

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



2982100

<https://www.phoenixcontact.com/in/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	CK6
Product key	CK69L1
Catalog page	Page 296 (C-5-2019)
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

Data management status

Date of last data management	11.07.2024
Article revision	03

Insulation characteristics: Standards/regulations

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

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 μ s
Typical turn-off time	400 μ 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

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Surge protection

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	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	in rows with zero spacing
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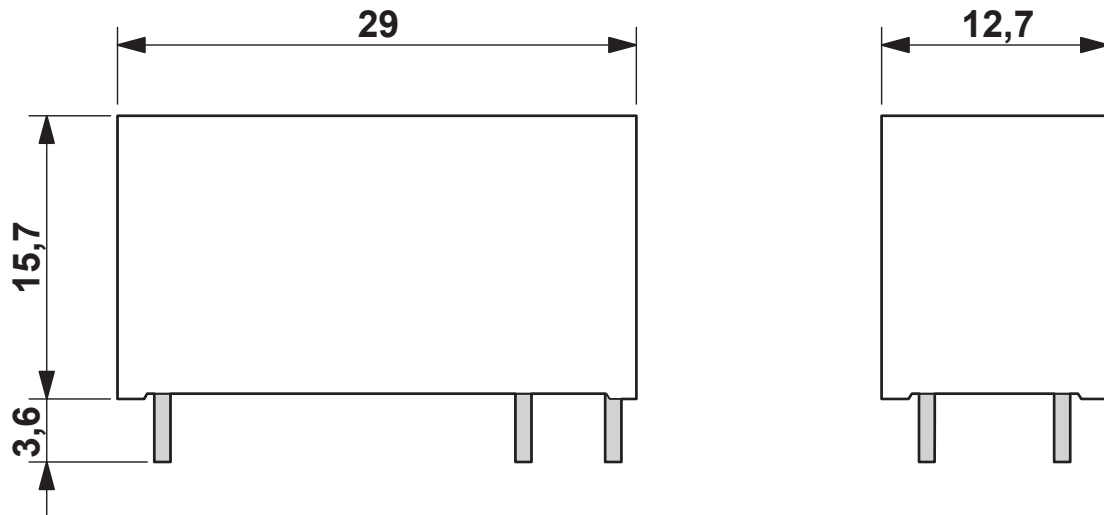
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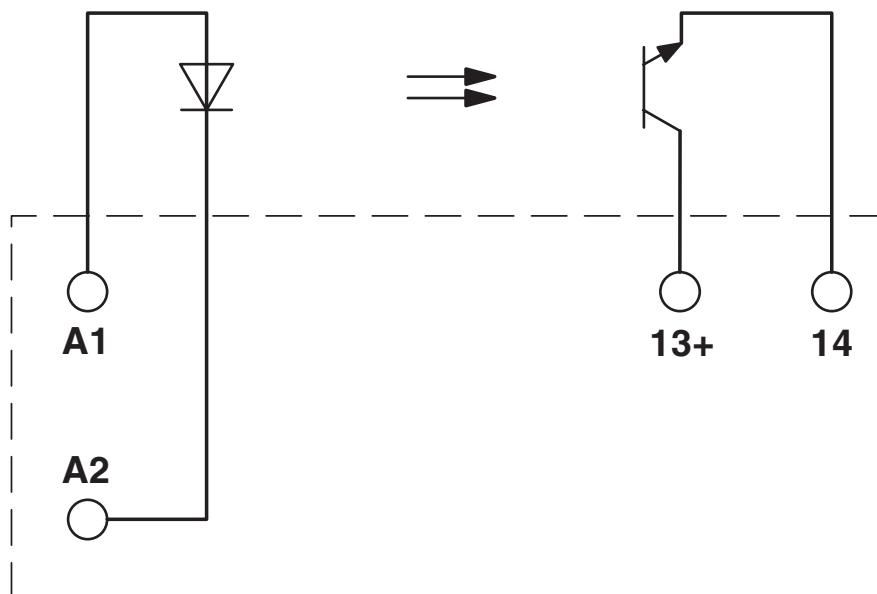
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Drawings

Dimensional drawing



Circuit diagram



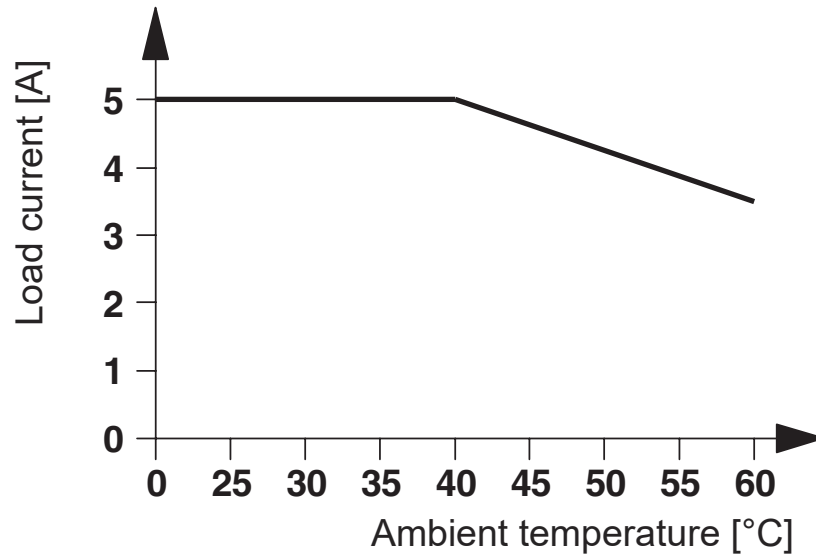
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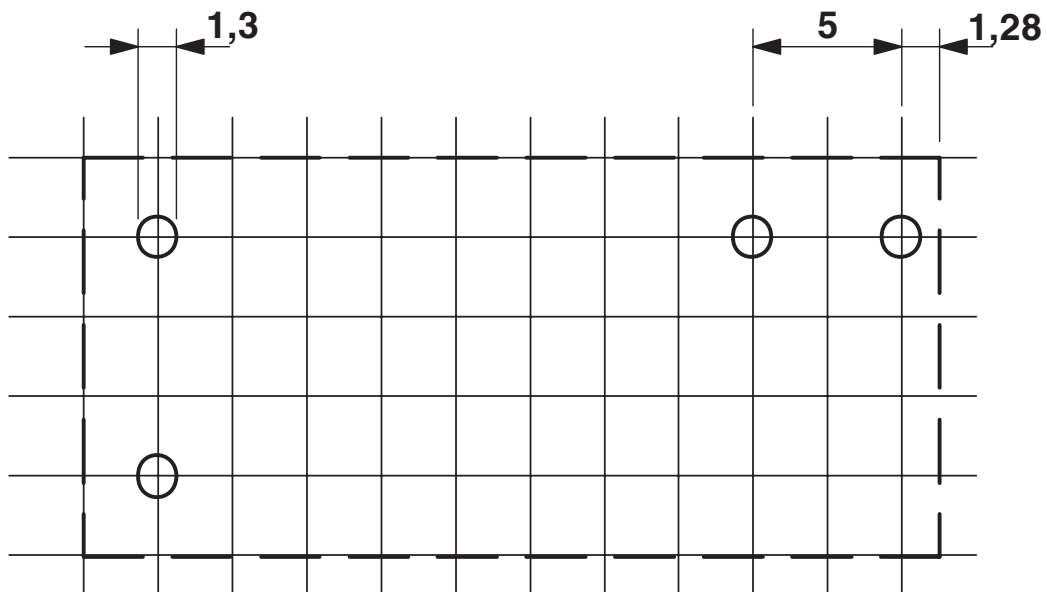
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Diagram



Drilling plan/solder pad geometry



Basic pitch 2.5 mm

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Approvals

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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

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Classifications

ECLASS

ECLASS-11.0	27371604
ECLASS-12.0	27371604
ECLASS-13.0	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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Mandatory accessories

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

2900283

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14 mm PLC basic terminal block with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 2 changeover contacts, input voltage 24 V DC

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

2967015

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14 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 2 changeover contacts, input voltage 24 V DC

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

2900260

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14 mm PLC basic terminal block for high switch-on currents 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

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

2967837

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14 mm PLC basic terminal block for high switch-on currents 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- 24DC/21HC - Relay base

2900254

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14 mm PLC basic terminal block for high continuous currents 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

PLC-BSC- 24DC/21HC - Relay base

2967772

<https://www.phoenixcontact.com/in/products/2967772>



14 mm PLC basic terminal block for high continuous currents with screw 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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RIF-1-BPT/2X21 - Relay base

2900931

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Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

RIF-1-BSC/2X21 - Relay base

2900930

<https://www.phoenixcontact.com/in/products/2900930>



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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