

# PLC-OSC- 24DC/ 24DC/ 3RW - Solid-state relay module



2980610

<https://www.phoenixcontact.com/us/products/2980610>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with screw connection and integrated miniature solid-state relay, range:  $0.7 \times U_N$  to  $1.25 \times U_N$ , temperature range:  $-25^\circ\text{C}$  to  $+70^\circ\text{C}$ , 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2980610       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C461          |
| Product key                          | DK622L        |
| GTIN                                 | 4046356094542 |
| Weight per piece (including packing) | 34.81 g       |
| Weight per piece (excluding packing) | 32.97 g       |
| Customs tariff number                | 85364190      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                |                          |
|----------------|--------------------------|
| Product type   | Solid-state relay module |
| Product family | PLC-INTERFACE            |
| Application    | Railway applications     |

### Insulation characteristics: Standards/regulations

|                      |     |
|----------------------|-----|
| 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 | 0.2 W |
|---|-------|

### Input data

|  |  |
|--|--|
| Nominal input voltage $U_N$                          | 24 V DC  |
| Input voltage range in reference to $U_N$            | 0.7 ... 1.25   |
| Input voltage range                                  | 16.8 V DC ... 30 V DC                                  |
| Switching threshold "0" signal in reference to $U_N$ | $\leq 0.3$   |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.6$   |
| Typical input current at $U_N$                       | 8.5 mA   |
| Typical response time                                | 40 $\mu$ s   |
| Typical turn-off time                                | 200 $\mu$ s  |
| Status display                                       | LED (yellow)   |
| Protective circuit                                   | Reverse polarity protection; Polarity protection 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  |
| Voltage drop at max. limiting continuous current | $\leq 200$ mV  |
| Output circuit                                   | 2-conductor, floating  |
| Protective circuit                               | Reverse polarity protection; Polarity protection diode<br>Surge protection |

### Connection data

|                               |  |
|-------------------------------|--|
| Connection method             | Screw connection                             |
| Stripping length              | 8 mm   |
| Screw thread                  | M3   |
| Conductor cross-section rigid | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |

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|                                  |  |
|----------------------------------|--|
| Conductor cross-section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>   |
|                                  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule)   |
|                                  | 2x 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (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 ... 70 °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

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|                               |  |
|-------------------------------|--|
| 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                                 |
|                       | DIN EN 50155/VDE 0115-200 (in relevant parts) |

## Mounting

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

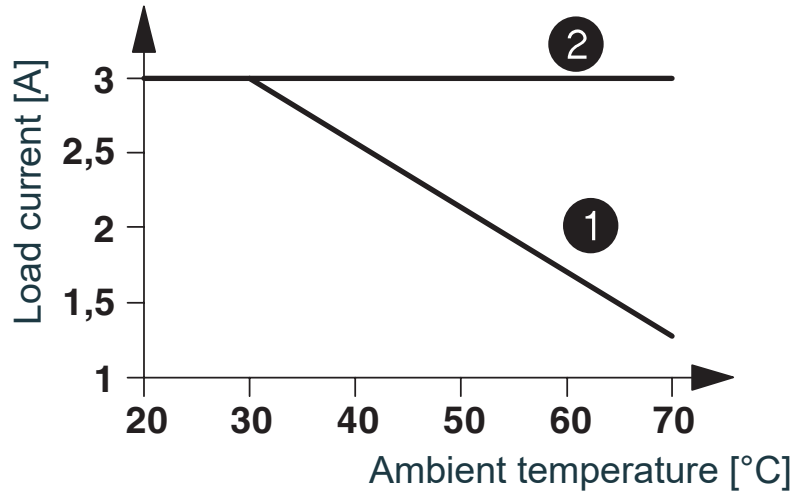
# PLC-OSC- 24DC/ 24DC/ 3RW - Solid-state relay module

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## Drawings

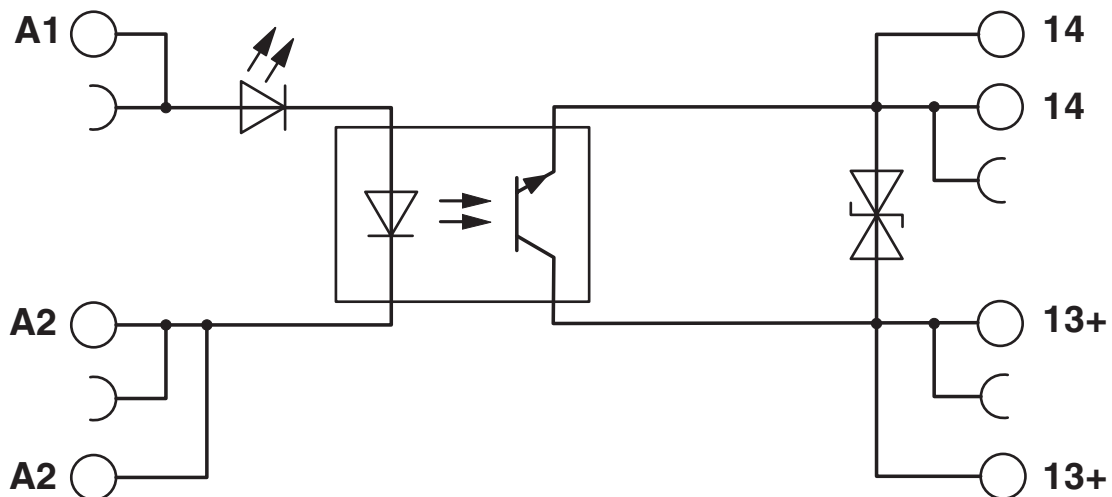
Diagram



- ① In rows with zero spacing
- ② in rows with > 20 mm spacing

The figure shows the load current as function of the ambient temperature range PLC-OSP-.../24DC/3RW. Duty cycle: 100% operating factor

Circuit diagram



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## Approvals

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**cULus Listed**

Approval ID: E140324



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**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                                | e3937c73-52b4-4b5e-ab40-b1be526e0113 |

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