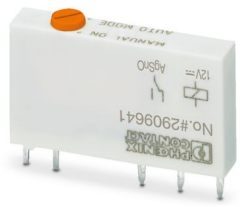
# REL-MR- 12DC/21/MS - Single relay

2909641

https://www.phoenixcontact.com/us/products/2909641

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Plug-in miniature power relay, with power contact, 1 changeover contact, manual operation, 12 V DC input voltage

## Commercial data

| | |
|---|---|
| Item number | 2909641 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Note | Made to order (non-returnable) |
| Sales key | C460 |
| Product key | CK6923 |
| Catalog page | Page 284 (C-5-2019) |
| GTIN | 4055626377667 |
| Weight per piece (including packing) | 6.63 g |
| Weight per piece (excluding packing) | 4.7 g |
| Customs tariff number | 85364190 |
| Country of origin | CZ |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Single relay |
| Operating mode | 100% operating factor |
| Mechanical service life | 1x $10^7$ 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 $U_N$ | 12 V DC |
| Input voltage range | 7.2 V DC ... 33 V DC |
| Input voltage range in reference to $U_N$ | see diagram |
| Drive and function | monostable |
| Drive (polarity) | non-polarized |
| Typical input current at $U_N$ | 14 mA |
| Typical response time | 5 ms |
| Typical release time | 2.5 ms |
| Coil resistance | 848 Ω ±10 % (at 20 °C) |

## Output data

Switching

| | |
|---|---|
| Contact switching type | 1 changeover contact |
| Type of switch contact | Single contact |
| Contact material | AgSnO |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 5 V (at 100 mA) |
| Limiting continuous current | 6 A |
| Maximum inrush current | 10 A (4 s) |
| 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) |
| 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) |

## Connection data

| | |
|---|---|
| Connection method | Plug / solder connection |

## Dimensions

| | |
|---|---|
| Width | 5 mm |
| Height | 28 mm |
| Depth | 16 mm |

## Material specifications

| | |
|---|---|
| Color | white (RAL 9010) |

## 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 |

## Standards and regulations

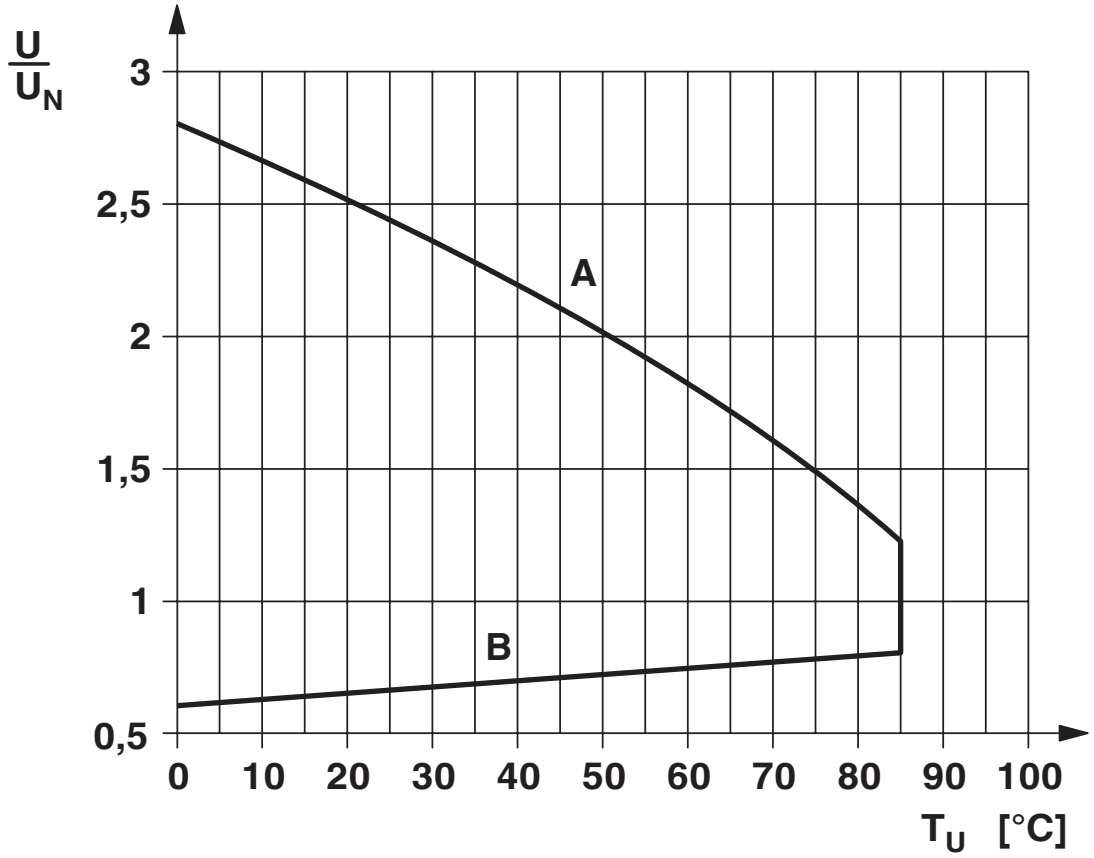
| | |
|---|---|
| Standards/regulations | IEC 60664 |
| | EN 50178 |
| | EN 61810-1 |

## Mounting

| | |
|---|---|
| Assembly note | in rows with zero spacing |
| Mounting position | any |

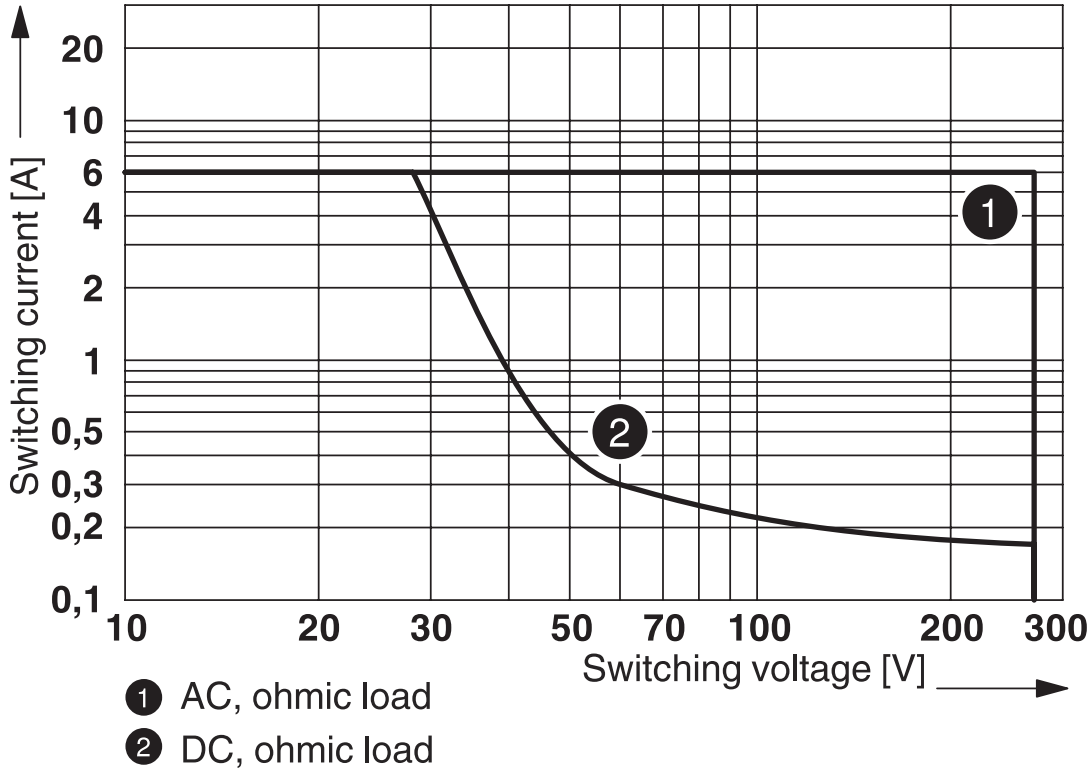
## Drawings

Diagram



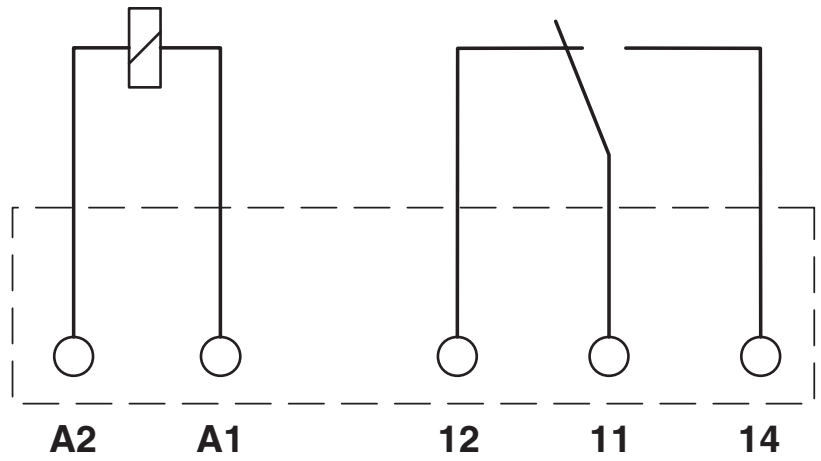

Operating voltage range

Diagram

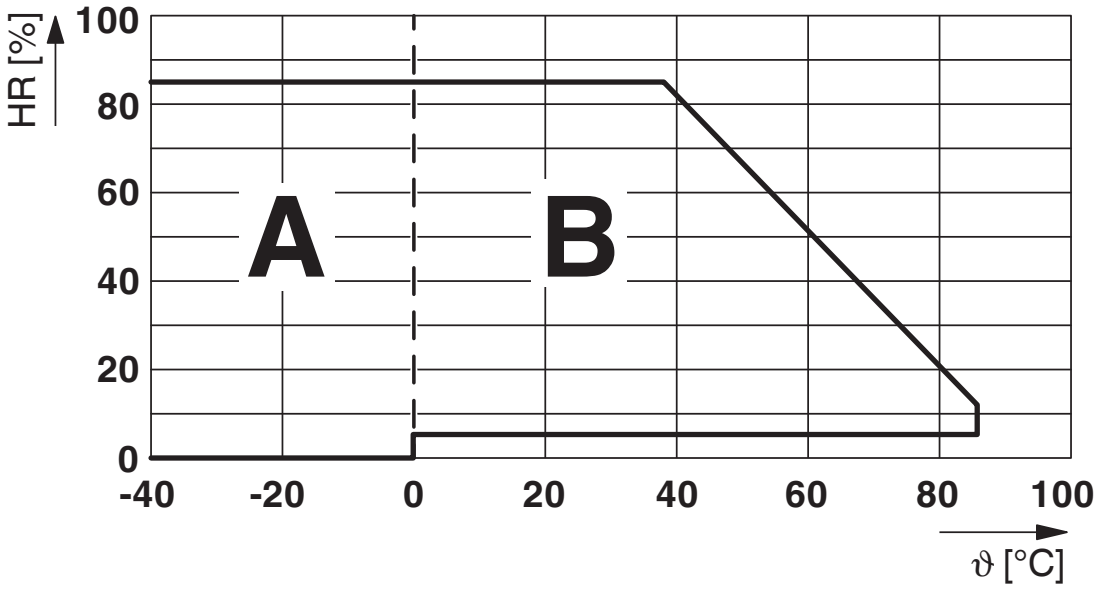



Interrupting rating

Circuit diagram



Diagram

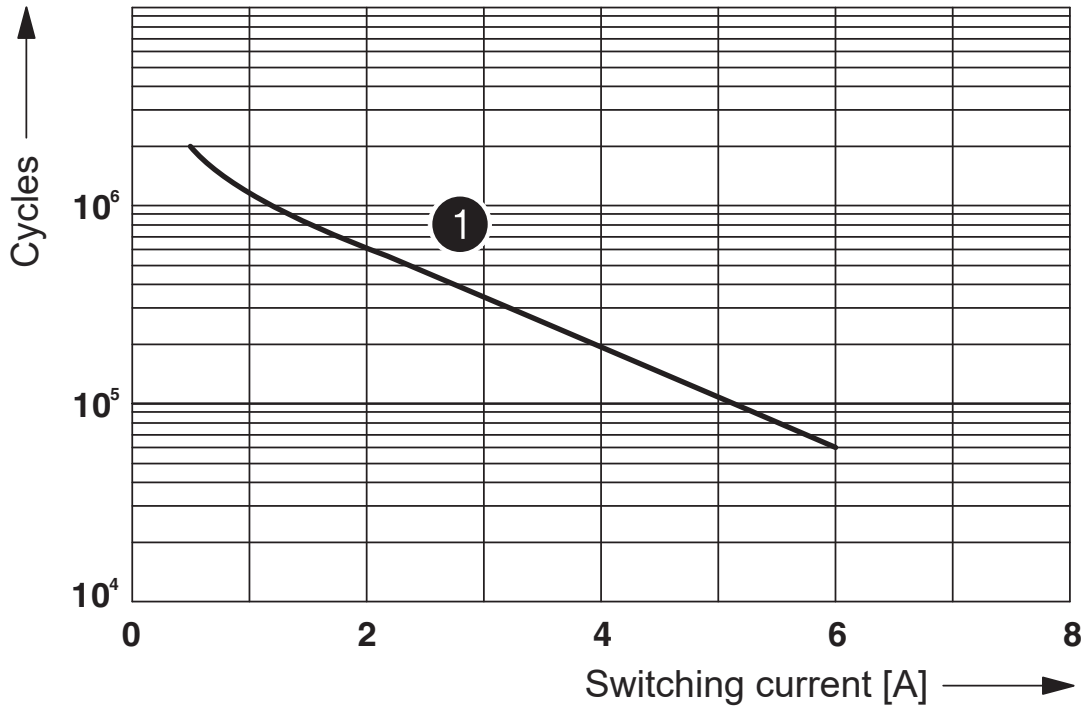



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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.

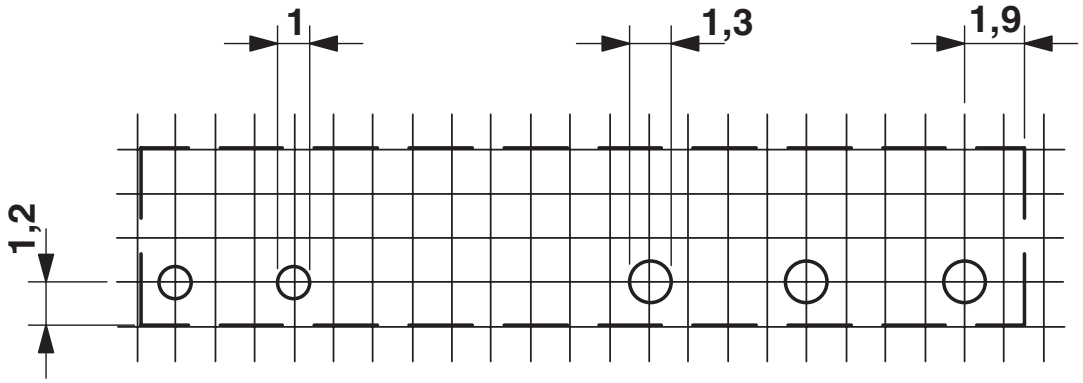
Diagram




1 250 V AC, ohmic load

Electrical service life

Drilling plan/solder pad geometry




a = pitch division 1.25 mm and 1.27 mm

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2909641

**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**

## 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, No exemptions |

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% |

## Mandatory accessories

### 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

### RIF-0-BSC/21 - Relay base

2900957

https://www.phoenixcontact.com/us/products/2900957



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


Phoenix Contact 2024 © - all rights reserved
https://www.phoenixcontact.com



Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com