

PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



2980144

<https://www.phoenixcontact.com/us/products/2980144>

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PLC-INTERFACE for output functions, consisting of PLC-BSC.../ACT basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 5 V DC, output: 3 - 33 V DC/3 A

Your advantages

- Actuator connected directly to relay module
- No need for additional modular terminal blocks
- Efficient connection to system cabling using V8 adapter
- Time savings of up to 60 %
- Relay modules with safe isolation according to DIN EN 50178 between coil and contact
- Space savings of up to 80 %
- Functional plug-in bridges

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2980144 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C462 |
| Product key | CK6223 |
| Catalog page | Page 376 (C-5-2019) |
| GTIN | 4017918727499 |
| Weight per piece (including packing) | 38.318 g |
| Weight per piece (excluding packing) | 35.738 g |
| Customs tariff number | 85364900 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|----------------|--------------------------|
| Product type | Solid-state relay module |
| Product family | PLC-INTERFACE |
| Application | Output function |
| Operating mode | 100% operating factor |

Data management status

| | |
|------------------------------|------------|
| Date of last data management | 07.05.2024 |
| Article revision | 06 |

Insulation characteristics: Standards/regulations

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

Electrical properties

| | |
|---|--------------------------------------|
| Maximum power dissipation for nominal condition | 0.05 W |
| Test voltage (Input/output) | 2.5 kV (50 Hz, 1 min., input/output) |

Input data

| | |
|--|--|
| Nominal input voltage U_N | 5 V DC |
| Nominal voltage (plugged-in solid-state relay) | 5 V DC |
| Input voltage range in reference to U_N | 0.8 ... 1.2 |
| Input voltage range | 4 V DC ... 6 V DC |
| Switching threshold "0" signal in reference to U_N | ≤ 0.25 |
| Switching threshold "1" signal in reference to U_N | ≥ 0.8 |
| Typical input current at U_N | 9.5 mA |
| Typical response time | 20 μ s (at U_N) |
| Typical turn-off time | 300 μ s (at U_N) |
| Operating voltage display | Yellow LED |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Freewheeling diode; Freewheeling diode |
| Transmission frequency | 300 Hz |

Output data

| | |
|--|--------------------------|
| Contact switching type | 1 N/O contact |
| Design of digital output | electronic |
| Output voltage range | 3 V DC ... 33 V DC |
| Limiting continuous current | 3 A (see derating curve) |
| Maximum inrush current | 15 A (10 ms) |
| Voltage drop at max. limiting continuous current | ≤ 200 mV |
| Output circuit | 2-conductor, floating |

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| | |
|--------------------|--|
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| 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 ... 1.5 mm ² (TWIN ferrule) |
| Conductor cross section AWG | 26 ... 14 |
| Tightening torque | 0.6 Nm ... 0.8 Nm |

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) | -25 °C ... 70 °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 |

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| | |
|-----------|---|
| Vibration | B/C |
| EMC | B |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

EMC data

| | |
|-------------------------------|--|
| Low Voltage Directive | Conformance with Low Voltage Directive |
| Electromagnetic compatibility | Conformance with EMC directive |

Standards and regulations

Standards/regulations

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

Mounting

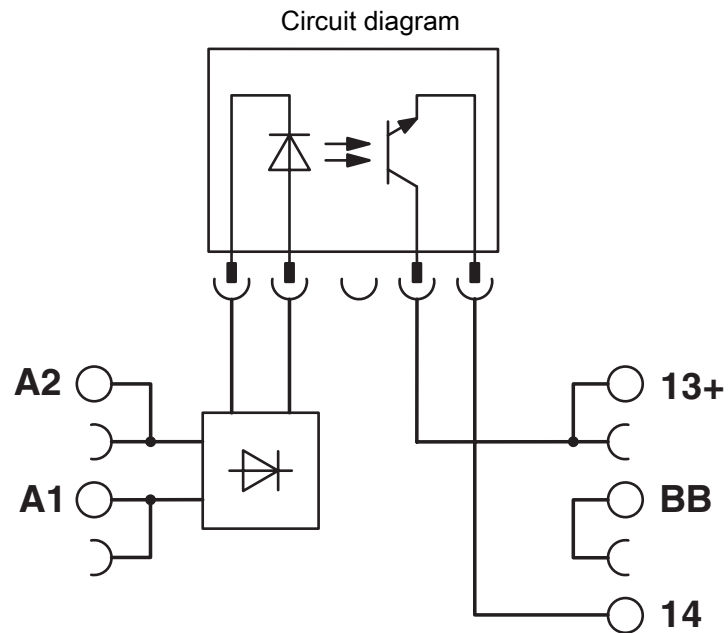
| | |
|-------------------|---------------------------|
| Mounting type | DIN rail mounting |
| Thread type | () |
| Assembly note | in rows with zero spacing |
| Mounting position | any |

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Drawings



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Approvals

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cUL Recognized
Approval ID: E238705



UL Recognized
Approval ID: E238705



EAC
Approval ID: TR_TS_D_00573_c



DNV GL
Approval ID: TAE0000196



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



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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
| | Lead(CAS: 7439-92-1) |
| SCIP | 3e9f17f0-91ca-4ba3-9bbe-9260f984b13f |

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