

OPT- 5DC/ 24DC/ 2 - Miniature solid-state relay

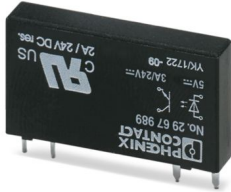


2967989

<https://www.phoenixcontact.com/us/products/2967989>

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Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input voltage: 5 V DC



Your advantages

- Vibration and shock resistant
- RT III-proof (wash-proof)
- Wear-free and durable
- Can be soldered on PCB
- Switching capacity of up to 24 V DC/3 A

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2967989 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C460 |
| Product key | CK61F2 |
| Catalog page | Page 396 (C-5-2019) |
| GTIN | 4017918820763 |
| Weight per piece (including packing) | 5.24 g |
| Weight per piece (excluding packing) | 3.5 g |
| Customs tariff number | 85364190 |
| Country of origin | HU |

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Technical data

Product properties

| | |
|----------------|--------------------------|
| Product type | Single solid-state relay |
| Operating mode | 100% operating factor |

Insulation characteristics

| | |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

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 |
| 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, voltage | ≤ 0.8 V |
| Switching threshold "1" signal voltage | ≥ 2.5 V |
| Typical input current at U_N | 9 mA |
| Typical response time | 20 μ s (at U_N) |
| Typical turn-off time | 300 μ s (at U_N) |
| 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 | ≤ 150 mV |
| Output circuit | 2-conductor, floating |
| Protective circuit | Reverse polarity protection Surge protection |

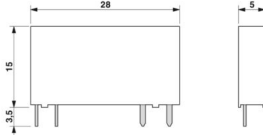
Dimensions

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| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 5 mm |
| Height | 28 mm |
| Depth | 15 mm |

Material specifications

| | |
|-------|------------------|
| Color | black (RAL 9005) |
|-------|------------------|

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

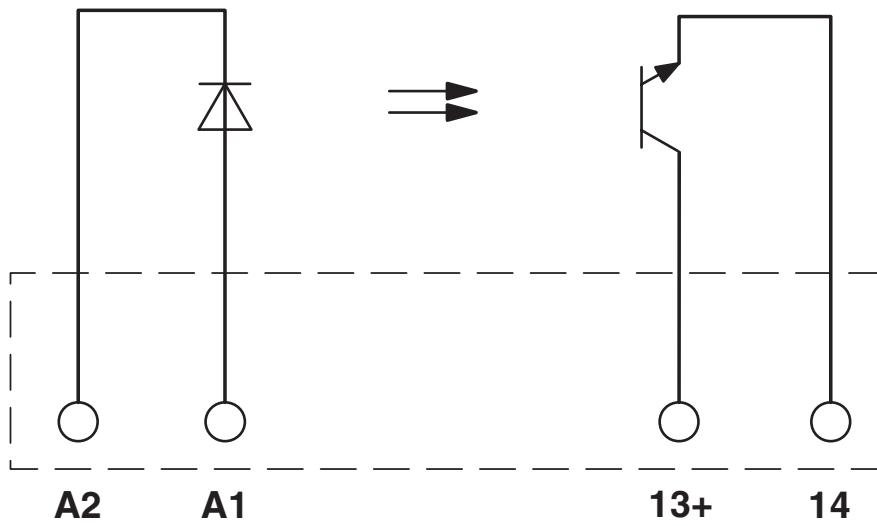
| | |
|-----------------------|-----------|
| Standards/regulations | IEC 60664 |
| | EN 50178 |

Mounting

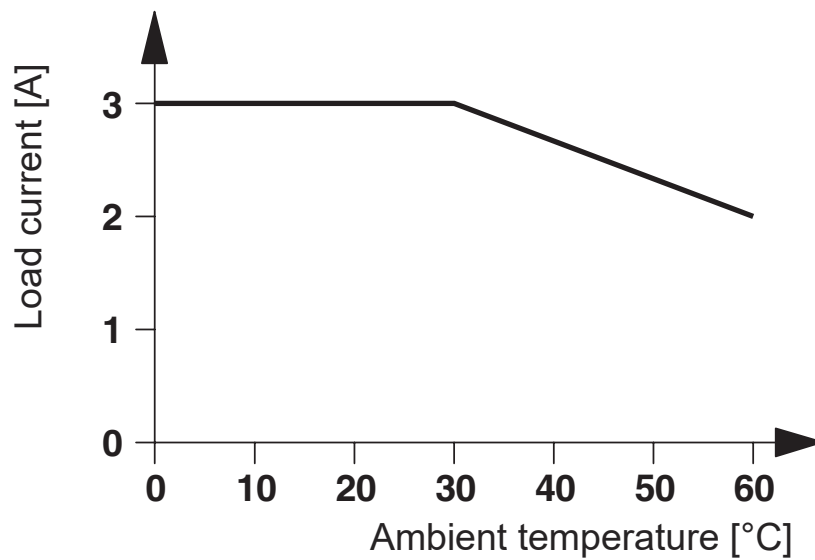
| | |
|-----------------------|---------------------------|
| Assembly instructions | in rows with zero spacing |
| Mounting position | any |

Drawings

Circuit diagram



Diagram



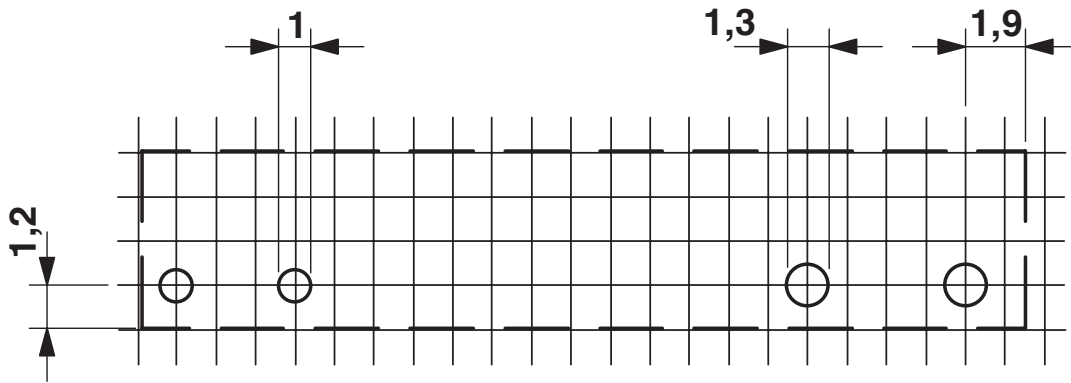
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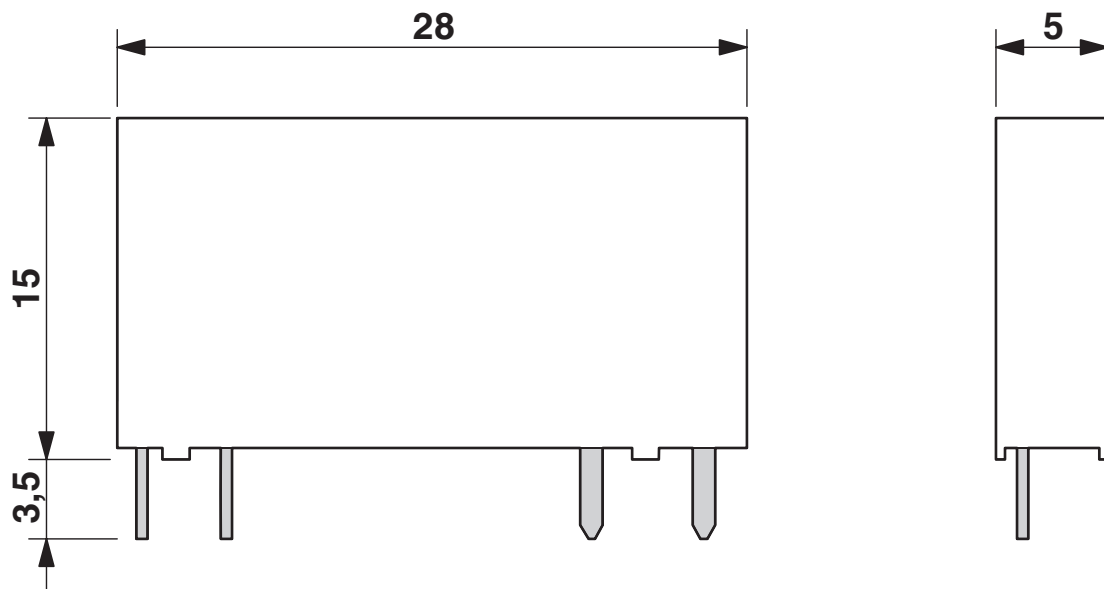
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Drilling plan/solder pad geometry



a = pitch division 1.25 mm and 1.27 mm

Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2967989>



cUL Recognized
Approval ID: FILE E 195083



UL Recognized
Approval ID: FILE E 195083



EAC
Approval ID: TR_TS_D_00573_c



UL Recognized
Approval ID: FILE E 195083



cUL Recognized
Approval ID: FILE E 195083



GL
Approval ID: 46016-03 HH

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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(c)-I |

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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Mandatory accessories

PLC-BPT- 5DC/21 - Relay base

2900443

<https://www.phoenixcontact.com/us/products/2900443>



6.2 mm PLC basic terminal block with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 5 V DC

PLC-BSC- 5DC/21 - Relay base

2980225

<https://www.phoenixcontact.com/us/products/2980225>



6.2 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 5 V DC

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