# RIF-1-RSC-LV-24AC/2X21AU - Relay module

2903345

https://www.phoenixcontact.com/us/products/2903345

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.



Preassembled relay module with screw connection, consisting of: relay base, multi-layer 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 | 2903345 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Note | Made to order (non-returnable) |
| Sales key | C465 |
| Product key | DK651H |
| GTIN | 4046356732789 |
| Weight per piece (including packing) | 70 g |
| Weight per piece (excluding packing) | 70 g |
| Customs tariff number | 85364110 |
| 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- 24AC/21-21AU - Single relay

2961464

https://www.phoenixcontact.com/us/products/2961464



Plug-in miniature power relay, with multi-layer gold contact, 2 changeover contacts, input voltage 24 V AC

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

2900942

https://www.phoenixcontact.com/us/products/2900942



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

## RIF-RH-1 - Retaining bracket

2900953

https://www.phoenixcontact.com/us/products/2900953



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 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 |
| 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 | 06.07.2025 |

### Electrical properties

| | |
|---|---|
| Service life electrical | see diagram |
| Maximum power dissipation for nominal condition | 0.79 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 $U_N$ | 33 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, hard gold-plated |
| Maximum switching voltage | 30 V AC |
| | 36 V DC |
| Minimum switching voltage | 100 mV (at 10 mA) |
| Limiting continuous current | 50 mA |
| Maximum inrush current | 50 mA |
| Min. switching current | 1 mA (24 V) |
| Interrupting rating (ohmic load) max. | 1.2 W (at 24 V DC) |
| Utilization category CB Scheme (IEC 60947-5-1) | AC15, 1.5 A/240 V (N/O contact) |
| | AC15, 2 A/250 V (N/C contact) |
| | DC13, 2 A/24 V (N/C contact) |
| | DC13, 0.2 A/250 V (N/O contact) |

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 | 5 V (at 10 mA) |
| Maximum inrush current | 12 A (20 ms, N/O contacts) |
| Min. switching current | 10 mA (At 5 V) |
| Interrupting rating (ohmic load) max. | 192 W (at 24 V DC) |
| | 96 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 110 V, DC13) |
| | 0.2 A (at 250 V, DC13) |
| | 2 A (at 24 V, AC15) |
| | 2 A (at 120 V, AC15) |
| | 2 A (at 250 V, AC15) |

## 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 III (Relay) |
| 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

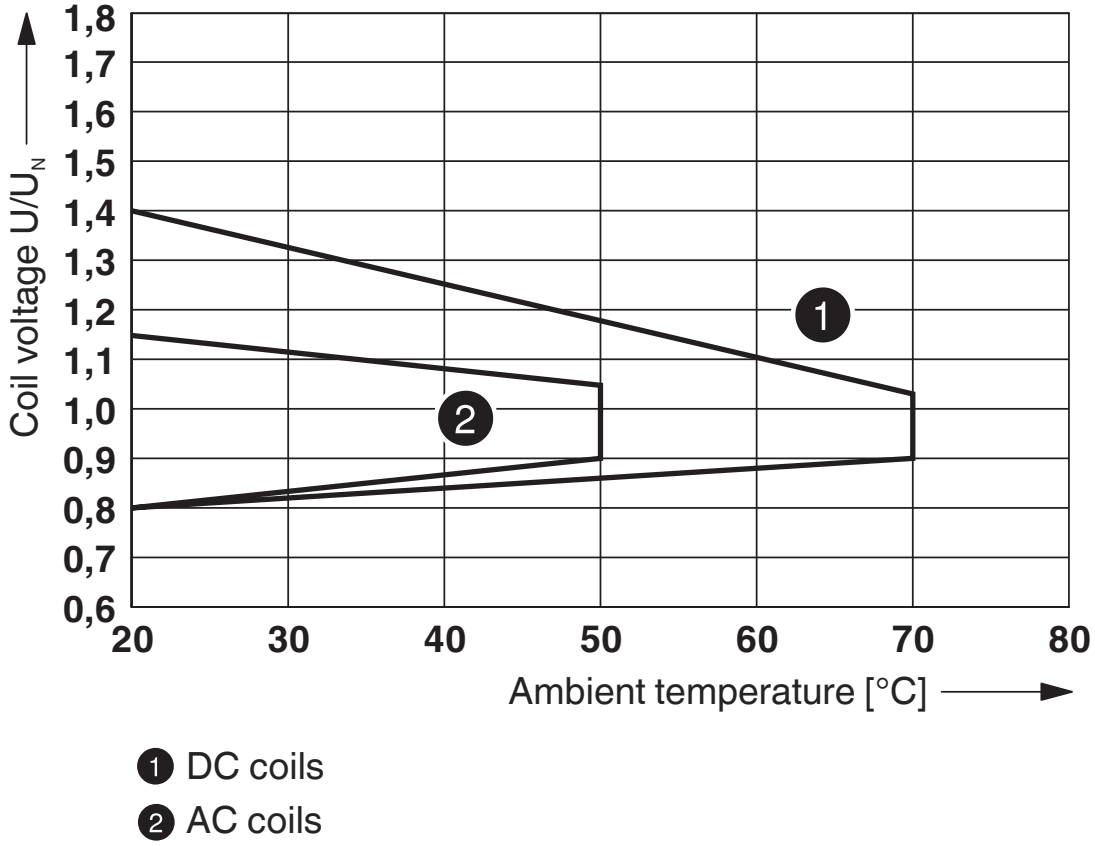
| | |
|---|---|
| Standards/regulations | IEC 60947-5-1 |

## Mounting

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

## Drawings

Diagram

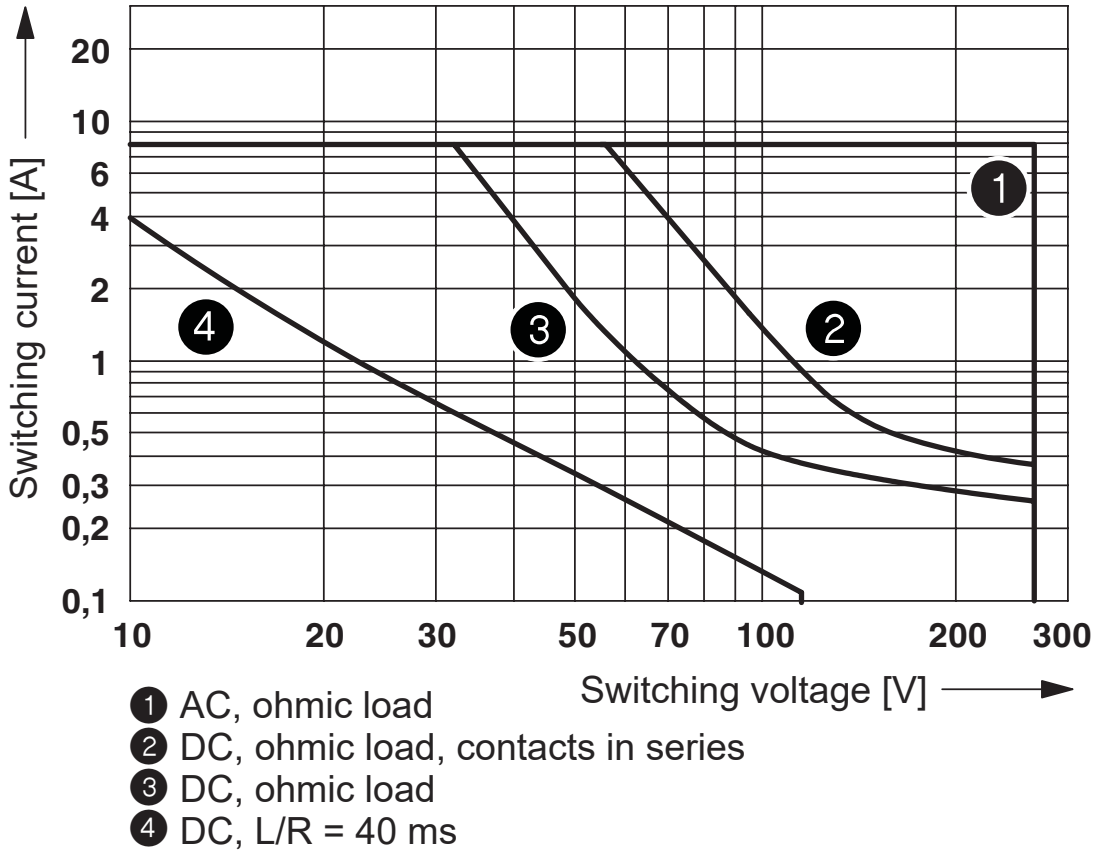



1 DC coils

2 AC coils

Operating voltage range

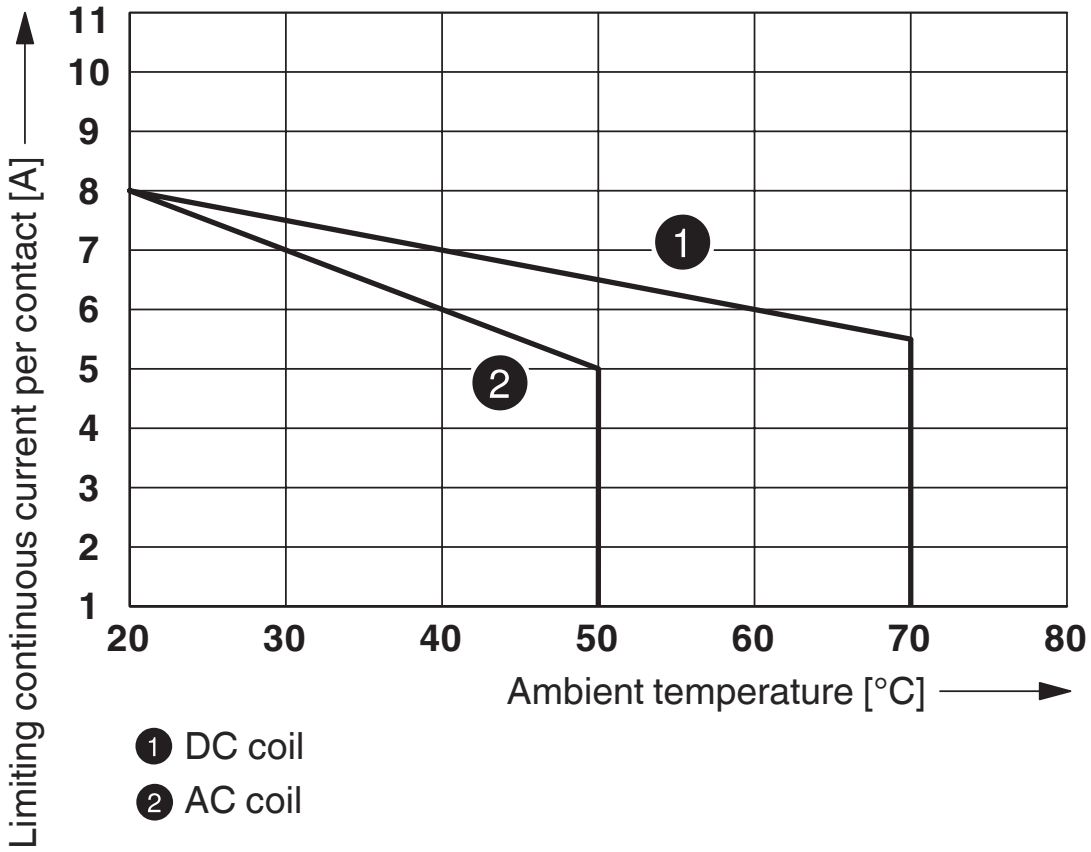
Diagram




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

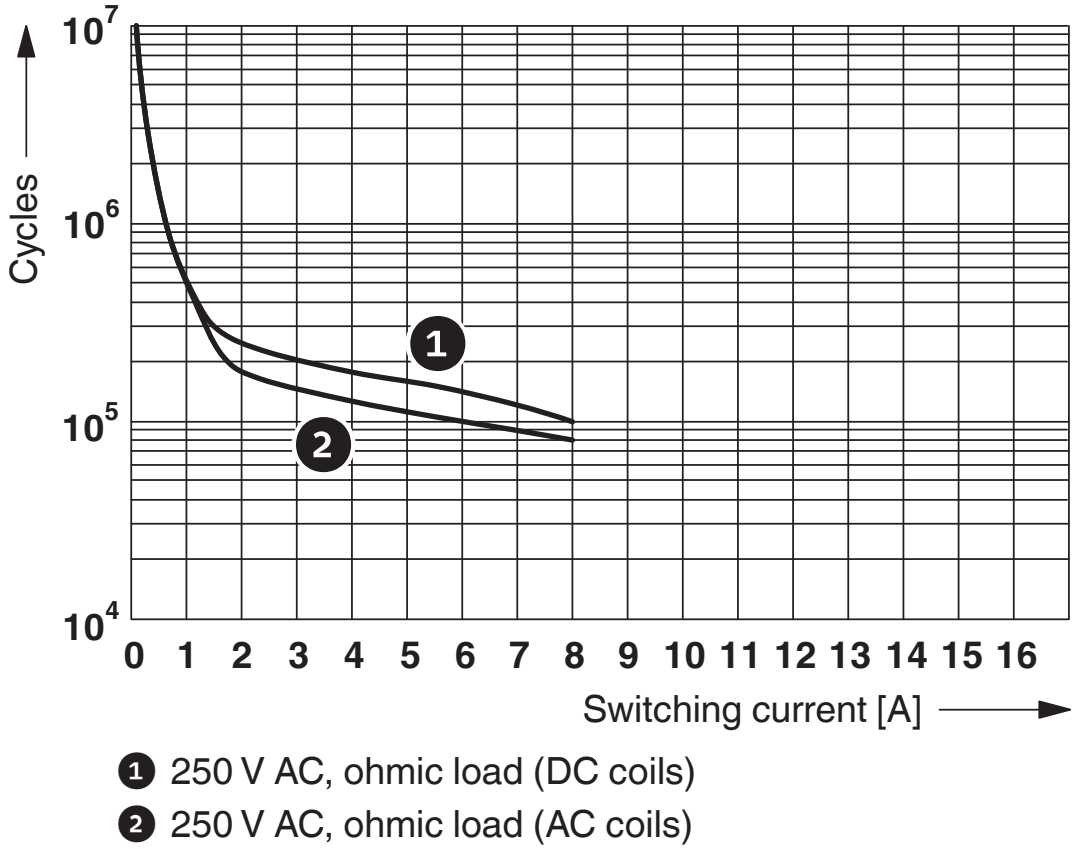
Interrupting rating

Diagram




Contact derating

Diagram

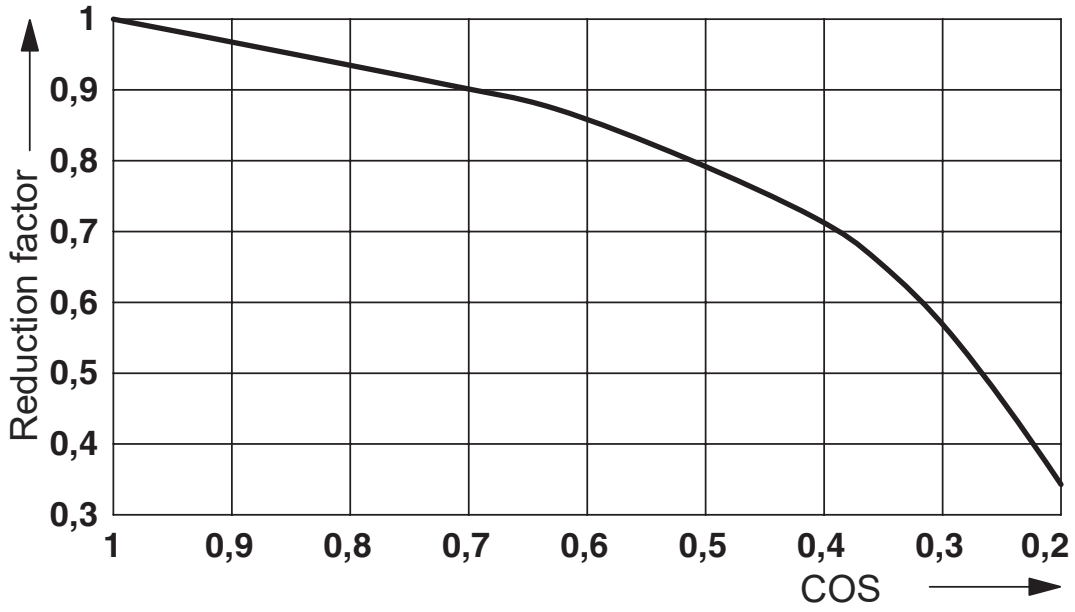



1 250 V AC, ohmic load (DC coils)

2 250 V AC, ohmic load (AC coils)

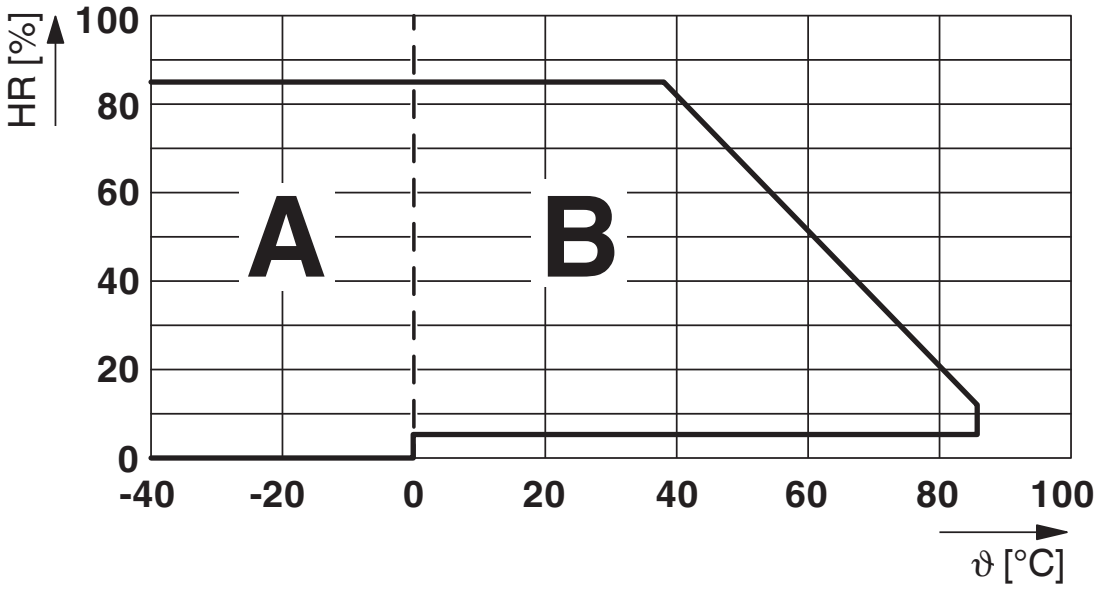
Electrical service life

Diagram




Service life reduction factor

Diagram

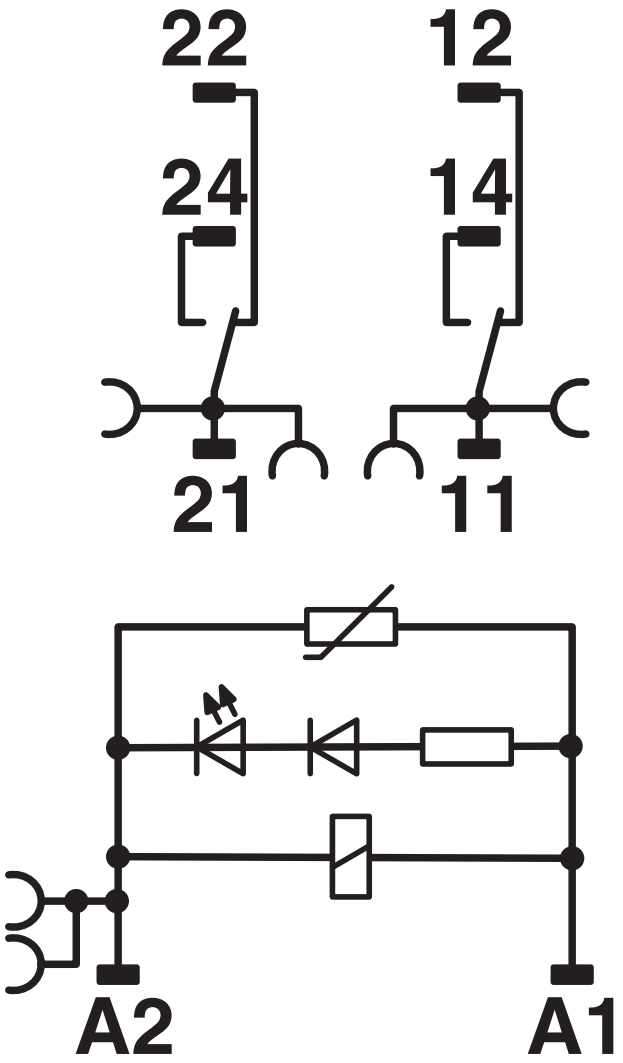



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC001437 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39122300 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 86a50239-1933-44e4-8e5b-c395f45b8264 |


Phoenix Contact 2025 © - 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