# RIF-1-RSC-LV-230AC/2X21MS - Relay module

2905662

https://www.phoenixcontact.com/us/products/2905662

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Preassembled relay module with screw connection, consisting of: relay base, relay retaining bracket, plug-in interference suppression module, and power contact relay with test button and integrated status LED. Contact switching type: 2 changeover contacts. Input voltage: 230 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

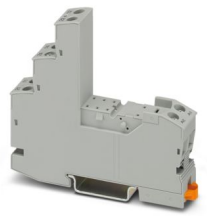
| | |
|---|---|
| Item number | 2905662 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C465 |
| Product key | DK6519 |
| GTIN | 4046356983280 |
| Weight per piece (including packing) | 71.4 g |
| Weight per piece (excluding packing) | 71.4 g |
| Customs tariff number | 85364900 |
| Country of origin | CN |

## Set consists of

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

2900930

https://www.phoenixcontact.com/us/products/2900930



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

### REL-MR-230AC/21-21/MS - Single relay

2987972

https://www.phoenixcontact.com/us/products/2987972




Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switching position indicator, status LED, coil voltage 230 V AC

## RIF-V-120-230 UC - Plug-in module

2900948

https://www.phoenixcontact.com/us/products/2900948



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor, input voltage: 120 V AC ... 230 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

## Product properties

| | |
|---|---|
| Product type | Relay Module |
| Product family | RIFLINE complete |
| Application | Palm switch |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 5x $10^6$ 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 | 12.09.2025 |

## Electrical properties

| | |
|---|---|
| Service life electrical | see diagram |
| Maximum power dissipation for nominal condition | 0.81 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 $U_N$ | 230 V AC (50/60 Hz) |
| Input voltage range | 184 V AC ... 253 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 $U_N$ | 4.5 mA |
| Typical response time | 4 ms ... 12 ms |
| Typical release time range | 4 ms ... 20 ms |
| Coil voltage | 230 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 | 12 V (at 10 mA) |
| Limiting continuous current | 5 A (see diagram) |
| Maximum inrush current | 16 A (20 ms, N/O contacts) |
| Min. switching current | 10 mA (12 V) |
| Interrupting rating (ohmic load) max. | 192 W (at 24 V DC) |
| | 62 W (at 48 V DC) |
| | 42 W (at 60 V DC) |
| | 55 W (at 110 V DC) |
| | 66 W (at 220 V DC) |
| | 2000 VA (for 250 V AC) |
| Switching power min. | 120 mW |
| 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 | Screw connection |
| Stripping length | 8 mm |
| Conductor cross-section rigid | 0.5 mm² ... 4 mm² |
| Conductor cross-section rigid (2 conductors with same cross section) | 0.5 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.5 mm² ... 4 mm² |
| | 0.5 mm² ... 4 mm² (Ferrule with plastic sleeve) |
| Conductor cross-section flexible (2 conductors with same cross section) | 0.5 mm² ... 2.5 mm² |
| | 0.5 mm² ... 1.5 mm² (TWIN ferrule with plastic sleeve) |
| Conductor cross-section AWG | 20 ... 10 (solid) |
| | 20 ... 12 (flexible) |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 16 mm |
| Height | 90 mm |
| Depth | 75 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 base) | IP20 (Relay base) |
| Degree of protection (Relay) | RT II (Relay) |
| Ambient temperature (operation) | -40 °C ... 45 °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

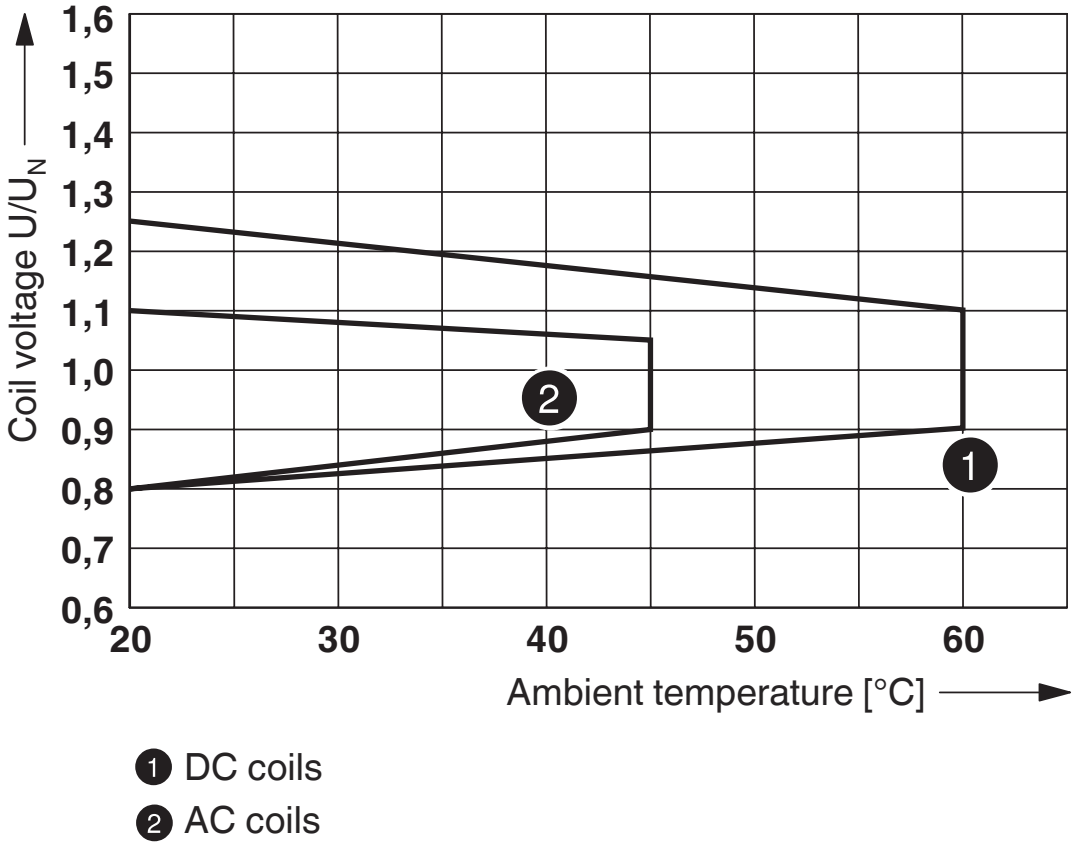
| | |
|---|---|
| Standards/regulations | DIN EN 50178 |

## Mounting

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

## Drawings

Diagram

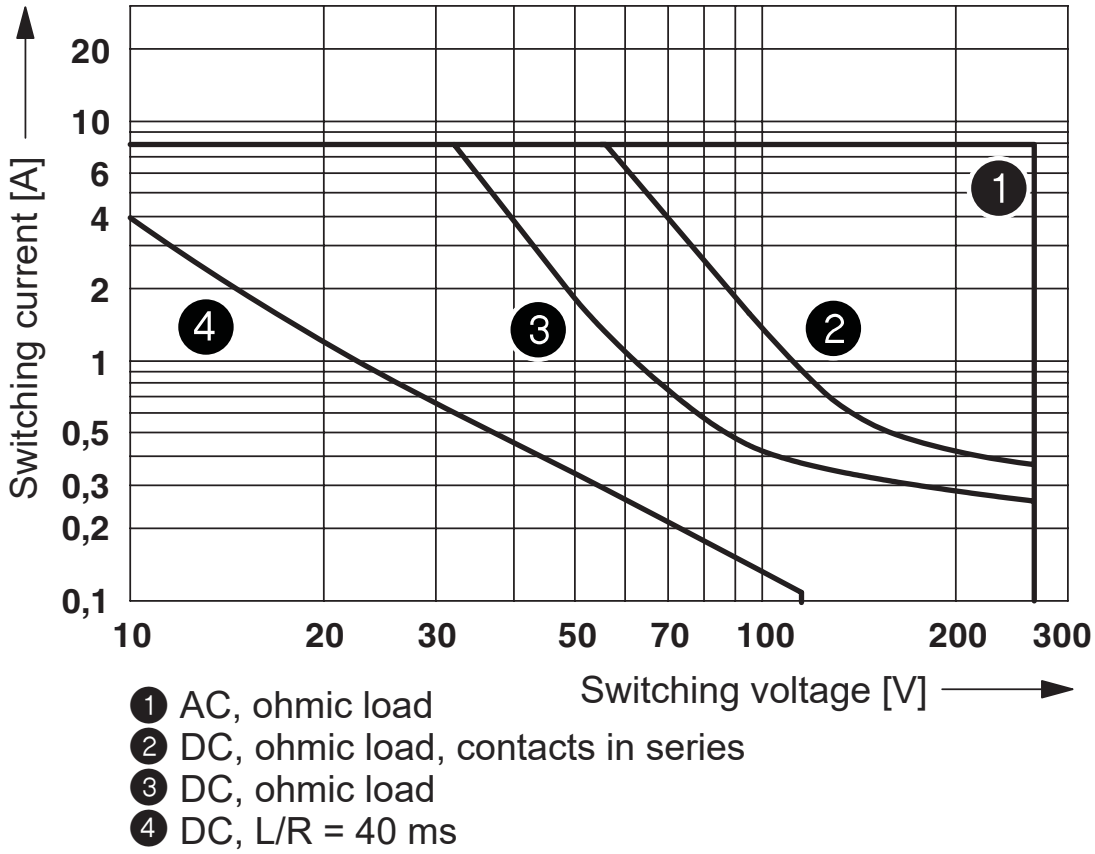



1 DC coils

2 AC coils

Operating voltage range

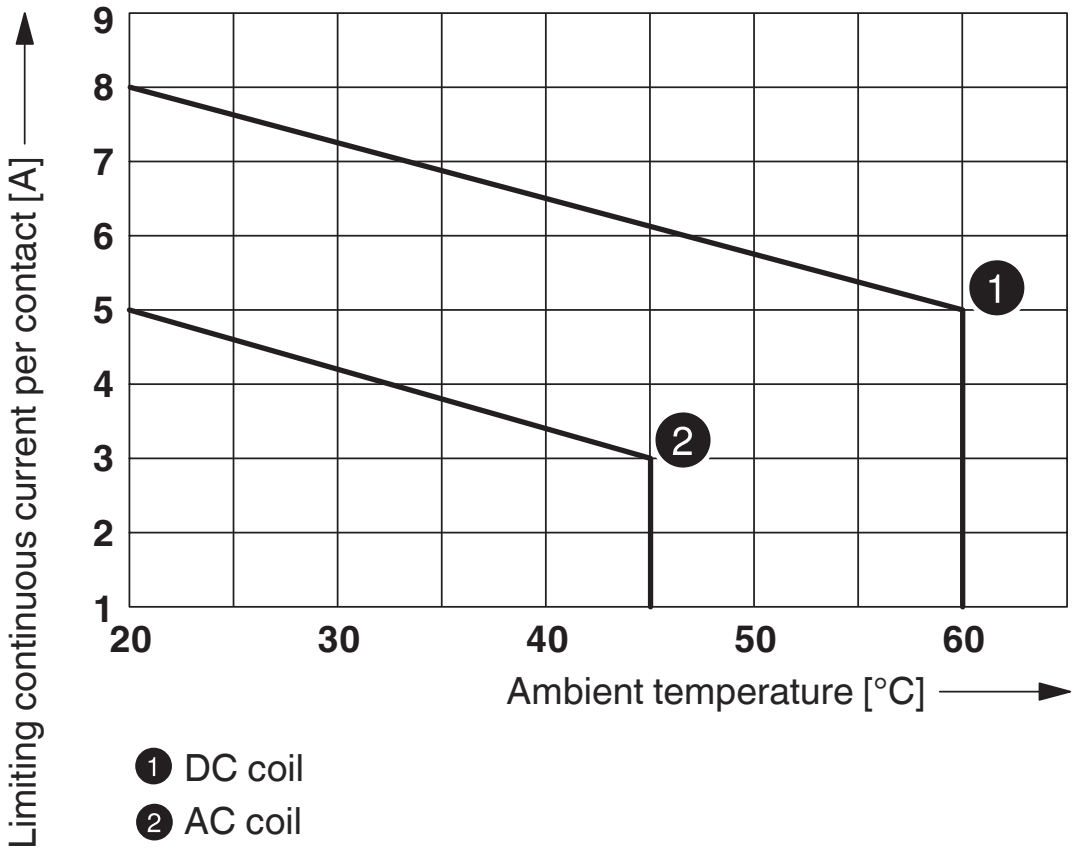
Diagram




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

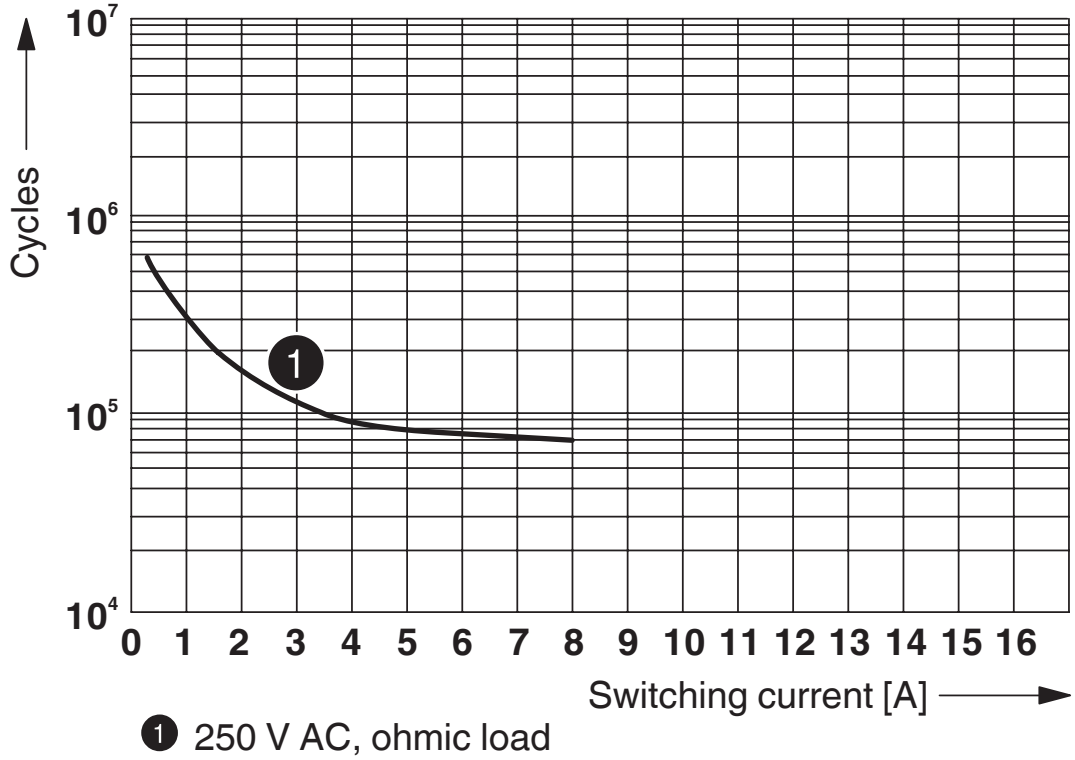
Interrupting rating

Diagram



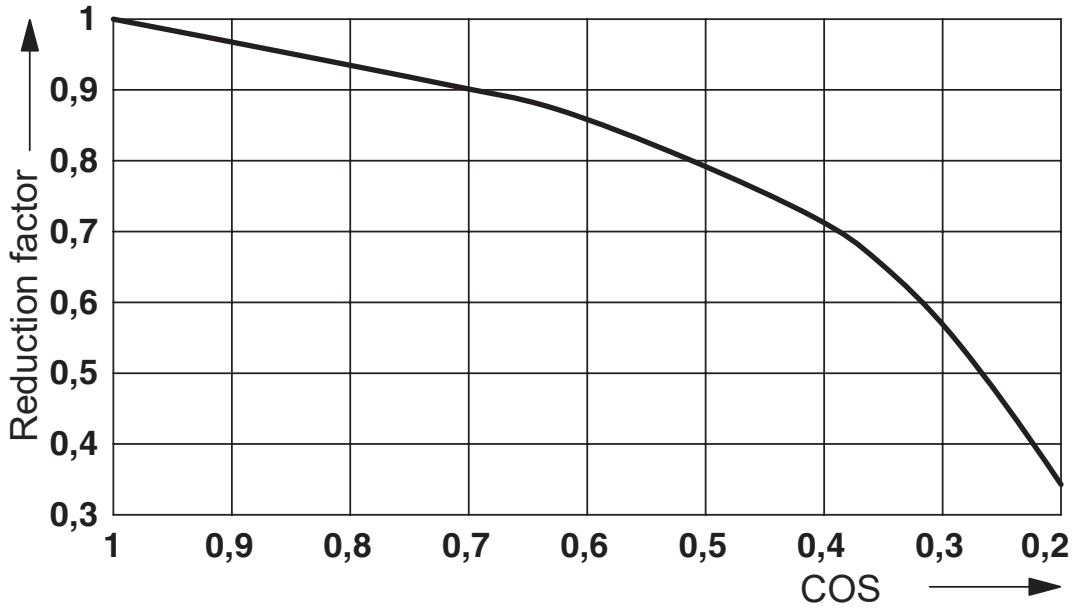

Contact derating

Diagram



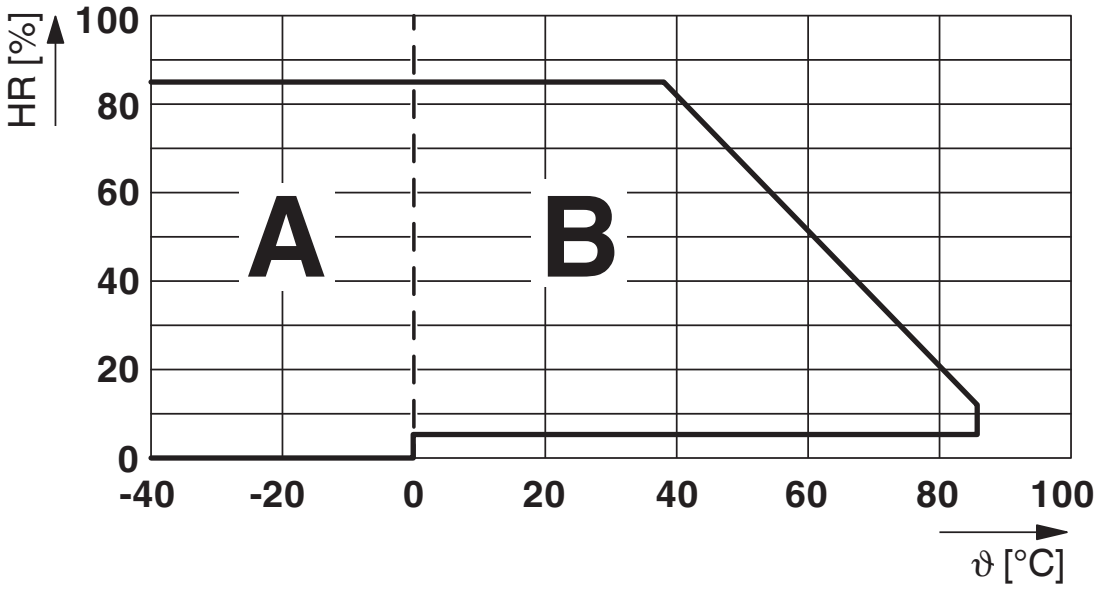

Electrical service life

Diagram




Service life reduction factor

Diagram

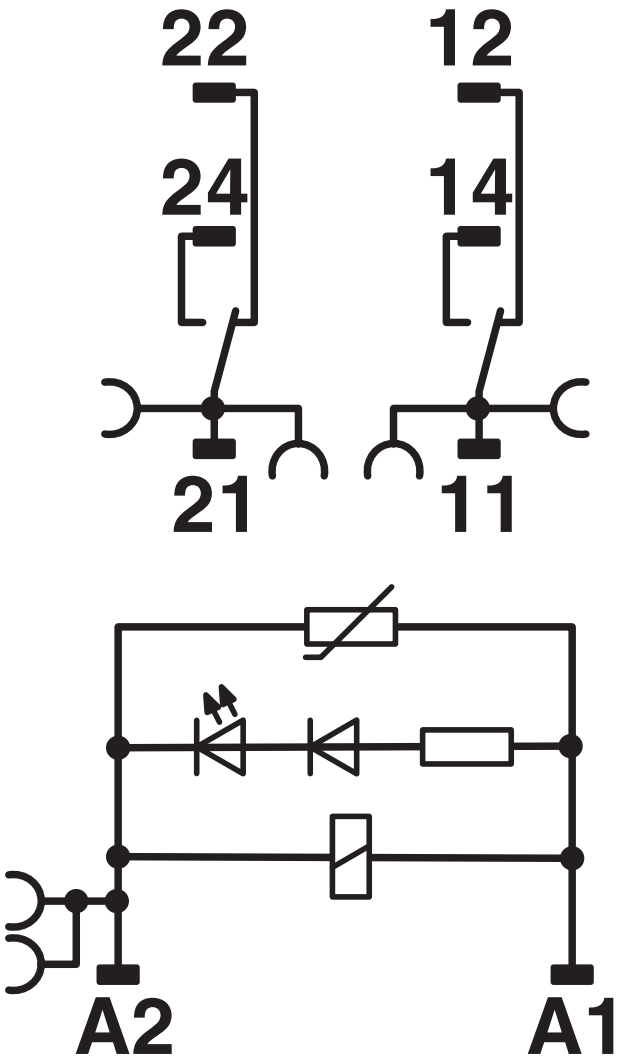



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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 |

### 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% |


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