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## Relay Module - RIF-4-RSC-LDP-24DC/3X21 - 2903288


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Pre-assembled relay module with screw connection, consisting of: relay base, power contact relay, and retaining bracket. Contact type: 3 changeover contacts. Input voltage: 24 V DC



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 5 STK   |
| GTIN         | <br>4 046356 731935 |
| GTIN         | 4046356731935   |

### Technical data

#### Note

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

#### Dimensions

|        |       |
|--------|-------|
| Width  | 44 mm |
| Height | 96 mm |
| Depth  | 91 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 $U_N$            | 56 mA       |
| Typical response time                     | 20 ms       |
| Typical release time                      | 20 ms       |
| Coil voltage                              | 24 V DC     |

# Relay Module - RIF-4-RSC-LDP-24DC/3X21 - 2903288

## Technical data

### Coil side

|   |               |
|---|---------------|
| Protective circuit                      | Damping diode |
| Operating voltage display               | Yellow LED    |
| Power dissipation for nominal condition | 1.34 W        |

### Contact side

|  |  |
|--|--|
| Contact type   | 3 PDTs   |
| Type of switch contact                                 | Single contact                                 |
| Contact material                                       | AgNi   |
| Maximum switching voltage                              | 440 V AC                                       |
|  | 250 V DC                                       |
| Minimum switching voltage                              | 10 V (At 24 mA)                                |
| Min. switching current                                 | 10 mA (at 24 V)                                |
| Maximum inrush current                                 | 50 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)                             |
|  | 70 W (at 220 V DC)                             |
|  | 2500 VA (for 250 V AC)                         |
|  | 4000 VA (at 440 V AC)                          |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 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)                         |
| 3-phase motor load                                     | 1500 W   |
| Motor load according to UL 508                         | 1/3 HP, 120 V AC (single-phase AC motor)       |
|  | 1/2 HP, 240 V AC (single-phase AC motor)       |
|  | 1/2 HP, 240 V AC (three-phase induction motor) |

### 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) |

# Relay Module - RIF-4-RSC-LDP-24DC/3X21 - 2903288

## Technical data

### Connection data input side

|                             |                      |
|-----------------------------|----------------------|
| 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   |
| 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 | 2.5 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. 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

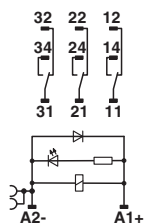
|            |   |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings



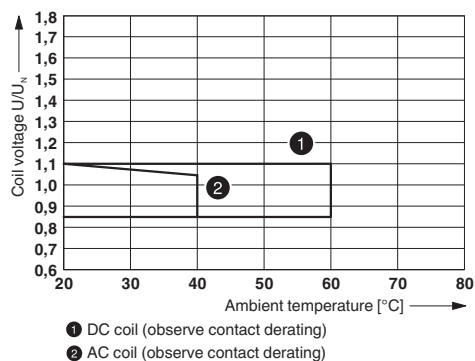
## Relay Module - RIF-4-RSC-LDP-24DC/3X21 - 2903288

Circuit diagram



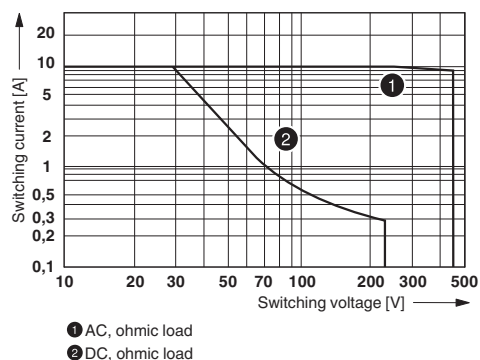
DC coils

Diagram

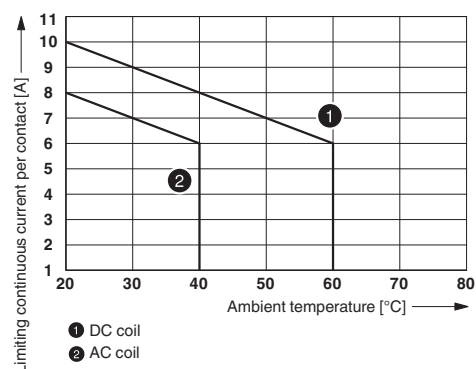


Operating voltage range

Diagram

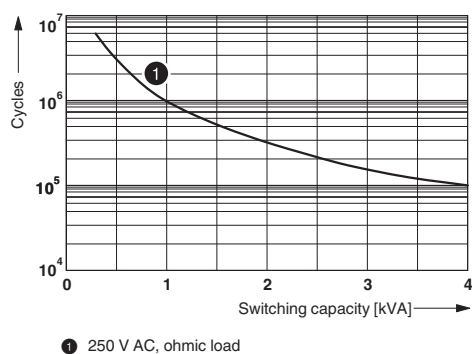


Diagram



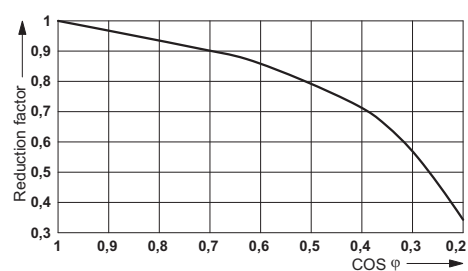
Interrupting rating

Diagram



Contact derating

Diagram



Electrical service life

Service life reduction factor

## Relay Module - RIF-4-RSC-LDP-24DC/3X21 - 2903288

### Articles in set

Relay base - RIF-4-BSC/3X21 - 2900960



RIF-4... relay base, for high-power relay with 2 or 3 changeover contacts or 3 N/O contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

Single relay - REL-PR3- 24DC/3X21 - 2903702



Plug-in high-power relay with power contacts, 3 PDTs, coil 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-4 - 2900956



Relay retaining bracket, with holder for marking material, suitable for RIF-4 relay base, for high-power relay

## Approvals

### Approvals

Approvals

DNV GL / CSA / EAC

Ex Approvals

### Approval details

## Relay Module - RIF-4-RSC-LDP-24DC/3X21 - 2903288

### Approvals

|        |   |   |                          |
|--------|---|---|--------------------------|
| 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                  |
| EAC    |  |   | RU C-<br>DE.A*30.B.01082 |

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