# PLC-RPT- 72UC/21/RW - Relay module

2900319

https://www.phoenixcontact.com/us/products/2900319

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PLC-INTERFACE for railway applications, consisting of basic terminal block with Push-in connection and plug-in miniature relay with power contact, range: 0.7 x $U_N$ to 1.25 x $U_N$, temperature class TX: -40°C to +70°C, 1 changeover contact, input voltage 72 V DC

## Your advantages

- Optimum relay operation thanks to wide-range electronics
- Safe isolation between coil and contact side
- Certified in accordance with EN 50155
- Vibration and shock resistance in accordance with EN 50155
- Temperature range: -40 °C ... + 70 °C (short-term 85 °C)
- Input voltage range of 0.7 to 1.25 x UN (1.4 x UN briefly)

## Commercial data

| | |
|---|---|
| Item number | 2900319 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Note | Made to order (non-returnable) |
| Sales key | C461 |
| Product key | DK62AL |
| GTIN | 4046356507417 |
| Weight per piece (including packing) | 33.37 g |
| Weight per piece (excluding packing) | 33.37 g |
| Customs tariff number | 85364900 |
| Country of origin | DE |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Relay Module |
| Product family | PLC-INTERFACE |
| Application | Railway applications |
| Environment | Attached to the vehicle body |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 2x $10^7$ cycles |

### Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |
| Pollution degree | 2 |

### Data management status

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

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 0.22 W |
| Test voltage (Winding/contact) | 4 $kV_{rms}$ (50 Hz, 1 min., winding/contact) |
| Rated insulation voltage | 250 V AC |
| Rated surge voltage | 6 kV |

## Input data

### Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 72 V DC |
| Input voltage range | 50.4 V DC ... 90 V DC |
| Nominal voltage (plugged-in electromechanical relay) | 48 V DC |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at $U_N$ | 3 mA |
| Typical response time | 4 ms |
| Typical release time | 4 ms |
| Protective circuit | Surge protection; Freewheeling diode |
| | RCZ filter |
| | Wide-range electronics |
| Operating voltage display | Yellow LED |

## Output data

### Switching

| | |
|---|---|
| Contact switching type | 1 changeover contact |
| Type of switch contact | Single contact |
| Contact material | AgSnO |

| | |
|---|---|
| Maximum switching voltage | 250 V AC/DC (Divider plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules.) |
| Minimum switching voltage | 5 V (100 mA) |
| Limiting continuous current | 6 A |
| Maximum inrush current | 10 A (4 s) |
| Min. switching current | 10 mA (12 V) |
| Short-circuit current | 200 A (conditional short-circuit current) |
| Interrupting rating (ohmic load) max. | 140 W (at 24 V DC) |
| | 20 W (at 48 V DC) |
| | 18 W (at 60 V DC) |
| | 23 W (at 110 V DC) |
| | 40 W (at 220 V DC) |
| | 1500 VA (for 250 V AC) |
| Output fuse | 4 A gL/gG NEOZED |
| Switching capacity | 1 A (24 V (DC13)) |
| | 0.2 A (110 V (DC13)) |
| | 0.1 A (220 V (DC13)) |
| | 3 A (24 V (AC15)) |
| | 3 A (120 V (AC15)) |
| | 3 A (230 V (AC 15)) |

## Connection data

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross-section rigid | 0.14 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.14 mm² ... 2.5 mm² |
| | 0.2 mm² ... 2.5 mm² (Single ferrule) |
| | 2x 0.5 mm² ... 1 mm² (TWIN ferrule) |
| Conductor cross-section AWG | 26 ... 14 |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 6.2 mm |
| Height | 80 mm |
| Depth | 94 mm |

## Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 (Housing) | V0 (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 ... 70 °C (Temperature class TX) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

## Approvals

CE

| | |
|---|---|
| Certificate | CE-compliant |

UKCA

| | |
|---|---|
| Certificate | UKCA-compliant |

Shipbuilding approval

| | |
|---|---|
| Certificate | TAE0000196 |

Corrosive gas test

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

Shipbuilding data

| | |
|---|---|
| Temperature | D |
| Humidity | A |
| Vibration | B/C |
| EMC | B |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

## EMC data

| | |
|---|---|
| Electromagnetic compatibility | Conformance with EMC directive |
| Low Voltage Directive | Conformance with Low Voltage Directive |

## Standards and regulations

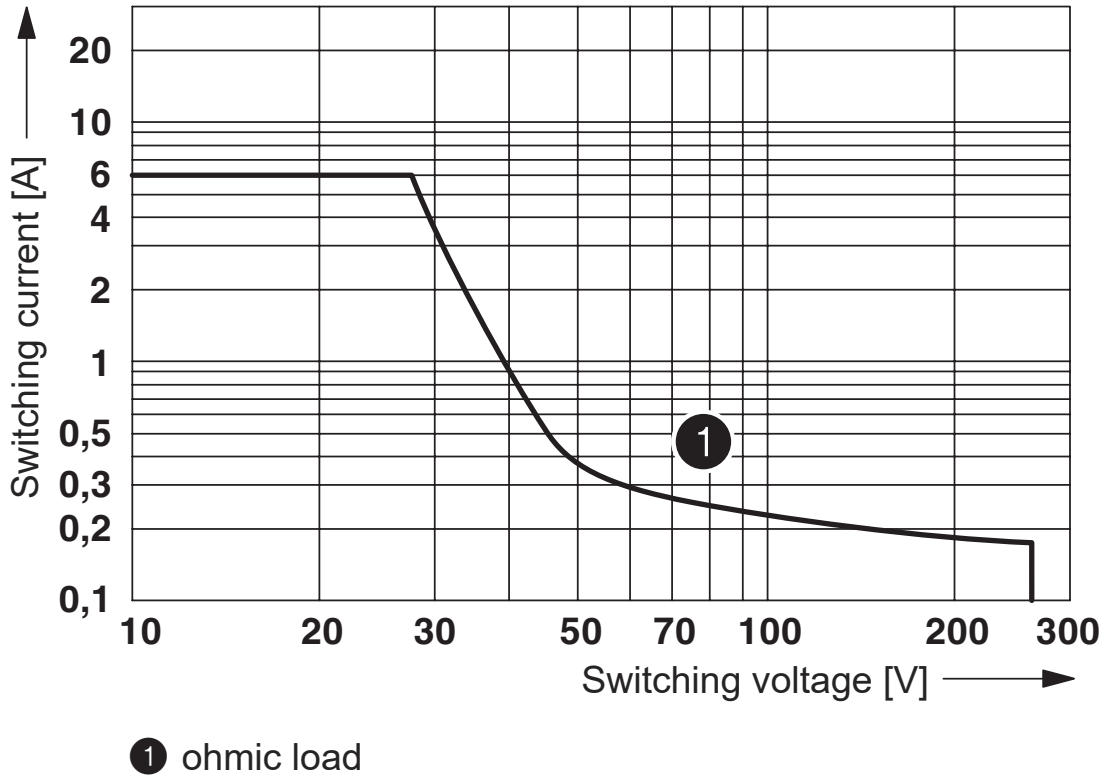
| | |
|---|---|
| Standards/regulations | IEC 60947-5-1 |
| | EN 50155 (VDE 0115 part 200) |
| | EN 61373 |
| | EN 50121 |

## Mounting

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

## Drawings

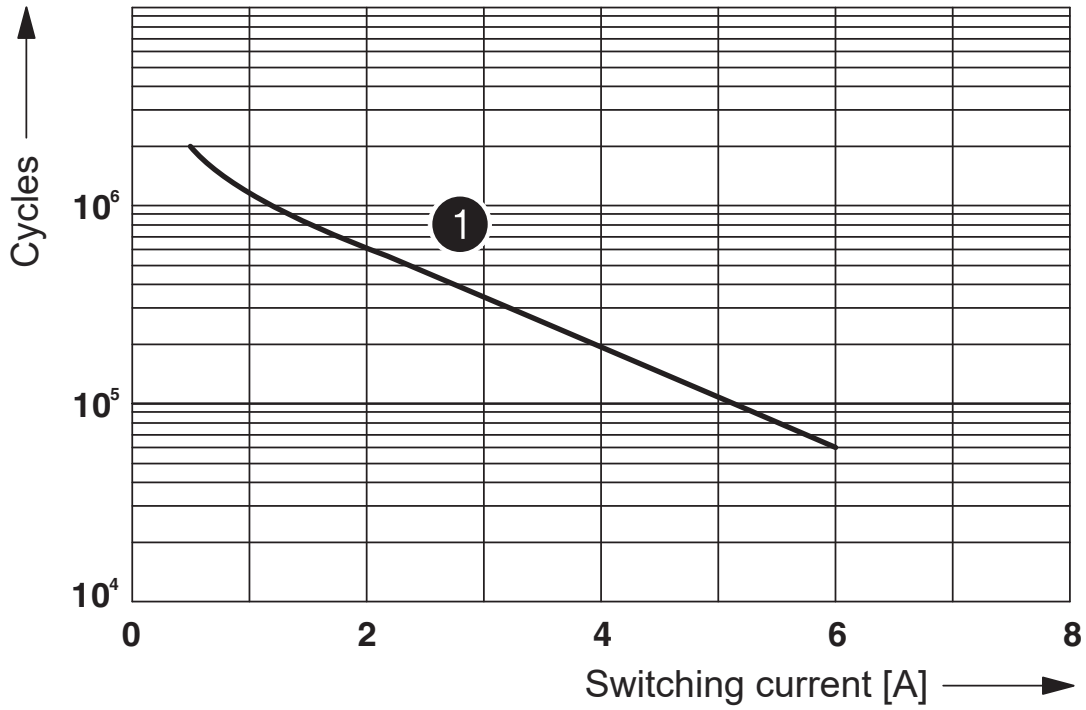
Diagram




1 ohmic load

DC interrupting rating

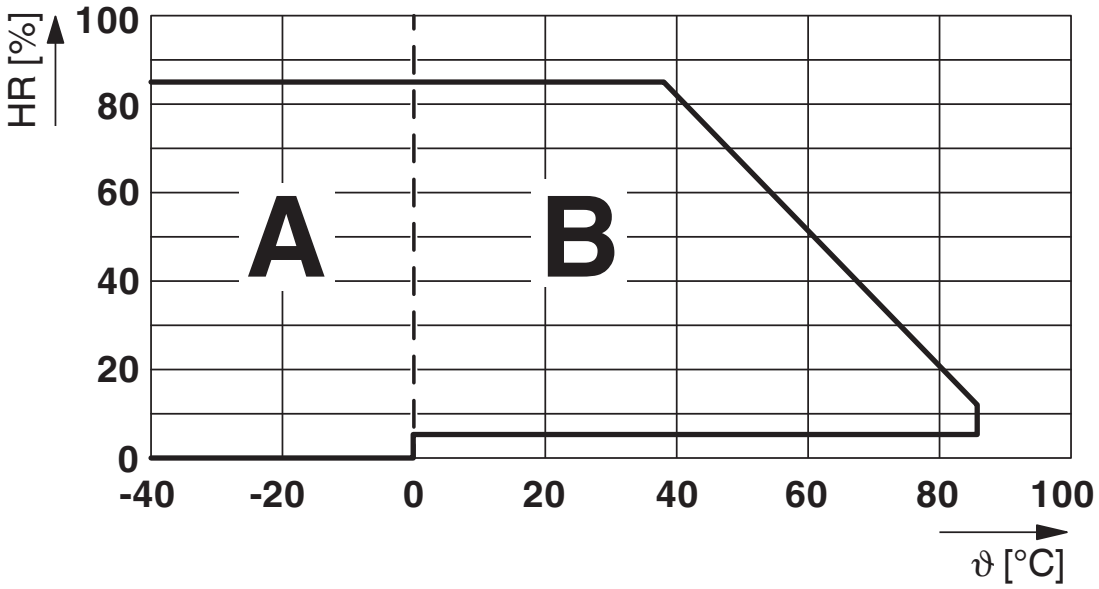
Diagram




1 250 V AC, ohmic load

Electrical service life

Diagram

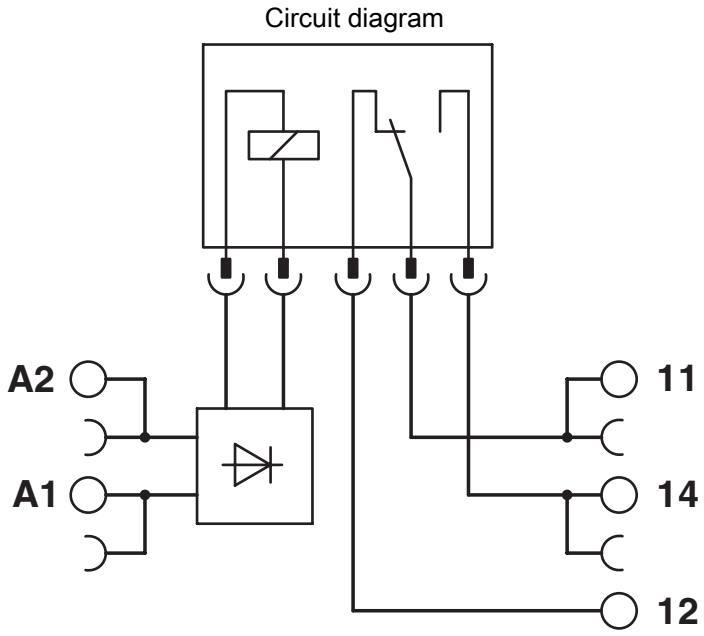



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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/2900319

**cULus Listed**
Approval ID: E140324

**cUL Recognized**
Approval ID: E238705

**UL Recognized**
Approval ID: E238705

**UL Listed**
Approval ID: FILE E 172140

**cUL Listed**
Approval ID: FILE E 172140

**cULus Listed**
Approval ID: E140324

**cULus Listed**
Approval ID: E140324

**DNV**
Approval ID: TAE0000196

## 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 |
| 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 | ad81a586-7d0b-4b17-a59b-9d6a61f53720 |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 2.5 kg CO2e |


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