RIF-1-RSC-LDP-12DC/1X21 - Relay module

2908500

https://www.phoenixcontact.com/us/products/2908500

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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: 1 changeover contact. 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	2908500
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	C465
Product key	CK6519
Catalog page	Page 328 (C-5-2019)
GTIN	4055626306223
Weight per piece (including packing)	69.52 g
Weight per piece (excluding packing)	69.52 g
Customs tariff number	85364110
Country of origin	CN

Set consists of

RIF-1-BSC/2X21 - Relay base

2900930

https://www.phoenixcontact.com/us/products/2900930

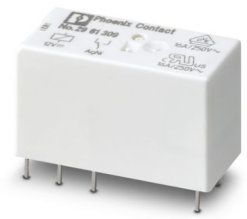


RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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

2961309

https://www.phoenixcontact.com/us/products/2961309



Plug-in miniature power relay, with power contact for high continuous currents, 1 changeover contact, input voltage 12 V DC

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

2900939

https://www.phoenixcontact.com/us/products/2900939



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 ±30 %

RIF-RH-1 - Retaining bracket

2900953

https://www.phoenixcontact.com/us/products/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

Technical data

Notes

Notes on operation	FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21)

Product properties

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

Data management status

Date of last data management	10.06.2024
Article revision	05

Insulation characteristics

Insulation	Safe isolation between input and output
	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)
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
Protective circuit	Freewheeling diode
Operating voltage display	Yellow LED

Output data

Switching

Contact switching type	1 changeover contact
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (10 mA)
Limiting continuous current	11 A (see diagram)
Maximum inrush current	50 A (20 ms, N/O contacts)
Min. switching current	10 mA (12 V)
Interrupting rating (ohmic load) max.	264 W (24 V DC)
	58 W (48 V DC)
	48 W (60 V DC)
	50 W (110 V DC)
	80 W (220 V DC)
	2750 VA (250 V AC)
Utilization category CB Scheme (IEC 60947-5-1)	AC15, 1.5 A/240 V (N/O contact)
	AC15, 3 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 mm² ... 4 mm²
Conductor cross-section rigid (2 conductors with same cross section)	0.5 mm² ... 2.5 mm²
Conductor cross section flexible	0.5 mm² ... 4 mm²
	0.5 mm² ... 4 mm² (Ferrule with plastic sleeve)
Conductor cross section flexible (2 conductors with same cross section)	0.5 mm² ... 2.5 mm²
	0.5 mm² ... 1.5 mm² (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

Color	gray (RAL 7042)
Flammability rating according to UL 94	V2 (Housing)

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

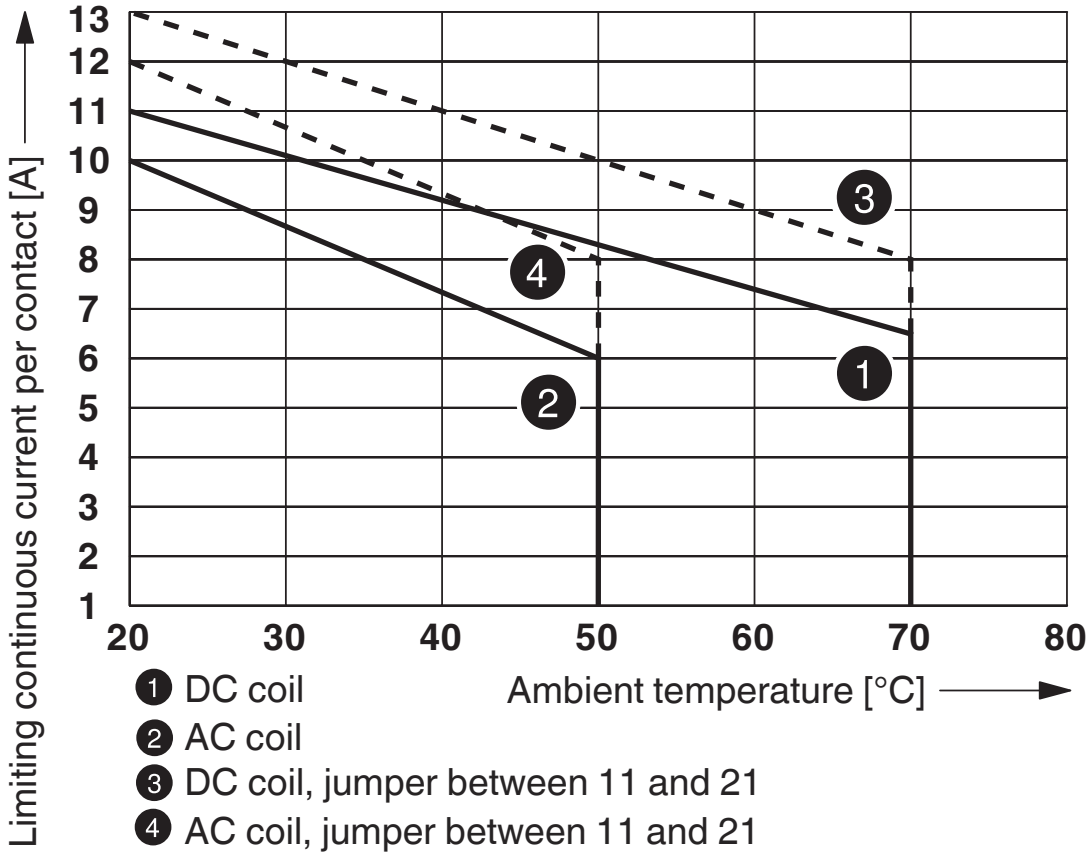
Standards/regulations	IEC 60947-5-1

Mounting

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

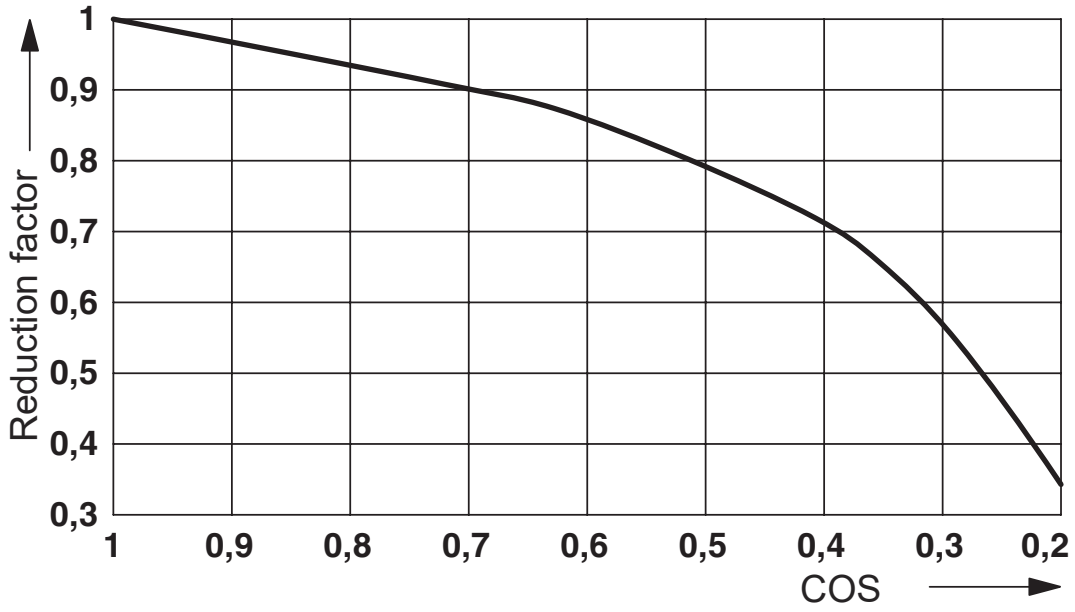
Drawings

Diagram



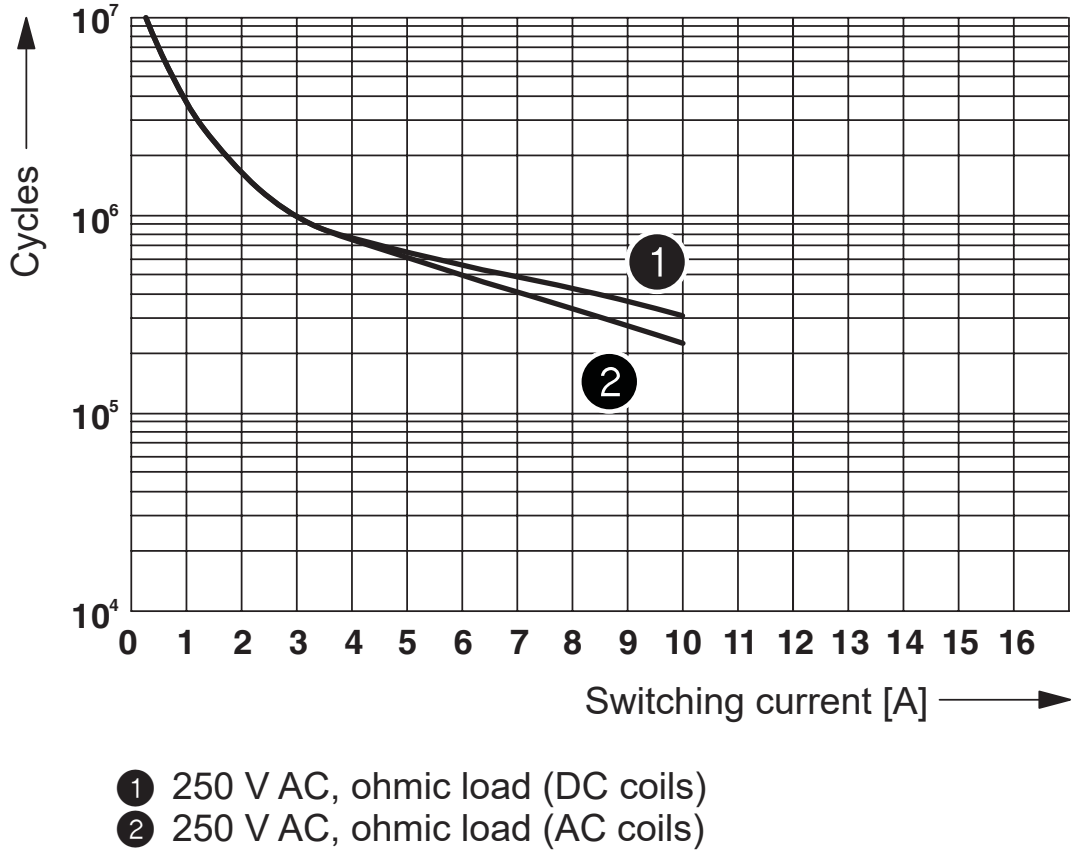
Contact derating

Diagram



Service life reduction factor

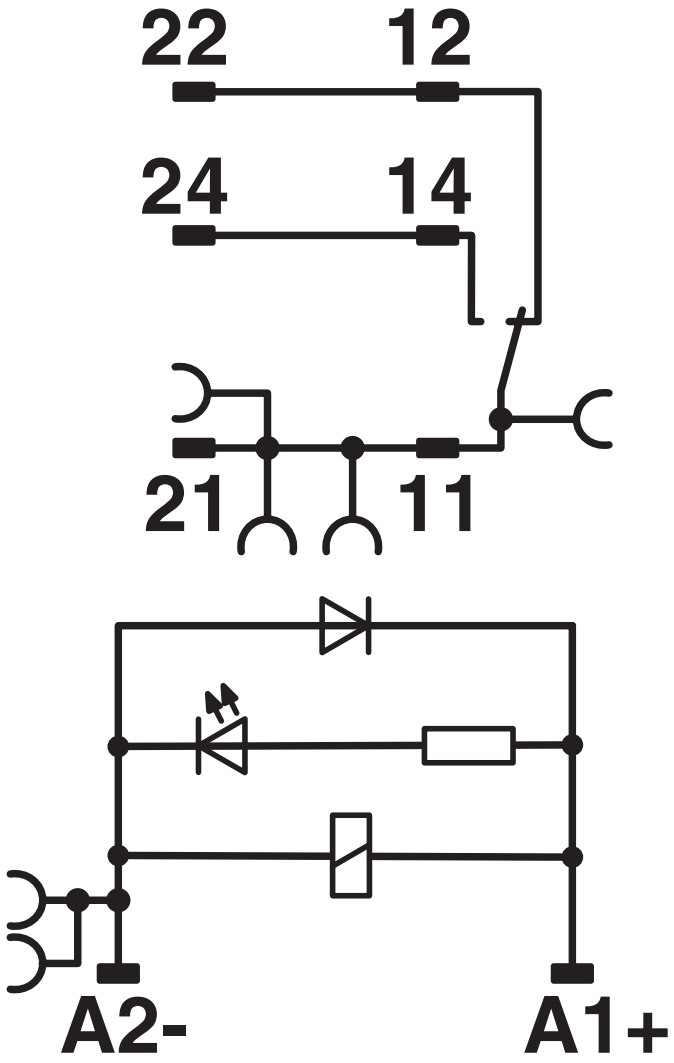
Diagram



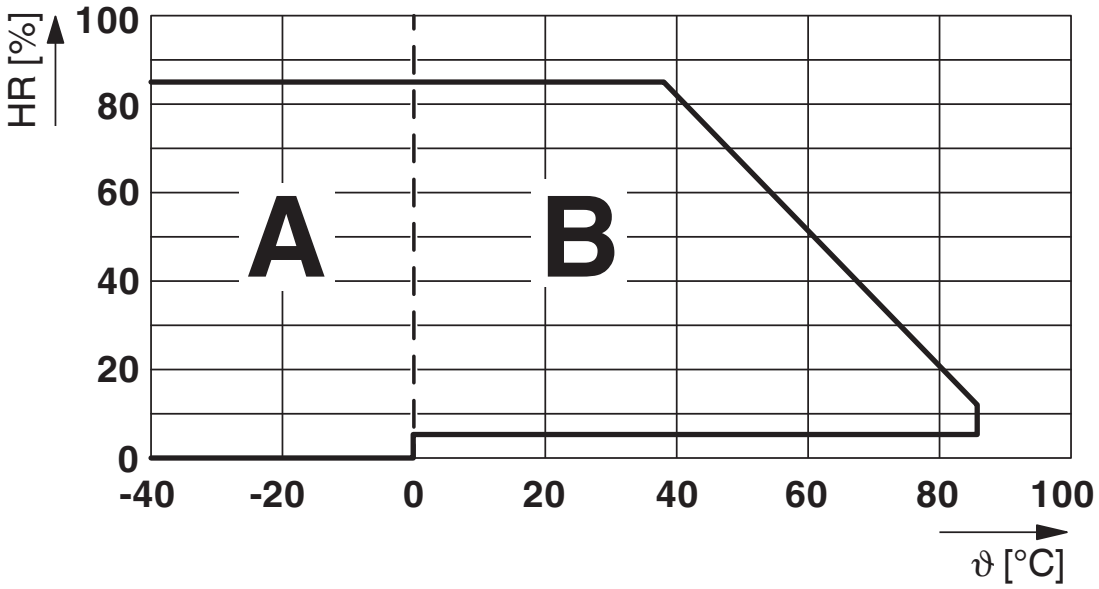
1 250 V AC, ohmic load (DC coils)
2 250 V AC, ohmic load (AC coils)

Electrical service life

Circuit diagram



Diagram

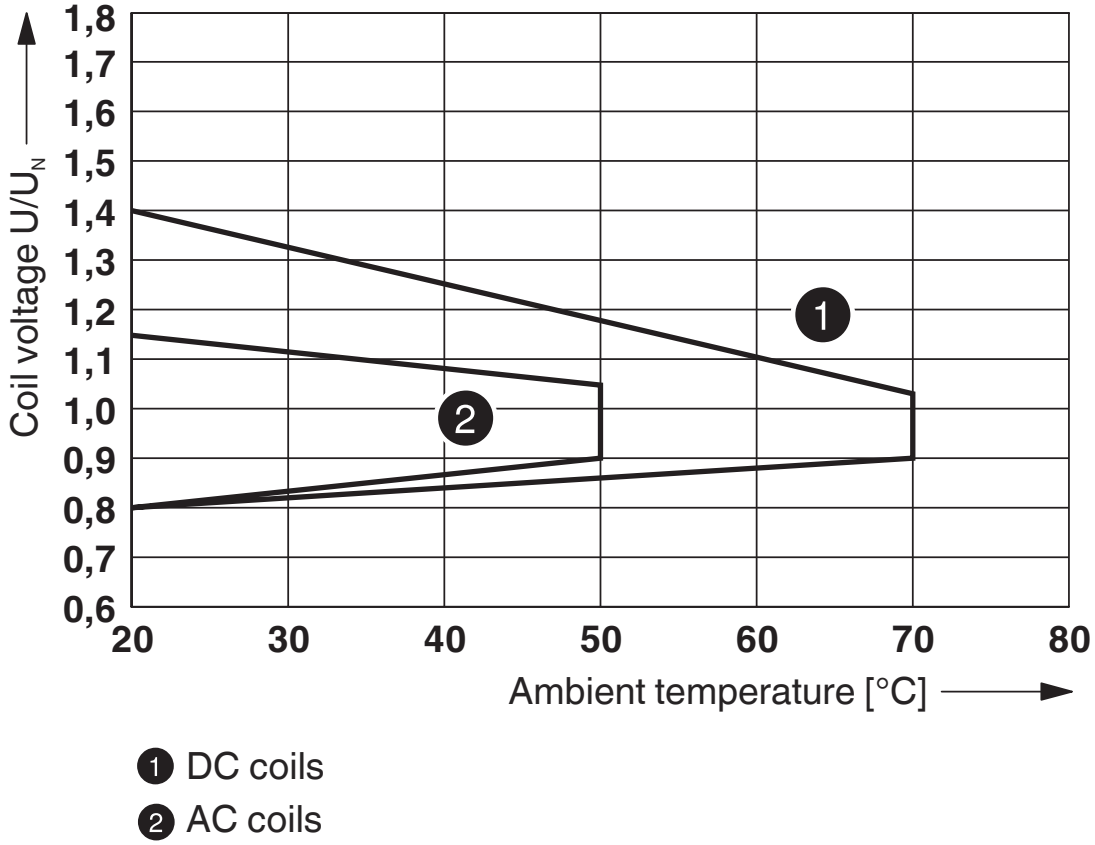


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°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 ≤ 25°C.

Diagram

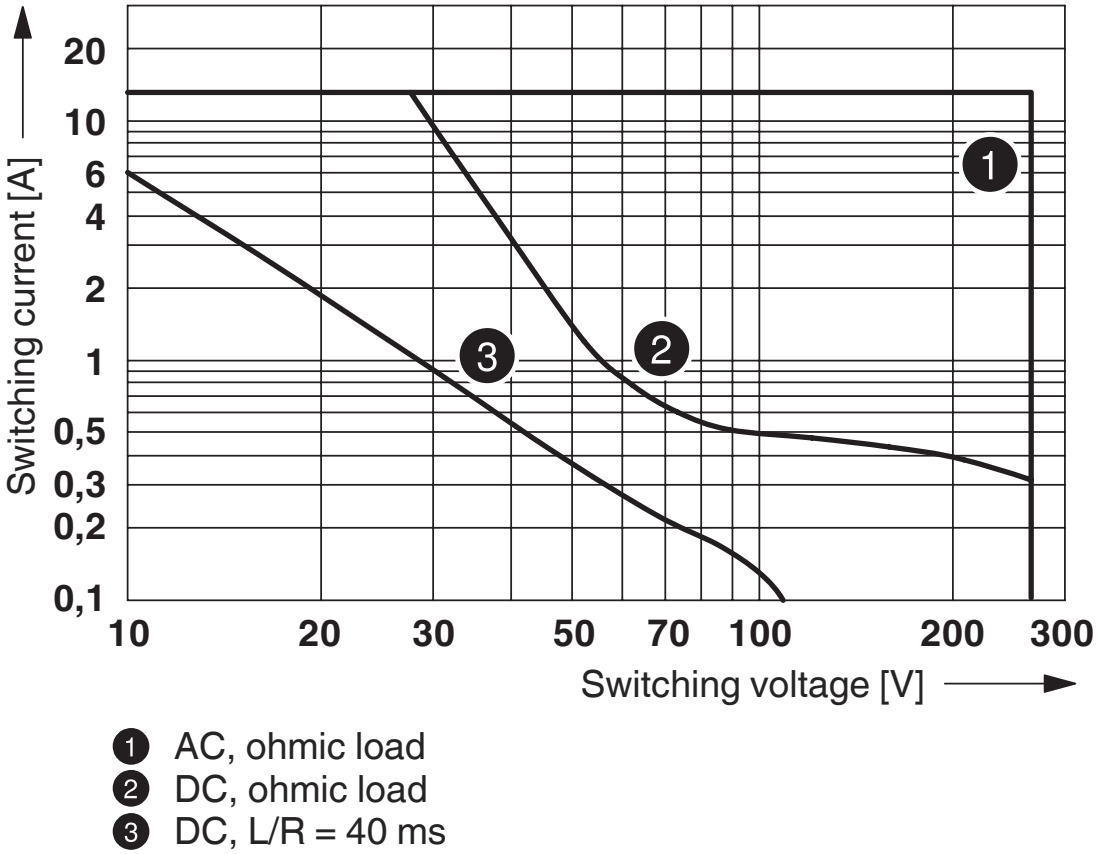


1 DC coils

2 AC coils

Operating voltage range

Diagram



1 AC, ohmic load
2 DC, ohmic load
3 DC, L/R = 40 ms

Interrupting rating

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2908500

EAC
Approval ID: TR_TS_D_00573_c

DNV GL
Approval ID: TAA000018V

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

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC001437

UNSPSC

UNSPSC 21.0	39122300

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)

Accessories

FBS 2-6 - Plug-in bridge

3030336

https://www.phoenixcontact.com/us/products/3030336



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

FBS 2-6 GY - Plug-in bridge

3032237

https://www.phoenixcontact.com/us/products/3032237



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

FBS 2-8 - Plug-in bridge

3030284

https://www.phoenixcontact.com/us/products/3030284



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

FBS 2-8 BU - Plug-in bridge

3032567

https://www.phoenixcontact.com/us/products/3032567



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

FBS 2-8 GY 7042 - Plug-in bridge

3032541

https://www.phoenixcontact.com/us/products/3032541



Bridge for potential distribution

STP 5-2 - Marker carriers

0800967

https://www.phoenixcontact.com/us/products/0800967



Marker carriers, snaps into STTB 2,5, STTB 4, PTTB 2,5, and PTTB 4 double-level 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: plug in, lettering field size: 5 x 10.5 mm

RIF-1-V8/PT/FLK14/OUT - System connection

2905195

https://www.phoenixcontact.com/us/products/2905195



V8 adapter for 8 x RIF-1 relay base, controller: PLC system cabling of output cards, connection 1: Push-in connection 4x, connection 2: IDC/FLK pin strip 1x 14-position, connection 3: Plug-in connection, number of channels: 8, control logic: positive switching

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

0801733

https://www.phoenixcontact.com/us/products/0801733



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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

0801681

https://www.phoenixcontact.com/us/products/0801681



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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

1204119

https://www.phoenixcontact.com/us/products/1204119



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

NS 35/ 7,5 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204122

https://www.phoenixcontact.com/us/products/1204122



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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

0801704

https://www.phoenixcontact.com/us/products/0801704



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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

1206421

https://www.phoenixcontact.com/us/products/1206421



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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

1206434

https://www.phoenixcontact.com/us/products/1206434



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

NS 35/ 7,5 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

0801762

https://www.phoenixcontact.com/us/products/0801762



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

NS 35/ 7,5 CAP - End cap

1206560

https://www.phoenixcontact.com/us/products/1206560

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



NS 35/15 PERF 2000MM - DIN rail perforated

1201730

https://www.phoenixcontact.com/us/products/1201730



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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

1201714

https://www.phoenixcontact.com/us/products/1201714



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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

0806602

https://www.phoenixcontact.com/us/products/0806602



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: white

NS 35/15 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204135

https://www.phoenixcontact.com/us/products/1204135



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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

1201756

https://www.phoenixcontact.com/us/products/1201756



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

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

1206599

https://www.phoenixcontact.com/us/products/1206599



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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

1206586

https://www.phoenixcontact.com/us/products/1206586



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

NS 35/15 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201895

https://www.phoenixcontact.com/us/products/1201895



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

NS 35/15 CAP - End cap

1206573

https://www.phoenixcontact.com/us/products/1206573

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



NS 35/15-2,3 UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201798

https://www.phoenixcontact.com/us/products/1201798



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

MPS-MT - Test plug

0201744

https://www.phoenixcontact.com/us/products/0201744



Test plug, with solder connection up to 1 mm^2 conductor cross section, number of positions: 1, color: gray

MPS-IH WH - Insulating sleeve

0201663

https://www.phoenixcontact.com/us/products/0201663

Insulating sleeve, color: white



MPS-IH RD - Insulating sleeve

0201676

https://www.phoenixcontact.com/us/products/0201676

Insulating sleeve, color: red

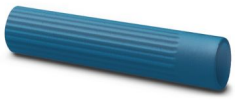


MPS-IH BU - Insulating sleeve

0201689

https://www.phoenixcontact.com/us/products/0201689

Insulating sleeve, color: blue



MPS-IH YE - Insulating sleeve

0201692

https://www.phoenixcontact.com/us/products/0201692

Insulating sleeve, color: yellow



MPS-IH GN - Insulating sleeve

0201702

https://www.phoenixcontact.com/us/products/0201702

Insulating sleeve, color: green



MPS-IH GY - Insulating sleeve

0201728

https://www.phoenixcontact.com/us/products/0201728

Insulating sleeve, color: gray



MPS-IH BK - Insulating sleeve

0201731

https://www.phoenixcontact.com/us/products/0201731

Insulating sleeve, color: black



ZB 5 :UNBEDRUCKT - Zack marker strip

1050004

https://www.phoenixcontact.com/us/products/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

ZB 5 CUS - Zack marker strip

0824962

https://www.phoenixcontact.com/us/products/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

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

1050017

https://www.phoenixcontact.com/us/products/1050017



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

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

1050020

https://www.phoenixcontact.com/us/products/1050020



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

ZB 5,LGS:GLEICHE ZAHLEN - Zack marker strip

1050033

https://www.phoenixcontact.com/us/products/1050033

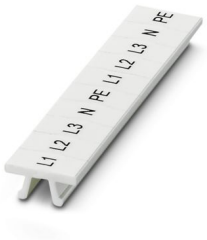


Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snapped, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

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

1050415

https://www.phoenixcontact.com/us/products/1050415



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

UC-TM 5 - Marker for terminal blocks

0818108

https://www.phoenixcontact.com/us/products/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: 4.6 x 10.5 mm, Number of individual labels: 96

UC-TM 5 CUS - Marker for terminal blocks

0824581

https://www.phoenixcontact.com/us/products/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

UCT-TM 5 - Marker for terminal blocks

0828734

https://www.phoenixcontact.com/us/products/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

UCT-TM 5 CUS - Marker for terminal blocks

0829595

https://www.phoenixcontact.com/us/products/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

GBS 5-25X12 - Group marker label for terminal marking

0810588

https://www.phoenixcontact.com/us/products/0810588



Group marker label, snaps onto terminal center for screw, spring-cage and quick connection terminal blocks, labeled with a 25 x 12 mm label or manually with the B-STIFT, in the foot part with ZB 5

GBS 5-25X5 - Group marker label for terminal marking

0829126

https://www.phoenixcontact.com/us/products/0829126



Group marking label, can be snapped into terminal center for screw, spring-cage, push-in, and fast connection terminal blocks, can be labeled with a 24 x 4 mm label or manually using B-STIFT, in the foot part with ZB 5

STP 5-2-ZB - Marker carriers

3037643

https://www.phoenixcontact.com/us/products/3037643

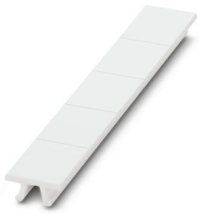


Marker carriers, snaps into ST 2,5 spring-cage terminal blocks, can be marked with UC-TM 5, UC-TMF 5, UCT-TM 5, UCT-TMF 5, ZB 5, or ZBF 5, gray, unlabeled, mounting type: snapped

ZB 15:UNBEDRUCKT - Zack marker strip

0811972

https://www.phoenixcontact.com/us/products/0811972

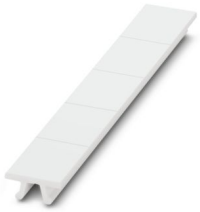


Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

ZB 15 CUS - Zack marker strip

0824945

https://www.phoenixcontact.com/us/products/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

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

0811998

https://www.phoenixcontact.com/us/products/0811998



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

UC-TM 16 - Marker for terminal blocks

0819217

https://www.phoenixcontact.com/us/products/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

UC-TMF 16 - Marker for terminal blocks

0819262

https://www.phoenixcontact.com/us/products/0819262

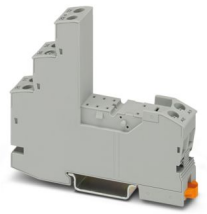


Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 16 mm, lettering field size: 15.45 x 5.1 mm, Number of individual labels: 32

RIF-1-BSC/2X21 - Relay base

2900930

https://www.phoenixcontact.com/us/products/2900930



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

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

2961309

https://www.phoenixcontact.com/us/products/2961309



Plug-in miniature power relay, with power contact for high continuous currents, 1 changeover contact, input voltage 12 V DC

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

2900939

https://www.phoenixcontact.com/us/products/2900939



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 ±30 %

RIF-RH-1 - Retaining bracket

2900953

https://www.phoenixcontact.com/us/products/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

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