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

2987927

https://www.phoenixcontact.com/us/products/2987927

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Plug-in miniature relay, with multi-layer contact with hard gold coating, 1 changeover contact, test button, mechanical switching position indicator, status LED, freewheeling diode, polarity A1+, A2-, input voltage 24 V DC

## Your advantages

- With detectable manual operation
- Mechanical switch position indicator
- Switching current of up to 16 A
- Integrated status LED
- DC types with integrated freewheeling diode

## Commercial data

| | |
|---|---|
| Item number | 2987927 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C460 |
| Product key | DK6934 |
| GTIN | 4046356481052 |
| Weight per piece (including packing) | 19.8 g |
| Weight per piece (excluding packing) | 18.63 g |
| Customs tariff number | 85364190 |
| Country of origin | CN |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Single relay |
| Mechanical service life | 5x $10^6$ cycles |

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) |

## Input data

Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 24 V DC |
| Input voltage range | 18.7 V DC ... 57.6 V DC |
| 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, hard gold-plated |
| Maximum switching voltage | 30 V AC |
| | 36 V DC |
| Minimum switching voltage | 12 V (At 1 mA) |
| Limiting continuous current | 50 mA |
| Maximum inrush current | 50 mA |
| Min. switching current | 1 mA (at 12 V) |
| Switching capacity | 3 A (at 240 V, AC15) |

Switching: when the gold layer is destroyed

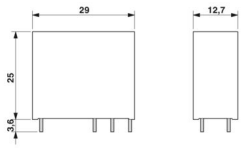
| | |
|---|---|
| Note | the following values are applicable if a gold layer is destroyed |
| Contact material | AgNi |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 6 V AC/DC |

| | |
|---|---|
| Limiting continuous current | 16 A |
| Maximum inrush current | 30 A (300 ms) |
| Min. switching current | 100 mA |
| Interrupting rating (ohmic load) max. | 4000 VA (for 250 V AC) |
| Switching capacity | 2 A (at 24 V, DC13) |
| | 3 A (at 24 V, AC15) |
| | 3 A (at 120 V, AC15) |
| | 3 A (at 240 V, AC15) |

## Connection data

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

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 12.7 mm |
| Height | 29 mm |
| Depth | 25 mm |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

## Approvals

### Corrosive gas test

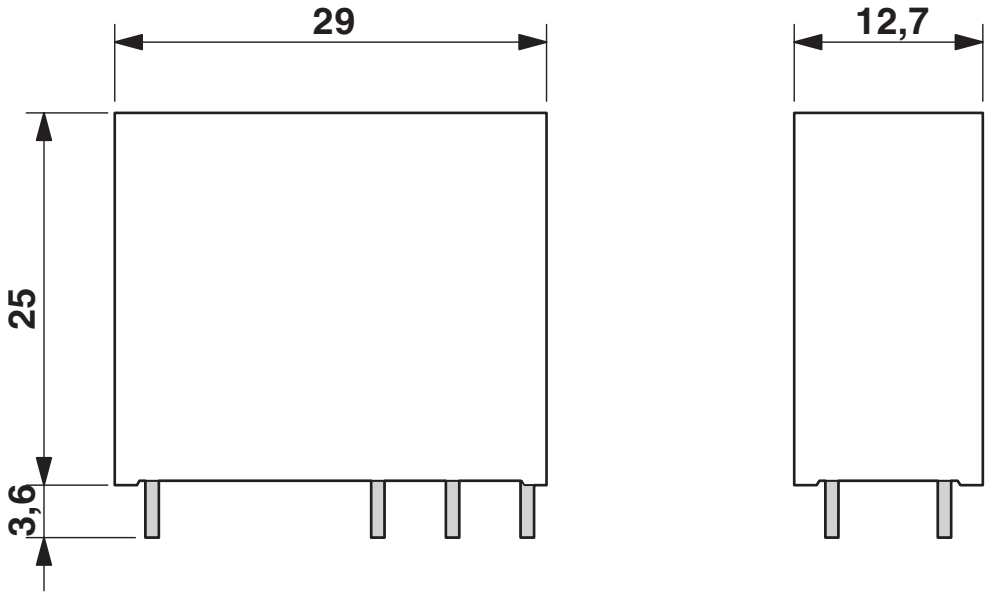
| | |
|---|---|
| Identification | ISA-S71.04. G3 Harsh Group |
| | EN 60068-2-60 |

## Standards and regulations

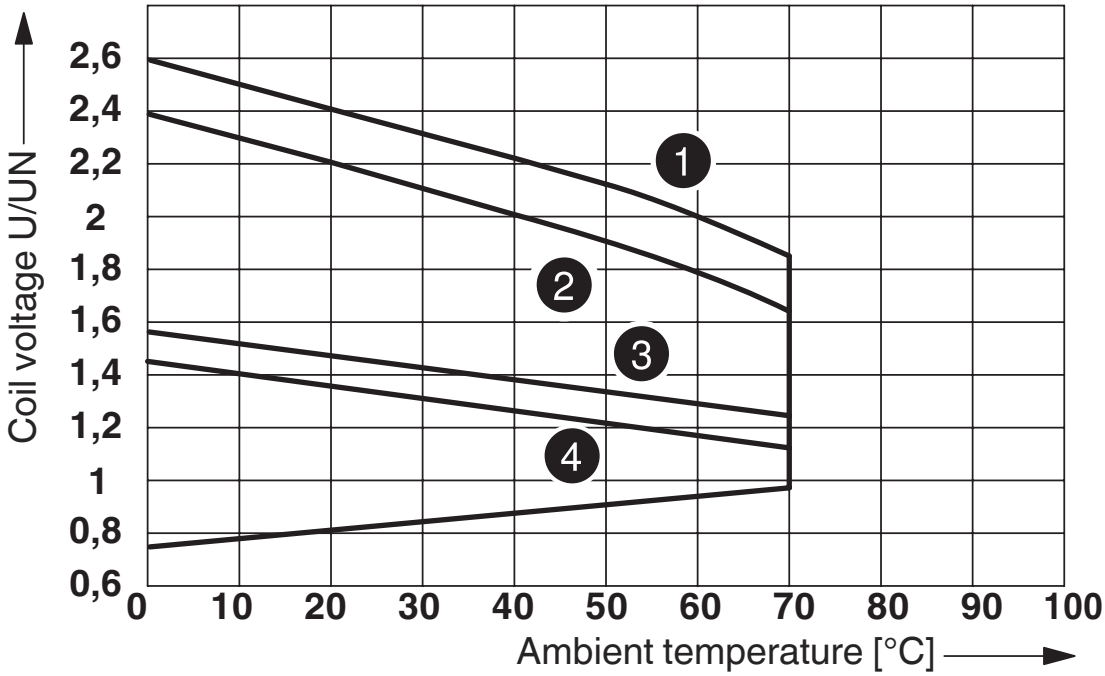
| | |
|---|---|
| Standards/regulations | EN 61810-1 |
| | VDE 0435-201 |
| | EN 50178 |

## Drawings

Dimensional drawing



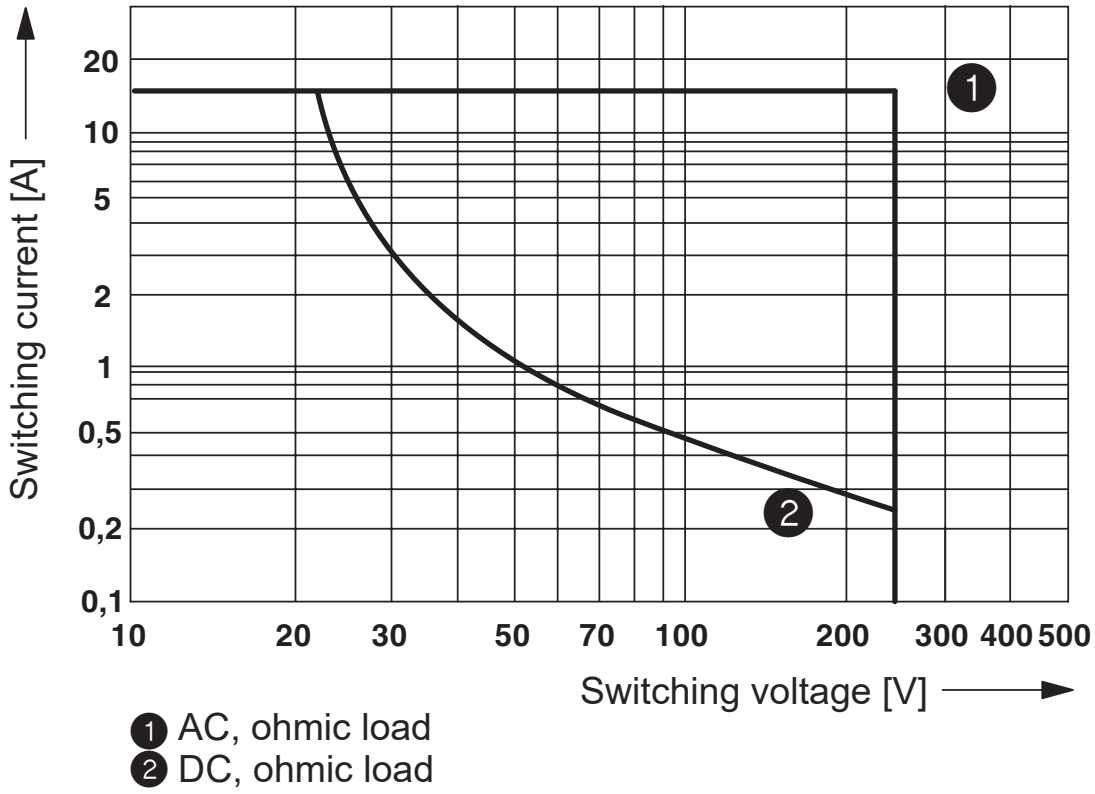

Diagram




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

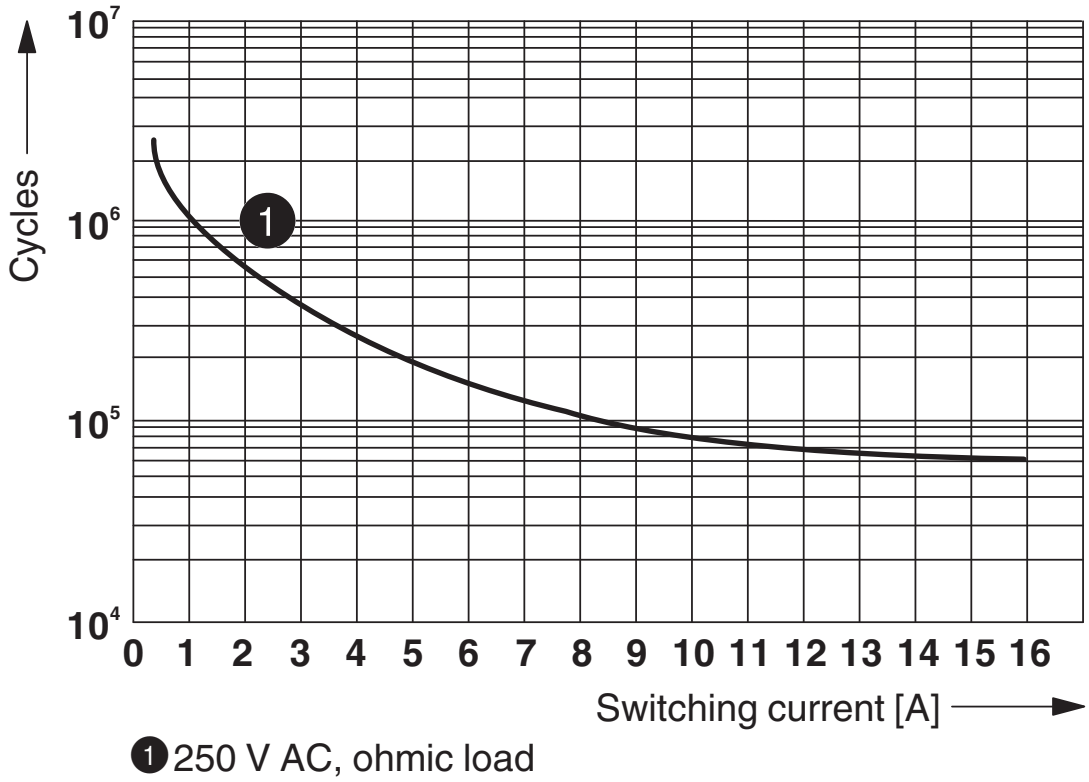
Operating voltage range

Diagram



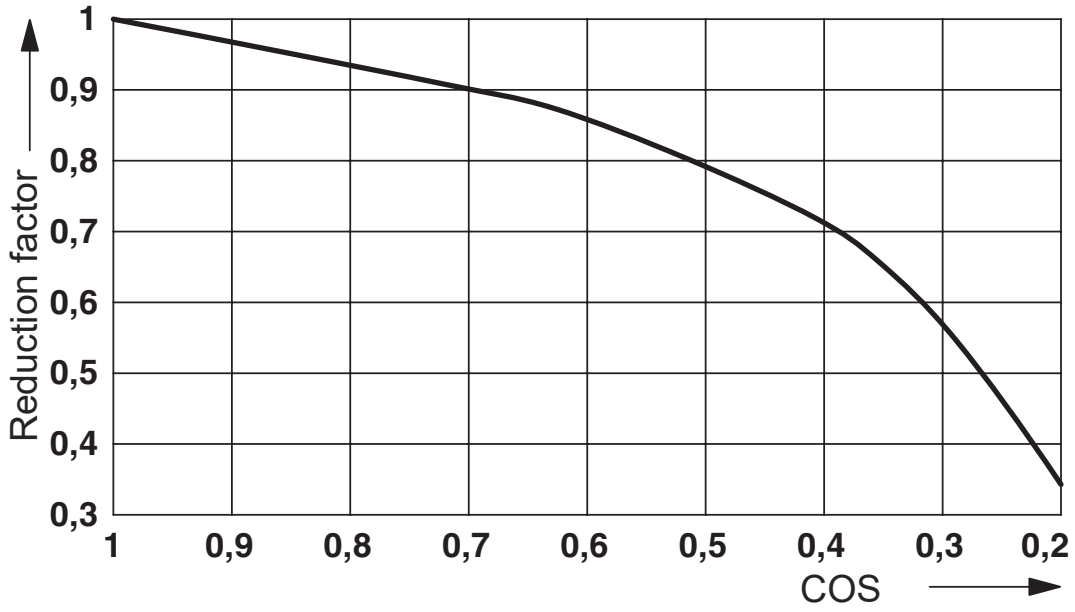

Interrupting rating

Diagram



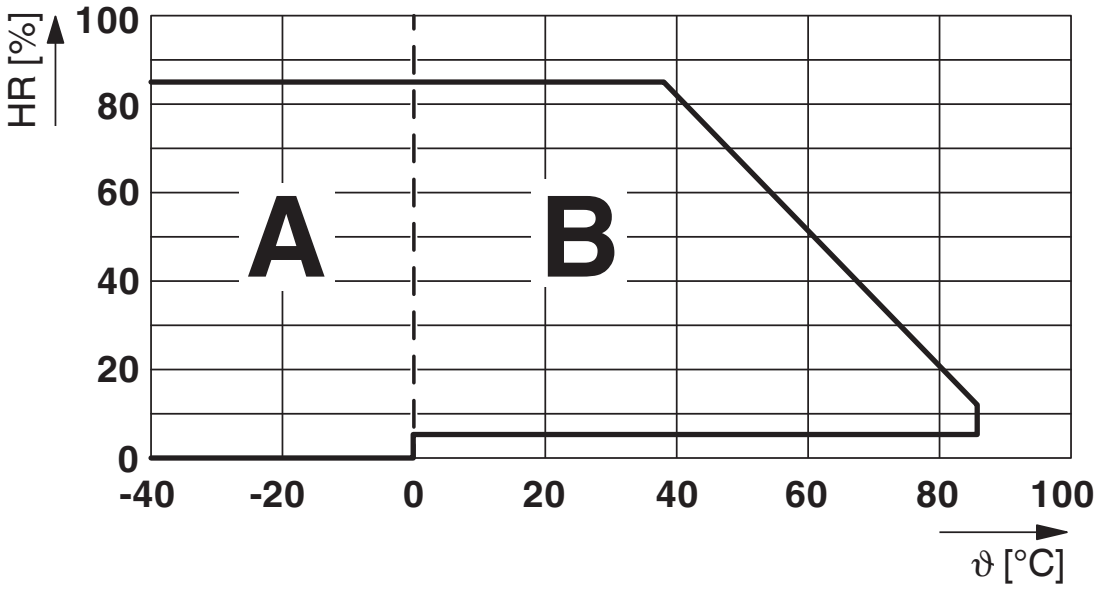

Electrical service life

Diagram




Service life reduction factor with various cos phi

Diagram

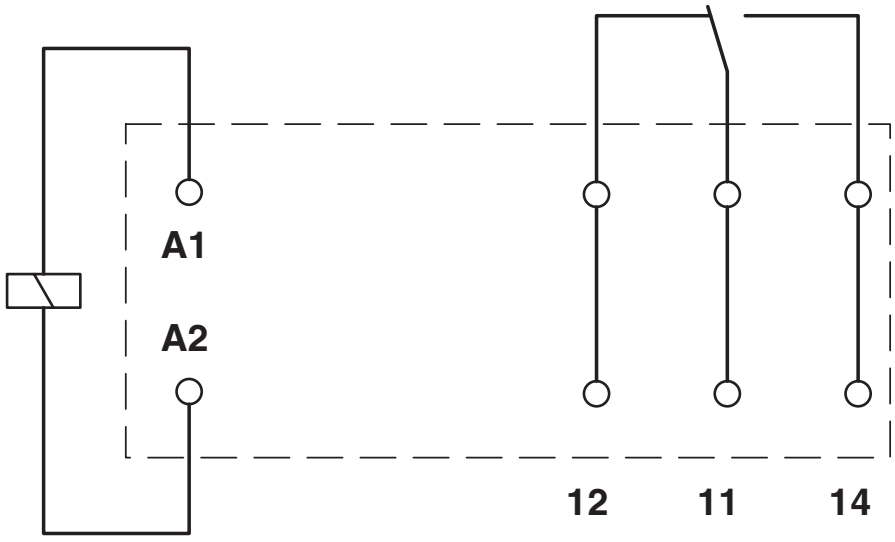



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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



## Classifications

### ECLASS

| | |
|---|---|
| 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(c)-I |

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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