

## Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 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 PDTs. Input voltage: 24 V DC



### Key Commercial Data

Packing unit	1 STK
Weight per Piece (excluding packing)	68.0 g
Custom tariff number	85364110
Country of origin	Germany

### Technical data

#### Note

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

Width	16 mm
Height	93 mm
Depth	75 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

#### Coil side

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	see diagram
Typical input current at $U_N$	18 mA

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## Technical data

### Coil side

Typical response time	9 ms
Typical release time	10 ms
Coil voltage	24 V DC
Protective circuit	Damping diode
Operating voltage display	Yellow LED
Power dissipation for nominal condition	0.43 W

### Contact side

Contact type	2 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	16 A (20 ms, N/O contact)
Limiting continuous current	see diagram
Interrupting rating (ohmic load) max.	192 W (at 24 V DC)
	62 W (at 48 V DC)
	42 W (at 60 V DC)
	55 W (at 110 V DC)
	66 W (at 220 V DC)
	2000 VA (for 250 V AC)
Switching capacity min.	120 mW
Switching capacity in acc. with DIN VDE 0660/IEC 60947	1 A (at 24 V, DC13)
	1.5 A (at 24 V, AC15)
	1.5 A (at 120 V, AC15)
	1.5 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
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## Technical data

### Connection data output side

Connection method	Push-in connection
Stripping length	8 mm
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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.)
Test voltage PDT/PDT	2.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Operating mode	100% operating factor
Degree of protection	IP20 (Relay socket)
	RT II (Relay)
Mechanical service life	Approx. 5 x 10 <sup>6</sup> 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

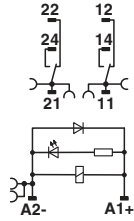
### Standards and Regulations

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

## Drawings

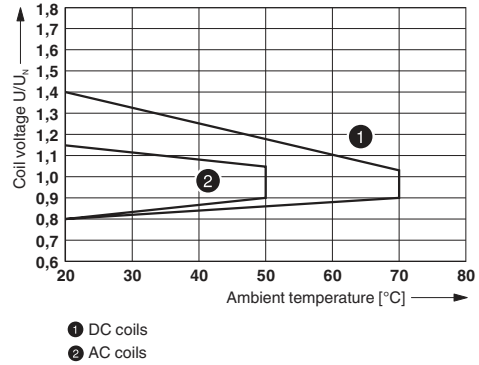
# Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 2905291

Circuit diagram



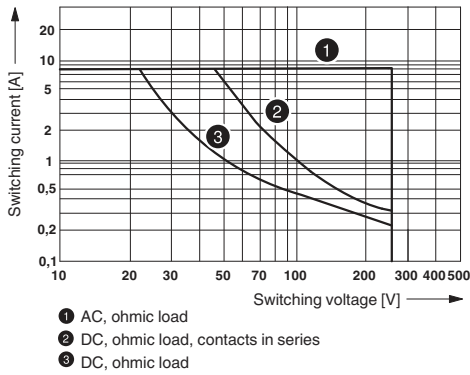
DC coils

Diagram



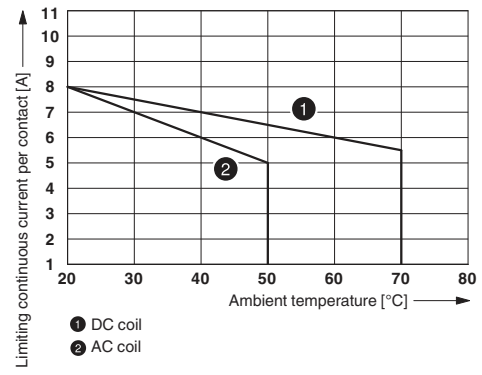
Operating voltage range

Diagram



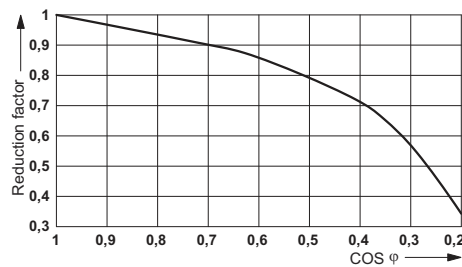
Interrupting rating

Diagram



Contact derating

Diagram



Service life reduction factor

Diagram

Electrical service life

# Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 2905291

## 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- 24DC/21-21/MS - 2987943



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

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

## Approvals

Approvals

## Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 2905291

### Approvals

Approvals

EAC / EAC

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Ex Approvals

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Approvals submitted

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### Approval details

EAC

EAC

### Accessories

Accessories

End block

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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## Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 2905291

### Accessories

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

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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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## Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 2905291

### Accessories

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, Length: 23 mm, Width: 10.7 mm, Number of positions: 2, Color: red

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



Plug-in bridge, Pitch: 6.2 mm, Number of positions: 2, Color: blue

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



Plug-in bridge, Pitch: 6.2 mm, Number of positions: 2, Color: gray

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Plug-in bridge - FBS 2-8 - 3030284



Plug-in bridge, Pitch: 8.2 mm, Length: 29.6 mm, Width: 14.7 mm, Number of positions: 2, Color: red



## Relay Module - RIF-1-RPT-LDP-24DC/2X21MS - 2905291

### Accessories

Plug-in bridge - FBS 2-8 BU - 3032567



Plug-in bridge, Pitch: 8.2 mm, Number of positions: 2, Color: blue

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Plug-in bridge - FBS 2-8 GY 7042 - 3032541



Bridge for potential distribution

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### Terminal marking

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

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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

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### Test plug terminal block

Test plugs - MPS-MT - 0201744



Test plugs, Color: silver

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### Accessories

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