

# 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)	11.65 g
Weight per piece (excluding packing)	11.65 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	19.03.2025
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### 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
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### 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 $\mu$ s
Typical turn-off time	400 $\mu$ s
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	$\leq$ 200 mV
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection

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## Dimensions

Dimensional drawing	
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
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## Standards and regulations

### Standards/regulations

Standards/regulations	IEC 60664 EN 50178
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## Mounting

Assembly note	in rows with zero spacing
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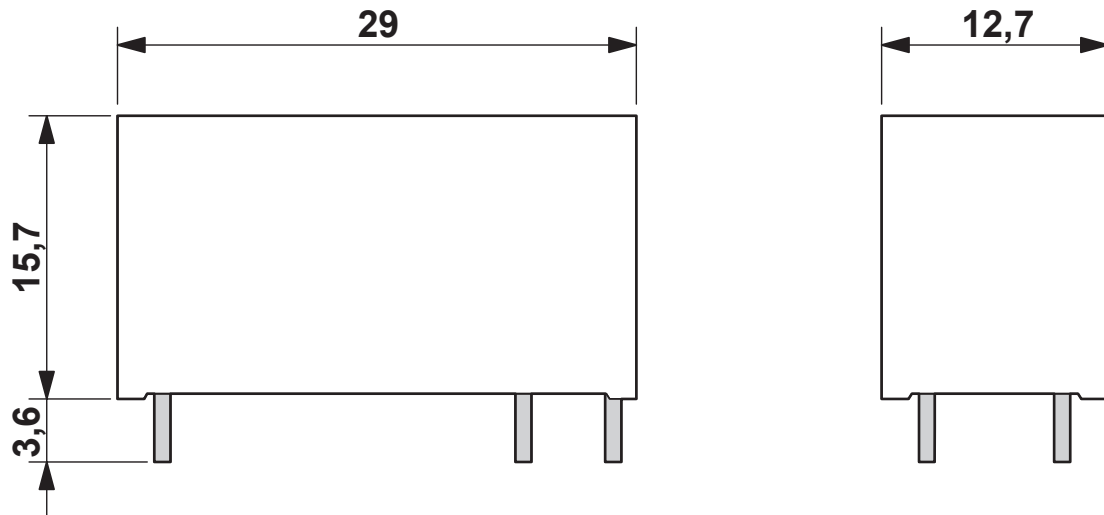
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## Drawings

Dimensional drawing



Diagram



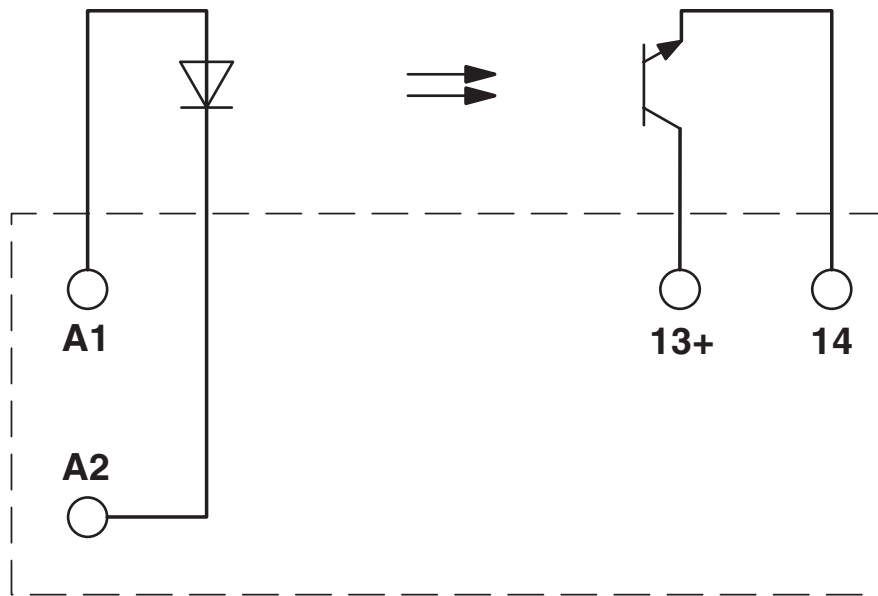
# OPT-24DC/ 24DC/ 5 - Miniature solid-state relay



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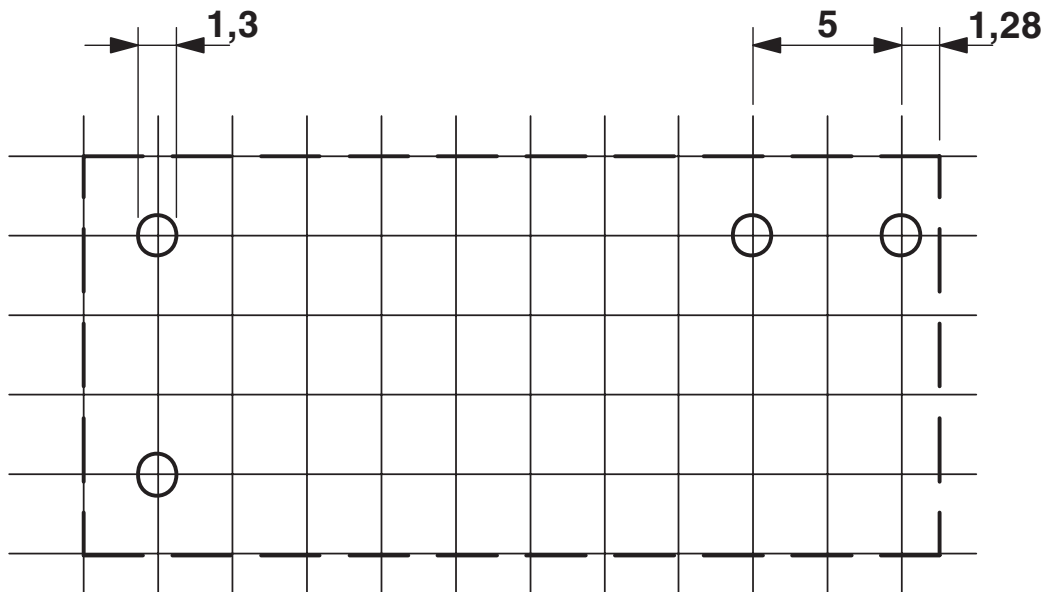
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Circuit diagram



Pin assignments: View of the connections

Drilling plan/solder pad geometry



Basic pitch 2.5 mm

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## 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



**EAC**  
Approval ID: RU\*C-DE.\*08.B.00010



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



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

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## Classifications

### ECLASS

ECLASS-13.0	27371604
ECLASS-15.0	27371604

### ETIM

ETIM 9.0	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
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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