

REL-MR- 24DC/21AU/MS - Single relay

2909645

<https://www.phoenixcontact.com/us/products/2909645>

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Plug-in miniature power relay, with multi-layer gold contact, 1 changeover contact, manual operation, 24 V DC input voltage

Commercial data

Item number	2909645
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C460
Product key	CK6195
Catalog page	Page 284 (C-5-2019)
GTIN	4055626377803
Weight per piece (including packing)	6.8 g
Weight per piece (excluding packing)	6.8 g
Customs tariff number	85364190
Country of origin	CZ

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Technical data

Product properties

Product type	Single relay
Operating mode	100% operating factor
Mechanical service life	1×10^7 cycles

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Maximum power dissipation for nominal condition	0.17 W
Test voltage (Winding/contact)	4 kV AC (50 Hz, 1 min., winding/contact)

Input data

Coil side

Nominal input voltage U_N	24 V DC
Input voltage range	14.4 V DC ... 66 V DC
Input voltage range in reference to U_N	see diagram
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U_N	7 mA
Typical response time	5 ms
Typical release time	2.5 ms
Coil resistance	$3390 \Omega \pm 10\% \text{ (at } 20^\circ\text{C)}$

Output data

Switching

Contact switching type	1 changeover contact
Type of switch contact	Single contact
Contact material	AgSnO, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
Minimum switching voltage	100 mV (at 10 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (at 24 V)
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)
Motor load according to UL 508	1/4 HP, 240 - 277 V AC (N/O contact)
	1/6 HP, 240 - 277 V AC (N/C contact)

Switching: when the gold layer is destroyed

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Note	the following values are applicable if a gold layer is destroyed
Contact material	AgSnO
Maximum switching voltage	250 V AC
Minimum switching voltage	5 V (at 100 mA)
Limiting continuous current	6 A
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	140 W (at 24 V DC) 20 W (at 48 V DC) 18 W (at 60 V DC) 23 W (at 110 V DC) 40 W (at 220 V DC) 1500 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13) 0.2 A (at 110 V, DC13) 0.1 A (at 220 V, DC13) 3 A (at 24 V, AC15) 3 A (at 120 V, AC15) 3 A (at 230 V, AC15)

Connection data

Connection method	Plug / solder connection
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Dimensions

Width	5 mm
Height	28 mm
Depth	16 mm

Material specifications

Color	white (RAL 9010)
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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

Approvals

Corrosive gas test

Identification	ISA-S71.04. G3 Harsh Group EN 60068-2-60
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Standards and regulations

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Standards/regulations	IEC 60664
	EN 50178
	EN 61810-1

Mounting

Assembly instructions	in rows with zero spacing
Mounting position	any

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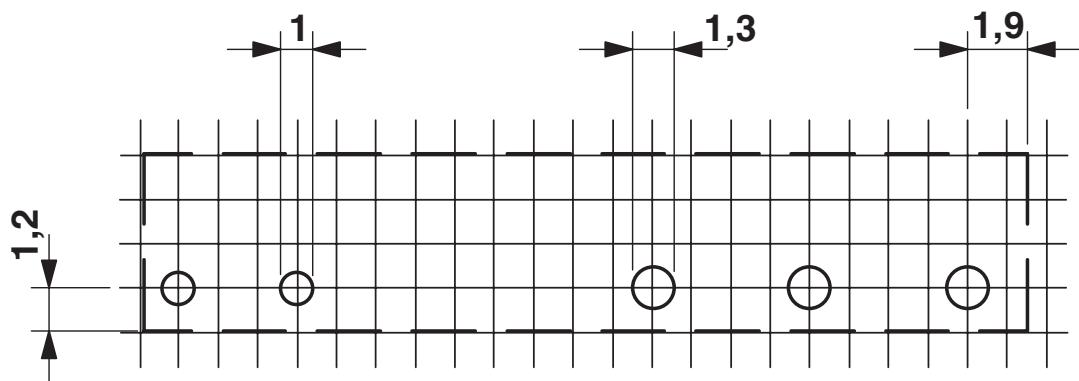
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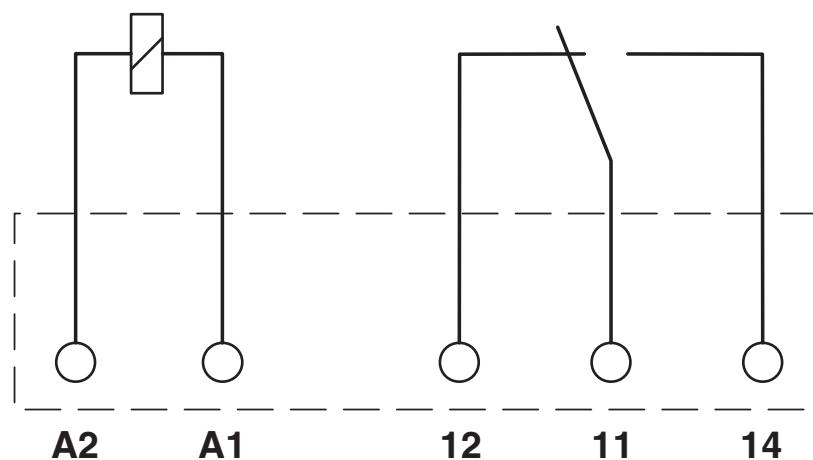
Drawings

Drilling plan/solder pad geometry



a = pitch division 1.25 mm and 1.27 mm

Circuit diagram



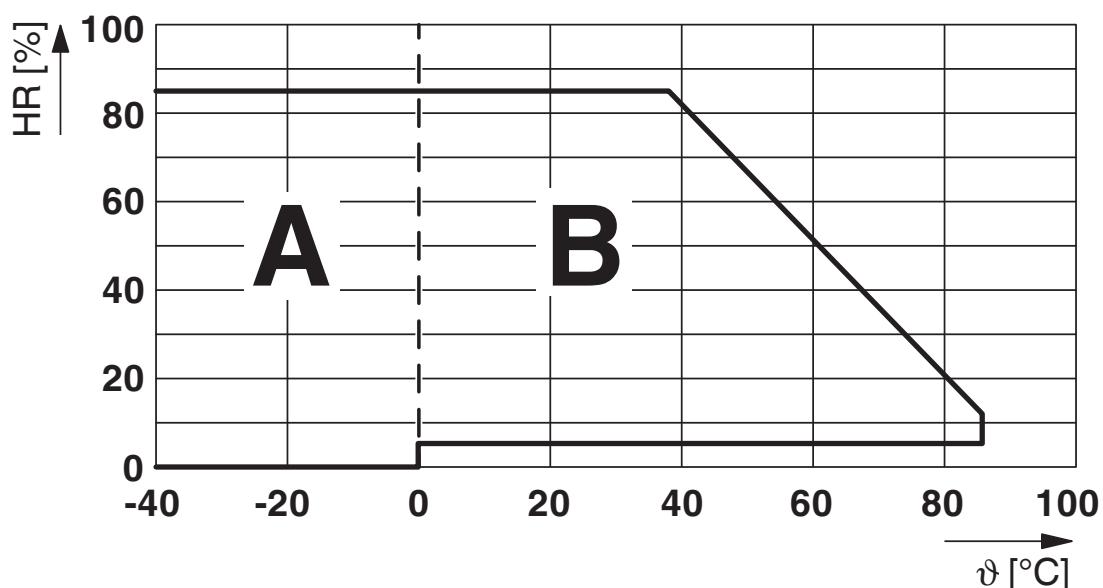
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Diagram



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 $\leq 25^\circ\text{C}$.

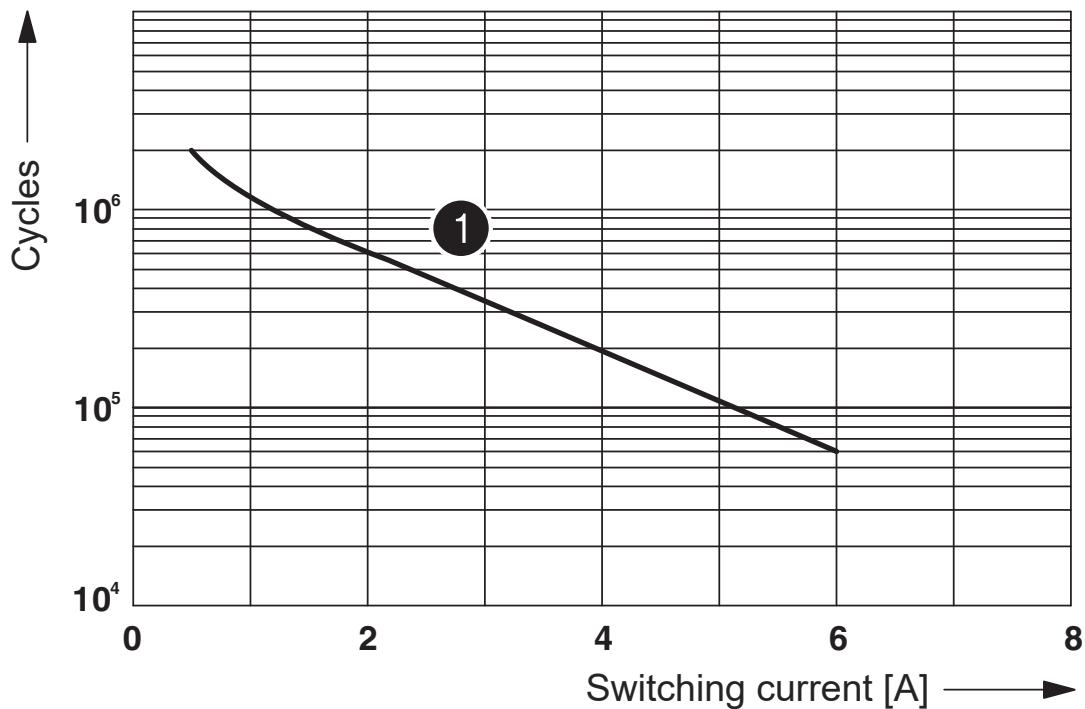
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Diagram



① 250 V AC, ohmic load

Electrical service life

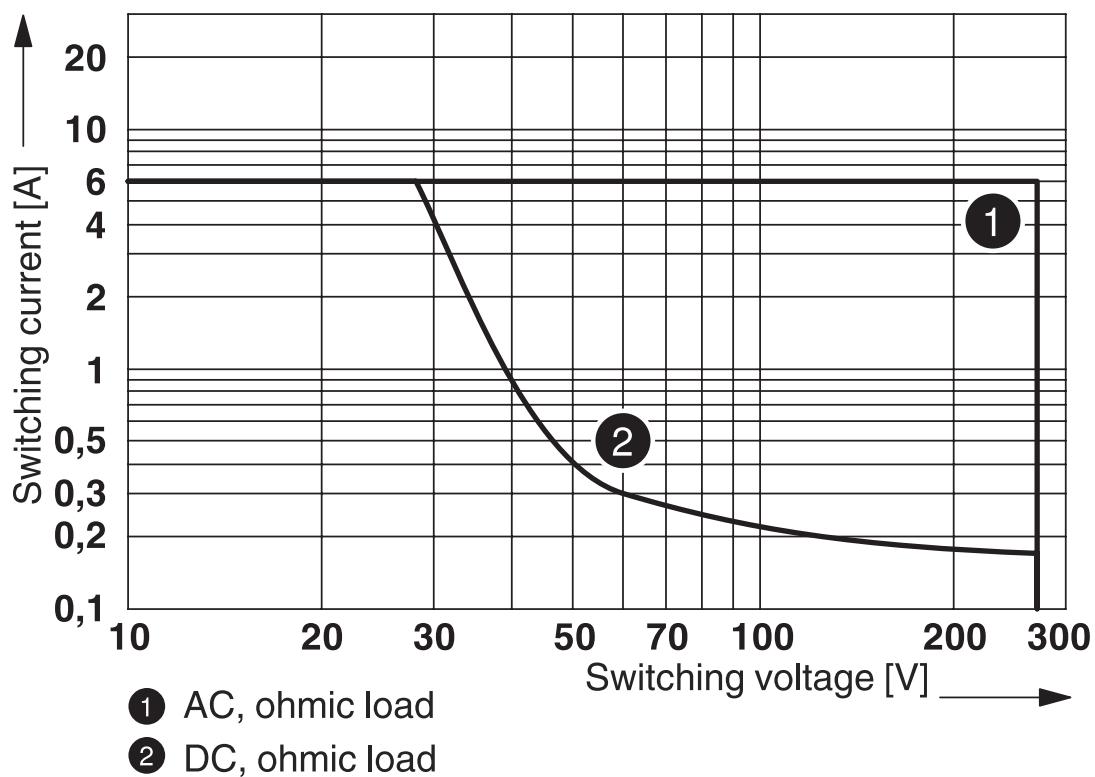
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Diagram



Interrupting rating

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2909645>



cUL Recognized

Approval ID: FILE E 228652



UL Recognized

Approval ID: FILE E 228652



EAC

Approval ID: TR_TS_D_00573_c



EAC

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



VDE Zeichengenehmigung

Approval ID: 40010212

cULus Recognized

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC001437
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UNSPSC

UNSPSC 21.0	39122300
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Mandatory accessories

PLC-BPT- 24DC/21 - Relay base

2900445

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6.2 mm PLC basic terminal block 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

PLC-BSC- 24DC/21 - Relay base

2966016

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6.2 mm PLC basic terminal block 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

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PLC-BPT- 24UC/21 - Relay base

2900446

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6.2 mm PLC basic terminal block 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

PLC-BSC- 24UC/21 - Relay base

2966029

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6.2 mm PLC basic terminal block 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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PLC-BPT- 24DC/ 1/SEN - Relay base

2900262

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6.2 mm PLC basic terminal block for input functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 24 V DC

PLC-BSC- 24DC/ 1/SEN - Relay base

2966061

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6.2 mm PLC basic terminal block for input functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 24 V DC

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PLC-BPT- 24DC/ 1/ACT - Relay base

2900449

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6.2 mm PLC basic terminal block for output functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 24 V DC

PLC-BSC- 24DC/ 1/ACT - Relay base

2966058

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6.2 mm PLC basic terminal block for output functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 24 V DC

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PLC-BPT- 24UC/ 1/ACT - Relay base

2900450

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6.2 mm PLC basic terminal block for output functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 24 V AC/DC

PLC-BSC- 24UC/ 1/ACT - Relay base

2982799

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6.2 mm PLC basic terminal block for output functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 24 V AC/DC

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PLC-BSC- 24DC/21/SO46 - Relay base

2980458

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6.2 mm PLC basic terminal block with protection against interference currents/voltages on the control side, with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with increased input current consumption, 1 changeover contact, input voltage 24 V DC

RIF-0-BPT/21 - Relay base

2900958

<https://www.phoenixcontact.com/us/products/2900958>



Relay base RIF-0..., for miniature power relay with 1 changeover contact or solid-state relays of the same design, Push-in connection, for mounting on NS 35/7,5

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RIF-0-BSC/21 - Relay base

2900957

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RIF-0... relay base, for miniature power relay with 1 changeover contact or identical solid-state relays, screw connection, for mounting on NS 35/7,5



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