

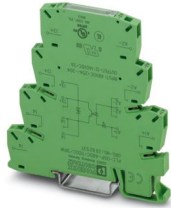
PLC-OSP- 48DC/110DC/ 3RW - Solid-state relay module



2982537

<https://www.phoenixcontact.com/us/products/2982537>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage connection and integrated miniature solid-state relay, range: $0.7 \times U_N$ to $1.25 \times U_N$, temperature range: -25°C to $+70^\circ\text{C}$, 1 N/O contact, input: 48 V DC, output: 12 - 140 V DC/3 A

Your advantages

- Shock resistance in accordance with DIN 50155 (requirements in accordance with EN 61373)
- Temperature range: -25°C ... $+70^\circ\text{C}$
- Input voltage range of $0.7 - 1.25 \times U_N$

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2982537 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Product key | DK6223 |
| GTIN | 4046356082594 |
| Weight per piece (including packing) | 35.78 g |
| Weight per piece (excluding packing) | 34.16 g |
| 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 |
| Operating mode | 100% operating factor |

Insulation characteristics: Air clearances and creepage distances between the power circuits

| | |
|----------------------|------------------|
| Insulation | Basic insulation |
| 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 | 0.26 W |
| Test voltage (Input/output) | 2.5 kV _{rms} (Input/output) |

Air clearances and creepage distances between the power circuits

| | |
|--------------------------|----------|
| Rated insulation voltage | 160 V DC |
| Rated surge voltage | 4 kV |

Input data

| | |
|--|---|
| Nominal input voltage U_N | 48 V DC |
| Input voltage range in reference to U_N | 0.7 ... 1.25 ($t < 1 \text{ s} = 0.6 \dots 1.4 \times U_N$) |
| Input voltage range | 33.6 V DC ... 60 V DC |
| Switching threshold "0" signal in reference to U_N | < 0.3 |
| Switching threshold "1" signal in reference to U_N | > 0.6 |
| Typical input current at U_N | 5.5 mA |
| Typical response time | 40 μs |
| Typical turn-off time | 200 μs |
| Operating voltage display | Yellow LED |
| Protective circuit | Reverse polarity protection; Series polarity protection diode Surge protection |
| Surge voltage protection | > 150 V |
| Transmission frequency | 300 Hz |

Output data

| | |
|-----------------------------|--|
| Contact switching type | 1 N/O contact |
| Design of digital output | electronic |
| Output nominal voltage | 110 V DC |
| Output voltage range | 12 V DC ... 140 V DC ($t < 1 \text{ s} = 1.40 \times U_N$) |
| Limiting continuous current | 3 A (see derating curve) |

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| | |
|--|---|
| Surge voltage protection | > 150 V |
| Voltage drop at max. limiting continuous current | < 150 mV |
| Output circuit | 2-conductor, floating |
| Protective circuit | Reverse polarity protection; Parallel polarity protection diode Surge protection |

Connection data

Input side

| | |
|----------------------------------|--|
| Connection method | Spring-cage connection |
| Stripping length | 8 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 |
| Conductor cross-section AWG | 26 ... 14 |

Output side

| | |
|----------------------------------|--|
| Connection method | Spring-cage connection |
| Stripping length | 8 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 |
| Conductor cross-section AWG | 26 ... 14 |

Dimensions

| | |
|--------|--------|
| Width | 6.2 mm |
| Height | 80 mm |
| Depth | 86 mm |

Material specifications

| | |
|-------|------------------|
| Color | green (RAL 6021) |
|-------|------------------|

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

Standards and regulations

Air clearances and creepage distances between the power circuits

| | |
|-----------------------|-----------------------|
| Standards/regulations | IEC 60664 EN 50178 |
|-----------------------|-----------------------|

Mounting

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

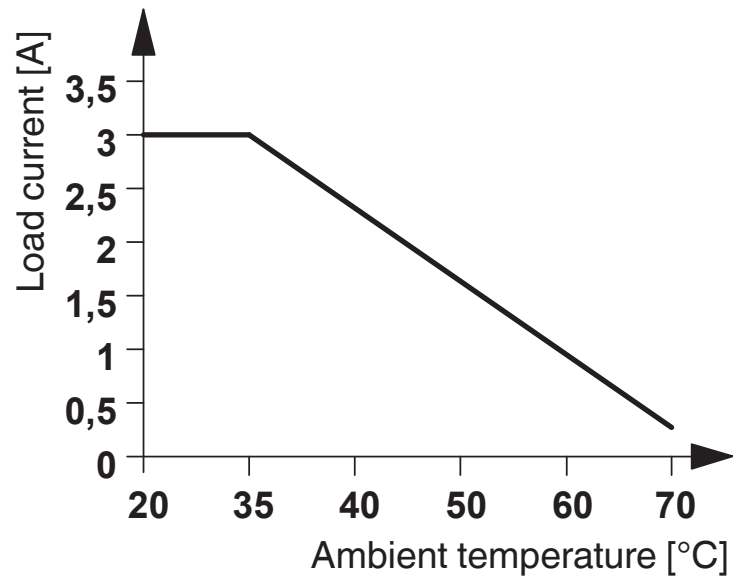
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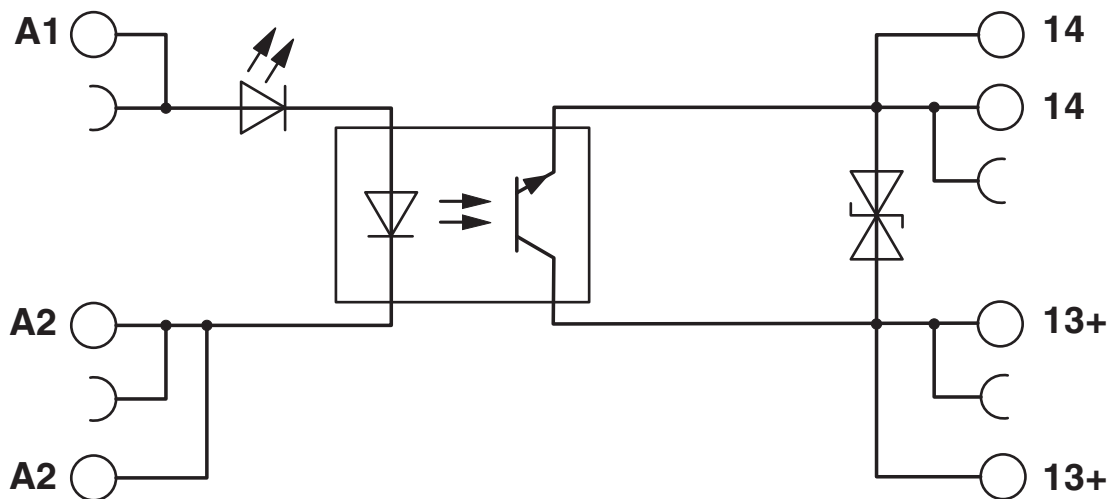
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Drawings

Diagram



Circuit diagram



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Environmental product compliance

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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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