

# Relay Module - RIF-1-RSC-LDP-24DC/2X21 - 2903350

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Pre-assembled relay module with screw connection, consisting of: relay base, power contact relay, plug-in display/interference suppression module, and retaining bracket. Contact type: 2 changeover contacts. 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.



## Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 10 pc   |
| Minimum order quantity               | 10 pc   |
| GTIN                                 | <br>4 046356 732130 |
| GTIN                                 | 4046356732130   |
| Weight per Piece (excluding packing) | 70.300 g  |
| Custom tariff number                 | 85364190  |
| Country of origin                    | China   |

## Technical data

### Note

|                         |   |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area                                   |
| Type of note            | Notes on operation  |
| Note                    | FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21) |

### Dimensions

|        |       |
|--------|-------|
| Width  | 16 mm |
| Height | 89 mm |
| Depth  | 75 mm |

### Ambient conditions

# Relay Module - RIF-1-RSC-LDP-24DC/2X21 - 2903350

## Technical data

### Ambient conditions

|   |                   |
|---|-------------------|
| Ambient temperature (operation)         | -40 °C ... 70 °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       |
| Input voltage range in reference to $U_N$ | see diagram   |
| Typical input current at $U_N$            | 18 mA         |
| Typical response time                     | 8 ms          |
| Typical release time                      | 10 ms         |
| Coil voltage                              | 24 V DC       |
| Protective circuit                        | Damping diode |
| Operating voltage display                 | Yellow LED    |
| Power dissipation for nominal condition   | 0.43 W        |

### Contact side

|                                       |                            |
|---------------------------------------|----------------------------|
| Contact type                          | 2 PDT                      |
| Type of switch contact                | Single contact             |
| Contact material                      | AgNi                       |
| Maximum switching voltage             | 250 V AC/DC                |
| Minimum switching voltage             | 5 V (at 10 mA)             |
| Min. switching current                | 10 mA (At 5 V)             |
| Maximum inrush current                | 25 A (20 ms, N/O contacts) |
| Limiting continuous current           | 8 A (see diagram)          |
| Interrupting rating (ohmic load) max. | 192 W (at 24 V DC)         |
|                                       | 96 W (at 48 V DC)          |
|                                       | 60 W (at 60 V DC)          |
|                                       | 44 W (at 110 V DC)         |
|                                       | 57 W (at 220 V DC)         |
|                                       | 2000 VA (for 250 V AC)     |
| Switching capacity                    | 2 A (at 24 V, DC13)        |
|                                       | 0.2 A (at 250 V, DC13)     |
|                                       | 3 A (at 24 V, AC15)        |
|                                       | 3 A (at 120 V, AC15)       |
|                                       | 3 A (at 250 V, AC15)       |

### General

|  |                                       |
|--|---------------------------------------|
| Test voltage relay winding/relay contact | 4 kV <sub>rms</sub> (50 Hz, 1 min.)   |
| Test voltage PDT/PDT                     | 2.5 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Operating mode                           | 100% operating factor                 |
| Mechanical service life                  | approx. $3 \times 10^7$ cycles        |

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## Technical data

### General

|                          |                           |
|--------------------------|---------------------------|
| 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   |
| Stripping length  | 8 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> ... 2.5 mm <sup>2</sup>                                    |
| Conductor cross section flexible  | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                      |
|   | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Ferrule with plastic sleeve)        |
| Conductor cross section flexible (2 conductors with same cross section) | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                    |
|   | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule with plastic sleeve) |
| Conductor cross section AWG   | 20 ... 10 (solid)  |
|   | 20 ... 12 (flexible)   |
| Torque  | 0.5 Nm ... 0.6 Nm  |

### Connection data 2

|   |  |
|---|--|
| Connection name   | Contact side   |
| Connection method   | Screw connection   |
| Stripping length  | 8 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> ... 2.5 mm <sup>2</sup>                                    |
| Conductor cross section flexible  | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                      |
|   | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Ferrule with plastic sleeve)        |
| Conductor cross section flexible (2 conductors with same cross section) | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                    |
|   | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule with plastic sleeve) |
| Conductor cross section AWG   | 20 ... 10 (solid)  |
|   | 20 ... 12 (flexible)   |
| Torque  | 0.5 Nm ... 0.6 Nm  |

### Standards and Regulations

|                       |   |
|-----------------------|---|
| Standards/regulations | DIN EN 50178  |
| Rated surge voltage   | 6 kV  |
| Insulation            | Safe isolation, basic insulation, and 4 kV rated surge voltage between all changeover contacts. |
| Pollution degree      | 2   |
| Overvoltage category  | III   |

### Environmental Product Compliance

|            |  |
|------------|--|
| China RoHS | Environmentally Friendly Use Period = 50 |
|------------|--|

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## Technical data

### Environmental Product Compliance

|  |   |
|--|---|
|  | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |
|--|---|

## Articles in set

### Relay base - RIF-1-BSC/2X21 - 2900930



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

### Single relay - REL-MR- 24DC/21-21 - 2961192



Plug-in miniature power relay, with power contact, 2 PDTs, input voltage 24 V DC

### Plug-in module - RIF-LDP-12-24 DC - 2900939



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with freewheeling diode and yellow LED, polarity: A1+, A2-, input voltage: 12 ... 24 V DC  $\pm 20\%$

### Retaining bracket - RIF-RH-1 - 2900953



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 mm tall miniature power relay and solid-state relay