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	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

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	05.09.2025

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

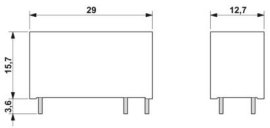
Input data

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 µs
Typical turn-off time	400 µs
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	≤ 200 mV
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection; Polarity protection diode
	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 (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

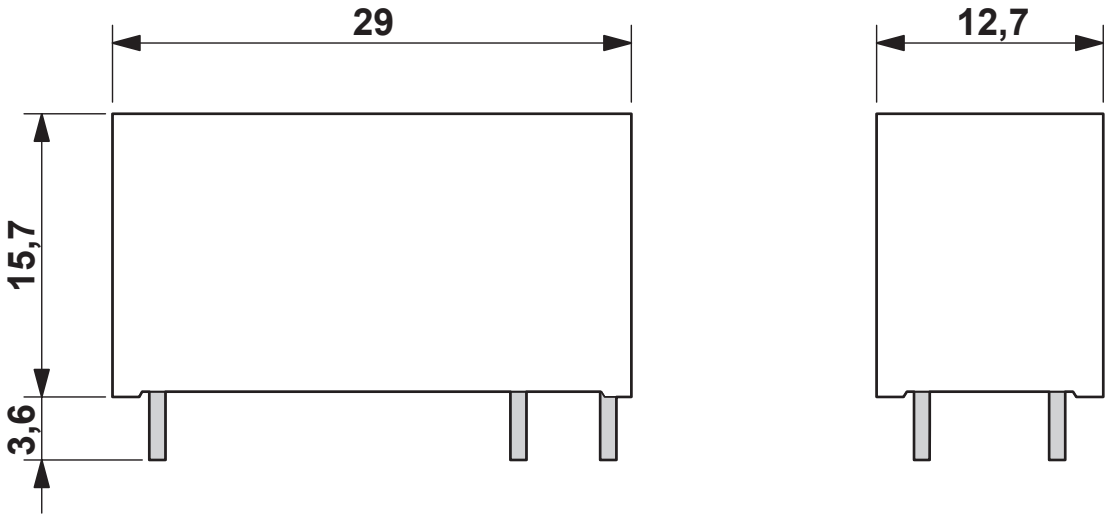
Standards/regulations	IEC 60664
	EN 50178

Mounting

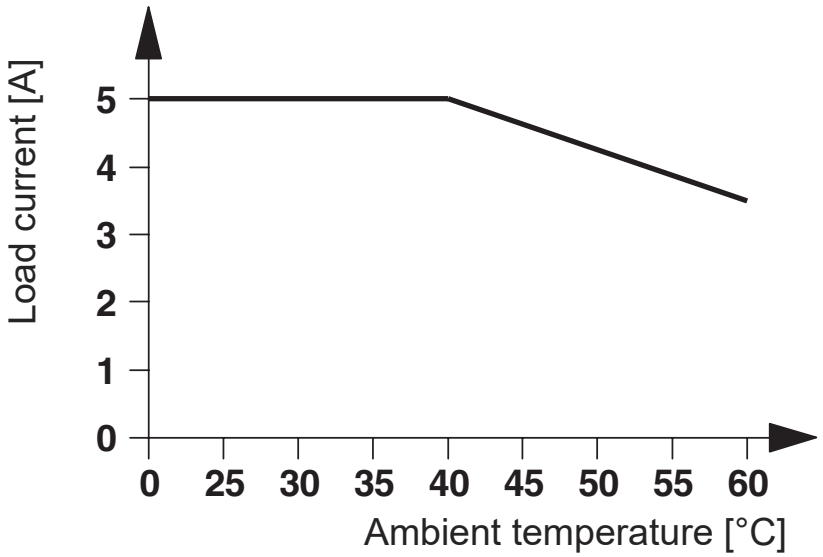
Assembly note	in rows with zero spacing

Drawings

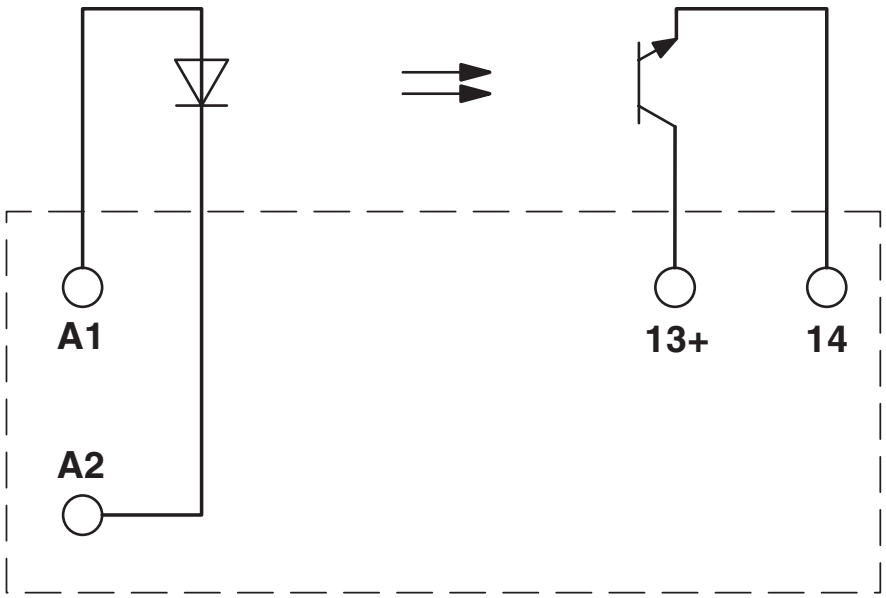
Dimensional drawing



Diagram

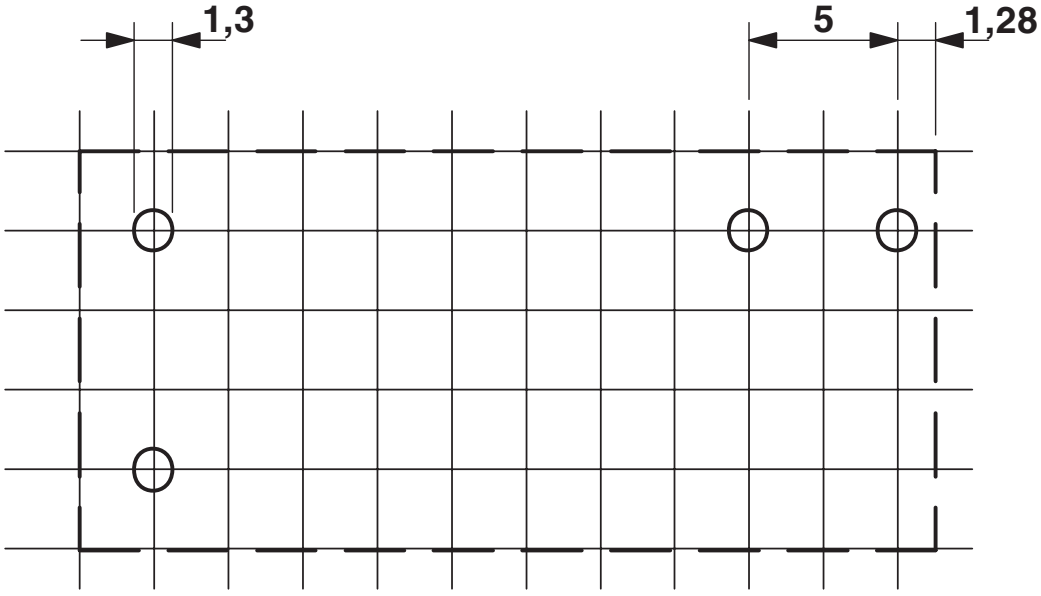


Circuit diagram



Pin assignments: View of the connections

Drilling plan/solder pad geometry



Basic pitch 2.5 mm

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/in/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

Classifications

ECLASS

ECLASS-13.0	27371604
ECLASS-15.0	27371604

ETIM

ETIM 9.0	EC001504

UNSPSC

UNSPSC 21.0	39122300

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%

EF3.0 Climate Change

CO2e kg	0.704 kg CO2e

Mandatory accessories

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

2900283

https://www.phoenixcontact.com/in/products/2900283



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

https://www.phoenixcontact.com/in/products/2967015



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

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

2900260

https://www.phoenixcontact.com/in/products/2900260



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

https://www.phoenixcontact.com/in/products/2967837



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

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

2900254

https://www.phoenixcontact.com/in/products/2900254



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

RIF-1-BPT/2X21 - Relay base

2900931

https://www.phoenixcontact.com/in/products/2900931

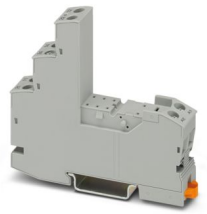


Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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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