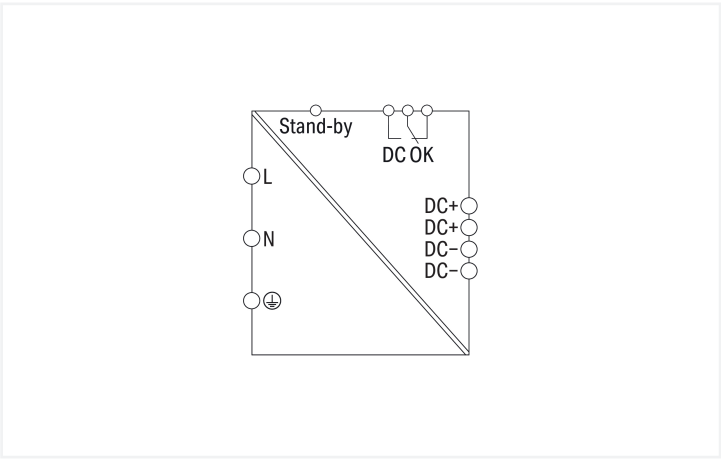
Data Sheet | Item Number: 787-831

Switched-mode power supply; Pro; 1-phase; 12 VDC output voltage; 15 A output current; TopBoost + PowerBoost; DC OK contact

https://www.wago.com/787-831





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	1
Nominal input voltage $U_{i\,nom}$	1 x 100 … 240 VAC
Input voltage range	1 x 85 … 264 VAC; 120 … 300 VDC
Input voltage derating	-1.5 %/V (< 110 VAC)
Nominal mains frequency range	50 … 60 Hz; 0 Hz
Input current I_i	≤ 0.9 A (240 VAC; 15 ADC)
Discharge current	≤ 1 mA
Inrush current	≤ 8 A (active power factor correction (PFC))
Power factor correction (PFC)	Active
Mains failure hold-up time	≥ 30 ms (230 VAC)

Output

Nominal output voltage $U_{o\,nom}$	12 VDC (SELV)
Output voltage range	11 … 18 VDC (adjustable)
Default Setting	12 VDC
Nominal output current $I_{o\,nom}$	15 A (12 VDC)
Nominal output power	180 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	30 ADC (4 s); 22.5 ADC (8 s)
TopBoost	55 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); ≤ 4.6 W (no load); ≤ 23.4 W (nominal load)
Efficiency (typ.)	87 %

Circuit Protection

Internal fuse	T 6.3 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	≤ 25 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/output
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	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	57 mm / 2.244 inches
Height	163 mm / 6.417 inches
Depth from upper-edge of DIN-rail	179 mm / 7.047 inches
Note (dimensions)	Height with connector

Mechanical data

Mounting type	DIN-35 rail

Continued on next page

Material data

Weight	1480 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	4050821226475
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

General approvals

UR Underwriters Laboratories Inc.	UL 60950-1	E255815

Continued on next page

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 787-831

Documentation

Bid Text

787-831	04.07.2019	xml 6.07 KB
787-831	04.07.2019	docx 20.99 KB

Instruction Leaflet

Primär getaktete Stromversorgungen PRO	pdf 247.20 KB

CAD/CAE-Data

CAD data

2D/3D Models 787-831

CAE data

EPLAN Data Portal 787-831

WSCAD Universe 787-831

ZUKEN Portal 787-831

Engineering-Software

Configuration and Commissioning Software

WAGO Line Length Calculation	1.3.5 09.12.2019	exe 329.50 KB

Continued on next page

1 Compatible Products

1.1 Optional Accessories

1.1.1 Marking

1.1.1.1 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.: 210-769
SCREWDRIVER; green