

Single relay - REL-MR- 24DC/21HC



2961312

<https://www.phoenixcontact.com/pc/products/2961312>

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Plug-in miniature power relay, with power contact for high continuous currents, 1 changeover contact, input voltage 24 V DC

Your advantages

- Switching current of up to 16 A

Commercial Data

Item number	2961312
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	08
Product Key	CK6195
Catalog Page	Page 290 (C-5-2019)
GTIN	4017918187576
Weight per Piece (including packing)	16.123 g
Weight per Piece (excluding packing)	12.91 g
Country of origin	AT

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Technical Data

Product properties

Product type	Single relay
Set comprises	2967620 PLC-RSC- 24DC/21HC
	2967633 PLC-RSC- 24UC/21HC
	2967646 PLC-RSC- 48DC/21HC
	2912277 PLC-RSP- 24DC/21HC
	2912280 PLC-RSP- 24UC/21HC
	2912293 PLC-RSP- 48DC/21HC
	2900291 PLC-RPT- 24DC/21HC
	2900293 PLC-RPT- 24UC/21HC
	2900294 PLC-RPT- 48DC/21HC
	2834326 PR1-RSC3-LDP-24DC/21
	2834407 PR1-RSP3-LDP-24DC/21
	2903342 RIF-1-RPT-LDP-24DC/1X21
2903358 RIF-1-RSC-LDP-24DC/1X21	
Operating mode	100% operating factor
Mechanical service life	3x 10 ⁷ cycles

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.41 W
Test voltage Winding/contact	5 kV AC (50 Hz, 1 min., winding/contact)

Input data

Coil side

Nominal input voltage U _N	24 V DC
Input voltage range	15.6 V DC ... 57.6 V DC
Typical input current at U _N	17 mA
Typical response time	7 ms
Typical release time	3 ms
Coil resistance	1440 Ω ±10 % (at 20 °C)

Output data

Switching

Contact type	1 changeover contact
Type of switch contact	Single contact
Drive and function	monostable

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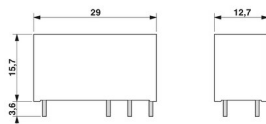
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Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Limiting continuous current	16 A
Maximum inrush current	50 A (20 ms)
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	384 W (at 24 V DC) 58 W (at 48 V DC) 48 W (at 60 V DC) 50 W (at 110 V DC) 80 W (at 220 V DC) 4000 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13) 0.2 A (at 110 V, DC13) 0.2 A (at 250 V, DC13) 6 A (at 24 V, AC15) 6 A (at 120 V, AC15) 6 A (at 250 V, AC15)
Motor load according to UL 508	1/2 HP, 120 V AC (N/O contact) 1 HP, 240 V AC (N/O contact) 1/3 HP, 120 V AC (N/C contact) 3/4 HP, 240 V AC (N/C contact) 1/4 HP, 200 ... 250 V AC

Connection data

Connection method	Solder connection
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Dimensions

Dimensional drawing	
Width	12.7 mm
Height	29 mm
Depth	15.7 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	RT II
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approval data

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Corrosive gas test

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

Standards and regulations

Standards/regulations	IEC 60664
	EN 50178
	EN 61810-1

Mounting

Assembly instructions	Can be aligned without spacing ($> 70\text{ °C} \geq 2.5\text{ mm}$)
Mounting position	any

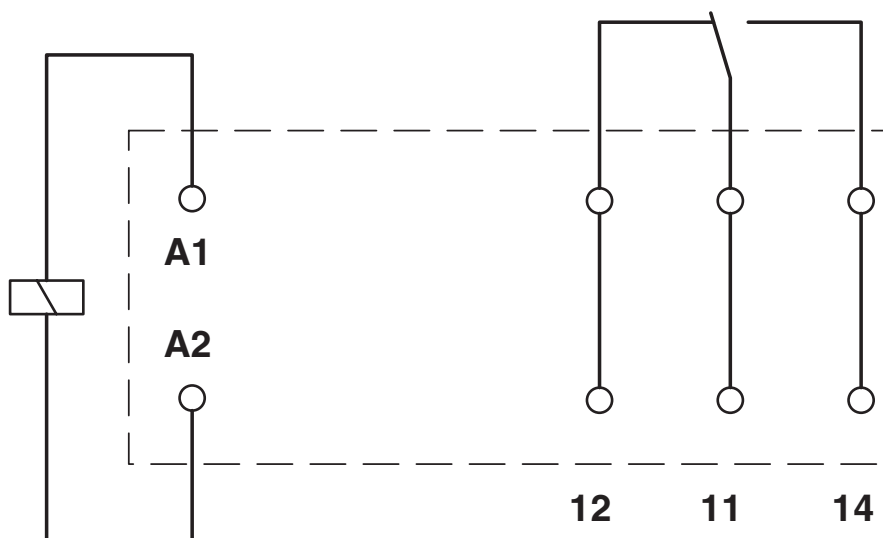
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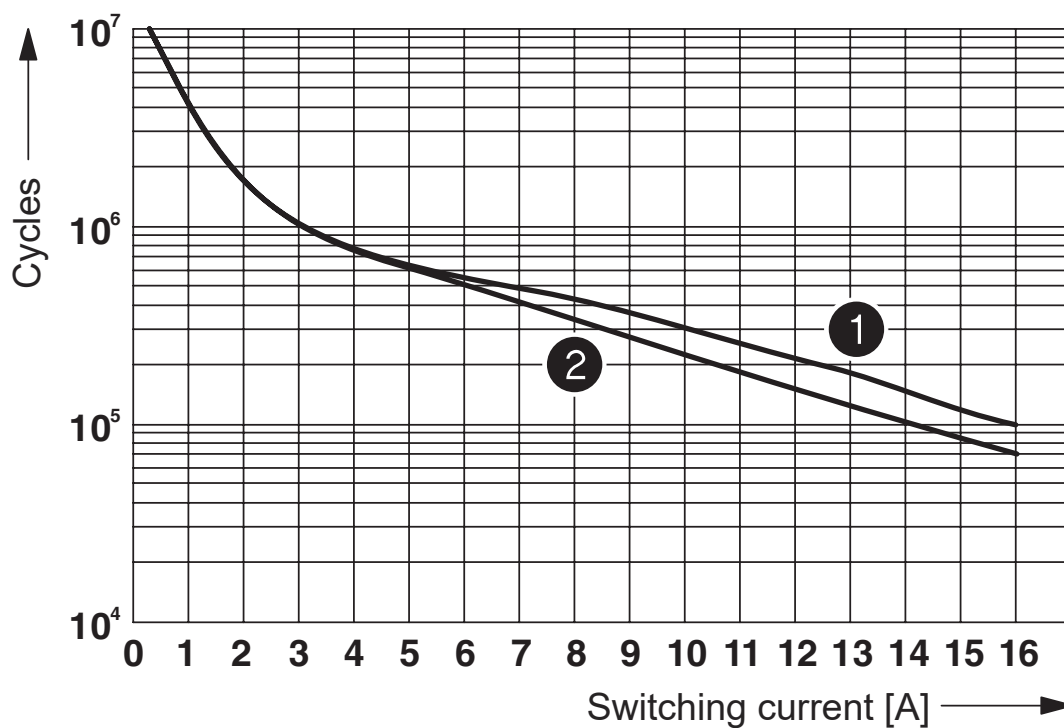
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Drawings

Circuit diagram



Diagram



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

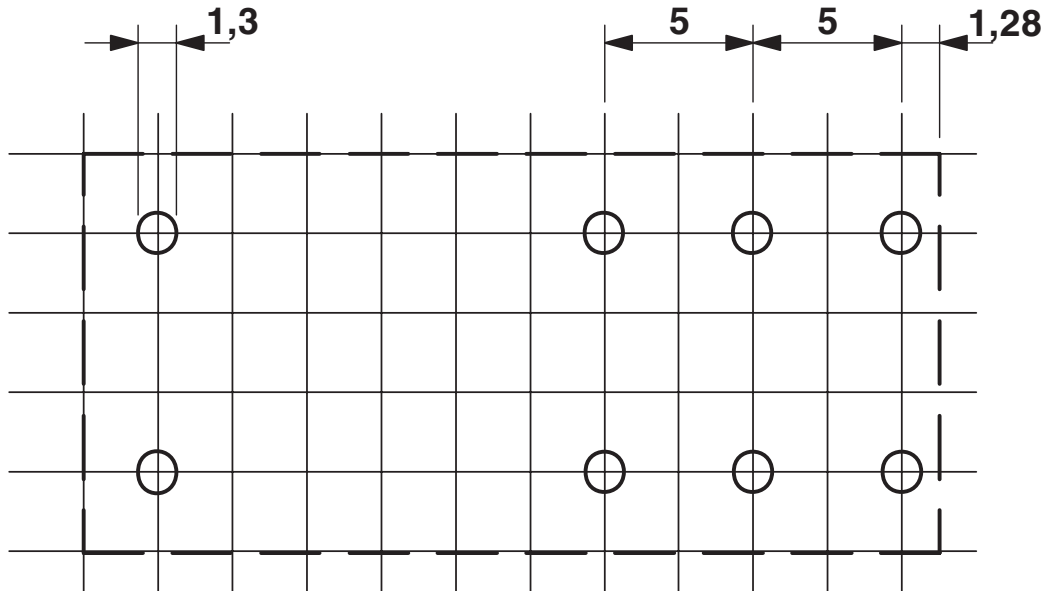
Electrical service life

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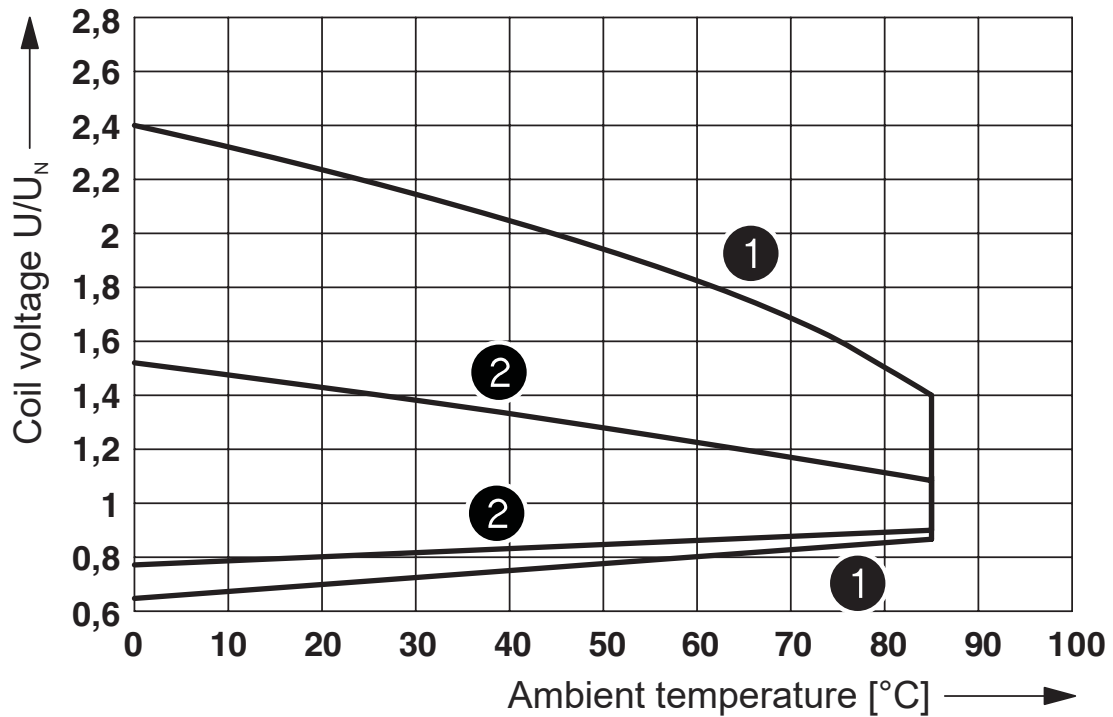
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Drilling plan/solder pad geometry



Basic pitch 2.5 mm

Diagram



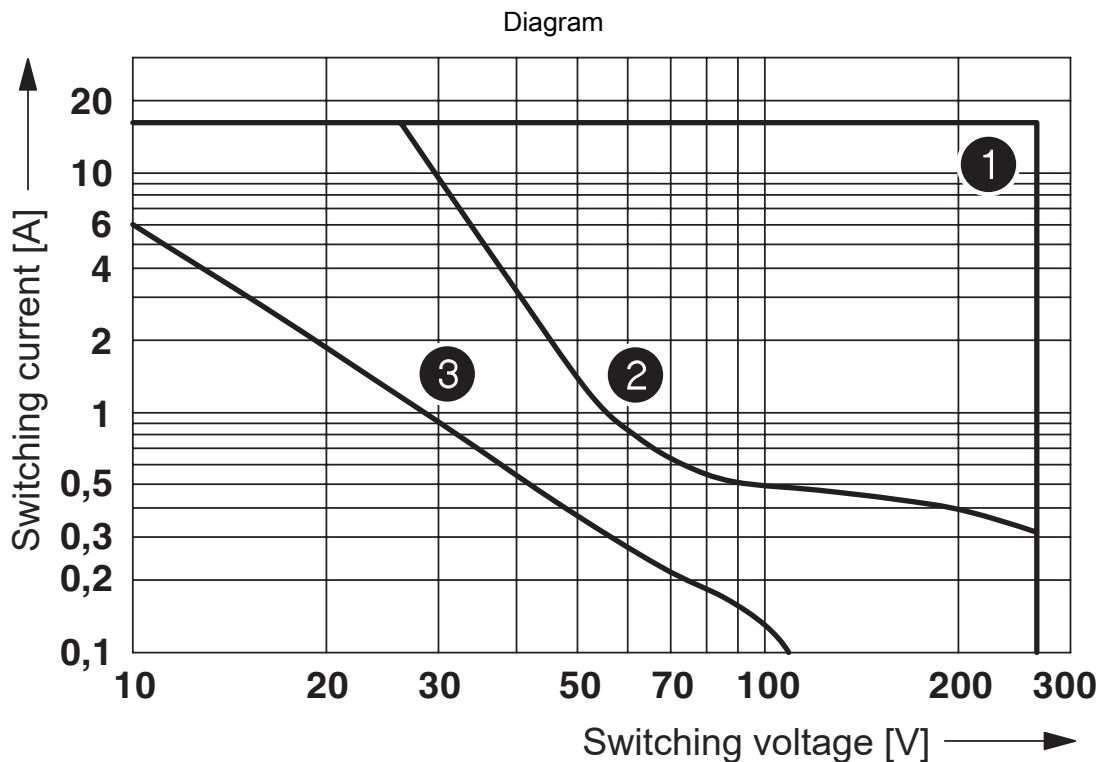
- ① DC coils
- ② AC coils

Operating voltage range

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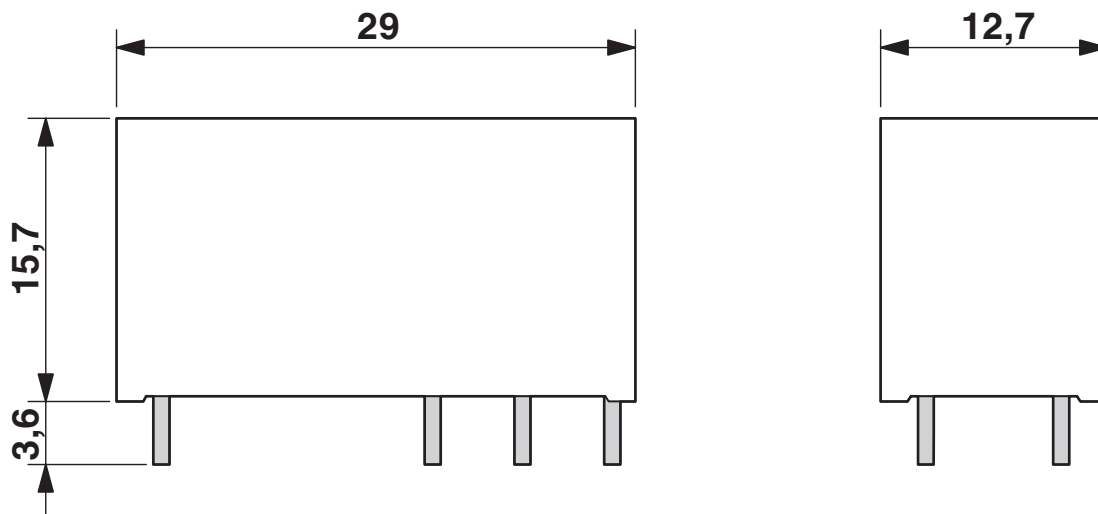
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- ① AC, ohmic load
- ② DC, ohmic load
- ③ DC, L/R = 40 ms

Interrupting rating

Dimensional drawing



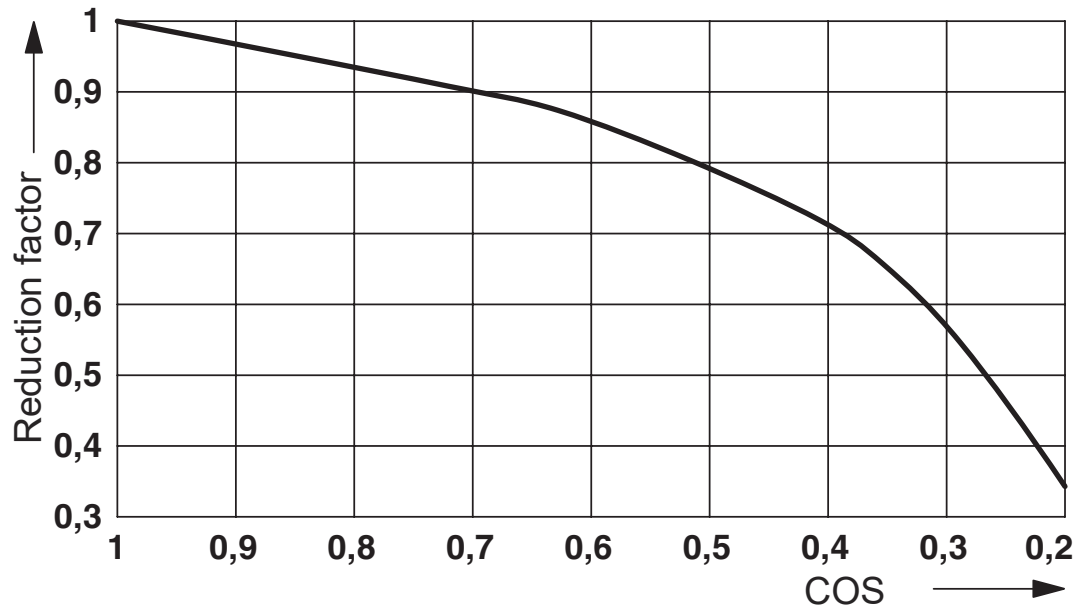
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Diagram



Service life reduction factor with various cos phi

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Approvals



cUL Recognized
Approval ID: FILE E 228652



UL Recognized
Approval ID: FILE E 228652



EAC
Approval ID: TR_TS_D_00573_c



UL Recognized
Approval ID: FILE E 228652



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



VDE Zeichengenehmigung
Approval ID: 40007758

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Reports with production monitoring			-	-



VDE Zeichengenehmigung
Approval ID: 40048281

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Reports with production monitoring			-	-



PRS
Approval ID: TE/2109/880590/16



cUL Recognized
Approval ID: FILE E 228652



cUL Recognized
Approval ID: FILE E 172140

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UL Recognized

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Classifications

ECLASS

ECLASS-9.0	27371601
ECLASS-10.0.1	27371601
ECLASS-11.0	27371601

ETIM

ETIM 8.0	EC001437
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UNSPSC

UNSPSC 21.0	39122300
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Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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Accessories

Relay base

Relay base - PLC-BSC- 24DC/21HC - 2967772

<https://www.phoenixcontact.com/pc/products/2967772>



14 mm PLC basic terminal block for high continuous currents with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V DC

Relay base

Relay base - PLC-BSC- 24UC/21HC - 2967785

<https://www.phoenixcontact.com/pc/products/2967785>



14 mm PLC basic terminal block for high continuous currents with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC

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Relay base

Relay base - PLC-BSC- 48DC/21HC - 2967798

<https://www.phoenixcontact.com/pc/products/2967798>



14 mm PLC basic terminal block for high continuous currents with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 48 V DC

Relay base

Relay base - PLC-BPT- 24DC/21HC - 2900254

<https://www.phoenixcontact.com/pc/products/2900254>



14 mm PLC basic terminal block for high continuous currents with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V DC

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Relay base

Relay base - PLC-BPT- 24UC/21HC - 2900255

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14 mm PLC basic terminal block for high continuous currents with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC

Relay base

Relay base - PLC-BPT- 48DC/21HC - 2900256

<https://www.phoenixcontact.com/pc/products/2900256>



14 mm PLC basic terminal block for high continuous currents with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 48 V DC

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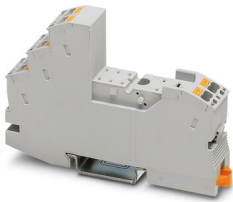
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Relay base

Relay base - RIF-1-BPT/2X21 - 2900931

<https://www.phoenixcontact.com/pc/products/2900931>



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

Relay base

Relay base - RIF-1-BSC/2X21 - 2900930

<https://www.phoenixcontact.com/pc/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

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