

# OPT- 5DC/230AC/ 2 - Miniature solid-state relay

2982168

<https://www.phoenixcontact.com/us/products/2982168>

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The figure shows the 24 V design

Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 5 V DC, output: 24 - 253 V AC/2 A

## Your advantages

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

## Commercial data

Item number	2982168
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	C460
Product key	DK69L2
GTIN	4017918996963
Weight per piece (including packing)	10.93 g
Weight per piece (excluding packing)	10.93 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: Standards/regulations

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

### Data management status

Date of last data management	01.04.2026
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### Electrical properties

Maximum power dissipation for nominal condition	0.08 W
Test voltage (Input/output)	2.5 kV (50 Hz, 1 min., input/output)

### Standards/regulations

Rated insulation voltage	250 V AC
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### 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 in reference to $U_N$	0.2
Switching threshold "1" signal in reference to $U_N$	0.6
Typical input current at $U_N$	15 mA
Typical response time	10 ms
Typical turn-off time	10 ms
Protective circuit	Reverse polarity protection; Polarity protection diode
Transmission frequency	10 Hz

### Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output nominal voltage	230 V AC
Output voltage range	24 V AC ... 253 V AC
Limiting continuous current	2 A (see derating curve)
Maximum inrush current	30 A (10 ms)
Min. load current	25 mA
Leakage current	< 1 mA
Surge current	30 A (10 ms)
Max. load value	4 A <sup>2</sup> s (tp = 10 ms, at 25 °C)
Voltage drop at max. limiting continuous current	≤ 1 V

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Output circuit	2-conductor floating, zero voltage switch
Protective circuit	Surge protection; RC element

## 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

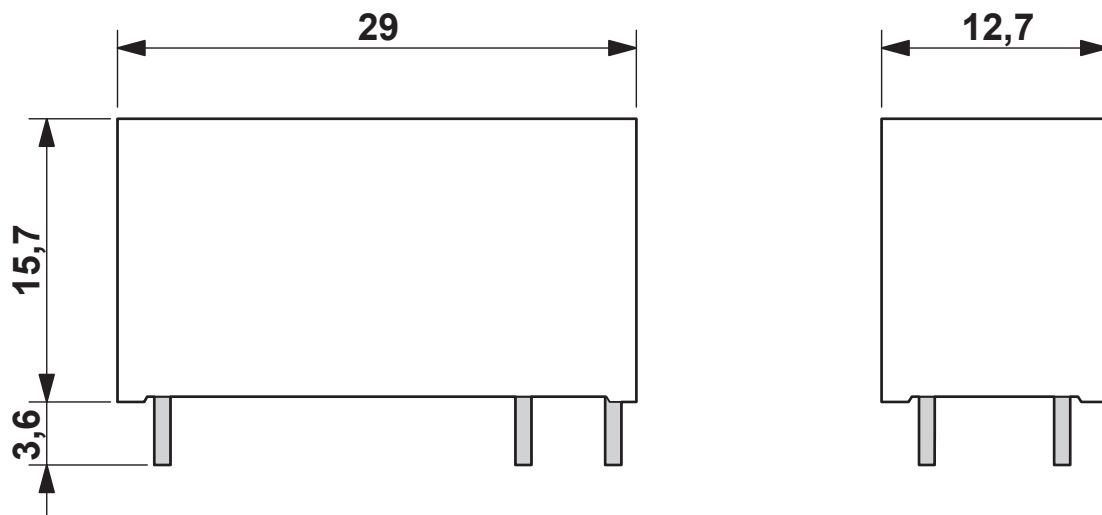
Standards/regulations	IEC 60664
	EN 50178

## Mounting

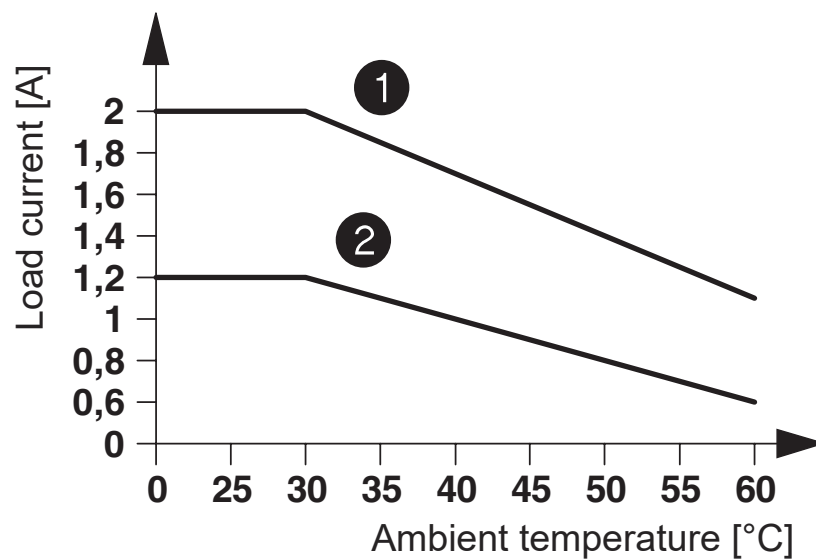
Assembly note	See derating curve
Mounting position	any

## Drawings

Dimensional drawing



Diagram



- ① In rows with 10 mm spacing
- ② In rows with zero spacing

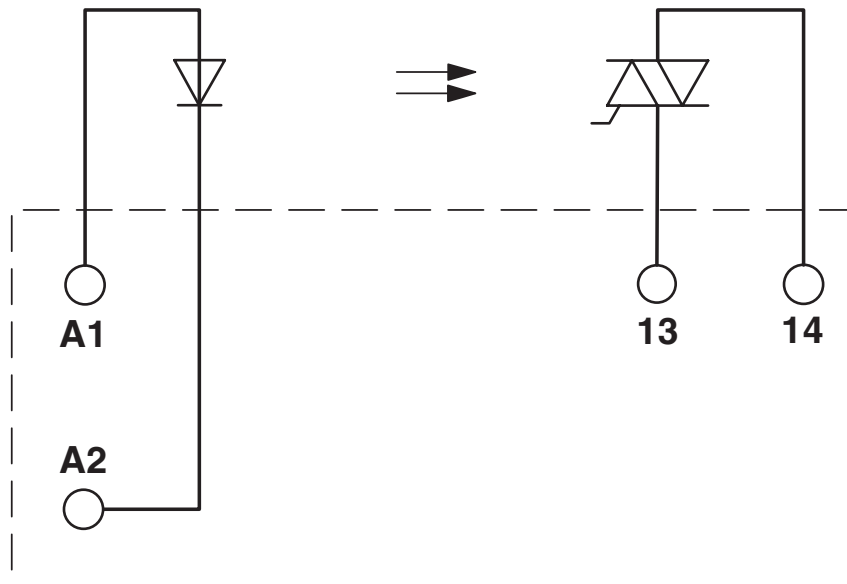
# OPT- 5DC/230AC/ 2 - Miniature solid-state relay



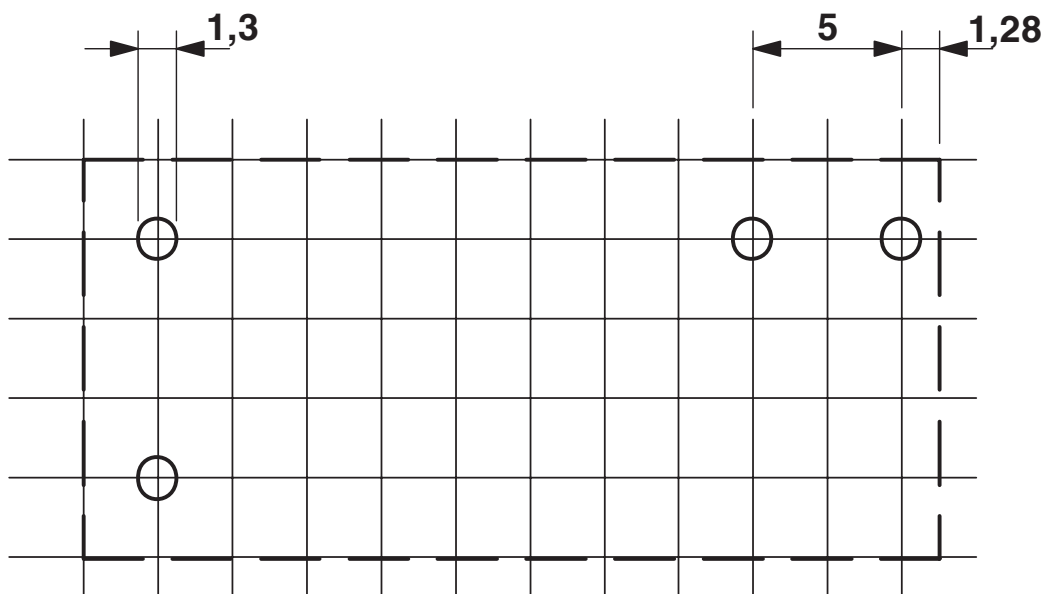
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Circuit diagram



Drilling plan/solder pad geometry



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2982168>



**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
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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