**Data sheet | Item number: 787-834**

Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; DC OK contact; 2,50 mm²

www.wago.com/787-834




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

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## 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 $U_{i\,nom}$ | 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 $I_i$ | ≤ 2.3 A (230 VAC; 20 ADC) |
| Discharge current | ≤ 1 mA |
| Inrush current | ≤ 8 A (active power factor correction (PFC)) |
| Power factor correction (PFC) | Active |
| Mains failure hold-up time | ≥ 25 ms (230 VAC) |
| Power loss $P_l$ | ≤ 0.8 W (Standby); ≤ 4.8 W (No load); ≤ 43.2 W (Nominal load) |
| Efficiency (typ.) | 91 % |
| Nominal output voltage $U_{o\,nom}$ | DC 24 V (SELV) |
| Output voltage range | DC 22 … 29.5 V (adjustable) |
| Default setting | DC 24 V |
| Nominal output current $I_{o\,nom}$ | 20 A (24 VDC) |
| Nominal output power | 480 W |
| Control deviation | ≤ 1 % |
| Residual ripple | ≤ 70 mV (peak-to-peak) |
| Current limitation | 1.1 x $I_{o\,nom}$ (typ.) |
| Overload behavior | TopBoost/PowerBoost/Constant current mode |
| PowerBoost | DC 30 A (4 s); DC 25 A (8 s) |
| TopBoost | DC 80 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 | ≤ DC 35 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 10 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)<br>1 x Error LED (red)<br>1 x stand-by input<br>1 x DC OK relay contact (changeover contact) |
| Operation status indicator | Green LED (DC OK)<br>Red LED (error) |

## Connection data

| | |
|---|---|
| Connection type (1) | Input |
| Connection technology | CAGE CLAMP® |
| WAGO Connector | WAGO 231 Series |
| Solid conductor | 0.08 … 2.5 mm² / 28 … 12 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 28 … 12 AWG |
| Strip length | 8 … 9 mm / 0.31 … 0.35 inch |
| Connection type 2 | Output |
| Connection technology 2 | Push-in CAGE CLAMP® |
| WAGO Connector 2 | WAGO 740 Series |
| Solid conductor 2 | 0.5 … 10 mm² / 20 … 8 AWG |
| Fine-stranded conductor 2 | 0.5 … 10 mm² / 20 … 8 AWG |
| Strip length 2 | 13 … 15 mm / 0.51 … 0.59 inch |
| Connection type (3) | Signaling |
| Connection technology 3 | CAGE CLAMP® |
| WAGO Connector 3 | WAGO 231 Series |
| Solid conductor 3 | 0.08 … 0.5 mm² / 28 … 20 AWG |
| Fine-stranded conductor (3) | 0.08 … 0.5 mm² / 28 … 20 AWG |
| Strip length 3 | 5 … 6 mm / 0.2 … 0.24 inch |

## Physical data

| | |
|---|---|
| Width | 97 mm / 3.819 inch |
| Height | 171 mm / 6.732 inch |

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| | |
|---|---|
| Depth from upper edge of DIN-rail | 187 mm / 7.362 inch |
| Note (dimensions) | Height with connector |

## Mechanical data

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

## Material data

| | |
|---|---|
| Weight | 2300 g |

## 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<br>EN 61010-2-201<br>EN 61204-3<br>EN 61558-2-16<br>UL 60950<br>UL 508 |

## Commercial data

| | |
|---|---|
| Product Group | 6 (Interface Electronics) |
| PU (SPU) | 1 Stück |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4050821085225 |
| Customs tariff number | 85044082900 |

## Approvals / Certificates

### UL-Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|---|---|
| | **UL**<br>Underwriters Laboratories Inc. | UL 508 | E255817 |

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| | | | |
|---|---|---|---|
| | UL<br>Underwriters Laboratories Inc. | UL 60950-1 | E255815 |

## Optional accessories

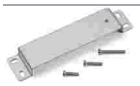
### Tool

Operating tool

| | | |
|---|---|---|
| | Item no.: 210-719<br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft | www.wago.com/210-719 |
| | Item no.: 210-721<br>Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured | www.wago.com/210-721 |
|  | Item no.: 210-769<br>SCREWDRIVER; green | www.wago.com/210-769 |
| | Item no.: 210-720<br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured | www.wago.com/210-720 |

### Mounting adapter

Wall-mount adapter

| | | |
|---|---|---|
|  | Item no.: 787-895<br>Mounting carrier; for screw fixing of 787-8xx devices on mounting plate or wall without DIN 35 rail | www.wago.com/787-895 |

DIN-rail adapter

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

### Ferrule

Ferrule

| | | |
|---|---|---|
| | Item no.: 216-203<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-203 |
| | Item no.: 216-206<br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; blue | www.wago.com/216-206 |
| | Item no.: 216-207<br>Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; gray | www.wago.com/216-207 |

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| | | |
|---|---|---|
|  | **Item no.: 216-202**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-202 |
|  | **Item no.: 216-204**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-204 |
|  | **Item no.: 216-205**<br>Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellow | www.wago.com/216-205 |
|  | **Item no.: 216-208**<br>Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow | www.wago.com/216-208 |
|  | **Item no.: 216-201**<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-201 |
|  | **Item no.: 216-223**<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-223 |
|  | **Item no.: 216-241**<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white | www.wago.com/216-241 |
|  | **Item no.: 216-242**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-242 |
|  | **Item no.: 216-222**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-222 |
|  | **Item no.: 216-221**<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-221 |
|  | **Item no.: 216-224**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-224 |
|  | **Item no.: 216-243**<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red | www.wago.com/216-243 |
|  | **Item no.: 216-244**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-244 |
|  | **Item no.: 216-263**<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red | www.wago.com/216-263 |
|  | **Item no.: 216-246**<br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue | www.wago.com/216-246 |
|  | **Item no.: 216-266**<br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue | www.wago.com/216-266 |
|  | **Item no.: 216-264**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-264 |

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| | | |
|---|---|---|
|  | **Item no.: 216-284**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-284 |
|  | **Item no.: 216-286**<br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue | www.wago.com/216-286 |
|  | **Item no.: 216-287**<br>Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-287 |
|  | **Item no.: 216-262**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-262 |
|  | **Item no.: 216-288**<br>Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow | www.wago.com/216-288 |
|  | **Item no.: 216-301**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-301 |
|  | **Item no.: 216-321**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |
|  | **Item no.: 216-322**<br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-322 |
|  | **Item no.: 216-267**<br>Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-267 |
|  | **Item no.: 216-302**<br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-302 |

**Marking accessories**

Marking strip

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

Marker

| | | |
|---|---|---|
|  | **Item no.: 2009-145**<br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-145 |



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| | | |
|---|---|---|
|  | **Item no.: 2009-115**<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-115 |
|  | **Item no.: 248-501**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white | www.wago.com/248-501 |
|  | **Item no.: 793-501**<br>WMB marking card; as card; not stretchable; plain; snap-on type; white | www.wago.com/793-501 |
|  | **Item no.: 793-5501**<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/793-5501 |

## Downloads

### Documentation

#### Bid Text

| | | | |
|---|---|---|---|
| 787-834<br>X81 - Datei | 2019. 7. 4. | xml<br>7.4 kB | Download |
| 787-834<br>docx - Datei | 2019. 7. 4. | docx<br>22.8 kB | Download |

#### Instruction Leaflet

| | | | |
|---|---|---|---|
| Primär getaktete Stromversorgungen PRO<br>DC 24 V, 20 A, SELV | | pdf<br>253.1 kB | Download |

#### Additional Information

| | | | |
|---|---|---|---|
| Disposal; Electrical and electronic equipment, Packaging | V 1.0.0 | pdf<br>265.8 kB | Download |

## Engineering-Software

#### Configuration and Commissioning Software

| | | | |
|---|---|---|---|
| WAGO Line Length Calculation<br>Die WAGO Leitungslaengenrechnung hilft bei der Planung der sekundärseitigen Absicherung von Leitungen an WAGO Stromversorgungen Pro (787-8xx) unde 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 | 1.3.5<br>2019. 12. 9. | exe<br>337.4 kB | Download |

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ordnungsgemäß funktioniert. Die Auswahl einer Grundlast kann vom Anwender vorgenommen werden.

## CAD/CAE-Data

### CAD data

| | | |
|---|---|---|
| 2D/3D Models 787-834 | URL | Download |

### CAE data

| | | |
|---|---|---|
| EPLAN Data Portal 787-834 | URL | Download |
| WSCAD Universe 787-834 | URL | Download |
| ZUKEN Portal 787-834 | URL | Download |

## Environmental Product Compliance

### Compliance Search

| | | |
|---|---|---|
| Environmental Product Compliance 787-834<br>Switched-mode power supply; Pro; 1-phase; 24 VDC output voltage; 20 A output current; TopBoost + PowerBoost; DC OK contact; 2,50 mm² | URL | Download |

## 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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