# PLC-OSC- 12DC/300DC/  1 - Solid-state relay module

2980665

https://www.phoenixcontact.com/gb/products/2980665

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PLC-INTERFACE, integrated solid-state relay, with screw connection, for mounting on NS 35/7,5 DIN rails, input: 12 V DC, output: 12 - 300 V DC/1 A

## Your advantages

- Wear-free switching with no contact bounce
- Resistant to vibrations and shocks
- Protective circuit in input and output
- Status indicator
- DC voltage outputs up to 300 V DC/1 A
- Option of bridging adjacent modules

## Commercial data

| | |
|---|---|
| Item number | 2980665 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | DK6223 |
| Product key | DK6223 |
| GTIN | 4046356051408 |
| Weight per piece (including packing) | 36.18 g |
| Weight per piece (excluding packing) | 34.16 g |
| Customs tariff number | 85364900 |
| Country of origin | DE |

# Technical data

## Product properties

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

Insulation characteristics: Standards/regulations

| | |
|---|---|
| Insulation | Basic insulation |
| 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 | 0.07 W |

Standards/regulations

| | |
|---|---|
| Rated insulation voltage | 300 V |
| Rated surge voltage | 2.5 kV |

## Input data

| | |
|---|---|
| Nominal input voltage $U_N$ | 12 V DC |
| Input voltage range in reference to $U_N$ | 0.8 ... 1.2 |
| Input voltage range | 9.6 V DC ... 14.4 V DC |
| Switching threshold "0" signal in reference to $U_N$ | ≤ 0.4 |
| Switching threshold "1" signal in reference to $U_N$ | ≥ 0.8 |
| Typical input current at $U_N$ | 6 mA |
| Typical response time | 0.3 ms |
| Typical turn-off time | 0.8 ms |
| Operating voltage display | Yellow LED |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection; Varistor |
| Transmission frequency | 50 Hz |

## Output data

Output data

| | |
|---|---|
| Contact switching type | 1 N/O contact |
| Design of digital output | electronic |
| Output voltage range | 12 V DC ... 300 V DC (Divider plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal points in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...) |

| | |
|---|---|
| Limiting continuous current | 1 A (see derating curve) |
| Voltage drop at max. limiting continuous current | < 500 mV |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection; Varistor |

## 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 | 0.45 Nm ... 0.55 Nm (Usually these terminal blocks must be supported during conductor connection (held by one hand, supported on the housing)) |

## 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

| | |
|---|---|
| Ambient temperature (operation) | -25 °C ... 60 °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

Standards/regulations

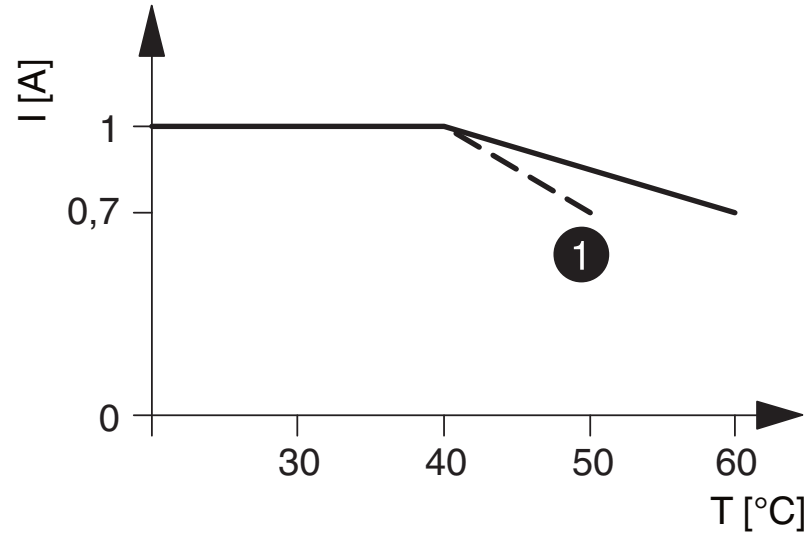
| | |
|---|---|
| Standards/regulations | IEC 60947-5-1 |

## Mounting

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

## Drawings

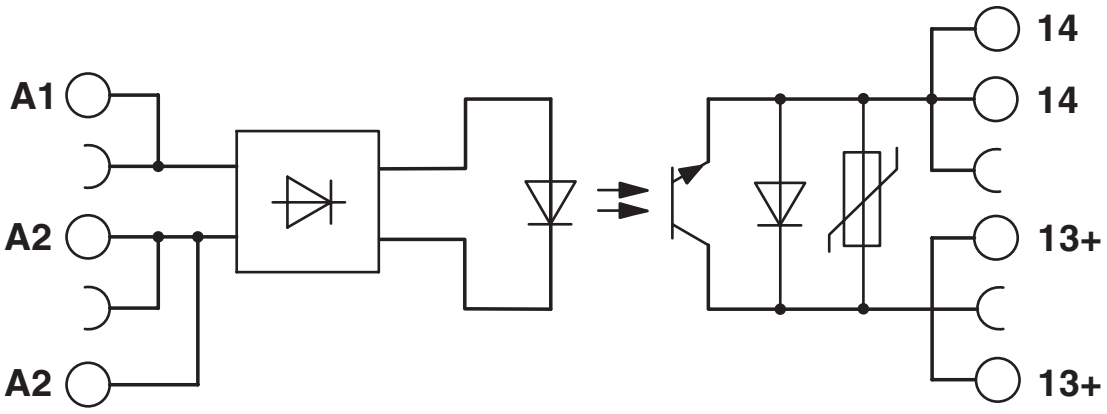
Diagram




1 Input voltages 220 V DC/230 V AC

The figure shows the derating curve for PLC-...300DC/1

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/2980665

**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 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

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

### 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 | 7e9b4afe-0ce6-4561-8de4-15c4f2253106 |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 1.702 kg CO2e |

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