EPSITRON® – Advanced Power Supplies

High-Performance and Efficient

WAGO®
INNOVATIVE CONNECTIONS

EPSITRON® – Advanced Industrial Power Supplies

The Right Solution for Every Application – 787 Series –

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EPSITRON® PRO Power

Single- and three-phase power supplies with a wide input voltage range and 12 V, 24 V or 48 V output voltages. Features include PowerBoost, TopBoost and optional LineMonitor.

1-phase, with TopBoost and PowerBoost:	
787-819	12 V DC, 6 A
787-821	12 V DC, 10 A
787-831	12 V DC, 15 A
787-818	24 V DC, 3 A
787-822	24 V DC, 5 A
787-832	24 V DC, 10 A
787-834	24 V DC, 20 A
787-833	48 V DC, 5 A
787-835	48 V DC, 10 A
3-phase, with TopBoost and PowerBoost:	
787-840	24 V DC, 10 A
787-842	24 V DC, 20 A
787-844	24 V DC, 40 A
787-845	48 V DC, 10 A
787-847	48V DC, 20A
3-phase, with TopBoost and PowerBoost, as well as LineMonitor:	
787-850	24 V DC, 10 A
787-852	24 V DC, 20 A
787-854	24 V DC, 40 A

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EPSITRON® CLASSIC Power

Single-phase power supplies with wide input voltage range and 12 V, 24 V, 30.5 V or 48 V output voltages.

1-phase:	
787-601	12 V DC, 2 A
787-611	12 V DC, 4 A
787-621	12 V DC, 8 A
787-602	24 V DC, 1.3 A
787-612	24 V DC, 2.5 A
787-622	24 V DC, 5 A
787-632	24 V DC, 10 A
787-613	48 V DC, 1 A
787-623	48 V DC, 2 A
787-633	48 V DC, 5 A
787-692	AS-Interface, 30.5 V DC, 3 A
1-phase, with integrated UPS charger and controller:	
787-1675	24 V DC, 5 A

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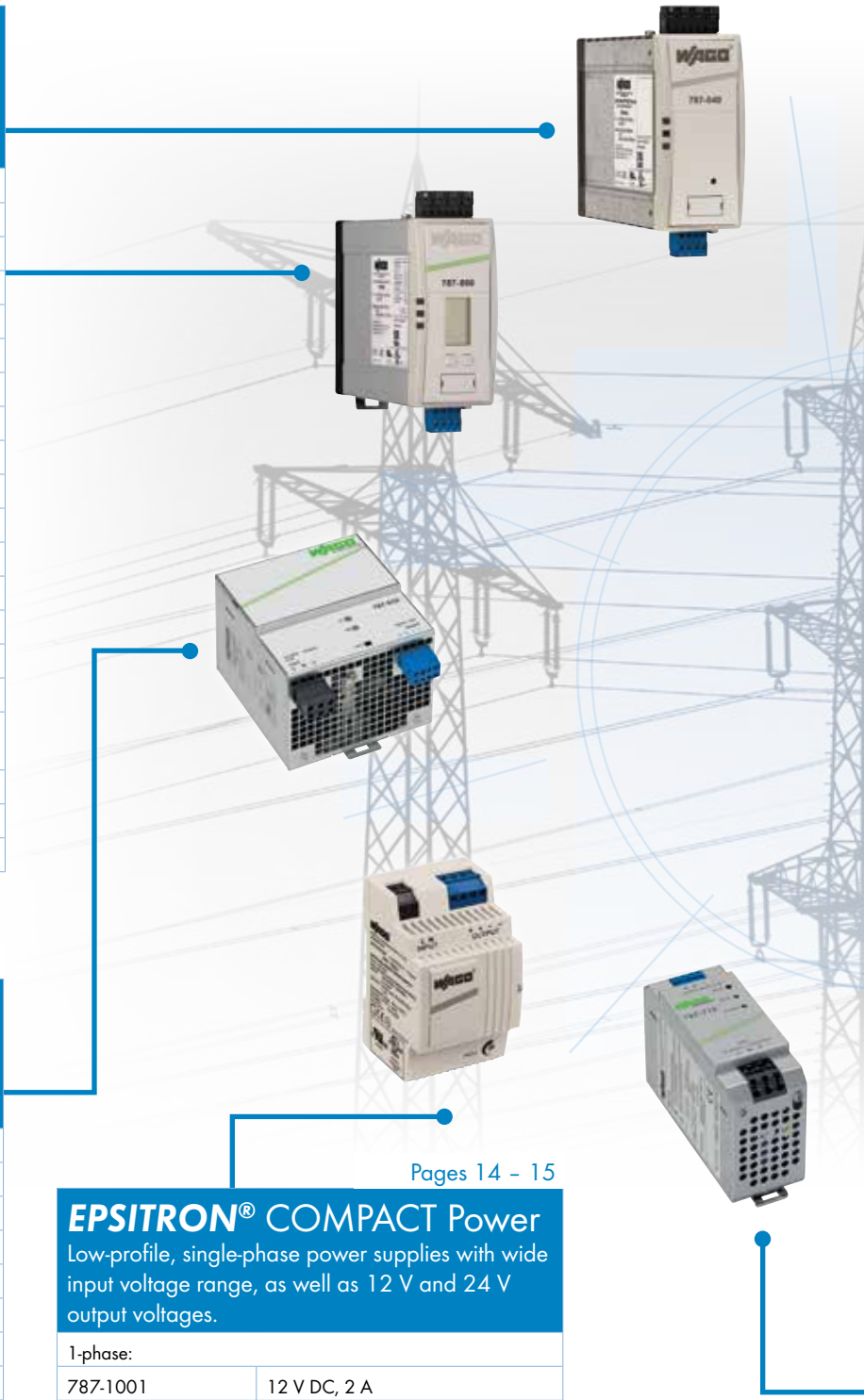
EPSITRON® COMPACT Power

Low-profile, single-phase power supplies with wide input voltage range, as well as 12 V and 24 V output voltages.

1-phase:	
787-1001	12 V DC, 2 A
787-1011	12 V DC, 4 A
787-1021	12 V DC, 6.5 A
787-1017	18 V DC, 2.5 A
787-1002	24 V DC, 1.3 A
787-1012	24 V DC, 2.5 A
787-1022	24 V DC, 4 A



Pages 18 – 23

EPSITRON® – Electronic Circuit Breakers

Configurable protection via 4-channel electronic circuit breakers, integrated current and voltage monitoring.

787-860	24 V DC, 4 x 6 A
787-861	24 V DC, 4 x 8 A, current-limited
787-862	24 V DC, 4 x 10 A
787-1662	24 V DC, 4 x 10 A
787-1664	24 V DC, 4 x 10 A
787-1668	24 V DC, 4 x 10 A

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EPSITRON® – Uninterruptible Power Supplies (UPS)

Reliable compensation for longer power failures via UPS charger, controller and connected battery modules. Integrated battery control technology.

UPS charger and controller:	
787-870	24 V DC, max. 10 A
787-875	24 V DC, max. 20 A
Battery modules with battery control:	
787-876	24 V DC, 1.2 Ah
787-871	24 V DC, 3.2 Ah
787-872	24 V DC, 7 Ah
787-873	24 V DC, 12 Ah
Power supply, 1-phase, with integrated UPS charger and controller:	
787-1675	24 V DC, 5 A

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EPSITRON® – Capacitive Buffer Modules

Reliable operation in the event of short voltage fluctuations via maintenance-free, capacitive buffer modules.

787-880	24 V DC, max. 10 A for 400 ms
787-881	24 V DC, max. 20 A for 400 ms

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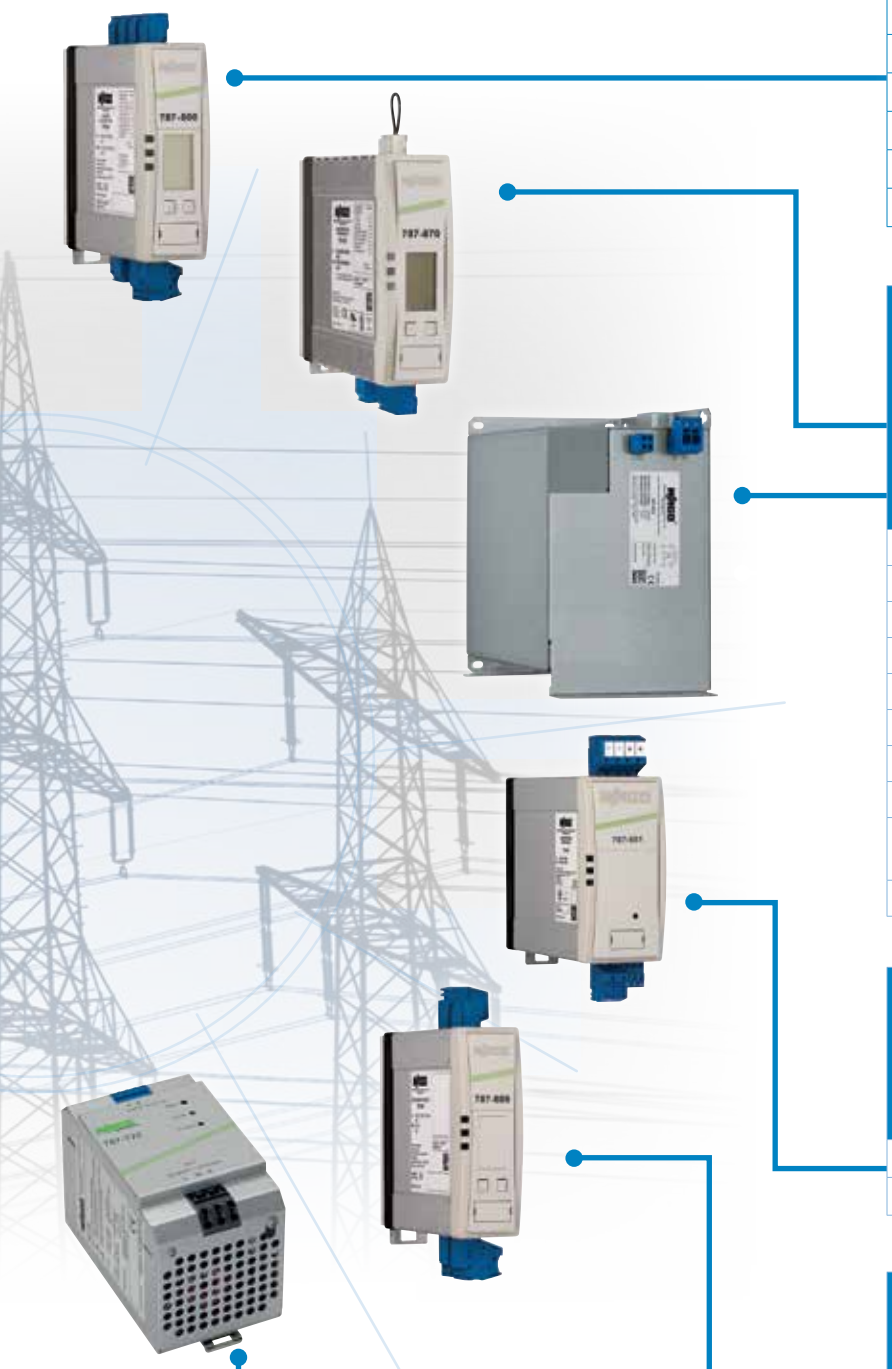
EPSITRON® Redundancy Modules

Parallel connection provides increased power availability and higher load current via redundancy module.

787-885	24 V DC, 2 x 20 A
	or 1 x 40 A
787-886	48 V DC, 2 x 20 A
	or 1 x 40 A

EPSITRON® Accessories

For accessories, see page 34.



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Ex Approval

EPSITRON® ECO Power

Single-phase power supplies with a wide input voltage range, 24 V output voltage and Ex approvals.

1-phase:	
787-712*	24 V DC, 2.5 A
787-722*	24 V DC, 5 A
787-732*	24 V DC, 10 A
787-734	24 V DC, 20 A
787-736	24 V DC, 40 A

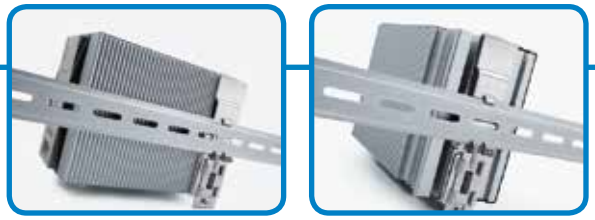
*These models have IECEx, ATEX and UL Class I, Div 2 approvals.

EPSITRON® PRO POWER

Professional and Efficient Power Supplies

Professional power supplies capable of reliably handling power peaks are needed in applications with high output requirements. The PRO series of power supplies is ideally suited for such applications. This compact device provides 12 V, 24 V or 48 V DC with nominal currents of 3 to 40 A, and two different mounting options. An integrated PowerBoost function, which enables the starting of capacitive loads or motors, provides 200% of the rated current for up to 4 seconds. In the event of a short circuit, the TopBoost function provides an additional 60 A nominal output current for 50 ms, allowing sufficient protection via miniature circuit breakers. The 787-85x versions* with line monitor provide convenient configuration and monitoring of operating parameters using built-in display or free software with RS-232 interface. This replaces additional devices, such as measuring instruments, phase monitoring devices, operating hour counters in control cabinets, and opens up a whole new range of power supply opportunities. High efficiency, up to 93%, also considerably reduces the maintenance costs of the devices.

- Efficiency up to 93%
- PowerBoost, up to 200% output power for 4 seconds
- Adjustable output voltage
- TopBoost, up to 60 A additional reserve for 50ms
- Line monitor for parameter setting and input/output monitoring (optional)*



Slim Design and Versatile Mounting Options

All PRO Power Supplies are slim, saving up to 50% space in the control cabinet. The units can be snapped onto DIN 35 rails in two positions in order to make optimal use of the available space.

solid fine-stranded ferruled

Quick to Connect

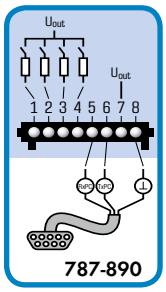
CAGE CLAMP® spring pressure connection technology provides fast, vibration-free and maintenance-free termination of solid, fine-stranded or ferruled wires.

Labeled and thus impossible-to-confuse pluggable female connectors allows for easy cable pre-assembly.

Innovative Communication

1. LEDs: When the device is running without any errors, the green LED illuminates. Non-critical errors are signaled by the (optional*) yellow LED, while critical errors are indicated by the red LED.

2. Display (optional*): The 787-85x units with Line Monitor continuously provide the current and voltage output and also offer comprehensive line monitoring. In the event of an error, a diagnostic can be preformed via an integrated fault memory. Function keys for parameter setting are located on the front of the device.

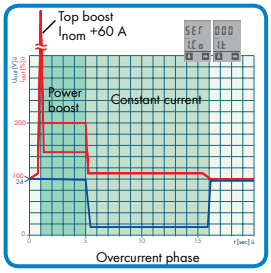


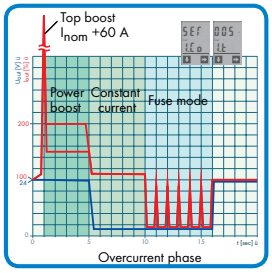
3. Active signal outputs (optional*): Four active signal outputs for function monitoring are located on the front of the device. The corresponding states can be transferred to the higher-level control system. These outputs do not require separate signal/supply voltage, as they are being supplied by the output of this device. Two of the four signal outputs can be user-defined using the free 759-850 Configuration Software, and may be set up to represent more than one fault condition per output (e.g. for the purpose of generating a group signal for all critical states).

4. Interface (optional*): The device can communicate with a PC or higher-level control system via the serial interface. The 759-851 Software is used to visualize all relevant data on a PC; configuring the device is performed via 759-850 Software. Both software versions can be downloaded free of charge from www.wago.us. The 787-890 Serial Communication Cable is available as an accessory for connection to the RS-232 interface. For more detail on this feature, see pages 30 and 31 of this brochure.

High-Performance

The PRO Power Supplies provide extra power via TopBoost and PowerBoost. In addition, the overload behavior of devices equipped with line monitor* can be adjusted, allowing them to be adapted to the relevant application.





Overload behavior

The constant current operation available in all PRO Power Supplies, where the output current is limited to 1.1 times the rated current in case of overload, can be limited temporally via fuse mode in devices equipped with line monitor. In fuse mode operation, the output current is switched off cyclically on overload or short circuit, which safely prevents over-heating due to the sharply-reduced power flow.

PowerBoost

Conventional switch mode power supplies typically set current limiting at 1.1 times the rated output current. The use of these power supplies becomes very problematic as soon as heavy starting loads are switched in, since these power supplies are not able to provide sufficient current for them. The PRO Series has power reserves which can provide twice the current at constant voltage for at least 4 seconds. This ensures reliable operation and removes the need for expensive oversizing of switch mode power supplies.

TopBoost

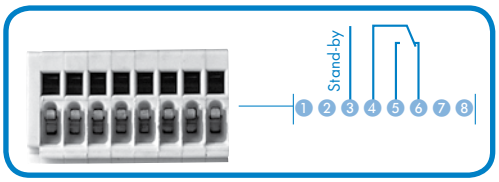
In order for high-speed magnetic miniature circuit breakers to trip, high currents (that are significantly higher than the rated current) are required for a period of 10 to 12 milliseconds. The PRO Series of power supplies are able to supply a powerful 60 A above the rated current for 50 milliseconds. This enables a faulty branch to be shut down selectively in the event of a short circuit while, the remaining loads continue unaffected.

EPSITRON® PRO Power: Technical Data

Item Number	787-819	787-821	787-831	787-818
Nominal input voltage	1/2 x 100 – 240 V AC	1/2 x 100 – 240 V AC	1/2 x 110 – 240 V AC	1/2 x 100 – 240 V AC
Input voltage range (use of DC requires external protection)	85 – 264 V AC; 120 – 350 V AC	85 – 264 V AC; 120 – 350 V DC	85 – 264 V AC; 120 – 350 V AC	85 – 264 V AC; 120 – 350 V AC
Nominal output voltage	12 V DC, SELV	12 V DC, SELV	12 V DC, SELV	24 V DC, SELV
Output voltage range	11 – 18 V DC, adjustable	11 – 18 V DC, adjustable	11 – 18 V DC, adjustable	22 – 29.5 V DC, adjustable
Output current	6 A at 12 V DC	10 A at 12 VDC	15 A at 12 V DC	3 A at 24 V DC
PowerBoost	12 A DC (for 4 s) 9 A DC (for 8 s)	20 A DC (for 4 s) 15 A DC (for 8 s)	30 A DC (for 4 s) 22.5 A DC (for 8 s)	6 A DC (for 4 s) 4.5 A DC (for 8 s)
TopBoost	21 A DC (for 25 ms)	60 A DC (for 25 ms) 40 A DC at V_{IN} < 110 VAC (for 25 ms)	55 A DC (for 25 ms)	14 A DC (for 25 ms)
Parallel-/Series-connections possible	yes	yes	yes	yes
Efficiency	83 % typ.	87.8 % typ.	87 % typ.	87.8 % typ.
Operation status indicator	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)
LED indication	Green LED (Vo > 0.85 x 12 V) Red LED (Vo < 0.85 x 12 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 12 V) Red LED (Vo < 0.85 x 12 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 12 V) Red LED (Vo < 0.85 x 12 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 24 V) Red LED (Vo < 0.85 x 24 V) Relay contact DC OK (changeover contact)
Stand-by input	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)
Ambient operating temperature	-25 °C ... +70 °C	-25 °C ... +70 °C	-25°C ... +70 °C	-25 °C ... +70 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
Dimensions (mm) W x H x D** Height from upper-edge of DIN 35 rail	40 x 163 x 163	57 x 163 x 163	57 x 179 x 163	40 x 163 x 163
Weight	800 g	1100 g	1300 g	800 g
Standards/Approvals	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508

** D = 127 mm, without pluggable female connectors

Potential-Free Signal Contact and Stand-By Input



In the event of undervoltage at the output, the internal relay is deactivated. This error is signaled via a **potential-free changeover contact** (rated 1 A at 30 V DC).

787-822	787-832	787-834	787-833	787-835
1/2 x 100 – 240 V AC	1/2 x 100 – 240 V AC	1/2 x 110 – 240 V AC	1/2 x 110 – 240 V AC	1/2 x 110 – 240 V AC
85 – 264 V AC; 120 – 350 V DC	85 – 264 V AC; 120 – 350 V DC	85 – 264 V AC; 120 – 350 V AC	85 – 264 V AC; 120 – 350 V AC	85 – 264 V AC; 120 – 350 V AC
24 V DC, SELV	24 V DC, SELV	24 V DC, SELV	48 V DC, SELV	48 V DC, SELV
22 – 29.5 V DC, adjustable	22 – 29.5 V DC, adjustable	22 – 29.5 V DC, adjustable	33 – 52 V DC, adjustable	33 – 52 V DC, adjustable
5 A at 24 V DC	10 A at 24 V DC	20 A at 24 V DC	5 A at 48 V DC	10 A at 48 V DC
10 A DC (for 4 s) 7.5 A DC (for 8 s)	20 A DC (for 4 s) 15 A DC (for 8 s)	30 A DC (for 4 s) 25 A DC (for 8 s)	10 A DC (for 4 s) 7.5 A DC (for 8 s)	17.5 A DC (for 4 s) 15 A DC (for 8 s)
21 A DC (for 25 ms)	60 A DC (for 25 ms)	80 A DC (for 25 ms)	30 A DC (for 25 ms)	60 A DC (for 25 ms)
yes	yes	yes	yes	yes
87.8 % typ.	90 % typ.	91 % typ.	91 % typ.	91 % typ.
Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)
Green LED (Vo > 0.85 x 24 V) Red LED (Vo < 0.85 x 24 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 24 V) Red LED (Vo < 0.85 x 24 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 24 V) Red LED (Vo < 0.85 x 24 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 48 V) Red LED (Vo < 0.85 x 48 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 0.85 x 48 V) Red LED (Vo < 0.85 x 48 V) Relay contact DC OK (changeover contact)
Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)
-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
57 x 163 x 163	57 x 179 x 163	97 x 187 x 171	57 x 179 x 163	97 x 187 x 171
1100 g	1300 g	2300 g	1300 g	2300 g
EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508

Energy Saving Mode

By applying an external 10–28.8 V DC at the **stand-by input**, the output is switched off and the power supply remains on energy-saving stand-by with maximum 0.8W power dissipation. The stand-by input allows targeted switch-off of distributed power supplies without requiring additional switching relays.

EPSITRON® PRO Power: Technical Data

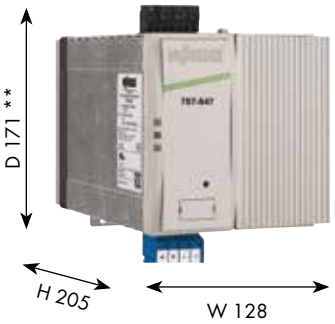
Item Number	787-840	787-842	787-844
Nominal input voltage	2/3 x 400 – 500 V AC	2/3 x 400 – 500 V AC	2/3 x 400 – 500 V AC
Input voltage range (use of DC requires external protection)	340 – 550 V AC; 480 – 780 V DC	340 – 550 V AC; 480 – 780 V DC	340 – 550 V AC; 480 – 780 V DC
Nominal output voltage	24 V DC, SELV	24 V DC, SELV	24 V DC, SELV
Output voltage range	22.8 – 28.8 V DC, adjustable	22.8 – 28.8 V DC, adjustable	22.8 – 28.8 V DC, adjustable
Output current	10 A at 24 V DC	20 A at 24 V DC	40 A at 24 V DC
PowerBoost	20 A DC (for 4 s) 15 A DC (for 16 s)	40 A DC (for 4 s) 30 A DC (for 16 s)	60 A DC (for 4 s) 50 A DC (for 16 s)
TopBoost	70 A DC (for 50 ms)	80 A DC (for 50 ms)	100 A DC (for 50 ms)
Parallel-/Series-connections possible	yes	yes	yes
Efficiency	91.7 % typ.	92.9 % typ.	93.6 % typ.
Operation status indicator	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)
LED indication	Green LED (Vo > 20.4 V) Red LED (Vo < 20.4 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 20.4 V) Red LED (Vo < 20.4 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 20.4 V) Red LED (Vo < 20.4 V) Relay contact DC OK (changeover contact)
LineMonitor, parameter setting and monitoring, active signal outputs, serial interface	–	–	–
Stand-by input	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)
Ambient operating temperature	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +55 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
Dimensions (mm) W x H x D** Height from upper-edge of DIN 35 rail	57 x 179 x 163	77 x 179 x 171	128 x 205 x 171
Weight	1000 g	1300 g	2500 g
Standards/Approvals	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508

** D = 127 mm, without pluggable female connectors

EPSITRON® Communication Cable

Many PRO power supply devices feature an RS-232 interface. When paired with the 787-890 Communication Cable, the following devices can connect to a PC or PLC RS-232 interface:
Integrated LineMonitor (787-850, -852 and -854) ECBs (787-860, -861, -862) UPS charger and controller (787-870, -875, -1675)

When combined with free software – download at **www.wago.us** – users can easily set device parameters and perform diagnostics.



	787-845	787-847	787-850	787-852	787-854
	2/3 x 400 – 500 V AC	2/3 x 400 – 500 V AC	2/3 x 400 – 500 V AC	2/3 x 400 – 500 V AC	2/3 x 400 – 500 V AC
	340 – 550 V AC; 480 – 780 V DC	340 – 550 V AC; 480 – 780 V DC	340 – 550 V AC; 480 – 780 V DC	340 – 550 V AC; 480 – 780 V DC	340 – 550 V AC; 480 – 780 V DC
	48 V DC, SELV	48 V DC, SELV	24 V DC, SELV	24 V DC, SELV	24 V DC, SELV
	39 – 53 V DC, adjustable	39 – 53 V DC, adjustable	22.8 – 28.8 V DC, adjustable	22.8 – 28.8 V DC, adjustable	22.8 – 28.8 V DC, adjustable
	10 A at 48 V DC	20 A at 48 V DC	10 A at 24 V DC	20 A at 24 V DC	40 A at 24 V DC
	15 A DC (for 4 s) 12.5 A DC (for 16 s)	30 A DC (for 4 s) 25 A DC (for 16 s)	20 A DC (for 4 s) 15 A DC (for 16 s)	40 A DC (for 4 s) 30 A DC (for 16 s)	60 A DC (for 4 s) 50 A DC (for 16 s)
	55 A DC (for 50 ms)	80 A DC (for 25 ms)	70 A DC (for 50 ms)	80 A DC (for 50 ms)	100 A DC (for 50 ms)
	yes	yes	yes	yes	yes
	93 % typ.	94.4 % typ.	91.7 % typ.	92.9 % typ.	93.6 % typ.
	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)	Green LED (Vo), red LED (error)
	Green LED (Vo > 36 V) Red LED (Vo < 36 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 36 V) Red LED (Vo < 36 V) Relay contact DC OK (changeover contact)	Green LED (Vo > 20.4 V) Yellow LED (warnings) Red LED (errors)	Green LED (Vo > 20.4 V) Yellow LED (warnings) Red LED (errors)	Green LED (Vo > 20.4 V) Yellow LED (warnings) Red LED (errors)
	–	–	yes	yes	yes
	Switches output off (stand-by operation)	Switches output off (stand-by operation)			
	-25 °C ... +70 °C	-25 °C ... +55 °C	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +55 °C
	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
	77 x 179 x 171	128 x 205 x 171	57 x 179 x 163	77 x 179 x 171	128 x 205 x 171
	1300 g	2500 g	1000 g	1300 g	2500 g
	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508	EN 60950, EN 61204-3, UL 60950, UL 508

EPSITRON® Wall Mount Adapter

Wall mount adapter, for screw fixing of 787-8xx devices on mounting plate or wall without DIN 35 rail.

The wall mount adapter replaces the rail support of the 787-8xx device. The adapter is screwed to the 787-8xx device via provided screws (see page 34).

EPSITRON® CLASSIC POWER

The Robust Power Supply for Various Voltage Ranges

Electrical machines and systems work with various voltage and power requirements. 12 V, 24 V or 48 V DC source is often required, but also 30.5 V to supply AS-Interface networks. The CLASSIC Power Supplies featuring various output voltages are ideally suited for such applications. These 1-phase devices offer a wide range of input voltages with output currents of 1.3 A up to 10 A. All devices feature an output voltage adjustable via potentiometer along with clear status indication so that power losses can be compensated.

The clearly-visible green display indicator (DC OK) makes start-up easy. CLASSIC devices with output power > 150W also indicate an overcurrent or short circuit with a red LED. The integrated constant current characteristic for output power > 40W allows the start-up of capacitive loads.

The pluggable CAGE CLAMP® connection, the robust metal housing, and an efficiency of up to 90% are additional advantages that make the power supplies in the CLASSIC family suitable power supplies for industrial use.

- Open circuit and short circuit protected
- Nominal output voltage DC 12 V, 24 V, 30.5 V or 48 V available
- Adjustable output voltage
- Approvals for worldwide applications
- LED status indication

solid fine-stranded ferruled

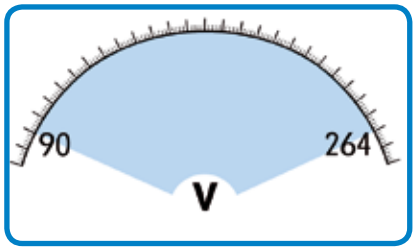
Quick to Connect

CAGE CLAMP® spring pressure connection technology provides fast, vibration-proof and maintenance-free termination of solid, fine-stranded or ferruled wires.

Labeled and thus impossible-to-confuse pluggable female connectors allows for easy cable pre-assembly.

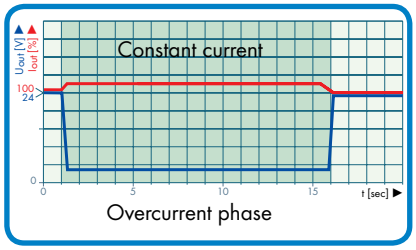
Compact and Easy to Mount

The CLASSIC Power Supplies have a compact and very robust metal housing. Mounting on DIN 35 rails is quick and reliable thanks to the easily-accessible plate on the device.



Universal Supply

The wide range of input voltages of the CLASSIC Power Supplies allows the feed with AC 90 to 264 V. In addition to the possibility of worldwide use, this increases the operating reliability of the power supplies if there are deviations from the rated voltage in the supply network. The CLASSIC Power Supplies can also be supplied with DC power and thus used as DC/DC converters.



High Load-Carrying Capacity

Loads frequently have an increased need for current at the moment when they are switched on. Power supplies with constant current characteristics such as the 24 V DC and 48 V DC CLASSIC devices with output power > 40W deliver 1.1 times the nominal rated current with lowered output voltage - ideal for starting capacitive loads, for example.

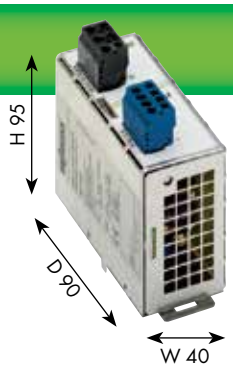
Quick Status

All CLASSIC Power Supplies have an operating indicator that signals the availability of the output voltage via a green LED. Devices with output power > 150W also have an overcurrent indicator, indicated by a red LED. This makes start-up easier and gives maintenance personnel faster information about the state of the machine or system.

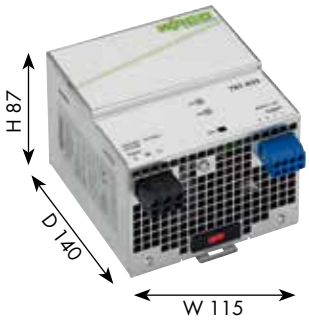
Adjustable Output Voltage

The longer the connection wires and the smaller the wire cross-section, the greater the output resistance. So that the load has sufficient operating voltage even at the end of long wires with small cross-sections, the output voltage of the power supplies can be increased by up to 20%. Conversely, a lowering of the output voltage is also possible, which can reduce the current consumption. The output voltage can be set using a screwdriver via the potentiometer accessible from the side or above.

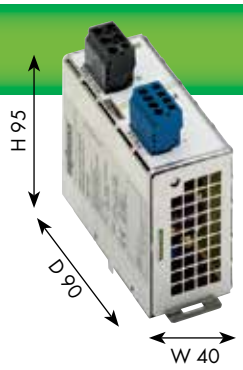
EPSITRON® CLASSIC Power: Technical Data



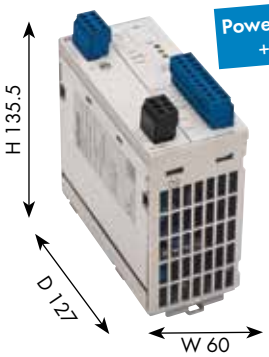
Item Number	787-601	787-611	787-621
Nominal input voltage	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC
Input voltage range	90 – 264 V AC; 130 – 300 V DC	90 – 264 V AC; 130 – 300 V DC	90 – 264 V AC; 130 – 300 V DC
Nominal output voltage	12 V DC	12 V DC	12 V DC
Output voltage range	11 – 15 V	11 – 15 V	11 – 15 V
Output current	2 A	4 A	8 A
Parallel-connections possible	-	yes	yes
Efficiency	78 % typ.	84 % typ.	85 % typ.
LED indication	Green LED (DC OK)	Green LED (DC OK)	Green LED (DC OK)
Ambient operating temperature	-10 °C ... +70 °C	-10 °C ... +70 °C	-10 °C ... +70 °C
Dimensions (mm) W x H x D Height from upper-edge of DIN 35 rail	40 x 95 x 90	51 x 133 x 120	67 x 133 x 120
Weight	300 g	690 g	890 g
Standards/Approvals	EN 60950, EN 61204-3, EN 61204-7, GL	EN 60950, EN 61204-3, EN 61204-7, GL	EN 60950, EN 61204-3, EN 61204-7, GL



Item Number	787-613	787-623	787-633
Nominal input voltage	100 – 240 V AC	100 – 240 V AC	110 – 240 V AC
Input voltage range	90 – 264 V AC; 130 – 300 V DC	90 – 264 V AC; 130 – 300 V DC	85 – 264 V AC; 90 – 350 V DC
Nominal output voltage	48 V DC	48 V DC	48 V DC
Output voltage range	43.2 – 52.8 V	42 – 52.8 V	43.2 – 53.8 V
Output current	1 A	2 A	5 A
Parallel-connections possible	yes	yes	yes
Efficiency	85 % typ.	90 % typ.	89 % typ.
LED indication	Green LED (DC OK)	Green LED (DC OK)	Green LED (DC OK) Red LED (overload)
Ambient operating temperature	-10 °C ... +70 °C	-10 °C ... +70 °C	-10 °C ... +70 °C
Dimensions (mm) W x H x D Height from upper-edge of DIN 35 rail	51 x 133 x 120	67 x 133 x 120	115 x 87 x 140
Weight	600 g	800 g	940 g
Standards/Approvals	EN 60950, EN 61204-3, EN 61204-7, GL	EN 60950, EN 61204-3, EN 61204-7, GL	EN 60950, EN 61204-3, EN 61204-7, GL



787-602	787-612	787-622	787-632
100 – 240 V AC	100 – 240 V AC	100 – 240 V AC	110 – 230 V AC
90 – 264 V AC; 130 – 300 V DC	90 – 264 V AC; 130 – 300 V DC	90 – 264 V AC; 130 – 300 V DC	85 – 264 V AC; 90 – 350 V DC
24 VD C	24 V DC	24 V DC	24 V DC
21.6 – 26.4 V	22 – 28.8 V	22 – 28.8 V	22 – 28 V
1.3 A	2.5 A	5 A	10 A
-	yes	yes	yes
81 % typ.	88 % typ.	89 % typ.	88 % typ.
Green LED (DC OK)	Green LED (DC OK)	Green LED (DC OK)	Green LED (DC OK); red LED (overload)
-10 °C ... +70 °C	-10 °C ... +70 °C	-10 °C ... +70 °C	-10 °C ... +70 °C
40 x 95 x 90	51 x 133 x 120	67 x 133 x 120	115 x 87 x 140
300 g	690 g	890 g	1100 g
EN 60950, EN 61204-3, EN 61204-7, UL 60950, UL 508, GL	EEN 60950, EN 61204-3, EN 61204-7, UL 60950, UL 508, GL	EN 60950, EN 61204-3, EN 61204-7, UL 60950, UL 508, GL	EN 60950, EN 61204-3, EN 61204-7, UL 60950, UL 508, GL



787-692
100 – 240 V AC
90 – 264 V AC; 130 – 300 V DC
30.5 V DC
28 – 33 V
3 A
-
89 % typ.
Green LED (DC OK) Red LED (overload)
-10 °C ... +70 °C
51 x 133 x 120
600 g
EN 60950, EN 61204-3, EN 61204-7, UL 60950, UL 508, GL

787-1675
100 – 240 V AC
85 – 264 V AC
24 V DC
23.0 – 28.5 V DC (mains operation) 18.5 – 27.5 V DC (battery operation)
5 A
yes
89 % typ.
Green LED (DC OK), yellow LED (battery mode), red LED (warning/fault)
-25 °C ... +70 °C
60 x 135,5 x 127
800 g
EN 60950, UL 60950*, UL 508*, EN 61000-6-2, EN 61000-6-3

* pending

EPSITRON® COMPACT POWER

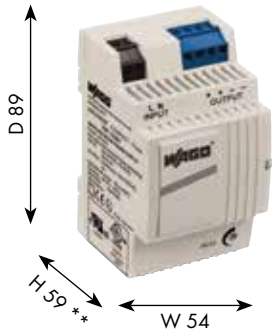
Compact, High-Performance Power Supply in DIN-Rail Mount Enclosure

Installation depth is often restricted for both commercial and industrial applications. DIN 43880 specifies built-in equipment dimensions for installation in distribution and meter panels.

COMPACT Power Supplies meet these requirements with a height of just 55mm from upper-edge of carrier rail – width and profile also comply to this standard. WAGO's compact but powerful 787-10xx Power Supplies provide 12, 18 and 24 V DC output voltage. They offer protection class II and feature a wide input voltage range for use in different supply networks.

Front-panel status indication, maintenance-free CAGE CLAMP® connection, adjustable output voltage, constant current operation in case of overload, as well as overhead installation capability are only some of the benefits. Thus, WAGO's COMPACT Power Supplies allow distributed control systems to be supplied in flat distribution boxes or operator panels.

- Wide input voltage range
- Adjustable output voltage
- CAGE CLAMP® connection technology
- Open circuit and short-circuit protected
- LED status indication



Fast and Safe Connection

solid

fine-stranded

ferruled

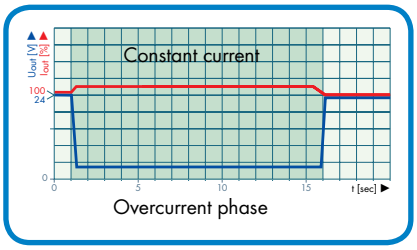
CAGE CLAMP® spring pressure connection technology provides fast, vibration-free and maintenance-free termination of solid, fine-stranded or ferruled wires.

Item Number	787-1001	787-1011
Nominal input voltage	100 – 240 V AC	100 – 240 V AC
Input voltage range	85 – 264 V AC; 120 – 373 V DC	85 – 264 V AC; 120 – 373 V DC
Nominal output voltage	12 V DC	12 V DC
Output voltage range	10.8 – 18 V DC, adjustable	10.5 – 15.5 V DC, adjustable
Output current	2 A at 12 V DC / 0.75 A at 18 V DC max. 1.4 A at 12 V DC, in any mounting position	4 A at 12 V DC max. 2.4 A in any mounting position
Default setting	12 V DC	12 V DC
Overload behavior	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.
Operation status indicator	Green LED (Vo)	Green LED (Vo)
Efficiency	80 % typ.	85 % typ.
Ambient operating temperature	-25 °C ... +55 °C	-25 °C ... +55 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C
Derating	-3 % / K (>45 °C)	-3 % / K (>45 °C)
Parallel-/Series-connections possible	yes	yes
Type of mounting	DIN-rail mount (EN 60715)	DIN-rail mount (EN 60715)
Dimensions (mm) W x H x D Height from upper-edge of DIN 35 rail	54 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail	72 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail
Weight	approx. 170 g	approx. 240 g
Standards/Approvals	EN 60950 (SELV), EN 61204-3, UL 60950, UL 508, GL	EN 60950 (SELV), EN 61204-3, UL 60950*, UL 508*, GL

** H = 55 mm, from upper-edge of DIN 35 rail * pending

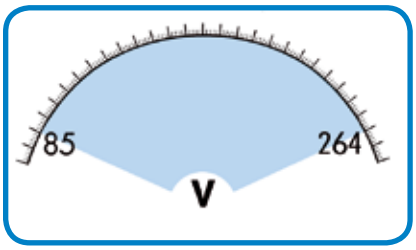
Clear Indication

All COMPACT Power Supplies indicate output voltage availability via green LED. This allows current operating status to be displayed at a glance.



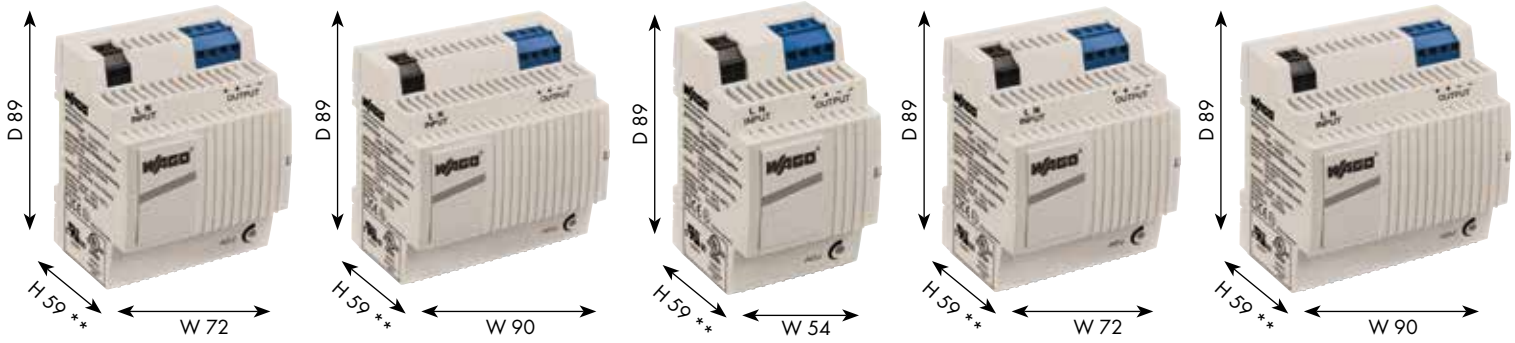
High Load-Carrying Capacity

To supply capacitive loads (e.g., distributed control units or HMI devices) with higher inrush current, WAGO's COMPACT Power Supplies feature constant current characteristic, while delivering 1.1 times the nominal rated current during overload. For low-ohm short circuits, the output voltage is reduced to zero and automatically reinstated once the short-circuit has been eliminated.



Universal Supply

The wide range of input voltages of the COMPACT Power Supplies allows feeds of 85 to 264 V AC so devices can operate on different supply networks worworldwide without additional conversion or setting. This feature increases tolerance of voltage fluctuations within a supply network, increasing reliability.



	787-1021	787-1017	787-1002	787-1012	787-1022
	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC
	85 – 264 V AC; 120 – 373 V DC	85 – 264 V AC; 120 – 373 V DC	85 – 264 V AC; 120 – 373 V DC	85 – 264 V AC; 120 – 373 V DC	85 – 264 V AC; 120 – 373 V DC
	12 V DC	18 V DC	24 V DC	24 V DC	24 V DC
	10.5 – 15.5 V DC, adjustable	15 – 19 V DC, adjustable	22.8 – 26.4 V DC, adjustable	22.8 – 26.4 V DC, adjustable	22.8 – 26.4 V DC, adjustable
	6.5 A at 12 V DC max. 4 A in any mounting position	2.4 A at 18 V DC max. 1.5 A in any mounting position	1.3 A at 24 V DC max. 0.9 A in any mounting position	2.5 A at 24 V DC max. 1.6 A in any mounting position	4 A at 24 V DC max. 2.4 A in any mounting position
	12 V DC	18 V DC	24 V DC	24 V DC	24 V DC
	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.
	Green LED (Vo)	Green LED (Vo)	Green LED (Vo)	Green LED (Vo)	Green LED (Vo)
	87 % typ.	84 % typ.	82 % typ.	88 % typ.	88 % typ.
	-25 °C ... +55 °C	-25 °C ... +55 °C	-25 °C ... +55 °C	-25 °C ... +55 °C	-25 °C ... +55 °C
	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
	-3 % / K (>45 °C)	-3 % / K (>45 °C)	-3 % / K (>45 °C)	-3 % / K (>45 °C)	-3 % / K (>45 °C)
	yes	yes	yes	yes	yes
	DIN-rail mount (EN 60715)	DIN-rail mount (EN 60715)	DIN-rail mount (EN 60715)	DIN-rail mount (EN 60715)	DIN-rail mount (EN 60715)
	90 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail	72 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail	54 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail	72 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail	90 x 59 x 89 Height: 55 mm, from upper-edge of DIN 35 rail
	approx. 300 g	approx. 240 g	approx. 170 g	approx. 240 g	approx. 300 g
	EN 60950 (SELV), EN 61204-3, UL 60950*, UL 508, GL	EN 60950 (SELV), EN 61204-3, UL 60950*, UL 508*	EN 60950 (SELV), EN 61204-3, UL 60950, UL 508, GL	EN 60950 (SELV), EN 61204-3, UL 60950, UL 508, GL	EN 60950 (SELV), EN 61204-3, UL 60950, UL 508, GL

EPSITRON® ECO POWER

Economical Power Supply for Standard Applications

ECO Power Supplies provide an economical alternative for all applications requiring only 24 V DC, without additional functionality. These compact and robust devices deliver 2.5 to 40 A of output current. Clear signaling of the operating status via LED, front-panel adjustable output voltage, efficiency of typically 82%, as well as fast and maintenance-free CAGE CLAMP® technology are only some of the advanced features that make these devices not only cost effective to purchase, but also to mount and operate.

- 24 V DC output voltage, adjustable
- CAGE CLAMP® connection technology
- Open circuit and short circuit protected
- LED status indication
- Wide range of input voltages
- Certified for use in hazardous locations

Fast and Safe Connection

solid | fine-stranded | ferruled

CAGE CLAMP® spring pressure connection technology provides fast, vibration-proof and maintenance-free termination of solid, fine-stranded or ferruled wires.

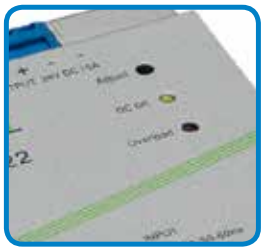
Fast Installation

The ECO Power Supplies have a flat and very robust metal housing. Mounting on DIN 35 rails is quick and reliable via easily accessible on-unit plate.

Technical Data:

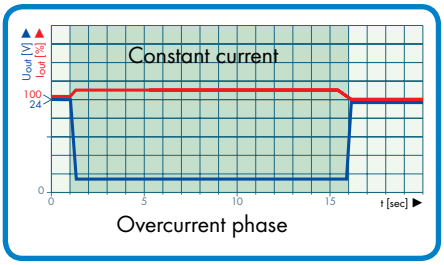
Item Number	787-712
Nominal input voltage	110 – 240 V AC
Input voltage range	85 – 264 V AC; 130 – 373 DC
Nominal output voltage	24 V DC
Output voltage range	22 – 28 V AC
Output current	2.5 A
Parallel connection, stabilized current characteristic	yes
Efficiency	82 % typ.
LED indication	Green LED (DC OK) Red LED (overload)
Ambient operating temperature	-10°C ... +70°C
Dimensions (mm) W x H x D Height from upper-edge of DIN 35 rail	50 x 92 x 130
Weight	470 g
Standards/Approvals	EN 60950, EN 61000-6-2, EN 61000-6-3, UL 60950, UL 508, NSI/ISA 12.12.01 (Class I Div.2), ATEX (Zone 2), IECEx (Zone 2)

* pending



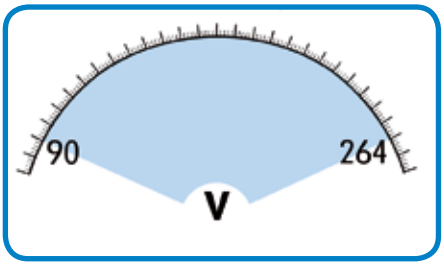
Clear Indication

All ECO Power Supplies have an operating indicator that signals the availability of the output voltage via a green LED. A red LED indicates an overvoltage. This makes start-up easier and provides maintenance personnel with quicker information about the machine or system status.



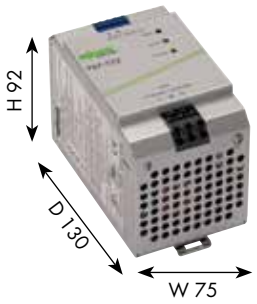
High Load-Carrying Capacity

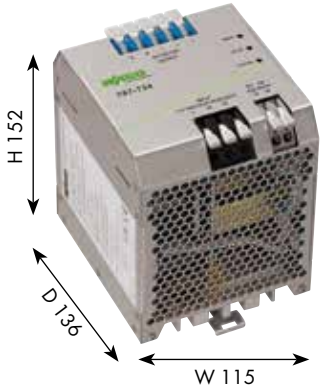
Loads frequently have an increased need for current at the moment when they are switched on. The ECO Power Supplies with constant current characteristics deliver 1.1 times the nominal rated current with lowered output voltage, ideal for starting capacitive loads, for example. For low-ohm short circuits, the output voltage is reduced to zero and brought up again automatically as soon as the short circuit has been eliminated.

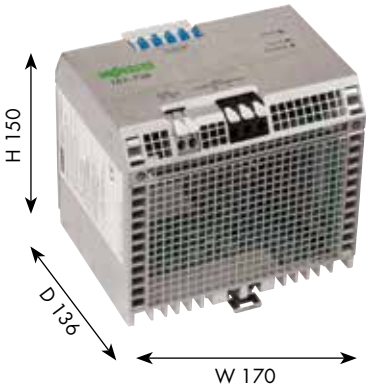


Universal Supply

The wide range of input voltages of the ECO Power Supplies allows use 90 to 264 V AC. In addition to the possibility of worldwide use, this increases the tolerance with respect to voltage fluctuations in the supply, which increases operating reliability.







	787-722	787-732	787-734	787-736
	110 – 240 V AC	110 – 240 V AC	110 – 240 V AC	110 – 240 V AC
	85 – 264 V AC; 130 – 373 V DC	85 – 264 V AC; 130 – 373 V DC	85 – 264 V AC; 130 – 373 V DC	85 – 264 V AC; 130 – 373 V DC
	24 V DC	24 V DC	24 V DC	24 V DC
	22 – 28 V AC	22 – 28 V AC	22 – 28 V AC	22 – 28 V AC
	5 A	10 A	20 A	40 A
	yes	yes	yes	yes
	82 % typ.	82 % typ.	90 % typ.	90 % typ.
	Green LED (DC OK) Red LED (overload)	Green LED (DC OK) Red LED (overload)	Green LED (DC OK) Red LED (overload)	Green LED (DC OK) Red LED (overload)
	-10 °C ... +60 °C	-10 °C ... +70 °C	-10 °C ... +70 °C	-10 °C ... +70 °C
	75 x 92 x 130	110 x 92 x 130	115 x 136 x 152	170 x 136 x 150
	740 g	1030 g	2400 g	3500 g
	EN 60950, EN 61000-6-2, EN 61000-6-3,UL 60950, UL 508, ANSI/ISA 12.12.01 (Class I Div.2), ATEX (Zone 2), IECEx (Zone 2)	EN 60950, EN 61000-6-2, EN 61000-6-3, UL 60950, UL 508, ANSI/ISA 12.12.01 (Class I Div.2), ATEX (Zone 2), IECEx (Zone 2)	EN 60950, EN 61000-6-2, EN 61000-6-3, UL 60950*, UL 508*	EN 60950, EN 61000-6-2, EN 61000-6-3, UL 60950*, UL 508*

EPSITRON® Electronic Circuit Breakers

Convenient, Configurable Protection for 24 V DC

Primary switch mode power supplies provide a very fast response to overcurrent conditions on the output side, allowing for an extended operating life. Selective protection of individual current paths on the secondary side via standard circuit breakers is often ineffective when TopBoost function is not available for high-speed magnetic tripping, unlike for PRO Power Supplies.

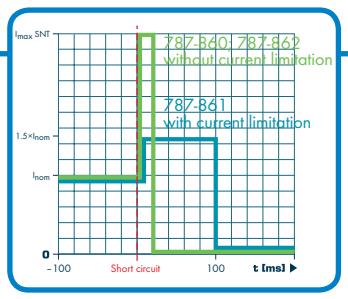
Electronic circuit breakers provide selective protection for power supplies without TopBoost feature. Up to four current paths can be protected via 4 channels and easily adjustable rated current. The short-circuit current is limited using an active current limiting circuit breaker, preventing voltage drop across adjacent current paths. In addition to parameter setting, the display and serial interface control both the integrated fault memory and the instantaneous values of the output current and voltage. Hence, not only proactive monitoring and fault diagnostics, but also energy monitoring can be performed.

- Connection via connectors equipped with CAGE CLAMP®
- Slim housing with easy mounting on DIN carrier rail
- 4 current channels with adjustable rated current
- Configurable isolated signal contact
- Remote reset via input (787-860 and 787-862)

- Configuration via display or software
- Active short-circuit current limitation (787-861)
- Adjustable tripping time, delayed switching-on of channels

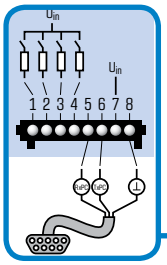
Communication Cable

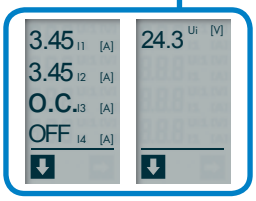
The 787-890 Communication Cable connects the RS-232 interface of the electronic circuit breaker with the RS-232 interface of a PC or PLC.

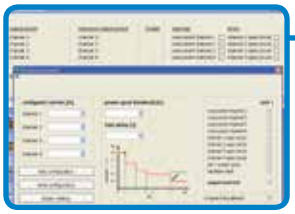


Tripping Characteristics

Rated currents can be set separately for each channel in 1A increments. In the event of an overcurrent, the affected channel will be shut down safely and reset in accordance with a programmed protection characteristic. The 787-861 Circuit Breaker provides active short-circuit current limitation to 1.5 times its rated current, preventing a voltage drop to affect other current paths in the event of a short circuit in one current path. The tripping time taken to shut down a current path can be configured to some extent. Once a channel has been shut down, it can be reactivated either via the on-device keys or by means of an impulse at the remote control input of the 787-860 or 787-862 Circuit Breakers.







Innovative Communication

1. LEDs: When the device is running and four channels are active, the green LED is illuminated. Non-critical errors such as minor overcurrents or an undervoltage at the device input are displayed as warning by the yellow LED, while critical faults such as a circuit shutting down are indicated by the red LED.

2. Display: The output currents of the 4 channels are indicated continuously on the display along with the input voltage. Specific devices feature an integrated fault memory for self-diagnostics in the event of fault conditions.

3. Signal outputs: There are four active signal outputs on the electronic circuit breakers which function as watch dogs. Direct digital signal processing is used for the outputs. Output 1 is linked to an isolated signal contact on the underside of the 787-860 and 787-862 devices. It can be user-defined via free 759-860 Software even to cover multiple fault conditions.

4. Interface: The 787-86x electronic circuit breakers can communicate with a PC or control system via the integrated serial interface. The free 759-860 Software is not only used to configure the current or tripping characteristics of individual channels, but also for visualization and fault diagnostic purposes. The 787-890 Serial Communication Cable is available as an accessory for connection to the RS-232 interface. For more detail on this feature, see page 32 of this brochure.

Item number	787-860	787-862	787-861
Description	Electronic circuit breaker	Electronic circuit breaker	Electronic circuit breaker
Nominal input voltage	24 V DC	24 V DC	24 V DC
Nominal output voltage	4 x 24 V DC	4 x 24 V DC	4 x 24 V DC
Nominal current	4 x 1 – 6 A DC (adjustable for each channel in 1A steps)	4 x 1 – 10 A DC (adjustable for each channel in 1A steps)	4 x 1 – 8 A DC (adjustable for each channel in 1A steps)
Voltage drop	120 mV at 6 A	240 mV at 10 A	240 mV at 8 A
Trip time	100 s (100 ms – 600 s; adjustable)	100 s (100 ms – 600 s; adjustable)	100 ms (100 ms – 1.5 s; adjustable, depending on nominal current)
Switch-on capacity	max. 20,000 µF per channel	max. 20,000 µF per channel	max. 20,000 µF per channel
Switch-on behavior	Time-delayed channel switching (250 ms each)	Time-delayed channel switching (250 ms each)	Time-delayed channel switching (250 ms each)
LED indication	LED, LCD, 4 x signal output 24 V DC, 25 mA and 1 x isolated relay contact 60 V DC, 3 A	LED, LCD, 4 x signal output 24 V DC, 25 mA and 1 x isolated relay contact 60 V DC, 3 A	LED, LCD, 4 x signal output 24 V DC, 25 mA
Remote control input	Reactivation of all tripped channels via pulse.	Reactivation of all tripped channels via pulse.	
Short-circuit current limitation	-/-	-/-	1.5 x nominal current typ.
Ambient operating temperature	-10 °C ... +60 °C	-10 °C ... +60 °C	-10 °C ... +60 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
Dimensions (mm) W x H x D*	40 x 163 x 171	40 x 163 x 171	40 x 163 x 171
Weight	800 g	800 g	800 g
Standards/Specifications	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3

* H from upper-edge of DIN 35 rail; D=127 mm, without pluggable female connectors (787-860, -862, -861 only)

EPSITRON® Electronic Circuit Breakers

Simple, Space-saving Protection for 24 V DC

In many applications selective protection is required, but without extensive monitoring and diagnostic features. The 787-166x family offers selective protection of individual current paths at an economical cost. The rated current setting is simply adjusted by a rotary switch, and the switching on/off or resetting of an individual channel is accomplished by pushing a button. This button is backlit by multi-colored LEDs, providing the current status of each channel.

The 787-166x family of electronic circuit breakers are available with 2, 4 or 8 individual channels per unit - the *EPSITRON*® 8 channel devices are a slim 42 mm wide, offering a very efficient, compact package at just over 5mm per channel. The current ratings of the devices range from 0.5 amps up to 10 amps. There are also versions with an active current limiting function allowing the selective shutdown of an overloaded channel without affecting the supply or other channels.

In addition, there is an integrated, cost-effective means of communication with these 787-166x electronic circuit breakers through a digital input and two digital outputs. These allow the switching on and off of channels, as well as remote resetting of a channel. Specific 787-166x devices also allow for the transmitting of a channel's rated current and the actual current value of a channel.

Pluggable connectors with CAGE CLAMP®

Slim housing with simple DIN rail mounting

2, 4, or 8 channels with adjustable rated current

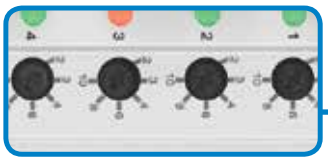
>50 mF switch-on capacity

Cost-effective communication with remote control and diagnostics via digital inputs and outputs

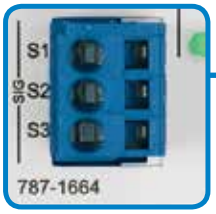
Convenient marking/identification of each channel

Simple Communication and Convenient Monitoring

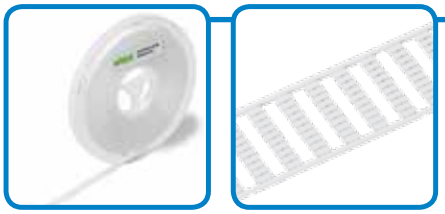
1. Push-button and LEDs: Each channel has a push-button with backlit multi-color LED. The LED provides indication of a tripped or turned off channel. During normal operation, the LED is green and then flashes green during overcurrent. After the channel has been switched off due to an overcurrent the LED will flash red, and then once the thermal cool-down is complete it will flash orange. A continuous red light indicates the channel was manually turned off.



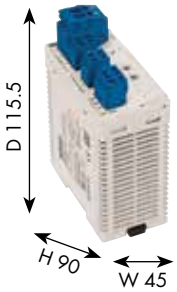
2. Rotary switch: The rotary switch is used to set the respective nominal current of each channel. The rotary switches are covered by a transparent flap which can be sealed to prevent changes to the settings.

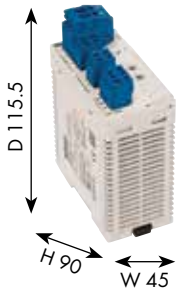


3. Signal inputs and outputs: The digital input S1 allows the resetting of tripped channels or turning a channel off remotely. The digital output S2 transmits a pulse sequence to indicate the actual state (on/off/tripped) of each channel; while output S3 provides a simple group message, if any channel has been shut down due to overcurrent.



4. Marking: The electronic circuit breakers accept WMB markers or the continuous marking strip for identifying the device. In addition, each channel can be identified using the continuous marking strip within the cover door.



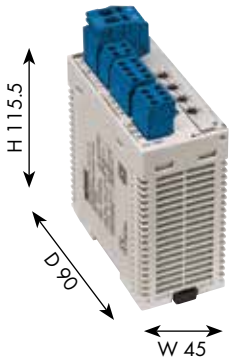


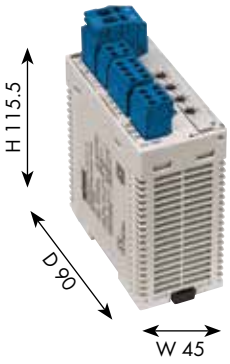
Item number	787-1662	787-1662/0106-0000	787-1662/0006-1000
Description	Electronic circuit breaker	Electronic circuit breaker	Electronic circuit breaker
Nominal input voltage	24 V DC	24 V DC	24 V DC
Nominal output voltage	2 x 24 V DC	2 x 24 V DC	2 x 24 V DC
Nominal current	2 x 2, 3, 4, 6, 8, 10 A DC (adjustable by rotary switch)	2 x 1, 2, 3, 4, 5, 6 A DC (adjustable by rotary switch)	2 x 0.5, 1, 2, 3, 4, 6 A DC (adjustable by rotary switch)
Voltage drop	200 mV at 10 A	120 mV at 6 A	145 mV at 6 A
Trip time	Depending on load (16 ms – 100 s)	Depending on load (16 ms – 100 s)	Depending on load (16 ms – 100 s)
Switch-on capacity	> 50,000 µF per channel	> 50,000 µF per channel	> 50,000 µF per channel
Switch-on behavior	Time-delayed channel switching (depending on load min. 50ms - 5s)	Time-delayed channel switching (depending on load min. 50ms - 5s)	Time-delayed channel switching (depending on load min. 50ms - 5s)
LED indication	2 x LED (green/red/orange)	2 x LED (green/red/orange)	2 x LED (green/red/orange)
Digital input S1	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.
Digital output S2	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal current.	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal current.	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal and acutal current.
Digital output S3	Group message – tripped.	Group message – tripped.	Group message – tripped.
Short-circuit current limitation	-/-	-/-	yes
Ambient operating temperature	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
Dimensions (mm) W x H x D*	45 x 115.5 x 90	40 x 115.5 x 90	40 x 115.5 x 90
Weight	170 g	170 g	170 g
Standards/Specifications	UL 508, UL 2367, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	UL 508, UL 2367, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	UL 508*, UL 2367*, GL*, EN 60950, EN 61000-6-2, EN 61000-6-3

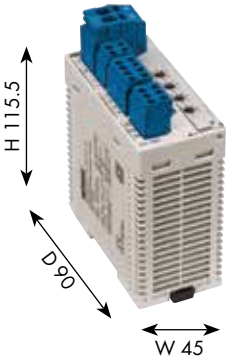
* in process

** Height from upper edge of DIN rail

EPSITRON® CLASSIC Power: Technical Data



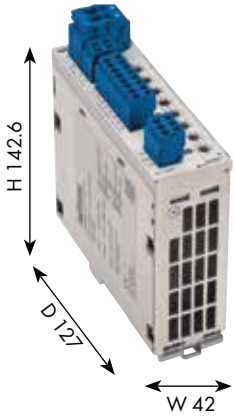


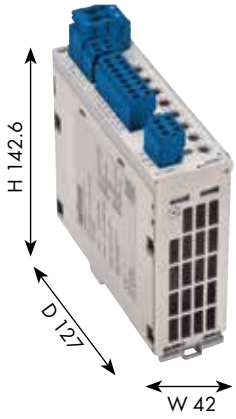


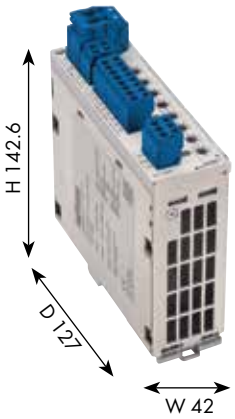
Item number	787-1664	787-1664/0106-0000	787-1664/006-1000	
Description	Electronic circuit breaker	Electronic circuit breaker	Electronic circuit breaker	
Nominal input voltage	24 V DC	24 V DC	24 V DC	
Nominal output voltage	4 x 24 V DC	4 x 24 V DC	4 x 24 V DC	
Nominal current	4 x 2, 3, 4, 6, 8, 10 A DC (adjustable by rotary switch)	4 x 1, 2, 3, 4, 5, 6 A DC (adjustable by rotary switch)	4 x 0.5, 1, 2, 3, 4, 6 A DC (adjustable by rotary switch)	
Voltage drop	200 mV at 10 A	120 mV at 6 A	145 mV at 6 A	
Trip time	Depending on load (16 ms – 100 s)	Depending on load (16 ms – 100 s)	Depending on load (16 ms – 100 s)	
Switch-on capacity	> 50,000 µF per channel	> 50,000 µF per channel	> 50,000 µF per channel	
Switch-on behavior	Time-delayed channel switching (depending on load min. 50ms - 5s)	Time-delayed channel switching (depending on load min. 50ms - 5s)	Time-delayed channel switching (depending on load min. 50ms - 5s)	
LED indication	4 x LED (green/red/orange)	4 x LED (green/red/orange)	4 x LED (green/red/orange)	
Digital input S1	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	
Digital output S2	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal current.	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal current.	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal and actual current.	
Digital output S3	Group message – tripped.	Group message – tripped.	Group message – tripped.	
Short-circuit current limitation	-/-	-/-	Yes	
Ambient operating temperature	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C	
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C	
Dimensions (mm) W x H x D*	45 x 115.5 x 90	40 x 115.5 x 90	40 x 115.5 x 90	
Weight	170 g	170 g	170 g	
Standards/Specifications	UL 508, UL 2367, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	UL 508, UL 2367, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	UL 508*, UL 2367*, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	

* in process

** Height from upper edge of DIN rail







	787-1668	787-1668/0106-0000	787-168/0006-1000
	Electronic circuit breaker	Electronic circuit breaker	Electronic circuit breaker
	24 V DC	24 V DC	24 V DC
	8 x 24 V DC	8 x 24 V DC	8 x 24 V DC
	8 x 2, 3, 4, 6, 8, 10 A DC (adjustable by rotary switch)	8 x 1, 2, 3, 4, 5, 6 A DC (adjustable by rotary switch)	8 x 0.5, 1, 2, 3, 4, 6 A DC (adjustable by rotary switch)
	200 mV at 10 A	120 mV at 6 A	155 mV at 6 A
	Depending on load (16 ms – 100 s)	Depending on load (16 ms – 100 s)	Depending on load (16 ms – 100 s)
	> 50,000 µF per channel	> 50,000 µF per channel	> 50,000 µF per channel
	Time-delayed channel switching (depending on load min. 50ms - 5s)	Time-delayed channel switching (depending on load min. 50ms - 5s)	Time-delayed channel switching (depending on load min. 50ms - 5s)
	8 x LED (green/red/orange)	8 x LED (green/red/orange)	8 x LED (green/red/orange)
	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.	Reactivation of all tripped channels with single pulse. Turn on/off specific channel with pulse sequence.
	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal current.	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal current.	State of each channel by pulse sequence (on/off/tripped). Optional setting of channel nominal and actual current.
	Group message – tripped.	Group message – tripped.	Group message – tripped.
	-/-	-/-	Yes
	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
	-25 °C ... +85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
	40 x 142.5 x 127	40 x 142.5 x 127	40 x 142.5 x 127
	440 g	440 g	440 g
	UL 508, UL 2367, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	UL 508, UL 2367, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3	UL 508*, UL 2367*, GL*, EN 60950 EN 61000-6-2, EN 61000-6-3

EPSITRON® – Uninterruptible Power Supply (UPS)

Reliable and Safe Compensation – Even for Longer Power Failures

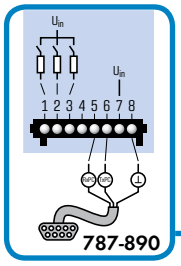
Unpredictable power failures are a nightmare for any machine or equipment operator. If a PLC is suddenly shut down due to a power failure, loss of production data (i.e., formulations or protocols) may follow. To prevent these losses, the Uninterruptible Power Supply, consisting of UPS charger and controller (787-870 or 787-875) and one or more connected batteries, reliably power the application for several hours.

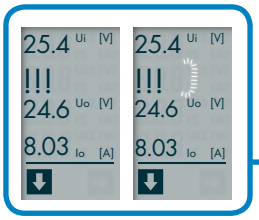
The charging voltage for the connected battery is temperature-controlled, significantly extending the battery's service life and minimizing maintenance costs. The UPS module supports a complete current and voltage monitoring while featuring numerous signaling options via display and RS-232 interface.

- Reliability via connectors equipped with CAGE CLAMP®*
- Slim housing that's easy to mount on DIN-rail **
- Temperature-controlled charging voltage
- Three active signal outputs for watchdog functions
- Configurable isolated signal contact
- Configuration via display or software
- Battery control technology for predictive maintenance applications

* Fast, clearly labeled connections, see page 4
** Slim design and versatile mounting options, see page 4

Innovative Communication





1. LEDs: A green LED signals error-free operation. Non-critical errors are indicated as warnings by the yellow LED; the red LED indicates critical errors.

2. Display: All currents and voltages are indicated continuously on the display. Important parameter settings can be easily performed via on-unit keys. The device features integrated fault memory for diagnosing errors.

3. Signal outputs: The function monitoring has three active signal outputs that can be processed as a digital signal and one isolated signal contact coupled with signal output 1. It can be user-defined (e.g., as a group error signal) via free 759-870 Configuration Software available at **www.wago.us**.

4. RS-232 serial interface: This interface allows the UPS charger and controller to communicate with a PC or PLC. In addition to the visualization of relevant data, it also provides reaction to errors. Parameter setting can also be easily performed via this interface. The 787-890 Serial Communication Cable is available as an accessory for connection to the RS-232 interface.

Easy and Compact

EPSITRON® 787-1675 Power Supply with integrated UPS charger and controller is designed for applications with lower output requirements. Combined with one or more connected batteries, this UPS delivers up to 5A output current. Buffer time can be set on-site via rotary switch and signal contacts provide current operating status information. The integrated serial interface allows configuration via software and communication with a PC or PLC.

Predictive Maintenance via Battery Control

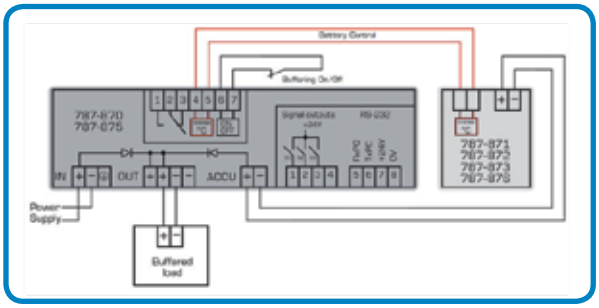
EPSITRON® battery control technology allows data exchange between intelligent battery modules, charger and controller.

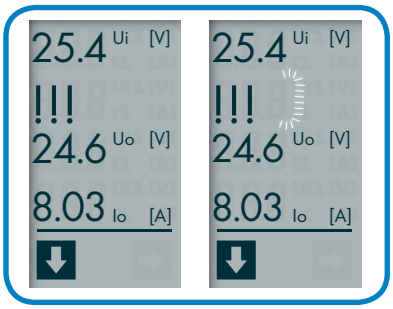
The type of connected battery module can be identified, permitting both temperature and service life of the battery module to be determined. The advantages are obvious:

- Reliable early warning of decreasing battery life
- Maximum battery life via temperature-controlled battery management
- Automatic detection of a connected battery module

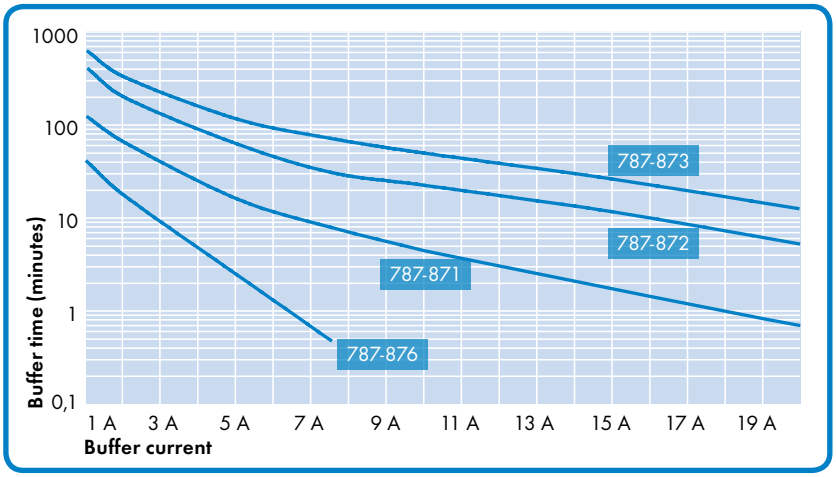
Service life is determined according to the ambient operating temperature. This allows faster aging at high ambient operating temperature to be taken into account, while providing a reliable evaluation of the residual battery life.

Furthermore, both 787-870 and 787-875 UPS Chargers and Controllers display the current charging status, allowing fast detection of the UPS status at a glance.





Buffer Time vs. Load Current



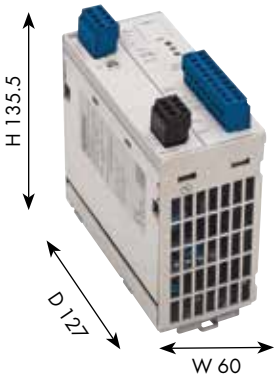
Different buffer times/currents can be achieved depending on the battery module selected.

Parallel connection of up to 3 battery modules of the same type increases capacity and buffer time. However, automatic capacity recognition must be deactivated in the charger and controller.

EPSITRON® UPS Devices: Technical Data

Item number	787-870	787-875	787-876	787-871
Description	UPS charger and controller	UPS charger and controller	Lead-acid AGM battery module	Lead-acid AGM battery module
Nominal input voltage	24 V DC	24 V DC	24 V DC	24 V DC
Input current Ii	0.1 A (no-load running); 0.8 A (charging); 10.8 A (max.)	0.1 A (no-load running); 1.5 A (charging); 21.5 A (max.)	max. 0.3 A	max. 0.8 A
Switch-on threshold (adjustable)	20 – 25.5 V AC	20 – 25.5 V AC		
Output voltage range	Vi - 1 V DC (below switch-on threshold); Battery voltage - 1 V DC (buffer mode)	Vi - 1 V DC (below switch-on threshold); Battery voltage - 1 V DC (buffer mode)	24 V DC	24 V DC
Output current Io	10 A	20 A	max. 7.5 A	20 A
Buffer time	10 – 600 s, IPC mode or constant (adjustable)	10 – 600 s, IPC mode or constant (adjustable)	Capacity: 1.2 Ah	Capacity: 3.2 Ah
End-of-charge voltage	26 – 29.5 V DC or temperature-controlled (adjustable)	26 – 29.5 V DC or temperature-controlled (adjustable)	27 V DC (at 25 °C)	27 V DC (at 25 °C)
LED indication	LED, LCD, 3 x signal output 24 V DC, 25 mA and 1 x isolated relay contact	LCD, 3x signal output 24 V DC, 25 mA and 1 x isolated relay contact	NTC K164 temperature sensor (4.7 kOhm)	NTC K164 temperature sensor (4.7 kOhm)
Remote input	Switches buffer mode off	Switches buffer mode off	–	–
Ambient operating temperature	-10 °C ... +60 °C	-10 °C ... +60 °C	-10 °C ... +40 °C	-10 °C ... +40 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C	-20 °C ... +40 °C	-20 °C ... +40 °C
Dimensions (mm) W x H x D *	40 x 163 x 163	57 x 163 x 171	55 x 126 x 153	76.2 x 175.5 x 168
Weight	0.8 kg	1.2 kg	approx. 1.8 kg	4.2 kg
Standards/Specifications	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3	Battery is tested to VdS	Battery is tested to VdS

* H from upper-edge of DIN 35 rail; D=127 mm, without pluggable female connectors (787-870 and 787-875 only) ** pending



	787-872	787-873	787-1675
	Lead-acid AGM battery module	Lead-acid AGM battery module	Power supply, 1-phase, with integrated UPS charger and controller
	24 V DC	24 V DC	100 – 240 V AC
	max. 1.8 A	max. 3 A	1.1 A AC at 230 V AC and 5 A DC
			22 V DC (pre-configured), 20 – 25.5 V DC (configurable via software)
	24 V DC	24 V DC	23.0 – 28.5 V DC (mains operation) 18.5 – 27.5 V DC (battery operation)
	max. 21 A	max. 21 A	5 A
	Capacity: 7 Ah	Capacity: 12 Ah	0.5 s – 20 min, IPC mode or constant (adjustable)
	27 V DC (at 25 °C)	27 V DC (at 25 °C)	26 – 29.5 V DC, temperature-controlled (fixed or adjustable)
	NTC K164 temperature sensor (4.7 kOhm)	NTC K164 temperature sensor (4.7 kOhm)	3 x signal output 24 V DC, 25 mA and 1 x isolated relay contact 30 V DC, 1 A
	–	–	Switches buffer mode off
	-10 °C ... +40 °C	-10 °C ... +40 °C	-25 °C ... +70 °C ; Derating: -3 % / K (>50 °C)
	-20 °C ... +40 °C	-20 °C ... +40 °C	-40 °C ... +85 °C
	86 x 239 x 217.5	120.5 x 239 x 217.5	60 x 135.5 x 127
	6.5 kg	10.6 kg	0.8 kg
	Battery is tested to VdS	Battery is tested to VdS	EN 60950, UL 60950**, UL 508**, EN 61000-6-2, EN 61000-6-3

EPSITRON® – Capacitive Buffer Modules

Short-Term Power Reserves for Mains Failures and Load Changes

Brief power supply failures jeopardize the trouble-free operation of machines/systems. The power supply buffer times of select applications can be considerably extended via capacitive buffer modules. These modules have power reserves that may be required when starting heavy loads or triggering a fuse. The 787-880 and 787-881 Buffer Modules contain completely maintenance-free "gold caps" that store energy and provide output power for 400ms. Buffer times up to several seconds can be easily achieved by connecting the modules in parallel or adjusting the output current.

Integrated diodes for decoupling buffered loads from unbuffered loads

Electronic overcurrent and short circuit protection

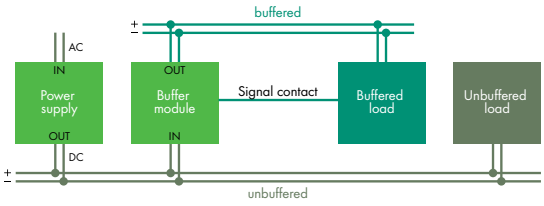
Parallel-connections possible

Configurable switch-on threshold

Maintenance-free, high-energy gold caps

Decoupled Output

Multiple buffer modules can easily be connected in parallel to increase the buffer time or the load current. The module outputs are decoupled from the inputs, making it possible to specifically buffer just selected loads.



Item number	787-880	787-881
Description	Capacitive buffer module	Capacitive buffer module
Nominal input voltage Vi	24 V DC	24 V DC
Input current Ii	60 mA (no-load running); 1 A (charging); 11 A (max.)	60 mA (no-load running); 1 A (charging); 22 A (max.)
Charging time	typ. 5 minutes	typ. 5 minutes
Switch-on threshold (adjustable)	20 – 24 V AC	20 – 24 V AC
Output voltage range	Vi - 1 V DC (below switch-on threshold); 20.4 – 24 V DC (buffer mode)	Vi - 1 V DC (below switch-on threshold); 20.4 – 24 V DC (buffer mode)
Output current Io	10 A	20 A
Buffer time	0.06 – 7.2 s (depending on load current and switch-on threshold)	0.17 – 16.5 s (depending on load current and switch-on threshold)
Parallel-connections possible	yes	yes
LED indication	LED; isolated relay contact	LED; isolated relay contact
Ambient operating temperature	-10 °C ... +50 °C	-10 °C ... +50 °C
Storage temperature	-10°C ... +60°C	-10°C ... +60°C
Dimensions (mm) W x H x D**	57 x 179 x 163	57 x 179 x 181
Weight	1.0 kg	1.0 kg
Standards/Specifications	EN 60950, EN 61000-6-2, EN 61000-6-3, UL 508	EN 60950, EN 61000-6-2, EN 61000-6-3, UL 508

** H from upper-edge of DIN 35 rail; D=127 mm, without pluggable female connectors

Signaling:

1. LEDs: There are 3 LEDs to signal individual operating conditions. The green LED indicates error-free operation. The red LED indicates undervoltage at the buffered module output; a yellow LED signals module charging.

2. Isolated signal contact: Once the internal charging procedure is complete and there is sufficient voltage at the buffer module input, the isolated signal output is activated. The contact is deactivated as soon as the module runs out of charge and the control level can respond to this change of state.

EPSITRON® Redundancy Module

Reliably Increasing Power Supply Availability

The 787-885 and 787-886 Redundancy Modules contains two high-performance diodes with 20 A capacity and decouples two power supplies connected in parallel. With the connection of two equal power supplies, the availability of the machine or system can be guaranteed or the load current doubled.

The possible failure of a power supply is reliably indicated via LED and an isolated contact. With the use of the redundancy module to increase the availability, for example, it is possible to change out the device in ongoing operation without downtime.

Two integrated power diodes, input current 2 x 20 A typ. or together max. 40 A

Parallel connection possible

Reverse voltage protection

Signaling:

1. LEDs: The green LED illuminates to indicate sufficient voltage at the module output. Each of the two yellow LEDs is assigned to a connected power supply and will light up should it fail.

2. Isolated signal contact: The integrated relay's changeover contacts report the operating status of the connected power supplies. During normal operation the relay is active; it drops out in the event of a power supply failure.

Technical Data:

Item number	787-885	787-886
Description	Redundancy module	Redundancy module
Nominal input voltage V_i	2 x 24 V DC	2 x 48 V DC
Input current I_i	2 x 20 A, together max. 1 x 40 A	2 x 20 A, together max. 1 x 40 A
Nominal output voltage $V_{o\,nom}$	24 V DC	48 V DC
Output current I_o	20 A, max. 40 A	20 A, max. 40 A
Efficiency	97 % typ.	96 % typ.
Power loss P_v	1.5 W (no load) / 14 W (rated load) / 26 W (rated load 40 A)	1.7 W (no load) / 20 W (rated load 20 A) / 40 W (rated load 40 A)
LED indication	LED; isolated relay contact	LED; isolated relay contact
Ambient operating temperature	-10 °C ... +60 °C	-10 °C ... +60 °C
Storage temperature	-25 °C ... +85 °C	-25 °C ... +85 °C
Dimensions (mm) W x H x D**	40 x 163 x 181	40 x 163 x 181
Weight	0.8 kg	0.8 kg
Standards/Specifications	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3	EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3

EPSITRON® PRO Power Supplies with Communication

The 787-85x versions of the PRO power supplies offer a built-in LCD display and keypad, as well as an RS-232 communication port for convenient configuration and monitoring. The communication port allows simple set up and monitoring using WAGO's free software, which can be downloaded at: www.wago.us.

Communication with the *EPSITRON*® PRO power supplies eliminates additional equipment within the control panel, such as current transformers, phase monitoring devices, hour counters and more.

The 787-890 communication cable can connect the 787-85x PRO power supplies via D-sub connector to the RS-232 interface of a PC or PLC.

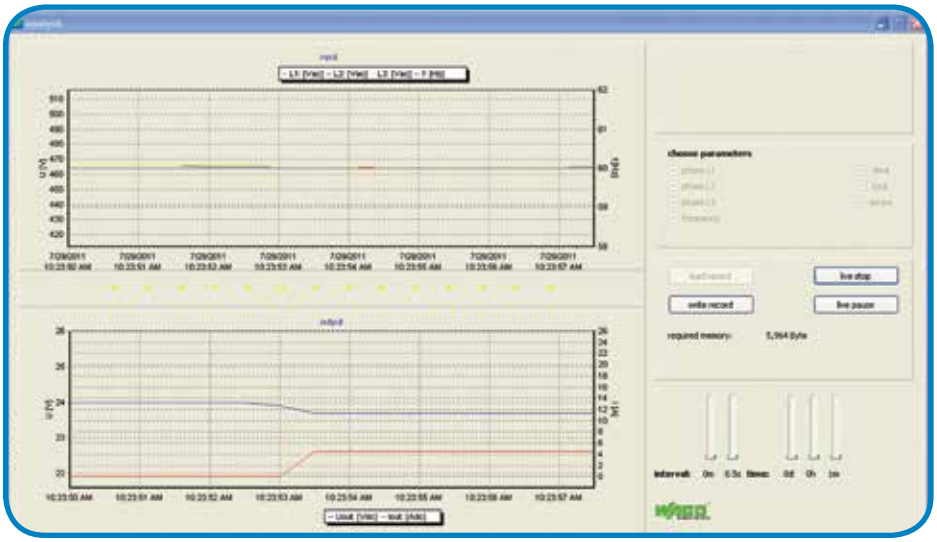
787-890 Communication Cable

Simply connect to a laptop for quick monitoring via RS-232 from the 787-85x PRO power supply, or connect to your WAGO-I/O-SYSTEM (or other PLC). With this WAGO supplied function block, it is possible to continuously monitor both input and output data.

Contact WAGO's automation support for the function block at (800) 346-7245 or support.us@wago.com

The 759-850 configuration software allows convenient configuration of the *EPSITRON*® PRO power supply by simply connecting to a computer via the RS-232 port. A maintenance timer can be set to provide an output after a designed amount of running hours. Acceptable voltage and current levels can also be set with software. Plus, the signal outputs 1 and 4 can be set to change state for a variety of conditions shown here.

Monitor both the input and output of your *EPSITRON*® PRO power supply with the 759-851 visualization software. In addition to monitoring these values, you can record and analyze both input and output data graphs of your system as shown below.



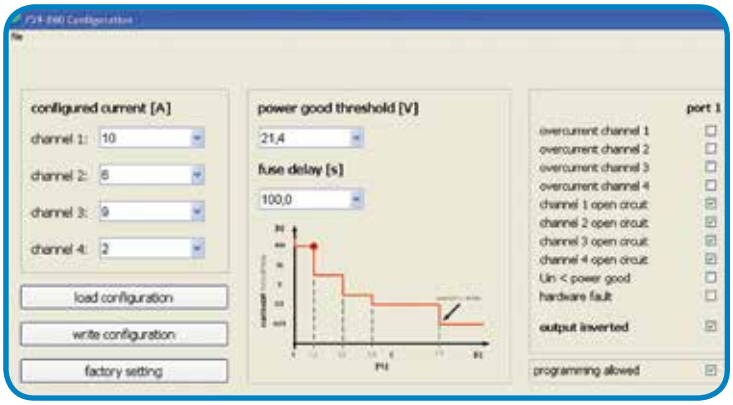
EPSITRON® Electronic Circuit Breakers

with Communication

Select *EPSITRON*® Electronic Circuit Breakers (ECB) and Uninterruptible Power Supplies (UPS) also have a built-in LCD display and keypad, as well as an RS-232 communication port for convenient configuration and monitoring. The communication port allows simple set up and monitoring using WAGO's free software, available at www.wago.us.

Monitoring of select 787-86x Electronic Circuit Breakers can also be accomplished via the WAGO-I/O-SYSTEM or other PLC using the WAGO provided function block shown here.

Contact WAGO's automation support for the function block at (800) 346-7245 or support.us@wago.com

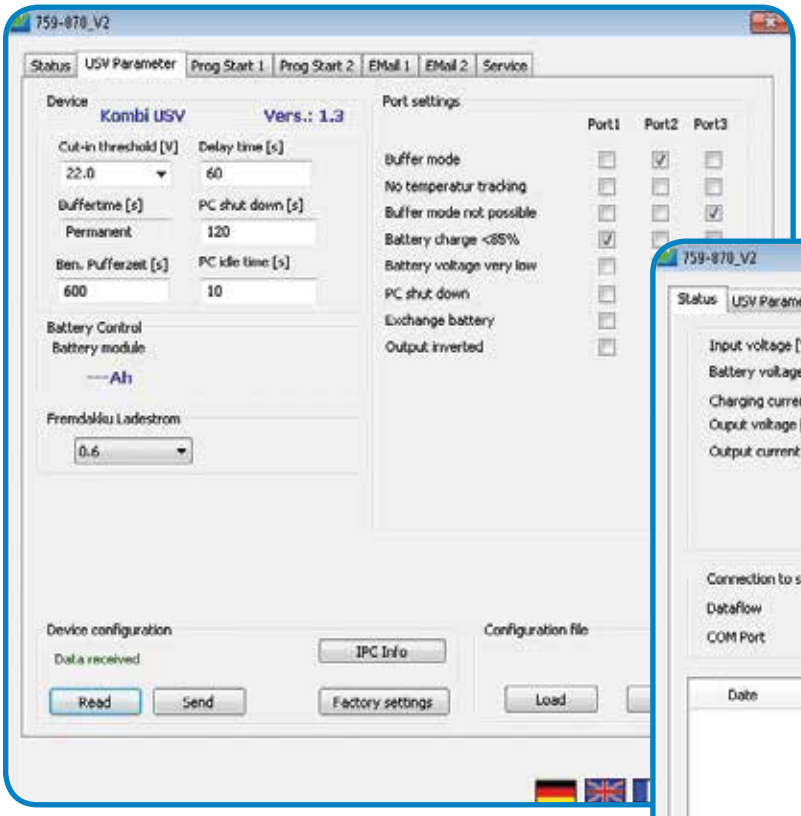


Communication with select 787-86x *EPSITRON*® Electronic Circuit Breaker modules via the 787-890 communication cable allows for convenient configuration of each of the four independent channels. Using the 759-860 configuration software, simply set the ampacity of each channel, a voltage level threshold and a trip time with drop down selection boxes. The S1 signal output can also be configured.

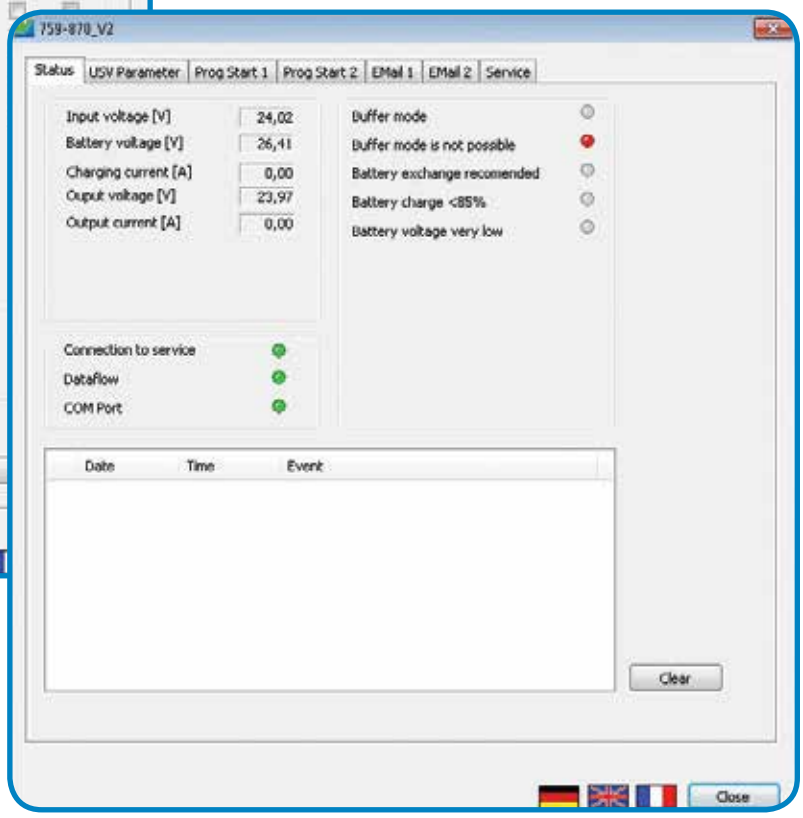
The visualization screen of 759-860 software provides the rated current, output current and maximum output current of each channel. The input voltages and minimum input voltage the Electronic Circuit Breaker are also provided. In addition, there are check boxes that will be shaded in the event of a warning or error condition.

EPSITRON® Uninterruptible Power Supplies (UPS)

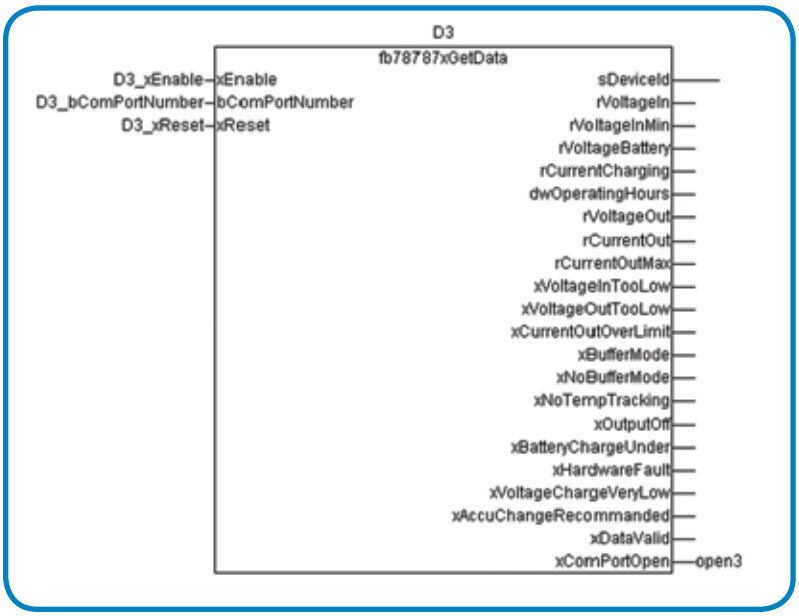
with Communication



The *EPSITRON*® Uninterruptible Power Supplies also offer convenient programming with the 759-870 software. This software allows programming of the UPS controller's cut-in threshold voltage (turn on voltage level), charging current and buffer time. The S1, S2 and S3 signal ouput contacts can also be configured via the software.



The 759-870 software provides status data on the input voltage, battery information, output voltage and current, as well as the overall status with the green and red lights as show here.



In addition to simply connecting to a laptop for quick monitoring with the free 759-870 software, connection via RS-232 from the UPS controller to your WAGO-I/O-SYSTEM (or other PLC) is possible. With this WAGO supplied function block, it is simple to continuously monitor both input and output data of your UPS system.

The function block is available by contacting WAGO's automation support at (800) 346-7245 or support.us@wago.com.

EPSITRON® Accessories

787-890 RS-232 Communication Cable, 1.8m long
The communication cable is used for configuration and visualization via PC, notebook or PLC. It is suitable for all 787-8xx Series modules equipped with RS-232 serial interface.

Connectors: 8-pole 733-108 female connector with strain relief (787-8xx module side), 9-pole D-sub female connector (PC/PLC side)

761-9005 USB Adapter with 1m connection cable
The USB adapter transmits RS-232 signals to the USB interface of a PC or notebook. The adapter is simply plugged into the 787-890 communication cable connector.

Connectors: 9-pole D-sub male connector (RS-232), USB connector (type A)
Notice: No electrical isolation.

787-895 Wall Mount Adapter for securing of 787-8xx devices on mounting plate or wall without DIN 35 rail
The wall mount adapter replaces the rail support of the 787-8xx device. The adapter is screwed to the 787-8xx device via provided screws.

787-896 Carrier Rail Adapter for mounting 787-8xx devices to a DIN 35 rail
The 787-896 Carrier 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 changed easily.

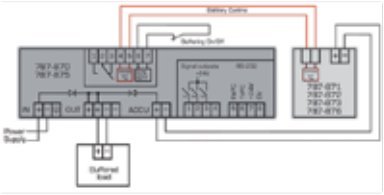
787-897 Carrier Rail Adapter made of zinc die-cast for mounting 787-8xx devices to a DIN 35 rail
Mounting the adapter to the device is performed by pressing the adapter into the guide slots of the cooling element via operating tool. Extremely secure fit allows operation even in environments subject to permanent vibrations.

Operating tools with partially insulated shaft, ideal for operating terminal blocks

210-719: Operating tool with partially insulated shaft, type 1, (2.5 x 0.4) mm blade, suitable for 733 and 734 Series female connectors.
210-720: Operating tool with partially insulated shaft, type 2, (3.5 x 0.5) mm blade, suitable for 231 and 721 Series female connectors.
210-721: Operating tool with partially insulated shaft, type 3, (5.5 x 0.8) mm blade, suitable for 831 Series female connectors.
210-769: Phillips PH0 operating tool, type 1, PH0 blade, for setting the voltage of 787-10xx Series *EPSITRON*® *COMPACT Power Supplies*.

Glossary

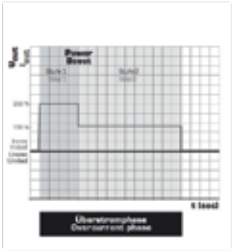
Battery Control
EPSITRON® battery control technology allows data exchange between intelligent battery modules, charger and controller. In addition to the temperature value, information on type and service life of the connected battery modules is also transmitted to the charger and controller.



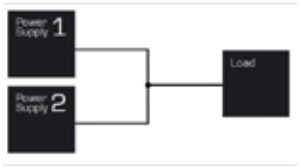
TopBoost
In order for high-speed magnetic miniature circuit breakers to trip, currents that are significantly higher than the rated current are required for 10 to 12 milliseconds. PRO Power Supplies deliver a multiple of their rated current for a short time; this means the faulty circuit can be shut off within milliseconds during a short-circuit. This increases the availability of the entire power supply while fulfilling EN 60204-1 requirements regarding grounding in control circuits. Using the free cable length calculator available from www.wago.us/787software.htm, the designer or planer can check in advance the layout of the line protection depending on cable lengths, cable cross section, characteristics of the protective device and type of power supply.

PowerBoost
During start-up or switching of capacitive loads (valve clusters, motors, etc.), there is an increased need for current. However, conventional switch mode power supplies usually require a much larger switch mode power supply to avoid switching to overload operation or short-circuit limitation.

In this case, PRO Power Supplies provide power supplies – up to 200% of nominal current at the output for up to 4 seconds, maximum 150% in a second stage. Twice the ouput power being available for a short time ensures reliable operation and eliminates expensive oversizing of switch mode power supplies. This also saves space in the control cabinet and reduces power losses, while ensuring optimum efficiency.

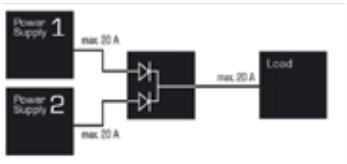


Parallel connection of power supply units – for extra power
EPSITRON® Power Supplies allow parallel connection of power supply units for extra power, except for 787-601 and 787-602 devices. To achieve a distribution of load as uniform as possible for parallel-connected devices, the output voltage without load must be set as precisely as possible to the same value. Star wiring using external rail-mounted terminal blocks is required to achieve the power supplies' line resistances to load as equal as possible. Please do not perform parallel connection directly via the power supplies' female connectors. Using the PRO Series, power supplies with differing output power may also be connected in parallel. Otherwise, please only connect power supplies of the same type in parallel.



Parallel connection of power supply units – for increased power availability
Parallel connection using decoupling diodes in the respective current path reliably prevents reverse currents. In normal operation, both units supply the load. If a power supply fails, the intact power supply takes over the complete supply of the load. This increases the availability of the power supply system. Of course, the nominal current of each power supply must be higher than the maximum arising load current.

The 787-885 and 787-886 Redundancy Modules feature two powerful decoupling diodes, providing permanent 20A load current per current path.



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