

PLC-OPT-120AC/300DC/1 - Solid-state relay module



2900388

<https://www.phoenixcontact.com/us/products/2900388>

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PLC-INTERFACE, integrated solid-state relay, with push-in connection, for mounting on NS 35/7,5 DIN rails, input: 120 V AC, 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 | 2900388 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Note | Made to order (non-returnable) |
| Sales key | C461 |
| Product key | CK62A3 |
| Catalog page | Page 408 (C-5-2019) |
| GTIN | 4046356506915 |
| Weight per piece (including packing) | 33.28 g |
| Weight per piece (excluding packing) | 33.28 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 |

Data management status

| | |
|------------------------------|------------|
| Date of last data management | 16.09.2024 |
| Article revision | 07 |

Insulation characteristics: Standards/regulations

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

Electrical properties

| | |
|---|--------|
| Maximum power dissipation for nominal condition | 0.36 W |
|---|--------|

Standards/regulations

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

Input data

| | |
|--|------------------------------------|
| Nominal input voltage U_N | 120 V AC |
| Input voltage range in reference to U_N | 0.8 ... 1.1 |
| Input voltage range | 96 V AC ... 132 V AC |
| 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 | 3 mA |
| Typical response time | 19 ms |
| Typical turn-off time | 6 ms |
| Operating voltage display | Yellow LED |
| Protective circuit | Bridge rectifier; Bridge rectifier |
| Transmission frequency | 10 Hz |

Output data

| | |
|-----------------------------|---|
| Designation | Output data |
| Contact switching type | 1 N/O contact |
| Design of digital output | electronic |
| Output voltage range | 12 V DC ... 300 V DC (Partition 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 | 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 |

Dimensions

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

Material specifications

| | |
|--|-----------------|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 | 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 |

DNV GL data

| | |
|-------------|-----|
| Temperature | D |
| Humidity | A |
| Vibration | B/C |

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| | |
|-----------|---|
| 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

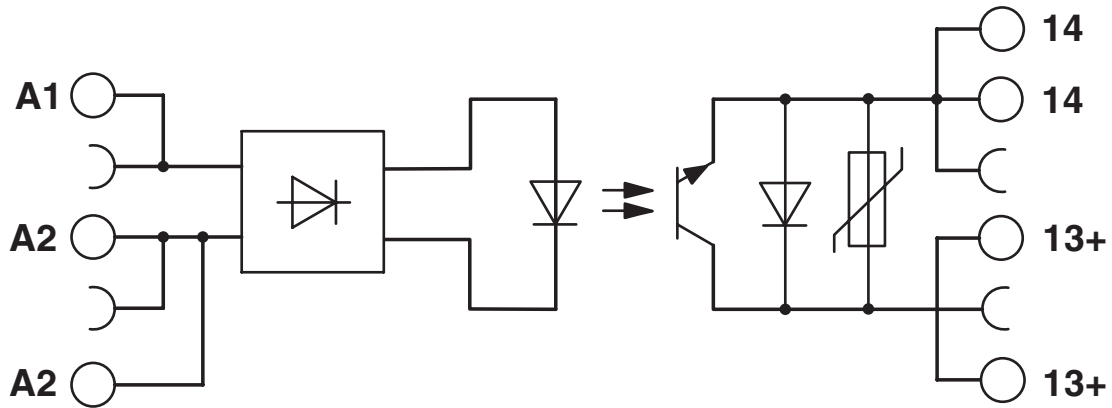
| | |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

Mounting

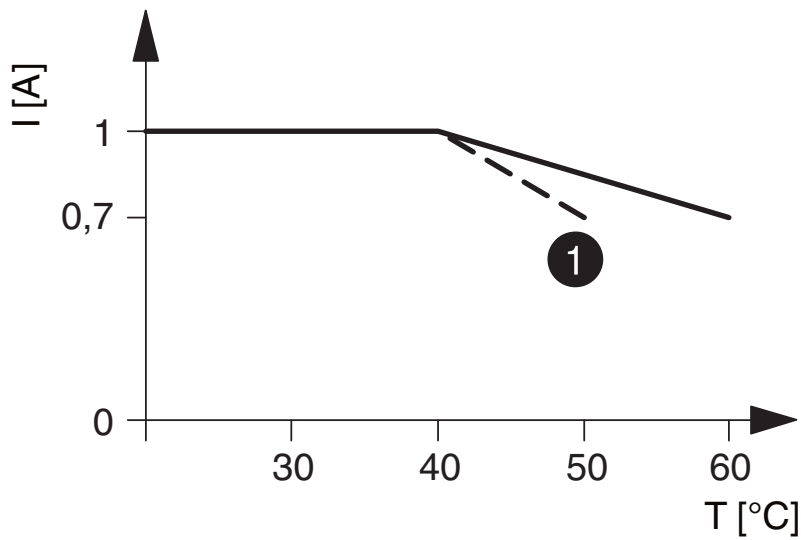
| | |
|-------------------|---------------------------|
| Mounting type | DIN rail mounting |
| Assembly note | in rows with zero spacing |
| Mounting position | any |

Drawings

Circuit diagram



Diagram



① Input voltages 220 V DC/230 V AC

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

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2900388>



cUL Recognized
Approval ID: E238705



UL Recognized
Approval ID: E238705



EAC
Approval ID: RU*C-DE.*08.B.00010



DNV GL
Approval ID: TAE0000196



UL Listed
Approval ID: FILE E 172140



cUL Listed
Approval ID: FILE E 172140



cULus Listed
Approval ID: E140324

cULus Recognized

cULus Listed

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27371604 |
| ECLASS-12.0 | 27371604 |
| ECLASS-13.0 | 27371604 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001504 |
|----------|----------|

UNSPSC

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

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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 | 84ed5137-986f-46b8-ae1b-48671b162567 |

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