

## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

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Pre-assembled solid-state relay module with push-in connection, consisting of: relay base with ejector and plug-in miniature solid-state relay. Input voltage: 24 V DC. Output: 3 - 33 V DC/3 A

### 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.



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 10 pc                                                                                                   |
| GTIN         | <br>4 046356 945417 |
| GTIN         | 4046356945417                                                                                           |

### Technical data

#### Note

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

#### Dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 93 mm  |
| Depth  | 66 mm  |

#### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Degree of protection                    | IP20             |

#### Input data

|                               |                         |
|-------------------------------|-------------------------|
| Input voltage range           | 19.2 V DC ... 28.8 V DC |
| Rated actuating voltage $U_c$ | 24 V DC                 |

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## Technical data

### Input data

|                                                      |                     |
|------------------------------------------------------|---------------------|
| "0" signal switching threshold in reference to $U_C$ | < 0.4               |
| "1" signal switching threshold in reference to $U_C$ | > 0.8               |
| Typical response time                                | 20 $\mu$ s          |
| Typical turn-off time                                | 300 $\mu$ s         |
| Status display                                       | Yellow LED          |
| Type of protection                                   | Free-wheeling diode |
| Transmission frequency                               | 300 Hz              |
| Power dissipation for nominal condition              | 0.2 W               |

### Output data

|                                                  |                             |
|--------------------------------------------------|-----------------------------|
| Output voltage range                             | 3 V DC ... 33 V DC          |
| Limiting continuous current                      | 3 A (see derating curve)    |
| Maximum inrush current                           | 15 A (10 ms)                |
| Surge voltage protection                         | > 33 V                      |
| Voltage drop at max. limiting continuous current | < 200 mV                    |
| Output circuit                                   | 2-wire, floating            |
| Type of protection                               | Reverse polarity protection |
|                                                  | Surge protection            |

### General

|                                        |                                       |
|----------------------------------------|---------------------------------------|
| Test voltage input/output              | 2.5 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Mounting position                      | any                                   |
| Assembly instructions                  | In rows with zero spacing             |
| Operating mode                         | 100% operating factor                 |
| Flammability rating according to UL 94 | V2 (Housing)                          |

### Connection data

|                                  |                                                                            |
|----------------------------------|----------------------------------------------------------------------------|
| Connection name                  | Input 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> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve) |
| Conductor cross section AWG      | 24 ... 16                                                                  |

### Connection data 2

|                                  |                                                                            |
|----------------------------------|----------------------------------------------------------------------------|
| Connection name                  | Output 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> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve) |
| Conductor cross section AWG      | 24 ... 16                                                                  |

## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Technical data

#### Standards and Regulations

|                          |                                                                  |
|--------------------------|------------------------------------------------------------------|
| Designation              | Air clearances and creepage distances between the power circuits |
| Standards/regulations    | DIN EN 50178                                                     |
| Rated insulation voltage | 260 V AC                                                         |
| Rated surge voltage      | 4 kV                                                             |
| Insulation               | Basic insulation                                                 |
| Pollution degree         | 2                                                                |
| Overvoltage category     | III                                                              |

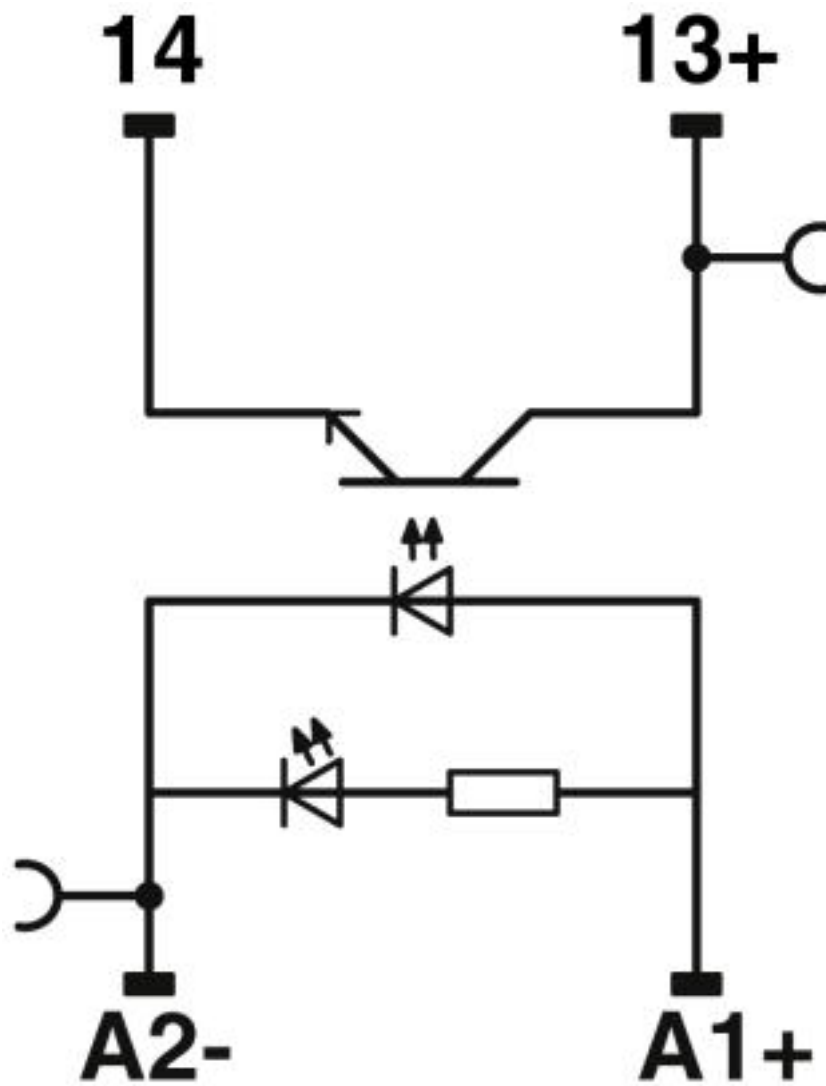
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

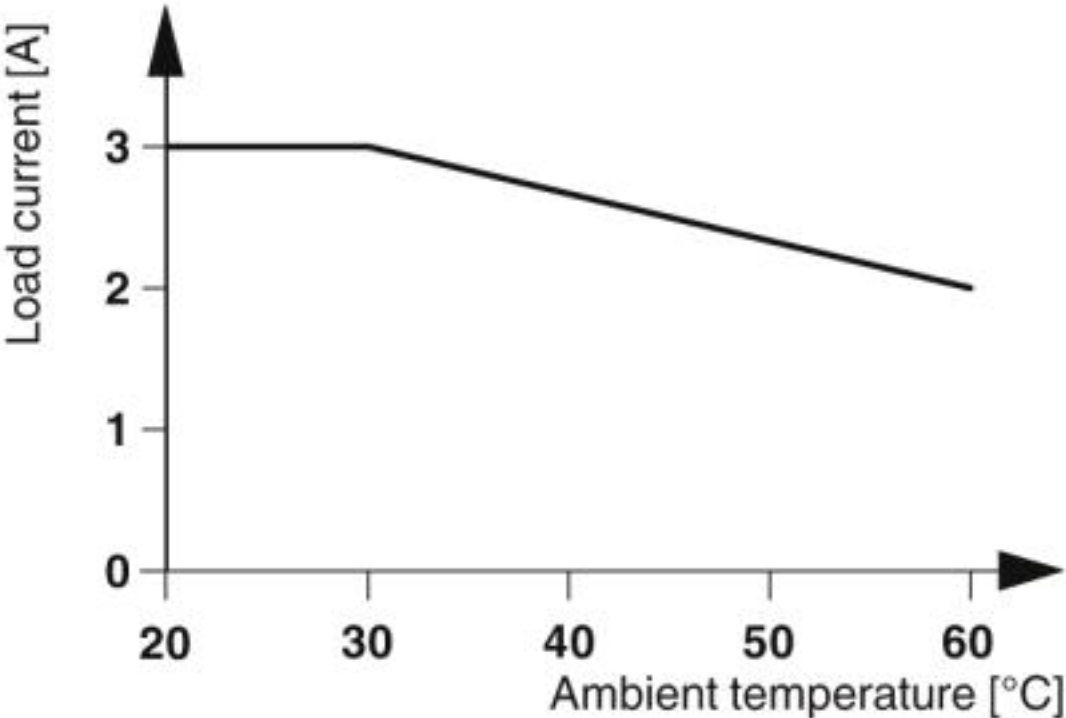
## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

Circuit diagram



Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

Diagram



Articles in set

Miniature solid-state relay - OPT-24DC/ 24DC/ 2 - 2966595



Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 24 V DC, output: 3 ... 33 V DC/3 A

Relay base - RIF-0-BPT/1 - 2901873



RIF-0... relay base, for miniature power relay with 1 N/O contact or solid-state relays of the same design, push-in connection, for mounting on NS 35/7,5

Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371604 |
| eCl@ss 4.1    | 27371100 |
| eCl@ss 5.0    | 27371600 |

## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 5.1 | 27371600 |
| eCl@ss 6.0 | 27371600 |
| eCl@ss 7.0 | 27371604 |
| eCl@ss 8.0 | 27371604 |
| eCl@ss 9.0 | 27371604 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001504 |
| ETIM 3.0 | EC001504 |
| ETIM 4.0 | EC001504 |
| ETIM 5.0 | EC001504 |
| ETIM 6.0 | EC001504 |
| ETIM 7.0 | EC001504 |

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39122326 |
| UNSPSC 18.0 | 39122326 |
| UNSPSC 19.0 | 39122326 |
| UNSPSC 20.0 | 39122326 |
| UNSPSC 21.0 | 39122326 |

### Approvals

#### Approvals

#### Approvals

#### EAC

#### Ex Approvals

#### Approval details

|     |                                                                                     |                 |
|-----|-------------------------------------------------------------------------------------|-----------------|
| EAC |  | TR_TS_D_00573_c |
|-----|-------------------------------------------------------------------------------------|-----------------|

### Accessories

#### Accessories

#### End block

## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### 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



## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### 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, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: red

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Plug-in bridge - FBS 3-6 - 3030242



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: red



## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Accessories

Plug-in bridge - FBS 4-6 - 3030255



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: red

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Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: red

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Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: red

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Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: red

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Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: red

---

## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Accessories

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



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: blue

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Plug-in bridge - FBS 3-6 BU - 3036945



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: blue

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Plug-in bridge - FBS 4-6 BU - 3036958



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: blue

---

Plug-in bridge - FBS 5-6 BU - 3036961



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: blue

---

Plug-in bridge - FBS 10-6 BU - 3032198



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: blue

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## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Accessories

Plug-in bridge - FBS 20-6 BU - 3032208



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: blue

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Plug-in bridge - FBS 50-6 BU - 3032211



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: blue

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



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: gray

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Plug-in bridge - FBS 3-6 GY - 3032240



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: gray

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Plug-in bridge - FBS 4-6 GY - 3032279



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: gray

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## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Accessories

Plug-in bridge - FBS 5-6 GY - 3032266



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: gray

Plug-in bridge - FBS 10-6 GY - 3032253



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: gray

### Terminal marking

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 6 - 0818085



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

Marker for terminal blocks - UCT-TM 6 - 0828736



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 60

### Test plug terminal block

## Solid-state relay module - RIF-0-OPT-24DC/24DC/2 - 2905293

### Accessories

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

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