# RIF-1-RPT-LV-24AC/2X21MS - Relay module

1049232

https://www.phoenixcontact.com/us/products/1049232

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Preassembled relay module with Push-in connection, consisting of: relay base, power contact relay, plug-in display/interference suppression module, and retaining bracket. Contact switching type: 2 changeover contacts. Input voltage: 24 V AC

## Product description

The pluggable electromechanical and solid-state relays in the RIFLINE complete product range and the base are recognized and approved in accordance with UL 508. The relevant approvals can be called up at the individual components in question.

## Commercial data

| | |
|---|---|
| Item number | 1049232 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C465 |
| Product key | DK6529 |
| GTIN | 4055626661018 |
| Weight per piece (including packing) | 70.85 g |
| Weight per piece (excluding packing) | 70.85 g |
| Customs tariff number | 85364110 |
| Country of origin | CN |

## Set consists of

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

2900931

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

### REL-MR- 24AC/21-21/MS - Single relay

2987956

https://www.phoenixcontact.com/us/products/2987956




Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switching position indicator, status LED, input voltage 24 V AC

## RIF-V-12-24 UC - Plug-in module

2900945

https://www.phoenixcontact.com/us/products/2900945



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor, input voltage: 12 V AC ... 24 V AC / DC ±20 %

## RIF-RH-1-H - Retaining bracket

2904468

https://www.phoenixcontact.com/us/products/2904468



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 25 mm tall miniature power relay and solid-state relay

# Technical data

## Notes

| | |
|---|---|
| Notes on operation | FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21) |

## Product properties

| | |
|---|---|
| Product type | Relay Module |
| Product family | RIFLINE complete |
| Application | Universal |
| | Palm switch |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. $10^7$ cycles |

### Insulation characteristics

| | |
|---|---|
| Insulation | Safe isolation between input and output |
| | Basic insulation between the changeover contacts |
| Overvoltage category | III |
| Pollution degree | 2 |

### Data management status

| | |
|---|---|
| Date of last data management | 20.01.2026 |

## Electrical properties

| | |
|---|---|
| Service life electrical | see diagram |
| Maximum power dissipation for nominal condition | 0.8 W |
| Test voltage (Winding/contact) | 4 $kV_{rms}$ (50 Hz, 1 min., winding/contact) |
| Test voltage (Changeover contact/changeover contact) | 2.5 $kV_{rms}$ (50 Hz, 1 min., changeover contact/changeover contact) |
| Rated insulation voltage | 250 V AC |
| Rated surge voltage | 6 kV (Input/output) |
| | 4 kV (between the changeover contacts) |

## Input data

### Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 24 V AC |
| Input voltage range | 19.2 V AC ... 27.6 V AC (20 °C) |
| Input voltage range in reference to $U_N$ | see diagram |
| Mains frequency | 50/60 Hz |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at $U_N$ | 32 mA |
| Typical response time | 3 ms ... 12 ms |
| Typical release time range | 3 ms ... 20 ms |

| | |
|---|---|
| Coil voltage | 24 V AC |
| Protective circuit | Varistor |
| Operating voltage display | Yellow LED |

## Output data

Switching

| | |
|---|---|
| Contact switching type | 2 changeover contacts |
| Type of switch contact | Single contact |
| Contact material | AgNi |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 5 V (10 mA) |
| Limiting continuous current | 8 A (see diagram) |
| Maximum inrush current | 12 A (20 ms, N/O contacts) |
| Min. switching current | 10 mA (5 V) |
| Interrupting rating (ohmic load) max. | 192 W (at 24 V DC) |
| | 124 W (at 48 V DC) |
| | 60 W (at 60 V DC) |
| | 44 W (at 110 V DC) |
| | 57 W (at 220 V DC) |
| | 2000 VA (for 250 V AC) |
| Switching capacity | 2 A (at 24 V, DC13) |
| | 0.2 A (at 250 V, DC13) |
| | 3 A (at 24 V, AC15) |
| | 3 A (at 120 V, AC15) |
| | 3 A (at 250 V, AC15) |
| Utilization category CB Scheme (IEC 60947-5-1) | AC15, 1.5 A/250 V (N/O contact) |
| | DC13, 1 A/24 V (N/O contact) |

## Connection data

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 8 mm |
| Conductor cross-section rigid | 0.14 mm² ... 1.5 mm² |
| Conductor cross-section flexible | 0.14 mm² ... 1.5 mm² |
| | 0.14 mm² ... 1.5 mm² (Ferrule with plastic sleeve) |
| | 0.14 mm² ... 1 mm² (Ferrule with plastic sleeve, two conductors on double terminal block) |
| Conductor cross-section AWG | 26 ... 16 (solid) |
| | 26 ... 16 (flexible) |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 16 mm |
| Height | 96 mm |
| Depth | 75 mm |

Drill hole

| | |
|---|---|
| Diameter | 3.2 mm |

## Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 (Housing) | V2 (Housing) |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection (Relay) | RT III (Relay) |
| Degree of protection (Relay base) | IP20 (Relay base) |
| Ambient temperature (operation) | -40 °C ... 50 °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

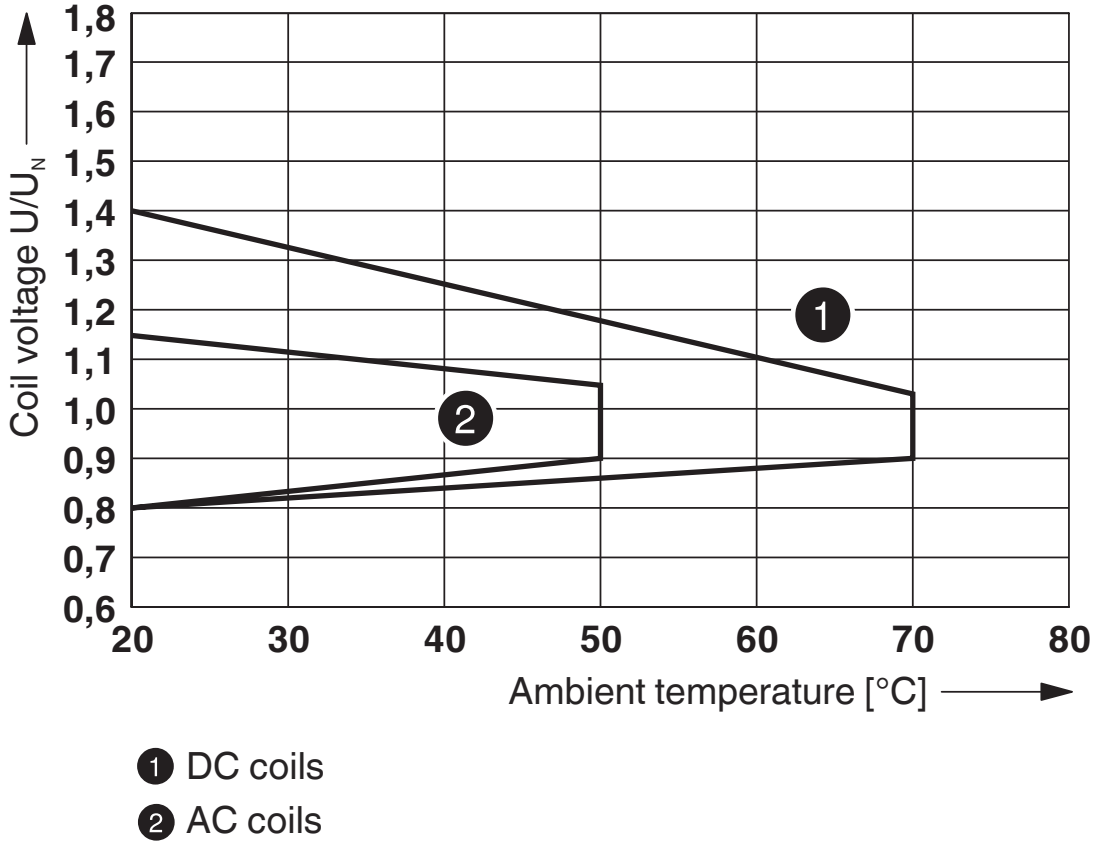
| | |
|---|---|
| Standards/regulations | IEC 60947-5-1 |

## Mounting

| | |
|---|---|
| Mounting type | DIN rail mounting |
| Assembly note | in rows with zero spacing |
| Mounting position | any |

## Drawings

Diagram

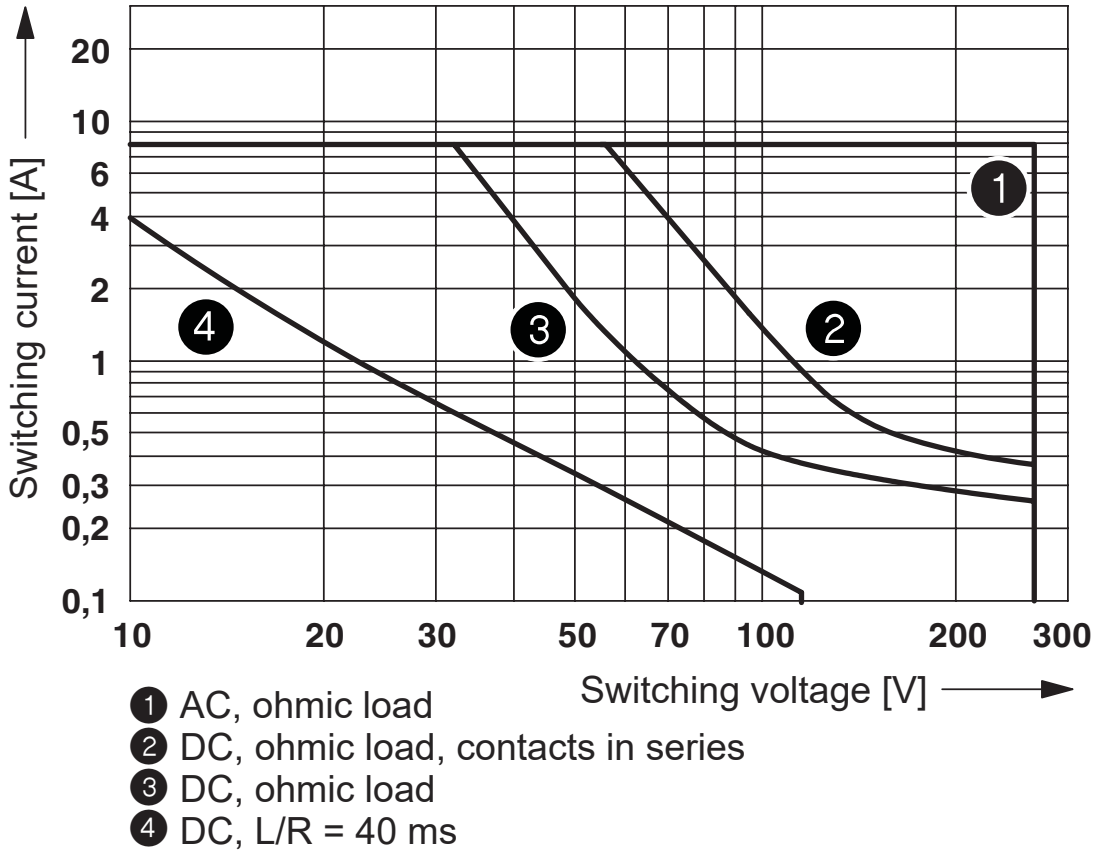



1 DC coils

2 AC coils

Operating voltage range

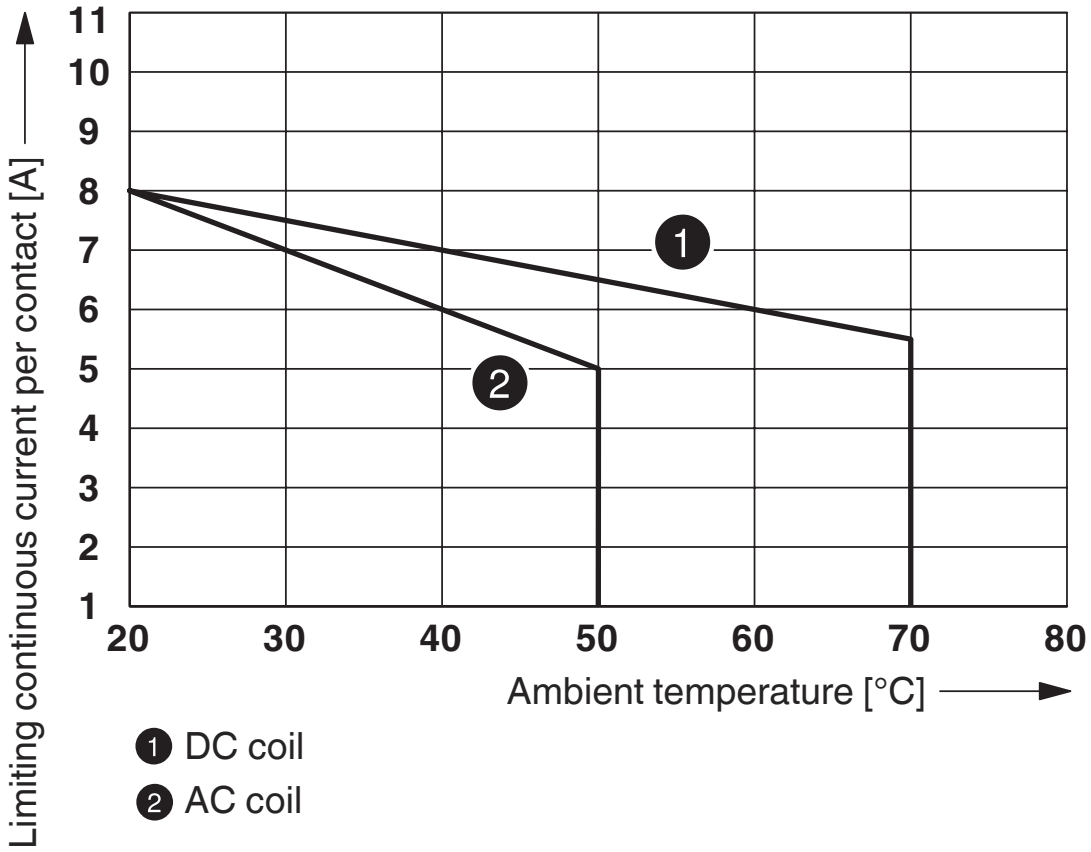
Diagram




1 AC, ohmic load
2 DC, ohmic load, contacts in series
3 DC, ohmic load
4 DC, L/R = 40 ms

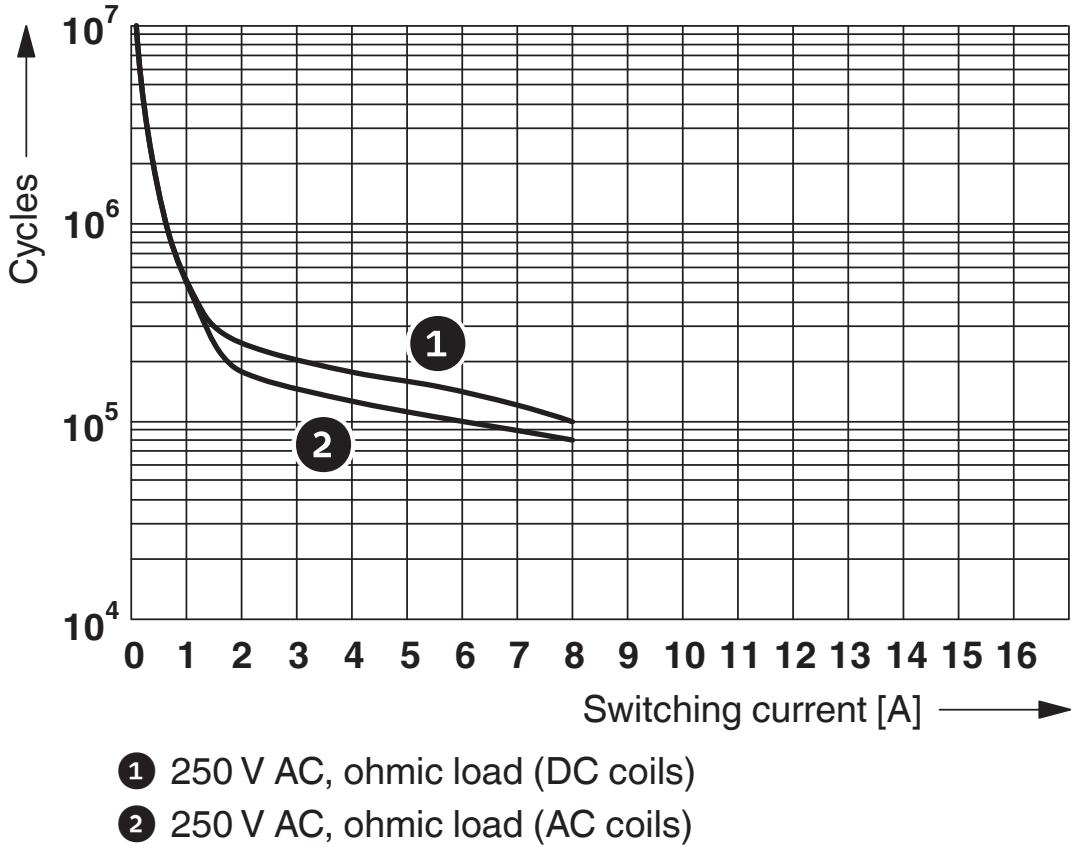
Interrupting rating

Diagram




Contact derating

Diagram

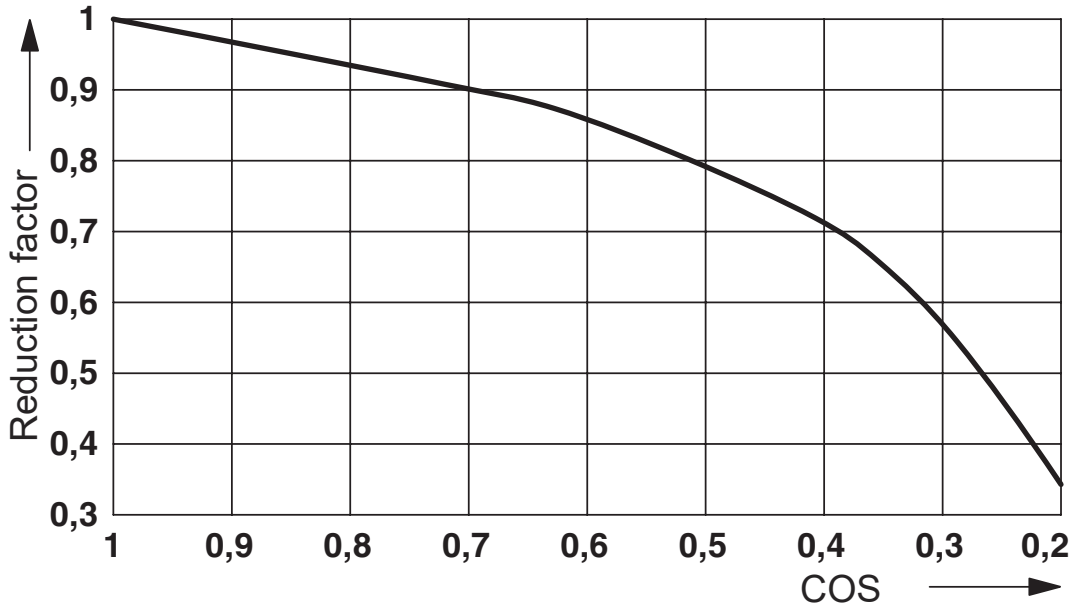



1 250 V AC, ohmic load (DC coils)

2 250 V AC, ohmic load (AC coils)

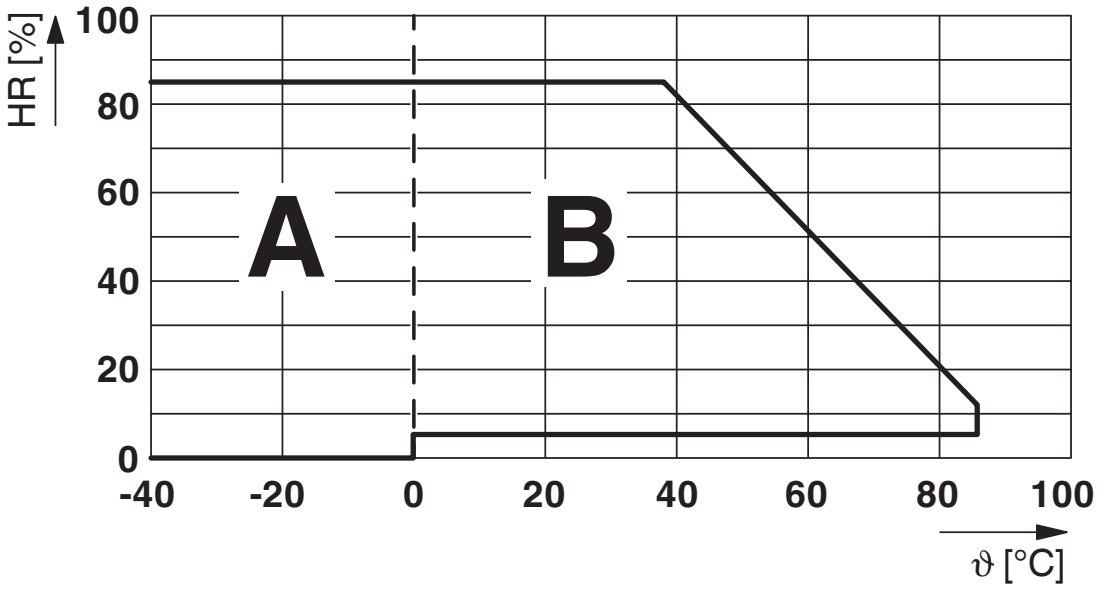
Electrical service life

Diagram




Service life reduction factor

Diagram

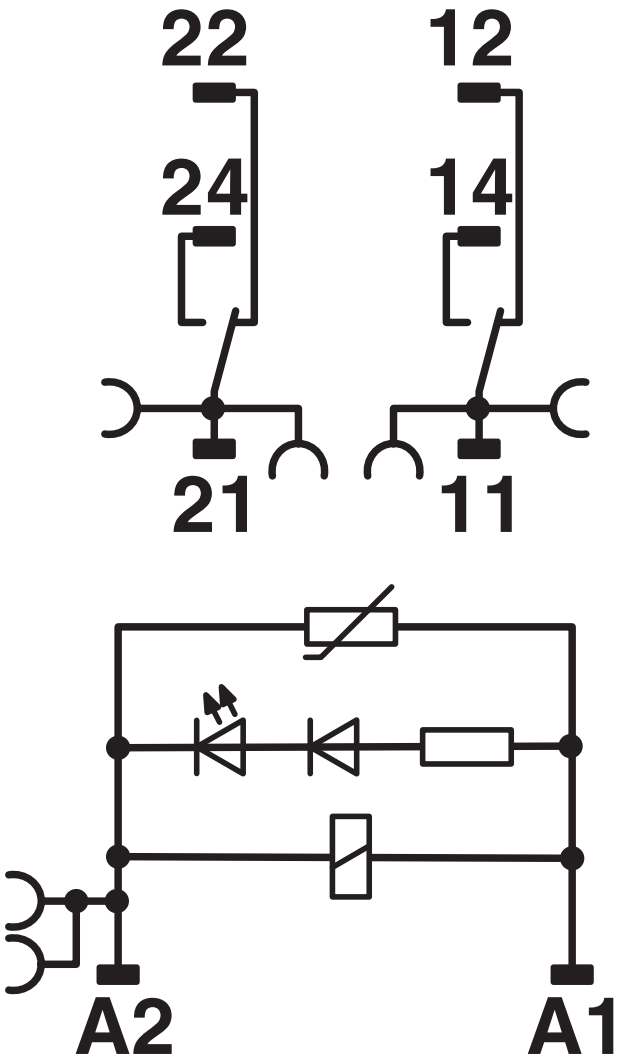



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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




AC coils

## 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% |


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