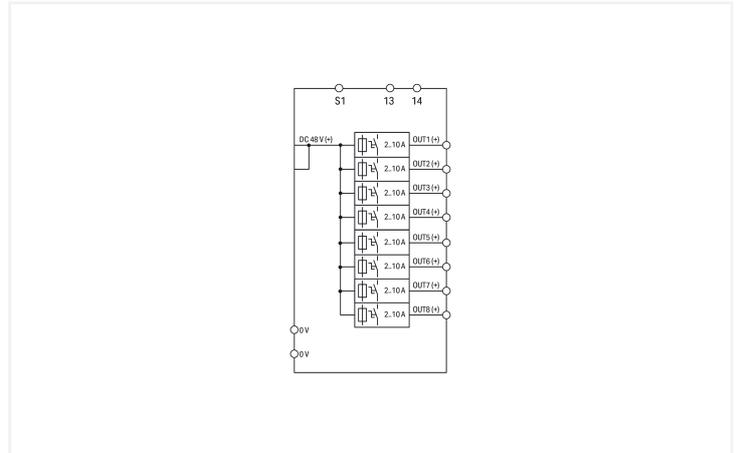# Data Sheet | Item Number: 787-1668/000-250

## Electronic circuit breaker; 8-channel; 48 VDC input voltage; adjustable 2 … 10 A; Signal contact

Similar to illustration



## Features:

- Space-saving ECB with eight channels
- Nominal current: 2 … 10 A (adjustable for each channel via sealable selector switch)
- Switch-on capacity > 23000 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 (common group signal)
- Remote input resets all tripped channels
- Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel" – does not support communication via pulse sequence

## Technical data

### Input

| | |
|---|---|
| Nominal input voltage $U_{i\,nom}$ | 48 VDC |
| Input voltage range | 32 … 58 VDC |

### Output

| | |
|---|---|
| Total number of channels (module) | 8 |
| Nominal output voltage $U_{o\,nom}$ | 8 x 48 VDC |
| Output voltage range | 32 … 58 VDC ($U_e$ – voltage drop) |
| Voltage drop | ≤ 200 mV (10 A) (Input (+)) |
| Nominal output current $I_{o\,nom}$ | 8 x 2 / 3 / 4 / 6 / 8 / 10 A (adjustable for each channel via selector switch; 70 A (max.) in total) |
| Default Setting | DC 10 A; switched on |
| 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 Remote control input (S1)<br>1 x Group signal contact (13; 14) |
| Operation status indicator | Green LED (channel OK)<br>Red LED (tripped channel) |
| Remote input | Reactivation of all tripped channels via 15 … 58 VDC pulse for min. 500 ms |

## 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 | ≤ 58 VDC |
| Pollution degree | 2 |
| Transient suppression (primary) | Suppressor diode (68 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

| | |
|---|---|
| Fire load | 0.85 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<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 | - | - |

**W/AGO**

## Approvals for marine applications

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

## Downloads

### Environmental Product Compliance

**Compliance Search**

| | |
|---|---|
| Environmental Product Compliance<br>787-1668/000-250 | ↓ |

## Documentation

**Bid Text**

| 787-1668/000-250 | 03.07.2019 | xml<br>7.17 KB | ↓ |
|---|---|---|---|
| 787-1668/000-250 | 03.07.2019 | docx<br>21.01 KB | ↓ |

**Instruction Leaflet**

| Elektronische Schutz-schalter | pdf<br>572.00 KB | ↓ |
|---|---|---|

## Application Notes

**Application Note e!COCKPIT**

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

## CAD/CAE-Data

**CAD data**

| 2D/3D Models<br>787-1668/000-250 | ↓ |
|---|---|

**CAE data**

| EPLAN Data Portal<br>787-1668/000-250 | ↓ |
|---|---|
| WSCAD Universe<br>787-1668/000-250 | ↓ |
| ZUKEN Portal<br>787-1668/000-250 | ↓ |

# 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

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

Current addresses can be found at:: www.wago.com