

# OPT-24DC/230AC/ 1 - Miniature solid-state relay



2967950

<https://www.phoenixcontact.com/us/products/2967950>

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Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 24 V DC, output: 24 - 253 V AC/0.75 A

## Your advantages

- Vibration and shock resistant
- RT III-proof (wash-proof)
- Wear-free and durable
- Can be soldered on PCB
- Zero voltage switch at AC output

## Commercial data

Item number	2967950
Packing unit	1 pc
Minimum order quantity	10 pc
Sales key	C460
Product key	CK61F3
Catalog page	Page 287 (C-5-2019)
GTIN	4017918190538
Weight per piece (including packing)	5.75 g
Weight per piece (excluding packing)	5.75 g
Customs tariff number	85364110
Country of origin	JP

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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	0.07 W
Test voltage (Input/output)	2.5 kV (50 Hz, 1 min., input/output)

### 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, voltage	$\leq 5$ V
Switching threshold "1" signal voltage	$\geq 10$ V
Typical input current at $U_N$	6 mA
Typical response time	10 ms (at $U_N$ )
Typical turn-off time	10 ms (at $U_N$ )
Transmission frequency	10 Hz

### Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output voltage range	24 V AC ... 253 V AC
Limiting continuous current	0.75 A (see derating curve)
Maximum inrush current	30 A (10 ms)
Min. load current	10 mA
Leakage current	$< 1$ mA
Phase angle $\cos \phi$ min	0.5
Max. load value	$4.5 \text{ A}^2\text{s}$
Voltage drop at max. limiting continuous current	$< 1$ V
Output circuit	2-conductor floating, zero voltage switch
Protective circuit	RCV circuit; RCV circuit

### 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
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## Standards and regulations

### Standards/regulations

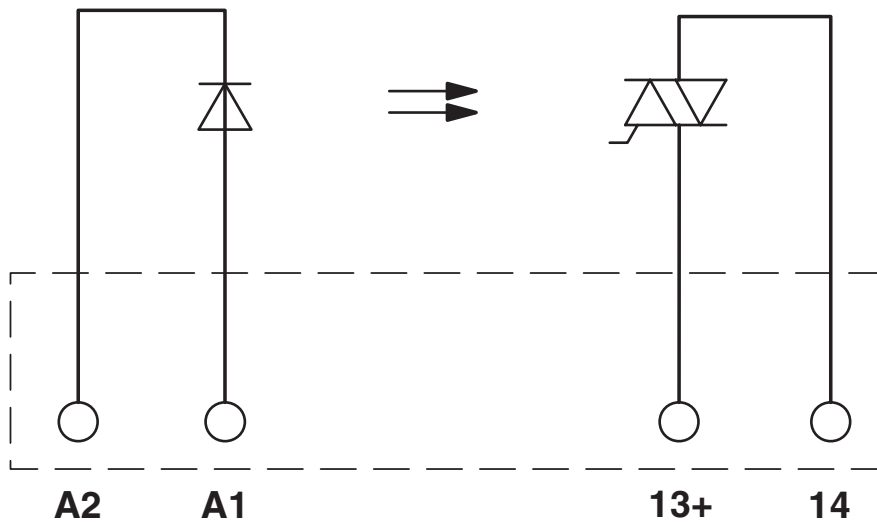
Standards/regulations	IEC 60664 EN 50178
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## Mounting

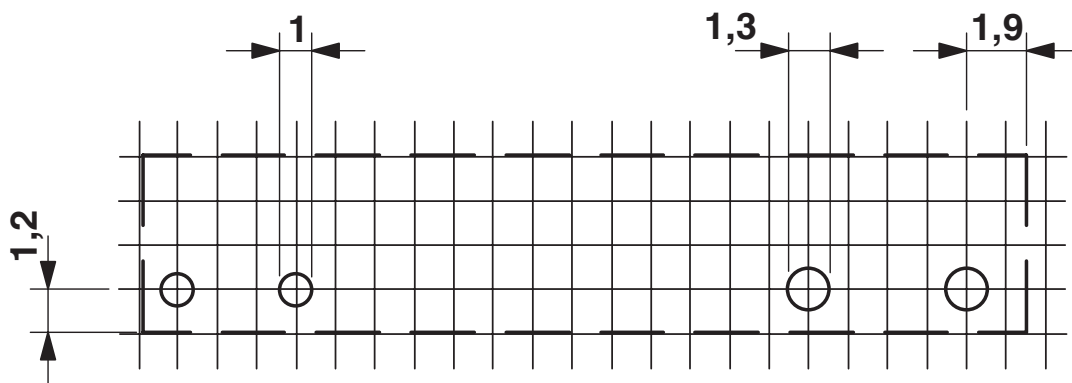
Assembly instructions	in rows with zero spacing
Mounting position	any

Drawings

Circuit diagram



Drilling plan/solder pad geometry



a = pitch division 1.25 mm and 1.27 mm

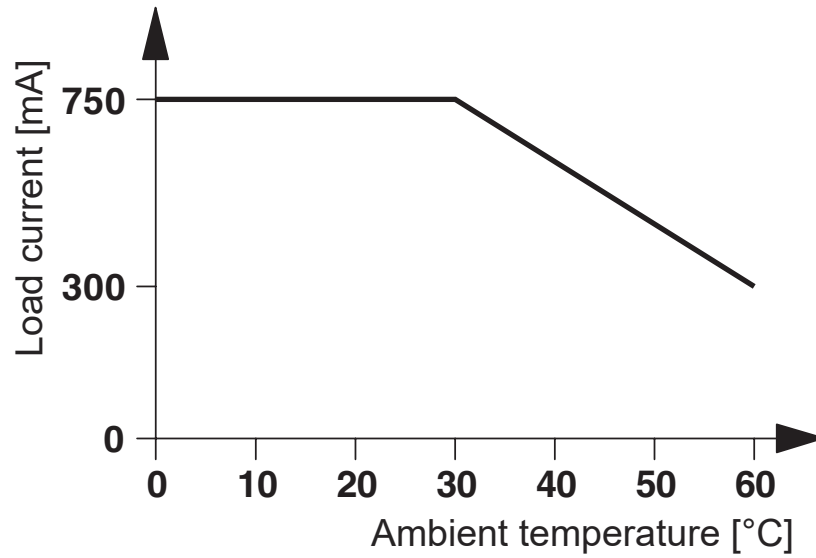
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2967950

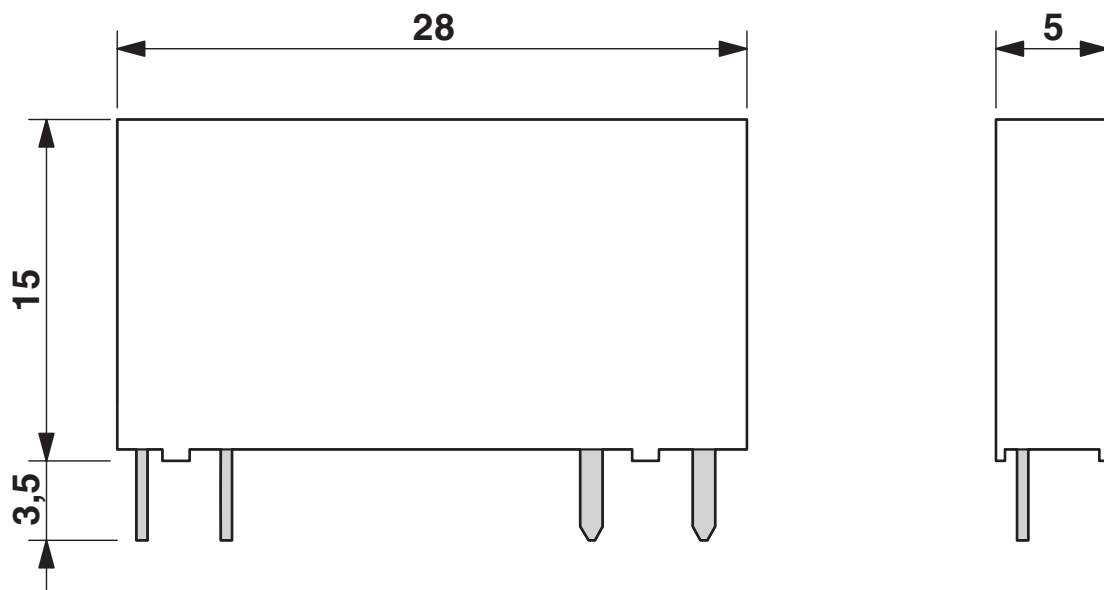
<https://www.phoenixcontact.com/us/products/2967950>



Diagram



Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2967950>



**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



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



**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 8.0	EC001504
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values



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## Accessories

### PLC-BPT- 24DC/21 - Relay base

2900445

<https://www.phoenixcontact.com/us/products/2900445>



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 24 V DC

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### PLC-BPT- 24DC/ 1/SEN - Relay base

2900262

<https://www.phoenixcontact.com/us/products/2900262>



6.2 mm PLC basic terminal block for input functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 24 V DC

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## PLC-BSC- 24DC/ 1/SEN - Relay base

2966061

<https://www.phoenixcontact.com/us/products/2966061>



6.2 mm PLC basic terminal block for input functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 24 V DC

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## PLC-BPT- 24DC/ 1/ACT - Relay base

2900449

<https://www.phoenixcontact.com/us/products/2900449>



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 24 V DC

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## PLC-BSC- 24DC/ 1/ACT - Relay base

2966058

<https://www.phoenixcontact.com/us/products/2966058>



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 24 V DC

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## PLC-BPT- 24UC/ 1/ACT - Relay base

2900450

<https://www.phoenixcontact.com/us/products/2900450>



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 24 V AC/DC

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## PLC-BSC- 24UC/ 1/ACT - Relay base

2982799

<https://www.phoenixcontact.com/us/products/2982799>



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 24 V AC/DC

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## PLC-BSC- 24DC/21/SO46 - Relay base

2980458

<https://www.phoenixcontact.com/us/products/2980458>



6.2 mm PLC basic terminal block with protection against interference currents/voltages on the control side, with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with increased input current consumption, 1 changeover contact, input voltage 24 V DC

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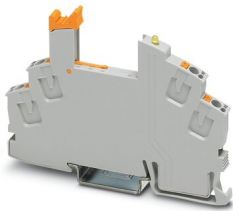
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## RIF-0-BPT/1 - Relay base

2901873

<https://www.phoenixcontact.com/us/products/2901873>



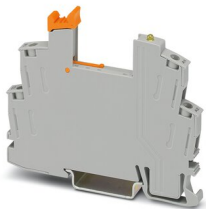
RIF-0... relay base, for miniature power relay with 1 N/O contact or solid-state relays of the same design, push-in connection, for mounting on NS 35/7,5

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## RIF-0-BSC/ 1 - Relay base

2901872

<https://www.phoenixcontact.com/us/products/2901872>



RIF-0... relay base, for miniature power relay with 1 N/O contact or identical solid-state relays, screw connection, for mounting on NS 35/7,5

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