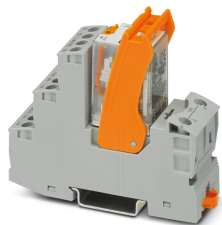


# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

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Pre-assembled relay module with screw connection, consisting of: relay base, power contact relay, plug-in display/interference suppression module, and retaining bracket. Contact type: 4 changeover contacts. Input voltage: 230 V AC


## 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	 4 046356 732185
GTIN	4046356732185

## Technical data

### Note

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

Width	27 mm
Height	89 mm
Depth	75 mm

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20 (Relay base)
	RT I (Relay)

### Coil side

Nominal input voltage $U_N$	230 V AC
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# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

## Technical data

### Coil side

Input voltage range in reference to $U_N$	see diagram
Mains frequency	50/60 Hz
Typical input current at $U_N$	6.5 mA
Typical response time	5 ms ... 15 ms
Typical release time range	5 ms ... 20 ms
Coil voltage	230 V AC
Protective circuit	Varistor
Operating voltage display	Yellow LED
Power dissipation for nominal condition	1.5 W

### Contact side

Contact type	4 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (At 24 mA)
Min. switching current	5 mA (at 24 V)
Maximum inrush current	16 A (20 ms, N/O contacts)
Limiting continuous current	5 A (see diagram)
Interrupting rating (ohmic load) max.	120 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)
	1250 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.22 A (at 120 V, DC13)
	0.11 A (at 250 V, DC13)
	1.5 A (at 24 V, AC15)
	1.5 A (at 120 V, AC15)
	1 A (at 240 V, AC15)

### General

Test voltage	2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)
	2 kV <sub>rms</sub> (50 Hz, 1 min., contact/contact)
Operating mode	100% operating factor
Flammability rating according to UL 94	V2 (Housing)
Mechanical service life	approx. $2 \times 10^7$ cycles
Mounting position	any
Assembly instructions	in rows with zero spacing

### Connection data

# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

## Technical data

### Connection data

Connection name	Input side
Connection method	Screw connection
Stripping length	8 mm
Conductor cross section solid	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section solid (2 conductors with same cross section)	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Ferrule with plastic sleeve)
Conductor cross section flexible (2 conductors with same cross section)	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule with plastic sleeve)
Conductor cross section AWG	20 ... 10 (solid)
	20 ... 12 (flexible)
Torque	0.5 Nm ... 0.6 Nm

### Connection data 2

Connection name	Contact side
Connection method	Screw connection
Stripping length	8 mm
Conductor cross section solid	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section solid (2 conductors with same cross section)	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Ferrule with plastic sleeve)
Conductor cross section flexible (2 conductors with same cross section)	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule with plastic sleeve)
Conductor cross section AWG	20 ... 10 (solid)
	20 ... 12 (flexible)
Torque	0.5 Nm ... 0.6 Nm

### Standards and Regulations

Standards/regulations	DIN EN 50178
Rated insulation voltage	250 V AC
Rated surge voltage	2.5 kV
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	II

### Conformance/approvals

Designation	Corrosive gas test
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
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# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

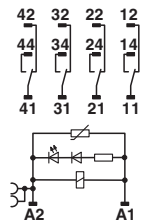
## Technical data

### Environmental Product Compliance

	No hazardous substances above threshold values
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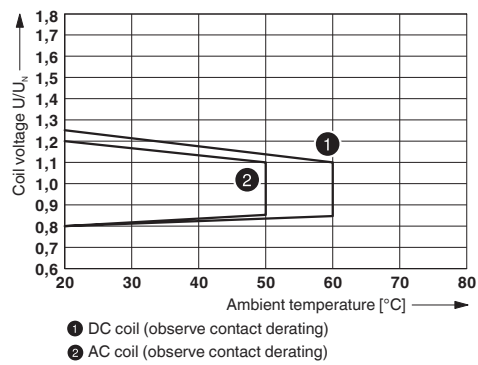
## Drawings

Circuit diagram



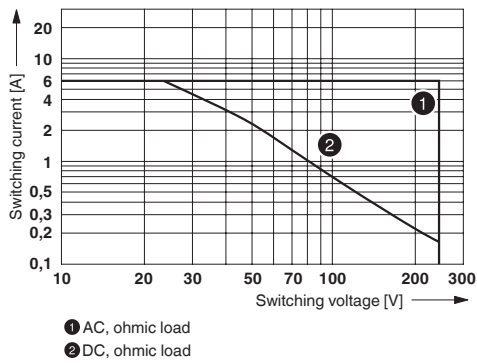
AC coils

Diagram



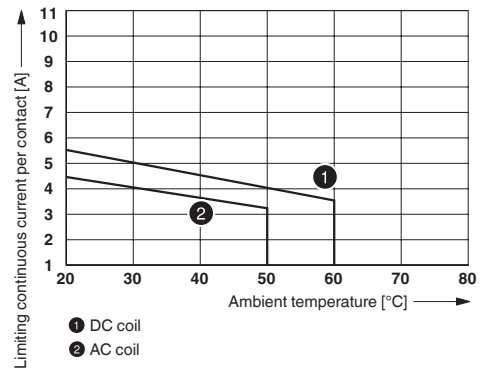
Operating voltage range

Diagram



Interrupting rating

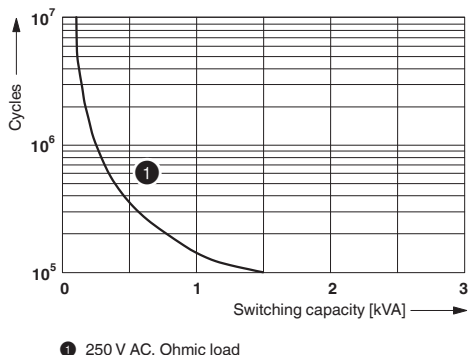
Diagram



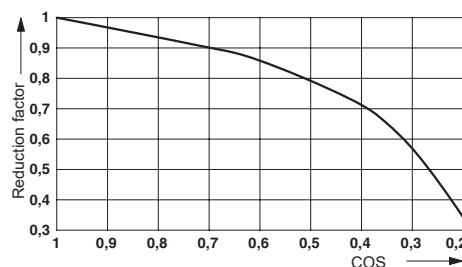
Contact derating

# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

Diagram



Diagram



Electrical service life

Service life reduction factor

## Articles in set

Relay base - RIF-2-BSC/4X21 - 2900932



RIF-2... relay base, for industrial relay with 2 or 4 changeover contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

Single relay - REL-IR4/L-230AC/4X21 - 2903688



Plug-in industrial relay with power contacts, 4 changeover contacts, test button, status LED, mechanical switching position indicator, input voltage: 230 V AC

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-2 - 2900954



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-2 relay base, for industrial relay

# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

## Articles in set

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### Classifications

#### eCl@ss

eCl@ss 10.0.1	27371601
eCl@ss 11.0	27371601
eCl@ss 4.0	27371100
eCl@ss 4.1	27371100
eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27371601
eCl@ss 9.0	27371601

#### ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437
ETIM 6.0	EC001437
ETIM 7.0	EC001437

#### UNSPSC

UNSPSC 6.01	30211917
UNSPSC 7.0901	39121516
UNSPSC 11	39121516
UNSPSC 12.01	39121516
UNSPSC 13.2	39122334
UNSPSC 18.0	39122334
UNSPSC 19.0	39122334
UNSPSC 20.0	39122334
UNSPSC 21.0	39122334

### Approvals

#### Approvals

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#### Approvals

DNV GL / CSA / EAC / EAC

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#### Ex Approvals

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# Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

## Approvals

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA000018V
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CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	2607057
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EAC			TR_TS_D_00573_c
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EAC			RU*C- DE.*08.B.00010
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## Accessories

### Accessories

#### DIN rail

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

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DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

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DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

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## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

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### 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

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

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### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



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



## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

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, color: red

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



Plug-in bridge, pitch: 6.2 mm, color: blue

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



Plug-in bridge, pitch: 6.2 mm, color: gray

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### Labeled terminal marker

Zack marker strip - ZB 5 CUS - 0824962



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

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## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

Zack marker strip - ZB 5,LGS:FORTL.ZAHLEN - 1050017



Zack marker strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

Zack marker strip - ZB 5,QR:FORTL.ZAHLEN - 1050020



Zack marker strip, white, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

Zack marker strip - ZB 5,LGS:GLEICHE ZAHLEN - 1050033



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

Zack marker strip - ZB 5,LGS:L1-N,PE - 1050415



Zack marker strip, Strip, white, labeled, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 5 CUS - 0824581



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm, Number of individual labels: 96

## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

Marker for terminal blocks - UCT-TM 5 CUS - 0829595



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm, Number of individual labels: 72

Zack marker strip - ZB 15 CUS - 0824945



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

Zack marker strip - ZB 15,LGS:L1-N,PE - 0811998



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

### Marker carriers

Marker carriers - STP 5-2 - 0800967



Double marker carrier, snaps onto the double-level spring-cage terminal block STTB 2,5, STTB 4, PTTB 2,5, PTTB 4 can be marked with UC-TM 5, ZB 5 or UC-TMF 5, ZBF 5

### Terminal marking

Marker for terminal blocks - UC-TM 16 - 0819217



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 16 mm, lettering field size: 15.45 x 10.5 mm, Number of individual labels: 32

## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### Accessories

#### Marker for terminal blocks - UC-TMF 16 - 0819262



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 16 mm, lettering field size: 15.45 x 5.1 mm, Number of individual labels: 32

#### Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 5.2 mm, lettering field size: 5.1 x 10.5 mm, Number of individual labels: 10

#### Marker for terminal blocks - UC-TM 5 - 0818108



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm, Number of individual labels: 96

#### Marker for terminal blocks - UCT-TM 5 - 0828734



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: snapped, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm, Number of individual labels: 72

#### Zack marker strip - ZB 15:UNBEDRUCKT - 0811972



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

#### Test plug terminal block



## Relay Module - RIF-2-RSC-LV-230AC/4X21 - 2903316

### 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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### Spare parts

Relay base - RIF-2-BSC/4X21 - 2900932



RIF-2... relay base, for industrial relay with 2 or 4 changeover contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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Single relay - REL-IR4/L-230AC/4X21 - 2903688



Plug-in industrial relay with power contacts, 4 changeover contacts, test button, status LED, mechanical switching position indicator, input voltage: 230 V AC

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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 ±20 %

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Retaining bracket - RIF-RH-2 - 2900954



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-2 relay base, for industrial relay

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>