

**Data sheet | Item number: 787-833**

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

[www.wago.com/787-833](http://www.wago.com/787-833)



Subject to changes. Please also observe the further product documentation!

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Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



## Item description

### 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 EN 60950-1/UL 60950-1; PELV per EN 60204

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## Data

## Technical data

Phases	1
Nominal input voltage $U_{i\text{nom}}$	1 x AC 100 ... 240 V
Input voltage range	AC 85 ... 264 V; DC 120 ... 373 V
Input voltage derating	-1.5 %/V (< 110 VAC)
Nominal mains frequency range	50 ... 60 Hz; 0 Hz
Input current $I_i$	$\leq 1.2$ A (230 VAC; 5 ADC)
Discharge current	$\leq 1$ mA
Inrush current	$\leq 8$ A (active power factor correction (PFC))
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 20$ ms (230 VAC)
Power loss $P_i$	$\leq 0.8$ W (Standby); $\leq 7.4$ W (No load); $\leq 21.6$ W (Nominal load)
Efficiency (typ.)	91 %
Nominal output voltage $U_{o\text{nom}}$	DC 48 V (SELV)
Output voltage range	DC 33 ... 52 V (adjustable)
Default setting	DC 48 V
Nominal output current $I_{o\text{nom}}$	5 A (48 VDC)
Nominal output power	240 W
Control deviation	$\leq 1$ %
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o\text{nom}}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Constant current mode
PowerBoost	DC 10 A (4 s); DC 7.5 A (8 s)
TopBoost	DC 30 A (25 ms)
Isolation voltage (Pri.-Sec.)	DC 4.242 kV
Isolation voltage (Pri.-GND)	DC 2.2 kV
Isolation voltage (Sec.-GND)	DC 0.7 kV
Protection class	I
Protection type	IP20 (per EN 60529)
Resistance to reverse feed	$\leq$ DC 63 V
Overvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Short-circuit-protected	Yes

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Open-circuit-proof	Yes
Parallel operation	Yes
Series operation	Yes
MTBF	> 500,000 h (per IEC 61709)
Internal fuse	T 6.3 A / 250 VAC
Required backup fusing	An external DC fuse is required for the DC input voltage.
Recommended backup fusing	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C
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)

### Connection data

Connection type (1)	Input/Output
Connection technology	CAGE CLAMP®
WAGO Connector	WAGO 231 Series
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 inch
Connection type 2	Signaling
Connection technology 2	CAGE CLAMP®
WAGO Connector 2	WAGO 2616 Series
Solid conductor 2	0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Fine-stranded conductor 2	0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

### Physical data

Width	57 mm / 2.244 inch
Height	163 mm / 6.417 inch
Depth from upper edge of DIN-rail	179 mm / 7.047 inch
Note (dimensions)	Height with connector

### Mechanical data

Mounting type	DIN-35 rail
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## Material data

Weight	1475 g
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## Environmental requirements

Surrounding air temperature (operation)	-25 ... 70 °C (Device starts at -40 °C (type-tested))
Surrounding air temperature (storage)	-25 ... 85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)

## 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

## Commercial data

Product Group	6 (Interface Electronics)
PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4050821226468
Customs tariff number	85044082900

## Approvals / Certificates




### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 508	E255817
	UL Underwriters Laboratories Inc.	UL 60950-1	E255815



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## Optional accessories

### Tool









Operating tool		
	<b>Item no.: 210-719</b> Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft	<a href="http://www.wago.com/210-719">www.wago.com/210-719</a>
	<b>Item no.: 210-769</b> SCREWDRIVER; green	<a href="http://www.wago.com/210-769">www.wago.com/210-769</a>
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>

### Ferrule

Ferrule		
	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>
	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
	<b>Item no.: 216-241</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</a>
	<b>Item no.: 216-243</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>


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crimped; acc. to DIN 46228, Part 4/09.90; black



	<b>Item no.: 216-263</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-263">www.wago.com/216-263</a>
	<b>Item no.: 216-264</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-284">www.wago.com/216-284</a>
	<b>Item no.: 216-262</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-262">www.wago.com/216-262</a>
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>

#### Mounting adapter

Wall-mount adapter




	<b>Item no.: 787-895</b> Mounting carrier; for screw fixing of 787-8xx devices on mounting plate or wall without DIN 35 rail	<a href="http://www.wago.com/787-895">www.wago.com/787-895</a>
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DIN-rail adapter

	<b>Item no.: 787-897</b> Carrier rail adapter made of zinc die-cast; for mounting 787-8xx devices to a DIN 35 rail	<a href="http://www.wago.com/787-897">www.wago.com/787-897</a>
	<b>Item no.: 787-896</b> Carrier rail adapter; for mounting 787-8xx devices to a DIN 35 rail	<a href="http://www.wago.com/787-896">www.wago.com/787-896</a>

#### Marking accessories

Marking strip

	<b>Item no.: 2009-110</b> Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/2009-110">www.wago.com/2009-110</a>
	<b>Item no.: 210-831</b> Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-831">www.wago.com/210-831</a>
	<b>Item no.: 210-832</b> Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-832">www.wago.com/210-832</a>

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## Downloads

### Documentation

#### Bid Text

787-833 docx - Datei	2019. 7. 4.	docx 22.6 kB	Download
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787-833 X81 - Datei	2019. 7. 4.	xml 7.3 kB	Download
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#### Instruction Leaflet

Primär getaktete Stromversorgungen PRO DC 48 V, 5 A		pdf 253.1 kB	Download
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#### Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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## Engineering-Software

### Configuration and Commissioning Software

WAGO Line Length Calculation Die WAGO Leitungslaengenrechnung hilft bei der Planung der sekundärseitigen Absicherung von Leitungen an WAGO Stromversorgungen Pro (787-8xx) und Classic (787-16xx). Nach Auswahl eines Netzgerätes kann der gewünschte Leitungsquerschnitt und der zugehörige Leitungsschutzschalter ausgewählt werden. Das Software-Werkzeug berechnet dann die maximale Leitungslänge, bei der die Absicherung unter Berücksichtigung der Leitungs- und Übergangswiderstände ordnungsgemäß funktioniert. Die Auswahl einer Grundlast kann vom Anwender vorgenommen werden.	1.3.5 2019. 12. 9.	exe 337.4 kB	Download
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## CAD/CAE-Data

### CAD data

2D/3D Models 787-833		URL	Download
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### CAE data

EPLAN Data Portal 787-833		URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 787-833

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

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## Installation Notes

### Product family

**EPSITRON PRO Power**

EPSITRON® PRO POWER: Professional and Efficient Power Supply with Extra Power

[Show all products from the family](#)

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