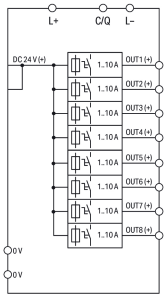
# Data Sheet | Item Number: 787-1668/000-080

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 µF 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 $U_{i\,nom}$ | 24 VDC |
| Input voltage range | 18 … 30 VDC |

### Output

| | |
|---|---|
| Total number of channels (module) | 8 |
| Nominal output voltage $U_{o\,nom}$ | 8 x 24 VDC |
| Output voltage range | 18 … 30 VDC ($U_e$ - voltage drop) |
| Voltage drop | ≤ 200 mV (10 A) (Input (+)) |
| Nominal output current $I_{o\,nom}$ | 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) |
| Default Setting | DC 10 A; switched off |
| Trip time | 16 ms … 100 s (load-dependent) |
| Switch-on capacity | |
| Switch-on behavior | Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s) |
| Active current limitation | No |
| Current limitation | No |

### Signaling and Communication

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

### Efficiency/Power Losses

| | |
|---|---|
| Power loss $P_l$ | ≤ 1.3 W; ≤ 20 W (8 x 10 A) |
| Efficiency (typ.) | 99 % |

## Circuit Protection

| | |
|---|---|
| Internal fuse | T 15 A per channel |

## 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 mm² / 20 … 8 AWG |
| Fine-stranded conductor | 0.5 … 10 mm² / 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 mm² / 28 … 12 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 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 |

## Material data

| | |
|---|---|
| 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) |


Continued on next page

## Standards and Specifications

| | |
|---|---|
| Conformity marking | CE |
| Standards/specifications | EN 61000-6-2<br>EN 61000-6-3<br>UL 508<br>UL 2367<br>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 |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| EAC<br>GZO Almaty Standart | TP TC 020/2011 | EAC CoC 03081 |
| UL<br>Underwriters Laboratories Inc. | UL 508 | E255817 |
| UR<br>Underwriters Laboratories Inc. | UL 2367 | E363438 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |

### Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| DNV<br>DNV GL SE | - | TAA0000281 |


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## Downloads

### Environmental Product Compliance

**Compliance Search**

| | |
|---|---|
| Environmental Product Compliance 787-1668/000-080 | |

### 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 | |


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## Libraries

| Device Description File | | | |
|---|---|---|---|
| Device description files<br>787-1668/000-080 | 1.1<br>19.03.2018 | zip<br>152.36 KB | |
| Device description files<br>787-1668/000-080 | 1.4.1<br>10.09.2019 | zip<br>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