# REL-MR-BL-24DC/21HC/MS - Single relay

2908180

https://www.phoenixcontact.com/us/products/2908180

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Plug-in miniature relay, with power contact, 1 changeover contact, test button, mechanical switch position indicator, polarity: bipolar, input voltage: 24 V DC

## Commercial data

| | |
|---|---|
| Item number | 2908180 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C460 |
| Product key | DKF923 |
| GTIN | 4055626277899 |
| Weight per piece (including packing) | 19.652 g |
| Weight per piece (excluding packing) | 18 g |
| Customs tariff number | 85364190 |
| Country of origin | CN |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Single relay |
| Operating mode | 100% operating factor |
| Mechanical service life | 5x $10^6$ cycles |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |
| Pollution degree | 2 |

Data management status

| | |
|---|---|
| Date of last data management | 01.04.2026 |

## 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) |
| Rated insulation voltage | 250 V AC |

## Input data

Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 24 V DC |
| Input voltage range | 19.2 V DC ... 52.8 V DC |
| Input voltage range in reference to $U_N$ | 0.8 ... 2.2 (see diagram) |
| Drive and function | monostable |
| Drive (polarity) | non-polarized |
| Typical input current at $U_N$ | 17 mA |
| Typical response time | 9 ms |
| Typical release time | 6 ms |

## 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 (at 10 mA) |
| Limiting continuous current | 16 A |
| Maximum inrush current | 32 A (20 ms) |
| Min. switching current | 10 mA (at 12 V) |
| Interrupting rating (ohmic load) max. | 384 W (at 24 V DC) |
| | 62 W (at 48 V DC) |

| | |
|---|---|
| | 48 W (at 60 V DC) |
| | 53 W (at 110 V DC) |
| | 66 W (at 220 V DC) |

## Connection data

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

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 13 mm |
| Height | 29 mm |
| Depth | 25.5 mm |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | RT II |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

## Standards and regulations

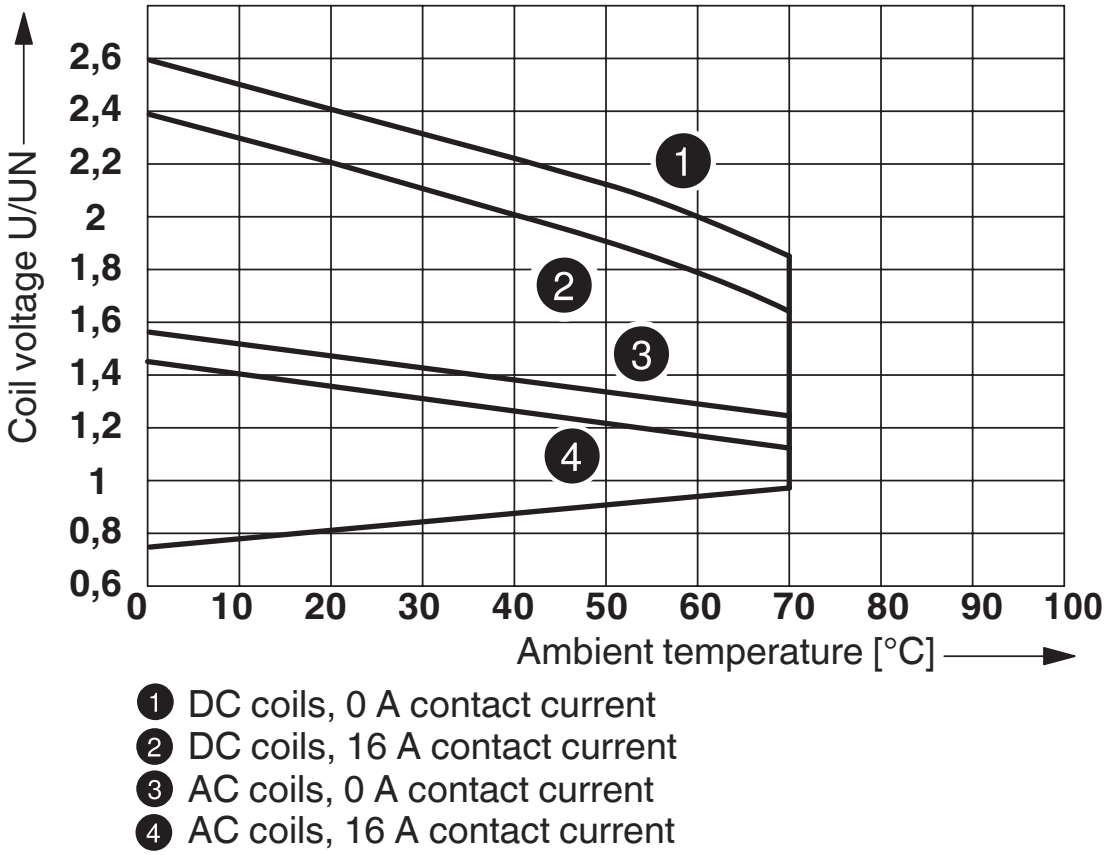
| | |
|---|---|
| Standards/regulations | IEC 61810 |
| | IEC 60664 |

## Mounting

| | |
|---|---|
| Mounting position | any |

## Drawings

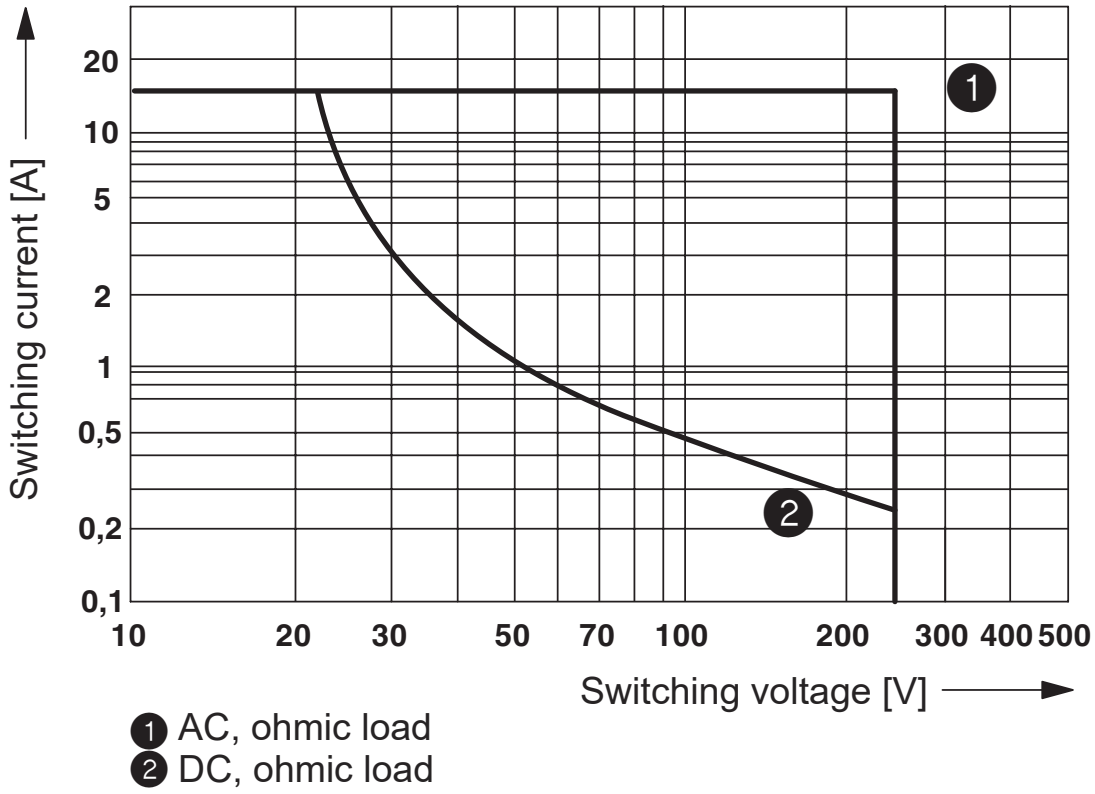
Diagram




1 DC coils, 0 A contact current
2 DC coils, 16 A contact current
3 AC coils, 0 A contact current
4 AC coils, 16 A contact current

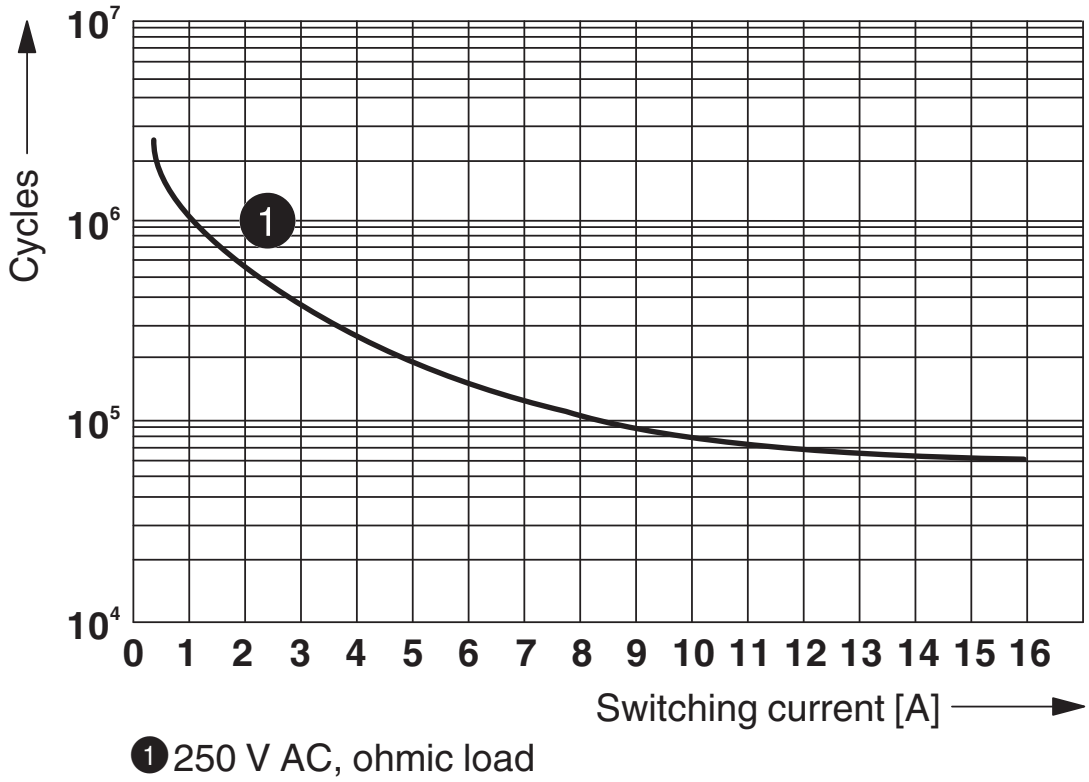
Operating voltage range

Diagram



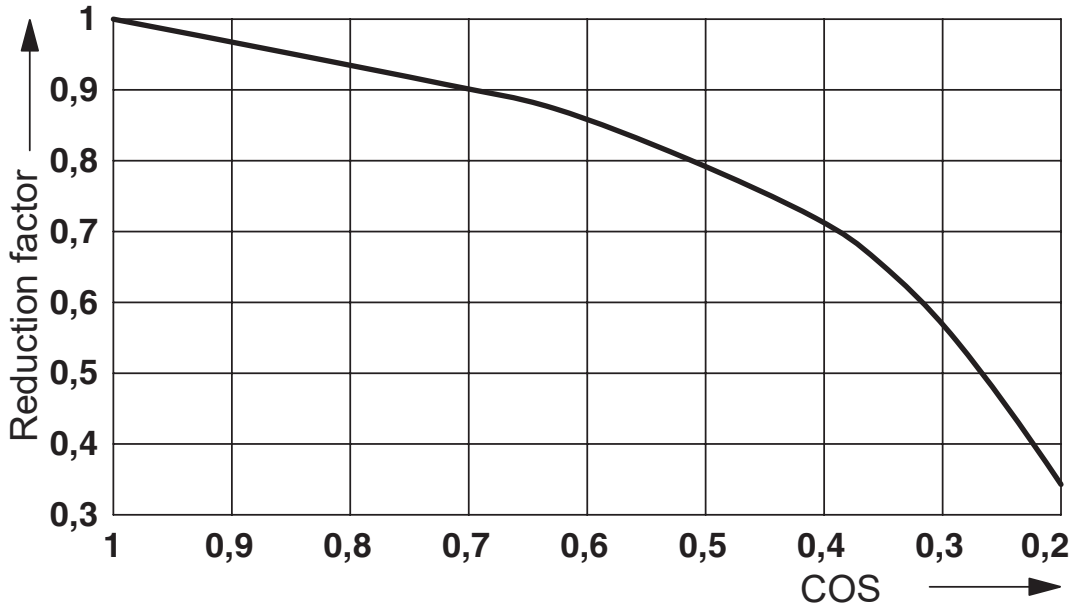

Interrupting rating

Diagram



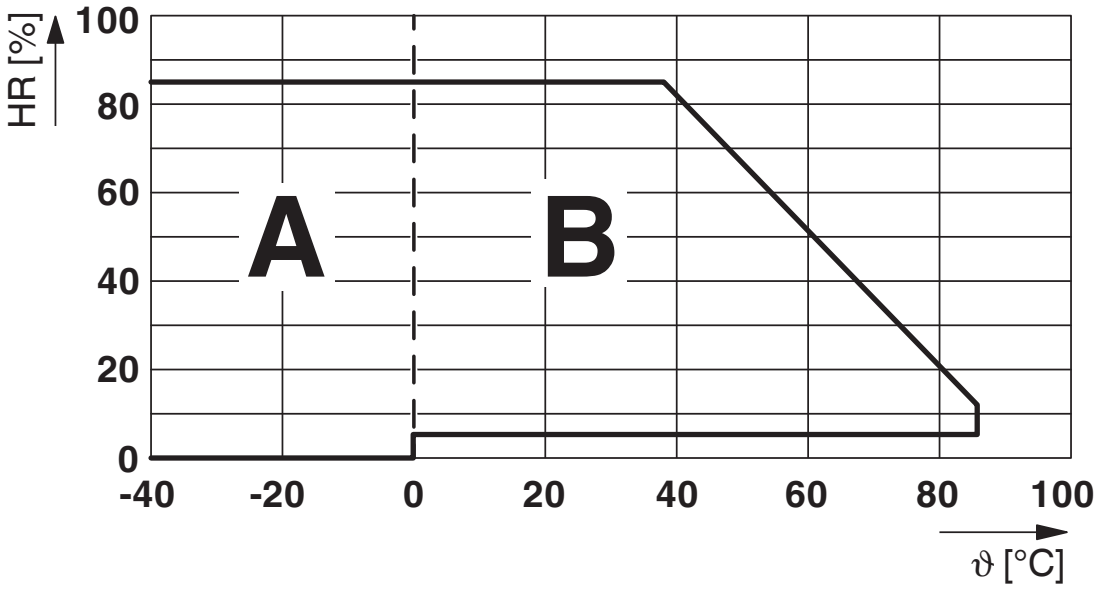

Electrical service life
1) 30 V DC, ohmic load
2) 250 V AC, ohmic load

Diagram




Service life reduction factor with various cos phi

Diagram

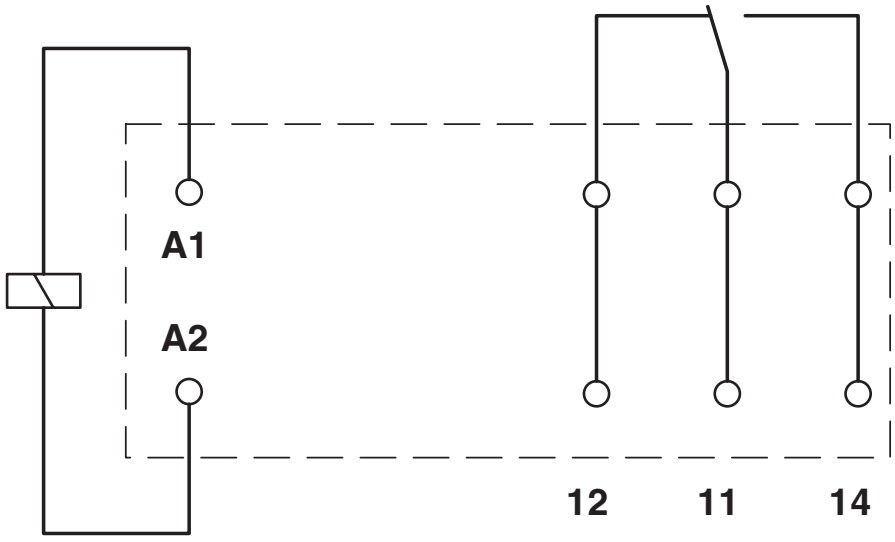



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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.

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2908180

**cUL Recognized**
Approval ID: FILE E 195083

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## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | 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% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.758 kg CO2e |


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