

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Pre-assembled relay module with screw connection, consisting of: relay base with ejector and power contact relay. Contact type: 1 changeover contact. Input voltage: 24 V DC

### Product Description

The pluggable electromechanical and solid-state relays in the RIFLINE complete product range and the base are recognized and approved in accordance with UL 508.

The relevant approvals can be called up at the individual components in question.

**RoHS**

COMPLIES WITH

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 10 pc                                                                                                   |
| GTIN         | <br>4 046356 732024 |
| GTIN         | 4046356732024                                                                                           |

### Technical data

#### Note

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---------------------------------------------------------------------------|

#### Dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 84 mm  |
| Depth  | 82 mm  |

#### Ambient conditions

|                                         |                   |
|-----------------------------------------|-------------------|
| Ambient temperature (operation)         | -40 °C ... 60 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C  |
| Degree of protection                    | IP20 (Relay base) |
|                                         | RT III (Relay)    |

#### Coil side

|                             |         |
|-----------------------------|---------|
| Nominal input voltage $U_N$ | 24 V DC |
|-----------------------------|---------|

# Relay Module - RIF-0-RSC-24DC/21 - 2903374

## Technical data

### Coil side

|                                           |               |
|-------------------------------------------|---------------|
| Input voltage range in reference to $U_N$ | see diagram   |
| Typical input current at $U_N$            | 9 mA          |
| Typical response time                     | 5 ms          |
| Typical release time                      | 8 ms          |
| Coil voltage                              | 24 V DC       |
| Protective circuit                        | Damping diode |
| Operating voltage display                 | Yellow LED    |
| Power dissipation for nominal condition   | 0.22 W        |

### Contact side

|                                       |                        |
|---------------------------------------|------------------------|
| Contact type                          | 1 PDT                  |
| Type of switch contact                | Single contact         |
| Contact material                      | AgSnO                  |
| Maximum switching voltage             | 250 V AC/DC            |
| Minimum switching voltage             | 5 V (at 100 mA)        |
| Min. switching current                | 10 mA (at 12 V)        |
| Limiting continuous current           | 6 A                    |
| Interrupting rating (ohmic load) max. | 140 W (at 24 V DC)     |
|                                       | 20 W (at 48 V DC)      |
|                                       | 18 W (at 60 V DC)      |
|                                       | 23 W (at 110 V DC)     |
|                                       | 40 W (at 220 V DC)     |
|                                       | 1500 VA (for 250 V AC) |
| Switching capacity                    | 2 A (24 V (DC13))      |
|                                       | 0.2 A (at 110 V, DC13) |
|                                       | 0.1 A (at 220 V, DC13) |
|                                       | 3 A (at 24 V, AC15)    |
|                                       | 3 A (at 120 V, AC15)   |
|                                       | 3 A (at 230 V, AC15)   |

### General

|                                          |                                     |
|------------------------------------------|-------------------------------------|
| Test voltage relay winding/relay contact | 4 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Operating mode                           | 100% operating factor               |
| Flammability rating according to UL 94   | V2 (Housing)                        |
| Mechanical service life                  | approx. $2 \times 10^7$ cycles      |
| Service life, electrical                 | see diagram                         |
| Mounting position                        | any                                 |
| Assembly instructions                    | In rows with zero spacing           |

### Connection data

|                   |                  |
|-------------------|------------------|
| Connection name   | Coil side        |
| Connection method | Screw connection |

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Technical data

#### Connection data

|                                                                         |                                                                               |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Stripping length                                                        | 7 mm                                                                          |
| Conductor cross section solid                                           | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                     |
| Conductor cross-section solid (2 conductors with same cross section)    | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
| Conductor cross section flexible                                        | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                   |
|                                                                         | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Ferrules without plastic sleeve) |
|                                                                         | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve)     |
| Conductor cross section flexible (2 conductors with same cross section) | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
|                                                                         | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule with plastic sleeve)  |
| Conductor cross section AWG                                             | 20 ... 12 (solid)                                                             |
|                                                                         | 20 ... 14 (flexible)                                                          |
| Torque                                                                  | 0.5 Nm ... 0.6 Nm                                                             |

#### Connection data 2

|                                                                         |                                                                               |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Connection name                                                         | Contact side                                                                  |
| Connection method                                                       | Screw connection                                                              |
| Stripping length                                                        | 7 mm                                                                          |
| Conductor cross section solid                                           | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                     |
| Conductor cross-section solid (2 conductors with same cross section)    | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
| Conductor cross section flexible                                        | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                   |
|                                                                         | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Ferrules without plastic sleeve) |
|                                                                         | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve)     |
| Conductor cross section flexible (2 conductors with same cross section) | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
|                                                                         | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule with plastic sleeve)  |
| Conductor cross section AWG                                             | 20 ... 12 (solid)                                                             |
|                                                                         | 20 ... 14 (flexible)                                                          |
| Torque                                                                  | 0.5 Nm ... 0.6 Nm                                                             |

#### Standards and Regulations

|                          |                |
|--------------------------|----------------|
| Standards/regulations    | DIN EN 50178   |
| Rated insulation voltage | 250 V AC       |
| Rated surge voltage      | 6 kV           |
| Insulation               | safe isolation |
| Pollution degree         | 2              |
| Overvoltage category     | III            |

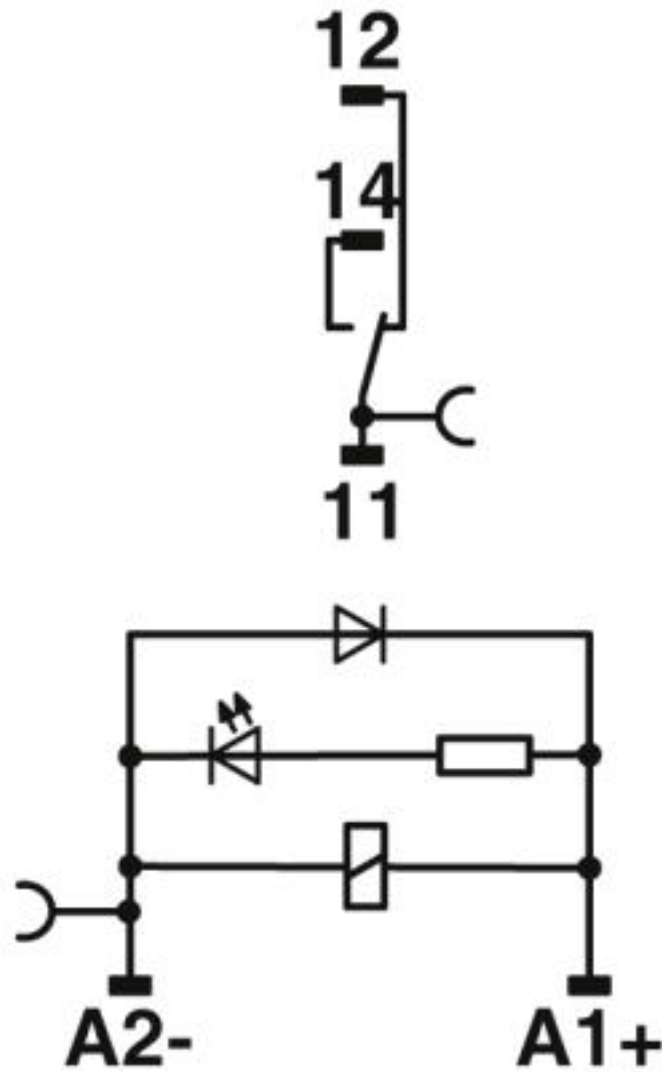
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

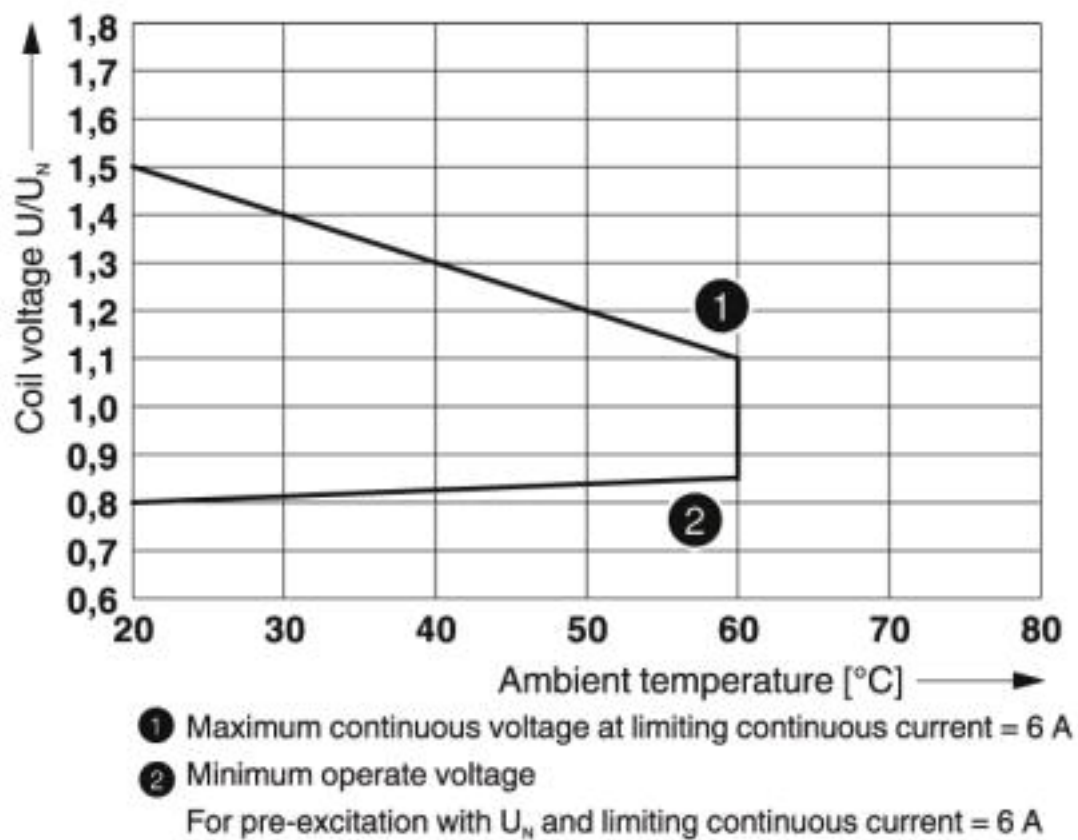
Circuit diagram



DC coils

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

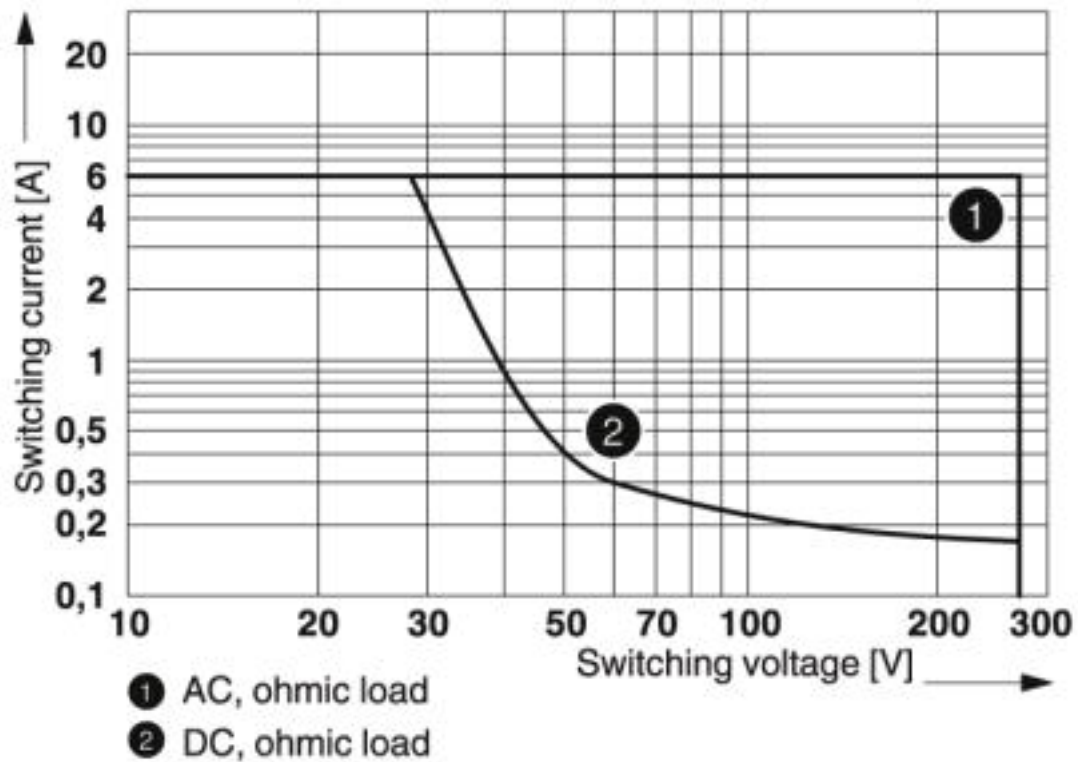
Diagram



Operating voltage range

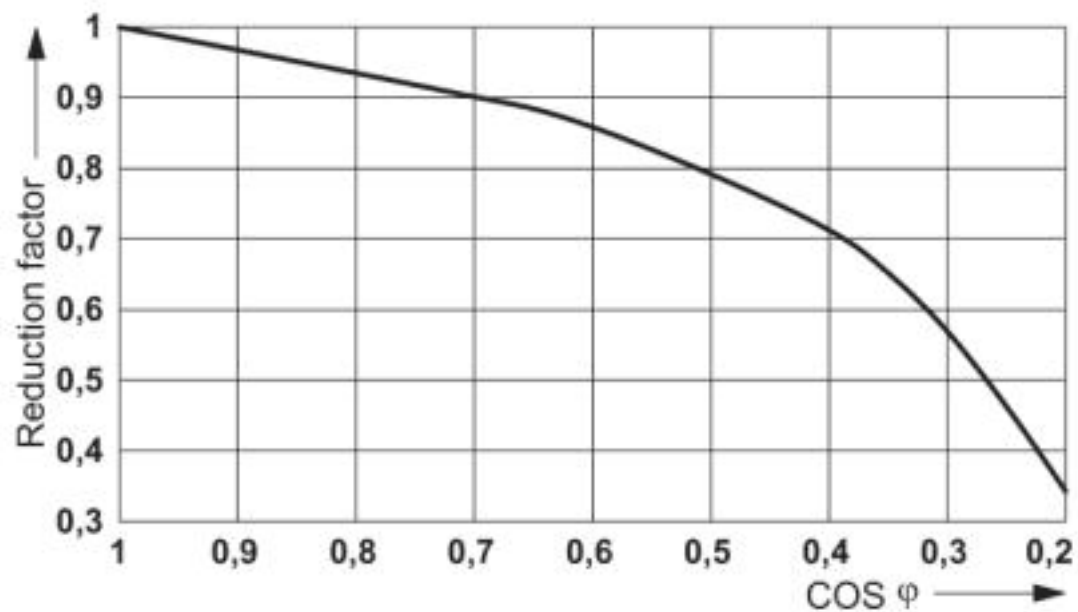
## Relay Module - RIF-0-RSC-24DC/21 - 2903374

Diagram



Interrupting rating

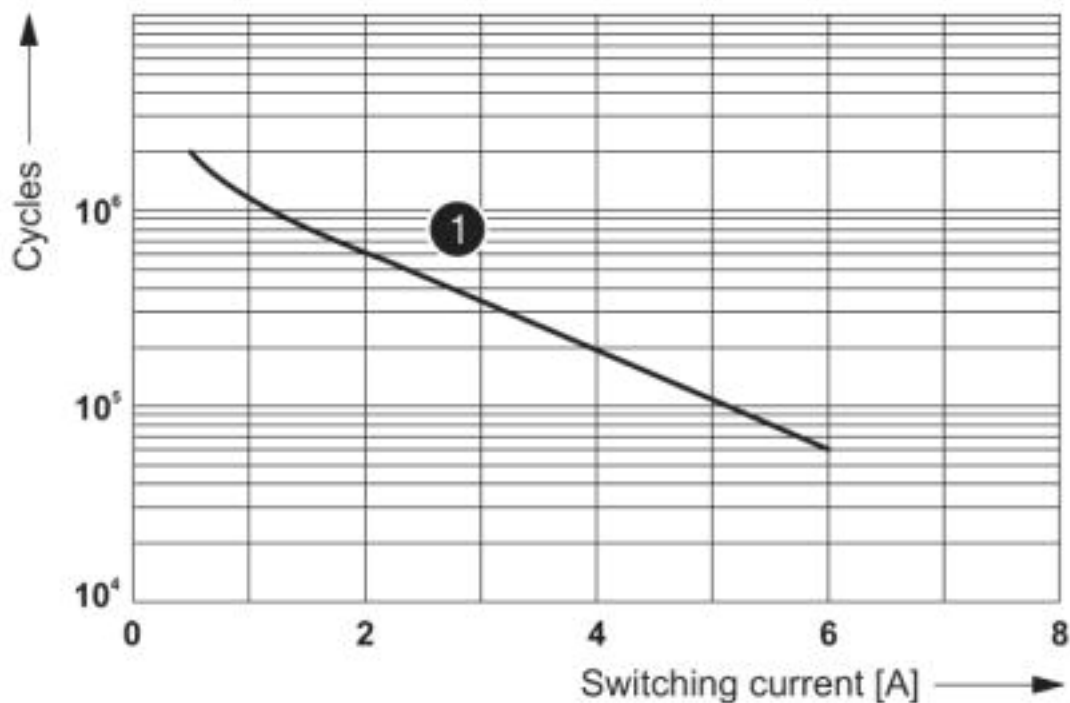
Diagram



Service life reduction factor with various cos phi

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

Diagram



① 250 V AC, ohmic load

Electrical service life

### Articles in set

Single relay - REL-MR- 24DC/21 - 2961105



Plug-in miniature power relay, with power contact, 1 PDT, input voltage 24 V DC

Relay base - RIF-0-BSC/21 - 2900957



RIF-0... relay base, for miniature power relay with 1 changeover contact or identical solid-state relays, screw connection, for mounting on NS 35/7,5

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371601 |
| eCl@ss 4.0    | 27371100 |
| eCl@ss 4.1    | 27371100 |
| eCl@ss 5.0    | 27371600 |
| eCl@ss 5.1    | 27371600 |
| eCl@ss 6.0    | 27371600 |
| eCl@ss 7.0    | 27371601 |
| eCl@ss 8.0    | 27371601 |
| eCl@ss 9.0    | 27371601 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001437 |
| ETIM 3.0 | EC001437 |
| ETIM 4.0 | EC001437 |
| ETIM 5.0 | EC001437 |
| ETIM 6.0 | EC001437 |
| ETIM 7.0 | EC001437 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211917 |
| UNSPSC 7.0901 | 39121516 |
| UNSPSC 11     | 39121516 |
| UNSPSC 12.01  | 39121516 |
| UNSPSC 13.2   | 39122334 |
| UNSPSC 18.0   | 39122334 |
| UNSPSC 19.0   | 39122334 |
| UNSPSC 20.0   | 39122334 |
| UNSPSC 21.0   | 39122334 |

### Approvals

#### Approvals

---

Approvals

DNV GL / EAC

---

Ex Approvals

---

#### Approval details

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Approvals

|        |                                                                                   |                                                                                   |            |
|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAA000018V |
|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|

|     |                                                                                   |  |                 |
|-----|-----------------------------------------------------------------------------------|--|-----------------|
| EAC |  |  | TR_TS_D_00573_c |
|-----|-----------------------------------------------------------------------------------|--|-----------------|

### Accessories

#### Accessories

##### End block

End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

##### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Accessories

---

Insulating sleeve - MPS-IH YE - 0201692

Insulating sleeve, color: yellow



---

Insulating sleeve - MPS-IH GN - 0201702

Insulating sleeve, color: green



---

Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



---

Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



---

### Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: red

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Accessories

Plug-in bridge - FBS 3-6 - 3030242



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: red

---

Plug-in bridge - FBS 4-6 - 3030255



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: red

---

Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: red

---

Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: red

---

Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: red

---

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Accessories

Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: red

---

Plug-in bridge - FBS 2-6 BU - 3036932



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: blue

---

Plug-in bridge - FBS 3-6 BU - 3036945



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: blue

---

Plug-in bridge - FBS 4-6 BU - 3036958



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: blue

---

Plug-in bridge - FBS 5-6 BU - 3036961



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: blue

---

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Accessories

Plug-in bridge - FBS 10-6 BU - 3032198



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: blue

---

Plug-in bridge - FBS 20-6 BU - 3032208



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: blue

---

Plug-in bridge - FBS 50-6 BU - 3032211



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: blue

---

Plug-in bridge - FBS 2-6 GY - 3032237



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: gray

---

Plug-in bridge - FBS 3-6 GY - 3032240



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: gray

---

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Accessories

Plug-in bridge - FBS 4-6 GY - 3032279



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: gray

Plug-in bridge - FBS 5-6 GY - 3032266



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: gray

Plug-in bridge - FBS 10-6 GY - 3032253



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: gray

### Terminal marking

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 6 - 0818085



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

## Relay Module - RIF-0-RSC-24DC/21 - 2903374

### Accessories

Marker for terminal blocks - UCT-TM 6 - 0828736



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 60

---

### Test plug terminal block

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

---

### Spare parts

Single relay - REL-MR- 24DC/21 - 2961105



Plug-in miniature power relay, with power contact, 1 PDT, input voltage 24 V DC

---

Relay base - RIF-0-BSC/21 - 2900957



RIF-0... relay base, for miniature power relay with 1 changeover contact or identical solid-state relays, screw connection, for mounting on NS 35/7,5