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Stocking Distributor

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[Phoenix Contact](#)  
[2903280](#)

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[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

https://www.phoenixcontact.com/us/products/2903280



## Relay Module - RIF-4-RPT-LV-120AC/2X21 - 2903280

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The figure shows the 24 V DC version

Pre-assembled relay module with push-in connection, consisting of: relay base, power contact relay, plug-in display/suppressor module, and retaining bracket. Contact type: 2 PDTs. Input voltage: 120 V AC



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 pc      |
| Weight per Piece (excluding packing) | 208.0 GRM |
| Custom tariff number                 | 85364900  |
| Country of origin                    | Germany   |

### Technical data

#### Dimensions

|        |        |
|--------|--------|
| Width  | 43 mm  |
| Height | 111 mm |
| Depth  | 90 mm  |

#### Ambient conditions

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

#### Coil side

|   |                |
|---|----------------|
| Nominal input voltage $U_N$               | 120 V AC       |
| Input voltage range in reference to $U_N$ | (see diagram)  |
| Nominal input current at $U_{IN}$         | 24 mA          |
| Typical response time                     | 5 ms ... 25 ms |
| Typical release time range                | 5 ms ... 20 ms |
| Operating voltage display                 | Yellow LED     |

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## Relay Module - RIF-4-RPT-LV-120AC/2X21 - 2903280

### Technical data

#### Coil side

|                    |          |
|--------------------|----------|
| Protective circuit | Varistor |
|--------------------|----------|

#### Contact side

|  |   |
|--|---|
| Contact type   | 2 PDT   |
| Contact material                                       | AgNi  |
| Maximum switching voltage                              | 440 V AC<br>250 V DC  |
| Minimum switching voltage                              | 10 V (At 24 mA)   |
| Maximum inrush current                                 | 50 A (20 ms, N/O contact)   |
| Min. switching current                                 | 10 mA (at 24 V)   |
| Limiting continuous current                            | 9 A (see diagram)   |
| Interrupting rating (ohmic load) max.                  | 216 W (at 24 V DC)<br>124 W (at 48 V DC)<br>108 W (at 60 V DC)<br>52 W (at 110 V DC)<br>70 W (at 220 V DC)<br>2250 VA (for 250 V AC)<br>4000 VA (At 440 V AC) |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 2 A (24 V (DC13))<br>1.5 A (230 V (AC15))<br>3.6 A (230 V (AC3))  |
| Single-phase motor load                                | 800 W   |
| Motor load according to UL 508                         | 1/3 HP, 120 V AC (single-phase AC motor)<br>1/2 HP, 240 V AC (single-phase AC motor)  |

#### Connection data

|  |                      |
|--|----------------------|
| Connection method  | Push-in connection   |
| Connection name  | Input                |
| Connection method  | Push-in connection   |
| Conductor cross section solid min.   | 0.14 mm <sup>2</sup> |
| Conductor cross section solid max.   | 1.5 mm <sup>2</sup>  |
| Conductor cross section stranded min.                                      | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded max.                                      | 1.5 mm <sup>2</sup>  |
| Conductor cross section stranded, with ferrule with plastic sleeve min.    | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded, with ferrule with plastic sleeve max.    | 1.5 mm <sup>2</sup>  |
| Conductor cross section stranded, with ferrule without plastic sleeve min. | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded, with ferrule without plastic sleeve max. | 1.5 mm <sup>2</sup>  |
| Conductor cross section AWG/kcmil min.                                     | 26                   |

## Relay Module - RIF-4-RPT-LV-120AC/2X21 - 2903280

### Technical data

#### Connection data

|  |                      |
|--|----------------------|
| Conductor cross section AWG/kcmil max                                      | 16                   |
| Stripping length   | 8 mm                 |
| Connection name  | Output               |
| Connection method  | Push-in connection   |
| Conductor cross section solid min.   | 0.14 mm <sup>2</sup> |
| Conductor cross section solid max.   | 2.5 mm <sup>2</sup>  |
| Conductor cross section stranded min.                                      | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded max.                                      | 2.5 mm <sup>2</sup>  |
| Conductor cross section stranded, with ferrule with plastic sleeve min.    | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded, with ferrule with plastic sleeve max.    | 2.5 mm <sup>2</sup>  |
| Conductor cross section stranded, with ferrule without plastic sleeve min. | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded, with ferrule without plastic sleeve max. | 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG/kcmil min.                                     | 26                   |
| Conductor cross section AWG/kcmil max                                      | 14                   |
| Stripping length   | 10 mm                |

#### 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 socket)                   |
|  | RT I (Relay)                          |
| Mechanical service life                  | Approx. 10 <sup>7</sup> cycles        |
| Standards/regulations                    | DIN EN 50178                          |
|  | IEC 62103                             |
| Rated insulation voltage                 | 250 V AC                              |
| Pollution degree                         | 2                                     |
| Surge voltage category                   | III                                   |
| Mounting position                        | any                                   |
| Assembly instructions                    | In rows with zero spacing             |

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## Relay Module - RIF-4-RPT-LV-120AC/2X21 - 2903280

### Articles in set

Relay socket - RIF-4-BPT/3X21 - 2900961



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

Single relay - REL-PR2-120AC/2X21 - 2903700



Plug-in high-power relay with power contacts, 2 PDTs, coil voltage: 120 V AC

Plug-in module - RIF-LV-120-230 AC/110 DC - 2900944



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor and yellow LED, input voltage: 120 - 230 V AC/110 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

### Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371601 |
| eCl@ss 5.1 | 27371601 |
| eCl@ss 6.0 | 27371601 |
| eCl@ss 7.0 | 27371601 |

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## Relay Module - RIF-4-RPT-LV-120AC/2X21 - 2903280

### Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 8.0 | 27371601 |
|------------|----------|

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001456 |
| ETIM 4.0 | EC001456 |
| ETIM 5.0 | EC001437 |

UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211917 |
| UNSPSC 7.0901 | 39121516 |
| UNSPSC 11     | 39121516 |
| UNSPSC 12.01  | 39121516 |
| UNSPSC 13.2   | 39121516 |

### Approvals

Approvals

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Approvals

CSA

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Ex Approvals

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Approvals submitted

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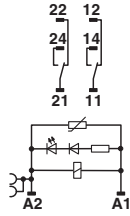
Approval details

|  |
|--|
|  |
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### Drawings

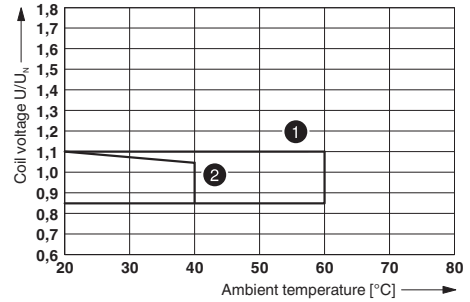
# Relay Module - RIF-4-RPT-LV-120AC/2X21 - 2903280

Circuit diagram



AC coils

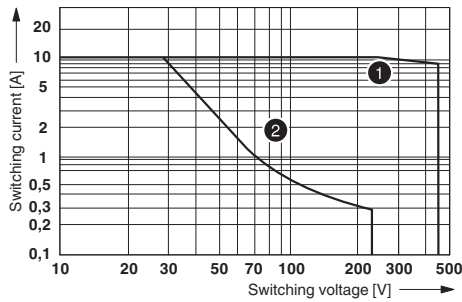
Diagram



- ① DC coil (observe contact derating)
- ② AC coil (observe contact derating)

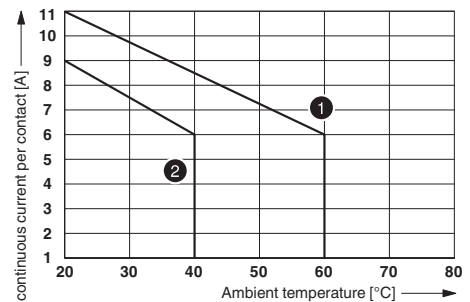
Operating voltage range

Diagram



- ① AC, ohmic load
- ② DC, ohmic load

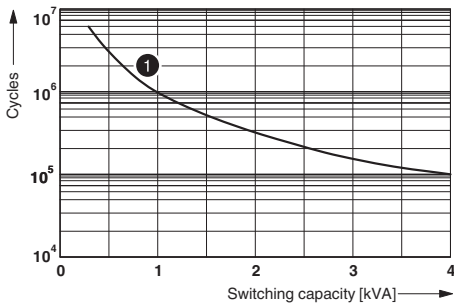
Diagram



- ① DC coil
- ② AC coil

Interrupting rating

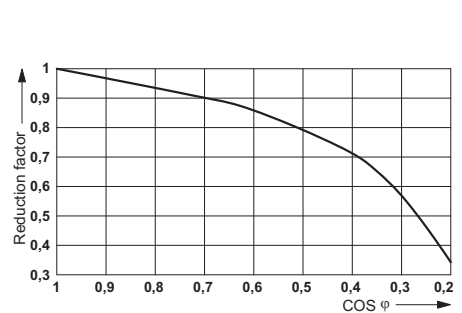
Diagram



- ① 250 V AC, ohmic load

Contact derating

Diagram



Electrical service life

Service life reduction factor

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