# RIF-2-RSC-LV-230AC/4X21/EX - Relay module

2909847

https://www.phoenixcontact.com/nl/products/2909847

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Pre-assembled relay module consisting of: relay base, function plug-in module, power contact relay, and retaining bracket, approval in accordance with ATEX/IECEx (Zone 2) and Ex Zone Class I, Div. 2, Screw connection, 4 changeover contacts, Varistor, 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

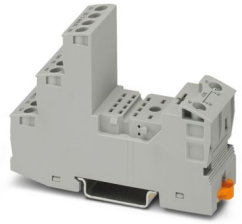
| | |
|---|---|
| Item number | 2909847 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | DK651A |
| Product key | DK651A |
| GTIN | 4055626395609 |
| Weight per piece (including packing) | 114,9 g |
| Weight per piece (excluding packing) | 114,9 g |
| Customs tariff number | 85364900 |
| Country of origin | CN |

## Set consists of

### RIF-2-BSC/4X21/EX - Relay base

1047031

https://www.phoenixcontact.com/nl/products/1047031



RIF-2.../EX relay base for assembling with RTIII-sealed industrial relays with 4 changeover contacts for use in zone 2, screw connection, plug-in option for input / interference suppression modules, for mounting on NS 35/7,5

### REL-IR4/230AC/4X21/EX - Single relay

2909742

https://www.phoenixcontact.com/nl/products/2909742



Pluggable industrial relay, RT III sealed with power contacts, 4x changeover contacts, mechanical switch position indicator, polarity: non-polarized, input voltage: 230 V AC, in connection with RIF-2.../EX bases approved in accordance with ATEX/IECEx (zone 2) and Ex zone class I, div. 2.

## RIF-LV-120-230 AC/110 DC - Plug-in module

2900944

https://www.phoenixcontact.com/nl/products/2900944



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor and yellow LED, input voltage: 120 V AC... 230 V AC / 110 V DC ±20 %

## RIF-RH-2 - Retaining bracket

2900954

https://www.phoenixcontact.com/nl/products/2900954



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-2 relay base, for industrial relay

# Technical data

## Product properties

| | |
|---|---|
| Product family | RIFLINE complete |
| Application | Class I, Division 2 |
| | potentially explosive areas |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 2x $10^7$ cycles |

### Insulation characteristics

| | |
|---|---|
| Insulation | Basic insulation |
| Overvoltage category | III |
| | II (Zone 2) |
| Pollution degree | 2 |

### Data management status

| | |
|---|---|
| Date of last data management | 12.09.2025 |

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 1.9 W |
| Test voltage (Winding/contact) | 2.5 $kV_{rms}$ (50 Hz, 1 min., winding/contact) |
| Test voltage (Contact/contact) | 2 $kV_{rms}$ (50 Hz, 1 min., contact/contact) |
| Rated insulation voltage | 250 V AC |
| Rated surge voltage | 2.5 kV |

## Input data

### Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 230 V AC |
| Input voltage range | 184 V AC ... 276 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 $U_N$ | 6.5 mA |
| Typical response time | 5 ms ... 15 ms |
| Typical release time range | 5 ms ... 20 ms |
| Coil voltage | 230 V AC |
| Protective circuit | Varistor |
| Operating voltage display | Yellow LED |

## Output data

### Switching

| | |
|---|---|
| Contact switching type | 4 changeover contacts |

| | |
|---|---|
| Type of switch contact | Single contact |
| Contact material | AgNi |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 5 V (24 mA) |
| Limiting continuous current | 5 A (see diagram) |
| Maximum inrush current | 16 A (20 ms, N/O contacts) |
| Min. switching current | 5 mA (24 V) |
| Interrupting rating (ohmic load) max. | 120 W (24 V DC) |
| | 124 W (48 V DC) |
| | 108 W (60 V DC) |
| | 52 W (110 V DC) |
| | 48 W (220 V DC) |
| | 1250 VA (250 V AC) |
| Utilization category CB Scheme (IEC 60947-5-1) | AC15, 1 A/240 V (N/O contact) |
| | DC13, 2 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 | 27 mm |
| Height | 89 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

ATEX

| | |
|---|---|
| Identification | II 3G Ex ec nC IIC T4 Gc |
| Certificate | IBExU17ATEXB014X |

UKCA Ex (UKEX)

| | |
|---|---|
| Identification | II 3G Ex ec nC IIC T4 Gc |
| Certificate | PxcIF21UKEX2909741X |

IECEx

| | |
|---|---|
| Identification | Ex ec nC IIC T4 Gc |
| Certificate | IECEx IBE 17.0032X |

UL, USA/Canada

| | |
|---|---|
| Identification | Class I, Div. 2, Groups A, B, C, D T4 |
| | Class I, Zone 2, Group IIC |

Corrosive gas test

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

## Standards and regulations

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

Ex zone

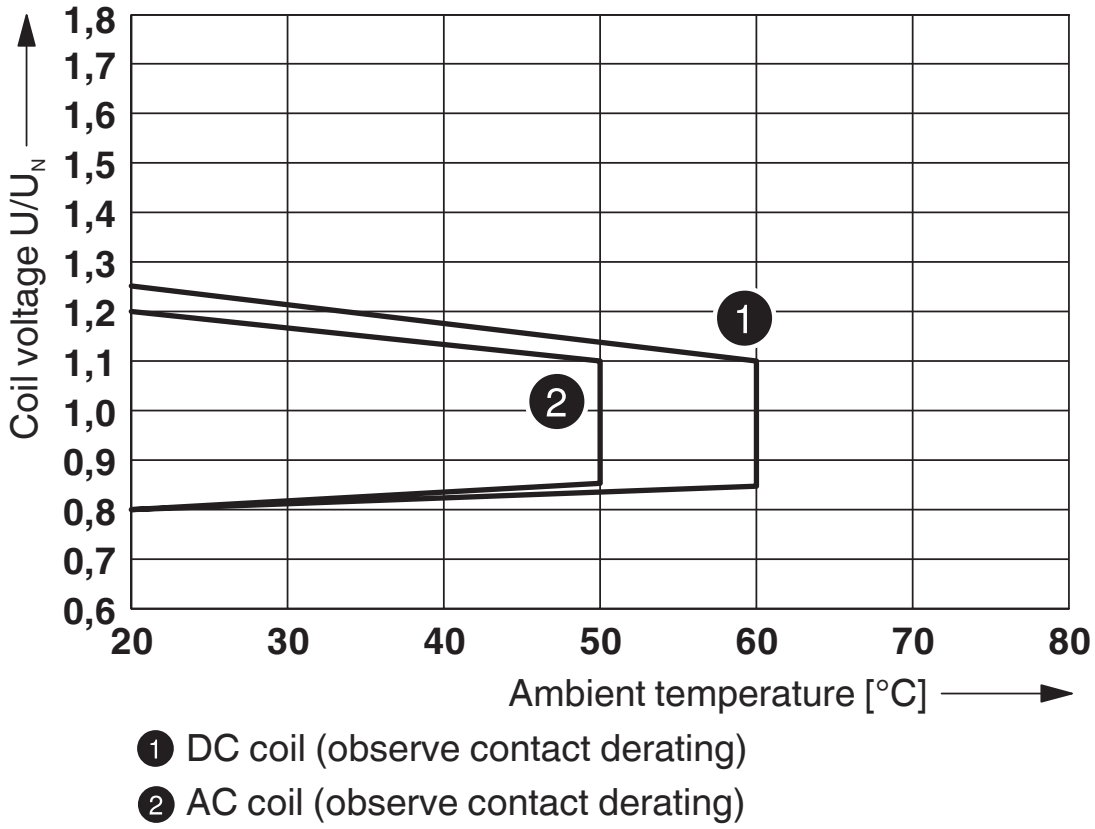
| | |
|---|---|
| Standards/regulations | EN/IEC 60079-0 |
| | EN/IEC 60079-7 |
| | EN/IEC 60079-15 |

## Mounting

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

## Drawings

Diagram

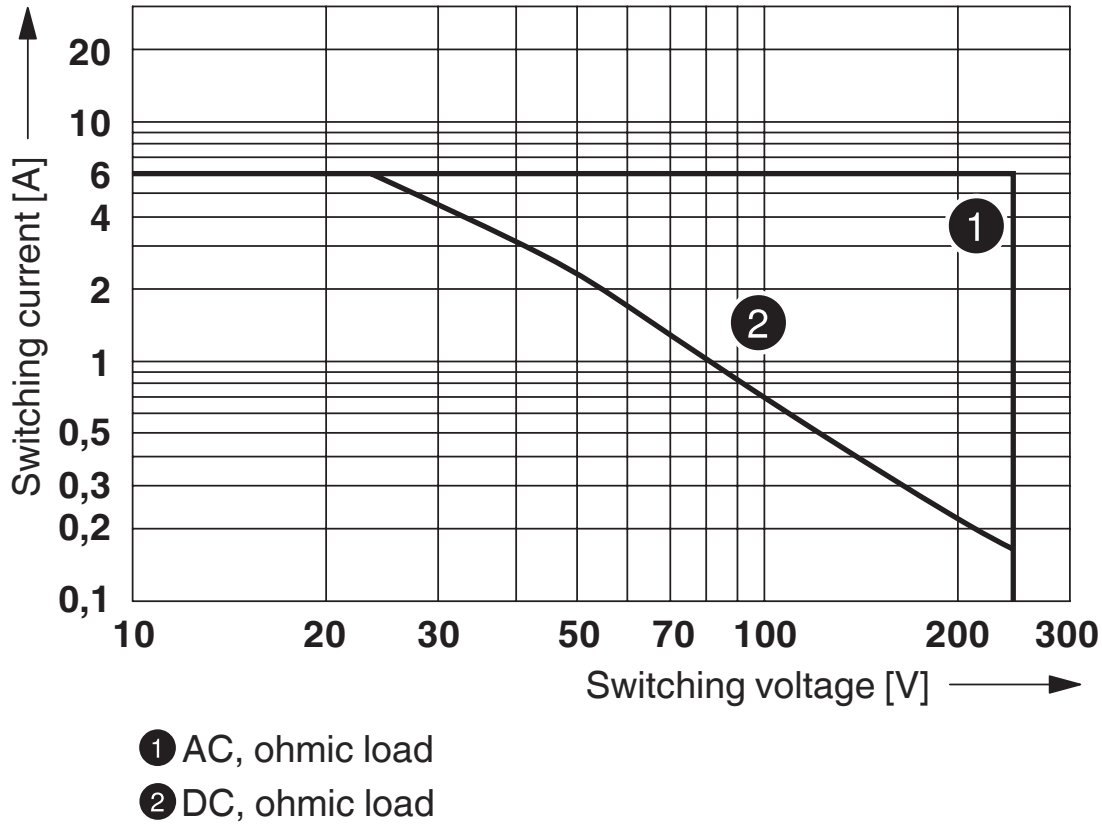



1 DC coil (observe contact derating)

2 AC coil (observe contact derating)

Operating voltage range

Diagram

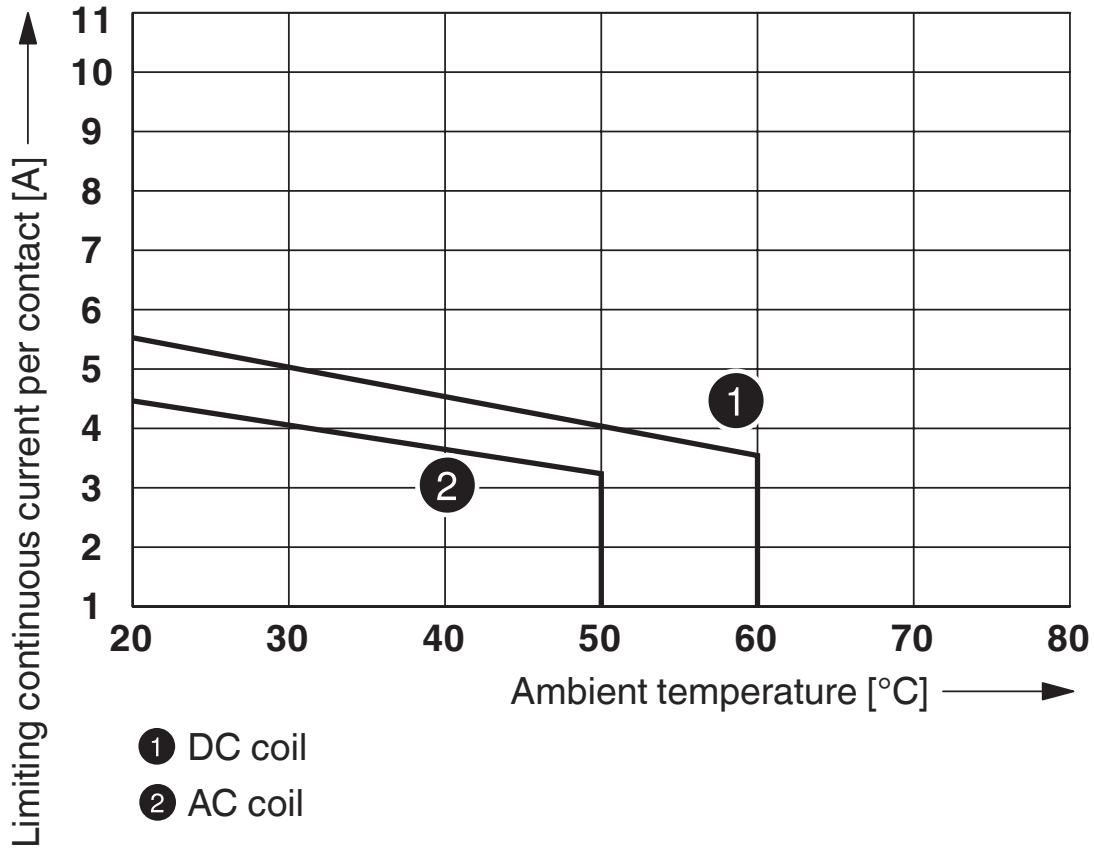



1 AC, ohmic load

2 DC, ohmic load

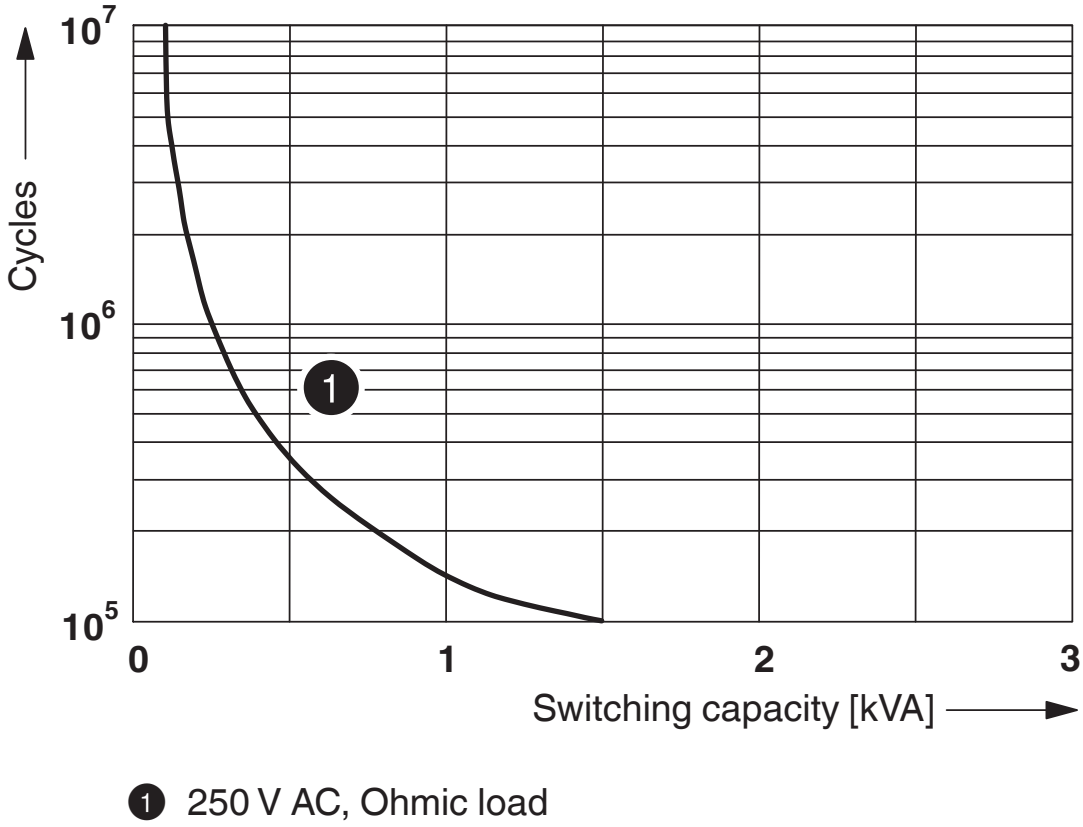
Interrupting rating

Diagram




Contact derating

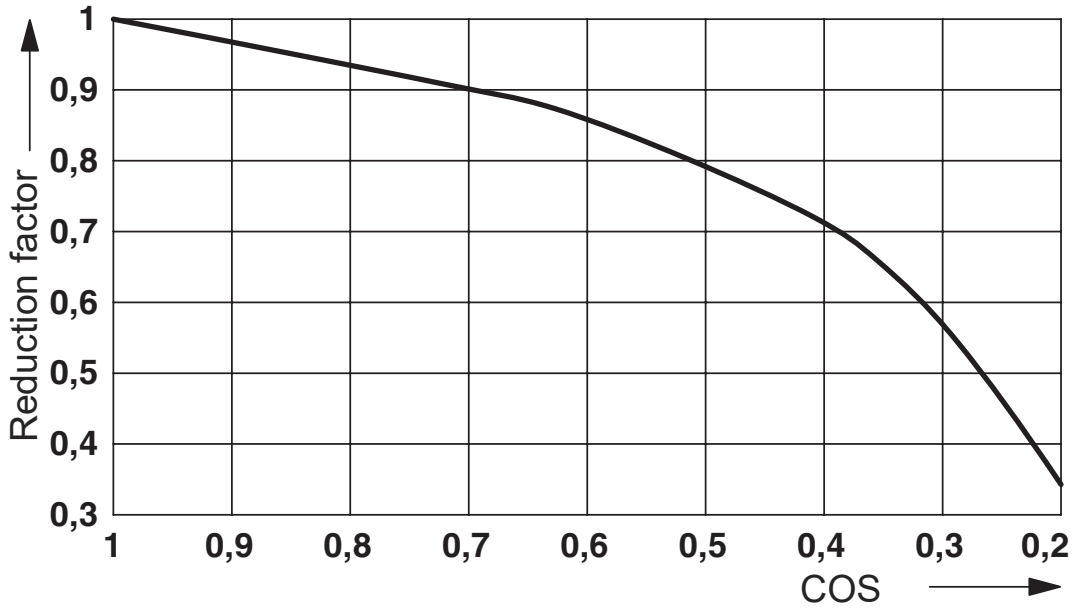
Diagram




1 250 V AC, Ohmic load

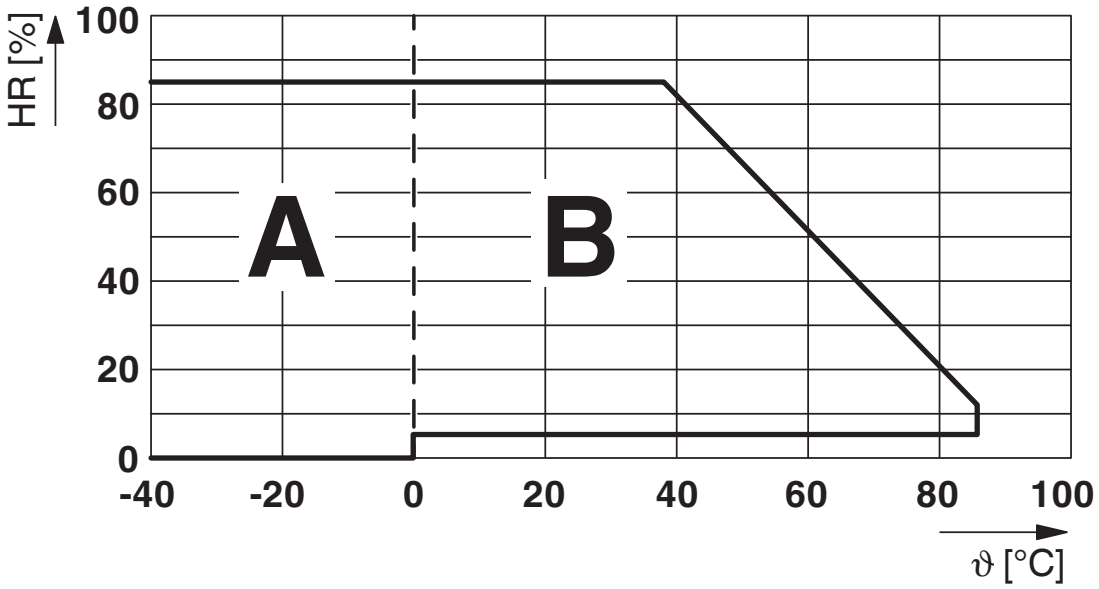
Electrical service life

Diagram




Service life reduction factor

Diagram

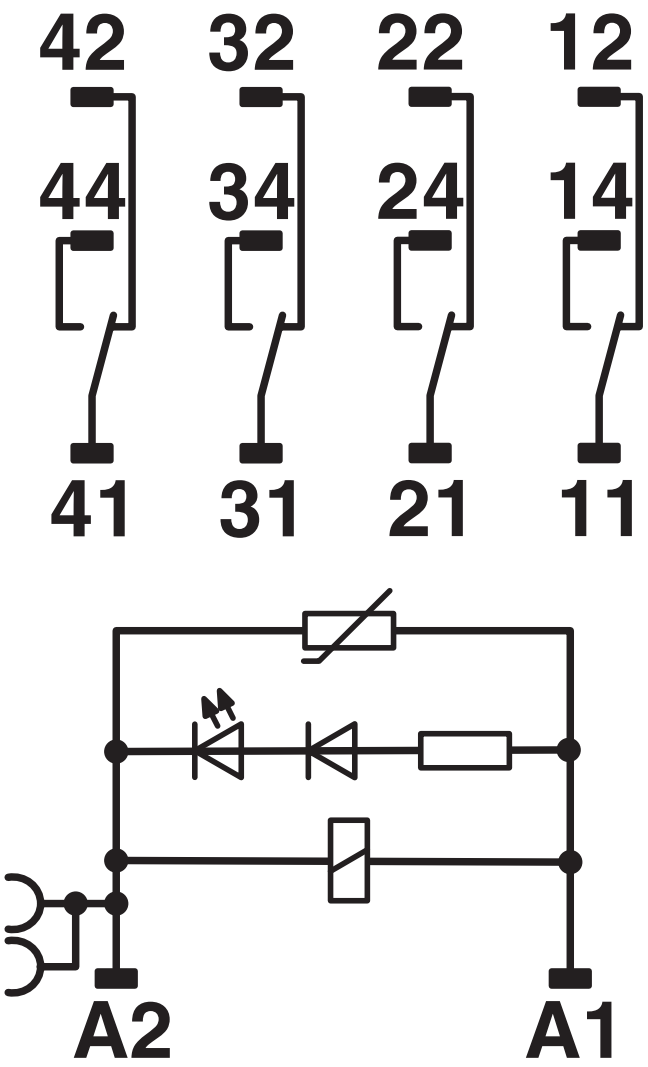



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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 | cbd223de-7ad4-43ce-9054-2ae0f4a1f94a |


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