

# RIF-1-RPT-LDP-24DC/2X21MS - Relay Module



2905291

<https://www.phoenixcontact.com/in/products/2905291>

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Pre-assembled relay module with Push-in connection, consisting of: relay base, relay retaining bracket, and power contact relay with test button, integrated status LED, and freewheeling diode. Contact type: 2 changeover contacts. Input voltage: 24 V DC

## Product Description

The pluggable electromechanical and solid-state relays in the RIFLINE complete product range and the base are recognized and approved in accordance with UL 508. The relevant approvals can be called up at the individual components in question.

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2905291             |
| Packing unit                         | 10 pc               |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | CK6                 |
| Product Key                          | CK6529              |
| Catalog Page                         | Page 331 (C-5-2019) |
| GTIN                                 | 4046356945370       |
| Weight per Piece (including packing) | 68.263 g            |
| Weight per Piece (excluding packing) | 65.369 g            |
| Customs tariff number                | 85364110            |
| Country of origin                    | CN                  |

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## Set consists of

### RIF-1-BPT/2X21 - Relay base

2900931

<https://www.phoenixcontact.com/in/products/2900931>



Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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### REL-MR- 24DC/21-21/MS - Single relay

2987943

<https://www.phoenixcontact.com/in/products/2987943>



Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switching position indicator, status LED, freewheeling diode, polarity A1+, A2, input voltage 24 V DC

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## RIF-RH-1-H - Retaining bracket

2904468

<https://www.phoenixcontact.com/in/products/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

## Technical Data

### Product properties

|                         |                                |
|-------------------------|--------------------------------|
| Product type            | Relay Module                   |
| Product family          | RIFLINE complete               |
| Application             | Universal                      |
|                         | Palm switch                    |
| Operating mode          | 100% operating factor          |
| Mechanical service life | approx. $5 \times 10^6$ cycles |

### Insulation characteristics

|            |  |
|------------|--|
| Insulation | Safe isolation between input and output          |
|            | Basic insulation between the changeover contacts |

### Insulation characteristics

|                      |  |
|----------------------|--|
| Insulation           | Safe isolation between input and output          |
|                      | Basic insulation between the changeover contacts |
| Overvoltage category | III  |
| Pollution degree     | 2  |

### Electrical properties

|  |  |
|--|--|
| Service life electrical                              | see diagram  |
| Maximum power dissipation for nominal condition      | 0.43 W   |
| Test voltage (Winding/contact)                       | 4 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)                         |
| Test voltage (Changeover contact/changeover contact) | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., changeover contact/changeover contact) |
| Rated insulation voltage                             | 250 V AC   |
| Rated surge voltage                                  | 6 kV (Input/output)  |
|  | 4 kV (between the changeover contacts)                                       |

### Input data

#### Coil side

|   |                               |
|---|-------------------------------|
| Nominal input voltage $U_N$               | 24 V DC                       |
| Input voltage range                       | 19.2 V DC ... 30 V DC (20 °C) |
| Input voltage range in reference to $U_N$ | see diagram                   |
| Mains frequency                           | 50/60 Hz                      |
| Drive and function                        | monostable                    |
| Drive (polarity)                          | polarized                     |
| Typical input current at $U_N$            | 18 mA                         |
| Typical response time                     | 9 ms                          |
| Typical release time                      | 10 ms                         |
| Coil voltage                              | 24 V DC                       |
| Protective circuit                        | Freewheeling diode            |
| Operating voltage display                 | Yellow LED                    |

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## Output data

### Switching

|  |  |
|--|--|
| Contact type                                   | 2 changeover contacts  |
| Type of switch contact                         | Single contact   |
| Contact material                               | AgNi   |
| Maximum switching voltage                      | 250 V AC/DC  |
| Minimum switching voltage                      | 12 V (10 mA)   |
| Limiting continuous current                    | 8 A (see diagram)  |
| Maximum inrush current                         | 12 A (20 ms, N/O contacts)   |
| Min. switching current                         | 10 mA (12 V)   |
| Interrupting rating (ohmic load) max.          | 192 W (at 24 V DC)<br>62 W (at 48 V DC)<br>42 W (at 60 V DC)<br>55 W (at 110 V DC)<br>66 W (at 220 V DC)<br>2000 VA (for 250 V AC) |
| Switching capacity min.                        | 120 mW   |
| Utilization category CB Scheme (IEC 60947-5-1) | AC15, 1.5 A/250 V (N/O contact)<br>DC13, 1 A/24 V (N/O contact)  |

## Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Push-in connection  |
| Stripping length                 | 8 mm  |
| Conductor cross section rigid    | 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><br>0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve)<br>0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve, two conductors on double terminal block) |
| Conductor cross section AWG      | 26 ... 16 (solid)<br>26 ... 16 (flexible)   |

## Dimensions

### Drill hole

|          |        |
|----------|--------|
| Diameter | 3.2 mm |
| Width    | 16 mm  |
| Height   | 96 mm  |
| Depth    | 75 mm  |

## Material specifications

|  |              |
|--|--------------|
| Flammability rating according to UL 94 | V2 (Housing) |
|--|--------------|

## Environmental and real-life conditions

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## Ambient conditions

|   |                   |
|---|-------------------|
| Degree of protection (Relay base)       | IP20 (Relay base) |
| Degree of protection (Relay)            | RT II (Relay)     |
| Ambient temperature (operation)         | -40 °C ... 60 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C  |

## Approvals

### Corrosive gas test

|                |                            |
|----------------|----------------------------|
| Identification | ISA-S71.04. G3 Harsh Group |
|                | EN 60068-2-60              |

## Standards and regulations

|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

|                       |                           |
|-----------------------|---------------------------|
| Mounting type         | DIN rail mounting         |
| Assembly instructions | in rows with zero spacing |
| Mounting position     | any                       |

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