

# 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                          | DK6223        |
| 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    |

### Insulation characteristics: Standards/regulations

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

### Data management status

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

### 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 $U_N$ | $\leq 0.25$  |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.8$   |
| Typical input current at $U_N$                       | 9.5 mA   |
| Typical response time                                | 20 $\mu$ s (at $U_N$ )   |
| Typical turn-off time                                | 300 $\mu$ s (at $U_N$ )  |
| Operating voltage display                            | Yellow LED   |
| Protective circuit                                   | Reverse polarity protection; Polarity protection diode<br>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 | $\leq 200$ mV  |
| Output circuit                                   | 2-conductor, floating                                  |
| Protective circuit                               | Reverse polarity protection; Polarity protection diode |

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|  |                  |
|--|------------------|
|  | Surge protection |
|--|------------------|

## 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                | 0.6 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 (Housing) | 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              |

### Shipbuilding 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

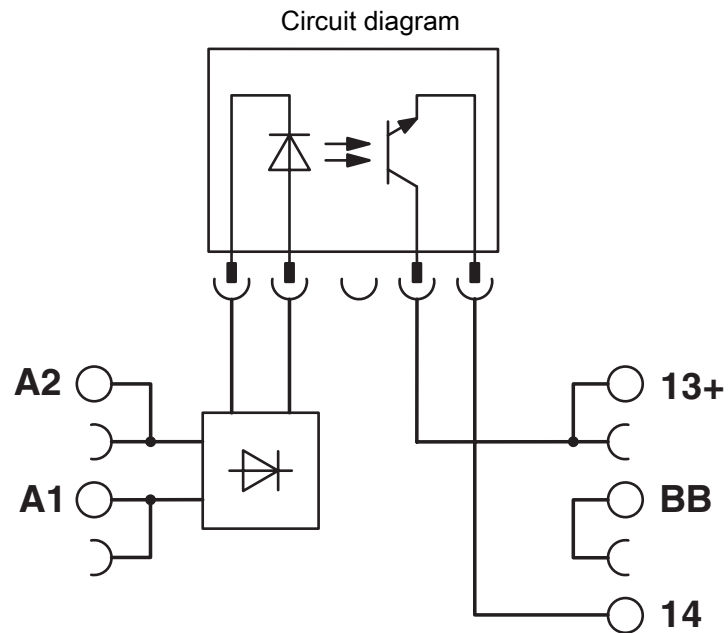
|                   |                           |
|-------------------|---------------------------|
| Mounting type     | DIN rail mounting         |
| Assembly note     | in rows with zero spacing |
| Mounting position | any                       |

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## Drawings



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2980144>



**EAC**

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



**DNV GL**

Approval ID: TAE0000196



**cULus Listed**

Approval ID: E140324

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)