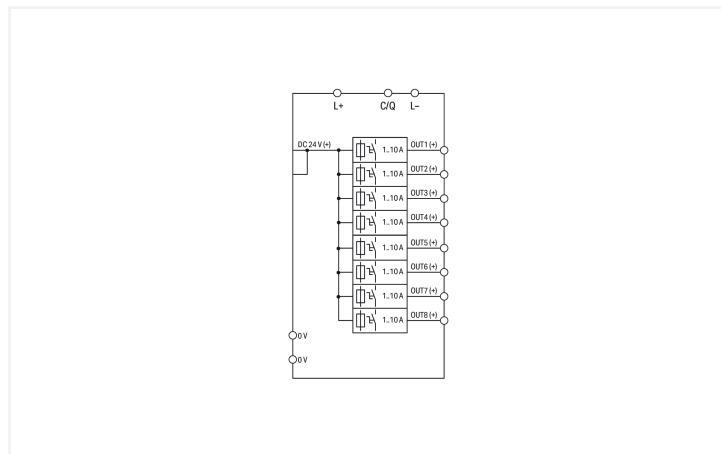


# Data Sheet | Item Number: 787-1668/000-080

Electronic circuit breaker; 8-channel; 24 VDC input voltage; adjustable 1 ... 10 A; IO-Link

<https://www.wago.com/787-1668/000-080>



## Features:

- Space-saving ECB with eight channels
- Nominal current: 1 ... 10 A (adjustable for each channel via sealable selector switch or IO-Link interface)
- Switch-on capacity > 50000  $\mu$ F per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Status message and current measurement of each individual channel via IO-Link interface
- Switch on/off each channel separately via IO-Link interface

## Technical data

### Input

Nominal input voltage $U_{i, \text{nom}}$	24 VDC
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Input voltage range	18 ... 30 VDC
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### Output

Total number of channels (module)	8
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Nominal output voltage $U_{o, \text{nom}}$	8 x 24 VDC
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Output voltage range	18 ... 30 VDC ( $U_e$ - voltage drop)
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Voltage drop	$\leq 200$ mV (10 A) (Input +)
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Nominal output current $I_{o, \text{nom}}$	8 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A (adjustable for each channel via IO-Link interface; 1, 2, 4, 6, 10 A adjustable for each channel via selector switch)
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Default Setting	DC 10 A; switched off
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Trip time	16 ms ... 100 s (load-dependent)
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Switch-on capacity	
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Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
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Active current limitation	No
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Current limitation	No
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## Signaling and Communication

Signaling	8 x LED (green/red/orange) 1 x IO-Link interface
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Operation status indicator	Green LED (channel OK) Red LED (tripped channel)
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Remote input	Switching on/off any number of channels via IO-Link interface
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## Efficiency/Power Losses

Power loss $P_I$	$\leq 1.3$ W; $\leq 20$ W (8 x 10 A)
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Efficiency (typ.)	99 %
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### 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	≤ 35 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	≥ 50 °C (see instruction manual)

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



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

Approval	Standard	Certificate Name
EU-Declaration of Confor- mity 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 787-1668/000-080	↓
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**Documentation**

Manual			
Product Manual Electronic Circuit Breaker	V 1.1.0 26.08.2019	pdf 5396.41 KB	↓

Additional Information			
Elektronischer Schutzschalter	24.04.2020 19.05.2020	pdf 1715.93 KB	↓

**Bid Text**

787-1668/000-080	03.07.2019	xml 6.91 KB	↓
787-1668/000-080	03.07.2019	docx 20.42 KB	↓

**Application Notes**

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

Application note SIEMENS			
Application note Electronic fuse 787-166x/0000-0080 with I/O-Link Interface (a2019004)	2019-06-06 06.06.2019	zip 7180.98 KB	↓
Application note Electronic fuse 787-166x/0000-0080 with I/O-Link Interface (a2019005)	2019-06-06 06.06.2019	zip 10697.94 KB	↓

**CAD/CAE-Data**

CAD data	
2D/3D Models 787-1668/000-080	↓

CAE data	
EPLAN Data Portal 787-1668/000-080	↓
ZUKEN Portal 787-1668/000-080	↓

## Libraries

### Device Description File

Device description files 787-1668/000-080	1.1 19.03.2018	zip 152.36 KB	
Device description files 787-1668/000-080	1.4.1 10.09.2019	zip 152.58 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