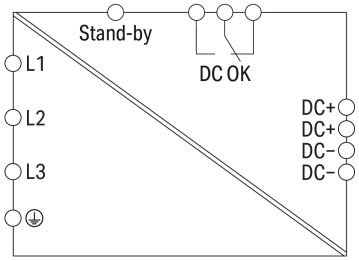
# Data Sheet | Item Number: 787-845

Switched-mode power supply; Pro; 3-phase; 48 VDC output voltage; 10 A output current; TopBoost + PowerBoost; DC OK contact

https://www.wago.com/787-845




**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

| | |
|---|---|
| Phases | 2 / 3 |
| Nominal input voltage $U_{i\,nom}$ | (2 / 3) x 400 … 500 VAC |
| Input voltage range | (2 / 3) x 340 … 550 VAC; 480 … 780 VDC |
| Nominal mains frequency range | 50 … 60 Hz; 0 Hz |
| Input current $I_i$ | ≤ 3 x 1.1 A (340 VAC; 10 ADC) |
| Discharge current | ≤ 1 mA |
| Inrush current | ≤ 30 A (peak) |
| Power factor correction (PFC) | Passive |
| Mains failure hold-up time | ≥ 12 ms (3 x 400 VAC) |

### Output

| | |
|---|---|
| Nominal output voltage $U_{o\,nom}$ | 48 VDC (SELV) |
| Output voltage range | 39 … 53 VDC (adjustable) |
| Default Setting | 48 VDC |
| Nominal output current $I_{o\,nom}$ | 10 A (48 VDC) |
| Nominal output power | 480 W |
| 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 | 15 ADC (4 s); 12.5 ADC (16 s) |
| TopBoost | 55 ADC (50 ms) |

### Signaling and Communication

| | |
|---|---|
| Signaling | 1 x DC OK LED (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) |

### Efficiency/Power Losses

| | |
|---|---|
| Power loss $P_l$ | ≤ 0.8 W (standby); ≤ 8.2 W (no load); ≤ 38 W (nominal load) |
| Efficiency (typ.) | 93 % |

## Circuit Protection

| | |
|---|---|
| Internal fuse | 3 x T 2.5 A / 440 VAC |
| Pre-fuse (required) | An external DC fuse is required for the DC input voltage. |
| Backup fuse (recommended) | 3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C<br>Alternative: motor circuit breaker; Setpoint: 2.5 A; Setting range: 2.5 … 4 A |

## 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 mm² / 28 … 12 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 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 mm² / 20 … 8 AWG |
| Fine-stranded conductor | 0.5 … 10 mm² / 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 mm² / 28 … 20 AWG |
| Fine-stranded conductor | 0.08 … 0.5 mm² / 28 … 20 AWG |
| Strip length | 5 … 6 mm / 0.2 … 0.24 inches |

## Physical data

| | |
|---|---|
| Width | 77 mm / 3.031 inches |
| Height | 171 mm / 6.732 inches |
| Depth from upper-edge of DIN-rail | 179 mm / 7.047 inches |
| Note (dimensions) | Height with connector |


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## Mechanical data

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

## Material data

| | |
|---|---|
| Weight | 1883.3 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<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 ELECTRONIC) |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4050821226437 |
| 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 |


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## Approvals / Certificates

### General approvals

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

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 787-845

### Documentation

**Bid Text**

| | | | |
|---|---|---|---|
| 787-845 | 04.07.2019 | xml<br>7.63 KB | |
| 787-845 | 04.07.2019 | docx<br>20.94 KB | |

**Instruction Leaflet**

| | | |
|---|---|---|
| Primär getaktete Stromversorgungen PRO | pdf<br>359.24 KB | |

### CAD/CAE-Data

**CAD data**

2D/3D Models 787-845

**CAE data**

EPLAN Data Portal 787-845

WSCAD Universe 787-845

ZUKEN Portal 787-845


Continued on next page

## Engineering-Software

### Configuration and Commissioning Software

| | | | |
|---|---|---|---|
| WAGO Line Length Calculation | 1.3.5<br>09.12.2019 | exe<br>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


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## 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