

## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

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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: 3 N/O contacts. Input voltage: 230 V AC

The figure shows the 24 V DC version



### 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

#### Note

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

#### 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 $U_N$               | 230 V AC    |
| Input voltage range in reference to $U_N$ | see diagram |
| Typical input current at $U_N$            | 14 mA       |

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### Technical data

#### Coil side

|                            |                |
|----------------------------|----------------|
| Typical response time      | 5 ms ... 25 ms |
| Typical release time range | 5 ms ... 20 ms |
| Operating voltage display  | Yellow LED     |
| Protective circuit         | Varistor       |

#### Contact side

|                                                        |                                                |
|--------------------------------------------------------|------------------------------------------------|
| Contact type                                           | 3 N/O contacts                                 |
| Contact material                                       | AgNi                                           |
| Maximum switching voltage                              | 440 V AC                                       |
|                                                        | 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                            | 8 A (see diagram)                              |
| Interrupting rating (ohmic load) max.                  | 216 W (at 24 V DC)                             |
|                                                        | 480 W (at 48 V DC)                             |
|                                                        | 600 W (at 60 V DC)                             |
|                                                        | 660 W (at 110 V DC)                            |
|                                                        | 183 W (at 220 V DC)                            |
|                                                        | 2250 VA (for 250 V AC)                         |
|                                                        | 4000 VA (At 440 V AC)                          |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 1 A (at 24 V, DC13)                            |
|                                                        | 1 A (at 120 V, DC13)                           |
|                                                        | 1 A (at 220 V, DC13)                           |
|                                                        | 1.5 A (at 24 V, AC15)                          |
|                                                        | 1.5 A (at 120 V, AC15)                         |
|                                                        | 1.5 A (at 240 V, AC15)                         |
| 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

|                                       |                      |
|---------------------------------------|----------------------|
| Connection method                     | Push-in connection   |
| Connection name                       | Input                |
| 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 solid min.    | 0.14 mm <sup>2</sup> |
| Conductor cross section solid max.    | 1.5 mm <sup>2</sup>  |

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### Technical data

#### Connection data

|                                                                            |                      |
|----------------------------------------------------------------------------|----------------------|
| 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                   |
| Conductor cross section AWG/kcmil max                                      | 16                   |
| Connection method                                                          | Push-in connection   |
| Stripping length                                                           | 8 mm                 |
| Connection name                                                            | Output               |
| 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 solid min.                                         | 0.14 mm <sup>2</sup> |
| Conductor cross section solid 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                   |
| Connection method                                                          | Push-in connection   |
| 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             |

## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

### 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-PR3-230AC/3X1 - 2903709



Plug-in high-power relay with power contacts, 3 N/O contacts, coil voltage: 230 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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## 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

Approvals

CSA

Ex Approvals

Approvals submitted

Approval details

|                                                                                     |
|-------------------------------------------------------------------------------------|
|  |
|-------------------------------------------------------------------------------------|

## Accessories

Accessories

End block

## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

### Accessories

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

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### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663



Insulating sleeve, Color: white

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Insulating sleeve - MPS-IH RD - 0201676



Insulating sleeve, Color: red

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Insulating sleeve - MPS-IH BU - 0201689



Insulating sleeve, Color: blue

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Insulating sleeve - MPS-IH YE - 0201692



Insulating sleeve, Color: yellow

## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

### Accessories

Insulating sleeve - MPS-IH GN - 0201702



Insulating sleeve, Color: green

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Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

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Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

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### Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, Number of positions: 2, Color: red

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



Plug-in bridge, Number of positions: 2, Color: blue

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## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

### Accessories

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



Plug-in bridge, Number of positions: 2, Color: gray

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Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, Number of positions: 5, Color: red

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Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, Number of positions: 10, Color: red

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Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, Number of positions: 20, Color: red

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Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, Number of positions: 50, Color: red

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### Terminal marking

## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

### Accessories

Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.1 x 10.5 mm

Zack marker strip - ZB 15:UNBEDRUCKT - 0811972



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 15.2 mm, Lettering field: 10.5 x 15.1 mm

### Test plug terminal block

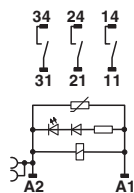
Test plugs - MPS-MT - 0201744



Test plugs, Color: silver

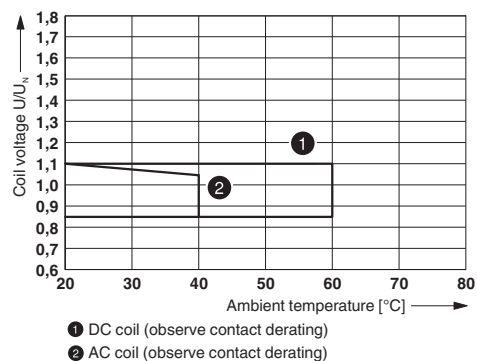
### Drawings

Circuit diagram



AC coils

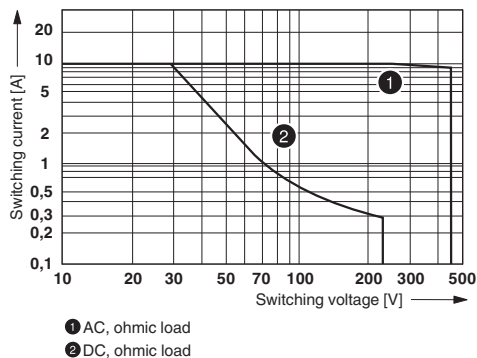
Diagram



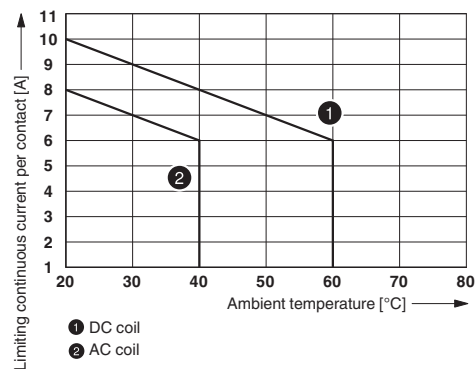
Operating voltage range

## Relay Module - RIF-4-RPT-LV-230AC/3X1 - 2903273

Diagram

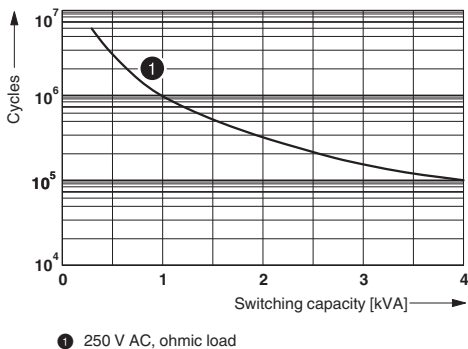


Diagram



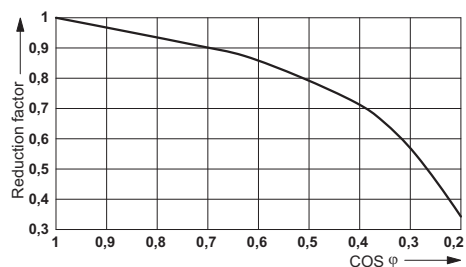
Interrupting rating

Diagram



Contact derating

Diagram



Electrical service life

Service life reduction factor