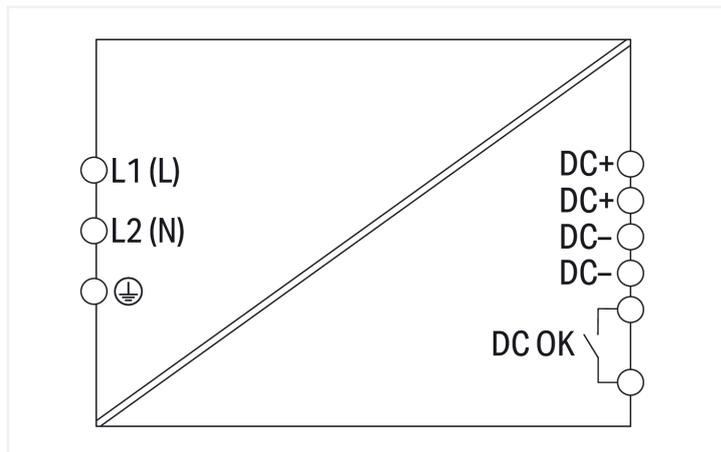


# Data Sheet | Item Number: 787-1638

Switched-mode power supply; Classic; 2-phase; 24 VDC output voltage; 10 A output current; TopBoost; DC OK contact

<https://www.wago.com/787-1638>



## 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 EN 60950-1/UL 60950-1; PELV per EN 60204

## Technical data

Input	
Phases	1 / 2
Nominal input voltage $U_{i\text{nom}}$	(1 / 2) x 200 ... 500 VAC
Input voltage range	(1 / 2) x 180 ... 550 VAC; 254 ... 780 VDC
Input voltage derating	-0.5 %/V (< 200 VAC); -0.4 %/V (< 280 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.975$ A (230 VAC); $\leq 1.36$ A (230 VAC)
Discharge current	$\leq 1$ mA
Inrush current	$\leq 30$ A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 78$ ms (400 VAC); $\geq 20$ ms (200 VAC)

Output	
Nominal output voltage $U_{o\text{nom}}$	24 VDC (SELV)
Output voltage range	23 ... 28.5 VDC (adjustable)
Default Setting	DC 24 V
Nominal output current $I_{o\text{nom}}$	10 A (24 VDC)
Nominal output power	240 W
Deviation	$\leq 1$ %
Residual ripple	$\leq 30$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o\text{nom}}$ (typ.)
Overload behavior	Constant current

## Signaling and communication

Signaling	1 x DC OK LED (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 $P_i$	$\leq 1.3$ W; $\leq 27.8$ W (230 VAC; nominal load); $\leq 20.3$ W (400 VAC; nominal load)
Power loss (max.) $P_{i(\text{max})}$	27.8 W (230 VAC / 24 VDC; 10 A)
Efficiency (typ.)	89 % (230 VAC); 92.5 % (400 VAC)

## Circuit protection

Internal fuse	T 6.3 A / 500 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.)	DC 4.242 kV
Isolation voltage (pri.-PE)	DC 2.2 kV
Isolation voltage (sec.-PE)	0.7 kVDC
Protection class	I
Protection type	IP20; Per EN 60529
Resistance to reverse feed	≤ 35 VDC
Oversvoltage category	II
Pollution degree	2
Transient suppression (primary)	Varistor
Oversvoltage 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 1

Connection type	Input/output/signaling
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 721 Series
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

## Physical data

Width	55 mm / 2.165 inches
Height	127 mm / 5 inches
Depth from upper-edge of DIN-rail	146.5 mm / 5.768 inches

## Mechanical data

Mounting type	DIN-35 rail
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## Material data

Fire load	0.363 MJ
Weight	830 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)
Climatic category	3K3 (per EN 60721)

**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**

PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143521420
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 8.0	EC002540
ECCN	NO US CLASSIFICATION

**Environmental Product Compliance**

RoHS Compliance Status	Compliant, No Exemption
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**Approvals / Certificates**

**General approvals**

**Declarations of conformity and manufacturer's declarations**



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

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
MFD for SEMI F47 WAGO GmbH & Co. KG	-	-

**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 787-1638



**Documentation**

**Bid Text**

787-1638	04.07.2019	xml 7.27 KB	
787-1638	04.06.2019	docx 21.44 KB	

**Instruction Leaflet**

Primär getaktete Stromversorgungen CLASSIC	pdf 159.51 KB	
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**CAD/CAE-Data**

**CAD data**

2D/3D Models 787-1638	
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**CAE data**

EPLAN Data Portal 787-1638	
WSCAD Universe 787-1638	
ZUKEN Portal 787-1638	

**Engineering-Software**

**Configuration and Commissioning Software**

WAGO Line Length Calculation	1.3.5 09.12.2019	exe 329.50 KB	
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**1 Compatible Products**

**1.1 Optional Accessories**

**1.1.1 Marking**

**1.1.1.1 Marker**



**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.: 210-769**

SCREWDRIVER; green