

PLC-RSP-110UC/21AU/RW - Relay module



2987066

<https://www.phoenixcontact.com/us/products/2987066>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage 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 $+70^\circ\text{C}$, 1 changeover contact, input voltage 110 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 x UN (1.4 x UN briefly)
- Temperature range: -40°C ... $+70^\circ\text{C}$ (short-term 85°C)

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2987066 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Product key | DK622B |
| GTIN | 4046356155298 |
| Weight per piece (including packing) | 34 g |
| Weight per piece (excluding packing) | 34 g |
| Country of origin | DE |

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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. 2×10^7 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 | 110 V DC |
| Input voltage range | 77 V DC ... 137.5 V DC |
| Input voltage range in reference to U_N | 0.7 ... 1.25 |
| Drive and function | monostable |
| Typical input current at U_N | 2 mA |
| Typical response time | 4 ms |
| Typical release time | 4 ms |
| Coil voltage | 60 V DC |
| Protective circuit | Bridge rectifier; Bridge rectifier |
| | Freewheeling diode; Freewheeling diode |
| | Surge protection |
| | RCZ filter |
| | Wide-range electronics |
| Operating voltage display | Yellow LED |

Output data

Switching

| | |
|------------------------|----------------------|
| Contact switching type | 1 changeover contact |
|------------------------|----------------------|

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| | |
|---------------------------------------|---------------------------------------|
| Type of switch contact | Single contact |
| Contact material | AgSnO ₂ , 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 (at 24 V) |
| Interrupting rating (ohmic load) max. | 1.2 W (at 24 V DC) |
| 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)) |

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 | 12 V AC/DC |
| Limiting continuous current | 6 A (see derating curve) |
| Min. switching current | 10 mA |
| 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) |
| Switching capacity | 2 A (at 24 V, DC13) |
| | 0.2 A (at 110 V, DC13) |
| | 0.1 A (at 220 V, DC13) |
| | 3 A (at 24 V, AC15) |
| | 3 A (at 120 V, AC15) |
| | 3 A (at 230 V, AC15) |

Connection data

Coil side

| | |
|----------------------------------|--|
| Connection method | Spring-cage connection |
| Stripping length | 8 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 |

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| | |
|-----------------------------|-----------|
| Conductor cross-section AWG | 26 ... 14 |
|-----------------------------|-----------|

Contact side

| | |
|----------------------------------|--|
| Connection method | Spring-cage connection |
| Stripping length | 8 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 |
| Conductor cross-section AWG | 26 ... 14 |

Dimensions

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

Material specifications

| | |
|--|------------------|
| Color | green (RAL 6021) |
| 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 |

Standards and regulations

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

Mounting

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

Drawings

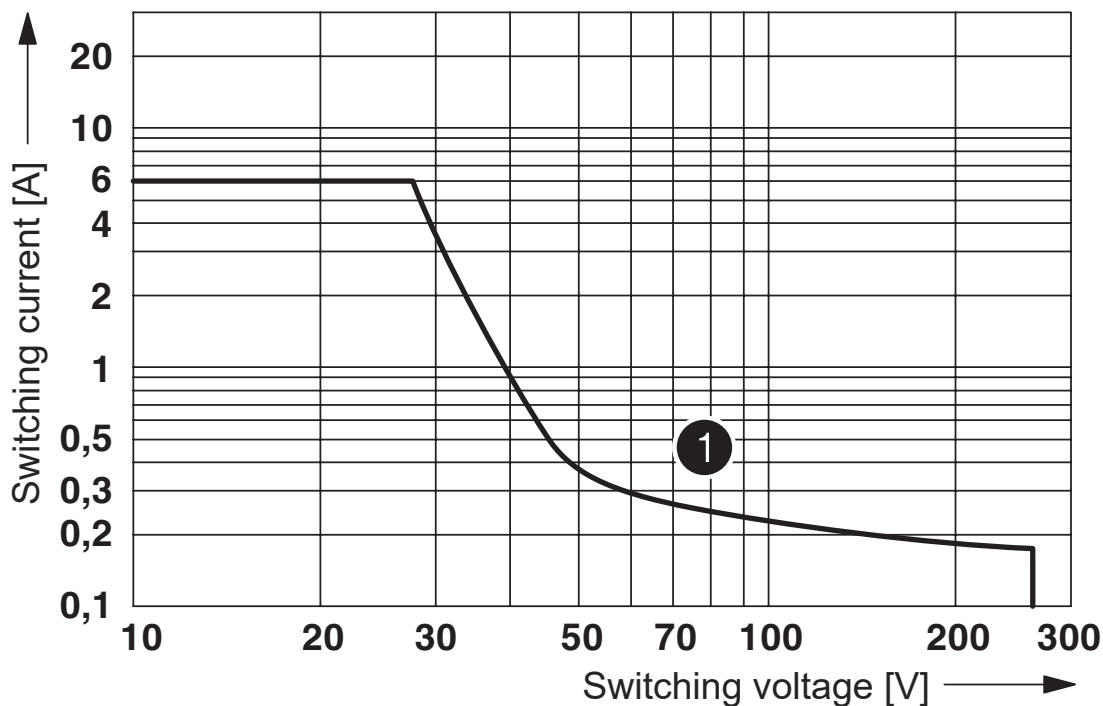
Diagram



① 250 V AC, ohmic load

Electrical service life

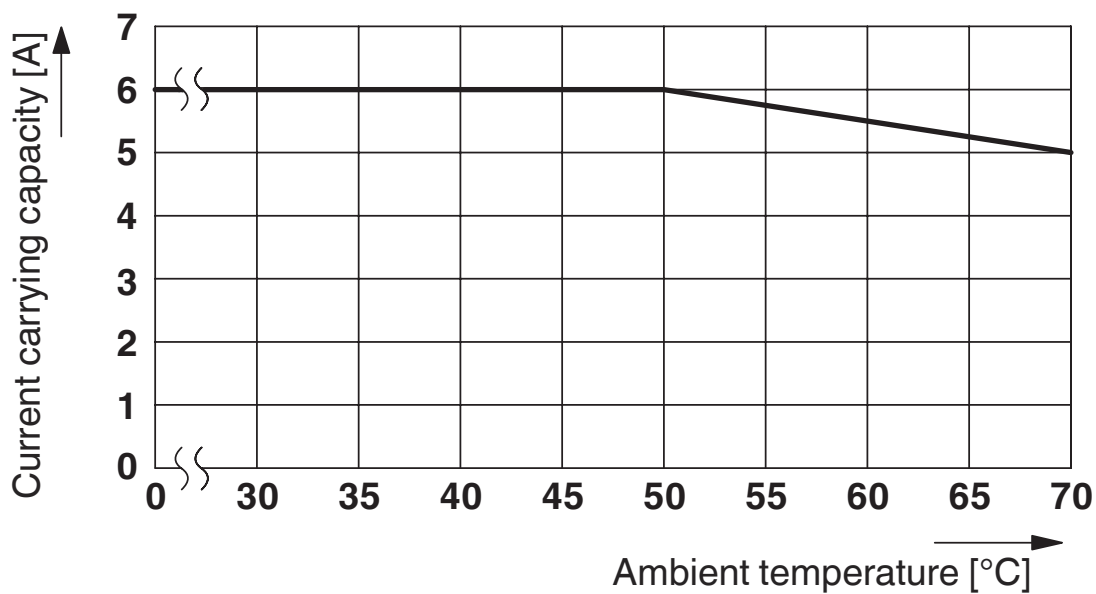
Diagram



① ohmic load

DC interrupting rating

Diagram

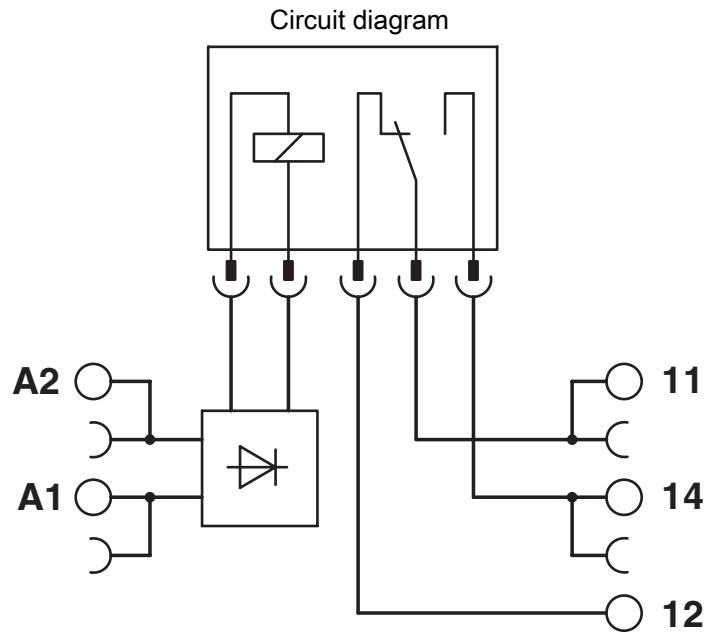


Derating diagram

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