

# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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: 2 PDTs. Input voltage: 230 V AC

The figure shows the 24 V DC version



## Key Commercial Data

Packing unit	10 STK
GTIN	
GTIN	4046356732307
Weight per Piece (excluding packing)	68.200 g
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	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
Input voltage range in reference to $U_N$	see diagram

# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

## Technical data

### Coil side

Typical input current at $U_N$	6 mA
Typical response time	3 ms ... 12 ms
Typical release time range	3 ms ... 20 ms
Coil voltage	230 V AC
Protective circuit	Varistor
Operating voltage display	Yellow LED

### Contact side

Contact type	2 PDT
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 10 mA)
Min. switching current	10 mA (At 5 V)
Maximum inrush current	12 A (20 ms, N/O contact)
Limiting continuous current	8 A (see diagram)
Interrupting rating (ohmic load) max.	192 W (at 24 V DC)
	124 W (at 48 V DC)
	108 W (at 60 V DC)
	52 W (at 110 V DC)
	48 W (at 220 V DC)
	2500 VA (for 250 V AC)
Switching capacity in acc. with DIN VDE 0660/IEC 60947	2 A (at 24 V, DC13)
	0.2 A (at 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 250 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> (with or without ferrule)
Conductor cross section flexible (2 conductors with same cross section)	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

# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

## Technical data

### Connection data output side

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> (with or without ferrule)
Conductor cross section AWG	26 ... 16

### General

Type of note	Notes on operation
Note	FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21)
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 III (Relay)
Mechanical service life	Approx. 10 <sup>7</sup> cycles
Mounting position	any
Assembly instructions	In rows with zero spacing

### Standards and Regulations

Standards/regulations	DIN EN 50178
	IEC 62103
Rated surge voltage	6 kV
Insulation	Safe isolation, basic insulation, and 4 kV rated surge voltage between all changeover contacts.
Degree of pollution	2
Overvoltage category	III

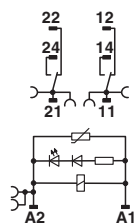
### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

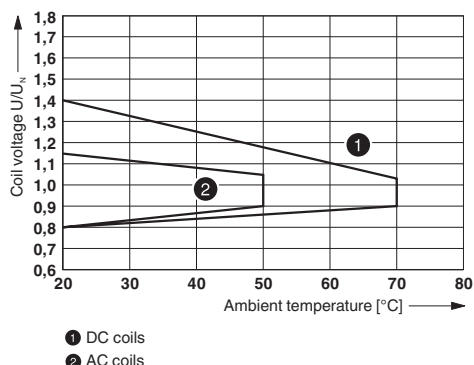
# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

Circuit diagram



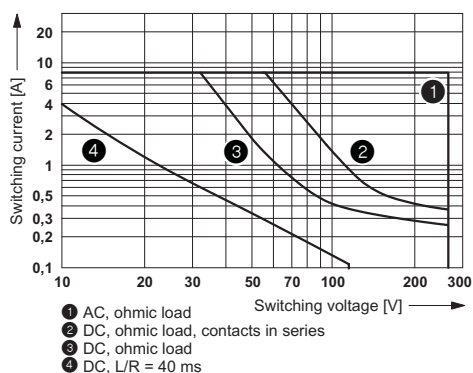
AC coils

Diagram

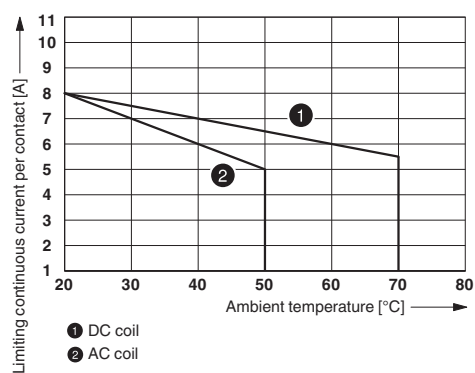


Operating voltage range

Diagram

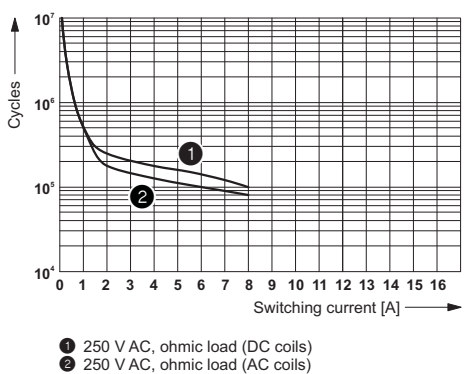


Diagram



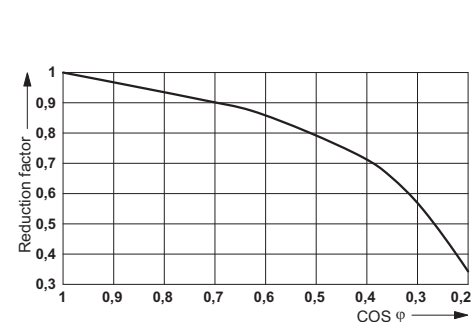
Interrupting rating

Diagram



Contact derating

Diagram



Electrical service life

Service life reduction factor

# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

## 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/21-21 - 2961451



Plug-in miniature power relay, with power contact, 2 PDTs, input 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 ±20%

Retaining bracket - RIF-RH-1 - 2900953



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 mm tall miniature power relay and solid-state relay

## Classifications

eCl@ss

eCl@ss 5.0	27371601
eCl@ss 5.1	27371601
eCl@ss 6.0	27371601
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437

# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

## Classifications

### ETIM

ETIM 4.0	EC001437
ETIM 5.0	EC001437
ETIM 6.0	EC001437

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39122334

## Approvals

### Approvals

Approvals


EAC / GL / LR / EAC / PRS


Ex Approvals

### Approval details

EAC		EAC-Zulassung
-----	---	---------------

GL		<a href="http://www.gl-group.com/newbuilding/approvals/index.html">http://www.gl-group.com/newbuilding/approvals/index.html</a>	11247-14 HH
----	---	---	-------------

LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	15/20011
----	---	---	----------

EAC		RU C- DE.A*30.B.01082
-----	---	--------------------------

# Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

## Approvals

PRS		<a href="http://www.prs.pl/">http://www.prs.pl/</a>	TE/2108/880590/16
-----	--	---	-------------------

## 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

#### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663



Insulating sleeve, Color: white

Insulating sleeve - MPS-IH RD - 0201676



Insulating sleeve, Color: red

Insulating sleeve - MPS-IH BU - 0201689



Insulating sleeve, Color: blue

## Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

### Accessories

Insulating sleeve - MPS-IH YE - 0201692



Insulating sleeve, Color: yellow

---

Insulating sleeve - MPS-IH GN - 0201702



Insulating sleeve, Color: green

---

Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

---

Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

---

### 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

---



## Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

### Accessories

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



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

---

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



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

---

Plug-in bridge - FBS 2-8 - 3030284



Plug-in bridge, Pitch: 8.2 mm, Length: 3 mm, Width: 14.7 mm, Number of positions: 2, Color: red

---

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



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

---

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



Bridge for potential distribution

---

### Terminal marking

## Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

### Accessories

Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, 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: CMS-P1-PLOTTER, PLOTMARK, 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, with solder connection up to 1 mm<sup>2</sup> conductor cross section, Color: silver

### Spare parts

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/21-21 - 2961451



Plug-in miniature power relay, with power contact, 2 PDTs, input voltage 230 V AC

## Relay Module - RIF-1-RPT-LV-230AC/2X21 - 2903331

### Accessories

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-1 - 2900953



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 mm tall miniature power relay and solid-state relay

---

Phoenix Contact 2017 © - all rights reserved  
<http://www.phoenixcontact.com>