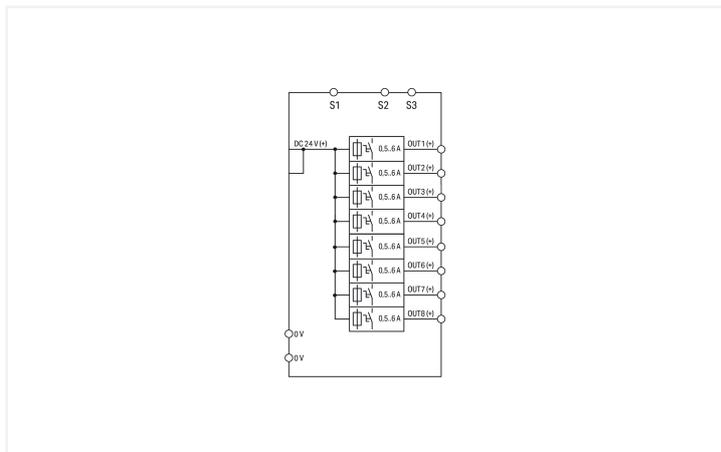


# Data Sheet | Item Number: 787-1668/006-1000

Electronic circuit breaker; 8-channel; 24 VDC input voltage; adjustable 0.5 ... 6 A;  
active current limitation; communication capability

<https://www.wago.com/787-1668/006-1000>



Similar to illustration

## Features:

- Space-saving ECB with eight channels
- Nominal current: 0.5 ... 6 A (adjustable for each channel via sealable selector switch)
- Active current limitation
- Switch-on capacity > 65000 µF per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

## Technical data

### Input

Nominal input voltage $U_{1\text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC

### Output

Total number of channels (module)	8
Nominal output voltage $U_{o\text{nom}}$	8 x 24 VDC
Output voltage range	18 ... 30 VDC ( $U_e$ - voltage drop)
Voltage drop	≤ 155 mV (6 A) (Input (+))
Nominal output current $I_{o\text{nom}}$	8 x 0.5 / 1 / 2 / 3 / 4 / 6 A (adjustable for each channel via selector switch)
Default Setting	DC 6 A; switched on
Trip time	16 ms ... 5 s (load-dependent)
Switch-on capacity	
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
Active current limitation	Yes
Current limitation	1.7 x $I_{o\text{nom}}$ (typ.)

### Signaling and Communication

Signaling	8 x LED (green/red/orange) 1 x Remote control input (S1) 2 x Active signal output (S2; S3)
Operation status indicator	Green LED (channel OK) Red LED (tripped channel)
Remote input	Reactivation of all tripped channels via 15 ... 30 VDC pulse for min. 500 ms Switching on/off any number of channels via pulse sequence

### Efficiency/Power Losses

Power loss $P_I$	$\leq 1.15 \text{ W}; \leq 8.6 \text{ W (8 x 6 A)}$
Efficiency (typ.)	99 %

### Circuit Protection

Internal fuse	T 15 A per channel
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### Safety and protection

Isolation voltage (connectors – housing)	0.5 kVDC
Protection class	III
Protection type	IP20; per EN 60529
Reverse voltage protection	No
Resistance to reverse feed	$\leq 35 \text{ VDC}$
Pollution degree	2
Transient suppression (primary)	Suppressor diode (33 V)
Parallel operation of single channels	Not permitted
Series operation	No
MTBF	> 500,000 h (per IEC 61709)

### Connection Data

#### Connection 1

Connection type	Input (+)
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 2

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	42 mm / 1.654 inches
Height	127 mm / 5 inches
Depth from upper-edge of DIN-rail	142.5 mm / 5.61 inches

### Mechanical data

Mounting type	DIN-35 rail
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### Material data

Fire load	0 MJ
Weight	440 g

### Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	No derating

### Standards and Specifications

Conformity marking	CE
Standards/specifications	EN 61000-6-2 EN 61000-6-3 UL 508 UL 2367 DNV

### Commercial data

PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
Customs tariff number	85362010900

### Product Classification

UNSPSC	39121601
eCl@ss 10.0	27-37-18-02
eCl@ss 9.0	27-37-18-02
ETIM 9.0	EC001440
ETIM 10.0	EC001440
ECCN	NO US CLASSIFICATION

### 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 2367	E363438

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

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

Approvals for marine applications



Approval	Standard	Certificate Name
DNV DNV GL SE	-	TAA0000281

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 787-1668/006-1000	↓
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Documentation

Manual

Product Manual br/ Electronic Circuit Breaker	V 1.1.0	pdf 1320.16 KB	↓
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Bid Text

787-1668/006-1000	03.07.2019	xml 7.23 KB	↓
787-1668/006-1000	02.07.2019	docx 20.92 KB	↓

Instruction Leaflet

Elektronische Schutzschalter	pdf 671.88 KB	↓
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Application Notes

Application Note e!COCKPIT

e!COCKPIT Application Note WagoAppFuse (a2019001)	2021-11-08 06.12.2021	pdf 548.17 KB	↓
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CAD/CAE-Data

CAD data

2D/3D Models 787-1668/006-1000	↓
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CAE data

EPLAN Data Portal 787-1668/006-1000	↓
WSCAD Universe 787-1668/006-1000	↓
ZUKEN Portal 787-1668/006-1000	↓

## Libraries

Library			
Anbindung Stromversorgungen Serie 787	1.0.0 28.08.2017	zip 340.24 KB	
Anbindung Stromversorgungen Serie 787	1.3.0 14.05.2014	zip 549.48 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