; Classic; 3-phase;  
24 VDC output voltage; 40 A output current; TopBoost;  
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)
Operation status indicator	Green LED ( $U_o$ )

Efficiency/power losses	
Power loss $P_1$	$\leq 4.2 \text{ W}$ ; $\leq 83.9 \text{ W}$ (400 VAC; nominal load)
Power loss (max.) $P_{1(\text{max.})}$	83.9 W (500 VAC / 24 VDC; 40 A)
Efficiency (typ.)	92 %

Circuit protection	
Internal fuse	No
Backup fusing (required)	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/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/series operation	Yes/Yes
MTBF	$> 500,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-25 \dots +70 \text{ }^\circ\text{C}$ (device starts at $-40 \text{ }^\circ\text{C}$ , type-tested)
Ambient temperature (storage)	$-25 \dots +85 \text{ }^\circ\text{C}$
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	$-2.5 \text{ } \%/ \text{K}$ ( $> 55 \text{ }^\circ\text{C}$ )

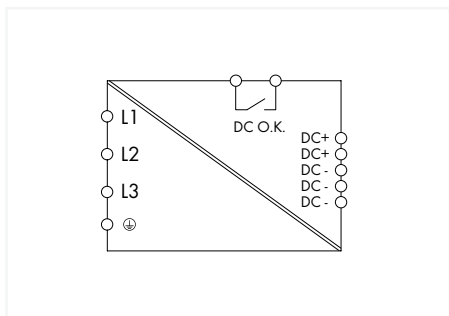
Connection data	
Connection technology	CAGE CLAMP®; Push-in CAGE CLAMP®
Input/ Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Output (solid/fine-stranded/AWG)	0,5 ... 10 mm <sup>2</sup> / 0,5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail (mm)	126 x 127 x 198
Mounting type	DIN-35 rail
Weight	2800 g

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

# Switched-mode power supply; ECO; 3-phase; 24 VDC output voltage; 6.25 A output current; DC OK contact

## 787 Series



Switched-mode power supply; ECO; 3-phase;  
24 VDC output voltage; 6.25 A output current;  
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 400 ... 500 VAC
Input voltage range	(2 / 3) x 360 ... 575 VDC; 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 ... 1.4 x $I_{o,nom}$ ); 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 (U <sub>i</sub> ); 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

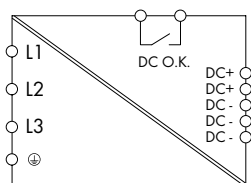
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 KVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 250,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP® / Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Signaling (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 (mm)	50 x 130 x 92
Mounting type	DIN-35 rail
Weight	844 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3 (Class A); UL 60950-1; UL 609

# Switched-mode power supply; ECO; 3-phase; 24 VDC output voltage; 10 A output current; DC OK contact 787 Series



Switched-mode power supply; Eco; 3-phase;  
24 VDC output voltage; 10 A output current;  
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 $U_{i,nom}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 360 ... 575 VDC; 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 $U_{o,nom}$	24 VDC (SELV)
Output voltage range	22 ... 28 VDC (adjustable)
Nominal output current $I_{o,nom}$	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 ... 1.4 x $I_{o,nom}$ ); 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 ( $U_o$ ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 32.5 \text{ W}$
Power loss (max.) $P_{i(max)}$	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

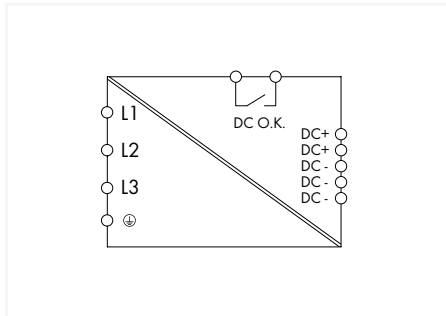
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 250,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-1.25 %/K ( $> 50 \text{ °C}$ ; 400 VAC)

Connection data	
Connection technology	CAGE CLAMP® / Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Signaling (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 (mm)	65 x 130 x 130
Mounting type	DIN-35 rail
Weight	1265 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3 (Class A); UL 60950-1; UL 508

# Switched-mode power supply; ECO; 3-phase; 24 VDC output voltage; 20 A output current; DC OK contact 787 Series



Switched-mode power supply; ECO; 3-phase;  
24 VDC output voltage; 20 A output current;  
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 $U_{i, \text{nom}}$	(2 / 3) x 400 ... 500 VAC
Input voltage range	(2 / 3) x 360 ... 575 VDC; 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 $U_{o, \text{nom}}$	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	$\leq 100 \text{ mV}$ (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)
Operation status indicator	Green LED (U <sub>i</sub> ); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 50 \text{ W}$
Power loss (max.) $P_{i, \text{(max.)}}$	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

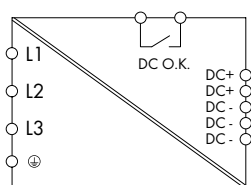
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	$> 250,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-2 %/K ( $> 50 \text{ °C}$ ; 400 VAC)

Connection data	
Connection technology	CAGE CLAMP® / Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Signaling (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 (mm)	110 x 130 x 151
Mounting type	DIN-35 rail
Weight	1930 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61204-3 (Class A); UL 60950-1; UL 508

## Power supply; ECO; 3-phase; 24 VDC output voltage; 20 A output current; DC OK contact 787 Series



Power supply; ECO; 3-phase; 24 VDC output voltage;  
20 A output current; 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 $U_{i,nom}$	(2 / 3) x 400 ... 480 VDC
Input voltage range	(2 / 3) x 325 ... 575 VAC; 60 ... 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 $U_{o,nom}$	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	$\leq 150 \text{ mV}$ (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.4 x $I_{o,nom}$ ); 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 (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 $P_i$	$\leq 2.15 \text{ W}$ (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

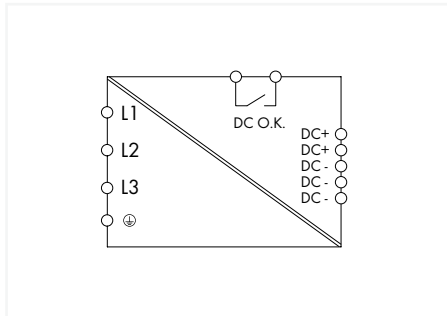
Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/type	I / IP20; per EN 60529
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/2 devices (max.)
MTBF	$> 1,800,000 \text{ h}$ (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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: 15 g (per EN 60068-2-27); Vibration: 1 g (per EN 60068-2-6)

Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Signaling (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 (mm)	80 x 130 x 170
Mounting type	DIN-35 rail
Weight	1710 g

Standards and specifications	
Conformity marking	1; EAC
Standards/specifications	EN 61204-3; EN 62368-1; cURus 60950-1; cURus 62368-1; cULus 508; CSA C22.2

# Power supply; ECO; 3-phase; 24 VDC output voltage; 40 A output current; DC OK contact 787 Series



Power supply; ECO; 3-phase; 24 VDC output voltage;  
40 A output current; 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 $U_{i,nom}$	(2 / 3) x 400 ... 480 VDC
Input voltage range	(2 / 3) x 325 ... 575 VAC; 560 ... 700 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 3 \times 2.5$ A (400 VAC)
Inrush current	$\leq 30$ A (400 VAC)
Power factor	$\geq 0.7$ (400 VAC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 10$ 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 $I_{o,nom}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 150$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.4 x $I_{o,nom}$ ); 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 (PhotoMOS as make contact; can be loaded with max. 31.2 V / 100 mA)
Operation status indicator	Green LED (U); Red LED (overload)

Efficiency/power losses	
Power loss $P_i$	$\leq 6.2$ W (400 VAC; nominal load); $\leq 64.3$ 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 $\geq 10$ A; Tripping characteristic: B or C

Safety and protection/Environmental requirements	
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class/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/series operation	Yes/2 devices (max.)
MTBF	$> 1,300,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-20 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	-2 %/K ( $> 45$ °C)
Resistance to shock and vibration	Shock: 15 g (per EN 60068-2-27); Vibration: 1 g (per EN 60068-2-6)

Connection data	
Connection technology	Push-in CAGE CLAMP®
Input (solid/fine-stranded/AWG)	0.5 ... 6 mm <sup>2</sup> / 0.5 ... 6 mm <sup>2</sup> / 20 ... 10 AWG
Output (solid/fine-stranded/AWG)	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Signaling (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 (mm)	140 x 130 x 170
Mounting type	DIN-35 rail
Weight	2630 g






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



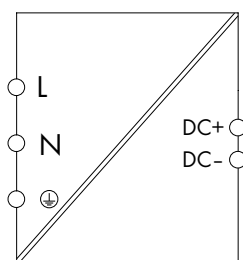
## Special WAGO Power Supplies



## Special WAGO Power Supplies

		Page
	<b>IP 67</b> Switched-Mode Power Supply; 787 Series	112
	<b>Accessories for IP67 Power</b> Supply Cable	113
	<b>Accessories for IP67 Power</b> Pluggable Connector	114
	<b>Transformer Power Supply</b> 787 Series	116
	<b>Switched Mode Power Supply</b> 787 Series	118

## Switched-mode power supply; 1-phase; 24 VDC output voltage; 4 A output current; PowerBoost 787 Series



Switched-mode power supply; 1-phase;  
24 VDC output voltage; 4 A output current; 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%
- Ambient 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 $I_i$	$\leq 0.5 \text{ A}$ (250 VAC); $\leq 1.1 \text{ A}$ (100 VAC)
Inrush current	$\leq 9 \text{ A}$
Power factor	$\geq 0.98$
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 45 \text{ ms}$

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	$\leq 100 \text{ mV}$ (peak-to-peak); $\leq 20 \text{ mV}$ (rms)
Overload behavior	Constant current
PowerBoost	6 ADC (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 $P_i$	$\leq 1 \text{ W}$ ; $\leq 7.9 \text{ W}$ (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	$\leq 30 \text{ VDC}$ (per IEC 61131)
Short-circuit-protected	Yes
Parallel/series operation	3 devices (max.)/2 devices (max.)
MTBF	$> 960,000 \text{ h}$
Ambient temperature (operation at $U_N$ )	$-40 \dots +85 \text{ }^\circ\text{C}$
Ambient temperature (storage)	$-40 \dots +85 \text{ }^\circ\text{C}$
Relative humidity	4 ... 100 %
Derating	$-3.84 \text{ W/K}$ ( $> 60 \text{ }^\circ\text{C}$ )

Connection data	
Connection type 1	Input
Connection technology	7/8"; 3-pole plug
Connection type 2	Output
Connection technology 2	7/8"; 5-pole socket

Physical data/Mechanical data/Material data	
Width x Height x Depth	111 x 141 x 54 mm / 4.37 x 5.55 x 2.123 inches
Mounting type	Screw mount
Weight	1100 g

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

# Accessories for IP67 Power Supply Cable 787 Series



**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

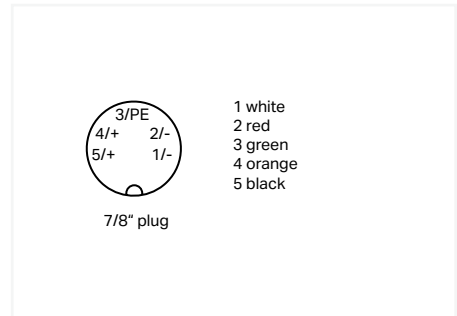
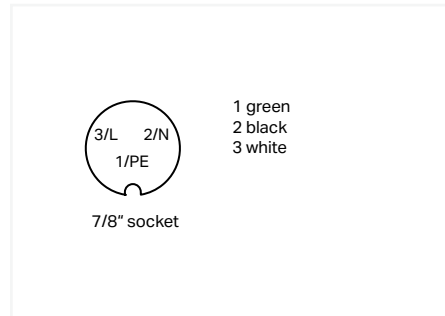
Operating data	
Operating voltage	600 VAC/VDC
Operating current	9 A
Safety and protection/Environmental requirements	
Rated surge voltage	4 kV
Protection type	IP67
Ambient temperature (operation at U <sub>n</sub> )	-25 ... +80 °C
Connection data	
Sheathed cable diameter	7.4 mm



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



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
-------------------------	--------

3

#### Features:

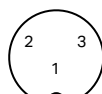
- 7/8" screw connection: Industry-proven connection technology for a large selection of different conductors
- High protection class for safe field applications
- Vibration- and shock-resistant via integrated locking mechanism
- PUR coating



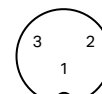
Similar to pictured device

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



7/8" socket



7/8" plug

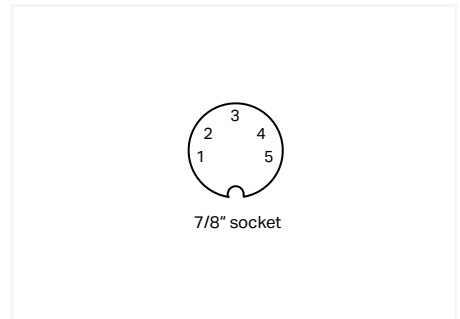
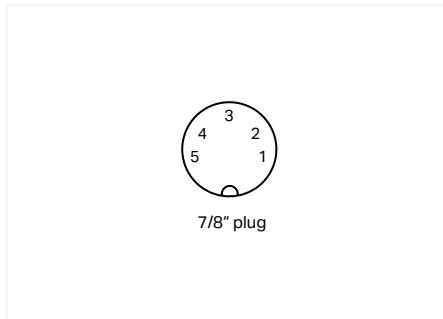
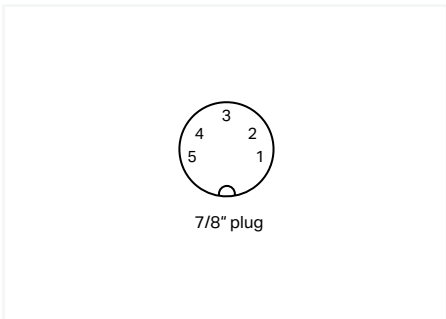
# Accessories for IP67 Power Pluggable Connector 787 Series



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	

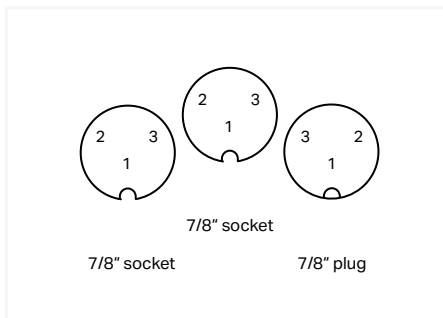
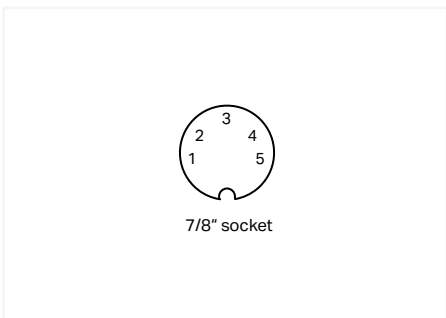
Pluggable connector, 7/8 inch; 5-pole; Socket, straight		
Item No.	PU	
787-6716/9700-000	1	



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	

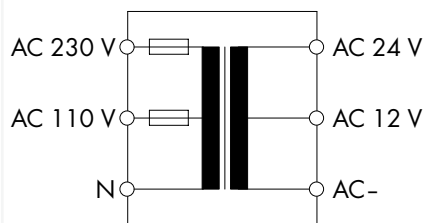
Pluggable connector, 7/8 inch; 3-pole; Socket, straight		
Item No.	PU	
787-6716/9300-000	1	



## Transformer power supply; Input voltage: 230 VAC; Output voltage: 12 ... 24 VAC;

### Output power: 40 VA

### 787 Series



Transformer power supply; Input voltage: 230 VAC;  
Output voltage: 12 ... 24 VAC; 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

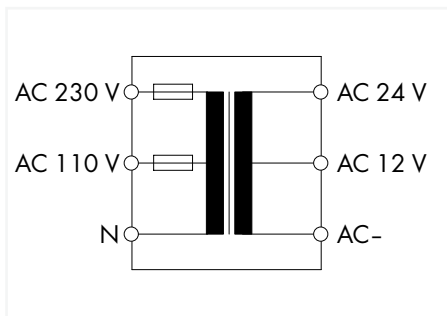
<b>Input</b>	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	1 x 115 VAC; 230 VAC
Input voltage range	1 x 0 ... 230 VAC
Nominal mains frequency range	50 ... 60 Hz
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	12 / 24 VAC
Nominal output current $I_{o, \text{nom}}$	3.3 A (115 VAC); 1.67 A (230 VAC)
Overload behavior	Safety fuse in the primary circuit
<b>Efficiency/power losses</b>	
Power loss $P_1$	$\leq 0.6$ W
<b>Circuit protection</b>	
Internal fuse	T 1.25 A / 250 VAC; T 0.63 A / 250 VAC
<b>Safety and protection/Environmental requirements</b>	
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/series operation	No/Yes (with identical power supply)
Ambient temperature (operation at $U_N$ )	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 90\%$
<b>Connection data</b>	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail	126 x 90 x 54 mm / 4.961 x 3.543 x 2.126 inches
Mounting type	DIN-35 rail
Weight	955.6 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	UL 5085; EN 61558-2-6

3

# Transformer power supply; Input voltage: 230 VAC; Output voltage: 12 ... 24 VAC;

## Output power: 63 VA

### 787 Series



Transformer power supply; Input voltage: 230 VAC;  
Output voltage: 12 ... 24 VAC; Output power: 63 VA

Item No.	PU
787-976	1

#### Features:

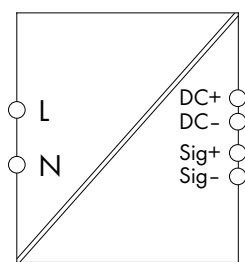
- Maintenance-free, DIN-rail-mount safety transformer for 12/24 VAC
- Center tap-off modules provide variable input/output voltage.
- Enables brief performance peaks
- Peak output power of 70 VA for 1 min/h

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 (115 VAC); 2.6 A (230 VAC)
Overload behavior	Safety fuse in the primary circuit
Efficiency/power losses	
Power loss $P_i$	$\leq 0.8$ 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/series operation	No/Yes (with identical power supply)
Ambient temperature (operation at $U_{i, \text{nom}}$ )	-25 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	$\leq 90\%$
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 x 90 x 54 mm mm / 5.669 x 3.543 x 2.126 inches
Mounting type	DIN-35 rail
Weight	1200 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 5085; EN 61558-2-6

3

## Switched-mode power supply; 1-phase; Output voltage: 22 VDC; 1 A output current

### 787 Series



Switched-mode power supply; 1-phase;  
Output voltage: 22 VDC; 1 A output current

Item No.	PU
787-914	1

#### Features:

- Power supply for small loads that operate at a variable input voltage
- The output voltage can be adjusted linearly by hand or via an analog voltage signal (0 ... 10 V) in the range from 12 to 22 V, e.g., for automatically controlling fan speed in control cabinets.
- Flat design allows installation in confined spaces.
- Variable mounting options for space-saving installation, e.g., in recesses

Input	
Nominal input voltage $U_{i, \text{nom}}$	100 ... 240 VAC
Input voltage range	90 ... 264 VAC; 130 ... 373 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current $I_i$	$\leq 0.6$ A
Inrush current	$\leq 18$ A
Power factor	$\geq 0.45$
Power factor correction (PFC)	Not required
Mains failure hold-up time	$\geq 15$ ms
Output	
Nominal output voltage $U_{o, \text{nom}}$	22 VDC
Output voltage range	12 ... 22 VDC (adjustable by hand or via signal input)
Nominal output current $I_{o, \text{nom}}$	0.8 A (< 110 VAC); 1 A (110 ... 240 VAC)
Residual ripple	$\leq 100$ mV (peak-to-peak)
Overload behavior	Constant power (in overload range: 1.05 ... 1.7 x $I_{o, \text{nom}}$ ); Hiccup in the event of a short circuit or permanent overload
Signaling and communication	
Signaling	1 x Status indication LED (green); 1 x Signal input (10 VDC)
Operation status indicator	Green LED ( $U_o$ )
Input signal (voltage)	0 ... 10 V
Input impedance	10 k $\Omega$
Efficiency/power losses	
Power loss $P_i$	$\leq 0.8$ W
Power loss (max.) $P_i$ (max.)	4 W
Efficiency (typ.)	84 % (230 VAC); 80 % (110 VAC)
Circuit protection	
Internal fuse	1 A / 250 VAC
Backup fusing (recommended)	Circuit breaker: B6, C4 or higher
Safety and protection/Environmental requirements	
Protection class/Protection type	II / IP20; per EN 60529
Reverse voltage protection	Yes (Signal input)
Pollution degree	2
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Yes (signal input) $\leq 31$ VDC (output; in the event of a fault)
Short-circuit-protected/open-circuit-proof	Yes/Yes
Parallel/series operation	Yes/Yes
MTBF	> 500,000 h (at 25 °C per IEC 61709)
Ambient temperature (operation at $U_N$ )	-20 ... +60 °C
Ambient temperature (storage)	-25 ... +75 °C
Relative humidity	20 ... 90 % (no condensation permissible)
Derating	-2.47 %/K (> 45 °C)
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
Physical data/Mechanical data/Material data	
Width x Height x Depth	45 x 138 x 35 mm mm / 1.77 x 5.433 x 1.38 inches
Note (dimensions)	Height: 156 mm (with fastening clips)
Mounting type	DIN-35 rail; Screw mount
Weight	160 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 60950; EN 61204-3; EN 62368-1; EN 61000-6-3








3



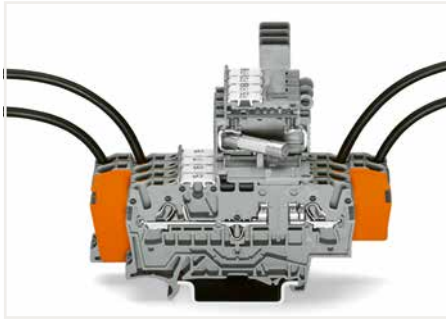
# WAGO Protective Devices and Electronics

## WAGO Protective Devices and Electronics

		Page
	<b>TOPJOB® S</b> Fuse Terminal Blocks; 2002 / 2006 Series	122
	<b>Classic</b> Fuse Terminal Blocks; Fuse Plugs; 281 / 282 / 811 Series	124
	<b>Electronic Circuit Breaker (ECBs)</b> 787 Series	126
	<b>Rail-Mount Terminal Blocks with Overvoltage Protection</b> 792 Series	130
	<b>Component Terminal Block; with Surge Arrester</b> 280 Series	132

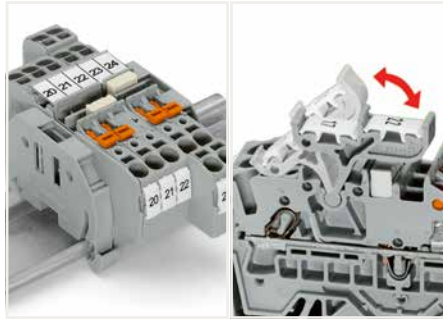
# Fuse Terminal Blocks; TOPJOB® S Description and Installation

## 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



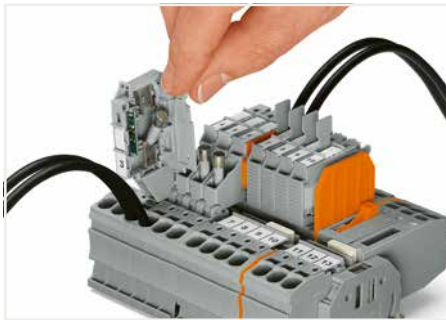
Before replacing the fuse, pivot the fuse holder into the locked open position.

## Commoning



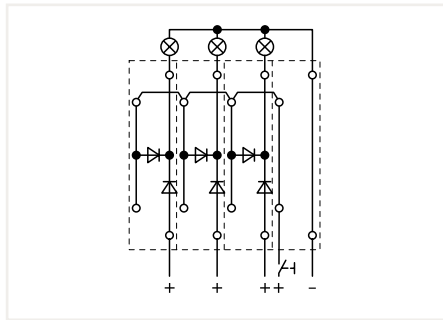
Custom circuit design via push-in type jumper bars. Example shows "lamp test circuit."

## Fuse replacement 2



One end of the fuse is automatically ejected from the holder when opening the cover.

## Application



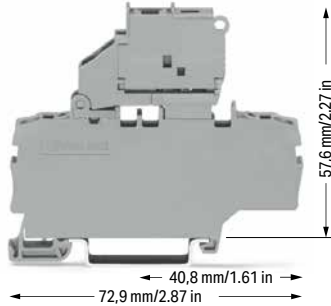
Lamp test circuit

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	



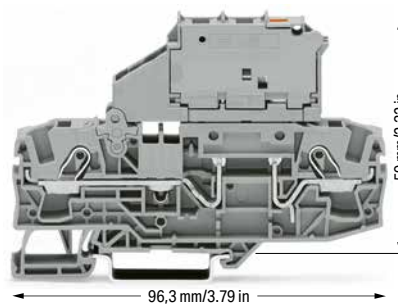
2-conductor fused disconnect terminal block with a pivoting fuse holder; with additional jumper slot; for (5 x 20) mm miniature metric fuse; without blown fuse indication  
Electrical ratings are given by the fuse

Color	Item No.	Pack. Unit
gray ⑤	2002-1911 ⑤	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 ⑤	50
30 ... 65 V ⑤	2002-1911/1000-542 ⑤	50
120 V ⑤	2002-1911/1000-867 ⑤	50
230 V ⑤	2002-1911/1000-836 ⑤	50

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

	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		
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		
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	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

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
2006-1621	7.5	1.6 W	1.6 W	2.5 W
2006-1631	7.5	1.6 W	1.6 W	2.5 W
2006-1631 /099-...	10.4	2.5 W	2.5 W	2.5 W
2006-1631 /1099-...	10.4	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



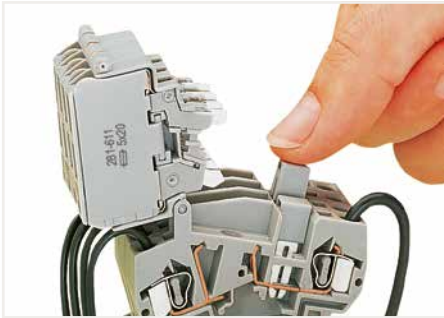
Fuse plug with blown fuse indication on a 3-conductor carrier terminal block.



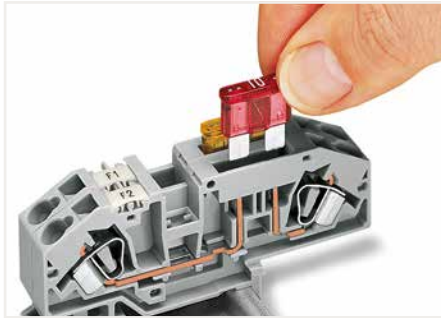
Conductor termination: Open the clamping unit via integrated lever.

# 4

## Commoning



Distributing current to several fuse-protected circuits via insulated touch-proof jumpers.



Inserting a fuse.

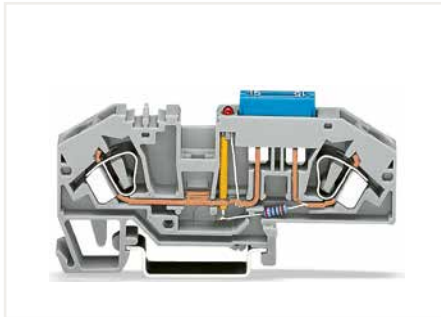


Open and close lever via screwdriver.

## 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.

# 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

Nominal input/output voltage	Input/Output				Approvals				Dimensions and Environmental Conditions				Item No.
	Channels (output)	Nominal current (output) [ADC]	Communication	Active current limitation	UL 61010-2-201	UL 2367	cULus 508	DNV	Width [mm]	Height [mm]	Length [mm]	Ambient temperature [°C]	
12 VDC	4	2 ... 10	M			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-100
24 VDC	1	0.5	S		■			■	6	97.8	94	-25 ... +70	787-2861/050-000
	1	0.5	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/050-000
	1	0.5 ... 4	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/004-020
	1	1	S		■			■	6	97.8	94	-25 ... +70	787-2861/100-000
	1	1	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/100-000
	1	1 ... 8	S		■			■	6	97.8	94	-25 ... +70	787-2861/108-020
	1	1 ... 8	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/108-020
	1	2	S		■			■	6	97.8	94	-25 ... +70	787-2861/200-000
	1	2	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/200-000
	1	4	S		■			■	6	97.8	94	-25 ... +70	787-2861/400-000
	1	4	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/400-000
	1	6	S		■			■	6	97.8	94	-25 ... +70	787-2861/600-000
1	6	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/600-000	
1	8	S		■			■	6	97.8	94	-25 ... +70	787-2861/800-000	
1	8	S		■	■		■	6	97.8	94	-25 ... +70	787-3861/800-000	
24 VDC	2	2 ... 10	M			■	■	■	45	115.5	90	-25 ... +70	787-1662
	2	2 ... 10	P			■	■	■	45	115.5	90	-25 ... +70	787-1662/000-054
	2	3.8 LPS	M	■		■	■	■	45	115.5	90	-25 ... +70	787-1662/004-1000 <sup>1)</sup>
	2	0.5 ... 6	M	■		■	■	■	45	115.5	90	-25 ... +70	787-1662/006-1000
	2	1 ... 6	M			■	■	■	45	115.5	90	-25 ... +70	787-1662/106-000
24 VDC	4	2 ... 10	M			■	■	■	45	115.5	90	-25 ... +70	787-1664
	4	2 ... 10	M			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-004
	4	2 ... 10	P			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-054
	4	2 ... 10	N			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-011
	4	1 ... 10	I			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-080
	4	3.8 LPS	M	■		■	■	■	45	115.5	90	-25 ... +70	787-1664/004-1000 <sup>1)</sup>
	4	0.5 ... 6	M	■		■	■	■	45	115.5	90	-25 ... +70	787-1664/006-1000
	4	1 ... 6	M			■	■	■	45	115.5	90	-25 ... +70	787-1664/106-000
	4	1 ... 6	N			■	■	■	45	115.5	90	-25 ... +70	787-1664/106-011
	4	2 ... 12	M	■		■	■	■	45	115.5	90	-25 ... +70	787-1664/212-1000
4	0.5 ... 6	P	■	□	■	■	■	45	115.5	90	-25 ... +70	787-1664/006-1054	
24 VDC	8	2 ... 10	M			■	■	■	42	142.5	127	-25 ... +70	787-1668
	8	2 ... 10	M			■	■	■	42	142.5	127	-25 ... +70	787-1668/000-004
	8	2 ... 10	P			■	■	■	42	142.5	127	-25 ... +70	787-1668/000-054
	8	1 ... 10	I			■	■	■	42	142.5	127	-25 ... +70	787-1668/000-080
	8	0.5 ... 6	M	■		■	■	■	42	142.5	127	-25 ... +70	787-1668/006-1000
	8	1 ... 6	M			■	■	■	42	142.5	127	-25 ... +70	787-1668/106-000
	8	1 ... 6	M		□	■	■	■	42	142.5	127	-25 ... +70	787-1668/106-054
8	1 ... 6	P	■		■	■	■	42	142.5	127	-25 ... +70	787-1668/006-1054	
48 VDC	2	2 ... 10	P			■	■	■	45	115.5	90	-25 ... +70	787-1662/000-250
48 VDC	4	2 ... 10	M			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-200
	4	2 ... 10	P			■	■	■	45	115.5	90	-25 ... +70	787-1664/000-250
48 VDC	8	2 ... 10	M			■	■	■	42	142.5	127	-25 ... +70	787-1668/000-200
	8	2 ... 10	P			■	■	■	42	142.5	127	-25 ... +70	787-1668/000-250

■ Yes □ Pending

<sup>1)</sup> NEC Class 2

S = Signal

N = Signal, low-side switching

P = Potential-free signal

I = IO-Link protocol

M = Manchester protocol

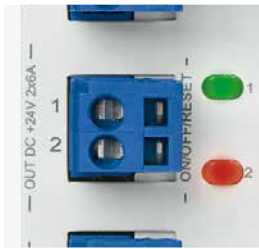




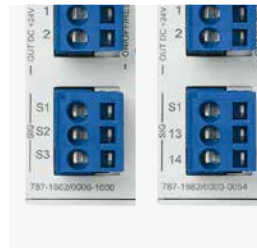
- Pluggable CAGE CLAMP® Connection Technology**
- Fast, vibration-proof, maintenance-free
  - For solid, fine-stranded and ferruled conductors
  - 100% protected against mismatching
  - With marking



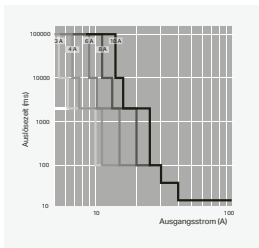
- Rotary Switch**
- Nominal current can be individually adjusted for each channel
  - The setting is visible, even when no voltage is applied
  - Transparent cover can be sealed and marked



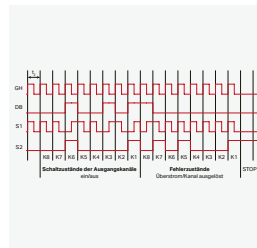
- Intuitive Status Indication**
- Each output channel has backlit buttons for switching on/off, as well as acknowledgement
  - Integrated, multi-color LEDs indicate the operating status of each channel



- Communication 1.0**
- Remote digital input S1 resets all tripped channels
  - Digital output S3 transmits a simple group message indicating whether one of the channels was triggered by an overcurrent.
  - Optional isolated signal contact 13/14 as group signal



- Trip Characteristics**
- Reliable and precise disconnection in case of overcurrent or short circuit
  - Nominal currents can be set separately for each channel in 1 A increments
  - Tripping time can be configured in defined increments
  - Optional, active short circuit current limitation to 1.5 times the nominal current prevents a voltage drop in other current paths



- Communication 2.0**
- Remote digital input (S1) switches certain channels on and off via pulse sequence.
  - Digital output (S2) transmits the current status (on/off/tripped/overcurrent) of each individual channel
  - Optional transmission of input voltage and output/nominal current value for each channel

\*Only for 787-166x/xxxx-1xxx



- Marking**
- Device identification via WMB Markers or TOPJOB® S Marking Strips
  - Label individual channels via marking strips that can be inserted into the rotary switch cover from the outside



- Communication 3.0**
- IO-Link interface
  - Read the status, the set nominal current, current voltage values and current values per channel
  - Set the rated current as well as switch on/off and reset individual channels

## Overvoltage Protection

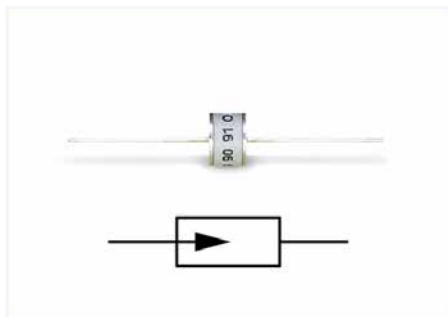
### Overvoltage Protection for Increased Safety and Longer On-Line Operation

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:

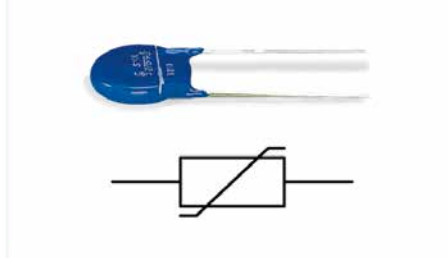
#### Gas-Filled Surge Arrester



The gas filled surge arrester is comprised of two electrodes in a ceramic or glass tube filled with a pressurized inert gas.

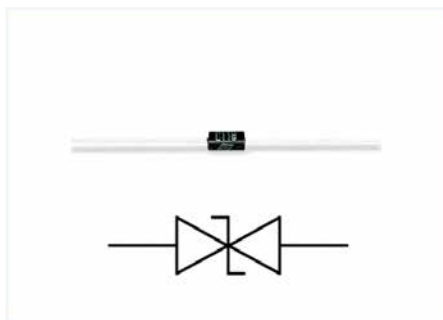
Once the ignition voltage is reached, resistance drops due to ionization and current begins to flow. The resistance of the device drops from high to low as it conducts. The voltage across the device after the arc is struck is typically 10 ... 30 V. Therefore, the current will continue to flow until the 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.

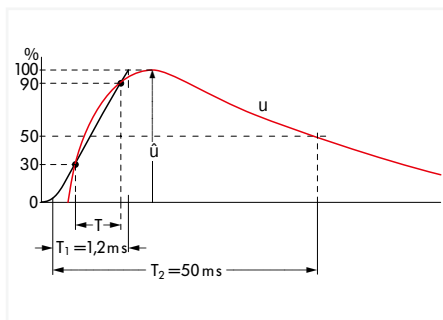
### Suppressor Diode



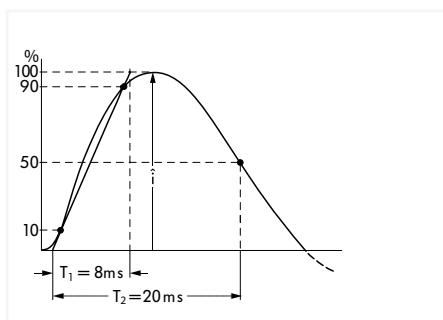
Suppressor diodes have electrical characteristics similar to Zener diodes, but are rated for surge currents. Once the rated breakdown voltage is exceeded (in the non-conductive direction), the diode becomes a conductor. The suppressor diode differs from a Zener in its higher current carrying capability 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 ( $U_{BN}$ )

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 ( $U_{Bmax}$ )

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 ( $I_N$ )

The nominal current corresponds to the current which may permanently flow through the connection terminals of the overvoltage protection device.

### Nominal Discharge Current ( $I_{SN}$ )

The nominal discharge current is the maximum value of a current having the 8/20  $\mu$ 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 ( $I_{Smax}$ )

The maximum surge current  $I_{Smax}$  defines the maximum value of a current having the 8/20  $\mu$ s waveform, which can flow through the surge arrester once without destroying it.

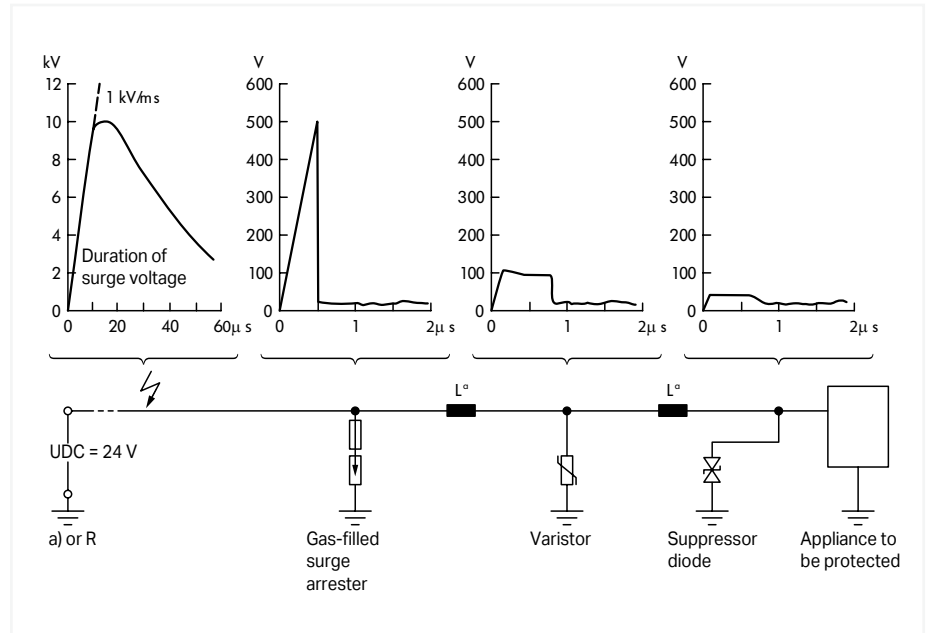
### Protection Level ( $U_p$ )

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 ( $t_{resp}$ )

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/ $\mu$ s.

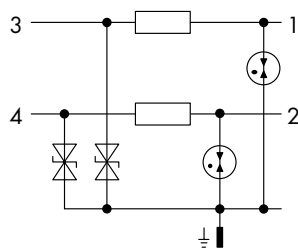
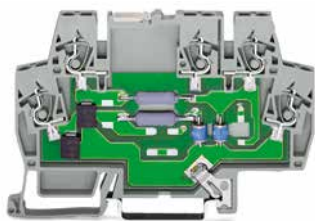
4



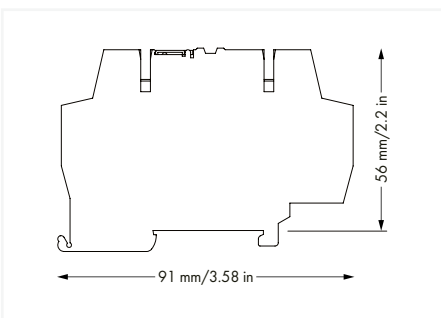
Function diagram of a multi-stage surge voltage protection module

## Surge suppression module for signal technology; Nominal voltage: 24 VDC; for 2 signal paths with common surge arrester; for unbalanced interfaces; Two-stage; Width: 6 mm

### 792 Series



Nominal Voltage	Item No.	PU
24 VDC	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
Highest 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
Limit frequency (line/line)	6 MHz
Limit frequency (line/protected ground)	6 MHz
Impedance	1.8 Ω

#### Safety and protection

Protection type	IP00; IP20 with end and intermediate plate
-----------------	--

#### Connection data

Connections (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches

#### Physical data

Width	6 mm / 0.236 inches
Height from upper-edge of DIN-rail	56 mm / 2.205 inches
Depth	91 mm / 3.583 inches

#### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

#### Material data

Weight	38.8 g
--------	--------

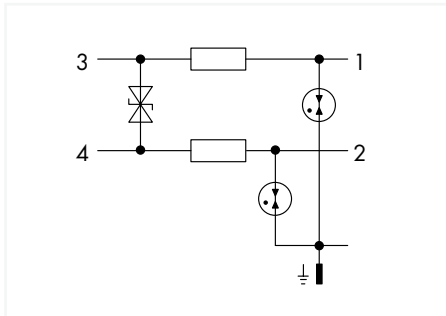
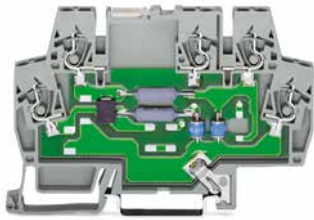
#### Environmental requirements

Ambient temperature (operation at U <sub>n</sub> )	-40 ... +80 °C
Ambient temperature (storage)	-40 ... +80 °C

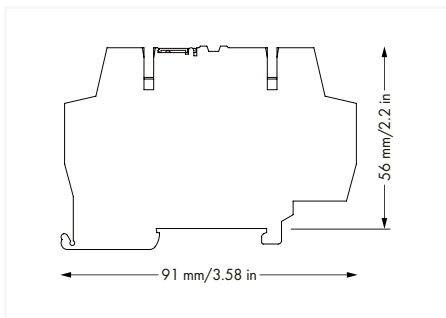
#### Standards and specifications

Standards/specifications	IEC 61643-21
--------------------------	--------------

# Surge suppression module for signal technology; Nominal voltage: 24 VDC; for 2 signal paths with common surge arrester; for symmetric interfaces; Two-stage; Width: 6 mm 792 Series



Nominal Voltage	Item No.	PU
24 VDC	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
Highest 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
Limit frequency (line/line)	6 MHz
Limit frequency (line/protected ground)	6 MHz
Impedance	1.8 Ω

### Safety and protection

Protection type	IP00; IP20 with end and intermediate plate
-----------------	--

### Connection data

Connections (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches

### Physical data

Width	6 mm / 0.236 inches
Height from upper-edge of DIN-rail	56 mm / 2.205 inches
Depth	91 mm / 3.583 inches

### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

### Material data

Weight	38.7 g
--------	--------

### Environmental requirements

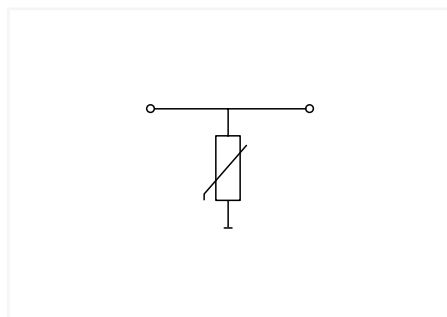
Ambient temperature (operation at U <sub>n</sub> )	-40 ... +80 °C
Ambient temperature (storage)	-40 ... +80 °C

### Standards and specifications

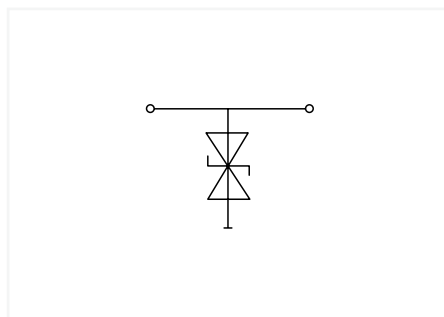
Standards/specifications	IEC 61643-21
--------------------------	--------------

## Component Terminal Block; with Surge Arrester; for DIN-35 Rail 280 Series

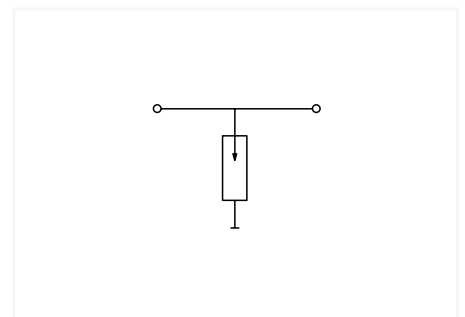
Image	Description	Nominal Operating Voltage	Item No.	PU
	Component terminal block; double-deck; with varistor; with direct connection to DIN-35 rail	24 VDC	280-502/281-609	50
		48 VDC	280-502/281-610	50
		60 VDC	280-502/281-611	50
		110 VDC	280-502/281-612	50
		24 VAC	280-502/281-613	50
		115 VAC	280-502/281-614	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



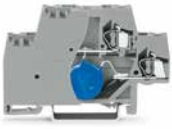
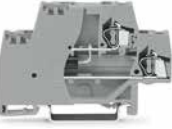
Component Terminal Block with Varistor

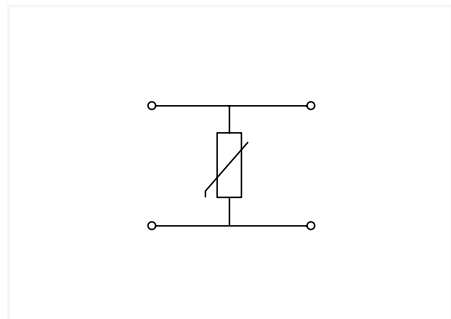


Component Terminal Block with TVS Diode

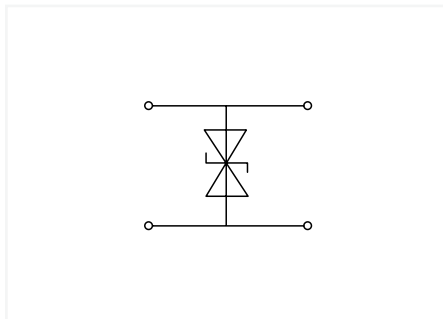


Component Terminal Block with Gas-Filled Surge Arrester

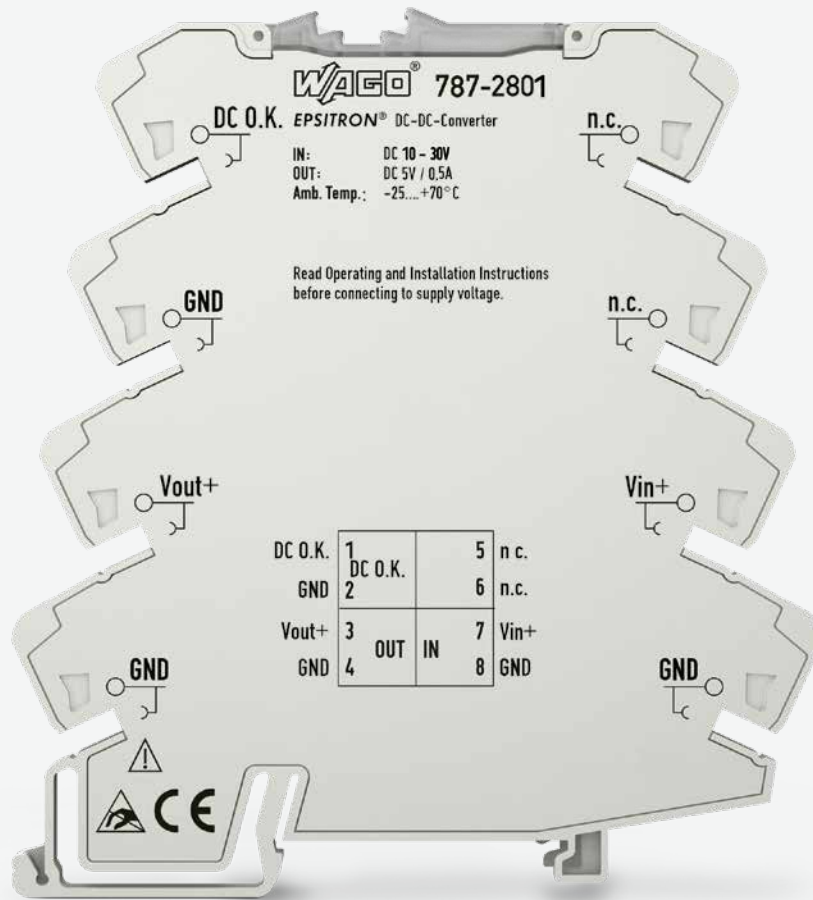
Image	Description	Nominal Operating Voltage	Item No.	PU
	Component terminal block; double-deck; with varistor; with end plate	24 VDC	280-504/281-582	25
		48 VDC	280-504/281-583	25
		60 VDC	280-504/281-584	25
		110 VDC	280-504/281-585	25
		24 VAC	280-504/281-586	25
		115 VAC	280-504/281-587	25
		230 VAC	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 137
	<b>DC/DC Converters; 787 Series</b> 141

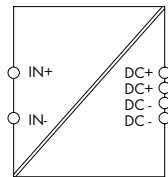
# WAGO DC/DC Converters Selection Guide

Nominal voltage (input) [DC V]	Nominal voltage (output) [DC V]	Nominal current (output) [A]	Approvals						DC OK signal/ contact	Efficiency typ. [%]	Ambient temperature [°C] <sup>4)</sup>	Item Number	Page
			EN 50155	EN 60335	UL 61010-2-201	DNV	ANSI/ISA 12.12.1	ATEX/IEC Ex					
24.0	5.0	0.5			■				■	82.5	-25 ... +70	787-2801	141
24.0	10.0	0.5			■				■	89.0	-25 ... +70	787-2802	142
48.0	24.0	0.5			■				■	91.0	-25 ... +70	787-2803	144
24.0	12.0	0.5			■				■	90.0	-25 ... +70	787-2805	143
24.0	5/10/12	0.5			■				■	82.5	-25 ... +70	787-2810	145
24.0	12.0	0.4			■				■	84.0	-25 ... +70	787-1650	140
110.0	24.0	2.0	■		■					85.0	-40 ... +70	787-1014	137
72.0	24.0	2.0	■		■					86.0	-40 ... +70	787-1014/072-000	138
72.0	12.0	4.0	■		■		■			86.0	-40 ... +70	787-1015/072-000	139

■ Yes   □ Pending

# 5

## DC/DC Converter; Compact; 110 VDC input voltage; 24 VDC output voltage; 2 A output current 787 Series



DC/DC Converter; Compact; 110 VDC input voltage;  
24 VDC output voltage; 2 A output current

	Item No.	PU
	787-1014	1

### Features:

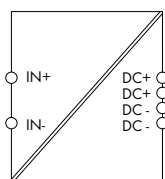
- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1
- Control deviation:  $\pm 1\%$  ( $\pm 10\%$  within the application range of EN 50121-3-2)
- Suitable for railway applications

Input	
Nominal input voltage $U_{i,nom}$	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 $U_{o,nom}$	24 VDC (SELV)
Nominal output current $I_{o,nom}$	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	$1.1 \times I_{o,nom}$ (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.) $P_{i(max)}$	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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-40 \dots +70$ °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 technology	CAGE CLAMP®
Input/Output (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	72 x 89 x 59 mm / 2.835 x 3.504 x 2.323 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mounting type	DIN-35 rail
Weight	250 g
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; 72 VDC input voltage; 24 VDC output voltage; 2 A output current 787 Series



Similar to pictured device



DC/DC Converter; Compact; 72 VDC input voltage;  
24 VDC output voltage; 2 A output current

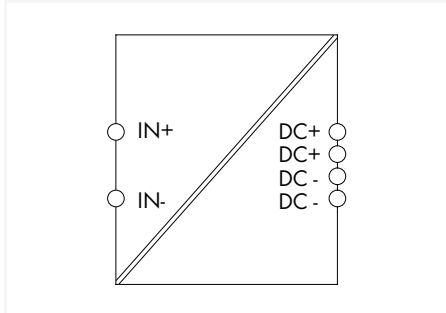
Item No.	PU
787-1014/072-000	1

### 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 $P_l$	$\leq 2$ W (72 VDC; no load); $\leq 9$ W (72 VDC; nominal load)
Power loss (max.) $P_{l, \text{max}}$	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/series operation	No/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	$-40 \dots +70$ °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 technology	CAGE CLAMP®
Input/Output (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	72 x 89 x 59 mm / 2.835 x 3.504 x 2.323 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mounting type	DIN-35 rail
Weight	250 g
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; 72 VDC input voltage; 12 VDC output voltage; 4 A output current; galvanically isolated 787 Series



DC/DC Converter; Compact; 72 VDC input voltage; 12 VDC output voltage; 4 A output current; galvanically isolated

Item No.	PU
787-1015/072-000	1

#### Features:

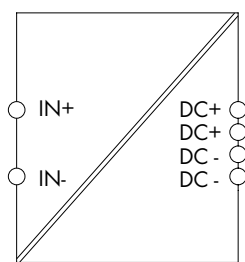
- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per EN 60950-1
- Control deviation:  $\pm 1\%$  ( $\pm 10\%$  within 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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +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 technology	CAGE CLAMP®
Input/Output (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	72 x 89 x 59 mm / 2.835 x 3.504 x 2.323 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mounting type	DIN-35 rail
Weight	235 g
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; 24 VDC input voltage; 12 VDC output voltage; 4 A output current; galvanically isolated 787 Series



Foto ähnlich



DC/DC Converter; 24 VDC input voltage;  
12 VDC output voltage; 4 A output current;  
galvanically isolated

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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2 %/K ( $> 55$ °C)
Connection data	
Connection technology	CAGE CLAMP®
Input/Output (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 x 90 x 107.5 mm / 1.772 x 3.543 x 4.232 inches
Mounting type	DIN-35 rail
Weight	240 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201; EN 61204-3; EN 61558-2-16

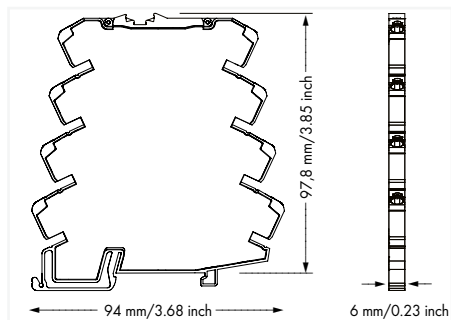
# DC/DC Converter; 24 VDC input voltage; 5 VDC output voltage; 0.5 A output current; DC OK contact 787 Series



DC O.K.	1	DC O.K.	5	n.c.
GND	2		6	n.c.
Vout+	3	OUT	7	Vin+
GND	4	IN	8	GND

DC/DC Converter; 24 VDC input voltage;  
5 VDC output voltage; 0.5 A output current;  
DC OK contact

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 $U_{i,nom}$	24 VDC
Input voltage range	10 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.34$ A
Inrush current	$\leq 0.5$ A (at nominal input voltage)

Output	
Nominal output voltage $U_{o,nom}$	5 VDC
Output voltage range	$\pm 3$ %
Nominal output current $I_{o,nom}$	0.5 A
Nominal output power	2.5 W
Residual ripple	$\leq 20$ 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 ( $U_i$ , max. 4 mA)
Operation status indicator	Green LED ( $U_i$ ); Red LED (short circuit)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.13$ W; $\leq 0.6$ 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/series operation	No/No
MTBF	$> 1,800,000$ h
Ambient temperature (operation at $U_i$ )	$-25 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG

Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	6 x 94 x 97.8 mm / 0.236 x 3.701 x 3.85 inches
Mounting type	DIN-35 rail
Weight	48.6 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

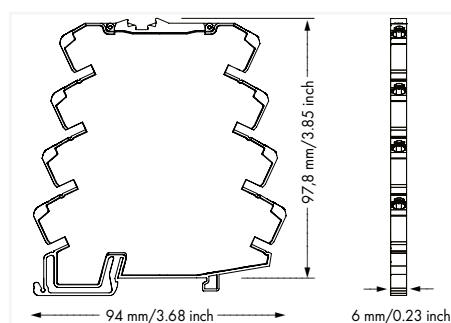
# DC/DC Converter; 24 VDC input voltage; 10 VDC output voltage; 0.5 A output current; DC OK contact 787 Series



DC O.K.	1	DC O.K.	5	n.c.
GND	2		6	n.c.
Vout+	3	OUT	7	Vin+
GND	4	IN	8	GND

DC/DC Converter; 24 VDC input voltage;  
10 VDC output voltage; 0.5 A output current;  
DC OK contact

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 $U_{i, \text{nom}}$	24 VDC
Input voltage range	15 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.42$ A
Inrush current	$\leq 0.5$ A (at nominal input voltage)
Output	
Nominal output voltage $U_{o, \text{nom}}$	10 VDC
Output voltage range	$\pm 2$ %
Nominal output current $I_{o, \text{nom}}$	0.5 A
Nominal output power	5 W
Residual ripple	$\leq 20$ 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 ( $U_i$ , max. 4 mA)
Operation status indicator	Green LED ( $U_o$ ); Red LED (short circuit)
Efficiency/power losses	
Power loss $P_i$	$\leq 0.19$ W; $\leq 0.7$ 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/series operation	No/No
MTBF	$> 1,800,000$ h
Ambient temperature (operation at $U_{i, \text{nom}}$ )	$-25 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	No derating
Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	6 x 94 x 97.8 mm / 0.236 x 3.701 x 3.85 inches
Mounting type	DIN-35 rail
Weight	36 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201



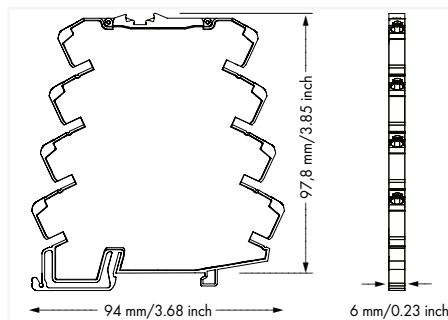
# DC/DC Converter; 24 VDC input voltage; 12 VDC output voltage; 0.5 A output current; DC OK contact 787 Series



DC O.K.	1	DC O.K.	5	n.c.
GND	2		6	n.c.
Vout+	3	OUT	7	Vin+
GND	4	IN	8	GND

DC/DC Converter; 24 VDC input voltage;  
12 VDC output voltage; 0.5 A output current;  
DC OK contact

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 $U_{i,nom}$	24 VDC
Input voltage range	15 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.5$ A
Inrush current	$\leq 0.5$ A (at nominal input voltage)
Output	
Nominal output voltage $U_{o,nom}$	12 VDC
Output voltage range	$\pm 2$ %
Nominal output current $I_{o,nom}$	0.5 A
Nominal output power	6 W
Residual ripple	$\leq 20$ 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 ( $U_i$ , max. 4 mA)
Operation status indicator	Green LED ( $U_i$ ); Red LED (short circuit)
Efficiency/power losses	
Power loss $P_i$	$\leq 0.21$ W; $\leq 0.7$ 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/series operation	No/No
MTBF	$> 1,800,000$ h
Ambient temperature (operation at $U_i$ )	$-25 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	No derating
Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	6 x 94 x 97.8 mm / 0.236 x 3.701 x 3.85 inches
Mounting type	DIN-35 rail
Weight	48.6 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

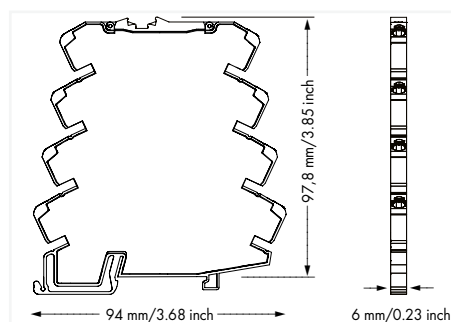
# DC/DC Converter; 48 VDC input voltage; 24 VDC output voltage; 0.5 A output current; DC OK contact 787 Series



DC O.K.	1	DC O.K.	5	n.c.
GND	2		6	n.c.
Vin+	3	IN	7	Vout+
GND	4	OUT	8	GND

DC/DC Converter; 48 VDC input voltage;  
24 VDC output voltage; 0.5 A output current;  
DC OK contact

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 $U_{i, \text{nom}}$	48 VDC
Input voltage range	40 ... 55 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.34$ A
Inrush current	$\leq 0.5$ A (at nominal input voltage)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$\pm 3$ %
Nominal output current $I_{o, \text{nom}}$	0.5 A
Nominal output power	12 W
Residual ripple	$\leq 20$ 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 ( $U_i$ , max. 4 mA)
Operation status indicator	Green LED ( $U_o$ ); Red LED (short circuit)
Efficiency/power losses	
Power loss $P_i$	$\leq 0.29$ W; $\leq 1.2$ 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/series operation	No/No
MTBF	$> 1,800,000$ h
Ambient temperature (operation at $U_{i, \text{nom}}$ )	$-25 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	No derating
Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	6 x 94 x 97.8 mm / 0.236 x 3.701 x 3.85 inches
Mounting type	DIN-35 rail
Weight	32.6 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201

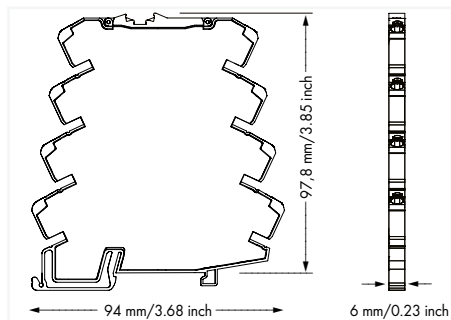
## DC/DC Converter; 24 VDC input voltage; 5/10/12 VDC adjustable output voltage; 0.5 A output current; DC OK contact 787 Series



DC O.K.	1	DC O.K.	5	n.c.
GND	2		6	n.c.
Vout+	3	OUT	7	Vin+
GND	4	IN	8	GND

DC/DC Converter; 24 VDC input voltage;  
5/10/12 VDC adjustable output voltage;  
0.5 A output current; DC OK contact

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 $U_{i,nom}$	24 VDC
Input voltage range	15 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.5$ A
Inrush current	$\leq 0.5$ A (at nominal input voltage)

Output	
Nominal output voltage $U_{o,nom}$	5 / 10 / 12 VDC (Adjustable via DIP switch)
Output voltage range	$\pm 3$ %
Nominal output current $I_{o,nom}$	0.5 A
Nominal output power	2.5 W
Residual ripple	$\leq 20$ 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 ( $U_i$ , max. 4 mA)
Operation status indicator	Green LED ( $U_i$ ); Red LED (short circuit)

Efficiency/power losses	
Power loss $P_i$	$\leq 0.21$ W; $\leq 0.7$ 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/series operation	No/No
MTBF	$> 1,800,000$ h
Ambient temperature (operation at $U_i$ )	$-25 \dots +70$ °C
Ambient temperature (storage)	$-40 \dots +85$ °C
Relative humidity	$\leq 95$ % (no condensation permissible)
Derating	No derating

Connection data	
Number of jumper slots	8
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG






Physical data/Mechanical data/Material data	
Width x Height x Depth from upper-edge of DIN-rail	6 x 94 x 97.8 mm / 0.236 x 3.701 x 3.85 inches
Mounting type	DIN-35 rail
Weight	36.4 g

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 61010-2-201



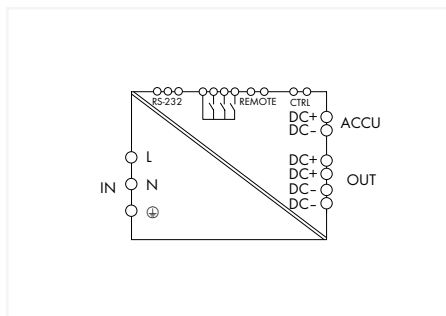
## WAGO UPS Charger and Controller and WAGO Capacitive Buffer Modules

## WAGO UPS Charger and Controller and WAGO Capacitive Buffer Modules

	Page
	148
	150
	153
	158
	160

# Switched-mode power supply with integrated charger and controller; Classic; 1-phase; 24 VDC output voltage; 5 A output current; Communication capability

## 787 Series



Switched-mode power supply with integrated charger and controller; Classic; 1-phase; 24 VDC output voltage; 5 A output current; Communication capability

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 $U_{i, \text{nom}}$	100 ... 240 VAC
Input voltage range	85 ... 264 VDC; 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 $I_i$	$\leq 1.1 \text{ A}$ (230 VAC; 5 ADC); $\leq 2.2 \text{ A}$ (110 VAC; 5 ADC)
Inrush current	$\leq 30 \text{ A}$
Power factor correction (PFC)	Passive

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (mains operation); 18.5 ... 27.5 VDC (buffer mode)
Nominal output current $I_{o, \text{nom}}$	5 A
Nominal output power	120 W
Residual ripple	$\leq 50 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ (typ.); TopBoost
Overload behavior	Constant current

Energy storage system	
Buffer time	1 s ... 20 min or constant; PC mode; configurable via software
Switch-on threshold (adjustable)	20 ... 25.5 VDC (Adjustable via software; 22 VDC (pre-configured))
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); 1 x RS-232 interface
Operation status indicator	Green LED (DC OK); Yellow LED (battery mode); Red LED (alarm)
Communication	RS-232 serial interface
Remote input	Switching buffer mode off

Efficiency/power losses	
Power loss $P_i$	$\leq 5.2 \text{ W}$ (Buffer mode; 24 VDC; 5 A); $\leq 17 \text{ W}$ (Mains operation; 230 VAC; 24 VDC; 5 A); $\leq 22 \text{ W}$
Power loss (max.) $P_{i, \text{max}}$	30 W (90 VAC; charging)
Efficiency (typ.)	88 %

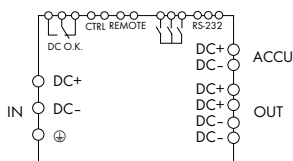
Circuit protection	
Internal fuse	T 4 A / 250 VAC (input side)
Backup fusing (required)	An external DC fuse is required for the DC input voltage.
Backup fusing (recommended)	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

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; $\leq 38 \text{ VDC}$ (in the event of a fault)
Parallel operation	Yes, max. 3 battery modules for buffer time extension
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	CAGE CLAMP®
Input/Output/Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Interface (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 [mm]	60 x 127 x 135.5
Mounting type	DIN-35 rail
Weight	847.8 g
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; 24 VDC input voltage; 24 VDC output voltage; 10 A output current; LineMonitor; Communication capability

## 787 Series



UPS charger and controller; 24 VDC input voltage; 24 VDC output voltage; 10 A output current; LineMonitor; Communication capability

Item No.	PU
787-870	1

### Features:

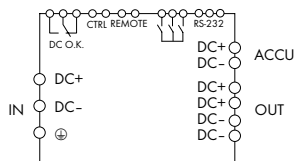
- Charger and controller for uninterruptible power supply (UPS)
- Current and voltage monitoring, as well as parameter setting via LCD and RS-232 interface
- Active signal outputs for function monitoring
- Remote input for deactivating the buffered output
- Input for temperature control of connected battery
- Battery control (from manufacturing no. 215563 onwards) detects both battery life and battery type

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	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)
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 1$ VDC (rated operation); 20 ... 25.5 VDC (buffer mode)
Nominal output current $I_{o, \text{nom}}$	20 A
Current limitation	1.1 ... 1.3 x $I_{o, \text{nom}}$ (typ.)
<b>Energy storage system</b>	
Buffer time	10 s ... 10 min or constant; adjustable
Switch-on threshold (adjustable)	20 ... 25.5 VDC
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
<b>Signaling and communication</b>	
Signaling	1 x LED DC OK (green); 1 x Warning LED (yellow); 1 x Error LED (red); LCD; 1 x RS-232 interface
Operation status indicator	Green LED ( $U_i$ ); Yellow LED (warning); Red LED (error)
Communication	RS-232 serial interface
Remote input	Switching buffer mode off
<b>Efficiency/power losses</b>	
Power loss $P_i$	$\leq 15$ W; $\leq 30$ W (nominal load)
Efficiency (typ.)	95 %
<b>Circuit protection</b>	
Internal fuse	T 25 A
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III
Reverse voltage protection	Yes
Pollution degree	2
Parallel operation	Yes, max. 3 battery modules for buffer time extension (temperature measurement evaluation is only possible via one battery module)
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
<b>Connection data</b>	
Connection technology	Push-in CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (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 [mm]	57 x 171 x 163; Height with connector
Mounting type	DIN-35 rail
Weight	1200 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 60950; UL 60950; UL 508; EN 61000-6-2; EN 61000-6-3



# UPS charger and controller; 24 VDC input voltage; 24 VDC output voltage; 20 A output current; LineMonitor; Communication capability

## 787 Series



UPS charger and controller; 24 VDC input voltage; 24 VDC output voltage; 20 A output current; LineMonitor; Communication capability

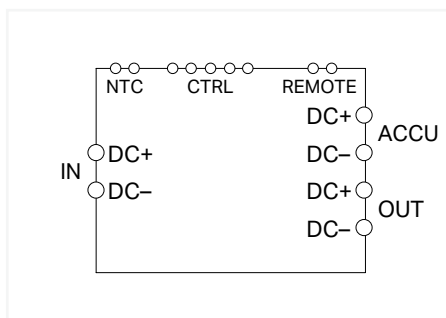
Item No.	PU
787-875	1

### 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 $U_{i, \text{nom}}$	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 $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 1$ VDC (rated operation); 20 ... 25.5 VDC (buffer mode)
Nominal output current $I_{o, \text{nom}}$	20 A
Current limitation	1.1 ... 1.3 x $I_{o, \text{nom}}$ (typ.)
Energy storage system	
Buffer time	10 s ... 10 min or constant; adjustable
Switch-on threshold (adjustable)	20 ... 25.5 VDC
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; 1 x RS-232 interface
Operation status indicator	Green LED (U); Yellow LED (warning); Red LED (error);
Communication	RS-232 serial interface
Remote input	Switching buffer mode off
Efficiency/power losses	
Power loss $P_i$	$\leq 15$ 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	Yes, max. 3 battery modules for buffer time extension (temperature measurement evaluation is only possible via one battery module)
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Connection data	
Connection technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (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 [mm]	57 x 171 x 163; Height with connector
Mounting type	DIN-35 rail
Weight	1200 g
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; 24 VDC input voltage; 24 VDC output voltage; 40 A output current 787 Series



UPS charger and controller; 24 VDC input voltage;  
24 VDC output voltage; 40 A output current

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

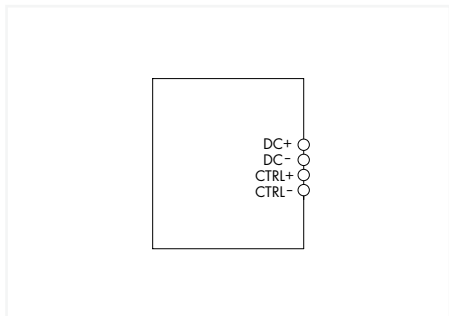
### Safety information:

For North America: Use only batteries with appropriate safety approvals!

<b>Input</b>	
Nominal input voltage $U_{i,nom}$	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
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	24 VDC
Output voltage range	$U_i$ (rated operation); 19.5 ... 26.5 VDC (battery voltage in buffer mode)
Nominal output current $I_{o,nom}$	40 A
<b>Energy storage system</b>	
Buffer time	load-dependent
Switch-on threshold (adjustable)	21.5 ... 22.5 VDC
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
<b>Signaling and communication</b>	
Signaling	1 x Power LED (green); 1 x UPS LED (yellow); 1 x Warning LED (red);
Operation status indicator	Green LED (operation); Red LED (warning)
Remote input	Switching buffer mode off
<b>Efficiency/power losses</b>	
Power loss $P_i$	$\leq 4$ W; $\leq 22.5$ W (nominal load)
Efficiency (typ.)	97 % (rated operation); 85 % (charging)
<b>Circuit protection</b>	
Internal fuse	T 6.3 A (charging circuit)
Backup fusing (recommended)	T 50 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/series operation	No/No
MTBF	600,000 h (40 °C; per SN 29500)
Ambient temperature (operation at $U_N$ )	0 ... +50 °C
Ambient temperature (storage)	-20 ... +55 °C
Relative humidity	5 ... 95 % (no condensation permissible)
<b>Connection data</b>	
Connection technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Signaling (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail [mm]	68 x 181 x 162
Mounting type	DIN-35 rail
Weight	1100 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61000-6-2; EN 61000-6-3
Standards/specifications (pending)	CSA

# Lead-acid AGM battery module; 24 VDC input voltage; 5 A output current; Capacity: 0.8 Ah; with battery control

## 787 Series



Lead-acid AGM battery module; 24 VDC input voltage; 5 A output current; Capacity: 0.8 Ah; with battery control

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.

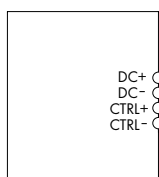
<b>Input</b>	
Nominal input voltage $U_{i,nom}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	24 VDC
Nominal output current $I_{o,nom}$	5 A
<b>Energy storage system</b>	
Battery capacity	0.8 Ah
Charging current	0.2 A (recommended)
End-of-charge voltage	27 VDC (25 °C)
<b>Circuit protection</b>	
Internal fuse	T 10 A / 250 VAC
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_n$ )	-15 ... +40 °C (-20 ... +40 °C (during discharge))
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
<b>Connection data</b>	
Connection type	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
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail [mm]	72 x 97 x 124
Mounting type	DIN-35 rail
Weight	1000 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-201
Standards/specifications (pending)	UL 508

## Lead-acid AGM battery module; 24 VDC input voltage; 7.5 A output current; 1.2 Ah capacity; with battery control

### 787 Series



Similar to pictured device



Lead-acid AGM battery module; 24 VDC input voltage; 7.5 A output current; 1.2 Ah capacity; with battery control

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.

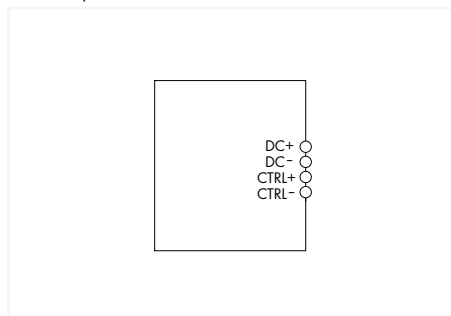
<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Nominal output current $I_{o, \text{nom}}$	7.5 A
<b>Energy storage system</b>	
Battery capacity	1.2 Ah
Charging current	$\leq 0.3$ A
End-of-charge voltage	27 VDC (25 °C)
<b>Circuit 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
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_n$ )	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
<b>Connection data</b>	
Connection type	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 [mm]	55 x 153 x 126.6; Height with connector
Mounting type	DIN-35 rail
Weight	1980 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

## Lead-acid AGM battery module; 24 VDC input voltage; 20 A output current; 3.2 Ah capacity; with battery control

### 787 Series



Similar to pictured device



Lead-acid AGM battery module; 24 VDC input voltage; 20 A output current; 3.2 Ah capacity; with battery control

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.

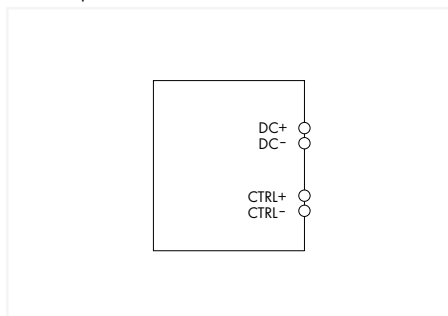
<b>Input</b>	
Nominal input voltage $U_{i,nom}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	24 VDC
Nominal output current $I_{o,nom}$	20 A
<b>Energy storage system</b>	
Battery capacity	3.2 Ah
Charging current	$\leq 0.8$ A
End-of-charge voltage	27 VDC (25 °C)
<b>Circuit protection</b>	
Internal fuse	T 25 A
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Pollution degree	2
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_n$ )	-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 [mm]	76.2 x 168 x 175.5
Mounting type	Screw mount
Weight	3079 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

## Lead-acid AGM battery module; 24 VDC input voltage; 40 A output current; 7 Ah capacity; with battery control

### 787 Series



Similar to pictured device



Lead-acid AGM battery module; 24 VDC input voltage; 40 A output current; 7 Ah capacity; with battery control

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.

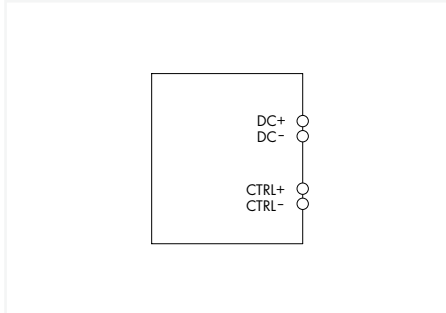
<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Nominal output current $I_{o, \text{nom}}$	40 A
<b>Energy storage system</b>	
Battery capacity	7 Ah
Charging current	$\leq 1.8 \text{ A}$
End-of-charge voltage	27 VDC (25 °C)
<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
Pollution degree	2
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_{i, \text{nom}}$ )	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
<b>Connection data</b>	
Connection technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Battery control (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 [mm]	86 x 239 x 217.5
Mounting type	Screw mount
Weight	6500 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

## Lead-acid AGM battery module; 24 VDC input voltage; 40 A output current; 12 Ah capacity; with battery control

### 787 Series



Similar to pictured device



Lead-acid AGM battery module; 24 VDC input voltage; 40 A output current; 12 Ah capacity; with battery control

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

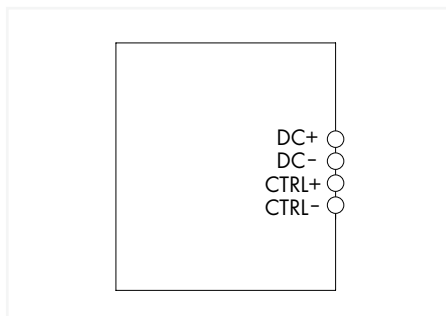
#### Hinweis:

For parallel connection, please switch battery capacity setting to "OFF" in the UPS charger and controller.

<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 system</b>	
Battery capacity	12 Ah
Charging current	$\leq 3$ A
End-of-charge voltage	27 VDC (25 °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
Pollution degree	2
Series operation	No
MTBF	> 500,000 h (per IEC 61709)
Service life (typ.)	5 / 4 / 2 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_n$ )	-10 ... +40 °C
Ambient temperature (storage)	-20 ... +40 °C
Relative humidity	5 ... 80 % (no condensation permissible)
<b>Connection data</b>	
Connection technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Battery (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 [mm]	120.5 x 239 x 217.5
Mounting type	Screw mount
Weight	10650 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	VdS-tested battery; UL 508

## Pure lead battery module; 24 VDC input voltage; 20 A output current; Capacity: 2.5 Ah; with battery control

### 787 Series



Pure Lead Battery module; 24 VDC input voltage; 20 A output current; Capacity: 2.5 Ah; with battery control

Item No.	PU
787-878/000-2500	1

#### Features:

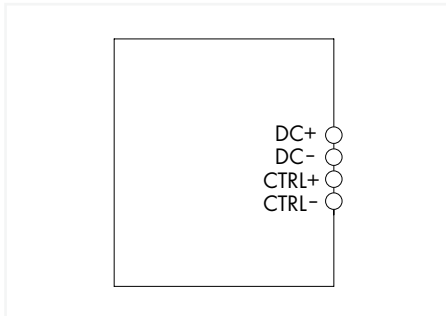
- Pure lead battery module: 12 x CYCLON battery (D cell) per module
- Various mounting options
- Intelligent battery management (battery control)
- Optional coated PCB
- Pluggable connection technology (WAGO MULTI CONNECTION SYSTEM)

<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 $I_{o, \text{nom}}$	20 A
<b>Energy storage system</b>	
Battery capacity	2.5 Ah
Charging current	$\leq 5$ A
End-of-charge voltage	27 VDC (25 °C)
<b>Circuit protection</b>	
Internal fuse	T 25 A
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Overvoltage category	I
Pollution degree	2
Parallel operation	Yes
Service life (typ.)	15 / 8 / 4 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_n$ )	-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	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
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail [mm]	86 x 186 x 160
Mounting type	Direct screw connection; Optional DIN-rail mount (EN 60715)
Weight	3800 g
<b>Standards and specifications</b>	
Conformity marking	CE



## Pure lead battery module; 24 VDC input voltage; 40 A output current; Capacity: 13 Ah; with battery control

### 787 Series



Pure Lead Battery module; 24 VDC input voltage; 40 A output current; Capacity: 13 Ah; with battery control

Item No.	PU
787-878/001-3000	1

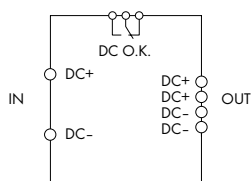
#### Features:

- 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 system</b>	
Battery capacity	13 Ah
Charging current	≤ 5 A
End-of-charge voltage	27 VDC (25 °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
Overvoltage category	I
Pollution degree	2
Parallel operation	Yes
Service life (typ.)	15 / 8 / 4 a (20 / 30 / 40 °C)
Ambient temperature (operation at $U_n$ )	-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 technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Battery control (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 from upper-edge of DIN-rail [mm]	217 x 186 x 199.5
Mounting type	Direct screw connection
Weight	12300 g
<b>Standards and specifications</b>	
Conformity marking	CE

# Capacitive buffer module; 24 VDC input voltage; 24 VDC output voltage; 10 A output current; 0.06 ... 7.2 s buffer time; Communication capability

## 787 Series



Capacitive buffer module; 24 VDC input voltage; 24 VDC output voltage; 10 A output current; 0.06 ... 7.2 s buffer time; Communication capability

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

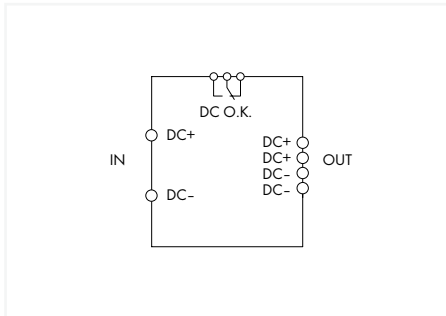
<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	20 ... 30 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0.06$ A (no load); $\leq 1$ A (charging); $\leq 11$ A
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 0.5$ 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.)
<b>Energy storage system</b>	
Buffer time	0.06 ... 7.2 s depends on load current and switch-on threshold
Switch-on threshold (adjustable)	20 ... 24 VDC
Charging time (typ.)	5 min
<b>Signaling and communication</b>	
Signaling	1 x LED DC OK (green); 1 x Charge LED (yellow); 1 x DC not OK LED (red)
Operation status indicator	Green LED ( $U_o > 20$ V); Yellow LED (charging); Red LED ( $U_o < 20$ V)
<b>Efficiency/power losses</b>	
Power loss $P_i$	$\leq 1.5$ W; $\leq 6.5$ W (nominal load)
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel/series operation	Yes/No
MTBF	typ. 87,600 h (at 25 °C); typ. 30,500 h (at 40 °C)
Ambient temperature (operation at $U_n$ )	-10 ... +50 °C
Ambient temperature (storage)	-10 ... +60 °C
Relative humidity	5 ... 96 % (no condensation permissible)
<b>Connection data</b>	
Connection type	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
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail [mm]	57 x 163 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1000 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 60950; UL 508; EN 61000-6-2; EN 61000-6-3

# Capacitive buffer module; 24 VDC input voltage; 24 VDC output voltage; 20 A output current; 0.17 ... 16.5 s buffer time; Communication capability

## 787 Series



Similar to pictured device



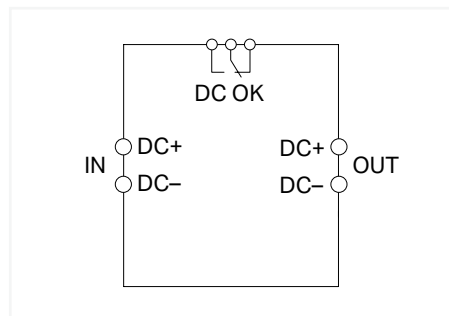
Capacitive buffer module; 24 VDC input voltage; 24 VDC output voltage; 20 A output current; 0.17 ... 16.5 s buffer time; Communication capability

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

<b>Input</b>	
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); $\leq 22$ A
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	$U_i - 1$ 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.)
<b>Energy storage system</b>	
Buffer time	0.17 ... 16.5 s depends on load current and switch-on threshold
Switch-on threshold (adjustable)	20 ... 24 VDC
Charging time (typ.)	5 min
<b>Signaling and communication</b>	
Signaling	1 x LED DC OK (green); 1 x Charge LED (yellow); 1 x DC not OK LED (red)
Operation status indicator	Green LED ( $U_o > 20$ V); Yellow LED (charging); Red LED ( $U_o < 20$ V)
<b>Efficiency/power losses</b>	
Power loss $P_i$	$\leq 1.5$ W; $\leq 15$ W (nominal load)
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel/series operation	Yes/No
MTBF	typ. 87,600 h (at 25 °C); typ. 30,500 h (at 40 °C)
Ambient temperature (operation at $U_n$ )	-10 ... +50 °C
Ambient temperature (storage)	-10 ... +60 °C
Relative humidity	5 ... 96 % (no condensation permissible)
<b>Connection data</b>	
Connection technology	CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Relay (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail [mm]	57 x 181 x 179; Height with connector
Mounting type	DIN-35 rail
Weight	1000 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 60950; UL 508; EN 61000-6-2; EN 61000-6-3

**Capacitive buffer module; 24 VDC input voltage; 24 VDC output voltage; 40 A output current;****Buffer time: 0.3 ... 6.6 s****787 Series**

Capacitive buffer module; 24 VDC input voltage;  
24 VDC output voltage; 40 A output current;  
Buffer time: 0.3 ... 6.6 s

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 $U_{i,nom}$	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 $U_{o,nom}$	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 $I_{o,nom}$	40 A
Energy storage system	
Buffer time	0.3 ... 6.6 s depends on load current and temperature
Switch-on threshold (typ.)	22 VDC
Nominal capacity	4.17
Nominal voltage	32.4 V
Effective energy content (typ.)	500
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)
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/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 at $U_i$ )	-10 ... +50 °C
Ambient temperature (storage)	-10 ... +60 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Connection data	
Connection technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.75 ... 16 mm <sup>2</sup> / 0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Signaling (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 [mm]	68 x 181 x 162
Mounting type	DIN-35 rail
Weight	900 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 62368-1; EN 61000-6-2; EN 61000-6-3
Standards/specifications (pending)	CSA

6



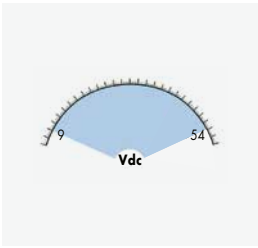
# WAGO Redundancy Modules

# WAGO Redundancy Modules



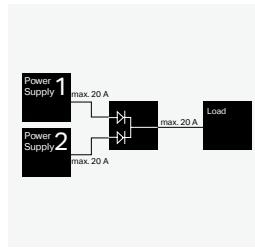
**Redundancy Modules**  
787 Series

Seite  
167



**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

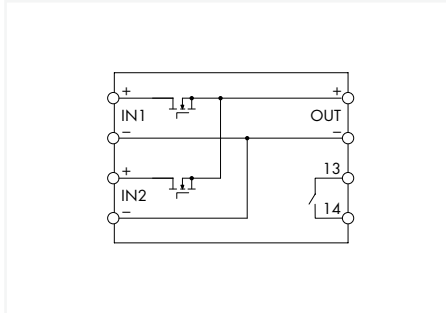


# Redundancy module; 2 x 24 VDC input voltage; 2 x 20 A input current; 24 VDC output voltage; 40 A output current

## 787 Series



Similar to pictured device



Redundancy module; 2 x 24 VDC input voltage;  
2 x 20 A input current; 24 VDC output voltage;  
40 A output current

Item No.	PU
787-1685	1

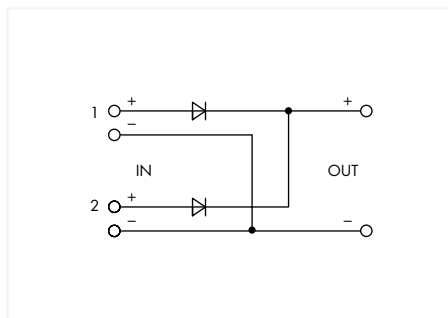
### Features:

- Redundancy module with low-loss MOFSET 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 $U_{i,nom}$	2 x 24 VDC
Input voltage range	2 x 10 ... 36 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 40$ A (per path); $\leq 40$ A (in total)
PowerBoost input	60 ADC (4 s); 50 ADC (8 s)
TopBoost input	100 ADC (50 ms)
Output	
Nominal output voltage $U_{o,nom}$	24 VDC
Output voltage range	10 ... 36 VDC ( $U_e$ - voltage drop)
Voltage drop	$\leq 100$ mV (Input/output)
Nominal output current $I_{o,nom}$	40 A (redundancy operation); 40 A (parallel operation)
Nominal output power	960 W
Switching frequency	5 kHz
PowerBoost	120 ADC (4 s); 100 ADC (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 ( $U_e > 10$ VDC)
Efficiency/power losses	
Power loss $P_i$	$\leq 1.5$ W; $\leq 9.5$ 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/series operation	Yes/No
MTBF	> 500,000 h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-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 technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Signaling (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 [mm]	42 x 127 x 139.5
Mounting type	DIN-35 rail
Weight	450 g
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; 2 x 9 ... 54 VDC input voltage; 2 x 12.5 A input current; 9 ... 54 VDC output voltage; 25 A output current

## 787 Series



Redundancy module; 2 x 9 ... 54 VDC input voltage;  
2 x 12.5 A input current; 9 ... 54 VDC output voltage;  
25 A output current

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

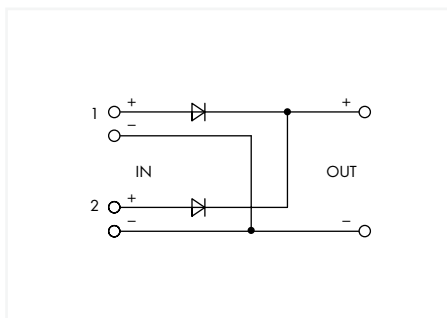
Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 9 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 12.5$ A (per path); $\leq 25$ A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ – 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/series operation	Yes/No
MTBF	$> 10$ million h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	$-25 \dots +70$ °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 technology	Push-in CAGE CLAMP®
Input/Output (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 [mm]	50 x 130 x 92
Mounting type	DIN-35 rail
Weight	470 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508

# Redundancy module; 2 x 9 ... 54 VDC input voltage; 2 x 12.5 A input current; 9 ... 54 VDC output voltage; 25 A output current

## 787 Series



Similar to pictured device



Redundancy module; 2 x 9 ... 54 VDC input voltage; 2 x 12.5 A input current; 9 ... 54 VDC output voltage; 25 A output current

	Item No.	PU
	787-783/000-040	1

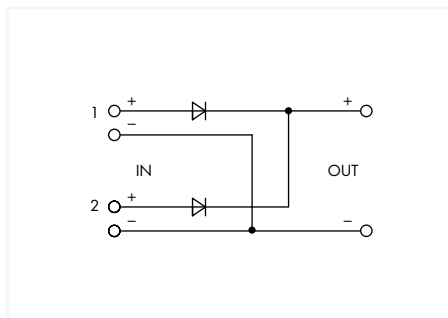
### Features:

- 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 $U_{i,nom}$	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 $U_{o,nom}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ - voltage drop)
Voltage drop	$\leq 0.8$ V (Input/output)
Nominal output current $I_{o,nom}$	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/series operation	Yes/No
MTBF	> 10 million h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	Push-in CAGE CLAMP®
Input/Output (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 [mm]	50 x 130 x 92
Mounting type	DIN-35 rail
Weight	470 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508; ATEX; IEC Ex; ANSI/ISA 12.12.01 (Class I Div. 2)

# Redundancy module; 2 x 9 ... 54 VDC input voltage; 2 x 40 A input current; 9 ... 54 VDC output voltage; 76 A output current

## 787 Series



Redundancy module; 2 x 9 ... 54 VDC input voltage;  
2 x 40 A input current; 9 ... 54 VDC output voltage;  
76 A output current

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

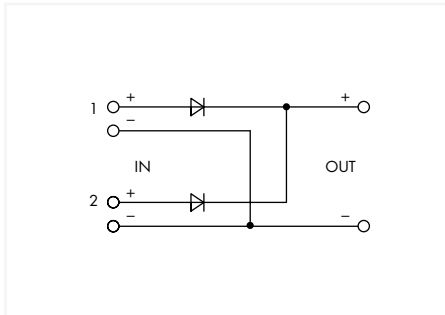
Input	
Nominal input voltage $U_{i, \text{nom}}$	2 x 24 VDC
Input voltage range	2 x 9 ... 54 VDC
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 40$ A (per path); $\leq 76$ A (in total)
Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ – voltage drop)
Voltage drop	$\leq 500$ mV (input/output)
Nominal output current $I_{o, \text{nom}}$	40 A (redundancy operation); 65 A (parallel operation [UL]); 76 A (parallel operation)
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 $P_l$	$\leq 38$ 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/series operation	Yes/No
MTBF	> 10 million h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-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 technology	Push-in CAGE CLAMP®
Input/Output (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 [mm]	83 x 130 x 153
Mounting type	DIN-35 rail
Weight	960 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508

# Redundancy module; 2 x 9 ... 54 VDC input voltage; 2 x 40 A input current; 9 ... 54 VDC output voltage; 76 A output current

## 787 Series



Similar to pictured device



Redundancy module; 2 x 9 ... 54 VDC input voltage;  
2 x 40 A input current; 9 ... 54 VDC output voltage;  
76 A output current

	Item No.	PU
	787-785/000-040	1

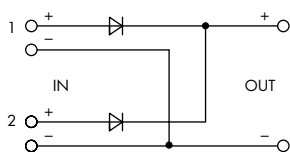
### Features:

- 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 $U_{i,nom}$	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 $U_{o,nom}$	24 VDC
Output voltage range	9 ... 54 VDC ( $U_o$ - voltage drop)
Voltage drop	$\leq 500$ mV (Input/output)
Nominal output current $I_{o,nom}$	40 A (redundancy operation); 65 A (parallel operation [UL]); 76 A (parallel operation)
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 $P_l$	$\leq 38$ 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/series operation	Yes/No
MTBF	> 10 million h (per IEC 61709)
Ambient temperature (operation at $U_i$ )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	$\leq 95\%$ (no condensation permissible)
Derating	-2.66 %/K ( $55$ °C < $T_i \leq 70$ °C)
Resistance to shock and vibration	Shock: 15g (per EN 60068-2-27)
Connection data	
Connection technology	Push-in CAGE CLAMP®
Input/Output (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 [mm]	83 x 130 x 153
Mounting type	DIN-35 rail
Weight	960 g
Standards and specifications	
Conformity marking	CE
Standards/specifications	UL 508; ATEX; IEC Ex; ANSI/ISA 12.12.01 (Class I Div. 2)

# Redundancy module; 2 x 24 VDC input voltage; 2 x 20 A input current; 24 VDC output voltage; 40 A output current; Communication capability

## 787 Series



Redundancy module; 2 x 24 VDC input voltage;  
2 x 20 A input current; 24 VDC output voltage;  
40 A output current; Communication capability

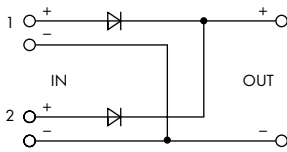
Item No.	PU
787-885	1

### 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

<b>Input</b>	
Nominal input voltage $U_{i,nom}$	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)
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	24 VDC
Output voltage range	18 ... 30 VDC ( $U_o$ - voltage drop)
Voltage drop	$\leq 0.6$ V (Input/output)
Nominal output current $I_{o,nom}$	20 A (redundancy operation); 40 A (parallel operation)
Nominal output power	960 W
<b>Signaling and communication</b>	
Signaling	1 x OUT LED (green); 1 x IN1 LED (yellow); 1 x IN2 LED (yellow)
Operation status indicator	Green LED ( $U_o$ ); 2 x Yellow LED (U)
<b>Efficiency/power losses</b>	
Power loss $P_l$	$\leq 1.5$ W; $\leq 14$ W (24 VDC; 20 A); $\leq 26$ W (48 VDC; 40 A)
Efficiency (typ.)	97 %
<b>Circuit protection</b>	
Internal fuse	No
<b>Safety and protection/Environmental requirements</b>	
Protection class/Protection type	III / IP20; per EN 60529
Reverse voltage protection	Yes
Pollution degree	2
Parallel/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_o$ )	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
<b>Connection data</b>	
Connection technology	Push-in CAGE CLAMP®; CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Relay (solid/fine-stranded/AWG)	0.08 ... 2.5 mm <sup>2</sup> / 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
<b>Physical data/Mechanical data/Material data</b>	
Width x Height x Depth from upper-edge of DIN-rail [mm]	40x 181 x 163; Height with connector
Mounting type	DIN-35 rail
Weight	972 g
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 60950; UL 60950; UL 508; EN 61000-6-2; EN 61000-6-3

# Redundancy module; 2 x 48 VDC input voltage; 2 x 20 A input current; 48 VDC output voltage; 40 A output current; Communication capability Serie 787



Redundancy module; 2 x 48 VDC input voltage;  
2 x 20 A input current; 48 VDC output voltage;  
40 A output current; Communication capability

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 $I_i$	$\leq 20$ A (per path); $\leq 40$ 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	$\leq 1$ 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)
Operation status indicator	Green LED ( $U_o$ ); 2 x Yellow LED (U)
Efficiency/power losses	
Power loss $P_i$	$\leq 1.7$ W (48 VDC; no load); $\leq 20$ W (48 VDC; 20 A); $\leq 40$ 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/series operation	Yes/Yes
MTBF	$> 500,000$ h (per IEC 61709)
Ambient temperature (operation at $U_n$ )	-10 ... +60 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Connection data	
Connection technology	Push-in CAGE CLAMP®/CAGE CLAMP®
Input/Output (solid/fine-stranded/AWG)	0.5 ... 10 mm <sup>2</sup> / 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Relay (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 [mm]	40 x 181 x 163; Height with connector
Mounting type	DIN-35 rail
Weight	860 g
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



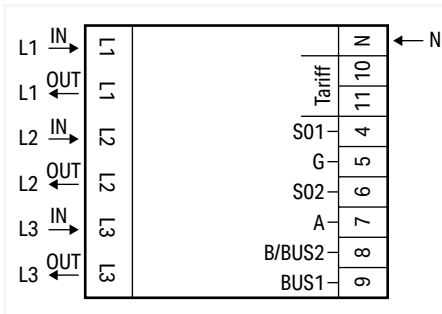
# WAGO Energy Measurement Technology



## WAGO Energy Measurement Technology

		Page
	<b>Energy Meter (MID); with Push-in CAGE CLAMP® and Lever</b> 879 Series	173
	<b>3-Phase Power Measurement Module</b> 2857 Series	182
	<b>Current Signal Conditioner</b> 857 Series	188
	<b>Voltage Signal Conditioner</b> 857 Series	190
	<b>Current Signal Conditioner</b> 789 Series	192
	<b>Selection Guide: Current Transformers</b>	194

# Energy meter (MID); for direct connection; 65 A; 3x230/400 V; 50 Hz; Modbus® and M-Bus; 2 x S0 interface; 4PU 879 Series



Energy meter (MID); for direct connection; 65 A;  
3x230/400 V; 50 Hz; Modbus® and M-Bus;  
2 x S0 interface; 4PU

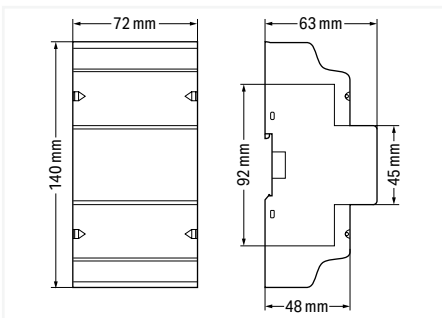
Item No.	PU
879-3000	1

### Short description:

Crucial for trimming costs, comprehensive energy measurement is necessary to optimize energy consumption. WAGO's portfolio now has new 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 (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  
 Nominal input voltage  $U_{I, nom}$  3 x 230 ... 400 VAC  
 Input voltage range  $\pm 20\%$   
 Reference current  $I_{ref}$  5 A  
 Input current  $I_I$   $\leq 65$  A  
 Frequency range 45 ... 60 Hz

### Communication

Communication Modbus®, M-Bus; Bluetooth®  
 Interface RS-485 (2-wire); 2x S0 interfaces (configurable)  
 Rate control input 230 VAC  
 Indicators LCD with backlight

### Signal processing

Measured variables (calculated) Active and reactive energy in supply and reference direction  
 Measurement type (load profile) No

### Measurement Error

Accuracy class Class B (= 1 % error); Active energy per EN 50470-3  
 Calibration validity period 8 years

### Supply

Power supply type Via measurement circuit  
 Power consumption  $P_{max}$  (phase; active power) 2 W  
 Power consumption  $P_{max}$  (phase; apparent power) 10 VA

### Safety and protection

Dielectric strength 4 kV; 1 min  
 Impulse withstand voltage (1.2/50  $\mu$ s) 6 kV  
 Pollution degree 2  
 Protection type IP51 / IP20; IP51 (front side); IP20 (connection)  
 Protection class II

### Connection data

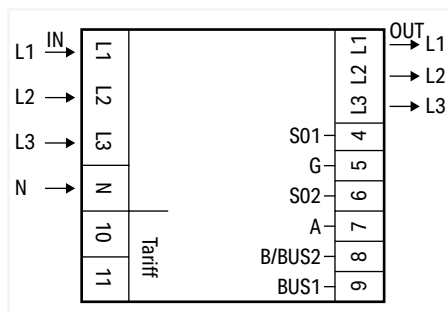
Connection type 1 Voltage/current  
 Connection technology Push-in CAGE CLAMP®  
 WAGO connector WAGO 2616 Series  
 Actuation type Lever  
 Solid conductor 0.75 ... 16 mm<sup>2</sup> / 18 ... 4 AWG  
 Fine-stranded conductor 0.75 ... 25 mm<sup>2</sup> / 18 ... 4 AWG  
 Fine-stranded conductor; with insulated ferrule 0.75 ... 16 mm<sup>2</sup>  
 Fine-stranded conductor; with uninsulated ferrule 0.75 ... 16 mm<sup>2</sup>  
 Strip length 18 ... 20 mm / 0.71 ... 0.79 inches  
 Connection type 2 Communication/rate control input  
 Connection technology 2 Push-in CAGE CLAMP®  
 WAGO connector 2 WAGO 2604 Series  
 Actuation type 2 Lever  
 Solid conductor 2 0.2 ... 4 mm<sup>2</sup> / 24 ... 12 AWG  
 Fine-stranded conductor 2 0.2 ... 4 mm<sup>2</sup> / 24 ... 12 AWG  
 Fine-stranded conductor; with insulated ferrule 2 0.25 ... 2.5 mm<sup>2</sup>  
 Strip length 2 9 ... 11 mm / 0.35 ... 0.43 inches

### Physical data

Width 72 mm / 2.835 inches  
 Height 140 mm / 5.512 inches  
 Depth 63 mm / 2.48 inches  
 Note (dimensions) Height without cover: 92 mm

<b>Mechanical data</b>	
Mounting type	DIN-35 rail
<b>Material data</b>	
Housing material	PC 940A
Weight	280 g
<b>Environmental requirements</b>	
Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Relative humidity	≤ 75% (during storage ≤ 95 %)
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 50470-1/3; MID-compliant

# Energy meter (MID); for direct connection; 65 A; 3x230/400 V; 50 Hz; Modbus® and M-Bus; 2 x S0 interface; 4PS 879 Series



Energy meter (MID); for direct connection; 65 A;  
3x230/400 V; 50 Hz; Modbus® and M-Bus;  
2 x S0 interface; 4PS

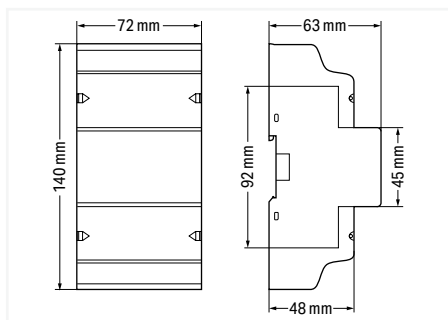
Item No.	PU
879-3020	1

### Short description:

Crucial for trimming costs, comprehensive energy measurement is necessary to optimize energy consumption. WAGO's portfolio now has new 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:

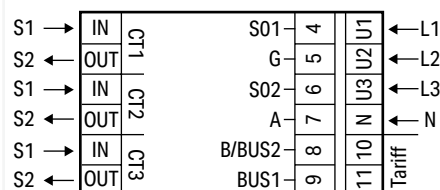
- Push-in CAGE CLAMP® and lever save time at every stage
- Real space savings: 72 mm wide (4PS)
- The communications pro: M-Bus/Modbus® interface and two S0 pulse outputs
- Full transparency at a glance: display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: 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
Nominal input voltage $U_{I, nom}$	3 x 230 ... 400 VAC
Input voltage range	±20 %
Reference current $I_{ref}$	5 A
Input current $I_I$	≤ 65 A
Frequency range	45 ... 60 Hz
Communication	
Communication	Modbus®, M-Bus; Bluetooth®
Interface	RS-485 (2-wire); 2x S0 interfaces (configurable)
Rate control input	230 VAC
Indicators	LCD with backlight
Signal processing	
Measured variables (calculated)	Active and reactive energy in supply and reference direction
Measurement type (load profile)	No
Measurement Error	
Accuracy class	Class B (= 1 % error); Active energy per EN 50470-3
Calibration validity period	8 years
Supply	
Power supply type	Via measurement circuit
Power consumption $P_{max}$ (phase; active power)	2 W
Power consumption $P_{max}$ (phase; apparent power)	10 VA
Safety and protection	
Dielectric strength	4 kV; 1 min
Impulse withstand voltage (1.2/50 μs)	6 kV
Pollution degree	2
Protection type	IP51 / IP20; IP51 (front side); IP20 (connection)
Protection class	II
Connection data	
Connection type 1	Voltage/current
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 2616 Series
Actuation type	Lever
Solid conductor	0.75 ... 16 mm <sup>2</sup> / 18 ... 4 AWG
Fine-stranded conductor	0.75 ... 25 mm <sup>2</sup> / 18 ... 4 AWG
Fine-stranded conductor; with insulated ferrule	0.75 ... 16 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.75 ... 16 mm <sup>2</sup>
Strip length	18 ... 20 mm / 0.71 ... 0.79 inches
Connection type 2	Communication/rate control input
Connection technology 2	Push-in CAGE CLAMP®
WAGO connector 2	WAGO 2604 Series
Actuation type 2	Lever
Solid conductor 2	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule 2	0.25 ... 2.5 mm <sup>2</sup>
Strip length 2	9 ... 11 mm / 0.35 ... 0.43 inches
Physical data	
Width	72 mm / 2.835 inches
Height	140 mm / 5.512 inches
Depth	63 mm / 2.48 inches
Note (dimensions)	Height without cover: 92 mm

<b>Mechanical data</b>	
Mounting type	DIN-35 rail
<b>Material data</b>	
Housing material	PC 940A
Weight	280 g
<b>Environmental requirements</b>	
Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Relative humidity	≤ 75% (during storage ≤ 95 %)
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 50470-1/3; MID-compliant

# Energy meter (MID); for transformer connection; 1 A / 5 A; 3x230/400 V; 50 Hz; Modbus® and M-Bus; 2 x S0 interface; 2PU CT 879 Series



Energy meter (MID); for transformer connection;  
1 A / 5 A; 3x230/400 V; 50 Hz; Modbus® and M-Bus;  
2 x S0 interface; 2PU CT

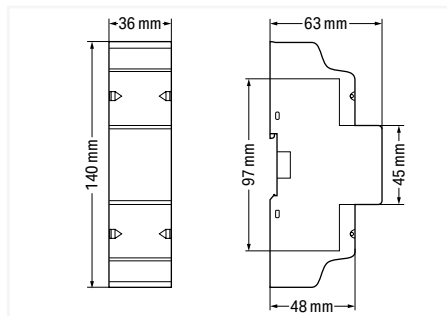
Item No.	PU
879-3040	1

### Short description:

Crucial for trimming costs, comprehensive energy measurement is necessary to optimize energy consumption. WAGO's portfolio now has new 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 (2PUCT)
- 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  
 Nominal input voltage  $U_{I, nom}$  3 x 230 ... 400 VAC  
 Input voltage range ±20 %  
 Reference current  $I_{ref}$  1 A  
 Input current  $I_i$  ≤ 5 A  
 Current transformer (secondary) 1 A; 5 A  
 Current transformer ratio 1:1 ... 9999 : 1 / 5:5 ... 9995 : 5  
 Frequency range 45 ... 60 Hz

### Communication

Communication Modbus®, M-Bus; Bluetooth®  
 Interface RS-485 (2-wire); 2x S0 interfaces (configurable)  
 Rate control input 230 VAC  
 Indicators LCD with backlight

### Signal processing

Measured variables (calculated) Active and reactive energy in supply and reference direction  
 Measurement type (load profile) No

### Measurement Error

Accuracy class Class B (= 1 % error); Active energy per EN 50470-3  
 Calibration validity period 8 years

### Supply

Power supply type Via measurement circuit  
 Power consumption  $P_{max}$  (phase; active power) 2 W  
 Power consumption  $P_{max}$  (phase; apparent power) 10 VA

### Safety and protection

Dielectric strength 4 kV; 1 min  
 Impulse withstand voltage (1.2/50 µs) 6 kV  
 Pollution degree 2  
 Protection type IP51 / IP20; IP51 (front side); IP20 (connection)  
 Protection class II

### Connection data

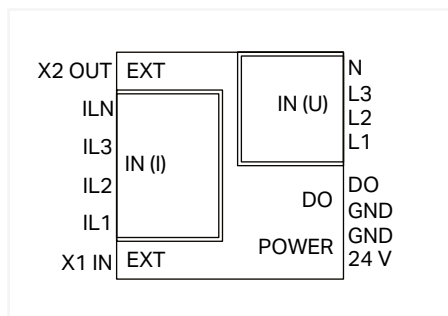
Connection type 1 Voltage/current  
 Connection technology Push-in CAGE CLAMP®  
 WAGO connector WAGO 2604 Series  
 Actuation type Lever  
 Solid conductor 0.2 ... 4 mm² / 24 ... 12 AWG  
 Fine-stranded conductor 0.2 ... 4 mm² / 24 ... 12 AWG  
 Fine-stranded conductor; with insulated ferrule 0.25 ... 2.5 mm²  
 Fine-stranded conductor; with uninsulated ferrule 0.25 ... 2.5 mm²  
 Strip length 9 ... 11 mm / 0.35 ... 0.43 inches  
 Connection type 2 Communication/rate control input  
 Connection technology 2 Push-in CAGE CLAMP®  
 WAGO connector 2 WAGO 2604 Series  
 Actuation type 2 Lever  
 Solid conductor 2 0.2 ... 4 mm² / 24 ... 12 AWG  
 Fine-stranded conductor 2 0.2 ... 4 mm² / 24 ... 12 AWG  
 Fine-stranded conductor; with insulated ferrule 2 0.25 ... 2.5 mm²  
 Strip length 2 9 ... 11 mm / 0.35 ... 0.43 inches

### Physical data

Width 36 mm / 1.417 inches  
 Height 97 mm / 3.82 inches  
 Depth 63 mm / 2.48 inches  
 Note (dimensions) Height with cover: 140 mm

<b>Mechanical data</b>	
Mounting type	DIN-35 rail
<b>Material data</b>	
Housing material	PC 940A
Weight	165 g
<b>Environmental requirements</b>	
Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Relative humidity	≤ 75% (during storage ≤ 95 %)
<b>Standards and specifications</b>	
Conformity marking	CE
Standards/specifications	EN 50470-1/3; MID-compliant

## 3-Phase Power Measurement module; 3x277/480 V/1 A; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC 2857 Series



3-Phase Power Measurement module; 3x277/480 V/1 A; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC

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:

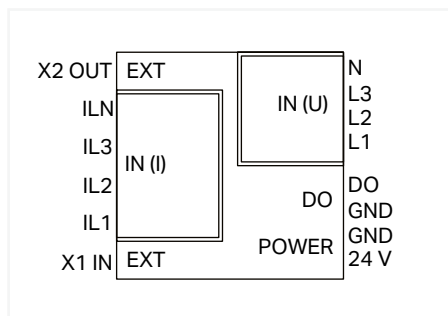
- Current measurement via 1A current transformer
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® interface
- Configurable digital signal output as pulse output

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 signal (voltage)	277 VAC ( $U_{LN}$ ); 480 VAC ( $U_{LL}$ )
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
Input current (max.)	1 AAC
Response threshold	10 mA
Resolution (current)	10 mA
Output – MODBUS	
Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	2 x RJ-45 (daisy chain configuration)
Output – digital	
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch; Pulse output (S0 interface)
Communication	
Communication	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)
Limit frequency	15.9 kHz
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Measurement Error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
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 (+ $I_{DD}$ )
Safety and protection	
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 as part of the mains circuit, shall be considered hazardous live.
$IL_x$ input requirement	Coils/converters with basic insulation
Protection type	IP20
Test voltage (input/output/supply)	AC 3.51 kV; 50 Hz; 1 min



Connection data	
Connection type 1	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inches
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inches
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)
Physical data	
Width	72 mm / 2.835 inches
Height	90 mm / 3.54 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	115.5 g
Environmental requirements	
Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Standards and specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1

## 3-Phase Power Measurement module; 3x277/480 V/5 A; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC 2857 Series



3-Phase Power Measurement module; 3x277/480 V/5 A;  
Modbus RTU; Digital output; Configuration via software;  
Supply voltage: 24 VDC

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.

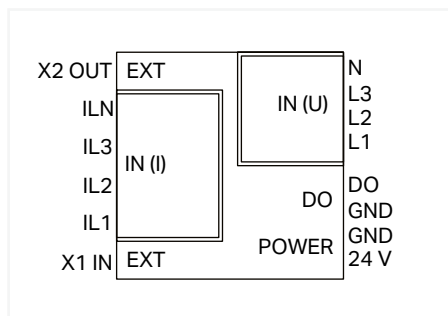
### Features:

- Current measurement via 5A 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

<b>Configuration</b>	
Configuration options	WAGO Interface Configuration Software
<b>Input</b>	
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 signal (voltage)	277 VAC ( $U_{LN}$ ); 480 VAC ( $U_{LL}$ )
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
Input current (max.)	5 AAC
Response threshold	5 mA
Resolution (current)	0.15 mA
<b>Output – MODBUS</b>	
Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	2 x RJ-45 (daisy chain configuration)
<b>Output – digital</b>	
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch; Pulse output (S0 interface)
<b>Communication</b>	
Communication	Modbus® RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32
Addressing	Via interface configuration software
<b>Signal processing</b>	
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)
Limit frequency	15.9 kHz
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
<b>Measurement Error</b>	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
<b>Supply</b>	
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 (+ $I_{DD}$ )
<b>Safety and protection</b>	
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 as part of the mains circuit, shall be considered hazardous live.
$I_L$ input requirement	Coils/converters with basic insulation
Protection type	IP20
Test voltage (input/output/supply)	AC 3.51 kV; 50 Hz; 1 min

Connection data	
Connection type 1	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inches
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inches
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)
Physical data	
Width	72 mm / 2.835 inches
Height	90 mm / 3.54 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	115.5 g
Environmental requirements	
Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Standards and specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1

## 3-Phase Power Measurement module; 3x277/480 V/RC; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC 2857 Series



3-Phase Power Measurement module; 3x277/480 V/RC;  
Modbus RTU; Digital output; Configuration via software;  
Supply voltage: 24 VDC

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:

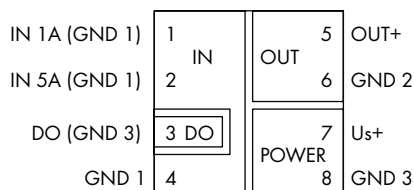
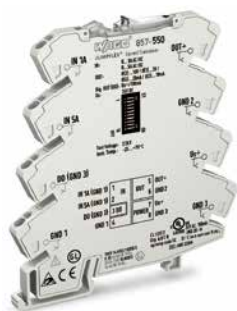
- Current measurement via Rogowski Coils RC xxx
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® interface
- Configurable digital signal output as pulse output

<b>Configuration</b>	
Configuration options	WAGO Interface Configuration Software
<b>Input</b>	
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 signal (voltage)	277 VAC (U <sub>LN</sub> ); 480 VAC (U <sub>LL</sub> ); 90 mVAC (WAGO Rogowski Coils RC xxx)
Sensitivity	22.5 mV/kA (WAGO Rogowski Coils RC xxx)
Measurement range (current)	4 x 4000 AAC (WAGO Rogowski Coils RC xxx)
Frequency range	50 ... 60 Hz (Harmonics analysis: 0 ... 3.3 kHz)
<b>Output – MODBUS</b>	
Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	2 x RJ-45 (daisy chain configuration)
<b>Output – digital</b>	
Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch; Pulse output (S0 interface)
<b>Communication</b>	
Communication	Modbus® RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32
Addressing	Via interface configuration software
<b>Signal processing</b>	
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)
Limit frequency	15.9 kHz
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
<b>Measurement Error</b>	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
<b>Supply</b>	
Power supply type	24 VDC
Nominal supply voltage U <sub>s</sub>	24 VDC (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ I <sub>bo</sub> )
<b>Safety and protection</b>	
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 as part of the mains circuit, shall be considered hazardous live.
IL <sub>x</sub> input requirement	Coils/converters with basic insulation
Protection type	IP20
Test voltage (input/output/supply)	AC 3.51 kV; 50 Hz; 1 min
<b>Connection data</b>	
Connection type 1	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inches
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inches
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)

Physical data	
Width	72 mm / 2.835 inches
Height	90 mm / 3.54 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	117.5 g
Environmental requirements	
Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Standards and specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1

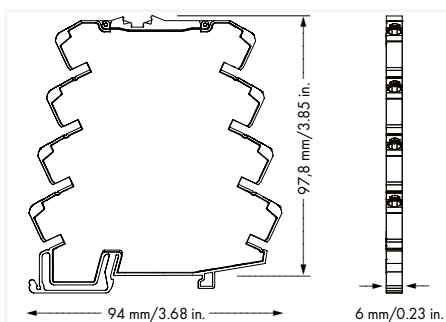
# Current signal conditioner; Current input signal; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

## 857 Series



Current signal conditioner; Current input signal; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

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.

### 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

### Note:

Additional setting options via WAGO Interface Configuration Software or WAGO Interface Configuration App

Configuration	
Configuration options	DIP switch; WAGO Interface Configuration Software; WAGO Interface Configuration App;
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
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
Supply	
Power supply type	24 VDC
Nominal supply voltage $U_s$	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA (+ $I_{b0}$ )
Safety and protection	
Protection type	IP20
Test voltage	
Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
Connection data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 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	
Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	64 g
Environmental requirements	
Ambient temperature (operation at $U_n$ )	-25 ... +70 °C (at nominal current)
Ambient temperature (storage)	-40 ... +85 °C
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

» Configuration software	Page 332
» Configuration app	Page 333
» Accessories	Page 344

**857-550**

DIP Switch Adjustability

= ON  **Default**

DIP Switch S1

Input Signal		Measurement Method	Filter	Output Signal		
1	2	3	4	5	6	
5 A	Mean square value	off				0 ... 20 mA
• 1 A	• Arithmetic mean value	• active		•		4 ... 20 mA
				•		0 ... 10 V
				•	•	2 ... 10 V
						0 ... 10 mA
					•	2 ... 10 mA
				•		0 ... 5 V
				•	•	1 ... 5 V

**Filter:**

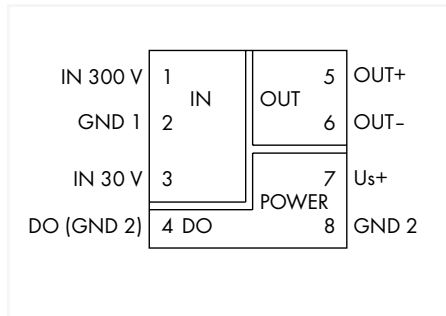
The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

DIP Switch S1

7	8	Measurement Range Underflow	Measurement Range Overflow	Overcurrent (Input Signal - End Value + 20%)	9	10	Digit Output DO Signaling
		Lower limit of measurement range -5 %*	Upper limit of measurement range +2.5 %*	Upper limit of measurement range +5 %*			DO not active
	•	Lower limit of measurement range	Upper limit of measurement range +2.5 %	Upper limit of measurement range +5 %		•	DO U <sub>s</sub> + switching
	•	Lower limit of measurement range	Upper limit of measurement range	Lower limit of measurement range	•	•	DO GND switching
	•	Lower limit of measurement range	Upper limit of measurement range	Upper limit of measurement range			*acc. to NAMUR NE 43

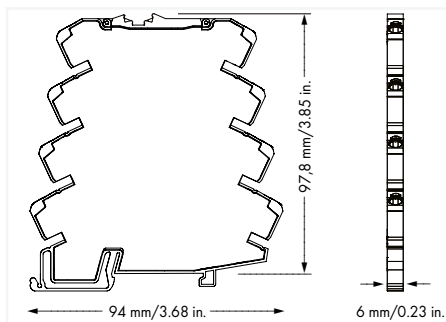
# Voltage signal conditioner; Voltage input signal; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

## 857 Series



Voltage signal conditioner; Voltage input signal; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

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; WAGO Interface Configuration App
Input	
Input signal type	Voltage
Input signal (voltage)	300 VAC/VDC (IN 1); 30 VAC/VDC (IN 2)
Measurement frequency	AC 10 ... 100 Hz
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.	Applied supply voltage
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
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 (+ $I_{D0}$ )
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	Danger: 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
Insulation parameters(UL)	
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Reinforced insulation (safe isolation)
Insulation parameters	
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 conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 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

» Configuration software	Page 332
» Configuration app	Page 333
» Accessories	Page 344



Physical data	
Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	40 g
Environmental requirements	
Ambient temperature (operation at $U_N$ )	-40 ... +70 °C (at nominal current)
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 10 \text{ K})$
Temperature range of connection cable (UL)	80 °C
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; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 50121-3-2; EN 61010-1; EN 61373

857-560

DIP Switch Adjustability

 = ON     Default

DIP Switch S1

1	2	Input	3	Measurement Method	4	Filter
		300 V		Effective value (RMS)		off
	•	150 V	•	Arithmetic mean value (bipolar output)	•	active
	•	30 V				
	•	15 V				

DIP Switch S1

5	6	7	Output Signal Range (Bipolar for Arithmetic Mean Value)
			(+/-) 0 ... 20 mA
	•		4 ... 20 mA
•			(+/-) 0 ... 10 V
•	•		2 ... 10 V
		•	(+/-) 0 ... 10 mA
	•	•	2 ... 10 mA
•	•		(+/-) 0 ... 5 V
•	•	•	1 ... 5 V

DIP Switch S1

8	9	Measurement Range Underflow	Measurement Range Overflow	10	Digital Output DO/ Signaling
		Lower limit of measurement range -5 %*	Upper limit of measurement range +2.5 %*		DO $V_s$ + switching
•		Lower limit of measurement range	Upper limit of measurement range +2.5 %	•	DO GND switching
	•	Lower limit of measurement range	Upper limit of measurement range		
•	•	Lower limit of measurement range -5 %	Upper limit of measurement range +5 %		

\*acc. to NAMUR NE 43

**Filter**

The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

**Digital Output DO/Signaling**

The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

## Current signal conditioner; Current input signal: 140 ADC; Modbus RTU; Supply voltage: 24 VDC; module width: 35 mm 789 Series



Current signal conditioner; Current input signal:  
140 ADC; Modbus RTU; Supply voltage: 24 VDC;  
module width: 35 mm

	Item No.	PU
	789-621	1

### Short description:

WAGO's intelligent current sensor monitors solar plants or inverters for DC measurements within a large current measurement range. The sensor is mounted on DIN-35 rail.

Input	
Input signal type	Current
Input signal (current)	0 ... 140 ADC
Resolution [bit]	15 bits
Output – MODBUS	
Number of devices (max.)	32
Connector	RJ-45
Bus length (max.)	1200 m
Terminating resistor	150 Ω (can be activated via DIP switch 1)
Communication	
Communication	Modbus® RTU
Interface	RS-485
Transmission channels	Half duplex; 8-bit data; 1 stop bit
Number of devices (max.)	32
Baud rate	19.2 kBd
Parity	Even
Terminating resistor	150 Ω (can be activated via DIP switch 1)
Measurement Error	
Transmission error (typ.)	≤ 0.5 % of upper-range value (0 ... 80 A; at room temperature); ≤ 1 % of upper-range value (80 ... 140 A; at room temperature)
Temperature coefficient	≤ 0.05 %/K (-20 ... 60 °C); ≤ 0.1 %/K (60 ... 70 °C)
Supply	
Nominal supply voltage $U_s$	24 VDC
Supply voltage range	12 ... 34 VDC
Current consumption at nominal supply voltage	≤ 8 mA
Safety and protection	
Protection type	IP20
Connection data	
Feedthrough for measurement conductor	Ø 15 mm
Connector	RJ-45
Physical data	
Width	35 mm / 1.378 inches
Height	90 mm / 3.543 inches
Depth from upper-edge of DIN-rail	55 mm / 2.165 inches
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	77.2 g
Environmental requirements	
Ambient temperature (operation at $U_s$ )	-20 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Standards and specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	DIN EN 50178

### Accessories



Interface Module with RJ-45 Connector

	Item No.	PU
	289-965	1



Interface Module with RJ-45 Connector and Shield Clamping Saddle

	Item No.	PU
Color weiß	289-966	1



ETHERNET RJ-45 Connector

	Item No.	PU
	750-975	1

789-621

RJ-45-Connector Pin Assignment:

Pin	Function
1	Ub
2	
3	n.c.
4	A (Data+)
5	B (Data-)
6	n.c.
7	GND
8	

Communication Description:

Modbus® Function	Read Holding Registers (0x03)
Address of Measured Value	0x0004
Data Type Measurement	Integer

Error Numbers

id	Description
01	Illegal Function
03	Illegal Data
101	Overflow (Current > +83 A)
102	Underflow (Current < -3 A)

DIP Switch Adjustability

● = ON

Adress	DIP Switch						Terminating Resistor	DIP Switch 1
	2	3	4	5	6			
1						150 Ohm	●	
2					●			
3				●				
4				●	●			
5			●					
6			●		●			
7			●	●				
8			●	●	●			
9		●						
10		●			●			
11		●		●				
12		●		●	●			
13		●	●					
14		●	●		●			
15		●	●	●				
16		●	●	●	●			
17	●							
18	●						●	
19	●			●				
20	●			●	●			
21	●		●					
22	●		●		●			
23	●		●	●				
24	●		●	●	●			
25	●	●						
26	●	●			●			
27	●	●		●				
28	●	●		●	●			
29	●	●	●					
30	●	●	●		●			
31	●	●	●	●				
32	●	●	●	●	●			

NOTICE:  
Only set the Modbus® Adress in the OFF state.

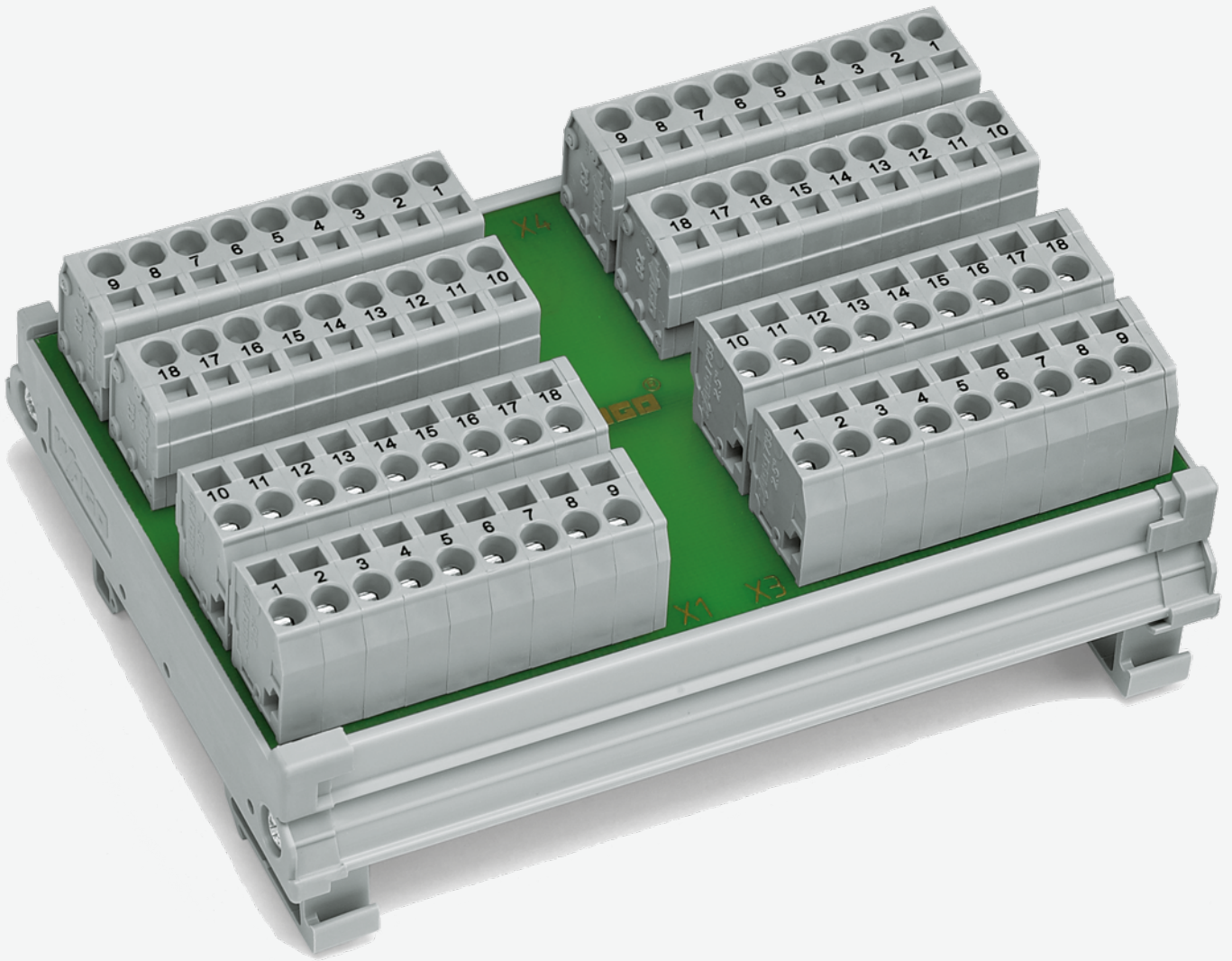
## Selection Guide: Current Transformers

### 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 or 3	1 or 3
Ambient 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> ®		Connectiono 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 listed	-
			



# WAGO Potential Distribution

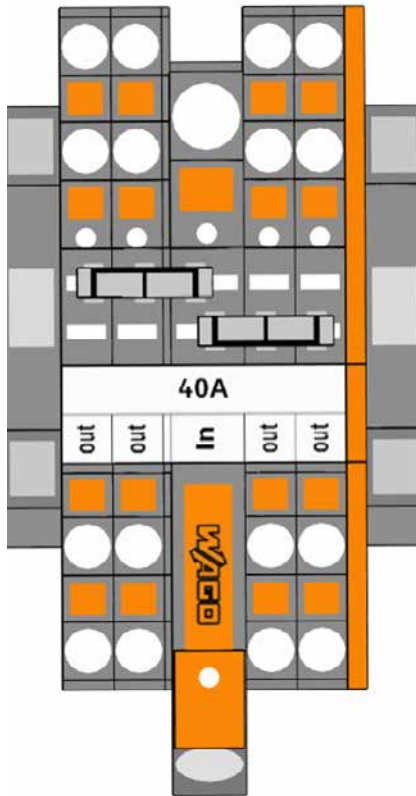
## WAGO Potential Distribution

		Page
	<b>Potential Distribution Blocks</b>	198
	<b>Busbar Terminal Blocks</b> 812 Series	200
	<b>DIN-Rail-Mount Potential Distribution Modules</b> 288 / 830 / 787 Series	202

## 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).

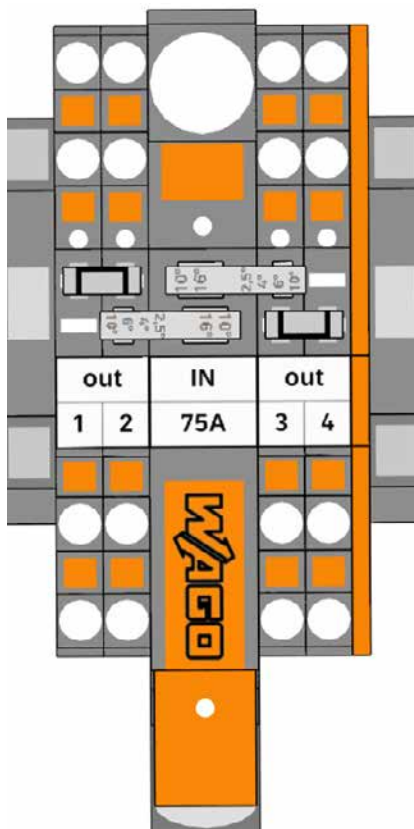
### Potential Distribution Blocks; 40 A



#### 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:

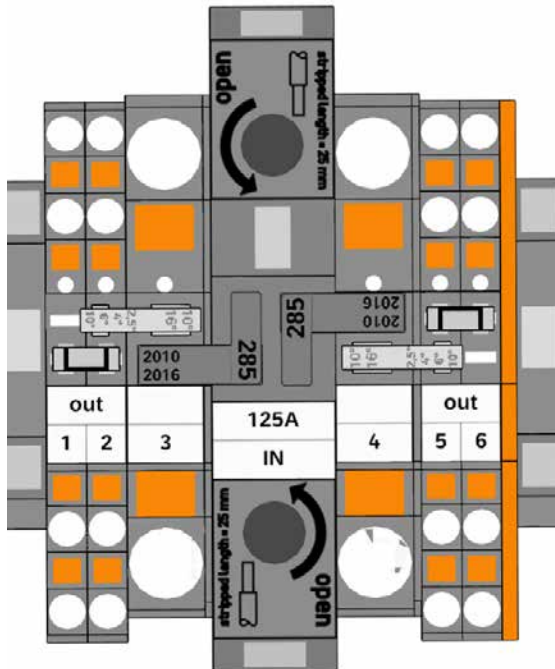
1x	2-conductor through terminal block; with lever and push-button; 16 mm <sup>2</sup> ; with test port; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®	2116-5201
4x	4-conductor through terminal block; with push-button; 2.5 mm <sup>2</sup> ; with test port; side and center 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

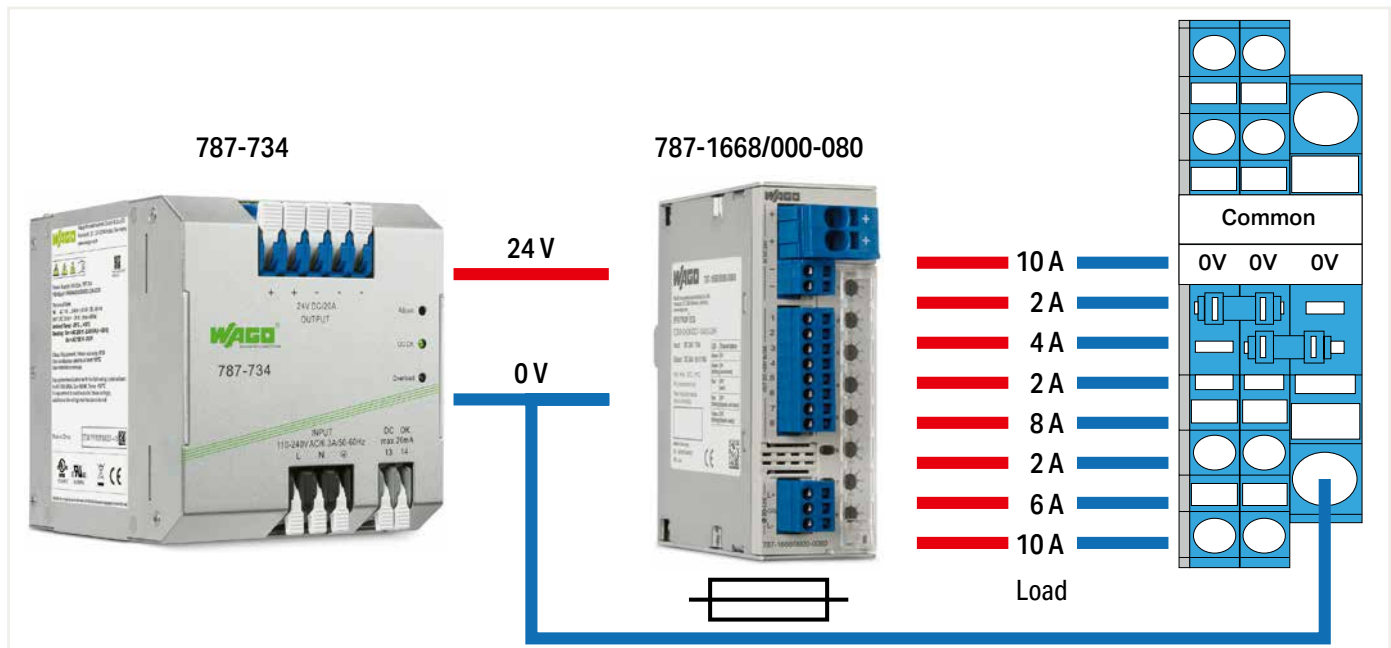
The setups and individual compilations below, e.g., with power supply and ECB can be easily created and documented via WAGO's Smart Designer Configuration Software (available at [www.wago.com](http://www.wago.com)), and then ordered as a custom rail assembly.

## 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

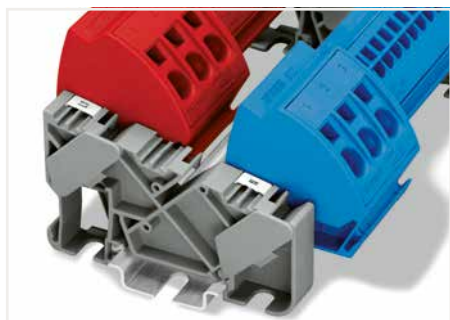


Snapping a ground busbar terminal block onto the N-busbar.

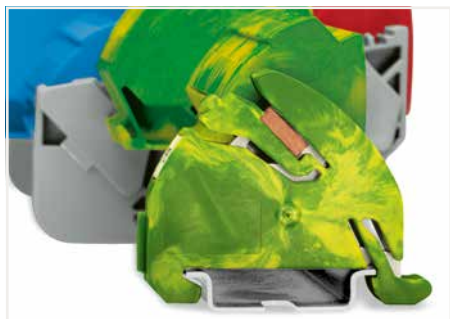


Unlock right and left positions to remove the ground busbar terminal block. Then pull up the block from the busbar.

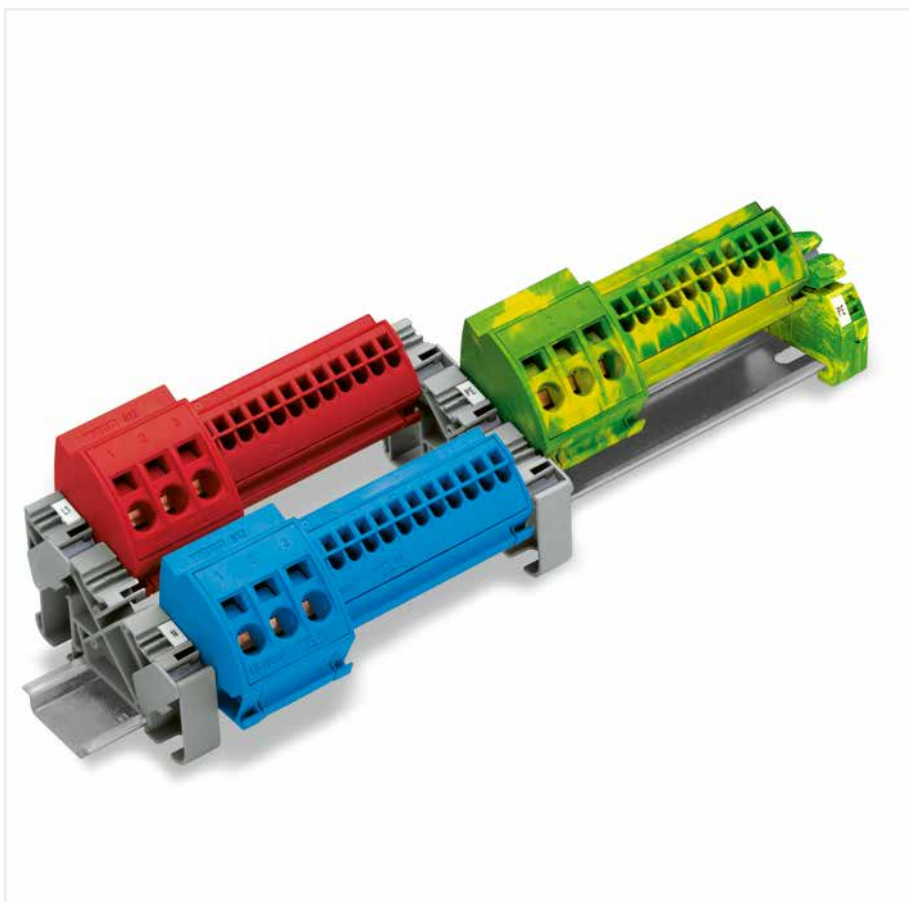
Using the 812 Series Busbar Terminal Blocks in switch-gear cabinets and distribution boards permits simple and safe potential distribution on standard (10 x 3) mm busbars. Tool-free snapping of self-locking busbar terminal blocks onto the busbar enables quick and easy assembly, as well as subsequent 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.



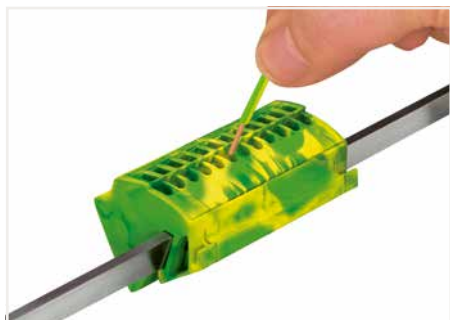
**Busbar carrier (812-140):**  
Offers three receptacles for (10 x 3) mm busbars with locking device for easy mounting of the busbars. The carrier can be snapped onto the DIN-35 rail or screwed on a panel.



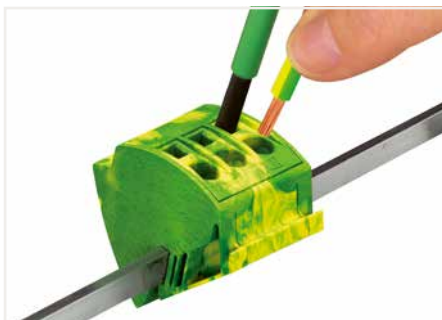
**Ground busbar carrier (812-141):**  
Offers a receptacle with locking device for (10 x 3) mm busbar. Contact between the busbar and rail is made automatically by simply snapping the carrier onto the DIN-35 rail. One end of the busbar is mounted onto the ground busbar carrier, the other end is inserted into the middle position of the insulated busbar carrier.



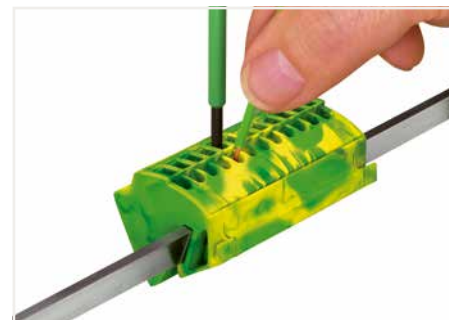
Mixed 4 mm<sup>2</sup> (12 AWG) and 16 mm<sup>2</sup> (6 AWG) busbar terminal blocks



**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.



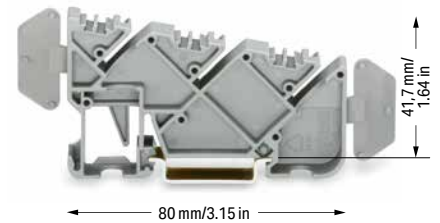
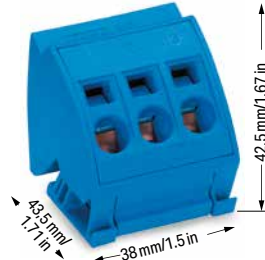
**Conductor removal (4 mm<sup>2</sup>/12 AWG and 16 mm<sup>2</sup>/6 AWG):**  
Open the clamping unit using an operating tool.

# 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

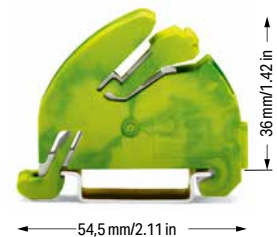
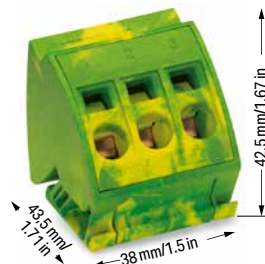
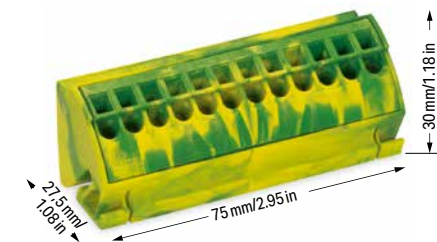
Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



Accessories; item-specific		
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



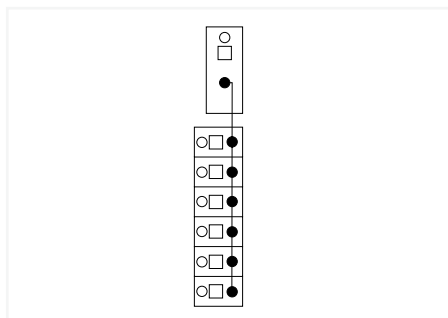
Accessories; item-specific		
Busbar; tin-plated; 1000 mm long; Copper (10 x 3) mm		
I <sub>N</sub> 140 A	210-133	1



Accessories; item-specific		
Finger guard; touch-proof cover protects unused conductor entries		
yellow	284-400	100 (25)



## Potential distribution module; 1 potential; with 1 input clamping point; Conductor cross-section up to 16 mm<sup>2</sup>; with lever; with 6 output clamping points; Conductor cross-section up to 2.5 mm<sup>2</sup> 830 Series



Color	Item No.	PU
gray	830-800/000-312	10
blue	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

### Connection data

Total number of potentials	1
Connection type 1	Input
Connection technology	CAGE CLAMP®
Solid conductor	1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG
Fine-stranded conductor	1.5 ... 16 mm <sup>2</sup> / 16 ... 6 AWG
Strip length	12 ... 13 mm / 0.47 ... 0.51 inches
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inches

### Physical data

Width	21 mm / 0.81 inches
Height from upper-edge of DIN-rail	49 mm / 1.929 inches
Depth	85 mm / 3.35 inches

### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

### Material data

Weight	57.8 g
--------	--------

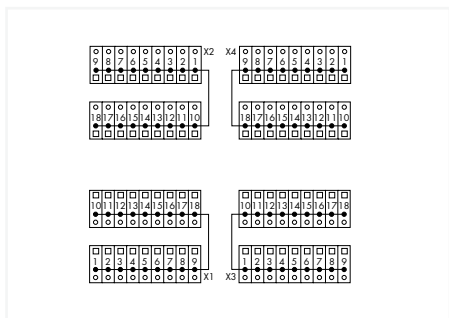
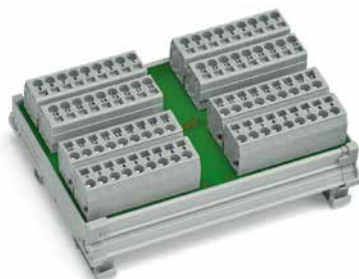
### Environmental requirements

Ambient temperature (operation at U <sub>N</sub> )	-20 ... +50 °C
Relative humidity	95% (without condensation)

### Standards and specifications

Standards/specifications	cULus 61010-2-201
--------------------------	-------------------

## Potential distribution module; 4 potentials; with 18 connection points each 288 Series



Item No.	PU
288-825	1

### Electrical data

Operating voltage	≤ 250 VAC/VDC
Current per connection (max.)	12 A
Total current per potential (max.)	12 A

### Safety and protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2

### Connection data

Total number of potentials	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

### Physical data

Width	115 mm / 4.528 inches
Height	85 mm / 3.346 inches
Depth from upper-edge of DIN-rail	45 mm / 1.772 inches

### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

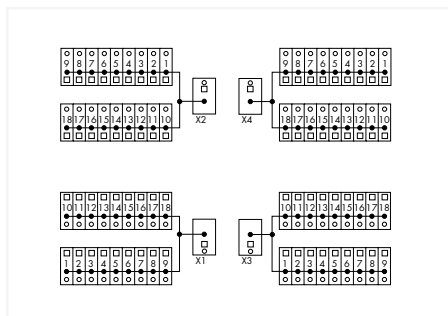
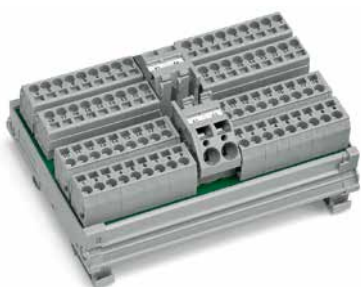
### Material data

Weight	156.6 g
--------	---------

### Environmental requirements

Ambient temperature (operation at U <sub>n</sub> )	-20 ... +50 °C
Ambient temperature (storage)	-40 ... +80 °C

## Potential distribution module; 4 potentials; with 19 connection points each 288 Series



Item No.	PU
288-837	1

### Electrical data

Operating voltage	≤ 250 VAC/VDC
Current per connection (max.)	12 A
Total current per potential (max.)	32 A

### Safety and protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2

### Connection data

Total number of potentials	4
Connection type 1	Power supply
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Strip length	11 ... 12 mm / 0.43 ... 0.47 inches
Connection type 2	Connection points
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inches

### Physical data

Width	115 mm / 4.528 inches
Height	85 mm / 3.346 inches
Depth from upper-edge of DIN-rail	45 mm / 1.772 inches

### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

### Material data

Weight	178.2 g
--------	---------

### Environmental requirements

Ambient temperature (operation at U <sub>n</sub> )	-20 ... +50 °C
Ambient temperature (storage)	-40 ... +80 °C

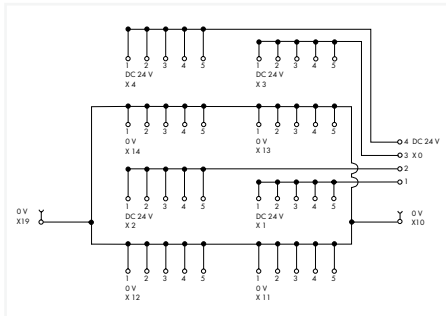
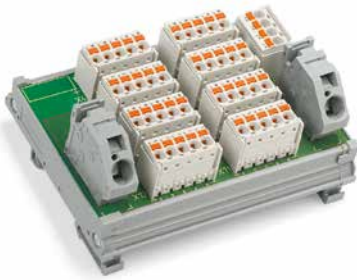
### Accessories



### Comb-style jumper bar; 2-way

Item No.	PU
745-382	250 (50)

## Potential distribution module; 4 potentials; with 6 connection points each; with 22 ground clamping points 288 Series



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

### Connection data

Total number of potentials	4
Connection type 1	Power supply 0 V
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 16 mm <sup>2</sup> / 24 ... 6 AWG
Fine-stranded conductor	0.2 ... 16 mm <sup>2</sup> / 24 ... 6 AWG
Strip length	12 ... 13 mm / 0.47 ... 0.51 inches
Connection type 2	Power supply 24 V; Connection points
Connection technology 2	Push-in CAGE CLAMP®
Solid conductor 2	0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inches

### Physical data

Width	100 mm / 3.937 inches
Height	85 mm / 3.346 inches
Depth from upper-edge of DIN-rail	49 mm / 1.929 inches

### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

### Material data

Weight	140.4 g
--------	---------

### Environmental requirements

Ambient temperature (operation at U <sub>N</sub> )	-25 ... +70 °C (without condensation)
Ambient temperature (storage)	-40 ... +85 °C

### Accessories



Comb-style jumper bar; 2-way



Coding pin carrier

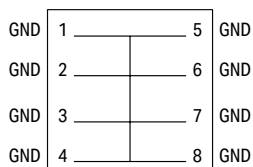


Gripping plate with sliding connector release

Item No.	PU	Item No.	PU	Description	Item No.	PU
745-682	400 (50)	2092-1610	100 (25)	3- to 4-pole	2092-1601/002-000	100 (25)
				5- to 8-pole	2092-1602/002-000	100 (25)

## Potential distribution module; 8-way 0 VDC

### 787 Series



Item No.	PU
787-3861/000-1000	1

#### Electrical data

Nominal operating voltage	24 VDC
Operating voltage	0 ... 30 VDC
Limiting continuous current	20 A; 15 A (UL)

#### Safety and protection

Protection class	III
Pollution degree	2
Protection type	IP20; per EN 60529

#### Connection data

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

#### Physical data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

#### Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

#### Environmental requirements

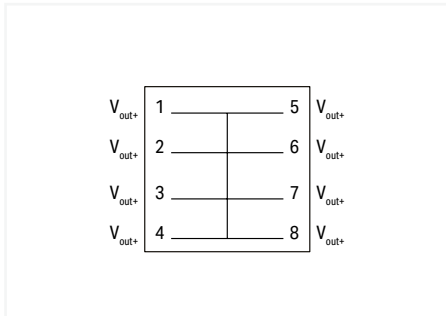
Operating altitude (max.)	2000 m
Ambient temperature (operation at U <sub>N</sub> )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)

#### Standards and specifications

Conformity marking	CE
--------------------	----



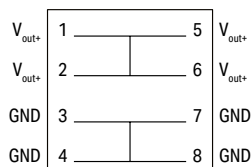
## Potential distribution module; 8-way 24 VDC 787 Series



Item No.	PU
787-3861/000-2000	1

<b>Electrical data</b>	
Nominal operating voltage	24 VDC
Operating voltage	0 ... 30 VDC
Limiting continuous current	20 A; 15 A (UL)
<b>Safety and protection</b>	
Protection class	III
Pollution degree	2
Protection type	IP20; per EN 60529
<b>Connection data</b>	
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
<b>Physical data</b>	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
<b>Mechanical data</b>	
Mounting type	DIN-35 rail
<b>Environmental requirements</b>	
Operating altitude (max.)	2000 m
Ambient temperature (operation at U <sub>N</sub> )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
<b>Standards and specifications</b>	
Conformity marking	CE

## Potential distribution module; 4-way 24 VDC / 4-way 0 VDC 787 Series



Item No.	PU
787-3861/000-3000	1











Electrical data	
Nominal operating voltage	24 VDC
Operating voltage	0 ... 30 VDC
Limiting continuous current	20 A; 15 A (UL)
Safety and protection	
Protection class	III
Pollution degree	2
Protection type	IP20; per EN 60529
Connection data	
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
Physical data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical data	
Mounting type	DIN-35 rail
Environmental requirements	
Operating altitude (max.)	2000 m
Ambient temperature (operation at U <sub>N</sub> )	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Standards and specifications	
Conformity marking	CE





## WAGO Accessories and WAGO Tools

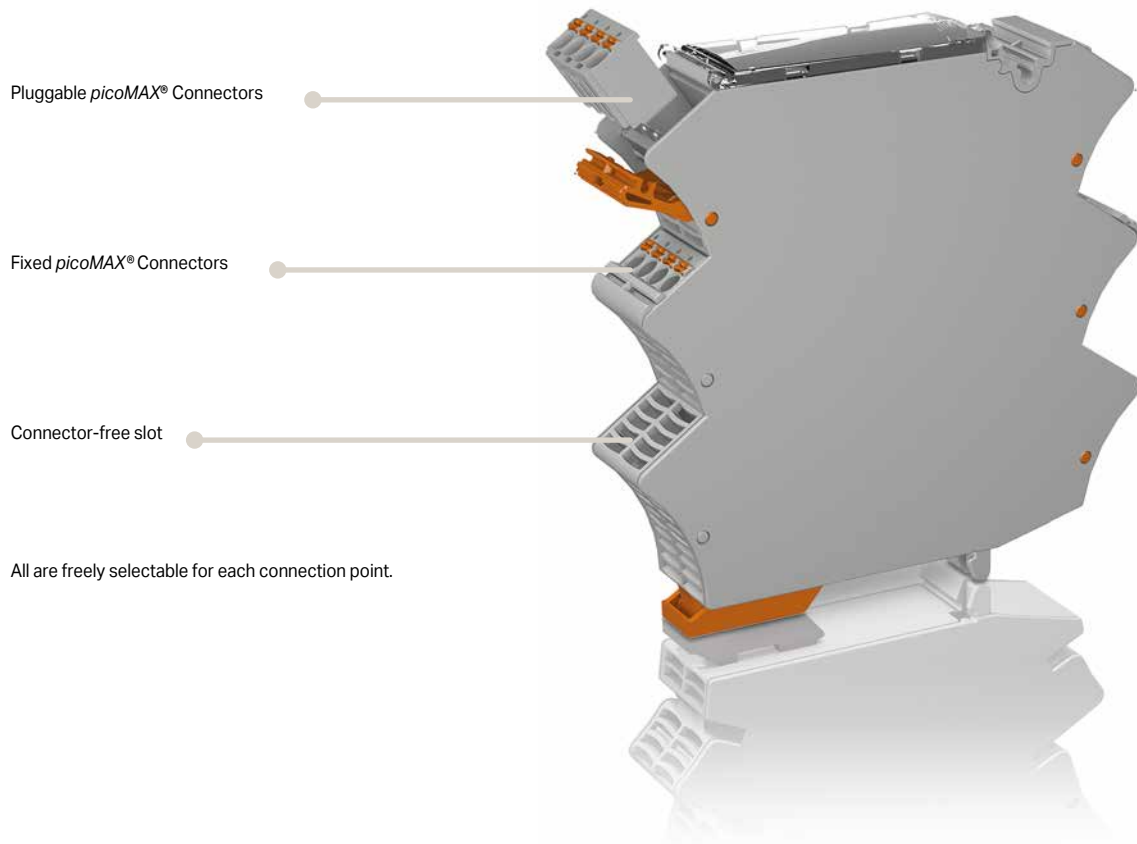
## WAGO Accessories and WAGO Tools

		Page
	<b>Empty Housings</b> 2857 Series	212
	<b>DIN-Rails</b> 209 / 210 / 282 Series	214
	<b>End Stops</b> 249 Series	216
	<b>Operating Tools</b> 210 / 2009 Series	217
	<b>Thermal Transfer Printer Smart Printer</b> 258 Series	218
	<b>Marking</b> 2009 Series	220
	<b>Wall Mount Adapter</b> 787 Series	221
	<b>DIN-Rail Adapters</b> 787 Series	222
	<b>Mounting Carriers</b> 2789 Series	224
	<b>Communication Cables</b> 787 Series	226

# Modular empty housings

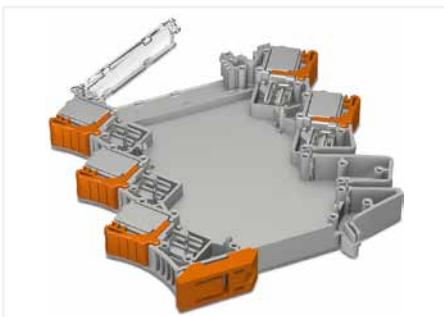
## Overview and configuration

### 2857 Series

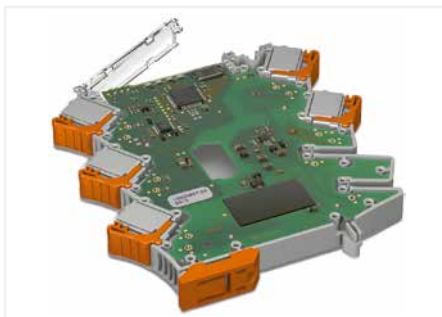


Supplied as a pre-assembled unit:

10



1. Pre-assembled unit










2. Insert and solder the PCB.



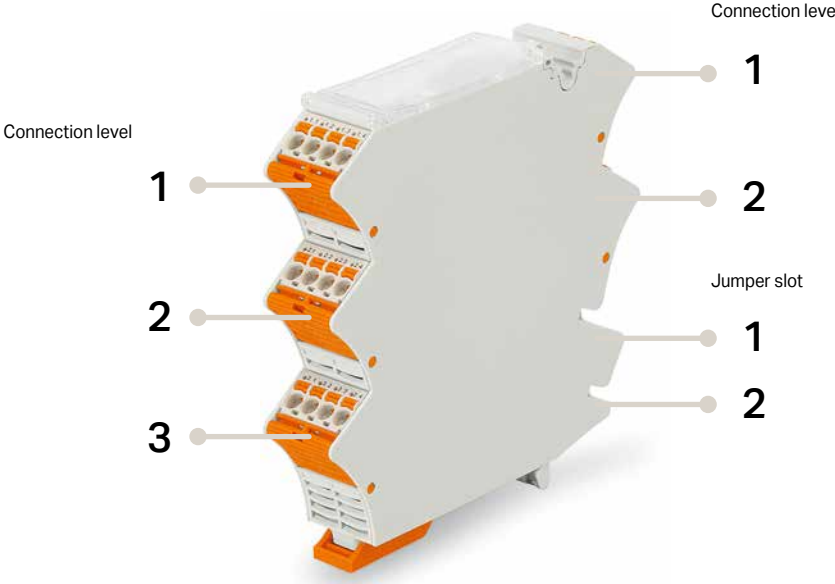
3. Snap on the side wall.

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:

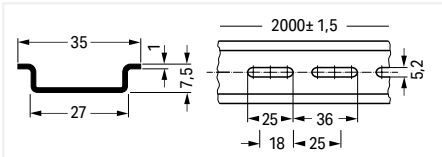


Connection levels	3-2
Jumper slots	0-2

## DIN-Rail; Rail end cap; Angled support bracket and collective jumper carrier



Dimensions in mm



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.	PU
unslotted	210-113	10 (1)

Hole width: 25 mm; Hole spacing: 36 mm

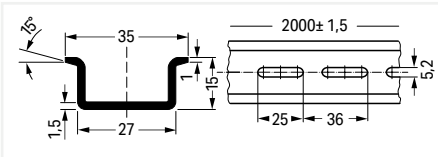
slotted	210-112	10 (1)
---------	---------	--------

Hole width: 18 mm; Hole spacing: 25 mm

slotted	210-115	1
---------	---------	---



Dimensions in mm

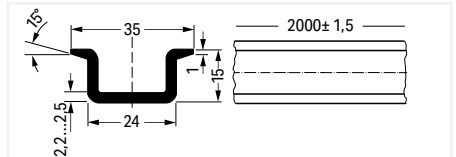


Steel DIN-rail; I<sub>N</sub> 125 A (based on 1 m length); 35 x 15 mm; 1.5 mm thick; 2 m long; similar to EN 60715

	Item No.	PU
unslotted	210-114	10 (1)
slotted	210-197	10 (1)



Dimensions in mm

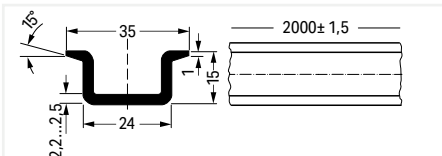


Steel DIN-rail; I<sub>N</sub> 125 A (based on 1 m length); 35 x 15 mm; 2.3 mm thick; 2 m long; per EN 60715

	Item No.	PU
unslotted	210-118	10 (1)



Dimensions in mm

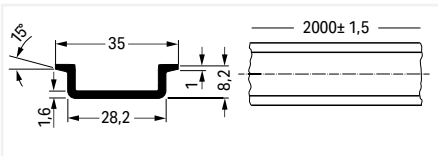


Copper DIN-rail; I<sub>N</sub> 309 A (based on 1 m length); 35 x 15 mm; 2.3 mm thick; 2 m long; per EN 60715

	Item No.	PU
unslotted	210-198	10 (1)



Dimensions in mm



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.	PU
unslotted	210-196	20 (1)



Rail end cap; for DIN-35 rail (7.5 mm high)

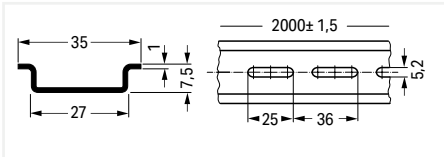
Color	Item No.	PU
○ gray	209-109	50 (25)

10





Dimensions in mm

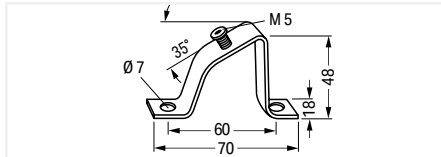


Steel DIN-rail; I<sub>n</sub> 76 A (based on 1 m length); 35 x 7.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	PU
unslotted	210-505	1
slotted	210-504	1



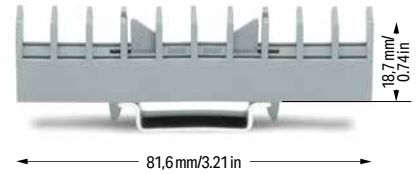
Dimensions in mm



Angled support bracket; without screw

	Item No.	PU
	210-148	10

Screw M5 x 8		
	210-149	100 (20)

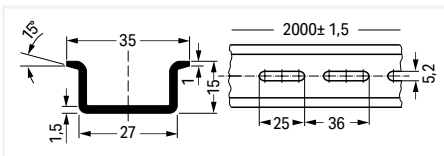


Collective jumper carrier; for DIN-35 rail; compatible with jumpers for transverse switching terminal block (282-811) and longitudinal switching disconnect terminal block (282-821)  
The collective carrier can be snapped onto DIN-35 rails. It stores jumpers during maintenance.

Color	Item No.	PU
○ gray	282-369	25



Dimensions in mm

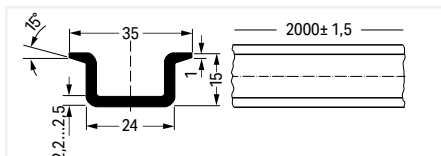


Steel DIN-rail; I<sub>n</sub> 125 A (based on 1 m length); 35 x 15 mm; 1.5 mm thick; 2 m long; per EN 60715

	Item No.	PU
unslotted	210-506	1
slotted	210-508	1



Dimensions in mm



Carrier rail; plastic  
Not suited for use with ground terminal blocks!

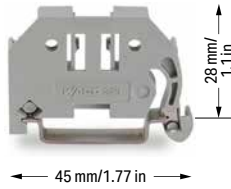
	Item No.	PU
	210-509	10 (1)



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.	PU
○ gray	209-100	50 (25)

## Screwless end stop; for DIN-35 rail 249 Series



Screwless end stop; for DIN-35 rail; 6 mm wide

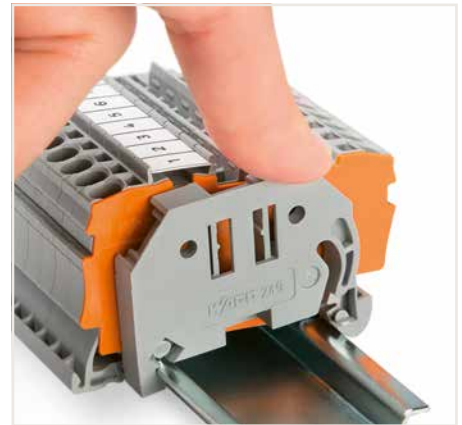
Color	Item No.	PU
○ gray	249-116	100 (25)

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.	PU
○ 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.

## Operating tool



Operating tool with a partially insulated shaft; Type 1, (2.5 x 0.4) mm blade		
Item No.	PU	
210-719	50 (1)	



Operating tool; Blades: 3.5 mm and 2.5 mm; for installation terminal blocks (TOPJOB® S)		
Item No.	PU	
2009-309	50 (1)	



Operating tool with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade; short		
Item No.	PU	
210-647	50 (1)	

Operating tool with a partially insulated shaft; Type 2, (3.5 x 0.5) mm blade		
210-720	50 (1)	

Operating tool; Blades: 3.5 mm and 5.5 mm; for installation terminal blocks (TOPJOB® S)		
2009-310	50 (1)	

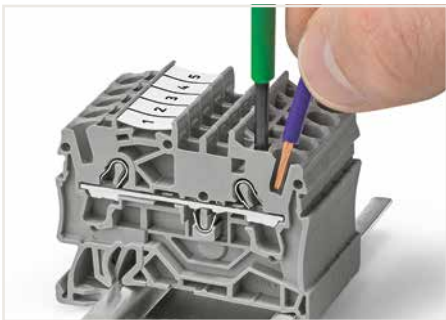
Operating tool with a partially insulated shaft; (2.5 x 0.4) mm blade; short; angled		
210-648	50 (1)	

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	

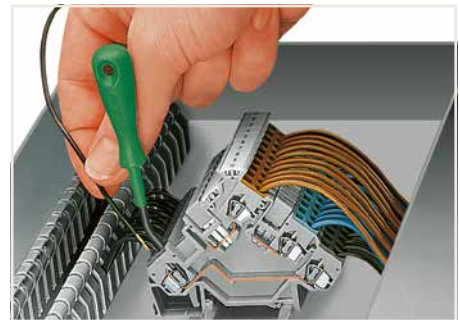
Operating tool with a partially insulated shaft; (3.5 x 0.5) mm blade; short; angled		
210-658	50 (1)	



The blade of this operating tool with a partially insulated shaft is ideal for operating front-entry terminal blocks.



Open the clamping unit using an operating tool.



This operating tool with blade dimensions per DIN 5264 is ideal for front-entry sensor/actuator terminal blocks (280 Series).



Set of operating tools in a box (210-722)

# Thermal transfer printer Smart printer



Open the printer.



Printer – open



Accessories for unwinding material



Insert the ink ribbon.



Prepare the marking material.



10



Insert and secure the appropriate roller into the printer.



Printer has several interfaces:  
USB, ETHERNET, serial COM port



Fast, cost-effective and easy to use –  
printing WMB Inline markers via Smart Printer

## Thermal transfer printer and cutter

### Smart printer



Smart Printer; WMB Inline markers; Marking strips; Conductor markers and labels; Resolution: 300 dpi

Item No.	PU
258-5000	1

#### Smart Printer

includes:

- Power supply and cable
- USB cable
- 1 x marking strip reel (2009-110)
- 1 x WMB Inline marker reel (2009-115)
- 2 x roller (258-5006 + 258-5007)
- 1 x reel holder
- 1 x ink ribbon (258-5005)

#### Technical data

Printing method	Thermal transfer
Print head	Glass layer, spring-mounted
Print speed (max.)	127 mm/s (WAGO recommends 50.8 mm/s)
Print width (max.)	47 mm
Print length (max.)	762 mm
Print resolution	300 dpi (12 pixels/mm)
See-through/reflective sensor	Yes, centrally mounted
Operating display	Color TFT LCD with navigation button
Memory	8 MB Flash, 16 MB SDRAM
Interfaces	USB, RS-232, ETHERNET 10/100 Mbps, USB Host
Operating voltage	100 ... 240 VAC, 50 ... 60 Hz (automatic adjustment)
Dimensions (mm) W x H x D	135 x 175 x 245
Weight	2000 g (without printing material)
Operating temperature	5 ... 40 °C (41 ... 104 °F)
Storage temperature	-20 ... 50 °C (-4 ... 122 °F)
Safety approvals	CE (EMC)
Ink ribbon (see also Full Line Catalog, Volume 6, Marking)	External roll diameter: 40 mm; Internal core diameter: 12.7 mm (0.5 inch); Max. length: 110 m; Max. width: 58 mm



Cutter for Smart Printer; for marking strips only; not suitable for WMB Inline markers

Item No.	PU
258-5030	1

#### Hardware requirements:

- Printer model: Smart Printer
- From manufacturing month/year: 0814 – August 2014
- Firmware version: 1.UW7i
- Printer driver: Version 7.4.2

#### Software requirements:

- Smart Script: Version 3.88.9.0 or higher
- WAGO printer settings: Version 2.4.0.0 or higher

#### Approved print material to be cut:

- Marking strips: 2009-110, 709-177, 709-178, 757-901/000-005
- Self-adhesive marking strips: 210-702, 210-870 ... -877
- Cable tie markers: 211-835 ... -836, 211-836/000-002
- Self-laminating labels: 211-855 ... -857
- Conductor markers for thread-on mounting: 211-861 ... -863
- Type labels: 210-801 ... -804, 210-812
- Continuous labels: 210-831 ... -834
- Label for circuit identification: 210-813

#### Dimensions of printing materials:

- Width (max.): 46 mm
- Thickness (max.): 250 µm

#### Technical data

Width	60 mm
Height	107 mm
Depth	131 mm
Weight	1050 g

## 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

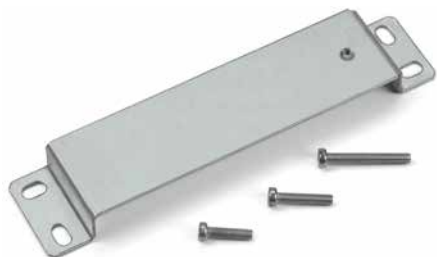
WMB Inline; plain; 1.500 WMB markers (5 mm)/reel; stretchable 5 ... 5.2 mm		
Color	5 ... 5.2 mm Item No.	PU
○ white	2009-115	1



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

## 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

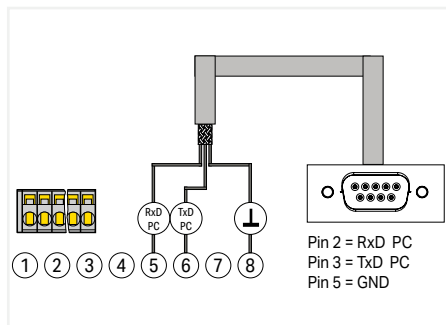
RS-232 Communication Cable; 1.8 m long		
for	Item No.	PU
787-8xx	787-890	1

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.

<b>Signaling and communication</b>	
Signaling	1 x RS-232 cable
Communication	RS-232 interface
<b>Safety and Protection/Environmental Requirements</b>	
Protection type	IP20 (per EN 60529)
Ambient temperature (operation)	-10 ... +70 °C
<b>Connection data</b>	
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
<b>Geometric data/Mechanical data/Material data</b>	
Cable length	1.8 m
<b>Material data</b>	
Weight	97 g



# Indexes

# Indexes

	Page
Item Number Index	230
WAGO Connection Technologies	232
WAGO Seminars	234

## Item Number Index

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>209 Series</b>		<b>281 Series</b>		<b>787 Series</b>		<b>787 Series</b>	
209-100	215	281-311	125	787-738	105	787-1685	167
209-109	214	281-402	125	787-740	106	787-1701	49
		281-511	125	787-742	107	787-1702	52
<b>210 Series</b>		281-512/281-414	125	787-783	168	787-1711	50
210-112	214	281-512/281-417	125	787-783/000-040	169	787-1712	53
210-113	214	281-512/281-418	125	787-785	170	787-1721	51
210-114	214	281-512/281-501	125	787-785/000-040	171	787-1722	57
210-115	214	281-611	125	787-818	24	787-1732	58
210-118	214	281-611/281-417	125	787-822	25	787-2742	108
210-133	201	281-611/281-418	125	787-832	26	787-2744	109
210-148	215	281-611/281-541	125	787-833	28	787-2801	141
210-149	215	281-611/281-542	125	787-834	27	787-2802	142
210-196	214	281-612	125	787-835	29	787-2803	144
210-197	214	281-612/281-417	125	787-840	94	787-2805	143
210-198	214	281-612/281-418	125	787-842	95	787-2810	145
210-504	215	281-612/281-541	125	787-844	96	787-2850	70
210-505	215	281-612/281-542	125	787-844/000-002	96	787-2857	69
210-506	215	281-613	125	787-845	100	787-2861/050-000	126
210-508	215	281-613/281-417	125	787-847	101	787-2861/100-000	126
210-509	215	281-613/281-418	125	787-850	97	787-2861/108-020	126
210-647	217	281-613/281-541	125	787-852	98	787-2861/200-000	126
210-648	217	281-613/281-542	125	787-854	99	787-2861/400-000	126
210-657	217	281-616	125	787-870	150	787-2861/600-000	126
210-658	217	281-622	125	787-871	155	787-2861/800-000	126
210-719	217	281-622/281-417	125	787-872	156	787-3861/000-1000	206
210-720	217	281-622/281-418	125	787-873	157	787-3861/000-2000	207
210-721	217	281-622/281-541	125	787-875	151	787-3861/000-3000	208
210-722	217	281-622/281-542	125	787-876	154	787-3861/004-020	126
		281-623	125	787-878/000-2500	158	787-3861/050-000	126
<b>249 Series</b>		281-623/281-417	125	787-878/001-3000	159	787-3861/100-000	126
249-116	216	281-623/281-418	125	787-880	160	787-3861/108-020	126
249-117	216	281-623/281-541	125	787-881	161	787-3861/200-000	126
249-197	216	281-623/281-542	125	787-885	172	787-3861/400-000	126
				787-886	173	787-3861/600-000	126
				787-890	226	787-3861/800-000	126
				787-892	227	787-6716	112
<b>258 Series</b>		<b>282 Series</b>		787-895	221	787-6716/9000-1000	115
258-5000	219	282-333	125	787-896	222	787-6716/9100-000	114
258-5030	219	282-334	125	787-897	223	787-6716/9300-000	115
		282-369	215	787-914	118	787-6716/9310-030	113
<b>280 Series</b>		282-402	125	787-915	152	787-6716/9310-050	113
280-502/281-582	132	282-694	125	787-916	162	787-6716/9310-100	113
280-502/281-583	132	282-696	125	787-974	116	787-6716/9400-000	114
280-502/281-584	132	282-698/281-413	125	787-976	117	787-6716/9500-000	115
280-502/281-585	132	282-698/281-429	125	787-1001	72	787-6716/9510-015	113
280-502/281-586	132	282-698/281-434	125	787-1002	76	787-6716/9510-030	113
280-502/281-587	132	282-698/281-449	125	787-1011	73	787-6716/9510-050	113
280-502/281-588	132	282-699	125	787-1012	77	787-6716/9600-000	115
280-502/281-589	132			787-1014	137	787-6716/9700-000	115
280-502/281-590	132			787-1014/072-000	138	787-6716/9800-000	115
280-502/281-591	132	<b>210 Series</b>		787-1017	75		
280-502/281-592	132	284-400	201	787-1020	71	<b>789 Series</b>	
280-502/281-593	132			787-1021	74	789-621	192
280-502/281-594	132			787-1022	78		
280-502/281-595	132	<b>285 Series</b>		787-1200	64		
280-502/281-602	132	285-135	199	787-1201	61	<b>792 Series</b>	
280-502/281-603	132	285-141	195	787-1202	65	792-800	130
280-502/281-604	132	285-150	195	787-1211	62	792-801	131
280-502/281-605	132	285-181	195	787-1212	66		
280-502/281-606	132	285-195	195	787-1216	67	<b>793 Series</b>	
280-502/281-607	132	285-430	199	787-1221	63	793-5501	123
280-502/281-608	132	285-1161	195	787-1226	68		
280-502/281-609	132	285-1185	195	787-1601	30		
280-502/281-610	132			787-1602	34	<b>811 Series</b>	
280-502/281-611	132	<b>288 Series</b>		787-1606	35	811-310	125
280-502/281-612	132	288-825	203	787-1611	31	811-311	125
280-502/281-613	132	288-837	204	787-1616	37	811-314	125
280-502/281-614	132	288-870/000-030	205	787-1616/000-070	37	811-316	125
280-503/281-579	132			787-1616/000-1000	36	811-317	125
280-503/281-580	132			787-1621	32	811-320	125
280-503/281-581	132	<b>289 Series</b>		787-1622	38	811-321	125
280-504/281-582	133	289-965	192	787-1623	41	811-330	125
280-504/281-583	133	289-966	192	787-1628	44	811-331	125
280-504/281-584	133			787-1631	33	811-410	125
280-504/281-585	133	<b>745 Series</b>		787-1632	39	811-411	125
280-504/281-586	133	745-382	203	787-1632/000-070	39	811-414	125
280-504/281-587	133	745-682	205	787-1633	42	811-420	125
280-504/281-588	133			787-1634	40	811-421	125
280-944/281-589	133	<b>750 Series</b>		787-1635	43	811-430	125
280-944/281-590	133	750-975	192	787-1635/000-070	43	811-431	125
280-944/281-591	133			787-1638	45	811-472	125
280-944/281-592	133			787-1640	102	811-482	125
280-944/281-593	133	<b>787 Series</b>		787-1642	103		
280-944/281-594	133	787-712	55	787-1644	104	<b>812 Series</b>	
280-944/281-595	133	787-722	56	787-1650	140	812-100	201
		787-732	59	787-1671	153	812-101	201
<b>281 Series</b>		787-734	60	787-1675	148	812-102	201
281-309	125	787-736	54				



## Item Number Index

Item No.	Page	Item No.	Page
<b>812 Series</b>		<b>2092 Series</b>	
812-103	201	2092-1602/002-000	205
812-104	201	2092-1610	205
812-110	201		
812-111	201	<b>2106 Series</b>	
812-112	201	2106-5201	198
812-113	201		
812-114	201		
812-140	201	<b>2116 Series</b>	
812-141	201	2116-5201	198
<b>830 Series</b>		<b>2202 Series</b>	
830-800/000-312	202	2202-1401	198
830-800/000-312/000-006	202		
<b>857 Series</b>		<b>2210 Series</b>	
857-550	188	2210-1201	199
857-560	190		
<b>879 Series</b>		<b>2687 Series</b>	
879-3000	176	2687-2142	46
879-3020	178	2687-2144	47
879-3040	180	2687-2146	48
<b>2002 Series</b>		<b>2787 Series</b>	
2002-400	123	2787-2134	12
2002-402	123	2787-2135	13
2002-403	198	2787-2144	14
2002-410	123	2787-2144/000-030	14
2002-423	123	2787-2144/000-070	14
2002-472	123	2787-2146	15
2002-482	123	2787-2146/000-030	15
2002-991	123	2787-2146/000-070	15
2002-992	123	2787-2147	16
2002-1491	198	2787-2147/000-030	16
2002-1492	198	2787-2147/000-070	16
2002-1911	123	2787-2154	18
2002-1911/1000-541	123	2787-2157	19
2002-1911/1000-542	123	2787-2344	84
2002-1911/1000-836	123	2787-2344/000-030	84
2002-1911/1000-867	123	2787-2344/000-070	84
		2787-2346	85
<b>2006 Series</b>		2787-2346/000-030	85
2006-402	123	2787-2346/000-070	85
2006-403	123	2787-2347	86
2006-404	123	2787-2347/000-030	86
2006-405	123	2787-2347/000-070	86
2006-405/011-000	123	2787-2348	87
2006-433	123	2787-2348/000-030	87
2006-434	123	2787-2348/000-070	87
2006-435	123	2787-2357	88
2006-991	123	2787-2358	89
2006-992	123	2787-2448	17
2006-1611/1000-541	123	2787-2448/000-030	17
2006-1611/1000-542	123	2787-2448/000-070	17
2006-1611/1000-836	123		
2006-1611/1000-867	123	<b>2789 Series</b>	
2006-1621/1000-541	123	2789-1128	224
2006-1621/1000-542	123	2789-1145	225
2006-1621/1000-836	123	2789-9015	21
2006-1621/1000-859	123	2789-9023	23
2006-1621/1000-867	123	2789-9052	20
2006-1631/1000-541	123	2789-9080	22
2006-1631/1000-542	123		
2006-1631/1000-836	123	<b>2857 Series</b>	
2006-1631/1000-859	123	2857-101	213
2006-1631/1000-867	123	2857-102	213
		2857-103	213
<b>2009 Series</b>		2857-121	213
2009-110	220	2857-122	213
2009-113	220	2857-123	213
2009-114	220	2857-124	213
2009-115	220	2857-570/024-000	186
2009-309	217	2857-570/024-001	182
2009-310	217	2857-570/024-005	184
<b>2016 Series</b>			
2016-499	198		
<b>2020 Series</b>			
2020-1291	199		
2020-1492	199		
<b>2092 Series</b>			
2092-1601/002-000	205		

## 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:

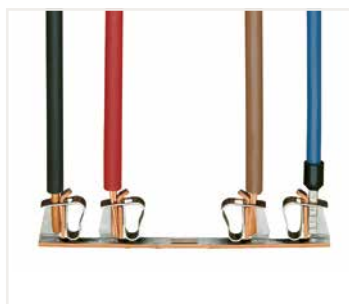
Push-in connection

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



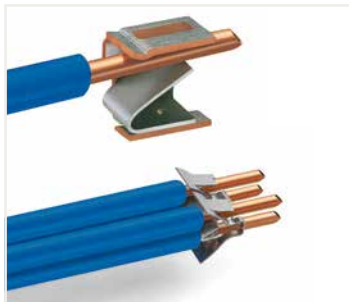
fine-stranded,  
with ferrule  
(gastight crimped)

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

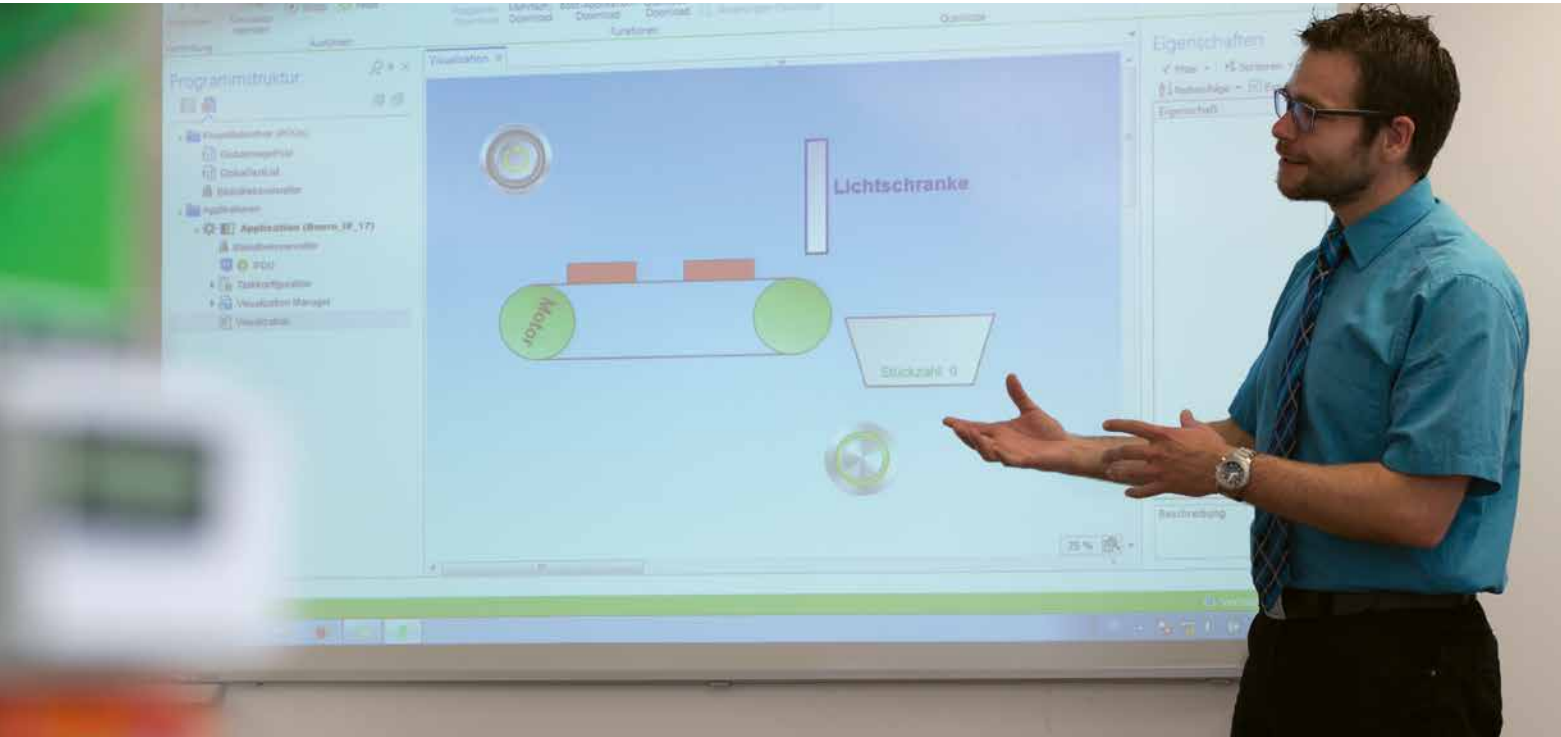
PUSH WIRE® connection for solid and stranded conductors (depending on the model used)

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

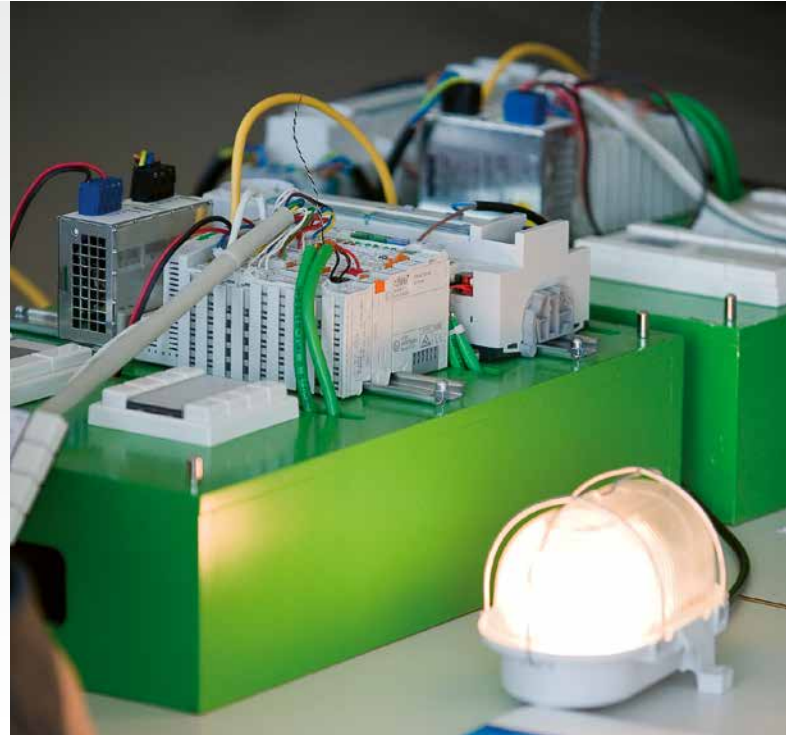
Experience the Benefits of First-Hand Knowledge and Expertise – Straight from the Source

Our instructors are specialists who know all the ins and outs of WAGO's products. This ensures that the time devoted to each WAGO training seminar is an effective investment in expanding your own expertise.

Request your registration form by email:

[training@wago.com](mailto:training@wago.com)

Contact your local  
WAGO office.



### Product-Related Seminars

We regularly offer product-related seminars on the following topics:

- Building and industrial automation
- Programming of automation components
- Fieldbus systems

Current Seminars at:  
[www.wago.com](http://www.wago.com)

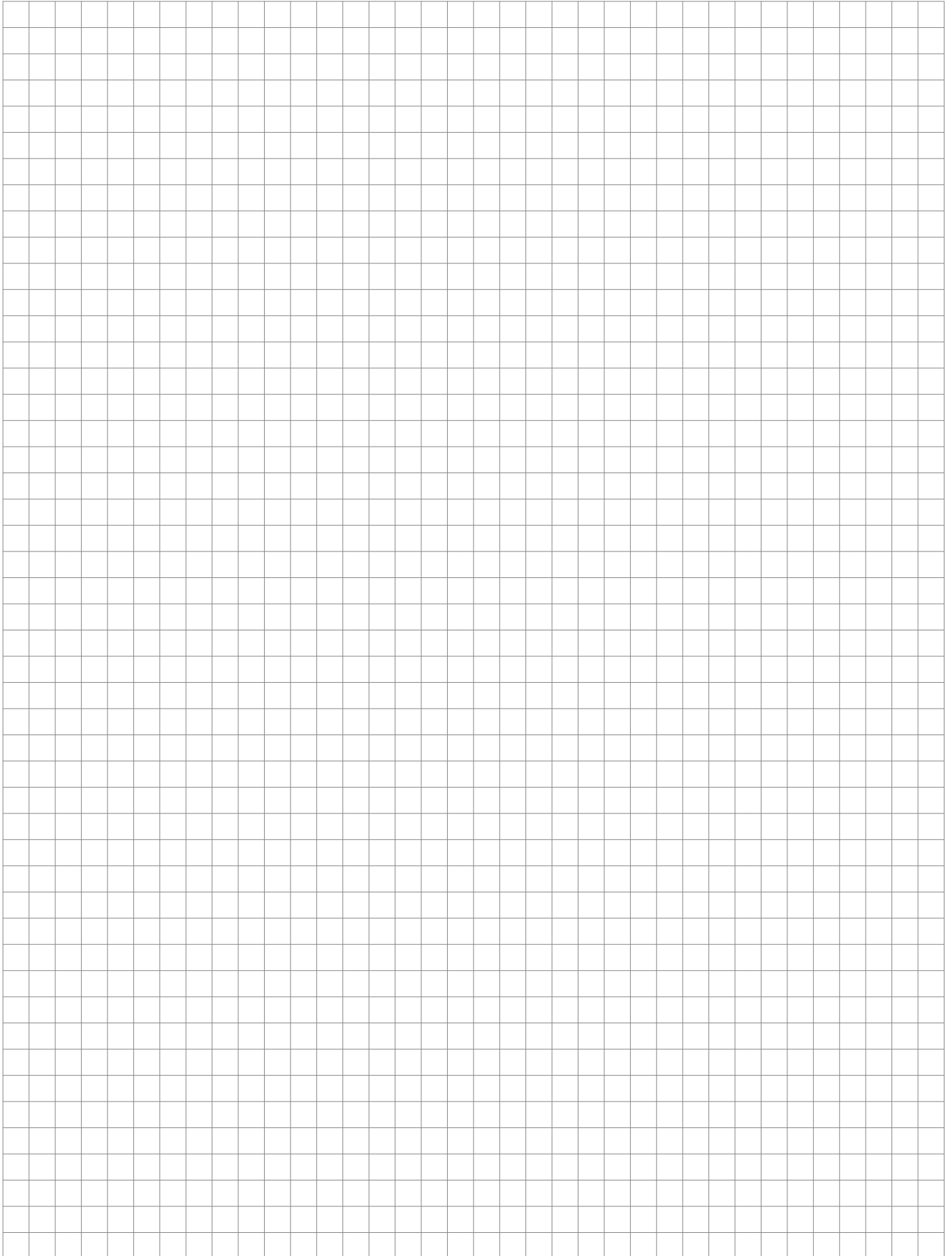
### Customer-Specific Training Seminars

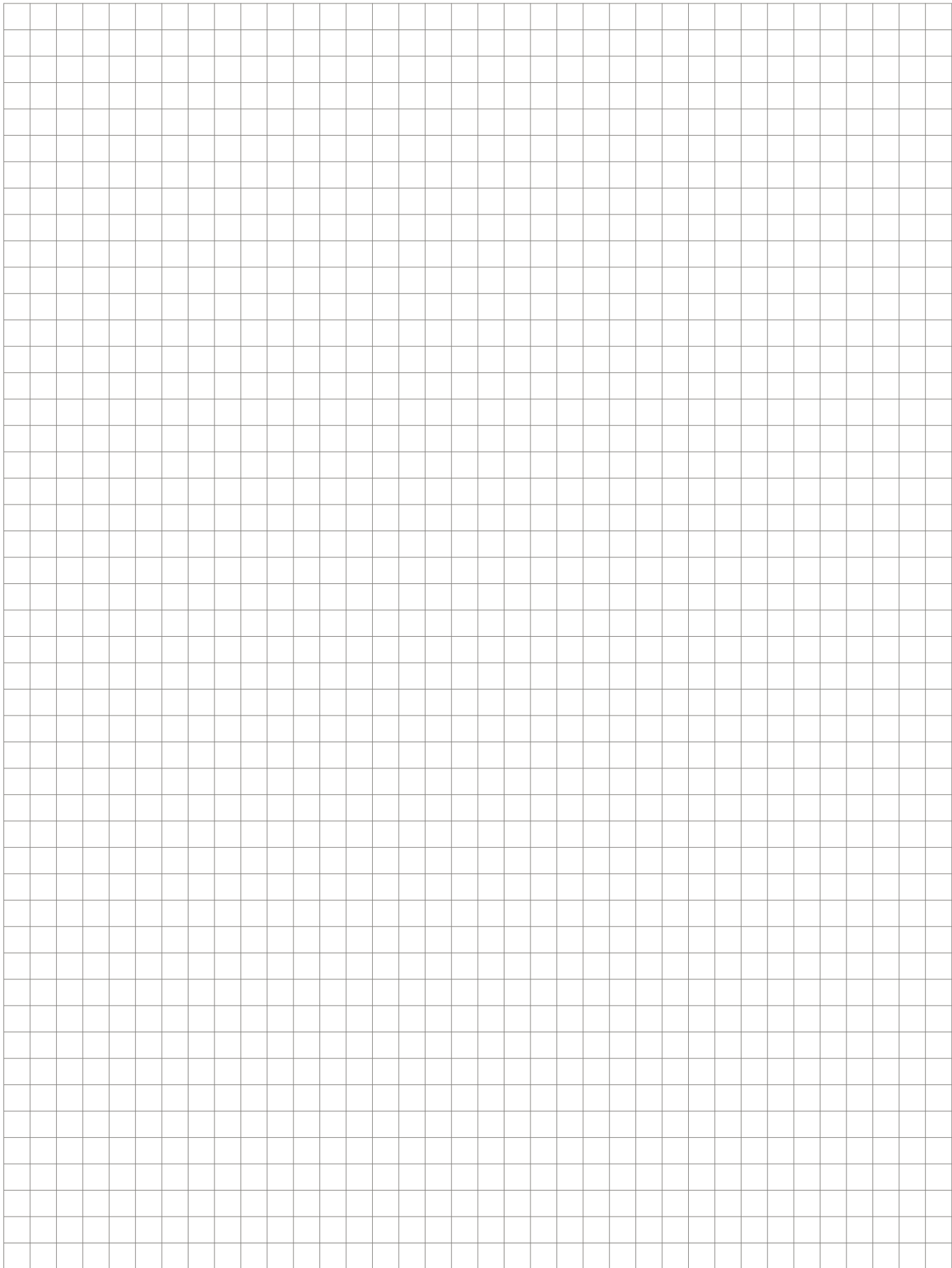
In addition to these "open" seminars, we also offer seminars specially tailored to your organization and its particular needs.

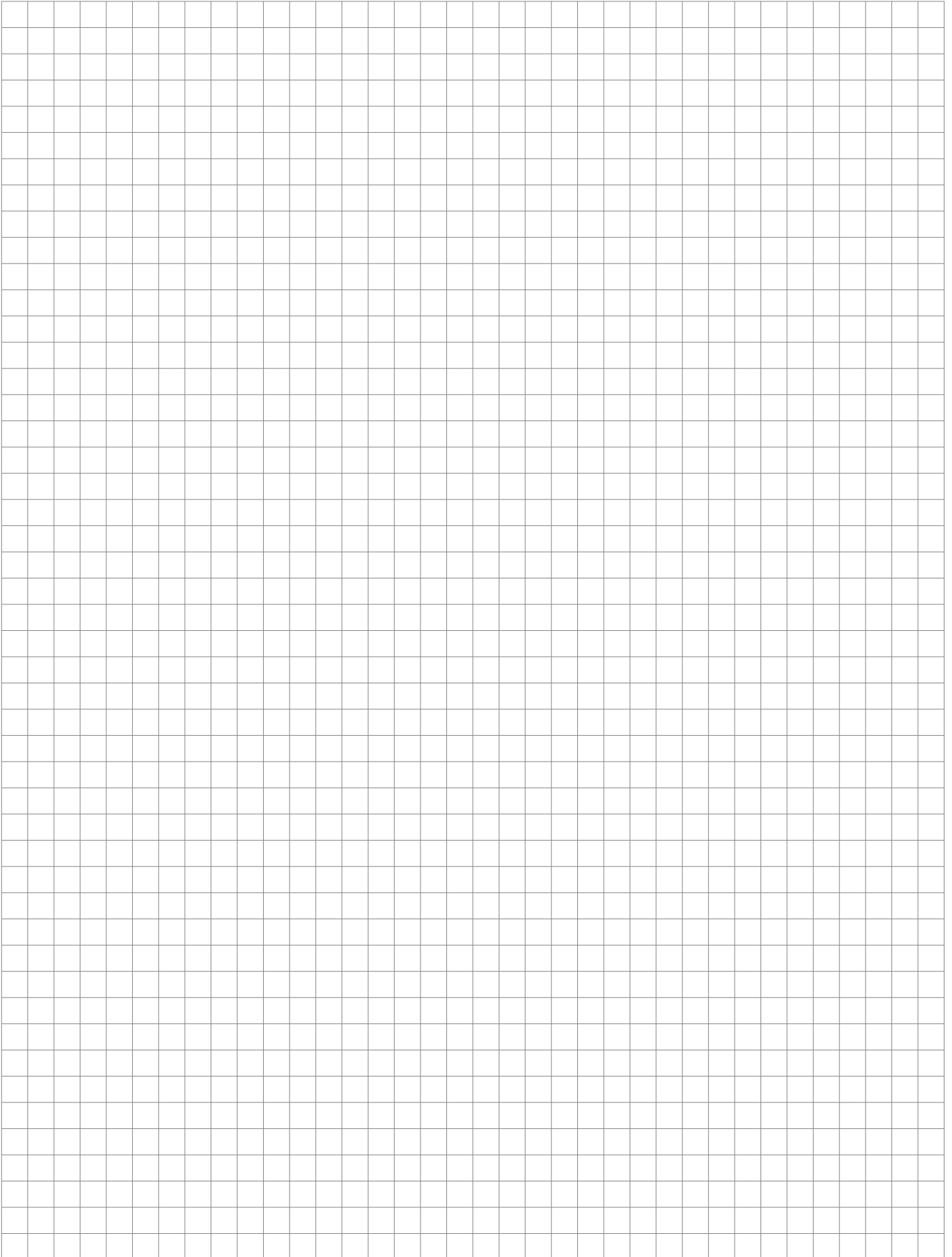
Upon request, we can also conduct these courses at your location.

Special  
Corporate Seminars

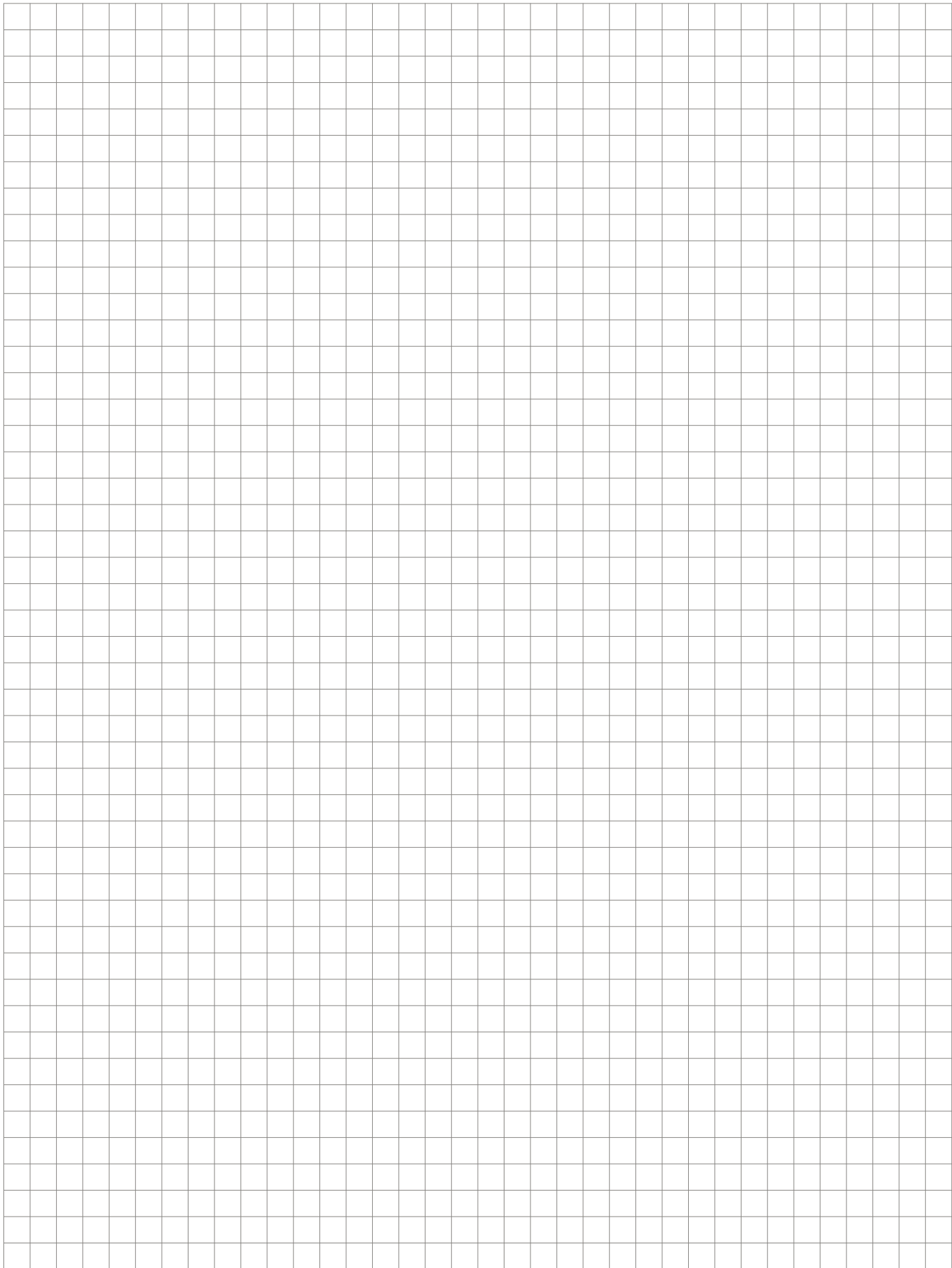
11

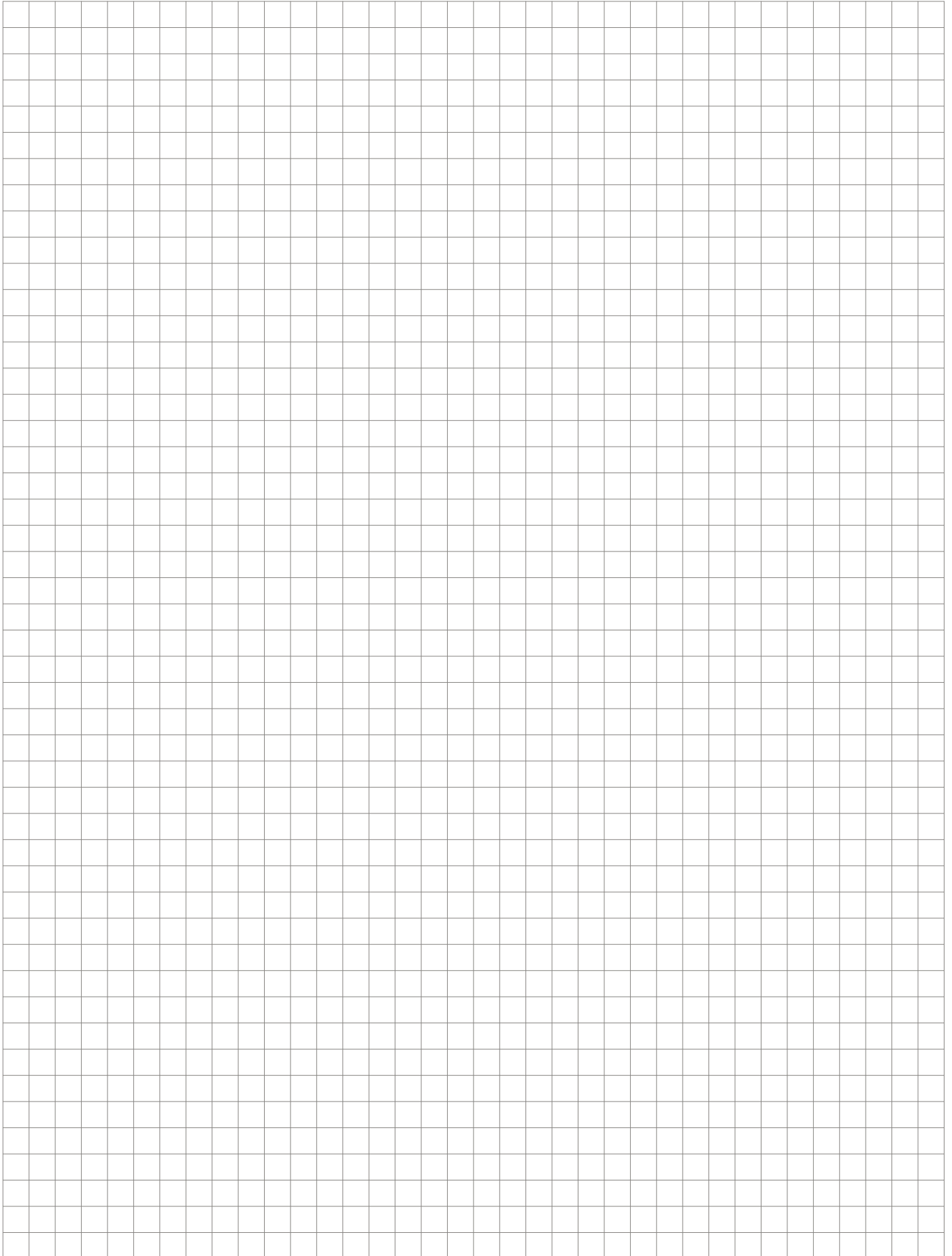














**WAGO GmbH & Co. KG**

Postfach 2880 · D · 32385 Minden  
Hansastraße 27 · D · 32423 Minden

[info@wago.com](mailto:info@wago.com)

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

Headquarters	+49 571 887 - 0
Sales	+49 571 887 - 44222
Order Service	+49 571 887 - 44333

Current addresses at [www.wago.com](http://www.wago.com)

**WAGO is a registered trademark of WAGO Verwaltungsgesellschaft mbH.**

"Copyright – WAGO GmbH & Co. KG – All rights reserved.

The content and structure of the WAGO websites, catalogs, videos and other WAGO media are subject to copyright. Distribution or modification to the contents of these pages and videos is prohibited. Furthermore, the content may neither be copied nor made available to third parties for commercial purposes. Also subject to copyright are the images and videos that were made available to WAGO GmbH & Co. KG by third parties."