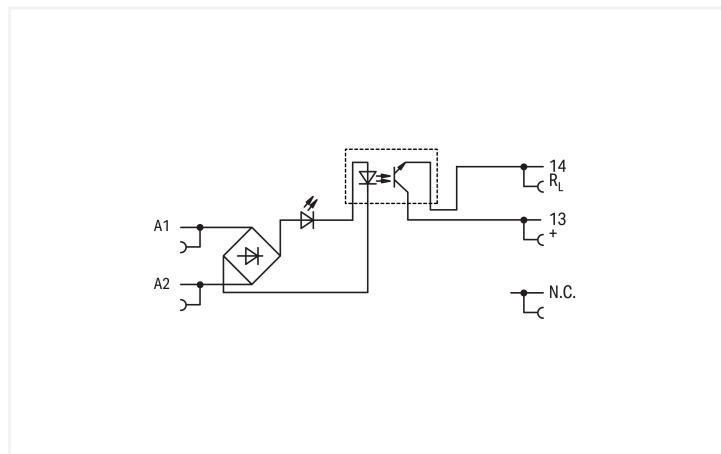


## Data Sheet | Item Number: 857-708

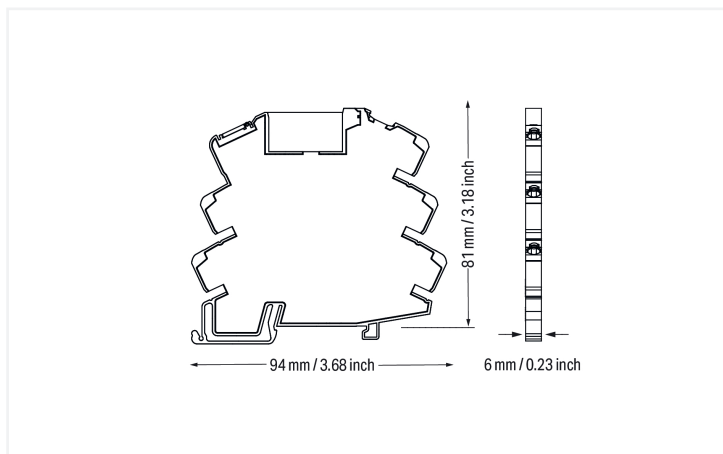
Solid-state relay module; Nominal input voltage: 230 V AC/DC; Output voltage range: 0 ... 48 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Yellow status indicator; Module width: 6 mm; gray



<https://www.wago.com/857-708>



Color: ■ gray



### Notes

Note

Optocouplers and solid state relays are designed for use in signal processing networks that are not supplied directly by the low-voltage power supply network.

### Technical data

#### Control circuit

|                                  |                    |
|----------------------------------|--------------------|
| Nominal input voltage $U_N$      | 230 VAC/VDC        |
| Input voltage range (low level)  | 0 ... 30 VAC/VDC   |
| Input voltage range (high level) | 200 ... 253 VAC/DC |
| Nominal input current at $U_N$   | 4 mA               |

#### Load circuit

|                                  |                   |
|----------------------------------|-------------------|
| Circuit type                     | 2-wire connection |
| Limiting continuous current      | 0.1 A             |
| Nominal output voltage           | 24 VDC            |
| Output voltage range             | 0 ... 48 VDC      |
| Voltage drop                     | $\leq 1$ VDC      |
| Leakage current at rated voltage | $\leq 1$ $\mu$ A  |
| Switching current (min.)         | 50 $\mu$ A        |
| Turn-on time                     | $\leq 4.5$ ms     |
| Turn-off time                    | $\leq 10$ ms      |
| Switching frequency              | $\leq 20$ Hz      |

### Signaling

|                  |            |
|------------------|------------|
| Status indicator | Yellow LED |
|------------------|------------|

### Safety and protection

|   |  |
|---|--|
| Rated Voltage   | 300 V                                  |
| Overtoltage category  | III                                    |
| Pollution degree  | 2                                      |
| Dielectric strength (control/load circuit) (AC, 1 min)      | 3.51 kVrms                             |
| Insulation type (control/load circuit)                      | Reinforced insulation (safe isolation) |
| Insulation type (between adjacent devices of the same type) | Reinforced insulation (safe isolation) |
| Insulation type (to adjacent devices of different types)    | Basic insulation                       |
| Protection type   | IP20                                   |

### Connection Data

|   |  |
|---|--|
| Connection technology                           | Push-in CAGE CLAMP®                          |
| Solid conductor                                 | 0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG |
| Fine-stranded conductor                         | 0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.34 ... 1.5 mm <sup>2</sup> / 22 ... 16 AWG |
| Strip length                                    | 9 ... 10 mm / 0.35 ... 0.39 inches           |

### Physical data

|                                   |                      |
|-----------------------------------|----------------------|
| Width                             | 6 mm / 0.236 inches  |
| Height                            | 94 mm / 3.701 inches |
| Depth from upper-edge of DIN-rail | 81 mm / 3.189 inches |

### Mechanical data

|                   |                                       |
|-------------------|---------------------------------------|
| Mounting type     | DIN-35 rail                           |
| Mounting position | horizontal (standing/lying); vertical |

### Material data

|                                    |  |
|------------------------------------|--|
| Note (material data)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | gray   |
| Insulation material (main housing) | Polyamide (PA66)   |
| Material group                     | I  |
| Flammability class per UL94        | V0   |
| Fire load                          | 0.58 MJ  |
| Weight                             | 30.7 g   |

### Environmental requirements

|  |  |
|--|--|
| Ambient temperature (operation at U <sub>N</sub> ) | -20 ... +60 °C                           |
| Ambient temperature (storage)                      | -40 ... +70 °C                           |
| Processing temperature                             | -25 ... +50 °C                           |
| Temperature range of connection cable              | ≥ (T <sub>ambient</sub> + 30 K)          |
| Relative humidity                                  | 5 ... 85 % (no condensation permissible) |
| Operating altitude (max.)                          | 2000 m                                   |

**Standards and Specifications**

|                          |  |
|--------------------------|--|
| Standards/specifications | EN 61000-6-2<br>EN 61000-6-3<br>EN 61373<br>EN 61010-2-201<br>UL 508 |
|--------------------------|--|

**Basic relay**

|                  |         |
|------------------|---------|
| WAGO Basic Relay | 857-165 |
|------------------|---------|

**Commercial data**

|                       |                          |
|-----------------------|--------------------------|
| Product Group         | 6 (INTERFACE ELECTRONIC) |
| PU (SPU)              | 25 (1) pcs               |
| Packaging type        | Box                      |
| Country of origin     | DE                       |
| GTIN                  | 4045454835514            |
| Customs tariff number | 85365005000              |

**Product Classification**

|             |                      |
|-------------|----------------------|
| UNSPSC      | 39122334             |
| eCl@ss 10.0 | 27-26-15-03          |
| eCl@ss 9.0  | 27-26-15-03          |
| ETIM 9.0    | EC001504             |
| ETIM 10.0   | EC001504             |
| ECCN        | NO US CLASSIFICATION |

**Environmental Product Compliance**

|   |  |
|---|--|
| CAS-No.                                   | 7439-92-1<br>79-94-7                                     |
| REACH Candidate List Substance            | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol<br>Lead |
| RoHS Compliance Status                    | Compliant,With Exemption                                 |
| RoHS Exemption                            | 7(a)<br>7(c)-I   |
| SCIP notification number (Bulgaria)       | f70c9b06-cb20-4326-bdd8-6063a3a2bad4                     |
| SCIP notification number (Czech Republic) | f644b729-cf8b-4021-bc1e-9c846bb94cc8                     |

**Approvals / Certificates**

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

| Approval   | Standard       | Certificate Name |
|--|----------------|------------------|
| EAC<br>GZO Almaty Standart                                   | TP TC 004/2011 | EAC CoC 03078    |
| EAC<br>GZO Almaty Standart                                   | TP TC 020/2011 | EAC CoC 03081    |
| UL<br>Underwriters Laboratories<br>Inc. (ORDINARY LOCATIONS) | UL 508         | E175199 Sec.4    |

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

Approvals for hazardous areas



| Approval                   | Standard    | Certificate Name  |
|----------------------------|-------------|---|
| ATEX<br>DEKRA EXAM GmbH    | EN 60079-0  | BVS_14_ATEX_E_091_X (II 3G Ex ec nC IIC T4 Gc; II 3G Ex ec IIC T4 Gc) |
| CCC<br>CNEX                | CNCA-C23-01 | 2020312304000757 (Ex ec IIC T4 Gc)                                    |
| IECEX<br>DEKRA EXAM GmbH   | IEC 60079-0 | IECEX_BVS_14.0079X_Is-sue_3 (Ex ec nC IIC T4 Gc; Ex ec IIC T4 Gc)     |
| UKEx<br>WAGO GmbH & Co. KG | EN 60079-0  | WAGO22UKEX002X_ec   |

Downloads

Environmental Product Compliance

| Compliance Search  |
|--|
| Environmental Product Compliance 857-708 <a href="#">↓</a> |

Documentation

| Bid Text |            |                  |                   |
|----------|------------|------------------|-------------------|
| 857-708  | 19.02.2019 | xml<br>4.15 KB   | <a href="#">↓</a> |
| 857-708  | 20.02.2019 | docx<br>15.99 KB | <a href="#">↓</a> |

| Instruction Leaflet             |            |                  |                   |
|---------------------------------|------------|------------------|-------------------|
| CCC Ex (Additional information) | 26.04.2023 | pdf<br>129.88 KB | <a href="#">↓</a> |

CAD/CAE-Data

| CAD data                               |
|--|
| 2D/3D Models 857-708 <a href="#">↓</a> |

| CAE data                                    |
|---|
| EPLAN Data Portal 857-708 <a href="#">↓</a> |
| WSCAD Universe 857-708 <a href="#">↓</a>    |
| ZUKEN Portal 857-708 <a href="#">↓</a>      |

**1 Compatible Products**

**1.1 Optional Accessories**

**1.1.1 Basic relay**

**1.1.1.1 Basic solid-state relay**



**Item No.: 857-165**  
 Basic solid-state relay; Nominal input voltage: 60 VDC; Output voltage range: 0 ... 48 VDC

**1.1.2 Ferrule**

**1.1.2.1 Ferrule**



**Item No.: 216-241**  
 Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



**Item No.: 216-242**  
 Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-243**  
 Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



**Item No.: 216-244**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

**1.1.3 Jumper**

**1.1.3.1 Jumper**



**Item No.: 281-482**  
 Jumper; 2-way; insulated; gray



**Item No.: 859-410/000-006**  
 Jumper; for jumper slot; 10-way; insulated; blue



**Item No.: 859-410**  
 Jumper; for jumper slot; 10-way; insulated; light gray



**Item No.: 859-410/000-005**  
 Jumper; for jumper slot; 10-way; insulated; red



**Item No.: 859-410/000-029**  
 Jumper; for jumper slot; 10-way; insulated; yellow



**Item No.: 859-402/000-006**  
 Jumper; for jumper slot; 2-way; insulated; blue



**Item No.: 859-402**  
 Jumper; for jumper slot; 2-way; insulated; light gray



**Item No.: 859-402/000-005**  
 Jumper; for jumper slot; 2-way; insulated; red



**Item No.: 859-402/000-029**  
 Jumper; for jumper slot; 2-way; insulated; yellow



**Item No.: 859-403/000-006**  
 Jumper; for jumper slot; 3-way; insulated; blue



**Item No.: 859-403**  
 Jumper; for jumper slot; 3-way; insulated; light gray



**Item No.: 859-403/000-005**  
 Jumper; for jumper slot; 3-way; insulated; red



**Item No.: 859-403/000-029**  
 Jumper; for jumper slot; 3-way; insulated; yellow



**Item No.: 859-404/000-006**  
 Jumper; for jumper slot; 4-way; insulated; blue



**Item No.: 859-404**  
 Jumper; for jumper slot; 4-way; insulated; light gray



**Item No.: 859-404/000-005**  
 Jumper; for jumper slot; 4-way; insulated; red



**Item No.: 859-404/000-029**  
 Jumper; for jumper slot; 4-way; insulated; yellow



**Item No.: 859-405/000-006**  
 Jumper; for jumper slot; 5-way; insulated; blue



**Item No.: 859-405**  
 Jumper; for jumper slot; 5-way; insulated; light gray



**Item No.: 859-405/000-005**  
 Jumper; for jumper slot; 5-way; insulated; red



**Item No.: 859-405/000-029**  
 Jumper; for jumper slot; 5-way; insulated; yellow



**Item No.: 859-406/000-006**  
 Jumper; for jumper slot; 6-way; insulated; blue



**Item No.: 859-406**  
 Jumper; for jumper slot; 6-way; insulated; light gray



**Item No.: 859-406/000-005**  
 Jumper; for jumper slot; 6-way; insulated; red



**Item No.: 859-406/000-029**  
 Jumper; for jumper slot; 6-way; insulated; yellow



**Item No.: 859-407/000-006**  
 Jumper; for jumper slot; 7-way; insulated; blue



**Item No.: 859-407**  
 Jumper; for jumper slot; 7-way; insulated; light gray



**Item No.: 859-407/000-005**  
 Jumper; for jumper slot; 7-way; insulated; red

1.1.3.1 Jumper



**Item No.: 859-407/000-029**  
 Jumper; for jumper slot; 7-way; insulated; yellow



**Item No.: 859-408/000-006**  
 Jumper; for jumper slot; 8-way; insulated; blue



**Item No.: 859-408**  
 Jumper; for jumper slot; 8-way; insulated; light gray



**Item No.: 859-408/000-005**  
 Jumper; for jumper slot; 8-way; insulated; red



**Item No.: 859-408/000-029**  
 Jumper; for jumper slot; 8-way; insulated; yellow



**Item No.: 859-409/000-006**  
 Jumper; for jumper slot; 9-way; insulated; blue



**Item No.: 859-409**  
 Jumper; for jumper slot; 9-way; insulated; light gray



**Item No.: 859-409/000-005**  
 Jumper; for jumper slot; 9-way; insulated; red



**Item No.: 859-409/000-029**  
 Jumper; for jumper slot; 9-way; insulated; yellow

1.1.4 Marking

1.1.4.1 Double marker carrier



**Item No.: 209-128**  
 Adaptor; gray

1.1.4.2 Group marker carrier



**Item No.: 249-105**  
 Group marker carrier; gray

1.1.4.3 Marker



**Item No.: 209-183**  
 Marker; 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.: 793-502**  
 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-566**  
 WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-503**  
 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-504**  
 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-505**  
 WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 793-506**  
 WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; 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

#### 1.1.4.4 Marking device



**Item No.: 210-110**

Fiber-tip pen

#### 1.1.4.5 Marking strip



**Item No.: 2009-110**

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

#### 1.1.4.6 Protective marker cover



**Item No.: 209-184**

Protection cover; transparent

#### 1.1.5 Tool

##### 1.1.5.1 Operating tool

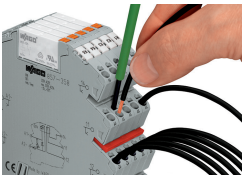


**Item No.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

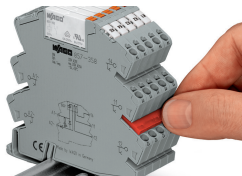
### Installation Notes

#### Conductor termination



Conductor termination

#### Commoning



Easy commoning using adjacent jumpers

## Marking



Marking via WMB Multi Marking System.

## Installation



Removing a relay via ejector.