# OPT-24DC/ 24DC/  5 - Miniature solid-state relay

2982100

https://www.phoenixcontact.com/gb/products/2982100

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Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/5 A

## Your advantages

- Vibration and shock resistant
- RT III-proof (wash-proof)
- Wear-free and durable
- Zero voltage switch at AC output
- Switching power of up to 24 V DC/5 A
- Can be soldered on PCB

## Commercial data

| | |
|---|---|
| Item number | 2982100 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | DK69L1 |
| Product key | DK69L1 |
| GTIN | 4017918937492 |
| Weight per piece (including packing) | 11.9 g |
| Weight per piece (excluding packing) | 11.65 g |
| Customs tariff number | 85364190 |
| Country of origin | HU |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Single solid-state relay |
| 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 | 01.04.2026 |

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 0.17 W |
| Test voltage (Input/output) | 2.5 kV (50 Hz, 1 min., input/output) |

Standards/regulations

| | |
|---|---|
| Rated insulation voltage | 100 V DC |

## Input data

| | |
|---|---|
| Nominal input voltage $U_N$ | 24 V DC |
| Input voltage range in reference to $U_N$ | 0.8 ... 1.2 |
| Input voltage range | 19.2 V DC ... 28.8 V DC |
| Switching threshold "0" signal in reference to $U_N$ | 0.4 |
| Switching threshold "1" signal in reference to $U_N$ | 0.7 |
| Typical input current at $U_N$ | 7 mA |
| Typical response time | 20 µs |
| Typical turn-off time | 400 µs |
| 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 nominal voltage | 24 V DC |
| Output voltage range | 3 V DC ... 33 V DC |
| Limiting continuous current | 5 A (see derating curve) |
| Maximum inrush current | 15 A (10 ms) |
| Surge voltage protection | > 33 V DC |
| Voltage drop at max. limiting continuous current | ≤ 200 mV |
| Output circuit | 2-conductor, floating |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 12.7 mm |
| Height | 29 mm |
| Depth | 15.7 mm |

## Material specifications

| | |
|---|---|
| Color | black (RAL 9005) |
| Flammability rating according to UL 94 (Housing) | V0 (Housing) |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | RT III |
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C |

## Approvals

Corrosive gas test

| | |
|---|---|
| Identification | ISA-S71.04. G3 Harsh Group |
| | EN 60068-2-60 |

## Standards and regulations

Standards/regulations

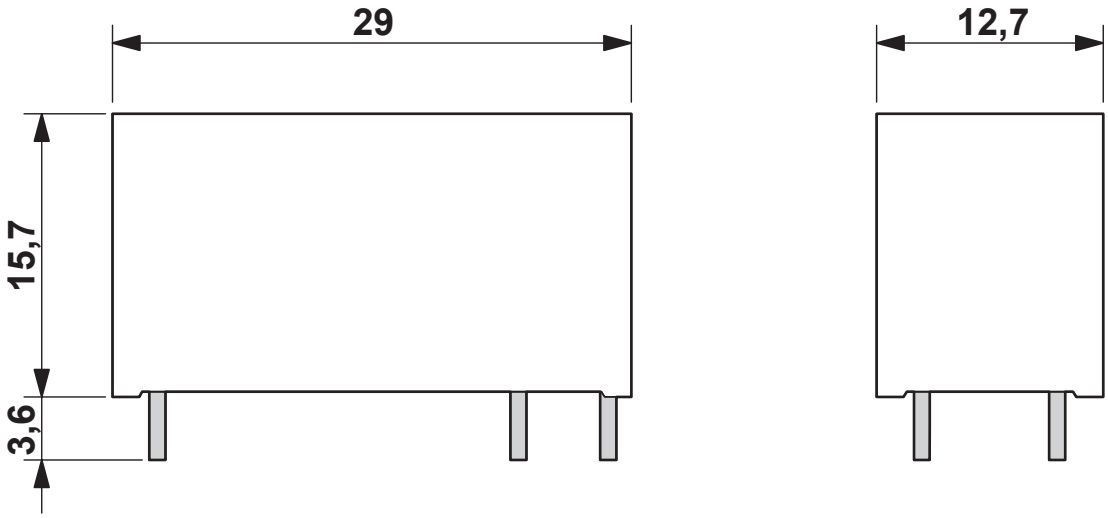
| | |
|---|---|
| Standards/regulations | IEC 60664 |
| | EN 50178 |

## Mounting

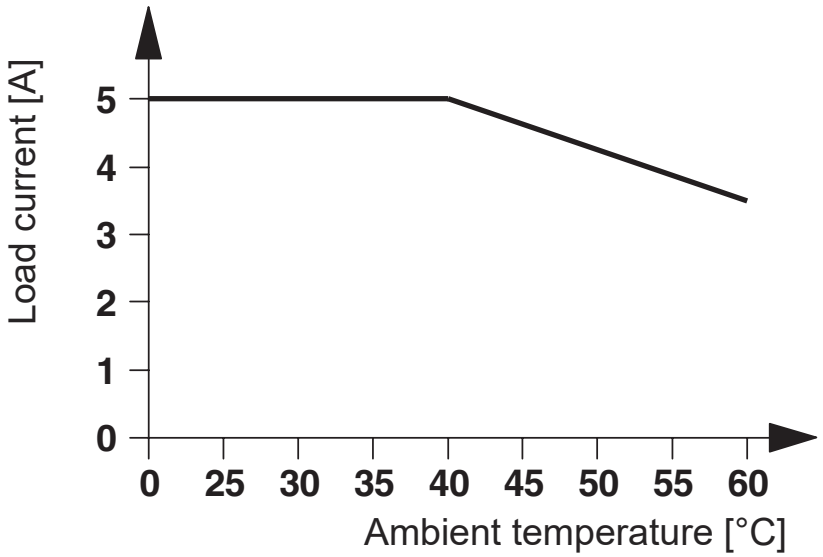
| | |
|---|---|
| Assembly note | in rows with zero spacing |

## Drawings

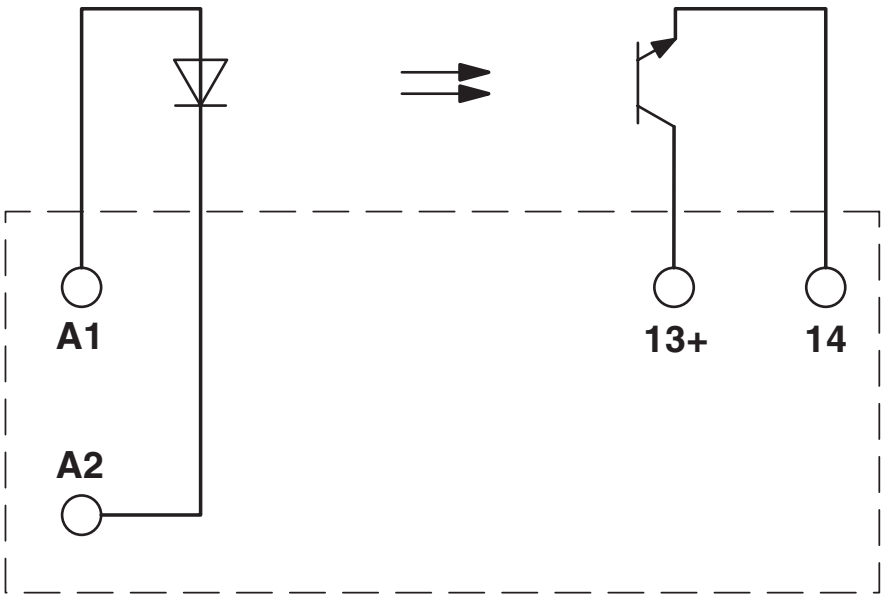
Dimensional drawing




Diagram

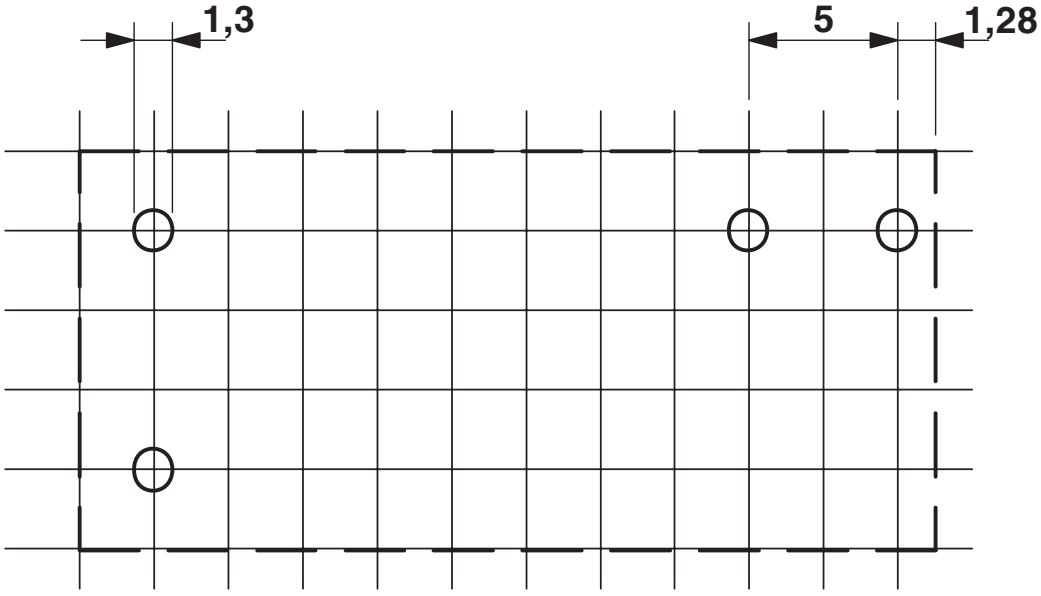


Circuit diagram




Pin assignments: View of the connections

Drilling plan/solder pad geometry




View from below

Grid spacing: 2.5 mm

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/2982100

**cUL Recognized**
Approval ID: FILE E 195083

**UL Recognized**
Approval ID: FILE E 195083

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## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC001504 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39122300 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 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.) | No substance above 0.1 wt% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.704 kg CO2e |


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