

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

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PLC-INTERFACE with checkback contact, consisting of basic terminal block with Push-in connection and integrated miniature solid-state relay, for mounting on NS 35/7,5 DIN rail, 1 N/O contact, input: 24 V DC, output: 8 V DC ... 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 | C461 |
| 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 |

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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. 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 type | Solid-state relay module |
| 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 | 08.05.2026 |
|------------------------------|------------|

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 μ s |

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

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

Item dimensions

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

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

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| | |
|-------------------|---------------------------|
| Assembly note | in rows with zero spacing |
| Mounting position | any |

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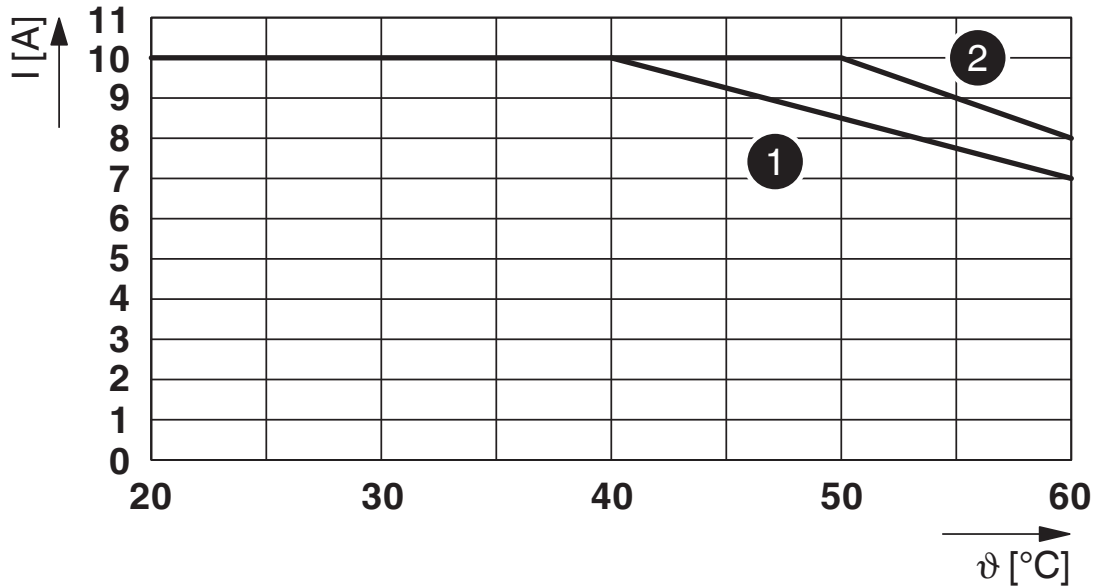


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Drawings

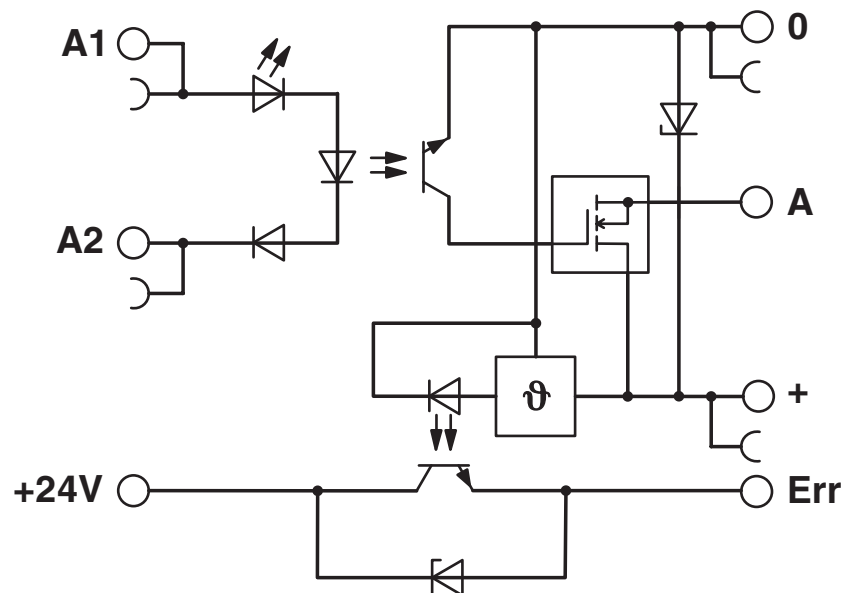
Diagram



Limiting continuous current

- 1) Aligned without spacing
- 2) Aligned with >6 mm spacing

Circuit diagram



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Approvals

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cULus Listed

Approval ID: E140324



cULus Listed

Approval ID: E140324



cULus Listed

Approval ID: E140324

DNV

Approval ID: TAE0000196

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Classifications

ECLASS

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

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | 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 | 6f0460dd-1928-4d12-9e16-f43d9dfd37c4 |

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