

## 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

[www.wago.com/787-1685](http://www.wago.com/787-1685)



### Item description

#### Features:

- Redundancy module with low-loss MOFSET 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

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Subject to changes. Please also observe the further product documentation!

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Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.

- Same profile as CLASSIC Power Supplies
- Electrically isolated output voltage (SELV/PELV) per EN 61140/UL 60950-1

## Data

### Technical data

#### Input

Nominal input voltage $U_{i\text{ nom}}$	2 x DC 24 V
Input voltage range	2 x DC 10 ... 36 V
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 40$ A (per path); $\leq 40$ A (in total)
PowerBoost input	DC 60 A (4 s); DC 50 A (8 s)
TopBoost input	DC 100 A (50 ms)

#### Output

Nominal output voltage $U_{o\text{ nom}}$	DC 24 V
Output voltage range	DC 10 ... 36 V ( $U_e$ - voltage drop)
Voltage drop	$\leq 100$ mV (Input/output)
Nominal output current $I_{o\text{ nom}}$	40 A (redundancy operation); 40 A (Parallel operation)
Nominal output power	960 W
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 IN1 LED (green) 1 x IN2 LED (green) 1 x DC OK signal contact (IN1 and IN2 > 10 VDC)
Operation status indicator	2 x Green LED ( $U_o > 10$ VDC)

#### Efficiency/power losses

Power loss $P_l$	$\leq 1.5$ W; $\leq 9.5$ W (nominal load)
Efficiency (typ.)	99.5 %

Subject to changes. Please also observe the further product documentation!



## Circuit protection

Internal fuse	No
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## Safety and protection

Protection class	III
Protection type	IP20; per EN 60529
Reverse voltage protection	Yes
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 <sup>2</sup> / 20 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm <sup>2</sup> / 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 <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 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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Subject to changes. Please also observe the further product documentation!



## 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 8.0	EC002540
ETIM 7.0	EC002540
Recupel Type	
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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Subject to changes. Please also observe the further product documentation!



## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>EAC</b> Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
	<b>UL</b> Underwriters Laboratories Inc.	UL 508	E255817
	<b>UL</b> Underwriters Laboratories Inc.	UL 60950-1	E255815

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>DNV</b> DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00000KT

## Optional accessories

### Tool

Operating tool		
<b>Item no.: 210-721</b>	Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-721">www.wago.com/210-721</a>
<b>Item no.: 210-720</b>	Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>

### Marking accessories

Marking strip		
<b>Item no.: 2009-110</b>	Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/2009-110">www.wago.com/2009-110</a>
<b>Item no.: 210-831</b>	Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-831">www.wago.com/210-831</a>
<b>Item no.: 210-832</b>	Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-832">www.wago.com/210-832</a>

  

Marker		
<b>Item no.: 2009-145</b>		<a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a>

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Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; 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

[www.wago.com/2009-115](http://www.wago.com/2009-115)

**Item no.: 248-501**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

[www.wago.com/248-501](http://www.wago.com/248-501)

**Item no.: 793-501**

WMB marking card; as card; not stretchable; plain; snap-on type; white

[www.wago.com/793-501](http://www.wago.com/793-501)

**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

[www.wago.com/793-5501](http://www.wago.com/793-5501)

**Mounting adapter**

DIN-rail adapter

**Item no.: 787-897/000-010**

Carrier rail adapter made of zinc die-cast; horizontal mounting of 787-16xx (TS35)

[www.wago.com/787-897/000-010](http://www.wago.com/787-897/000-010)

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787-1685 docx - Datei	2019 年7月15 日	docx 23.2 kB	Download
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**Instruction Leaflet**

Redundanzmodul MOSFET, DC 24 V, 40 A	2022 年4月20 日	pdf 266.9 kB	Download
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**Additional Information**

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 年8月18 日	pdf 2.2 MB	Download
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**CAD/CAE-Data****CAD data**

2D/3D Models 787-1685		URL	Download
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#### CAE data

EPLAN Data Portal 787-1685	<a href="#">URL</a>	<a href="#">Download</a>
ZUKEN Portal 787-1685	<a href="#">URL</a>	<a href="#">Download</a>

#### Environmental Product Compliance

##### Compliance Search

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#### Installation Notes

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