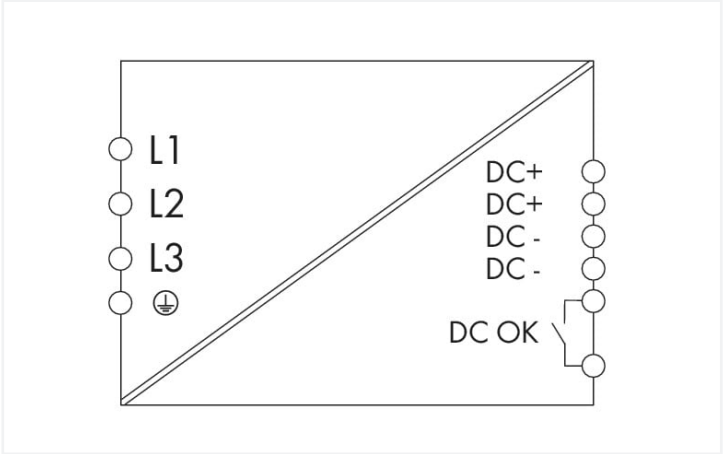


Data Sheet | Item Number: 787-1642

Switched-mode power supply; Classic; 3-phase; 24 VDC output voltage; 20 A output current; TopBoost; DC OK contact

<https://www.wago.com/787-1642>



Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Technical data

Input		Output	
Phases	2 / 3	Nominal output voltage $U_{o\ nom}$	DC 24 V (SELV)
Nominal input voltage $U_{i\ nom}$	(2 / 3) x AC 400 ... 500 V	Output voltage range	DC 23 ... 28.5 V (adjustable)
Input voltage range	(2 / 3) x AC 320 ... 575 V; DC 450 ... 800 V	Default setting	DC 24 V
Nominal mains frequency range	47 ... 63 Hz; 0 Hz	Nominal output current $I_{o\ nom}$	20 A (24 VDC)
Input current I_i	$\leq 3 \times 1.21\ A$ (400 VAC); $\leq 3 \times 1.03\ A$ (500 VAC)	Nominal output power	480 W
Discharge current	$\leq 1\ mA$	Deviation	$\leq 1\ \%$
Inrush current	$\leq 30\ A$ (NTC)	Residual ripple	$\leq 15\ mV$ (peak-to-peak)
Power factor correction (PFC)	Passive	Current limitation	$1.1 \times I_{o\ nom}$ (typ.)
Mains failure hold-up time	$\geq 25\ ms$ (500 VAC); $\geq 15\ ms$ (400 VAC)	Overload behavior	Constant current

Signaling and communication	
Signaling	1 x LED DC OK (green) 1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A)
Operation status indicator	Green LED (U_o)

Efficiency/power losses	
Power loss P_I	$\leq 5.8\ W$; $\leq 42.8\ W$ (400 VAC; nominal load)
Power loss (max.) $P_{I\ (max.)}$	47.6 W (500 VAC / 24 VDC; 20 A)
Efficiency (typ.)	92 %

Circuit protection	
Internal fuse	No
Backup fusing (required)	3 x Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C, 20 A (max.) Alternative: motor circuit breaker An external DC fuse is required for the DC input voltage.



Safety and protection		
Isolation voltage (pri.-sec.)	DC 4.242 kV	
Isolation voltage (pri.-PE)	DC 2.2 kV	
Isolation voltage (sec.-PE)	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	
Overvoltage protection; secondary	Internal protective circuit ≤ 40 VDC (in the event of a fault)	
Short-circuit-protected	Yes	
Open-circuit-proof	Yes	
Parallel operation	Yes	
Series operation	Yes	
MTBF	> 500,000 h (per IEC 61709)	

Connection data		
Connection type 1	Input/signaling	
Connection technology	CAGE CLAMP®	
WAGO connector	WAGO 721 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 type 2	Output	
Connection technology 2	Push-in CAGE CLAMP®	
WAGO connector 2	WAGO 831 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 inches	

Physical data		
Width	80 mm / 3.15 inches	
Height	127 mm / 5 inches	
Depth from upper-edge of DIN-rail	180 mm / 7.087 inches	

Mechanical data		
Mounting type	DIN-35 rail	

Material data		
Fire load	0.914 MJ	
Weight	1623 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	-2.5 %/K (> 55 °C)

Standards and specifications	
Conformity marking	CE
Standards/specifications	EN 61010-1 EN 61010-2-201 EN 61204-3 UL 60950-1 UL 508 DNV SEMI F47

Commercial data	
eCl@ss 10.0	27-04-07-01
eCl@ss 9.0	27-04-07-01
ETIM 8.0	EC002540
ETIM 7.0	EC002540
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143259170
Customs tariff number	85044083900

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
  			Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungs- stelle	TP TC 004/2011, TP TC 020/2011	EAC RU C-DE.AM02. B.00089_19	MFD with product refe- rence WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc.	UL 508	E255817			
UL Underwriters Laboratories Inc.	UL 60950-1	E255815			



Approvals for marine applications



Approval	Standard	Certificate Name
DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00000KT

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 787-1642



Documentation

Bid Text			
787-1642	04.07.2019	xml 7.37 KB	
787-1642	13.06.2019	docx 21.61 KB	

Instruction Leaflet			
Primär getaktete Stromversorgungen CLASSIC		pdf 166.24 KB	

CAD/CAE-Data

CAD data	
2D/3D Models 787-1642	

CAE data	
EPLAN Data Portal 787-1642	
WSCAD Universe 787-1642	
ZUKEN Portal 787-1642	

Engineering-Software

Configuration and Commissioning Software			
WAGO Line Length Cal- culation	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.: 787-897/000-010
Carrier rail adapter made of zinc die-cast; horizontal mounting of 787-16xx (TS35)

1.1.3 Tool

1.1.3.1 Operating tool



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