# PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module

2900398

https://www.phoenixcontact.com/nl/products/2900398

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PLC-INTERFACE with confirmation contact, consisting of basic terminal block with push-in connection and integrated miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/10 A

## Your advantages

- Resistant to vibrations and shocks
- Wear-free switching with no contact bounce
- Protective circuit in input and output
- Status indicator
- DC voltage outputs up to 24 V DC/10 A
- Option of bridging adjacent modules

## Commercial data

| | |
|---|---|
| Item number | 2900398 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | DK62A3 |
| Product key | DK62A3 |
| GTIN | 4046356506960 |
| Weight per piece (including packing) | 32,48 g |
| Weight per piece (excluding packing) | 32,4 g |
| Customs tariff number | 85364190 |
| Country of origin | DE |

# Technical data

## Notes

| | |
|---|---|
| Notes on operation | The PLC-ATP partition plate must be installed for voltages greater than 250 V (L1, L2, L3) between identical terminal blocks on adjacent modules. |
| Notes on operation | The PLC-ATP separating plate should be installed for safe isolation between adjacent modules |
| Notes on operation | Do not connect adjacent channels to SELV/ PELV and voltages dangerous to the touch. |
| Notes on operation | The system installer must ensure the touch protection of the product (at voltages > 25 V AC/60 V DC). The product is a built-in device without protection against direct contact. |
| Notes on operation | At least one functional insulation against adjacent modules is complied with in the support rail direction.<br>If the application has higher requirements on the insulation (basic or reinforced insulation), then these must be realized through suitable measures (e. g., partition plates). |
| Notes on operation | Do not use to separate SELV / PELV circuits from other circuits, because safe isolation is not guaranteed. |

## Product properties

| | |
|---|---|
| Product family | PLC-INTERFACE |
| Application | With integrated solid-state relay |
| Operating mode | 100% operating factor |

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

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

Data management status

| | |
|---|---|
| Date of last data management | 15.09.2025 |

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 0.07 W |

Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Rated insulation voltage | 50 V DC |
| Rated surge voltage | 0.5 kV |

## Input data

| | |
|---|---|
| Rated actuating voltage $U_C$ | 24 V DC |
| Rated actuating current $I_C$ | 3.5 mA |
| Switching threshold "0" signal in reference to $U_N$ | < 0.4 |
| Switching threshold "1" signal in reference to $U_N$ | > 0.8 |
| Typical response time | 100 µs |
| Typical turn-off time | 500 µs |

| | |
|---|---|
| Operating voltage display | Yellow LED |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection |
| Surge voltage protection | > 33 V |
| Transmission frequency | 100 Hz |

## Output data

| | |
|---|---|
| Designation | DC voltage output |
| Contact switching type | 1 N/O contact |
| Design of digital output | electronic |
| Contact connection type | Power contact |
| Output voltage range | 8 V DC ... 33 V DC |
| Limiting continuous current | 10 A (see derating curve) |
| Quiescent current | 5.2 mA |
| Voltage drop at max. limiting continuous current | < 50 mV |
| Output circuit | 3-conductor, ground-referenced |
| Protective circuit | Inverse diode |
| | Surge protection |
| Designation | Alarm output |
| Output voltage range | 3 V DC ... 33 V DC |
| Limiting continuous current | 100 mA |
| Surge voltage protection | > 33 V |
| Voltage drop at max. limiting continuous current | < 1.2 V |
| Output circuit | 2-conductor, floating |
| Error indication | Red LED |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection; Suppressor diode |

## Connection data

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|---|---|
| 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

| | |
|---|---|
| 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 | IP20 |
| Degree of protection (Installation location) | IP54 (Installation location) |
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 2000 m |

## 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

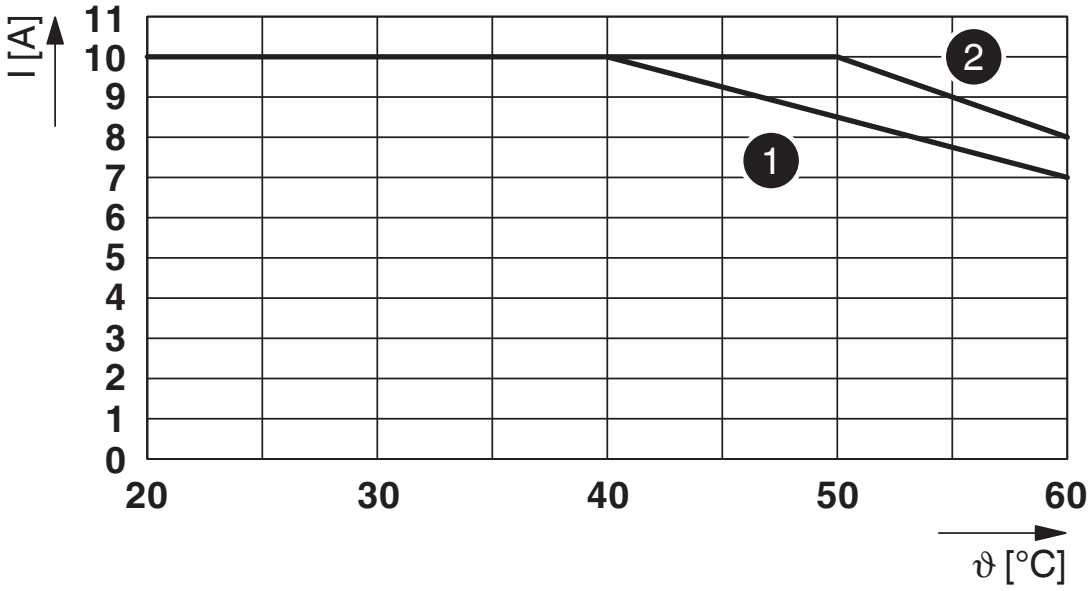
| | |
|---|---|
| Standards/regulations | IEC 60947-5-1 |

## Mounting

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

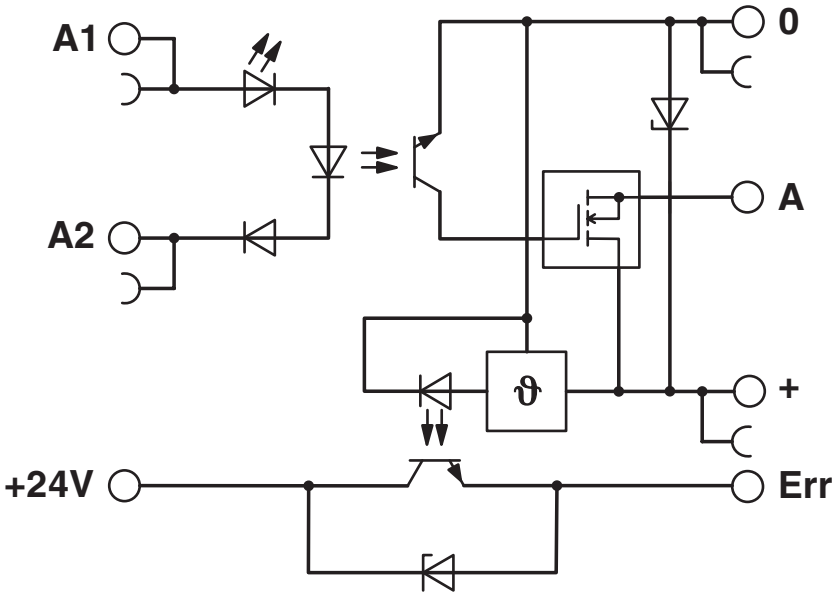
## Drawings

Diagram




Limiting continuous current
1) Aligned without spacing
2) Aligned with >6 mm spacing

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/nl/products/2900398

**DNV GL**
Approval ID: TAE0000196

**cULus Listed**
Approval ID: E140324

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

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|---|---|
| ETIM 10.0 | EC001504 |

### UNSPSC

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|---|---|
| UNSPSC 21.0 | 39122300 |

## Environmental product compliance

EU RoHS

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|---|---|
| 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 | 6f0460dd-1928-4d12-9e16-f43d9dfd37c4 |


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