

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



2967989

<https://www.phoenixcontact.com/in/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	CK6
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
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### 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	$\leq 0.8$ V
Switching threshold "1" signal voltage	$\geq 2.5$ V
Typical input current at $U_N$	9 mA
Typical response time	20 $\mu$ s (at $U_N$ )
Typical turn-off time	300 $\mu$ s (at $U_N$ )
Transmission frequency	300 Hz

### Output data

Contact 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	$\leq 150$ mV
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection Surge protection

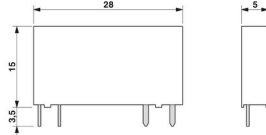
### Dimensions

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Dimensional drawing	
Width	5 mm
Height	28 mm
Depth	15 mm

## 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

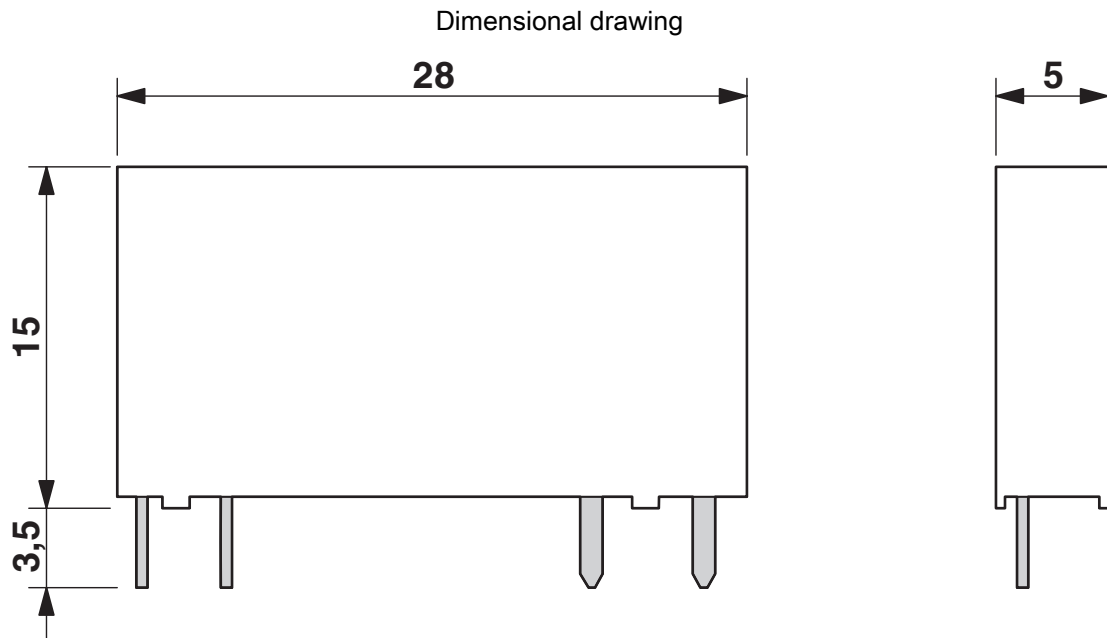
Assembly instructions	in rows with zero spacing
Mounting position	any

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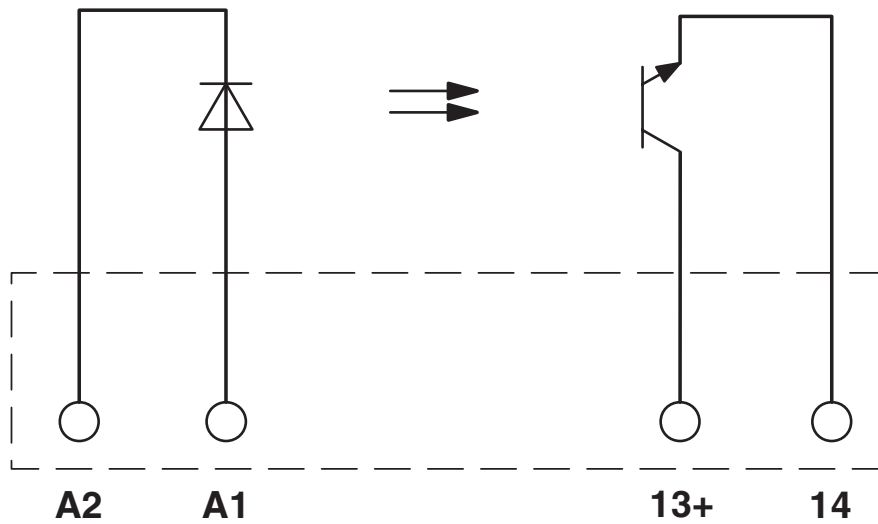
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## Drawings



Circuit diagram



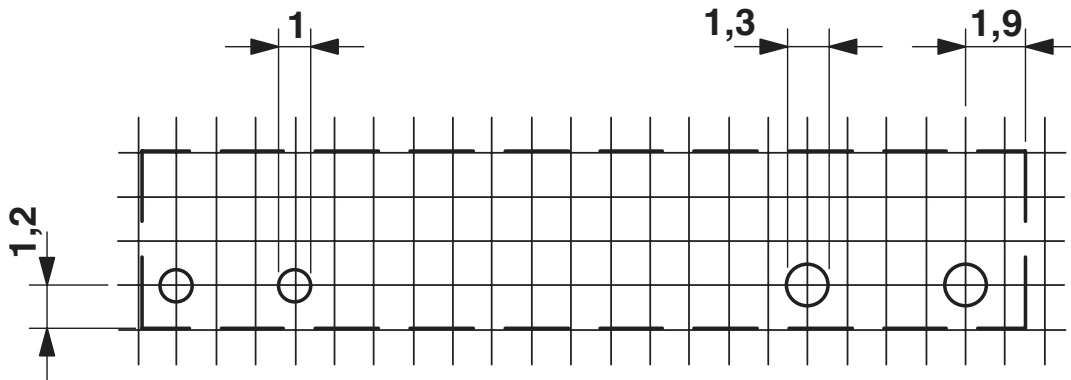
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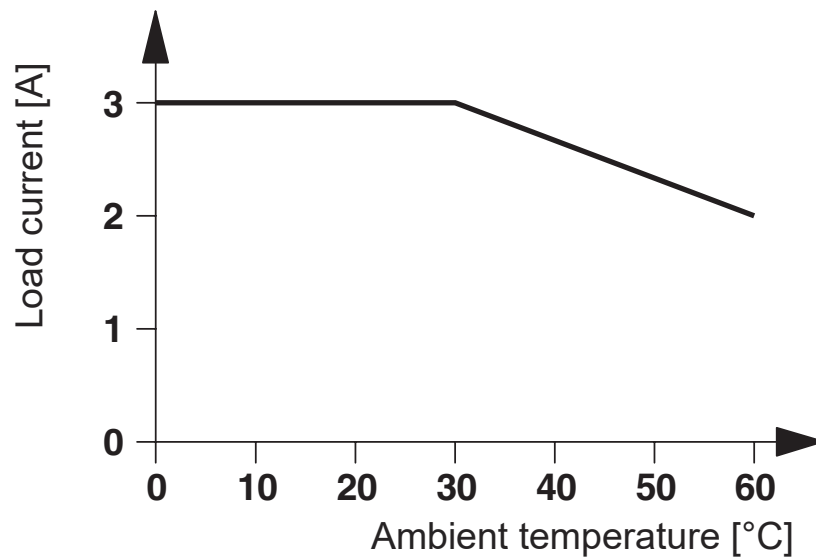
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Drilling plan/solder pad geometry



a = pitch division 1.25 mm and 1.27 mm

Diagram



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## Approvals



**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



**PRS**  
Approval ID: TE/2109/880590/16



**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	Einzel-Solid-State-Relais
ECLASS-12.0	Einzel-Solid-State-Relais
ECLASS-12.0	Einzel-Solid-State-Relais

### ETIM

ETIM 8.0	EC001504
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values



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## Accessories

### PLC-BPT- 5DC/21 - Relay base

2900443

<https://www.phoenixcontact.com/in/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

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### PLC-BSC- 5DC/21 - Relay base

2980225

<https://www.phoenixcontact.com/in/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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## PLC-BSC- 5DC/ 1/SEN - Relay base

2980267

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6.2 mm PLC basic terminal block for output functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 5 V DC

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## PLC-BPT- 5DC/ 1/ACT - Relay base

2900448

<https://www.phoenixcontact.com/in/products/2900448>



6.2 mm PLC basic terminal block for output functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 5 V DC

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## PLC-BSC- 5DC/ 1/ACT - Relay base

2980241

<https://www.phoenixcontact.com/in/products/2980241>



6.2 mm PLC basic terminal block for output functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 5 V DC

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