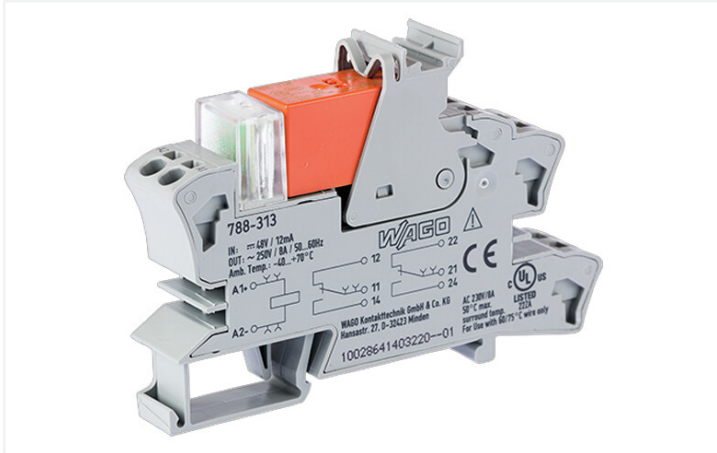


# Data Sheet | Item Number: 788-313

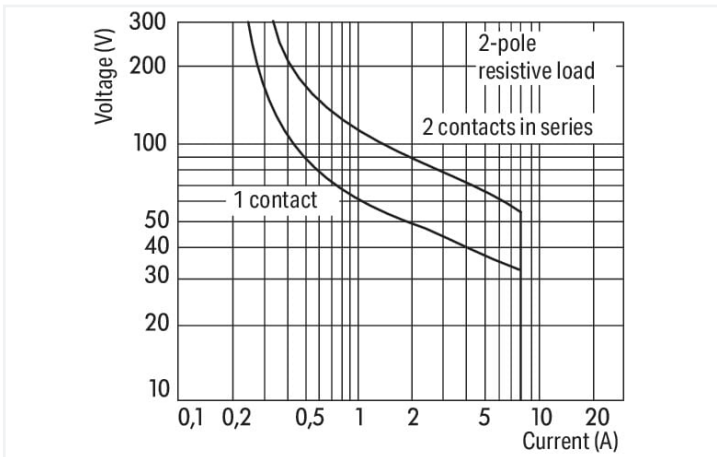
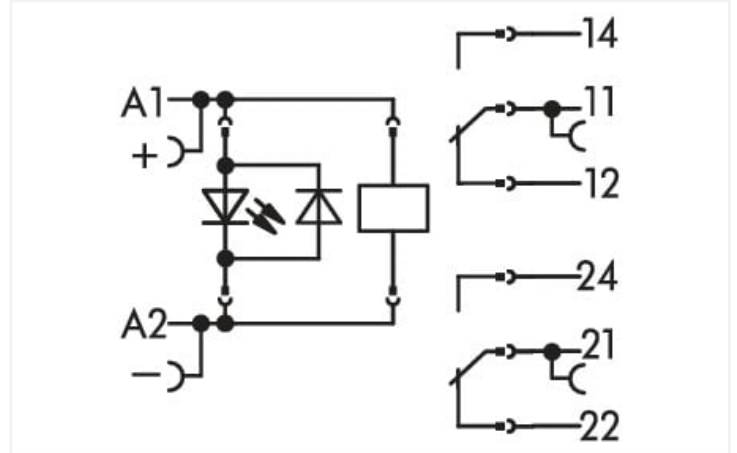
Relay module; Nominal input voltage: 48 VDC; 2 changeover contacts; Limiting continuous current: 8 A; Red status indicator; Module width: 15 mm; 2,50 mm<sup>2</sup>; gray



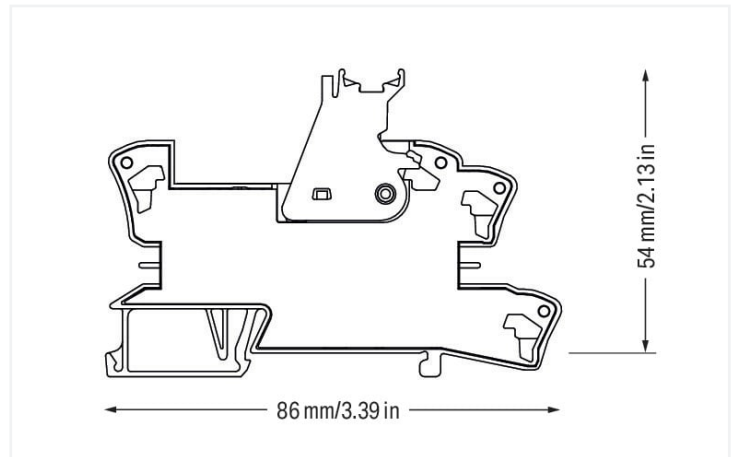
<https://www.wago.com/788-313>



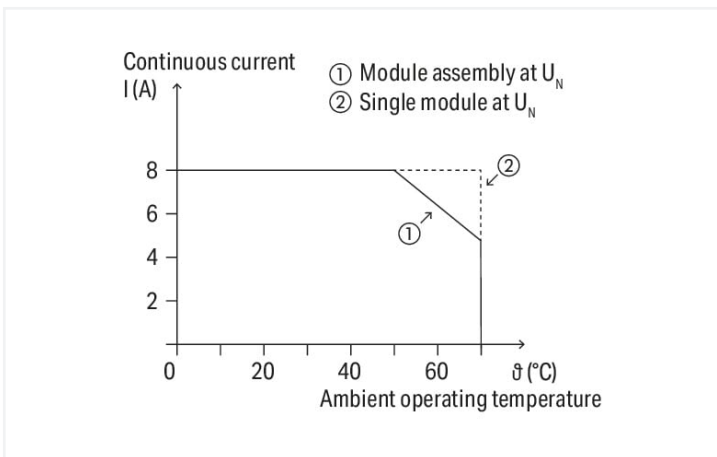
Color: ■ gray



DC load limit curve



Dimensions in mm



Current-carrying capacity curve

## Notes

|                    |  |
|--------------------|--|
| Safety information | A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.  |
| Note               | <ul style="list-style-type: none"> <li>Reinforced insulation between coil and contacts</li> <li>To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.</li> </ul> |

## Technical data

| Control circuit                |            | Load circuit                                 |  |
|--------------------------------|------------|--|--|
| Nominal input voltage $U_N$    | DC 48 V    | Number of changeover/switchover contacts     | 2  |
| Input voltage range            | $\pm 10\%$ | Contact material (relay)                     | AgNi 90/10                                     |
| Nominal input current at $U_N$ | 11 mA      | Limiting continuous current                  | 8 A  |
|                                |            | Inrush current (resistive) max.              | (AC) 15 A / 4 s                                |
|                                |            | Switching voltage (max.)                     | AC 250 V                                       |
|                                |            | Switching power (resistive) max.             | AC 2000 VA; DC (see load limit curve)          |
|                                |            | Switching capacity                           | AC-15: 3 A / AC 250 V; DC-13: 2 A / DC 24 V    |
|                                |            | Recommended minimum load                     | 12 V / 10 mA                                   |
|                                |            | Pull-in time (typ.)                          | 8 ms   |
|                                |            | Drop-out time (typ.)                         | 13 ms  |
|                                |            | Bounce time (typ.)                           | 10 ms  |
|                                |            | Electrical life (NO; resistive load; 23 °C)  | $10 \times 10^3$ switching operations          |
|                                |            | Mechanical life                              | $30 \times 10^6$ switching operations          |
|                                |            | Switching frequency with/without load (max.) | $6 \text{ min}^{-1}$ / $1200 \text{ min}^{-1}$ |

## Signaling

|                  |         |
|------------------|---------|
| Status indicator | Red LED |
|------------------|---------|

## Safety and protection

|  |   |
|--|---|
| Rated voltage  | 250 V   |
| Rated surge voltage                                    | 4 kV  |
| Pollution degree                                       | 3   |
| Dielectric strength (control/load circuit) (AC, 1 min) | 5 kVrms   |
| Dielectric strength (open contact) (AC, 1 min)         | 1 kVrms   |
| Dielectric strength (load/load circuit) (AC, 1 min)    | 2.5 kVrms   |
| Safety information                                     | A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements. |
| 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 |
| Strip length            | 9 ... 10 mm / 0.35 ... 0.39 inches           |

### Physical data

|                                   |                      |
|-----------------------------------|----------------------|
| Width                             | 15 mm / 0.591 inches |
| Height                            | 86 mm / 3.386 inches |
| Depth from upper-edge of DIN-rail | 54 mm / 2.126 inches |

### Mechanical data

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

### Material data

|           |          |
|-----------|----------|
| Color     | gray     |
| Fire load | 0.667 MJ |
| Weight    | 45.6 g   |

### Environmental requirements

|  |  |
|--|--|
| Ambient temperature (operation at $U_N$ )    | -40 ... +70 °C                             |
| Ambient temperature UL (operation at $U_N$ ) | -40 ... +50 °C                             |
| Ambient temperature (storage)                | -40 ... +70 °C                             |
| Processing temperature                       | -25 ... +50 °C                             |
| Temperature range of connection cable        | $\geq (T_{\text{ambient}} + 20 \text{ K})$ |

### Standards and specifications

|                          |  |
|--------------------------|--|
| Standards/specifications | EN 61010-2-201<br>EN 61810-1<br>EN 61373<br>UL 508 |
|--------------------------|--|

### Basic relay

|                  |         |
|------------------|---------|
| WAGO Basic Relay | 788-160 |
|------------------|---------|

### Commercial data

|                       |                          |
|-----------------------|--------------------------|
| Product Group         | 6 (INTERFACE ELECTRONIC) |
| eCl@ss 10.0           | 27-37-16-01              |
| eCl@ss 9.0            | 27-37-16-01              |
| ETIM 8.0              | EC001437                 |
| ETIM 7.0              | EC001437                 |
| PU (SPU)              | 20 (1) pcs               |
| Packaging type        | Box                      |
| Country of origin     | DE                       |
| GTIN                  | 4045454550370            |
| Customs tariff number | 85364900990              |

| Environmental Product Compliance          |   |
|---|---|
| CAS-No.                                   | 7439-92-1<br>79-94-7<br>80-05-7   |
| REACH Candidate List Substance            | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol<br>4,4'-isopropylidenediphenol<br>Lead |
| RoHS Compliance Status                    | Compliant,With Exemption  |
| RoHS Exemption                            | 6(c)<br>7(a)<br>7(c)-I<br>7(c)-II   |
| SCIP notification number (Bulgaria)       | 73d5cb2e-d36a-4445-9941-623ea07679bc  |
| SCIP notification number (Czech Republic) | 4f74200c-b4fd-4a10-be4f-76bc8b610bf8  |

### Approvals / Certificates

| General approvals   |                |                                 | Declarations of conformity and manufacturer's declarations   |  |  |          |          |                  |  |                |                                 |   |        |                     |
|---|----------------|---------------------------------|--|--|--|----------|----------|------------------|--|----------------|---------------------------------|---|--------|---------------------|
|   |                |                                 | <table border="1"> <thead> <tr> <th>Approval</th> <th>Standard</th> <th>Certificate Name</th> </tr> </thead> <tbody> <tr> <td>EAC<br/>Brjansker Zertifizierungsstelle</td> <td>TP TC 004/2011</td> <td>EAC RU C-DE.AM02.<br/>B.00122/19</td> </tr> <tr> <td>UL<br/>Underwriters Laboratories Inc. (ORDINARY LOCATIONS)</td> <td>UL 508</td> <td>E175199 Vol.1 Sec.6</td> </tr> </tbody> </table> |  |  | Approval | Standard | Certificate Name | EAC<br>Brjansker Zertifizierungsstelle | TP TC 004/2011 | EAC RU C-DE.AM02.<br>B.00122/19 | UL<br>Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | UL 508 | E175199 Vol.1 Sec.6 |
| Approval  | Standard       | Certificate Name                |  |  |  |          |          |                  |  |                |                                 |   |        |                     |
| EAC<br>Brjansker Zertifizierungsstelle                    | TP TC 004/2011 | EAC RU C-DE.AM02.<br>B.00122/19 |  |  |  |          |          |                  |  |                |                                 |   |        |                     |
| UL<br>Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | UL 508         | E175199 Vol.1 Sec.6             |  |  |  |          |          |                  |  |                |                                 |   |        |                     |


### Downloads




| Environmental Product Compliance         |                   |
|--|-------------------|
| Compliance Search                        |                   |
| Environmental Product Compliance 788-313 | <a href="#">↓</a> |

### Documentation

| Bid Text |            |                  |                   | Instruction Leaflet                |                       |                   |                   |
|----------|------------|------------------|-------------------|------------------------------------|-----------------------|-------------------|-------------------|
| 788-313  | 19.02.2019 | xml<br>4.60 KB   | <a href="#">↓</a> | Sockets with Elementary Relay/ SSR | V 1.0.1<br>09.10.2020 | pdf<br>2271.22 KB | <a href="#">↓</a> |
| 788-313  | 25.01.2019 | docx<br>16.58 KB | <a href="#">↓</a> |                                    |                       |                   |                   |

### CAD/CAE-Data

| CAD data   |
|--|
| 2D/3D Models 788-313  |

| CAE data  |
|---|
| EPLAN Data Portal 788-313  |
| WSCAD Universe 788-313     |
| ZUKEN Portal 788-313       |

## 1 Compatible Products

### 1.1 Optional Accessories

#### 1.1.1 Basic relay

##### 1.1.1.1 Basic relay



**Item No.: 788-160**  
 Basic relay; Nominal input voltage: 48 VDC; 2 changeover contacts; Limiting continuous current: 8 A; Module width: 13 mm; Module height: 15 mm

#### 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

**Item No.: 216-542**  
 Twin ferrule; Sleeve for 2 x 1 mm<sup>2</sup> / AWG 2 x 18; red, insulated; 12 mm long; red

#### 1.1.3 Indicators

##### 1.1.3.1 Status indication



**Item No.: 788-121**  
 Accessories for relay modules; Operation status indicator: red; Nominal operating voltage range: 48 ... 60 VDC

##### 1.1.4 Jumper

### 1.1.4.1 Jumper



**Item No.: 788-118**

Jumper; for jumper slot; 2-way; from 1 to 3; insulated; light gray

**Item No.: 788-113**

Jumper; for jumper slot; 2-way; insulated; light gray

**Item No.: 859-402**

Jumper; for jumper slot; 2-way; insulated; light gray

**Item No.: 788-114**

Jumper; for jumper slot; 3-way; insulated; light gray



**Item No.: 788-115**

Jumper; for jumper slot; 4-way; insulated; light gray

**Item No.: 788-116**

Jumper; for jumper slot; 6-way; insulated; light gray

**Item No.: 788-117**

Jumper; for jumper slot; 8-way; insulated; light gray

### 1.1.5 Marking

#### 1.1.5.1 Double marker carrier



**Item No.: 209-128**

Adaptor; gray

#### 1.1.5.2 Group marker carrier



**Item No.: 249-105**

Group marker carrier; gray

**Item No.: 209-145**

Group marker carrier; white

#### 1.1.5.3 Marker



**Item No.: 209-183**

Marker; white

**Item No.: 793-502**

WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white

**Item No.: 793-503**

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.: 793-501**

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

#### 1.1.5.4 Marking devices



**Item No.: 210-110**

Fiber-tip pen

#### 1.1.5.5 Marking strip



**Item No.: 2009-110**

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

### 1.1.5.6 Protective marker cover



Item No.: [209-184](#)

Protection cover; transparent

### 1.1.6 Tool

#### 1.1.6.1 Operating tool

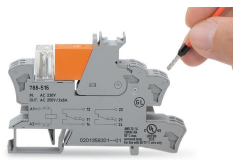


Item No.: [210-720](#)

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 using WMB Multi markers and group marker carriers.