

## Relay Module - RIF-3-RSC-LDP-24DC/2X21 - 2903303

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Pre-assembled relay module with screw connection, consisting of: relay base, power contact relay, and retaining bracket. Contact type: 2 changeover contacts. Input voltage: 24 V DC



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 5 pc                                                                                                    |
| GTIN         | <br>4 046356 732543 |
| GTIN         | 4046356732543                                                                                           |

### Technical data

#### Note

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

#### Dimensions

|        |       |
|--------|-------|
| Width  | 40 mm |
| Height | 96 mm |
| Depth  | 90 mm |

#### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -40 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

#### Coil side

|                                           |             |
|-------------------------------------------|-------------|
| Nominal input voltage $U_N$               | 24 V DC     |
| Input voltage range in reference to $U_N$ | see diagram |
| Typical input current at $U_N$            | 60 mA       |
| Typical response time                     | 18 ms       |
| Typical release time                      | 20 ms       |
| Coil voltage                              | 24 V DC     |

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## Technical data

### Coil side

|                                         |               |
|-----------------------------------------|---------------|
| Protective circuit                      | Damping diode |
| Operating voltage display               | Yellow LED    |
| Power dissipation for nominal condition | 1.44 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             | 10 V (At 24 mA)           |
| Min. switching current                | 10 mA (at 24 V)           |
| Maximum inrush current                | 30 A (20 ms, N/O contact) |
| Limiting continuous current           | 10 A (see diagram)        |
| Interrupting rating (ohmic load) max. | 240 W (at 24 V DC)        |
|                                       | 124 W (at 48 V DC)        |
|                                       | 108 W (at 60 V DC)        |
|                                       | 52 W (at 110 V DC)        |
|                                       | 48 W (at 220 V DC)        |
|                                       | 2500 VA (for 250 V AC)    |
| Switching capacity                    | 2 A (at 24 V, DC13)       |
|                                       | 0.22 A (at 120 V, DC13)   |
|                                       | 0.11 A (at 250 V, DC13)   |
|                                       | 3 A (at 24 V, AC15)       |
|                                       | 3 A (at 120 V, AC15)      |
|                                       | 1.5 A (at 240 V, AC15)    |

### Connection data input side

|                                                                         |                                                                                |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Connection name                                                         | Input 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 output side

|                 |              |
|-----------------|--------------|
| Connection name | Contact side |
|-----------------|--------------|

# Relay Module - RIF-3-RSC-LDP-24DC/2X21 - 2903303

## Technical data

### Connection data output 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                                                              |

### General

|                                          |                                       |
|------------------------------------------|---------------------------------------|
| Test voltage relay winding/relay contact | 2.5 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Test voltage relay contact/relay contact | 2 kV <sub>rms</sub> (50 Hz, 1 min.)   |
| Operating mode                           | 100% operating factor                 |
| Degree of protection                     | IP20 (Relay base)                     |
|                                          | RT I (Relay)                          |
| Mechanical service life                  | approx. 2x 10 <sup>7</sup> cycles     |
| Mounting position                        | any                                   |
| Assembly instructions                    | In rows with zero spacing             |

### Standards and Regulations

|                                        |                  |
|----------------------------------------|------------------|
| Standards/regulations                  | DIN EN 50178     |
| Rated insulation voltage               | 250 V AC         |
| Rated surge voltage                    | 4 kV             |
| Insulation                             | Basic insulation |
| Degree of pollution                    | 2                |
| Overvoltage category                   | III              |
| Flammability rating according to UL 94 | V2               |

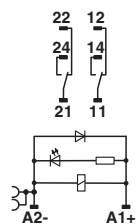
### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

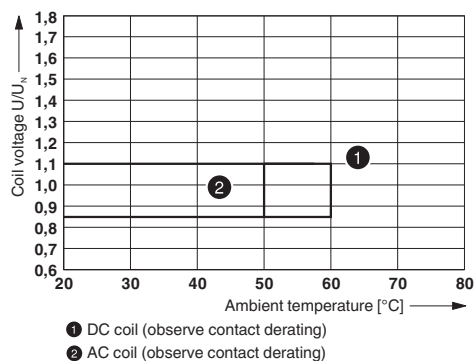
## Relay Module - RIF-3-RSC-LDP-24DC/2X21 - 2903303

Circuit diagram



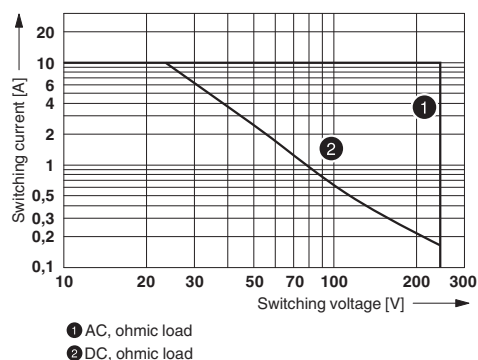
DC coils

Diagram

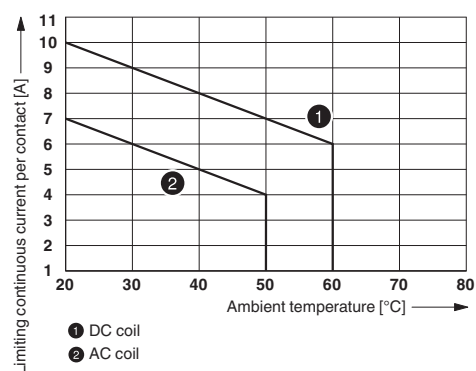


Operating voltage range

Diagram

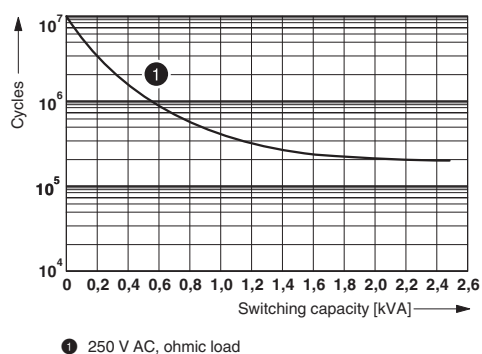


Diagram



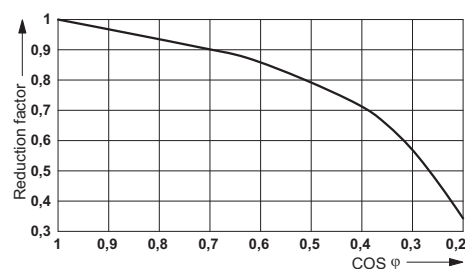
Interrupting rating

Diagram



Contact derating

Diagram



Electrical service life

Service life reduction factor

## Relay Module - RIF-3-RSC-LDP-24DC/2X21 - 2903303

### Articles in set

Relay base - RIF-3-BSC/2X21 - 2900935



RIF-3... relay base, for octal relay with 2 changeover contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

Single relay - REL-OR2/LDP- 24DC/2X21 - 2903689



Plug-in octal relays with power contacts, 2 PDTs, test button, freewheeling diode, mechanical switch position indicator, polarity: A1+, A2-, coil voltage: 24 V DC

Retaining bracket - RIF-RH-3 - 2900955



Relay retaining bracket, with holder for marking material, suitable for RIF-3 relay base, for octal relay

### Approvals

#### Approvals

Approvals

DNV GL / CSA / EAC

Ex Approvals

#### Approval details

|        |                                                                                     |                                                                                                                                         |            |
|--------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------|
| DNV GL |                                                                                     | <a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>                                                               | TAA000018V |
| CSA    |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 2607057    |

## Relay Module - RIF-3-RSC-LDP-24DC/2X21 - 2903303

### Approvals

EAC



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