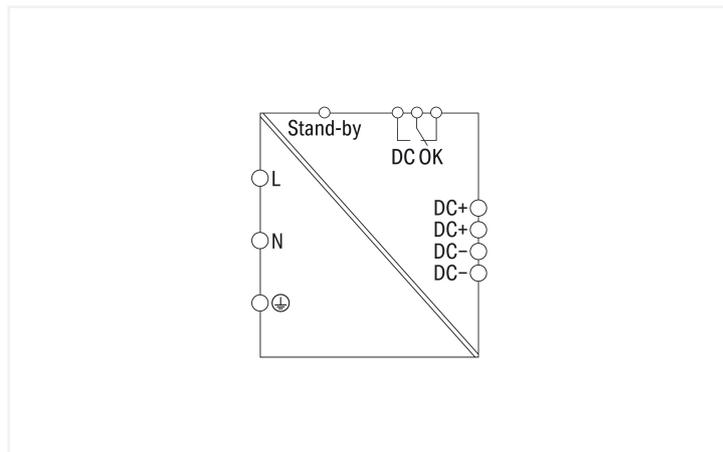


Data Sheet | Item Number: 787-835

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

<https://www.wago.com/787-835>



Features:

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

Technical data

| Input | | Output | |
|------------------------------------|---|-------------------------------------|---|
| Phases | 1 | Nominal output voltage $U_{o, nom}$ | 48 VDC (SELV) |
| Nominal input voltage $U_{i, nom}$ | 1 x 100 ... 240 VAC | Output voltage range | 33 ... 52 VDC (adjustable) |
| Input voltage range | 1 x 85 ... 264 VAC; 120 ... 300 VDC | Default Setting | 48 VDC |
| Input voltage derating | -1.5 %/V (< 110 VAC) | Nominal output current $I_{o, nom}$ | 10 A (48 VDC) |
| Nominal mains frequency range | 50 ... 60 Hz; 0 Hz | Nominal output power | 480 W |
| Input current I_i | ≤ 2.3 A (230 VAC; 10 ADC) | Deviation | ≤ 1 % |
| Discharge current | ≤ 1 mA | Residual ripple | ≤ 70 mV (peak-to-peak) |
| Inrush current | ≤ 8 A (active power factor correction (PFC)) | Current limitation | $1.1 \times I_{o, nom}$ (typ.) |
| Power factor correction (PFC) | Active | Overload behavior | TopBoost/PowerBoost/Constant current mode |
| Mains failure hold-up time | ≥ 20 ms (230 VAC) | PowerBoost | 17.5 ADC (4 s); 15 ADC (8 s) |
| | | TopBoost | 60 ADC (25 ms) |

Signaling and Communication

| | |
|----------------------------|--|
| Signaling | 1 x DC OK LED (green) 1 x Error LED (red) 1 x Stand-by input 1 x DC OK relay contact (changeover contact) |
| Operation status indicator | Green LED (DC OK) Red LED (error) |

Efficiency/Power Losses

| | |
|-------------------|--|
| Power loss P_l | ≤ 0.8 W (standby); ≤ 4.8 W (no load); ≤ 43.2 W (nominal load) |
| Efficiency (typ.) | 91 % |

Circuit Protection

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

Safety and protection

| | |
|---------------------------------|-----------------------------|
| Isolation voltage (pri.-sec.) | 4.242 kVDC |
| Isolation voltage (pri.-PE) | 2.2 kVDC |
| Isolation voltage (sec.-PE) | 0.7 kVDC |
| Protection class | I |
| Protection type | IP20; per EN 60529 |
| Resistance to reverse feed | ≤ 63 VDC |
| Overvoltage category | II |
| Pollution degree | 2 |
| Transient suppression (primary) | Varistor |
| Short-circuit-protected | Yes |
| Open-circuit-proof | Yes |
| Parallel operation | Yes |
| Series operation | Yes |
| MTBF | > 500,000 h (per IEC 61709) |

Connection Data

Connection 1

| | |
|-------------------------|--|
| Connection type | Input |
| Connection technology | CAGE CLAMP® |
| WAGO connector | WAGO 231 Series |
| Solid conductor | 0.08 ... 2.5 mm ² / 28 ... 12 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm ² / 28 ... 12 AWG |
| Strip length | 8 ... 9 mm / 0.31 ... 0.35 inches |

Connection 2

| | |
|-------------------------|---|
| Connection type | Output |
| Connection technology | Push-in CAGE CLAMP® |
| WAGO connector | WAGO 831 Series |
| Solid conductor | 0.5 ... 10 mm ² / 20 ... 8 AWG |
| Fine-stranded conductor | 0.5 ... 10 mm ² / 20 ... 8 AWG |
| Strip length | 13 ... 15 mm / 0.51 ... 0.59 inches |

Connection 3

| | |
|-------------------------|--|
| Connection type | Signaling |
| Connection technology | CAGE CLAMP® |
| WAGO connector | WAGO 733 Series |
| Solid conductor | 0.08 ... 0.5 mm ² / 28 ... 20 AWG |
| Fine-stranded conductor | 0.08 ... 0.5 mm ² / 28 ... 20 AWG |
| Strip length | 5 ... 6 mm / 0.2 ... 0.24 inches |

Physical data

| | |
|-----------------------------------|-----------------------|
| Width | 97 mm / 3.819 inches |
| Height | 171 mm / 6.732 inches |
| Depth from upper-edge of DIN-rail | 187 mm / 7.362 inches |
| Note (dimensions) | Height with connector |

Mechanical data

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

Material data

| | |
|-----------|--------|
| Fire load | 0 MJ |
| Weight | 2460 g |

Environmental requirements

| | |
|---------------------------------|--|
| Ambient temperature (operation) | -25 ... +70 °C (Device starts at -40 °C (type-tested)) |
| Ambient temperature (storage) | -25 ... +85 °C |
| Relative humidity | 5 ... 96 % (no condensation permissible) |
| Derating | -3 %/K (> 50 °C) |
| Climatic category | 3K3 (per EN 60721) |

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 ELECTRONIC) |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4050821226451 |
| Customs tariff number | 85044083900 |

Product Classification

| | |
|-------------|----------------------|
| UNSPSC | 39121004 |
| eCl@ss 10.0 | 27-04-07-01 |
| eCl@ss 9.0 | 27-04-07-01 |
| ETIM 9.0 | EC002540 |
| ETIM 10.0 | EC002540 |
| ECCN | NO US CLASSIFICATION |

Environmental Product Compliance

| | |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|--------------------------------------|----------------|------------------|
| EAC GZO Almaty Standart | TP TC 004/2011 | EAC CoC 03078 |
| EAC GZO Almaty Standart | TP TC 020/2011 | EAC CoC 03081 |
| UL Underwriters Laboratories Inc. | UL 508 | E255817 |
| UR Underwriters Laboratories Inc. | UL 60950-1 | E255815 |

Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|----------|------------------|
| EU-Declaration of Confor- mity WAGO GmbH & Co. KG | - | - |

Downloads

Environmental Product Compliance

| Compliance Search |
|--|
| Environmental Product Compliance 787-835 ↓ |

Documentation

| Bid Text | | | |
|----------|------------|------------------|-------------------|
| 787-835 | 04.07.2019 | docx 22.31 KB | ↓ |
| 787-835 | 04.07.2019 | xml 7.25 KB | ↓ |

| Instruction Leaflet | | |
|--|------------------|-------------------|
| Primär getaktete Stromversorgungen PRO | pdf 247.20 KB | ↓ |

CAD/CAE-Data

| CAD data |
|--|
| 2D/3D Models 787-835 ↓ |

| CAE data | |
|------------------------------|-------------------|
| EPLAN Data Portal 787-835 | ↓ |
| WSCAD Universe 787-835 | ↓ |
| ZUKEN Portal 787-835 | ↓ |

Engineering-Software

Configuration and Commissioning Software

| | | | |
|------------------------------|---------------------|------------------|--|
| WAGO Line Length Calculation | 1.3.5 09.12.2019 | exe 329.50 KB | |
|------------------------------|---------------------|------------------|--|

1 Compatible Products

1.1 Optional Accessories

1.1.1 Marking

1.1.1.1 Marker



Item No.: 2009-145

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 793-5501

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.1.2 Marking strip



Item No.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white



Item No.: 210-831

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



Item No.: 210-832

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

1.1.2 Mounting adapter

1.1.2.1 DIN-rail adapter



Item No.: 787-897

Carrier rail adapter made of zinc die-cast; for mounting 787-8xx devices to a DIN 35 rail; gray



Item No.: 787-896

Carrier rail adapter; for mounting 787-8xx devices to a DIN 35 rail; gray

1.1.2.2 Wall-mount adapter



Item No.: 787-895

Mounting carrier; for screw fixing of 787-8xx devices on mounting plate or wall without DIN 35 rail; gray

1.1.3 Tool

1.1.3.1 Operating tool



[Item No.: 210-719](#)

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

[Item No.: 210-720](#)

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

[Item No.: 210-721](#)

Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

[Item No.: 210-769](#)

SCREWDRIVER; green