

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



2908501

<https://www.phoenixcontact.com/us/products/2908501>

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Preassembled relay module with screw connection, consisting of: relay base, power contact relay, plug-in display/interference suppression module, and retaining bracket. Contact switching type: 2 changeover contacts. Input voltage: 12 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	2908501
Packing unit	1 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	C465
Product key	CK6519
Catalog page	Page 329 (C-5-2019)
GTIN	4055626306230
Weight per piece (including packing)	69.8 g
Weight per piece (excluding packing)	69 g
Customs tariff number	85364110
Country of origin	CN

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



2908501

<https://www.phoenixcontact.com/us/products/2908501>

Technical data

Notes

General	FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21)
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Product properties

Product type	Relay Module
Product family	RIFLINE complete
Application	Universal
Operating mode	100% operating factor
Mechanical service life	approx. 3×10^7 cycles

Insulation characteristics

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

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	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	0.4 W
Test voltage (Winding/contact)	4 kV _{rms} (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2.5 kV _{rms} (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	12 V DC
Input voltage range	9.6 V DC ... 16.8 V DC (20 °C)
Input voltage range in reference to U_N	see diagram
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at U_N	33 mA
Typical response time	8 ms
Typical release time	10 ms
Coil voltage	12 V DC

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



2908501

<https://www.phoenixcontact.com/us/products/2908501>

Protective circuit	Freewheeling diode
Operating voltage display	Yellow LED

Output data

Switching

Contact switching type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (10 mA)
Limiting continuous current	8 A (see diagram)
Maximum inrush current	25 A (20 ms, N/O contacts)
Min. switching current	10 mA (5 V)
Interrupting rating (ohmic load) max.	192 W (at 24 V DC) 96 W (at 48 V DC) 60 W (at 60 V DC) 44 W (at 110 V DC) 57 W (at 220 V DC) 2000 VA (for 250 V AC)
Utilization category CB Scheme (IEC 60947-5-1)	AC15, 1.5 A/240 V (N/O contact) AC15, 2 A/250 V (N/C contact) DC13, 2 A/24 V (N/C contact) DC13, 0.2 A/250 V (N/O contact)

Connection data

Connection method	Screw connection
Stripping length	8 mm
Conductor cross section rigid	0.5 mm ² ... 4 mm ²
Conductor cross-section rigid (2 conductors with same cross section)	0.5 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.5 mm ² ... 4 mm ² 0.5 mm ² ... 4 mm ² (Ferrule with plastic sleeve)
Conductor cross section flexible (2 conductors with same cross section)	0.5 mm ² ... 2.5 mm ² 0.5 mm ² ... 1.5 mm ² (TWIN ferrule with plastic sleeve)
Conductor cross section AWG	20 ... 10 (solid) 20 ... 12 (flexible)
Tightening torque	0.5 Nm ... 0.6 Nm

Dimensions

Width	16 mm
Height	90 mm
Depth	75 mm

Material specifications

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



2908501

<https://www.phoenixcontact.com/us/products/2908501>

Flammability rating according to UL 94	V2 (Housing)
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Environmental and real-life conditions

Ambient conditions

Degree of protection (Relay base)	IP20 (Relay base)
Degree of protection (Relay)	RT III (Relay)
Ambient temperature (operation)	-40 °C ... 70 °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

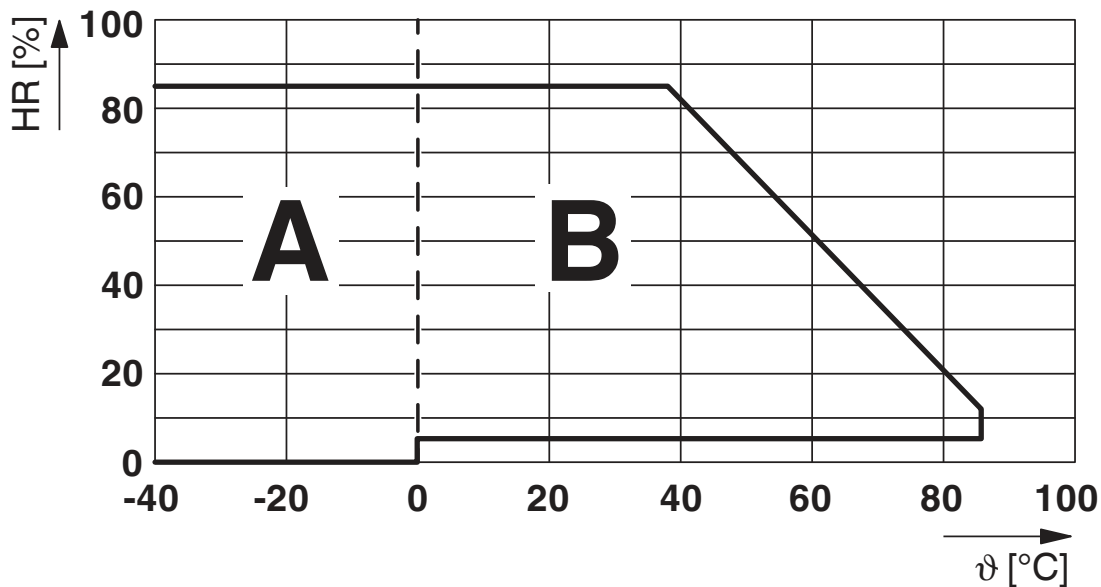
Standards/regulations	IEC 60947-5-1
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Mounting

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

Drawings

Diagram



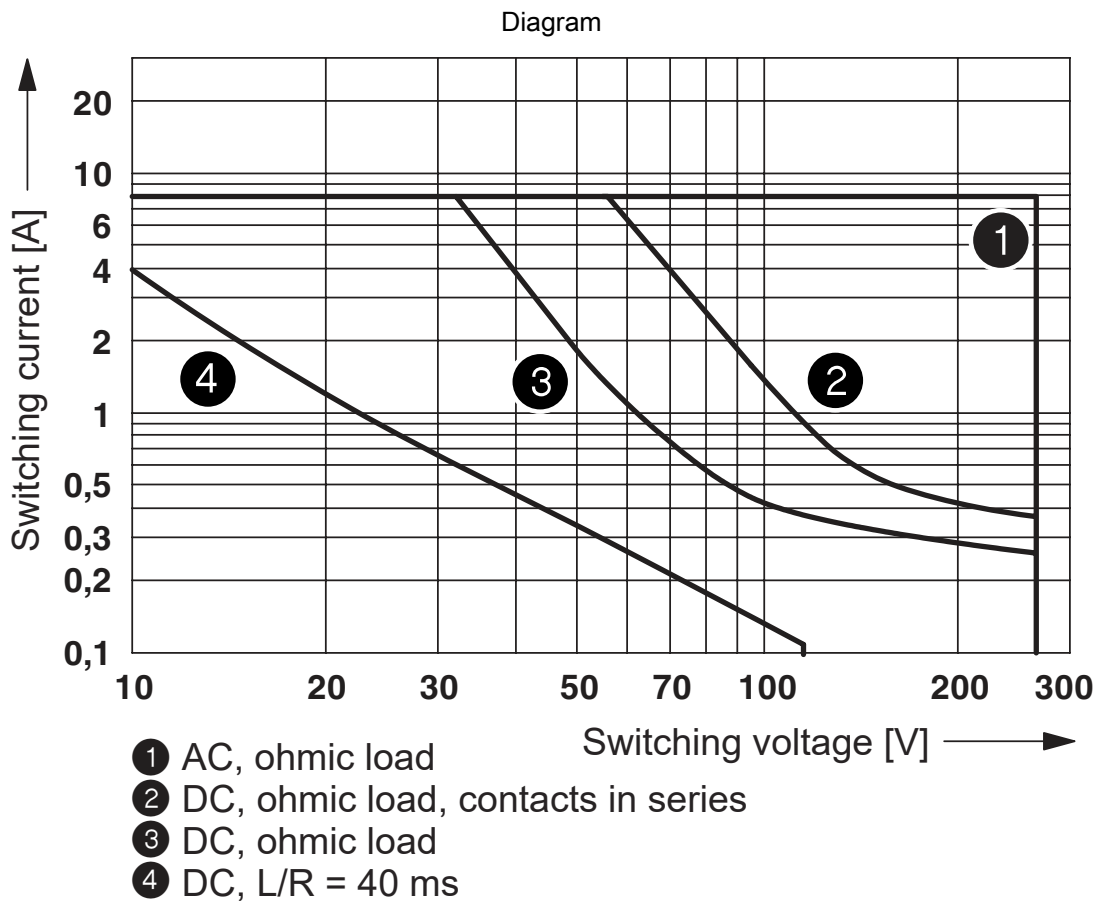
Permissible humidity for operation and storage.

The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures $\leq 0^\circ\text{C}$ must be prevented

Area B: Condensation at ambient temperatures $> 0^\circ\text{C}$ must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature $\leq 25^\circ\text{C}$.

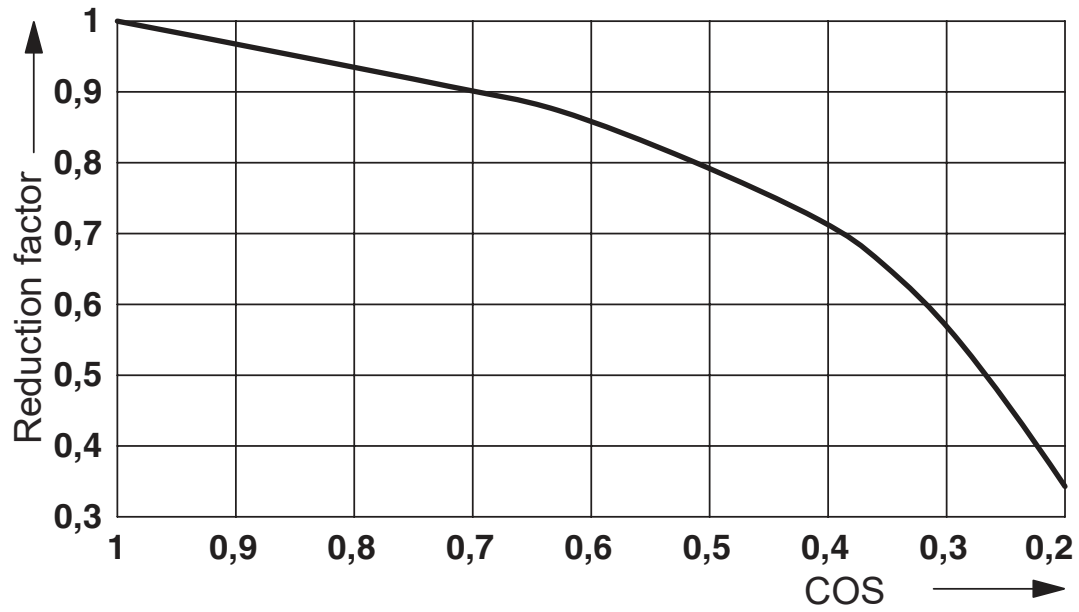


Interrupting rating

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Diagram



Service life reduction factor

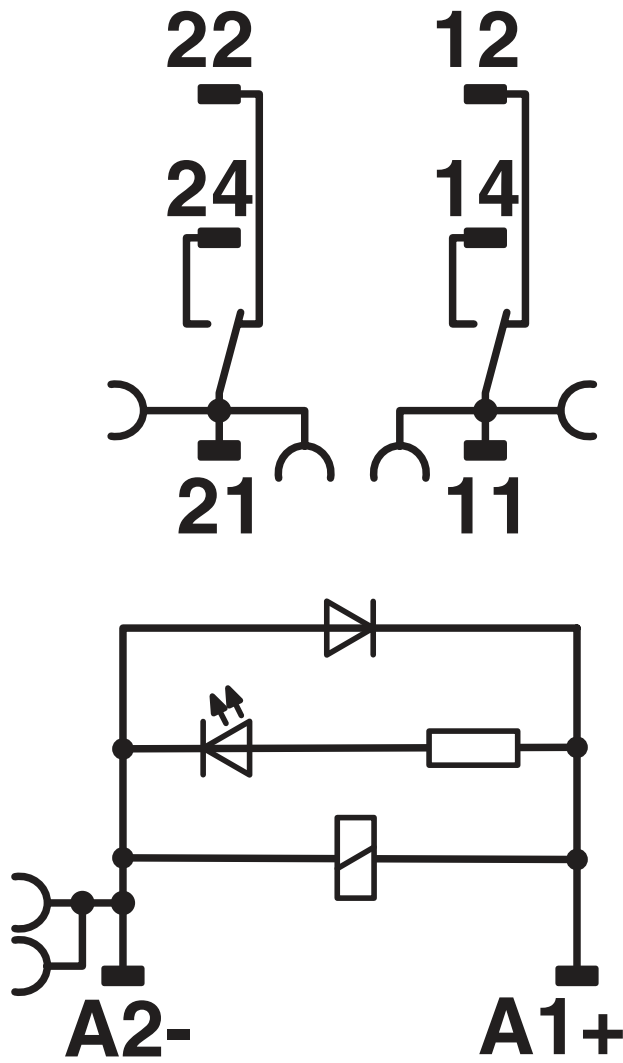
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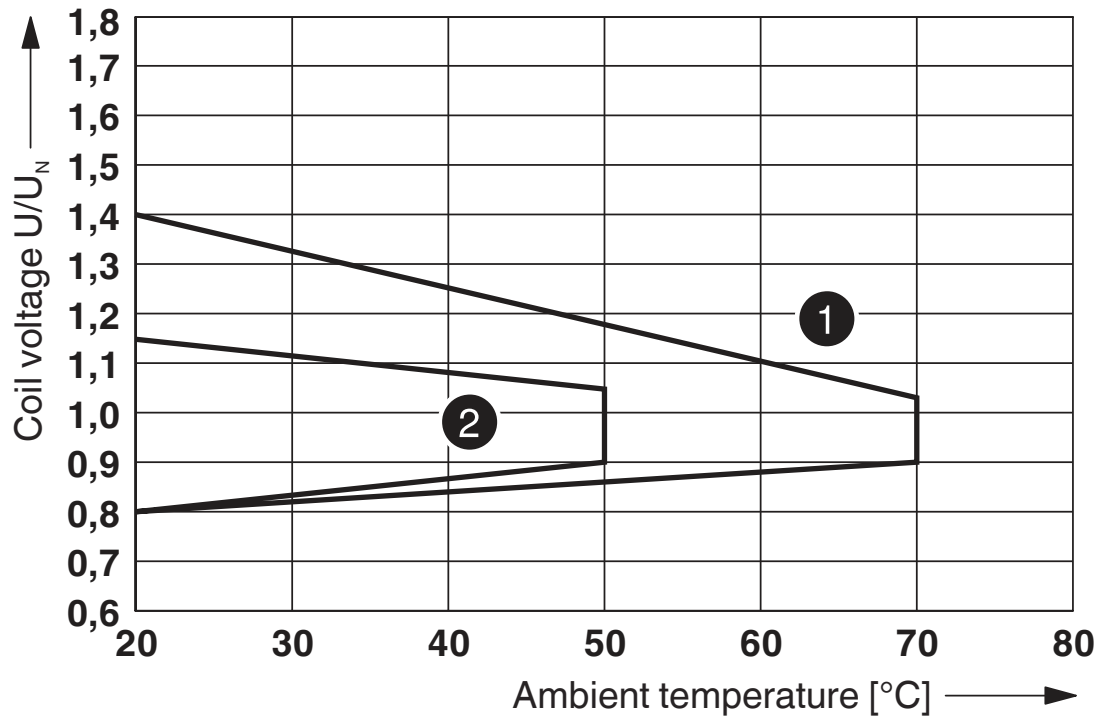
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Circuit diagram



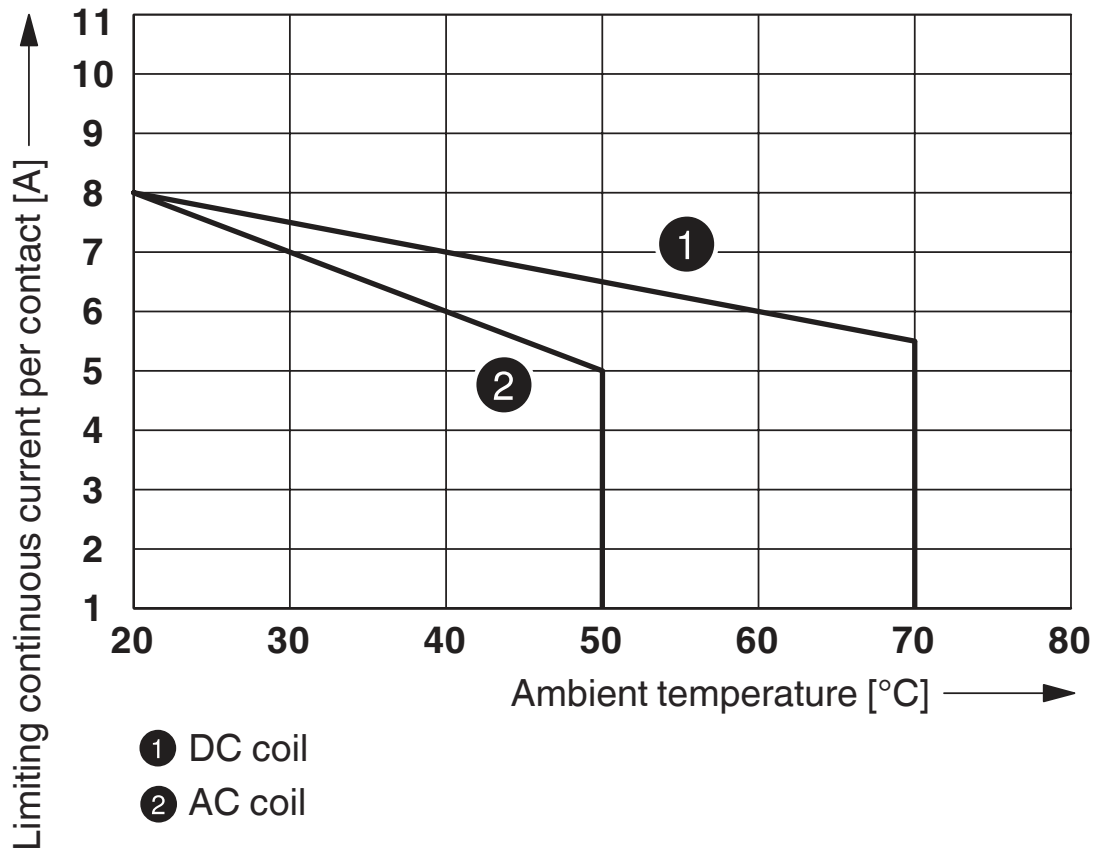
Diagram



- ① DC coils
- ② AC coils

Operating voltage range

Diagram

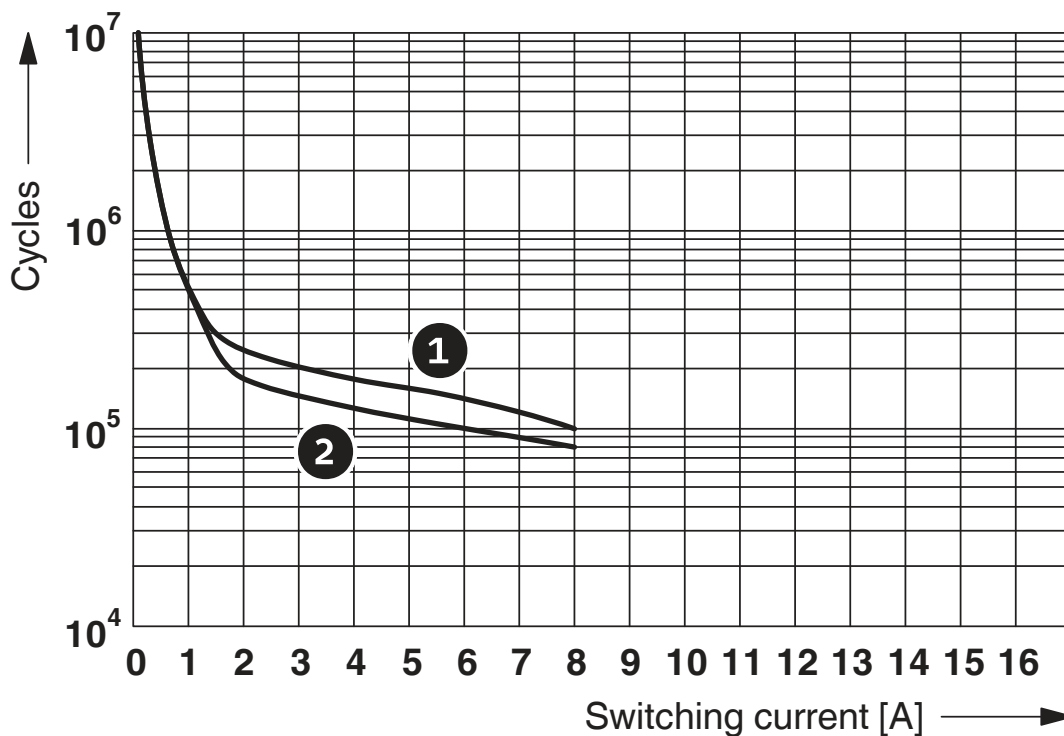


Contact derating

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Diagram



- 1 250 V AC, ohmic load (DC coils)
- 2 250 V AC, ohmic load (AC coils)

Electrical service life

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2908501>



EAC

Approval ID: TR_TS_D_00573_c



DNV GL

Approval ID: TAA000018V



EAC

Approval ID: RU*C-DE.*08.B.00010

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Classifications

ECLASS

ECLASS-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	27371601

ETIM

ETIM 8.0	EC001437
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UNSPSC

UNSPSC 21.0	39122300
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

FBS 2-6 - Plug-in bridge

3030336

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Plug-in bridge, pitch: 6.2 mm, number of positions: 2, color: red

FBS 2-6 BU - Plug-in bridge

3036932

<https://www.phoenixcontact.com/us/products/3036932>



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

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



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FBS 2-6 GY - Plug-in bridge

3032237

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

FBS 2-8 - Plug-in bridge

3030284

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Plug-in bridge, pitch: 8.2 mm, number of positions: 2, color: red

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



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FBS 2-8 BU - Plug-in bridge

3032567

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Plug-in bridge, pitch: 8.2 mm, number of positions: 2, color: blue

FBS 2-8 GY

7042 - Plug-in bridge

3032541

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Bridge for potential distribution

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STP 5-2-ZB - Marker carriers

3037643

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Marker carriers, snaps into ST 2,5 spring-cage terminal blocks, can be marked with UC-TM 5, UC-TMF 5, UCT-TM 5, UCT-TMF 5, ZB 5, or ZBF 5, gray, unlabeled, mounting type: snapped

RIF-1-BSC/2X21 - Relay base

2900930

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

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



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REL-MR- 12DC/21-21 - Single relay

2961257

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Plug-in miniature power relay, with power contact, 2 changeover contacts, input voltage 12 V DC

RIF-LDP-12-24 DC - Plug-in module

2900939

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Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with freewheeling diode and yellow LED, polarity: A1+, A2-, input voltage: 12 V DC ... 24 V DC $\pm 30\%$

RIF-1-RSC-LDP-12DC/2X21 - Relay Module



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RIF-RH-1 - Retaining bracket

2900953

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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

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