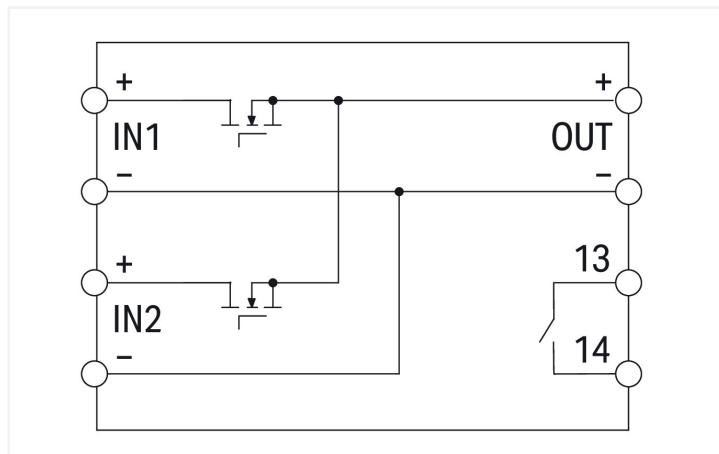


Data Sheet | Item Number: 787-1685

Redundancy Module; 2 x 24 VDC input voltage; 2 x 20 A input current; 24 VDC output voltage; 40 A output current

<https://www.wago.com/787-1685>



Features:

- Redundancy module with low-loss MOSFET decouples two power supplies.
- For redundant and fail-safe power supply
- Continuous output current: 40 ADC, in any ratio of both inputs (e.g., 20 A / 20 A or 0 A / 40 A)
- Suitable for power supplies with PowerBoost and TopBoost
- Same profile as CLASSIC Power Supplies
- Electrically isolated output voltage (SELV/PELV) per EN 61140/UL 60950-1

Technical data

Input		Output	
Nominal input voltage $U_{i, \text{nom}}$	2 x DC 24 V	Nominal output voltage $U_{o, \text{nom}}$	DC 24 V
Input voltage range	2 x DC 10 ... 36 V	Output voltage range	DC 10 ... 36 V (U_o – voltage drop)
Nominal mains frequency range	0 Hz	Voltage drop	≤ 100 mV (Input/output)
Input current I_i	≤ 40 A (per path); ≤ 40 A (in total)	Nominal output current $I_{o, \text{nom}}$	40 A (redundancy operation); 40 A (Parallel operation)
PowerBoost input	DC 60 A (4 s); DC 50 A (8 s)	Nominal output power	960 W
TopBoost input	DC 100 A (50 ms)	Switching frequency	5 kHz
		PowerBoost	DC 120 A (4 s); DC 100 A (8 s)
		TopBoost	DC 200 A (50 ms)

Signaling and communication

Signaling	1 x IN2 LED (green) 1 x DC OK signal contact (IN1 and IN2 > 10 VDC) 1 x IN1 LED (green)
Operation status indicator	2 x Green LED ($U_o > 10$ VDC)

Efficiency/power losses

Power loss P_i	≤ 1.5 W; ≤ 9.5 W (nominal load)
Efficiency (typ.)	99.5 %

Circuit protection

Internal fuse	No
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Safety and protection

Isolation voltage (connectors – housing)	DC 0.5 kV
Protection class	III
Protection type	IP20; per EN 60529
Reverse voltage protection	Yes
Resistance to reverse feed	≤ DC 37 V
Pollution degree	2
Parallel operation	Yes
Series operation	No
MTBF	> 500,000 h (per IEC 61709)

Connection data

Connection type 1	Input/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 type 2	Signaling
Connection technology 2	CAGE CLAMP®
WAGO connector 2	WAGO 721 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data

Width	42 mm / 1.654 inches
Height	127 mm / 5 inches
Depth from upper-edge of DIN-rail	139.5 mm / 5.421 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Fire load	1.083 MJ
Weight	450 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-1.5 %/K (> 65 °C)
Climatic category	3K3 (per EN 60721; except for low air pressure)

Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61010-1 EN 61010-2-201 EN 61000-6-2 EN 61000-6-3 UL 60950 UL 508 DNV EN 61140

Commercial data

eCl@ss 10.0	27-04-07-01
eCl@ss 9.0	27-04-07-01
ETIM 9.0	EC002540
ETIM 8.0	EC002540
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143534529
Customs tariff number	85363030888

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
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	-	-
UK-Declaration of Confor- mity 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 787-1685



Documentation

Bid Text

787-1685	15.07.2019	xml 6.98 KB	
787-1685	15.07.2019	docx 22.66 KB	

Instruction Leaflet

Redundanzmodul	20.04.2022	pdf 260.62 KB	
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CAD/CAE-Data

CAD data

2D/3D Models 787-1685	
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CAE data

EPLAN Data Portal 787-1685	
ZUKEN Portal 787-1685	

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