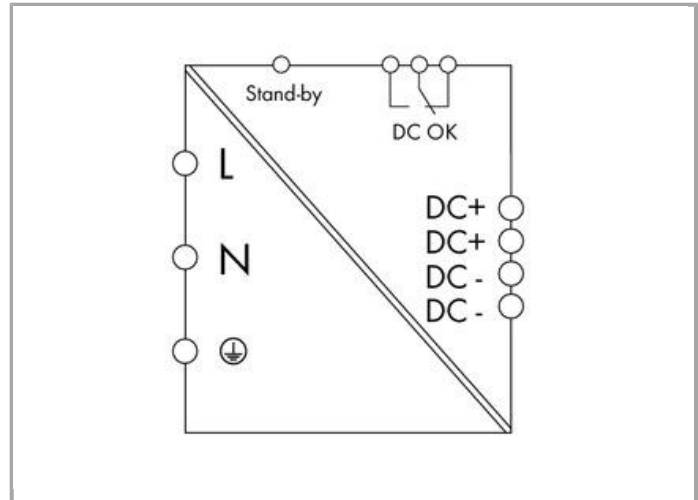


## Data sheet | Item number: 787-833

Switched-mode power supply; EPSITRON® PRO Power; 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)



### Item description

#### Features:

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

## Data

## Technical Data

## Input

|  |   |
|--|---|
| Phases                                   | 1   |
| Nominal input voltage $U_{i\text{ nom}}$ | 100 ... 240 VAC                                   |
| Input voltage range                      | 85 ... 264 VAC; 120 ... 373 VDC                   |
| 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)            | Aktive  |
| Mains failure hold-up time               | $\geq 20$ ms (230 VAC)                            |

## Output

|   |   |
|---|---|
| Nominal output voltage $U_{o\text{ nom}}$ | 48 VDC (SELV)                             |
| Output voltage range                      | 33 ... 52 VDC (adjustable)                |
| Factory preset                            | 48 VDC                                    |
| Nominal output current $I_{o\text{ nom}}$ | 5 A (48 VDC)                              |
| Nominal output power                      | 240 W                                     |
| Adjustment accuracy                       | $\leq 1$ %                                |
| 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                                | 10 ADC (4 s); 7.5 ADC (8 s)               |
| TopBoost                                  | 30 ADC (25 ms)                            |

## Signaling and communication

|                            |  |
|----------------------------|--|
| Signaling                  | 1 x LED DC OK (green)<br>1 x LED error (red)<br>1 x stand-by input<br>1 x Relaiskontakt DC O.K. (changeover contact) |
| Operation status indicator | LED green (DC OK)<br>LED red (error)   |

## Efficiency/Power losses:

|                  |  |
|------------------|--|
| Power loss $P_v$ | 0.8 W (stand-by); 7.4 W (no load); 21.6 W (nominal load) |
| Efficiency       | 91 %   |

**Fuse protection:**

|                             |  |
|-----------------------------|--|
| Internal fuse               | T 6.3 A / 250 VAC  |
| External fuse (required)    | an external DC fuse required for DC input voltage        |
| External fuse (recommended) | Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C |

**Safety and protection:**

|                               |                             |
|-------------------------------|-----------------------------|
| Insulation voltage (PRI-SEC)  | 4.242 kV DC                 |
| Isolation voltage (PRI-GND)   | 2.2 kV DC                   |
| Insulation voltage (SEC-GND)  | 0.7 kV DC                   |
| Protection class              | I                           |
| Degree of protection          | IP20 (per EN 60529)         |
| Feedback voltage              | ≤ 63VDC                     |
| Overvoltage category          | II                          |
| Transient protection, primary | Varistor                    |
| Short circuit protection      | Yes                         |
| No-load proof                 | Yes                         |
| Parallel operation            | Yes                         |
| Series connection             | Yes                         |
| MTBF                          | > 500,000 h (per IEC 61709) |

**Connection data**

|                             |  |
|-----------------------------|--|
| Connection type (1)         | Input/Output                                 |
| Connection technology       | CAGE CLAMP®                                  |
| WAGO terminal               | 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 terminal 2             | WAGO 733 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               |

**Geometrical Data**

|                                       |                     |
|---------------------------------------|---------------------|
| Width                                 | 57 mm / 2.244 inch  |
| Height                                | 163 mm / 6.417 inch |
| Length from upper-edge of DIN-35 rail | 179 mm / 7.047 inch |

Note on dimensions

Height including female connector

## Mechanical data

Type of mounting

DIN-35 rail (EN 60715) in 2 positions

## Material Data

Weight

1475 g

## Environmental Requirements

Surrounding air (operating) temperature

-25 ... 70 °C (Device start at -40 °C type-tested)

Surrounding air (storage) temperature

-25 ... 85 °C

Relative humidity

5 ... 96 % (no condensation permissible)

Derating

-3 %/K (&gt; 50 °C)

Pollution degree

2

Climatic category

3K3 (per EN 60721)

## Standards and specifications

Conformity marking

CE

Standards/specifications

EN 60950; EN 61204-3; EN 61558-2-16; UL 60950; UL 508

## Commercial data

Country of origin

DE

GTIN

4050821226468

Customs Tariff No.

85044082900

Product Group

6 (Interface Electronics)

## Compatible products

### tools

**Item no.: 210-719**

Operating tool with partially insulated shaft; Type 1, blade (2.5 x 0.4) mm

[www.wago.com/210-719](http://www.wago.com/210-719)**Item no.: 210-720**

Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm

[www.wago.com/210-720](http://www.wago.com/210-720)

### Marking accessories

**Item no.: 2009-110**

Marking strips; on reel; not stretchable; plain; snap-on type

[www.wago.com/2009-110](http://www.wago.com/2009-110)**Item no.: 210-831**

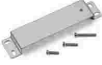


Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive

[www.wago.com/210-831](http://www.wago.com/210-831)**Item no.: 210-832**















Marking strips; on reel; 3 mm wide; plain; Self-adhesive







[www.wago.com/210-832](http://www.wago.com/210-832)

### Mounting adapter

|  |   |  |
|--|---|--|
|  | <b>Item no.: 787-895</b><br>EPSITRON® wall mount adapter; 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> |
|  | <b>Item no.: 787-896</b><br>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> |
|  | <b>Item no.: 787-897</b><br>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> |

### ferrule

|   |  |  |
|---|--|--|
|    | <b>Item no.: 216-201</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; insulated; electro-tin plated  | <a href="http://www.wago.com/216-201">www.wago.com/216-201</a> |
|    | <b>Item no.: 216-202</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; insulated; electro-tin plated   | <a href="http://www.wago.com/216-202">www.wago.com/216-202</a> |
|    | <b>Item no.: 216-203</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated  | <a href="http://www.wago.com/216-203">www.wago.com/216-203</a> |
|    | <b>Item no.: 216-204</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated  | <a href="http://www.wago.com/216-204">www.wago.com/216-204</a> |
|   | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; insulated; electro-tin plated  | <a href="http://www.wago.com/216-221">www.wago.com/216-221</a> |
|  | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; insulated; electro-tin plated   | <a href="http://www.wago.com/216-222">www.wago.com/216-222</a> |
|  | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated  | <a href="http://www.wago.com/216-223">www.wago.com/216-223</a> |
|  | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated  | <a href="http://www.wago.com/216-224">www.wago.com/216-224</a> |
|  | <b>Item no.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | <a href="http://www.wago.com/216-241">www.wago.com/216-241</a> |
|  | <b>Item no.: 216-242</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90 | <a href="http://www.wago.com/216-242">www.wago.com/216-242</a> |
|  | <b>Item no.: 216-243</b><br>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    | <a href="http://www.wago.com/216-243">www.wago.com/216-243</a> |
|  | <b>Item no.: 216-244</b><br>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  | <a href="http://www.wago.com/216-244">www.wago.com/216-244</a> |
|  | <b>Item no.: 216-262</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90 | <a href="http://www.wago.com/216-262">www.wago.com/216-262</a> |
|  | <b>Item no.: 216-263</b><br>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    | <a href="http://www.wago.com/216-263">www.wago.com/216-263</a> |

|  |   |  |
|--|---|--|
|  | <b>Item no.: 216-264</b><br>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 | <a href="http://www.wago.com/216-264">www.wago.com/216-264</a> |
|  | <b>Item no.: 216-284</b><br>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 | <a href="http://www.wago.com/216-284">www.wago.com/216-284</a> |
|  | <b>Item no.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated  | <a href="http://www.wago.com/216-301">www.wago.com/216-301</a> |
|  | <b>Item no.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated  | <a href="http://www.wago.com/216-302">www.wago.com/216-302</a> |
|  | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated  | <a href="http://www.wago.com/216-321">www.wago.com/216-321</a> |
|  | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated  | <a href="http://www.wago.com/216-322">www.wago.com/216-322</a> |

## Downloads

### Documentation

#### Bid Text

|                                     |              |                |          |
|-------------------------------------|--------------|----------------|----------|
| 787-833<br>Stromversorgung EPSITRON | Jan 14, 2016 | DOC<br>35.8 kB | Download |
|-------------------------------------|--------------|----------------|----------|

#### Instruction Leaflet

|  |              |                 |          |
|--|--------------|-----------------|----------|
| Primary Switch Mode Power Supply EPSITRON-PRO-Power<br>48 VDC, 5 A | Apr 10, 2017 | PDF<br>253.1 kB | Download |
|--|--------------|-----------------|----------|

#### Additional Information

|  |              |          |          |
|--|--------------|----------|----------|
| Disposal; Electrical and electronic equipment, Packaging | Oct 15, 2018 | 265.8 kB | Download |
|--|--------------|----------|----------|

## Engineering-Software

### Configuration and Commissioning Software

|  |                       |                 |          |
|--|-----------------------|-----------------|----------|
| Used for line length calculation<br>The conductor length calculation assists in planning the secondary fuse protection for conductors to power supply devices from the EPSITRON® PRO power family (787-8xx) as well as EPSITRON(R) CLASSIC Power family (787-16xx). After choosing a 787-8xx and 787-16xx power supply unit, the desired conductor size and associated fuse can be selected. The software tool then calculates the maximum conductor length at which the fuse functions correctly, while also considering the conductor and transfer resistances. The user can select a base load. | 1.3.3<br>Apr 26, 2017 | EXE<br>428.0 kB | Download |
|--|-----------------------|-----------------|----------|



## smartDATA

### CAD data

3D Download 787-833

URL

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## Product family

### EPSITRON PRO Power

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

[Show all products from the family](#)

Subject to changes.

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WAGO Kontakttechnik GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.