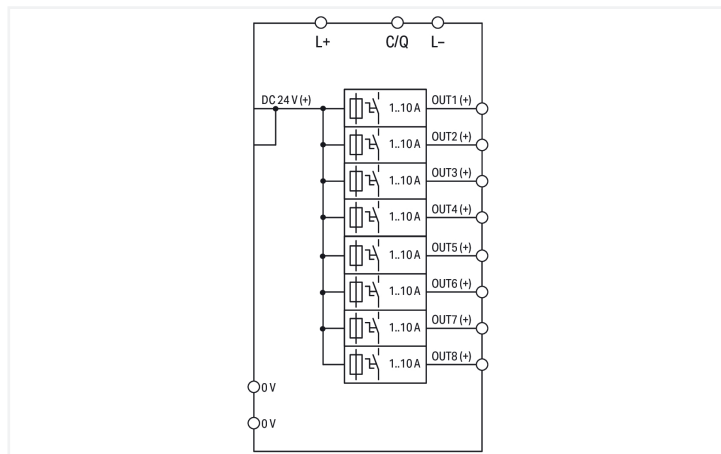


Data Sheet | Item Number: 787-1668/000-080

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 μ 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 $U_{i, \text{nom}}$ | DC 24 V |
| Input voltage range | DC 18 ... 30 V |

Output

| | |
|--|--|
| Total number of channels (module) | 8 |
| Nominal output voltage $U_{o, \text{nom}}$ | 8 x DC 24 V |
| Output voltage range | DC 18 ... 30 V (U_e - voltage drop) |
| Voltage drop | ≤ 200 mV (10 A) (Input (+)) |
| 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) |
| 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) 1 x IO-Link interface |
| Operation status indicator | Green LED (channel OK) Red LED (tripped channel) |
| Remote input | Switching on/off any number of channels via IO-Link interface |

Efficiency/power losses

| | |
|-------------------|--------------------------------------|
| Power loss P_I | ≤ 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) | DC 0.5 kV |
| Protection class | III |
| Protection type | IP20; per EN 60529 |
| Reverse voltage protection | No |
| Resistance to reverse feed | ≤ DC 35 V |
| 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 type 1 | Input (+) |
| Connection technology | Push-in CAGE CLAMP® |
| WAGO connector | WAGO 831 Series |
| Solid conductor | 0.5 ... 10 mm ² / 20 ... 8 AWG |
| Fine-stranded conductor | 0.5 ... 10 mm ² / 20 ... 8 AWG |
| Strip length | 13 ... 15 mm / 0.51 ... 0.59 inches |
| Connection type 2 | Input (-); output; signaling |
| Connection technology 2 | CAGE CLAMP® |
| WAGO connector 2 | WAGO 721 Series |
| Solid conductor 2 | 0.08 ... 2.5 mm ² / 28 ... 12 AWG |
| Fine-stranded conductor 2 | 0.08 ... 2.5 mm ² / 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 | 142.5 mm / 5.61 inches |

Mechanical data

| | |
|---------------|-------------|
| Mounting type | DIN-35 rail |
|---------------|-------------|

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

| | |
|-----------------------|-------------|
| eCl@ss 10.0 | 27-37-18-02 |
| eCl@ss 9.0 | 27-37-18-02 |
| ETIM 9.0 | EC001440 |
| ETIM 8.0 | EC001440 |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| Customs tariff number | 85363010900 |

Environmental Product Compliance

| | |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

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 | - | - |

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 | | | |

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

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

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