

## Relay Module - RIF-1-RPT-LV-230AC/1X21MS - 2905290

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Pre-assembled relay module with push-in connection, consisting of: relay base, relay retaining bracket, plug-in suppressor module, and power contact relay with test button and integrated status LED. Contact type: 1 PDT. Input voltage: 230 V AC

### Key Commercial Data

|                                      |                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------|
| Packing unit                         | 10 STK                                                                                                |
| GTIN                                 | <br>4 046356 944663 |
| Weight per Piece (excluding packing) | 70.42 g                                                                                               |
| Weight per piece (including packing) | 70.42 g                                                                                               |
| Country of origin                    | Germany                                                                                               |

### Technical data

#### Note

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

#### Dimensions

|        |       |
|--------|-------|
| Width  | 16 mm |
| Height | 93 mm |
| Depth  | 75 mm |

#### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -40 °C ... 50 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

#### Coil side

|                                           |                     |
|-------------------------------------------|---------------------|
| Nominal input voltage $U_N$               | 230 V AC (50/60 Hz) |
| Input voltage range in reference to $U_N$ | see diagram         |
| Typical input current at $U_N$            | 4.5 mA              |
| Typical response time                     | 4 ms ... 12 ms      |
| Typical release time range                | 4 ms ... 20 ms      |
| Coil voltage                              | 230 V AC            |
| Protective circuit                        | Varistor            |
| Operating voltage display                 | Yellow LED          |

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## Technical data

### Contact side

|                                                        |                           |
|--------------------------------------------------------|---------------------------|
| Contact type                                           | 1 PDT                     |
| Contact material                                       | AgNi                      |
| Maximum switching voltage                              | 250 V AC/DC               |
| Minimum switching voltage                              | 12 V (at 10 mA)           |
| Min. switching current                                 | 10 mA (at 12 V)           |
| Maximum inrush current                                 | 32 A (20 ms, N/O contact) |
| Limiting continuous current                            | see diagram               |
| Interrupting rating (ohmic load) max.                  | 240 W (at 24 V DC)        |
|                                                        | 62 W (at 48 V DC)         |
|                                                        | 48 W (at 60 V DC)         |
|                                                        | 52 W (at 110 V DC)        |
|                                                        | 66 W (at 220 V DC)        |
|                                                        | 2500 VA (for 250 V AC)    |
| Switching capacity min.                                | 120 mW                    |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 2 A (at 24 V, DC13)       |
|                                                        | 3 A (at 24 V, AC15)       |
|                                                        | 3 A (at 120 V, AC15)      |
|                                                        | 3 A (at 240 V, AC15)      |

### Connection data input side

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| Connection name                  | Coil side                                                                      |
| Connection method                | Push-in connection                                                             |
| Stripping length                 | 8 mm                                                                           |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
|                                  | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve)       |
|                                  | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrules without plastic sleeve) |
| Conductor cross section AWG      | 26 ... 16                                                                      |

### Connection data output side

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| Connection name                  | Contact side                                                                   |
| Connection method                | Push-in connection                                                             |
| Stripping length                 | 8 mm                                                                           |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                   |
|                                  | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve)       |
|                                  | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrules without plastic sleeve) |
| Conductor cross section AWG      | 26 ... 16                                                                      |

### General

|                                          |                                     |
|------------------------------------------|-------------------------------------|
| Test voltage relay winding/relay contact | 4 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Operating mode                           | 100% operating factor               |

## Relay Module - RIF-1-RPT-LV-230AC/1X21MS - 2905290

### Technical data

#### General

|                                |                                |
|--------------------------------|--------------------------------|
| Degree of protection           | IP20 (Relay socket)            |
|                                | RT II (Relay)                  |
| Mechanical service life        | Approx. $5 \times 10^6$ cycles |
| Standards/regulations          | DIN EN 50178                   |
|                                | IEC 62103                      |
| Rated surge voltage/insulation | 6 kV/safe isolation            |
| Rated insulation voltage       | 250 V AC                       |
| Degree of pollution            | 2                              |
| Overvoltage category           | III                            |
| Mounting position              | any                            |
| Assembly instructions          | In rows with zero spacing      |

#### Standards and Regulations

|                                |                     |
|--------------------------------|---------------------|
| Standards/regulations          | DIN EN 50178        |
|                                | IEC 62103           |
| Rated insulation voltage       | 250 V AC            |
| Rated surge voltage/insulation | 6 kV/safe isolation |
| Degree of pollution            | 2                   |
| Overvoltage category           | III                 |

### Articles in set

#### Relay socket - RIF-1-BPT/2X21 - 2900931



RIF-1... relay base, for miniature power relay with 1 or 2 PDTs or solid-state relays of the same design, push-in connection, plug-in option for input/suppressor modules, for mounting on NS 35/7,5

#### Single relay - REL-MR-230AC/21HC/MS - 2987914



Plug-in miniature relay, with power contact, 1 PDT, test button, mechanical switch position indicator, status LED, input voltage 230 V AC

# Relay Module - RIF-1-RPT-LV-230AC/1X21MS - 2905290

## Articles in set

Plug-in module - RIF-V-120-230 UC - 2900948



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor, input voltage: 120 - 230 V AC/DC  $\pm 20\%$

Retaining bracket - RIF-RH-1-H - 2904468



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 25 mm tall miniature power relay and solid-state relay

## Classifications

eCl@ss

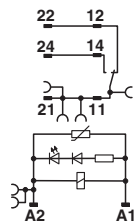
|            |          |
|------------|----------|
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.1 | 27371603 |
| eCl@ss 6.0 | 27371603 |
| eCl@ss 8.0 | 27371601 |
| eCl@ss 9.0 | 27371601 |

ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC000236 |
| ETIM 5.0 | EC001437 |

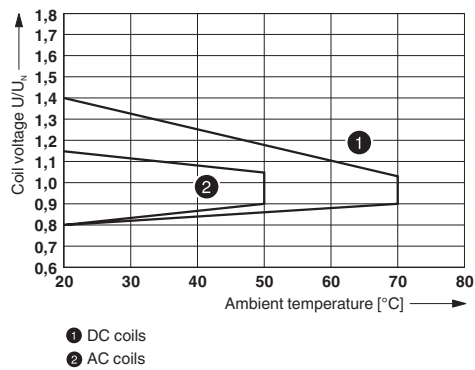
## Drawings

Circuit diagram



AC coils

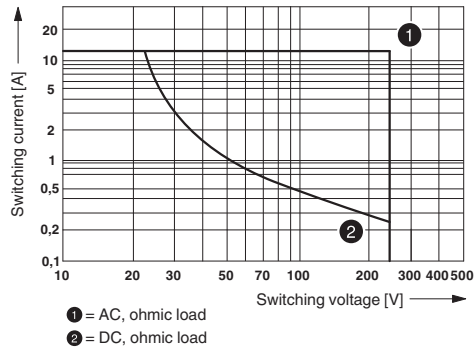
Diagram



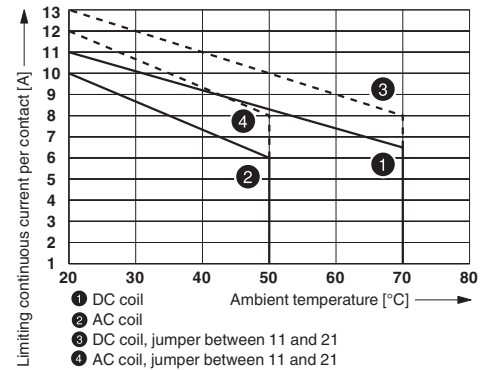
Operating voltage range

## Relay Module - RIF-1-RPT-LV-230AC/1X21MS - 2905290

Diagram



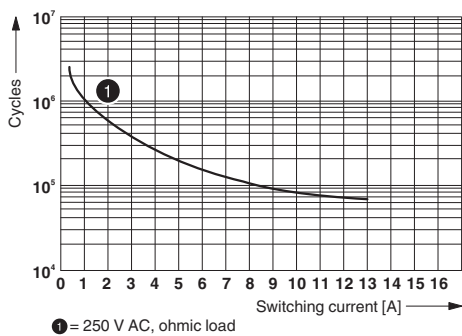
Diagram



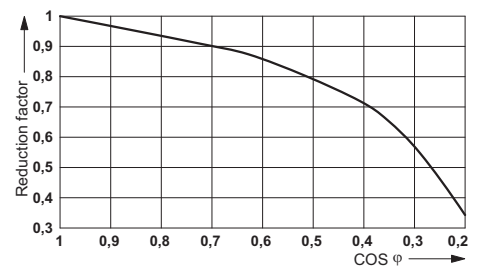
Interrupting rating

Contact derating

Diagram



Diagram



Electrical service life

Service life reduction factor