# REL-IR4/120AC/4X21/EX - Single relay

2909744

https://www.phoenixcontact.com/us/products/2909744

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Pluggable industrial relay, RT III sealed with power contacts, 4x changeover contacts, mechanical switch position indicator, polarity: non-polarized, input voltage: 120 V AC, in connection with RIF-2.../EX bases approved in accordance with ATEX/IECEx (zone 2) and Ex zone class I, div. 2.

## Commercial data

| | |
|---|---|
| Item number | 2909744 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C460 |
| Product key | DK694H |
| GTIN | 4055626379937 |
| Weight per piece (including packing) | 34.8 g |
| Weight per piece (excluding packing) | 34.8 g |
| Customs tariff number | 85364900 |
| Country of origin | PL |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Single relay |
| Set comprises | 2909740 RIF-2-RPT-LV-120AC/4X21/EX |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 2x $10^7$ cycles |

### Insulation characteristics

| | |
|---|---|
| Insulation | Basic insulation |
| Overvoltage category | II |
| Pollution degree | 2 |

### Data management status

| | |
|---|---|
| Date of last data management | 01.04.2026 |

## Electrical properties

| | |
|---|---|
| Service life electrical | see diagram |
| Maximum power dissipation for nominal condition | 1.56 W |
| Test voltage (Winding/contact) | 2.5 $kV_{rms}$ (50 Hz, 1 min., winding/contact) |
| Test voltage (Changeover contact/changeover contact) | 2 $kV_{rms}$ (50 Hz, 1 min., changeover contact/changeover contact) |
| Rated insulation voltage | 250 V AC |
| Rated surge voltage | 2.5 kV |

## Input data

### Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 120 V AC |
| Input voltage range | 93.6 V AC ... 165.6 V AC |
| Input voltage range in reference to $U_N$ | see diagram |
| Mains frequency | 50/60 Hz |
| Drive and function | monostable |
| Drive (polarity) | non-polarized |
| Typical input current at $U_N$ | 13 mA |
| Typical response time | 5 ms ... 15 ms (depending on phase relation) |
| Typical release time range | 5 ms ... 20 ms (depending on phase relation) |
| Status display | LED (yellow) |

## 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 (At 24 mA) |
| Limiting continuous current | 6 A |
| Maximum inrush current | 16 A (20 ms, N/O contacts) |
| Min. switching current | 5 mA (at 24 V) |
| Interrupting rating (ohmic load) max. | 144 W (at 24 V DC) |
| | 124 W (at 48 V DC) |
| | 108 W (at 60 V DC) |
| | 52 W (at 110 V DC) |
| | 48 W (at 220 V DC) |
| | 1500 VA (for 250 V AC) |
| Switching power min. | 0.12 W |
| Switching capacity | 2 A (at 24 V, DC13) |
| | 0.22 A (at 120 V, DC13) |
| | 0.11 A (at 250 V, DC13) |
| | 1.5 A (at 24 V, AC15) |
| | 1.5 A (at 120 V, AC15) |
| | 1 A (at 240 V, AC15) |
| Motor load according to UL 508 | 1/3 HP, 240 V AC |

## Connection data

| | |
|---|---|
| Connection method | Plug-in connection |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 21.2 mm |
| Height | 27.5 mm |
| Depth | 35.6 mm |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | RT III |
| Ambient temperature (operation) | -40 °C ... 55 °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

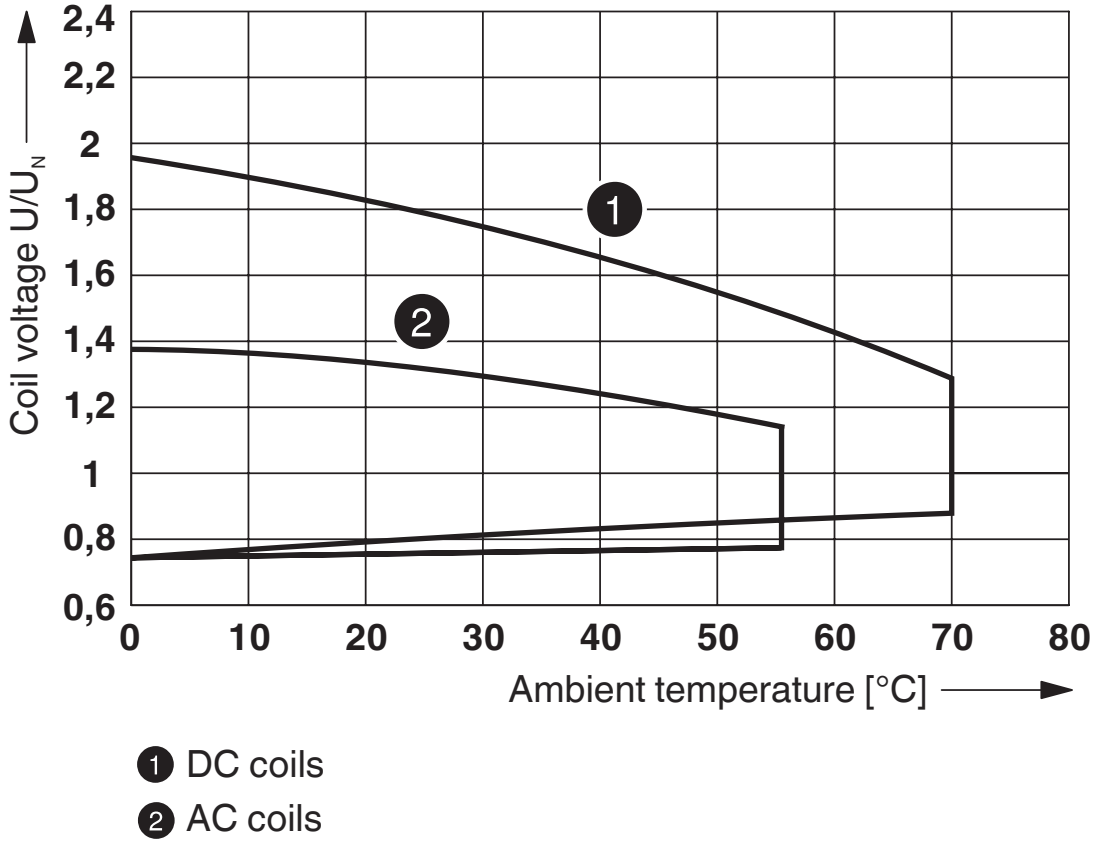
| | |
|---|---|
| Standards/regulations | IEC 60664 |
| | IEC 61810 |

## Mounting

| | |
|---|---|
| Mounting position | any |

## Drawings

Diagram

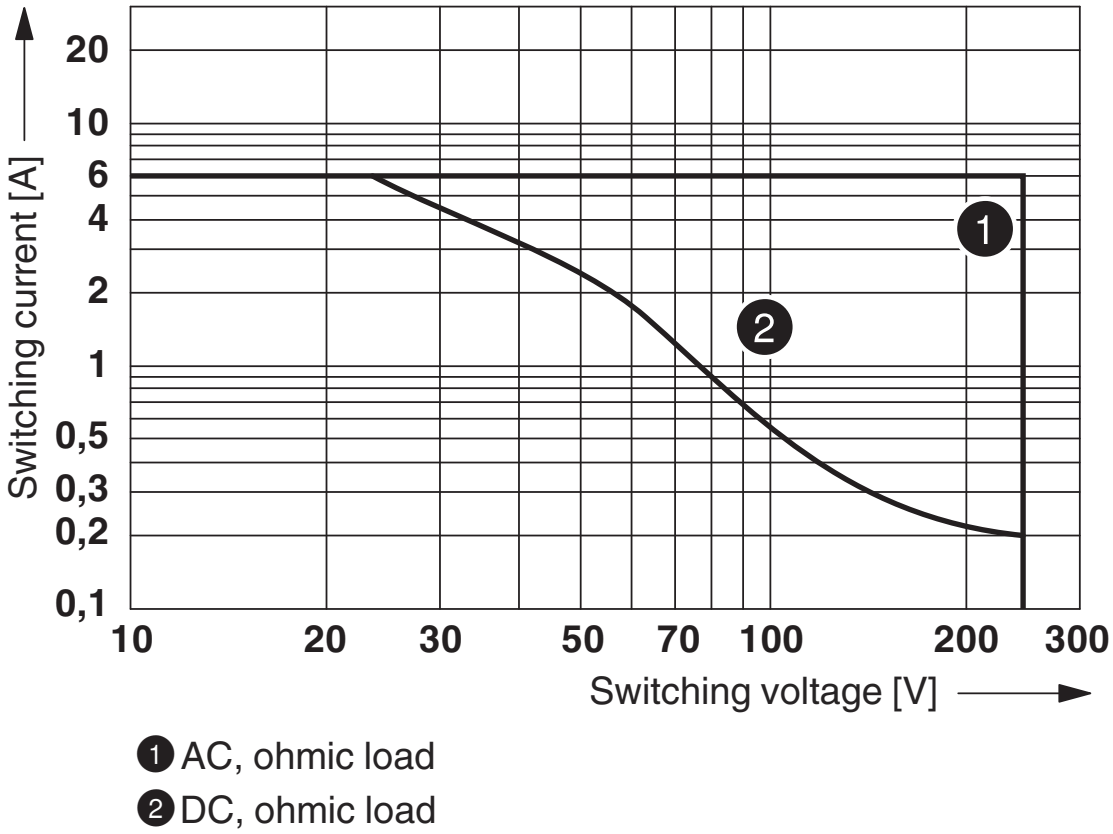



1 DC coils

2 AC coils

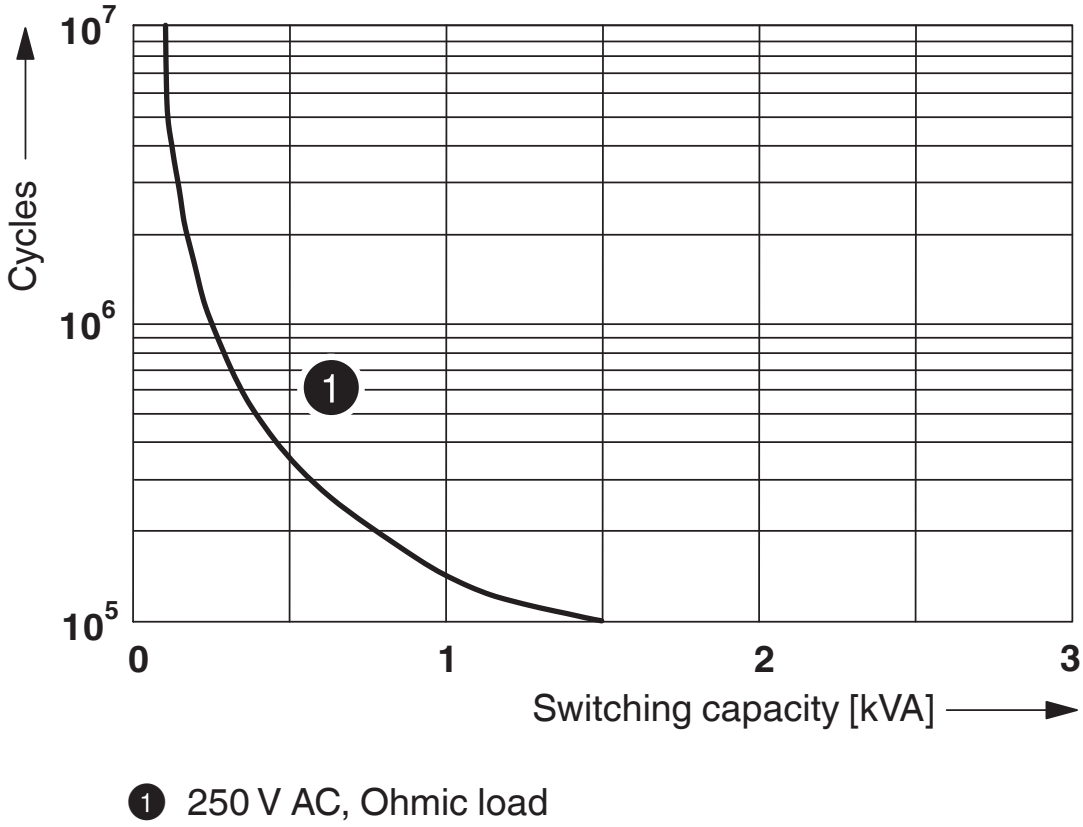
Operating voltage range

Diagram




Interrupting rating

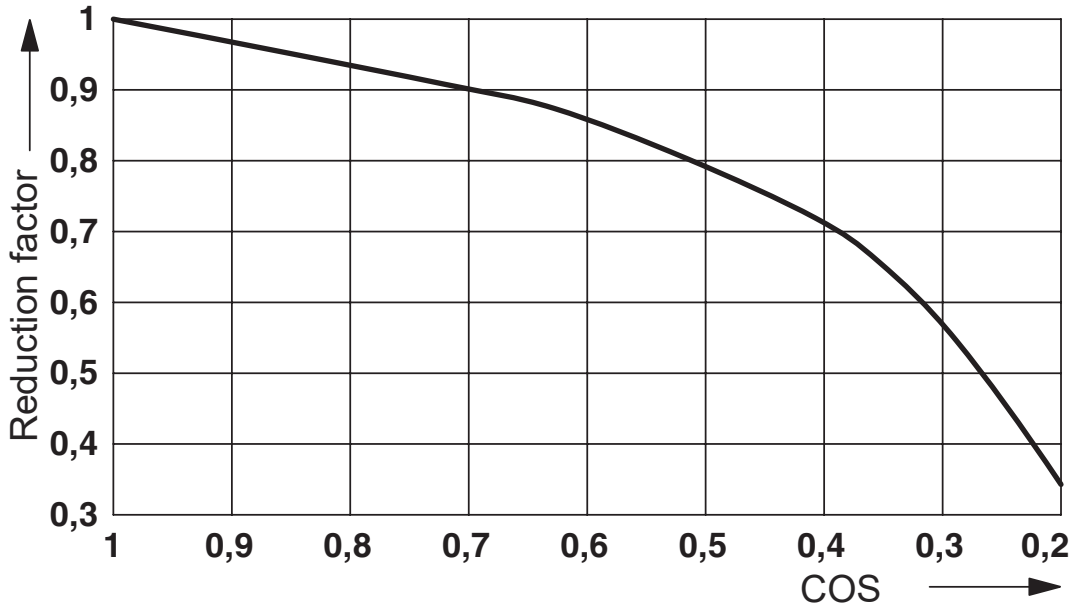
Diagram




1 250 V AC, Ohmic load

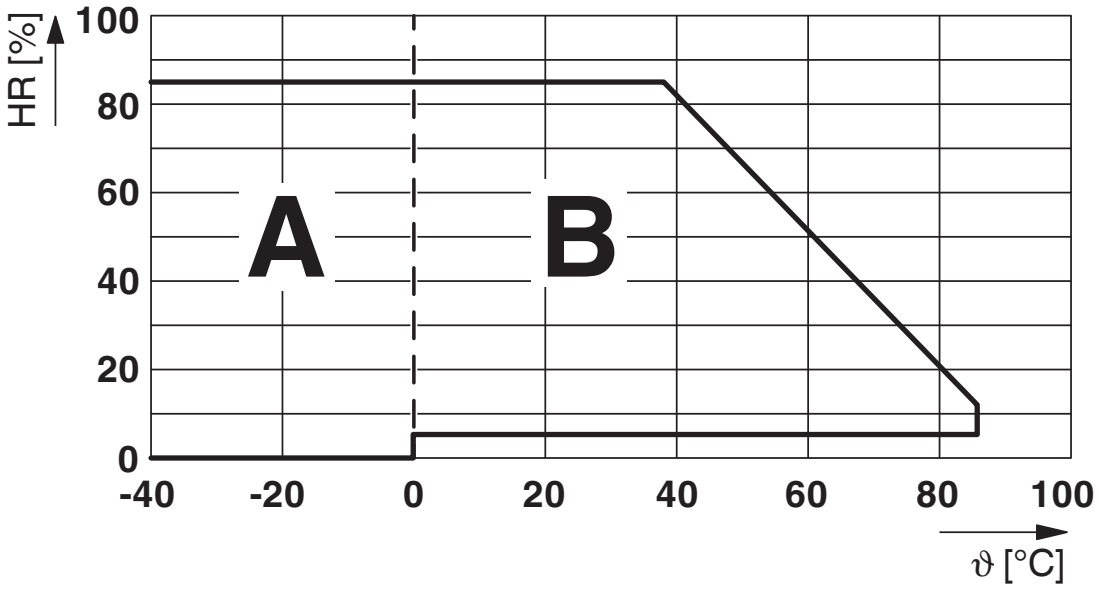
Electrical service life

Diagram




Service life reduction factor

Diagram

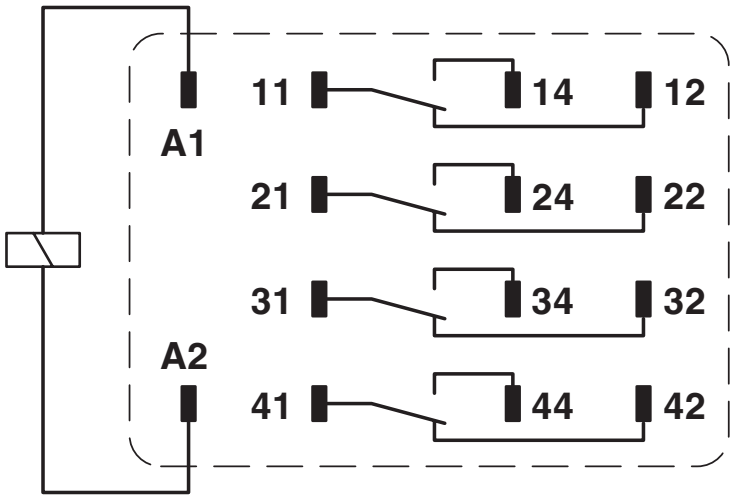



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2909744

**cULus Recognized**
Approval ID: E172140

## 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% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.967 kg CO2e |


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