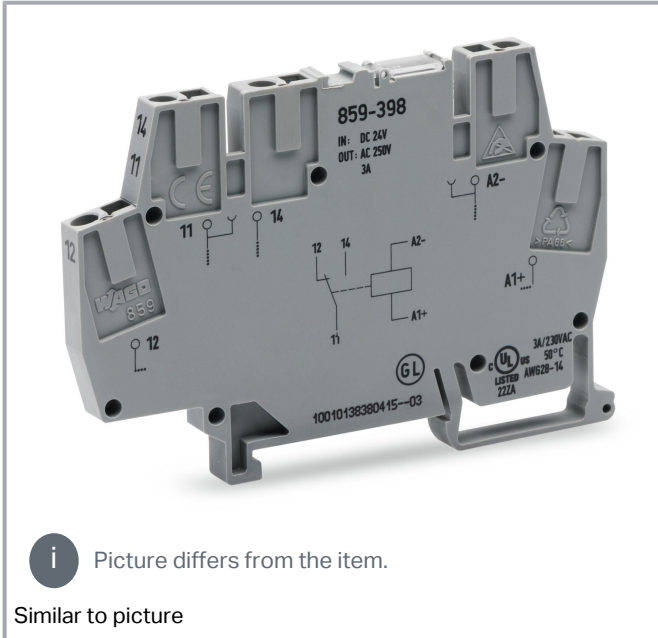


# Data sheet | Item number: 859-397

Relay module; Nominal input voltage: 48 VDC; 1 changeover contact;  
Railway; Red status indicator; Module width: 6 mm

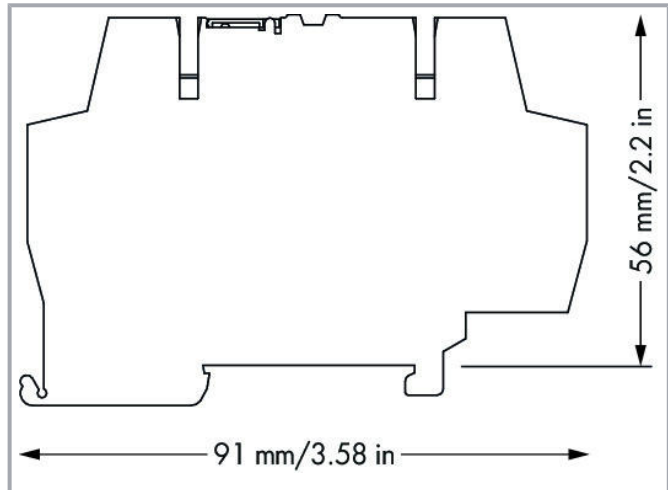
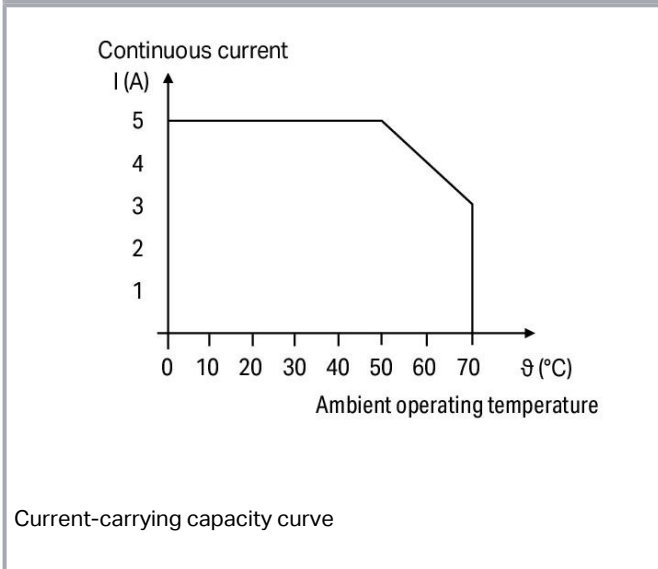
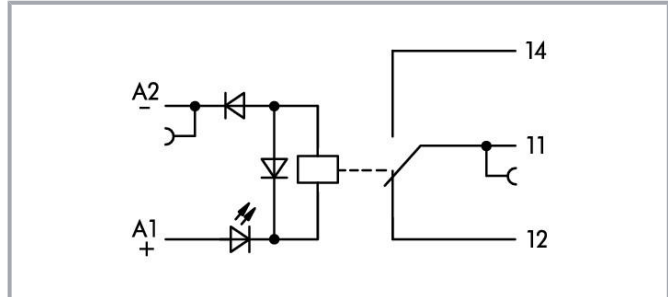


[www.wago.com/859-397](http://www.wago.com/859-397)



**i** Picture differs from the item.

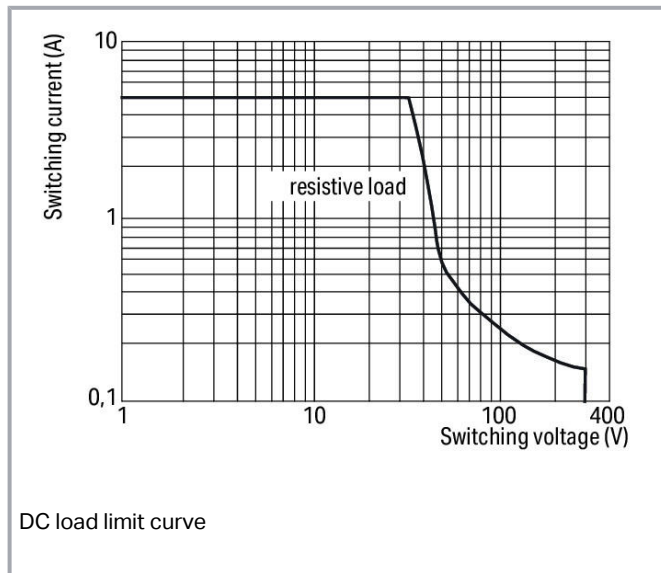
Similar to picture



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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

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## Item description

### Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

## Data

### Technical data

### Control circuit

|                                |            |
|--------------------------------|------------|
| Nominal input voltage $U_N$    | DC 48 V    |
| Input voltage range            | $\pm 40\%$ |
| Nominal input current at $U_N$ | 7.9 mA     |

### Load circuit

|                                    |                                       |
|------------------------------------|---------------------------------------|
| Number of changeover contacts      | 1                                     |
| Contact material (relay)           | AgSnO <sub>2</sub>                    |
| Limiting continuous current        | 5 A                                   |
| Switching voltage (max.)           | AC 250 V                              |
| Switching power (resistive) (max.) | AC 1250 VA; DC (see load limit curve) |
| Recommended minimum load           | 10 V / 10 mA; 24 V / 1 mA             |
| Pull-in time (typ.)                | 15 ms                                 |

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

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|  |   |
|--|---|
| Drop-out time (typ.)                         | 25 ms                                       |
| Bounce time (typ.)                           | 3.5 ms                                      |
| Electrical life (NO; resistive load; 23 °C)  | 50 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> / 180 min <sup>-1</sup> |

## Signaling

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

## Safety and protection

|   |         |
|---|---------|
| Rated voltage   | 250 V   |
| Rated surge voltage                                   | 4 kV    |
| Pollution degree                                      | 2       |
| Dielectric strength, control/load circuit (AC, 1 min) | 4 kVrms |
| Dielectric strength, open contact (AC, 1 min)         | 1 kVrms |

## Connection data

|                         |  |
|-------------------------|--|
| Connection technology   | CAGE CLAMP®                                  |
| Solid conductor         | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG |
| Strip length            | 5 ... 6 mm / 0.2 ... 0.24 inch               |

## Physical data

|                                    |                    |
|------------------------------------|--------------------|
| Width                              | 6 mm / 0.236 inch  |
| Height from upper-edge of DIN-rail | 56 mm / 2.205 inch |
| Depth                              | 91 mm / 3.583 inch |

## Mechanical data

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

## Material data

|           |          |
|-----------|----------|
| Fire load | 0.313 MJ |
| Weight    | 23.2 g   |

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

## Environmental requirements

|   |  |
|---|--|
| Surrounding air temperature (operation at $U_N$ ) | -40 ... 70 °C                            |
| Surrounding air temperature (storage)             | -40 ... 70 °C                            |
| Processing temperature                            | -25 ... +50 °C                           |
| Relative humidity                                 | 5 ... 95 % (no condensation permissible) |
| Operating altitude (max.)                         | 2000 m                                   |

## Standards and specifications



|                          |  |
|--------------------------|--|
| Standards/Specifications | EN 61010-2-201<br>EN 61810-1<br>EN 61373<br>GL |
|--------------------------|--|

## Commercial data

|                       |                           |
|-----------------------|---------------------------|
| Product Group         | 6 (Interface Electronics) |
| Packaging type        | BOX                       |
| Country of origin     | DE                        |
| GTIN                  | 4055143604468             |
| Customs tariff number | 8536490050                |

## Approvals / Certificates















### Ship Approvals

| Logo  | Approval  | Additional Approval Text | Certificate name      |
|---|---|--------------------------|-----------------------|
|   | <b>DNV GL</b><br>Det Norske Veritas, Germanischer Lloyd | -                        | TAA00001D1            |
|   | <b>NK</b><br>Nippon Kaiji Kyokai                        | -                        | TA17255M              |
|  | <b>PRS</b><br>Polski Rejestr Statków                    | -                        | TE/2186<br>/880590/18 |

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















## Optional accessories

### Jumpers









|  |  |  |
|--|--|--|
|    | <b>Item no.: 859-402</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 2-position | <a href="http://www.wago.com/859-402">www.wago.com/859-402</a>                 |
|    | <b>Item no.: 859-402/000-005</b><br>Jumper; for jumper slot; 2-way; insulated; red           | <a href="http://www.wago.com/859-402/000-005">www.wago.com/859-402/000-005</a> |
|    | <b>Item no.: 859-402/000-006</b><br>Jumper; for jumper slot; 2-way; insulated; blue          | <a href="http://www.wago.com/859-402/000-006">www.wago.com/859-402/000-006</a> |
|    | <b>Item no.: 859-402/000-029</b><br>Jumper; for jumper slot; 2-way; insulated; yellow        | <a href="http://www.wago.com/859-402/000-029">www.wago.com/859-402/000-029</a> |
|    | <b>Item no.: 859-403</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 3-position | <a href="http://www.wago.com/859-403">www.wago.com/859-403</a>                 |
|    | <b>Item no.: 859-403/000-005</b><br>Jumper; for jumper slot; 3-way; insulated; red           | <a href="http://www.wago.com/859-403/000-005">www.wago.com/859-403/000-005</a> |
|   | <b>Item no.: 859-403/000-006</b><br>Jumper; for jumper slot; 3-way; insulated; blue          | <a href="http://www.wago.com/859-403/000-006">www.wago.com/859-403/000-006</a> |
|  | <b>Item no.: 859-403/000-029</b><br>Jumper; for jumper slot; 3-way; insulated; yellow        | <a href="http://www.wago.com/859-403/000-029">www.wago.com/859-403/000-029</a> |
|  | <b>Item no.: 859-404</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 4-position | <a href="http://www.wago.com/859-404">www.wago.com/859-404</a>                 |
|  | <b>Item no.: 859-404/000-005</b><br>Jumper; for jumper slot; 4-way; insulated; red           | <a href="http://www.wago.com/859-404/000-005">www.wago.com/859-404/000-005</a> |
|  | <b>Item no.: 859-404/000-006</b><br>Jumper; for jumper slot; 4-way; insulated; blue          | <a href="http://www.wago.com/859-404/000-006">www.wago.com/859-404/000-006</a> |
|  | <b>Item no.: 859-404/000-029</b><br>Jumper; for jumper slot; 4-way; insulated; yellow        | <a href="http://www.wago.com/859-404/000-029">www.wago.com/859-404/000-029</a> |
|  | <b>Item no.: 859-405</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 5-position | <a href="http://www.wago.com/859-405">www.wago.com/859-405</a>                 |
|  | <b>Item no.: 859-405/000-005</b><br>Jumper; for jumper slot; 5-way; insulated; red           | <a href="http://www.wago.com/859-405/000-005">www.wago.com/859-405/000-005</a> |

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



|  |  |  |
|--|--|--|
|     | <b>Item no.: 859-405/000-006</b><br>Jumper; for jumper slot; 5-way; insulated; blue          | <a href="http://www.wago.com/859-405/000-006">www.wago.com/859-405/000-006</a> |
|     | <b>Item no.: 859-405/000-029</b><br>Jumper; for jumper slot; 5-way; insulated; yellow        | <a href="http://www.wago.com/859-405/000-029">www.wago.com/859-405/000-029</a> |
|     | <b>Item no.: 859-406</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 6-position | <a href="http://www.wago.com/859-406">www.wago.com/859-406</a>                 |
|     | <b>Item no.: 859-406/000-005</b><br>Jumper; for jumper slot; 6-way; insulated; red           | <a href="http://www.wago.com/859-406/000-005">www.wago.com/859-406/000-005</a> |
|     | <b>Item no.: 859-406/000-006</b><br>Jumper; for jumper slot; 6-way; insulated; blue          | <a href="http://www.wago.com/859-406/000-006">www.wago.com/859-406/000-006</a> |
|     | <b>Item no.: 859-406/000-029</b><br>Jumper; for jumper slot; 6-way; insulated; signal yellow | <a href="http://www.wago.com/859-406/000-029">www.wago.com/859-406/000-029</a> |
|     | <b>Item no.: 859-407</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 7-position | <a href="http://www.wago.com/859-407">www.wago.com/859-407</a>                 |
|   | <b>Item no.: 859-407/000-005</b><br>Jumper; for jumper slot; 7-way; insulated; red           | <a href="http://www.wago.com/859-407/000-005">www.wago.com/859-407/000-005</a> |
|   | <b>Item no.: 859-407/000-006</b><br>Jumper; for jumper slot; 7-way; insulated; blue          | <a href="http://www.wago.com/859-407/000-006">www.wago.com/859-407/000-006</a> |
|   | <b>Item no.: 859-407/000-029</b><br>Jumper; for jumper slot; 7-way; insulated; yellow        | <a href="http://www.wago.com/859-407/000-029">www.wago.com/859-407/000-029</a> |
|  | <b>Item no.: 859-408</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 8-position | <a href="http://www.wago.com/859-408">www.wago.com/859-408</a>                 |
|  | <b>Item no.: 859-408/000-005</b><br>Jumper; for jumper slot; 8-way; insulated; red           | <a href="http://www.wago.com/859-408/000-005">www.wago.com/859-408/000-005</a> |
|  | <b>Item no.: 859-408/000-006</b><br>Jumper; for jumper slot; 8-way; insulated; blue          | <a href="http://www.wago.com/859-408/000-006">www.wago.com/859-408/000-006</a> |
|  | <b>Item no.: 859-408/000-029</b><br>Jumper; for jumper slot; 8-way; insulated; yellow        | <a href="http://www.wago.com/859-408/000-029">www.wago.com/859-408/000-029</a> |

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

|   |   |  |
|---|---|--|
|   | <b>Item no.: 859-409</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 9-position  | <a href="http://www.wago.com/859-409">www.wago.com/859-409</a>                 |
|   | <b>Item no.: 859-409/000-005</b><br>Jumper; for jumper slot; 9-way; insulated; red            | <a href="http://www.wago.com/859-409/000-005">www.wago.com/859-409/000-005</a> |
|   | <b>Item no.: 859-409/000-006</b><br>Jumper; for jumper slot; 9-way; insulated; blue           | <a href="http://www.wago.com/859-409/000-006">www.wago.com/859-409/000-006</a> |
|   | <b>Item no.: 859-409/000-029</b><br>Jumper; for jumper slot; 9-way; insulated; yellow         | <a href="http://www.wago.com/859-409/000-029">www.wago.com/859-409/000-029</a> |
|    | <b>Item no.: 859-410</b><br>Push-in type jumper bar; Light gray; Insulated; 18 A; 10-position | <a href="http://www.wago.com/859-410">www.wago.com/859-410</a>                 |
|    | <b>Item no.: 859-410/000-005</b><br>Jumper; for jumper slot; 10-way; insulated; red           | <a href="http://www.wago.com/859-410/000-005">www.wago.com/859-410/000-005</a> |
|    | <b>Item no.: 859-410/000-006</b><br>Jumper; for jumper slot; 10-way; insulated; blue          | <a href="http://www.wago.com/859-410/000-006">www.wago.com/859-410/000-006</a> |
|  | <b>Item no.: 859-410/000-029</b><br>Jumper; for jumper slot; 10-way; insulated; yellow        | <a href="http://www.wago.com/859-410/000-029">www.wago.com/859-410/000-029</a> |

**Ferrules**










|   |  |  |
|---|--|--|
|  | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white   | <a href="http://www.wago.com/216-221">www.wago.com/216-221</a> |
|  | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray   | <a href="http://www.wago.com/216-222">www.wago.com/216-222</a> |
|  | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red       | <a href="http://www.wago.com/216-223">www.wago.com/216-223</a> |
|  | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black   | <a href="http://www.wago.com/216-224">www.wago.com/216-224</a> |
|  | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow | <a href="http://www.wago.com/216-321">www.wago.com/216-321</a> |
|  | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green  | <a href="http://www.wago.com/216-322">www.wago.com/216-322</a> |

**End plates**

|   |  |  |
|---|--|--|
|  | <b>Item no.: 859-525</b><br>End and intermediate plate; 1 mm thick; Gray | <a href="http://www.wago.com/859-525">www.wago.com/859-525</a> |
|---|--|--|

**Marking accessories**

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

|   |   |  |
|---|---|--|
|    | <b>Item no.: 2009-145</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white      | <a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a> |
|    | <b>Item no.: 210-110</b><br>Fiber-tip pen   | <a href="http://www.wago.com/210-110">www.wago.com/210-110</a>   |
|    | <b>Item no.: 248-501</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white                                       | <a href="http://www.wago.com/248-501">www.wago.com/248-501</a>   |
|    | <b>Item no.: 248-502</b><br>Mini-WSB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white  | <a href="http://www.wago.com/248-502">www.wago.com/248-502</a>   |
|    | <b>Item no.: 248-503</b><br>Mini-WSB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-503">www.wago.com/248-503</a>   |
|    | <b>Item no.: 248-504</b><br>Mini-WSB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-504">www.wago.com/248-504</a>   |
|    | <b>Item no.: 248-506</b><br>Mini-WSB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-506">www.wago.com/248-506</a>   |
| <b>Tools</b>  |   |  |
|    | <b>Item no.: 210-720</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured                              | <a href="http://www.wago.com/210-720">www.wago.com/210-720</a>   |
| <b>Testing accessories</b>  |   |  |
|  | <b>Item no.: 859-500</b><br>Test pin; 1 mm Ø; with solder connection for test wire  | <a href="http://www.wago.com/859-500">www.wago.com/859-500</a>   |

## Downloads

### Documentation

#### Bid Text

|                         |              |                 |          |
|-------------------------|--------------|-----------------|----------|
| 859-397<br>X81 - Datei  | Feb 19, 2019 | xml<br>4.6 kB   | Download |
| 859-397<br>docx - Datei | Feb 20, 2019 | docx<br>17.3 kB | Download |

#### Instruction Leaflet

|                                    |                         |               |          |
|------------------------------------|-------------------------|---------------|----------|
| Relay modules, Optocoupler modules | V 1.2.0<br>Aug 30, 2019 | pdf<br>2.2 MB | Download |
|------------------------------------|-------------------------|---------------|----------|

#### Additional Information

|  |         |     |          |
|--|---------|-----|----------|
| Disposal; Electrical and electronic equipment, Packaging | V 1.0.0 | pdf | Download |
|--|---------|-----|----------|

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

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## CAD files

### CAD data

|                      | URL | Download |
|----------------------|-----|----------|
| 2D/3D Models 859-397 |     |          |

### CAE data

|                           |     |          |
|---------------------------|-----|----------|
| EPLAN Data Portal 859-397 | URL | Download |
|---------------------------|-----|----------|

|                        |     |          |
|------------------------|-----|----------|
| WSCAD Universe 859-397 | URL | Download |
|------------------------|-----|----------|

|                      |     |          |
|----------------------|-----|----------|
| ZUKEN Portal 859-397 | URL | Download |
|----------------------|-----|----------|

## Environmental Product Compliance

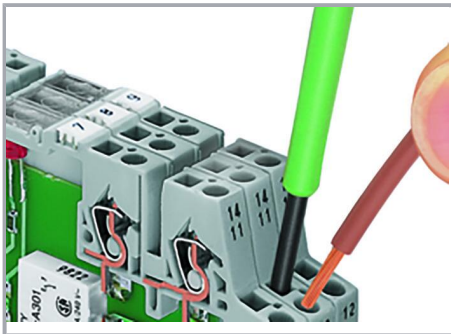
### Compliance Search

|  |     |          |
|--|-----|----------|
| Environmental Product Compliance 859-397 | URL | Download |
|--|-----|----------|

Relay module; Nominal input voltage: 48 VDC; 1 changeover contact; Railway; Red status indicator; Module width: 6 mm

## Installation Notes

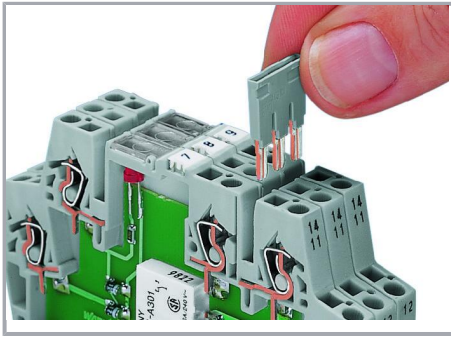
### Conductor termination



### Conductor termination

### Commoning

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



Easy commoning using adjacent jumpers

### Marking



Marking via Mini-WSB Quick Marking System

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

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