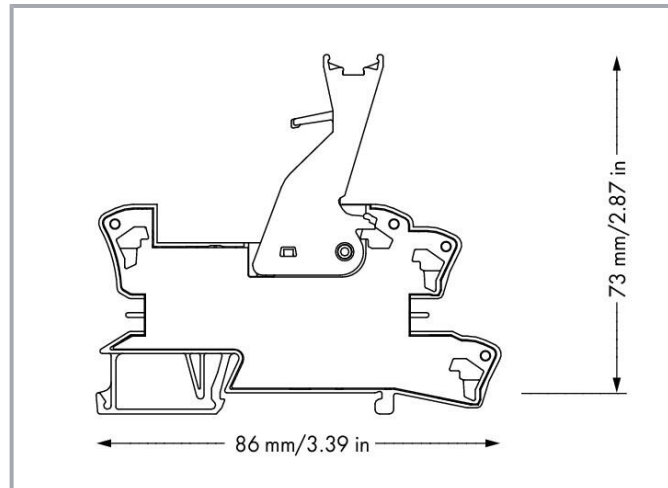
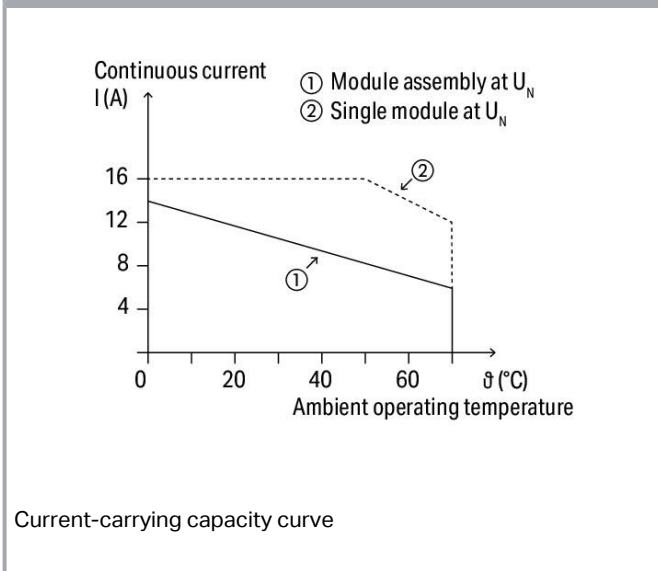
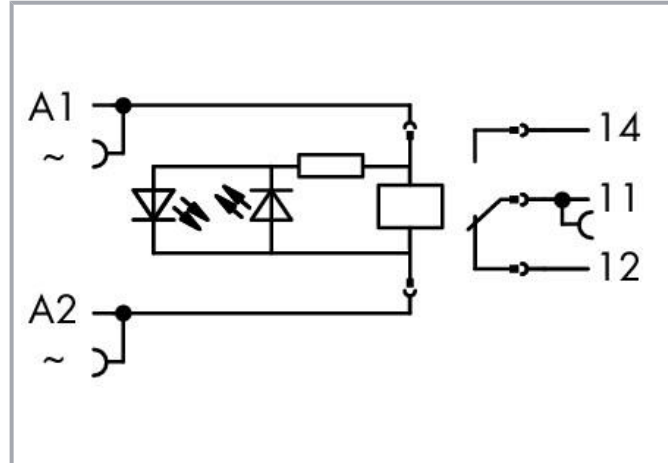
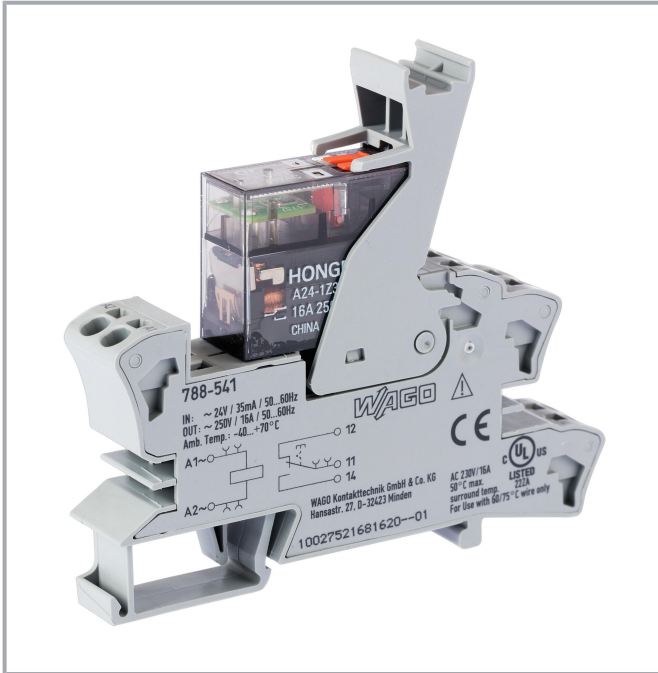


**Data sheet | Item number: 788-541**

Relay module; Nominal input voltage: 24 VAC; 1 changeover contact;  
Limiting continuous current: 16 A; with manual operation; Red status  
indicator; Module width: 15 mm



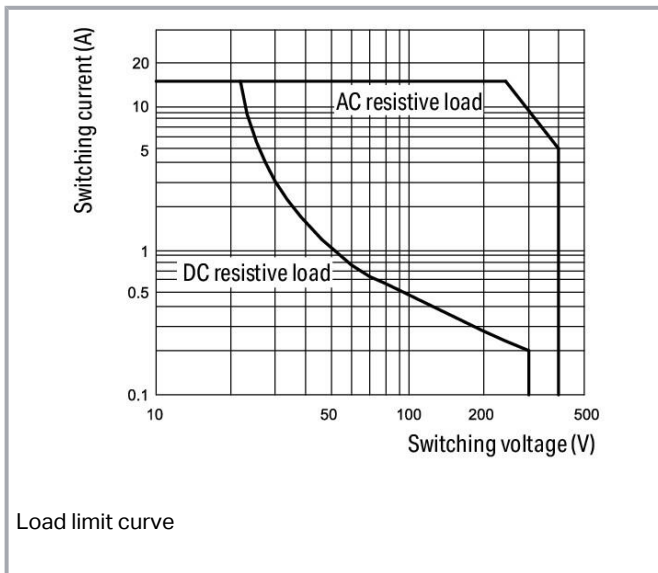
[www.wago.com/788-541](http://www.wago.com/788-541)



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

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## Data

### 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

- Reinforced insulation between coil and contacts
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

## Technical data

### Control Circuit

|                                |         |
|--------------------------------|---------|
| Nominal input voltage $U_N$    | AC 24 V |
| Input voltage range            | ±10 %   |
| Nominal input current at $U_N$ | 32 mA   |

### Load circuit

|  |      |
|--|------|
| Number of changeover/switchover contacts | 1    |
| Contact material (relay)                 | AgNi |
| Limiting continuous current              | 16 A |

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|  |   |
|--|---|
| Inrush current (resistive) max.              | (AC) 32 A / 0.02 s; (AC) 24 A / 4 s         |
| Switching voltage (max.)                     | AC 250 V                                    |
| Switching power (resistive) max.             | AC 4000 VA; DC (see load limit curve)       |
| Switching capacity                           | AC-15: 3 A / AC 240 V; DC-13: 2 A / DC 24 V |
| Recommended minimum load                     | 12 V / 10 mA                                |
| Pull-in time (typ.)                          | 15 ms                                       |
| Drop-out time (typ.)                         | 8 ms  |
| Bounce time (typ.)                           | 6 ms  |
| Electrical life (NO; resistive load; 23 °C)  | 10 x 10 <sup>3</sup> switching operations   |
| Mechanical life                              | 5 x 10 <sup>6</sup> switching operations    |
| Switching frequency with/without load (max.) | 6 min <sup>-1</sup> / 300 min <sup>-1</sup> |

## Signaling

|                  |                       |
|------------------|-----------------------|
| Status indicator | Red LED<br>Mechanical |
|------------------|-----------------------|

## 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   |
| 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 |

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|                                   |                      |
|-----------------------------------|----------------------|
| Depth from upper-edge of DIN-rail | 73 mm / 2.874 inches |
|-----------------------------------|----------------------|

### Mechanical data

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

### Material Data

|           |          |
|-----------|----------|
| Fire load | 0.669 MJ |
|-----------|----------|

|        |      |
|--------|------|
| Weight | 47 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 (max. 10 A) |
|--------------------------|--|

### 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) | 15 (1) pcs |
|----------|------------|

|                |     |
|----------------|-----|
| Packaging type | box |
|----------------|-----|

|                   |    |
|-------------------|----|
| Country of origin | DE |
|-------------------|----|

|      |               |
|------|---------------|
| GTIN | 4050821226895 |
|------|---------------|

|                       |             |
|-----------------------|-------------|
| Customs tariff number | 85364900990 |
|-----------------------|-------------|

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

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## Environmental Product Compliance

RoHS Compliance Status


Compliant, No Exemption

## Approvals / Certificates

### General approvals



| Logo   | Approval  | Additional Approval Text | Certificate name            |
|--|---|--------------------------|-----------------------------|
|  | EAC<br>Brjansker Zertifizierungsstelle                    | TP TC 004/2011           | EAC RU C-DE.AM02.B.00122/19 |
|  | UL<br>Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | UL 508                   | E175199<br>Vol.1 Sec. 6     |

### Declarations of conformity and manufacturer's declarations

| Logo   | Approval   | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | -                        | -                |

## Optional accessories

### Jumpers

| Jumper   |   |  |
|--|---|--|
|  | <b>Item no.: 788-116</b><br>Jumper; for jumper slot; 6-way; insulated; light gray | <a href="http://www.wago.com/788-116">www.wago.com/788-116</a> |
|  | <b>Item no.: 788-117</b><br>Jumper; for jumper slot; 8-way; insulated; light gray | <a href="http://www.wago.com/788-117">www.wago.com/788-117</a> |
|  | <b>Item no.: 788-114</b><br>Jumper; for jumper slot; 3-way; insulated; light gray | <a href="http://www.wago.com/788-114">www.wago.com/788-114</a> |
|  | <b>Item no.: 788-113</b><br>Jumper; for jumper slot; 2-way; insulated; light gray | <a href="http://www.wago.com/788-113">www.wago.com/788-113</a> |
|  | <b>Item no.: 788-115</b><br>Jumper; for jumper slot; 4-way; insulated; light gray | <a href="http://www.wago.com/788-115">www.wago.com/788-115</a> |

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



**Item no.: 859-402**

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

[www.wago.com/859-402](http://www.wago.com/859-402)



**Item no.: 788-118**

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

[www.wago.com/788-118](http://www.wago.com/788-118)

### Filter Module

Suppressor module



**Item no.: 788-148**

Filter module; RC filter element; Nominal voltage: 230 VAC

[www.wago.com/788-148](http://www.wago.com/788-148)

### Marking accessories

Marking strip



**Item no.: 2009-110**

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

[www.wago.com/2009-110](http://www.wago.com/2009-110)

Double marker carrier



**Item no.: 209-128**

Adaptor; gray

[www.wago.com/209-128](http://www.wago.com/209-128)

Marking devices



**Item no.: 210-110**

Fiber-tip pen

[www.wago.com/210-110](http://www.wago.com/210-110)

Protective marker cover



**Item no.: 209-184**

Protection cover; transparent

[www.wago.com/209-184](http://www.wago.com/209-184)

Marker



**Item no.: 2009-115**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/2009-115](http://www.wago.com/2009-115)



**Item no.: 209-183**

Marker; white

[www.wago.com/209-183](http://www.wago.com/209-183)



**Item no.: 793-501**

WMB marking card; as card; not stretchable; plain; snap-on type; white

[www.wago.com/793-501](http://www.wago.com/793-501)



**Item no.: 793-502**

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

[www.wago.com/793-502](http://www.wago.com/793-502)



**Item no.: 793-503**

WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-503](http://www.wago.com/793-503)

**Item no.: 793-504**

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WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; [www.wago.com/793-504](http://www.wago.com/793-504)  
white

**Item no.: 793-505**

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; [www.wago.com/793-505](http://www.wago.com/793-505)  
white

## Group marker carrier

**Item no.: 209-145**

Group marker carrier; white

[www.wago.com/209-145](http://www.wago.com/209-145)

**Item no.: 249-105**

Group marker carrier; gray

[www.wago.com/249-105](http://www.wago.com/249-105)

## Ferrule

## 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

[www.wago.com/216-241](http://www.wago.com/216-241)

**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

[www.wago.com/216-242](http://www.wago.com/216-242)

**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

[www.wago.com/216-243](http://www.wago.com/216-243)

**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

[www.wago.com/216-244](http://www.wago.com/216-244)

**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

[www.wago.com/216-542](http://www.wago.com/216-542)

## Indicators

## Status indication

**Item no.: 788-123**

Accessories for relay modules; Operation status indicator: red; Nominal operating voltage: 24 VAC

[www.wago.com/788-123](http://www.wago.com/788-123)

## Tool

## Operating tool

**Item no.: 210-720**

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

[www.wago.com/210-720](http://www.wago.com/210-720)

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

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## Downloads

### Documentation

#### Bid Text

|                        |             |               |          |
|------------------------|-------------|---------------|----------|
| 788-541<br>X81 - Datei | 2019 Feb 19 | xml<br>5.1 kB | Download |
|------------------------|-------------|---------------|----------|

|                         |             |                 |          |
|-------------------------|-------------|-----------------|----------|
| 788-541<br>docx - Datei | 2019 Jan 25 | docx<br>17.2 kB | Download |
|-------------------------|-------------|-----------------|----------|

#### Instruction Leaflet

|                                    |                       |               |          |
|------------------------------------|-----------------------|---------------|----------|
| Sockets with Elementary Relay/ SSR | V 1.0.1<br>2020 Oct 9 | pdf<br>2.3 MB | Download |
|------------------------------------|-----------------------|---------------|----------|

#### Additional Information

|   |                        |               |          |
|---|------------------------|---------------|----------|
| Disposal and Recycling<br>Electrical and electronic equipment, Batteries, Packaging | V 1.1.0<br>2022 Aug 18 | pdf<br>2.2 MB | Download |
|---|------------------------|---------------|----------|

## CAD/CAE-Data

### CAE data

|                        |  |     |          |
|------------------------|--|-----|----------|
| WSCAD Universe 788-541 |  | URL | Download |
|------------------------|--|-----|----------|

|                      |  |     |          |
|----------------------|--|-----|----------|
| ZUKEN Portal 788-541 |  | URL | Download |
|----------------------|--|-----|----------|

|                           |  |     |          |
|---------------------------|--|-----|----------|
| EPLAN Data Portal 788-541 |  | URL | Download |
|---------------------------|--|-----|----------|

### CAD data

|                      |  |     |          |
|----------------------|--|-----|----------|
| 2D/3D Models 788-541 |  | URL | Download |
|----------------------|--|-----|----------|

## Environmental Product Compliance

### Compliance Search

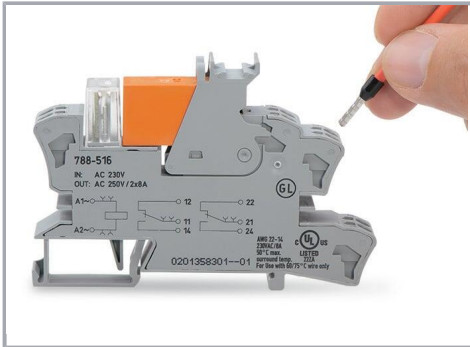
|  |  |     |          |
|--|--|-----|----------|
| Environmental Product Compliance 788-541<br>Relay module; Nominal input voltage: 24 VAC; 1 changeover contact; Limiting continuous current: 16 A; with manual operation; Red status indicator; Module width: 15 mm |  | URL | Download |
|--|--|-----|----------|

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



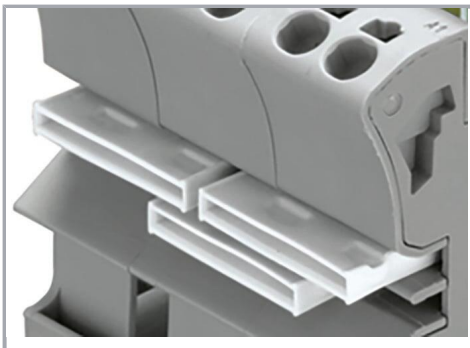
## Installation Notes

### Conductor termination



### Conductor termination

### Commoning



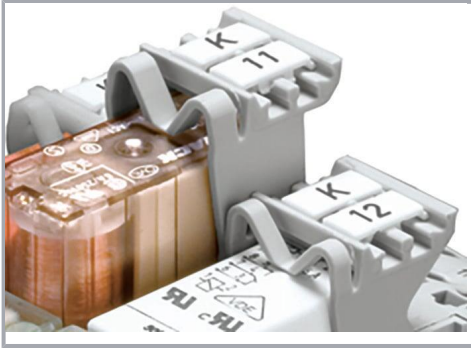
Easy commoning using adjacent jumpers

### Marking

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Marking using WMB Multi markers and group marker carriers.

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