# PLC-RSC-230UC/21-21/SO46 - Relay module

2980500

https://www.phoenixcontact.com/us/products/2980500

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PLC-INTERFACE with protection against interference currents/voltages on the control side, consisting of PLC-BSC.../21 basic terminal block with screw connection and plug-in miniature relay with power contact, 2 changeover contacts, input voltage 230 V AC

## Commercial data

| | |
|---|---|
| Item number | 2980500 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C461 |
| Product key | DK623M |
| GTIN | 4046356051293 |
| Weight per piece (including packing) | 75.65 g |
| Weight per piece (excluding packing) | 70.96 g |
| Customs tariff number | 85364900 |
| Country of origin | DE |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Relay Module |
| Product family | PLC-INTERFACE |
| Application | Filter to prevent interference |
| Operating mode | 100% operating factor |
| Mechanical service life | 3x $10^7$ cycles |

Insulation characteristics: Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Insulation | Basic insulation |
| Overvoltage category | III |
| Pollution degree | 3 |

Data management status

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

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 1.04 W |
| Test voltage (Winding/contact) | 4 kV AC (50 Hz, 1 min., winding/contact) |
| Test voltage (Changeover contact/changeover contact) | 2.5 kV AC (50 Hz, 1 min., changeover contact/changeover contact) |

Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Rated insulation voltage | 250 V AC |
| Rated surge voltage | 4 kV (Safe isolation, reinforced insulation, and 6 kV between input circuit and output contact current paths) |

## Input data

Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 230 V AC |
| | 220 V DC |
| Input voltage range | 179.4 V AC ... 264.5 V AC (20 °C) |
| | 171.6 V DC ... 253 V DC (20 °C) |
| Nominal voltage (plugged-in electromechanical relay) | 110 V DC |
| Mains frequency | 50/60 Hz |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at $U_N$ | 9 mA |
| Typical response time | 7 ms |
| Typical release time | 10 ms |
| Typical release voltage | 60 V AC/DC |
| Protective circuit | Bridge rectifier |
| Status display | LED (yellow) |

## Output data

Switching

| | |
|---|---|
| Contact switching type | 2 changeover contacts |
| Type of switch contact | Single contact |
| Contact material | AgNi |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 5 V (10 mA) |
| Limiting continuous current | 6 A |
| Maximum inrush current | 15 A (300 ms) |
| Min. switching current | 10 mA (5 V) |
| Interrupting rating (ohmic load) max. | 140 W (24 V DC) |
| | 85 W (48 V DC) |
| | 60 W (60 V DC) |
| | 44 W (110 V DC) |
| | 60 W (220 V DC) |
| | 1500 VA (250 V AC) |
| Switching capacity | 2 A (at 24 V, DC13) |
| | 0.2 A (at 250 V, DC13) |
| | 3 A (at 24 V, AC15) |
| | 3 A (at 120 V, AC15) |
| | 3 A (at 250 V, AC15) |

## Connection data

| | |
|---|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| 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 ... 1.5 mm² (TWIN ferrule) |
| Conductor cross-section AWG | 26 ... 14 |
| Tightening torque | 0.6 Nm ... 0.8 Nm |

## Dimensions

Item 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 ... 55 °C |
| 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

Air clearances and creepage distances between the power circuits

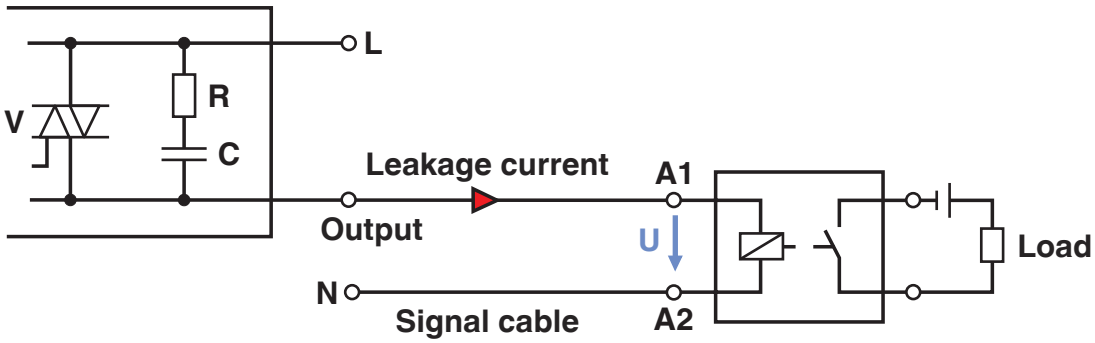
| | |
|---|---|
| Standards/regulations | IEC 60947-5-1 |

## Mounting

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

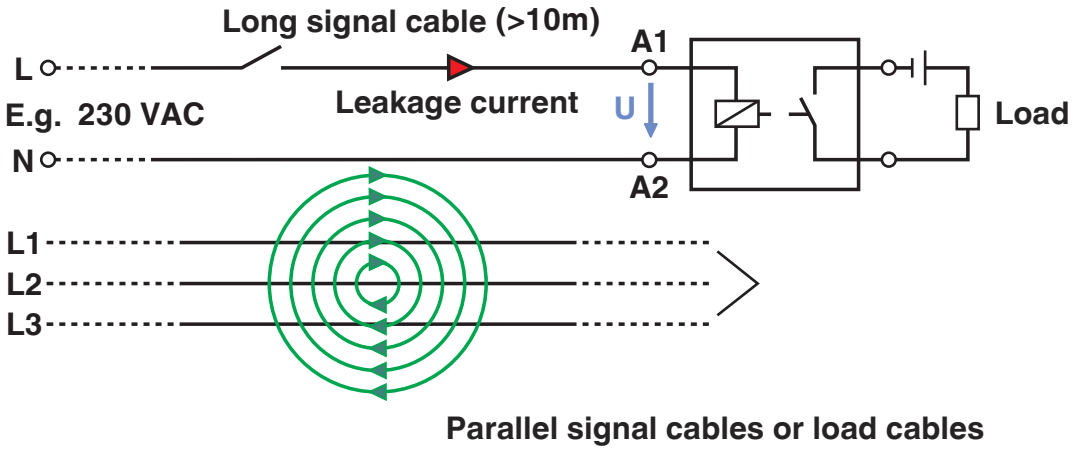
## Drawings

Application drawing



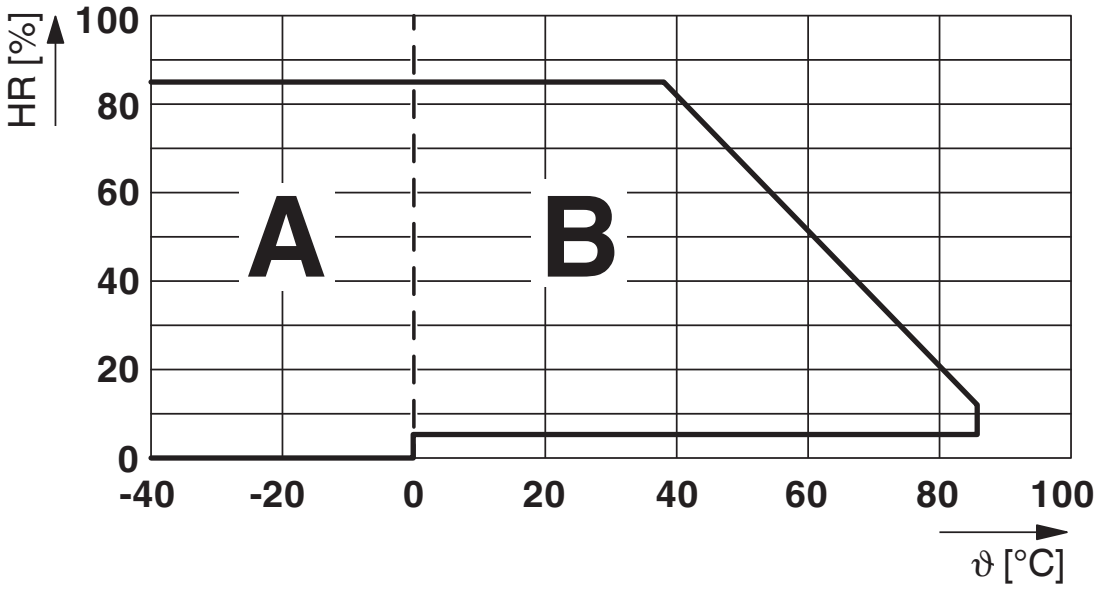

Occurrence of interference signals
Scenario 1: controller - AC output card

Application drawing




Occurrence of interference signals
Scenario 2: long signal cables

Diagram

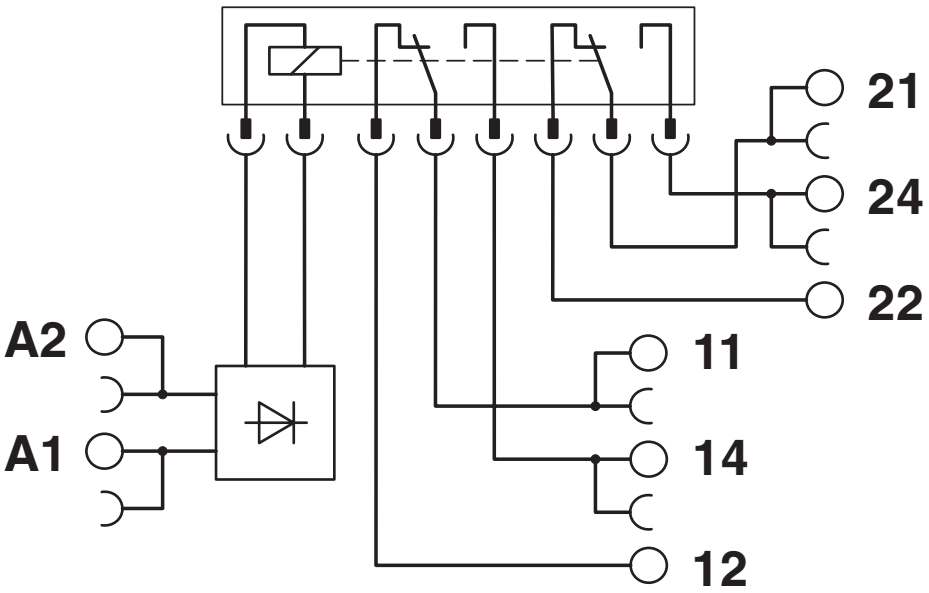



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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/2980500

**cULus Listed**
Approval ID: E140324

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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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
| | Lead(CAS: 7439-92-1) |
| SCIP | 7738d3d6-169f-4c86-a4aa-90fa1da788d3 |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 1.212 kg CO2e |

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