

PLC-RPT- 24UC/21-21AU/RW - Relay module



2900349

<https://www.phoenixcontact.com/us/products/2900349>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with Push-in connection and plug-in miniature relay with multi-layer gold contact, range: $0.7 \times U_N$ to $1.25 \times U_N$, temperature class TX: -40°C to $+70^\circ\text{C}$, 2 changeover contacts, input voltage 24 V DC

Your advantages

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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2900349 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C461 |
| Product key | DK62BL |
| GTIN | 4046356507530 |
| Weight per piece (including packing) | 64.16 g |
| Weight per piece (excluding packing) | 60.49 g |
| Customs tariff number | 85364190 |
| 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. 3×10^7 cycles |

Insulation characteristics

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

Data management status

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

Electrical properties

| | |
|--|--|
| Maximum power dissipation for nominal condition | 0.48 W |
| Test voltage (Winding/contact) | 5 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 data

Coil side

| | |
|--|--------------------------------------|
| Nominal input voltage U_N | 24 V DC |
| Input voltage range | 20.2 V DC ... 33.6 V DC |
| Input voltage range in reference to U_N | 0.7 ... 1.25 |
| Nominal voltage (plugged-in electromechanical relay) | 12 V DC |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at U_N | 20 mA |
| Typical response time | 5 ms |
| Typical release time | 11 ms |
| Protective circuit | Bridge rectifier |
| | Surge protection; Freewheeling diode |
| | RCZ filter |
| | Wide-range electronics |
| Operating voltage display | Yellow LED |

Output data

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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 (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) |

Switching: when the gold layer is destroyed

| | |
|---------------------------------------|---|
| Note | the following values are applicable if a gold layer is destroyed |
| Maximum switching voltage | 250 V AC/DC (Separating 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 AC/DC |
| Limiting continuous current | 6 A |
| Maximum inrush current | 8 A |
| Min. switching current | 10 mA |
| Interrupting rating (ohmic load) max. | 140 W (at 24 V DC) 100 W (at 48 V DC) 60 W (at 60 V DC) 44 W (at 110 V DC) 60 W (at 220 V DC) 1500 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 | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross-section rigid | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.14 mm ² ... 2.5 mm ² 0.2 mm ² ... 2.5 mm ² (Single ferrule) 2x 0.5 mm ² ... 1 mm ² (TWIN ferrule) |
| Conductor cross-section AWG | 26 ... 14 |

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Dimensions

| | |
|--------|-------|
| Width | 14 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) |

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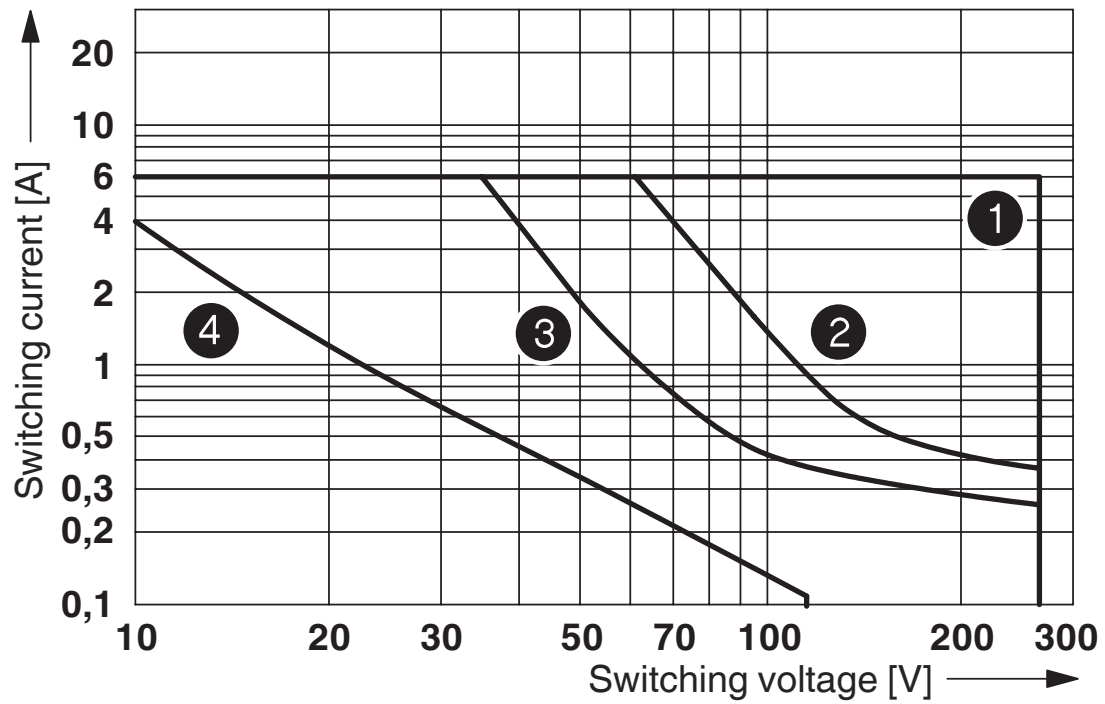
| | |
|--|----------|
| | EN 61373 |
| | EN 50121 |

Mounting

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

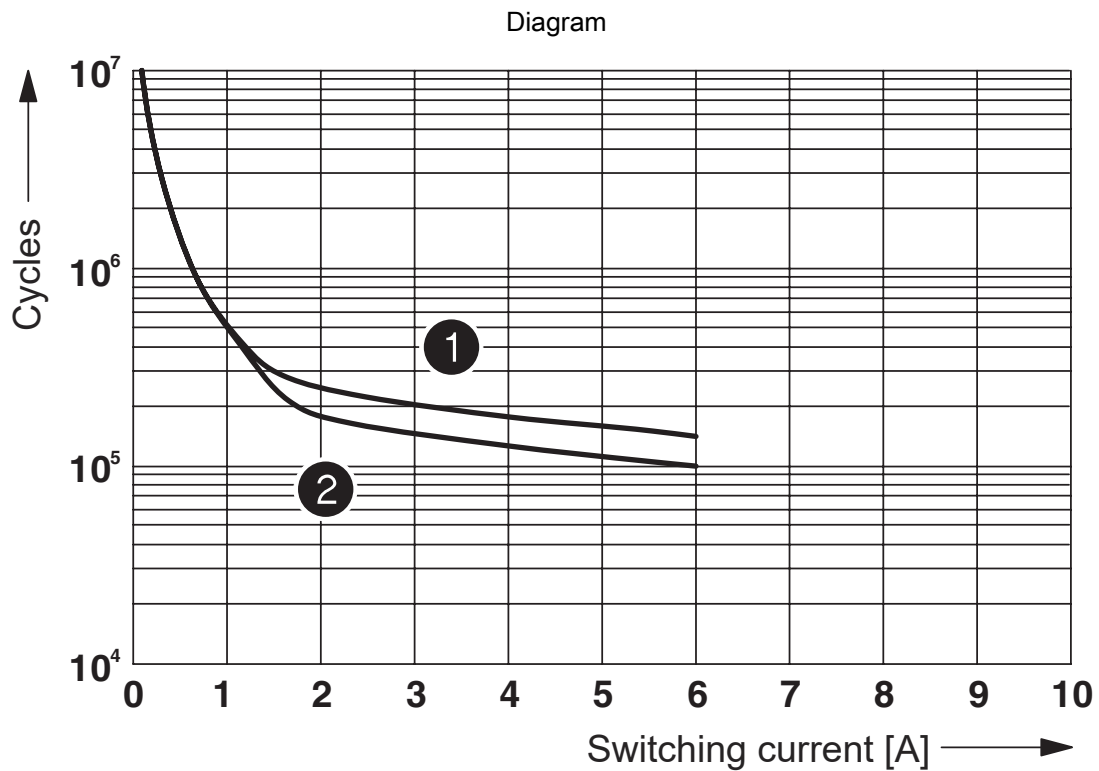
Drawings

Diagram



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

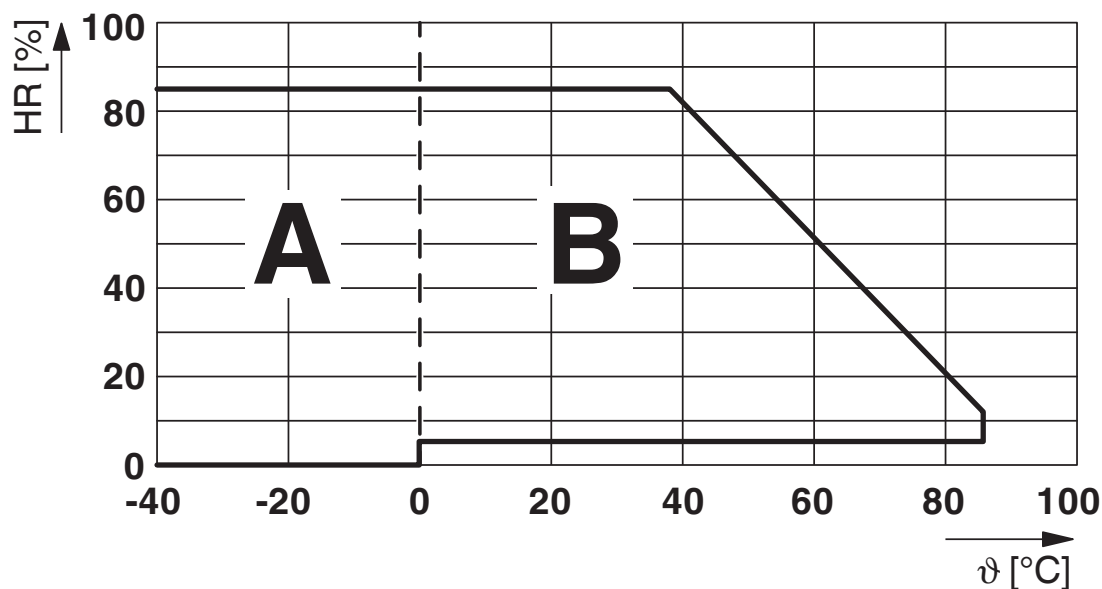
Interrupting rating



- ① 250 V AC, ohmic load (DC coils)
- ② 250 V AC, ohmic load (AC coils)

Electrical service life

Diagram



Permissible humidity for operation and storage.

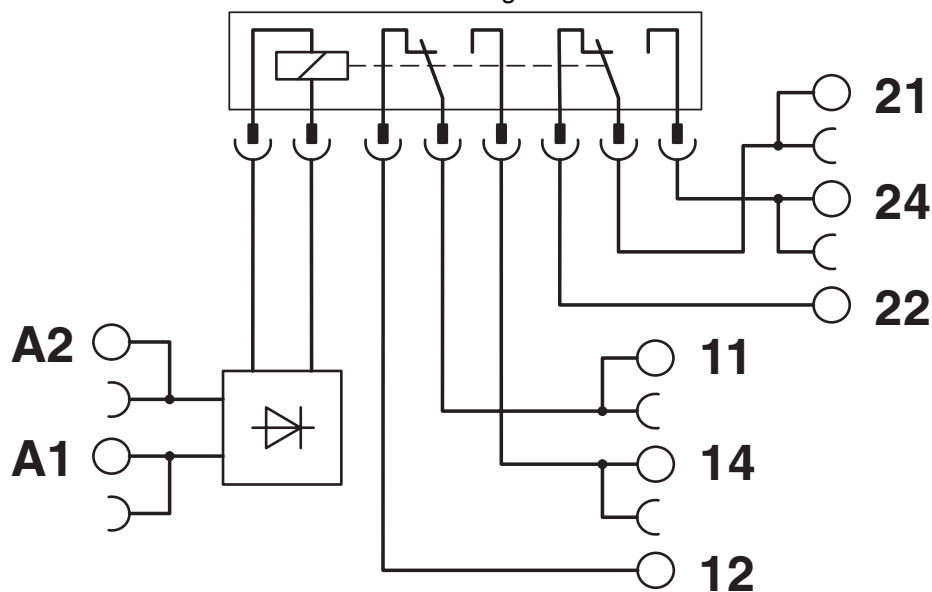
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures $\leq 0^\circ\text{C}$ must be prevented

Area B: Condensation at ambient temperatures $> 0^\circ\text{C}$ 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 $\leq 25^\circ\text{C}$.

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2900349>



DNV GL

Approval ID: TAE0000196



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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 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 | 3c0201e5-beaa-49f6-8e8d-1c6c6bd59949 |