

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 24 V DC, output: 24 - 253 V AC/2 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	2982171
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C460
Product key	CK69L2
Catalog page	Page 297 (C-5-2019)
GTIN	4017918996970
Weight per piece (including packing)	11.84 g
Weight per piece (excluding packing)	10.33 g
Customs tariff number	85364190
Country of origin	HU

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

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	02

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	250 V AC
--------------------------	----------

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	0.35
Switching threshold "1" signal in reference to U_N	0.8
Typical input current at U_N	7 mA
Typical response time	10 ms
Typical turn-off time	10 ms
Protective circuit	Reverse polarity protection; Polarity protection diode
Transmission frequency	10 Hz

Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output nominal voltage	230 V AC
Output voltage range	24 V AC ... 253 V AC
Limiting continuous current	2 A (see derating curve)
Maximum inrush current	30 A (10 ms)
Min. load current	25 mA
Leakage current	typ. 1 mA
Surge current	30 A (10 ms)
Max. load value	4 A ² s (tp = 10 ms, at 25 °C)

OPT-24DC/230AC/ 2 - Miniature solid-state relay

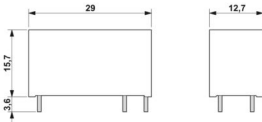


2982171

<https://www.phoenixcontact.com/us/products/2982171>

Voltage drop at max. limiting continuous current	$\leq 1\text{ V}$
Output circuit	2-conductor floating, zero voltage switch
Protective circuit	Surge protection; RC element

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

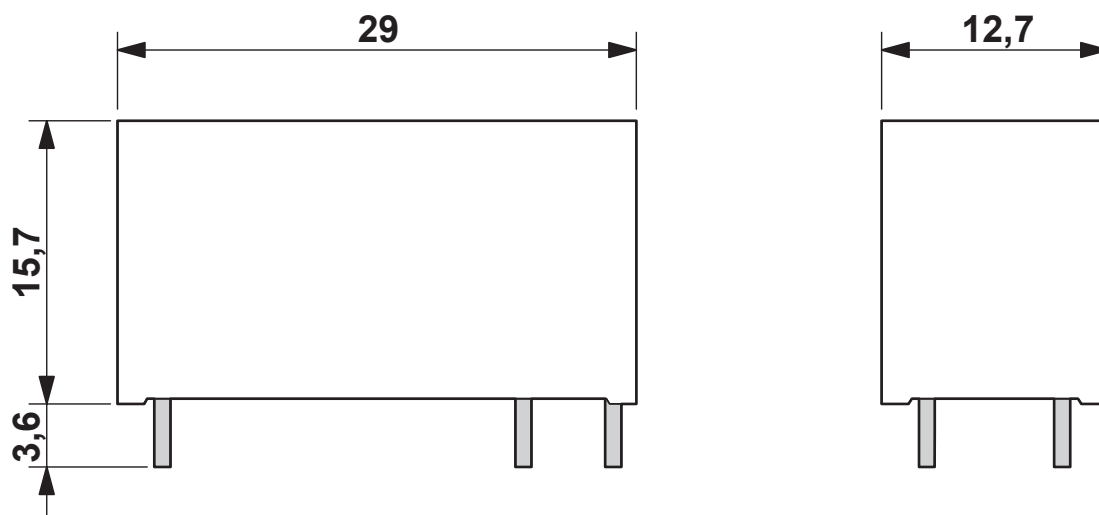
Standards/regulations	
Standards/regulations	IEC 60664 EN 50178

Mounting

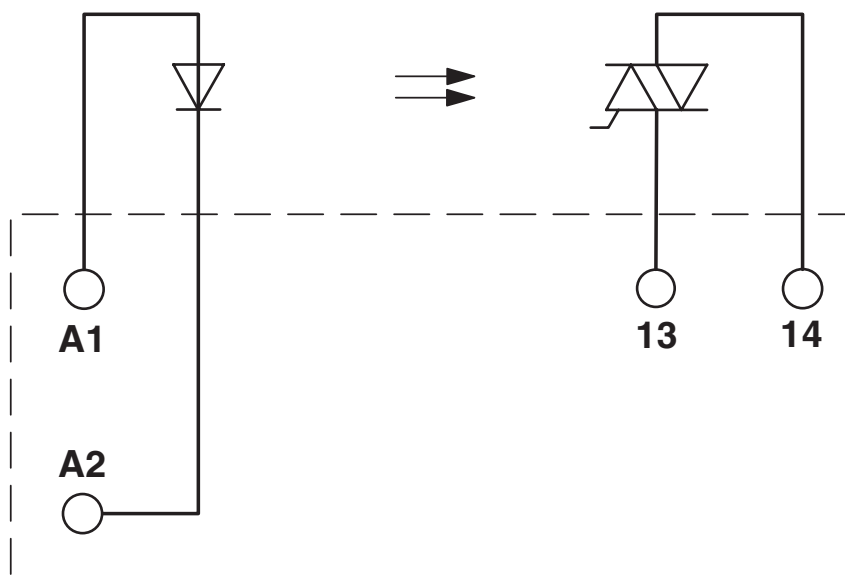
Assembly note	See derating curve
Mounting position	any

Drawings

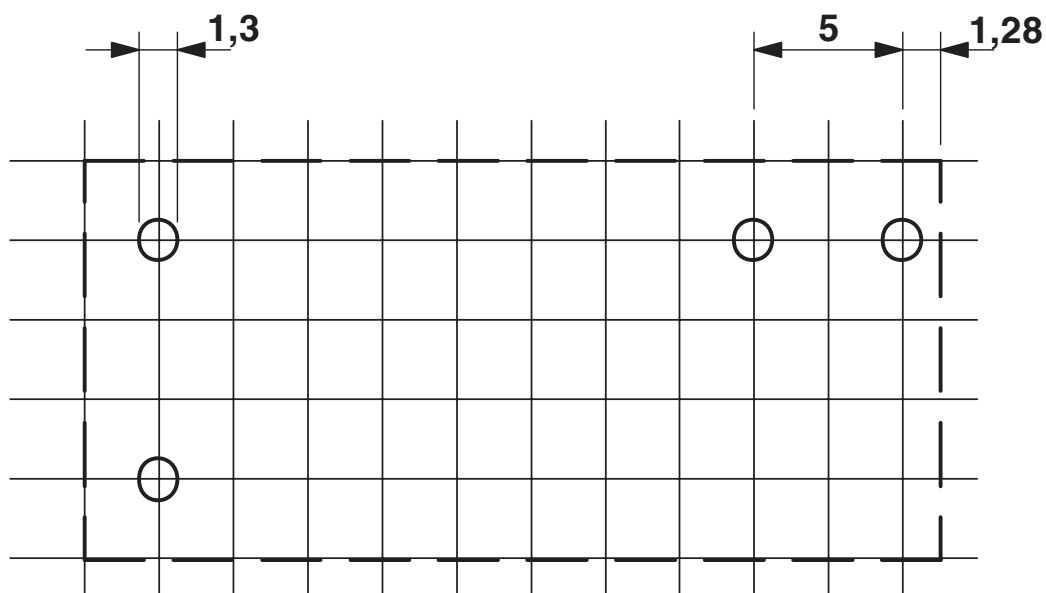
Dimensional drawing



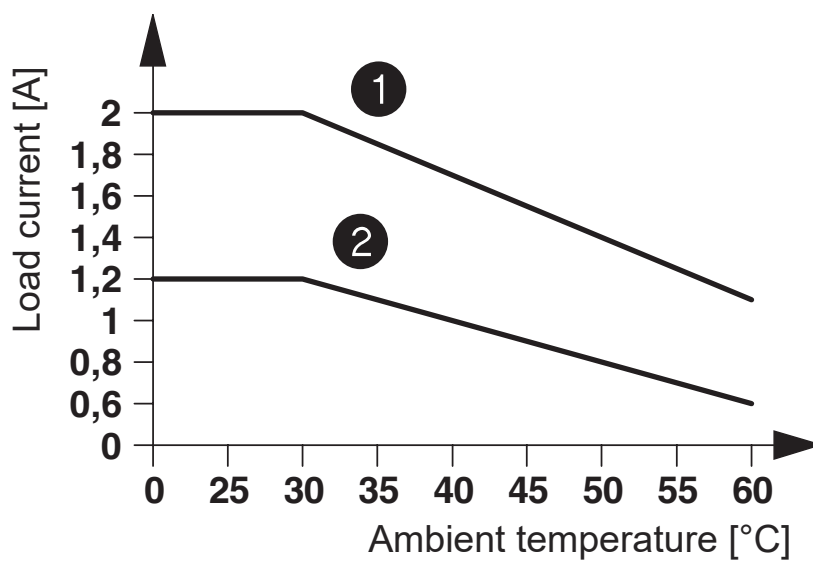
Circuit diagram



Drilling plan/solder pad geometry



Diagram



- ① In rows with 10 mm spacing
- ② In rows with zero spacing

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2982171>



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

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

Classifications

ECLASS

ECLASS-11.0	27371604
ECLASS-12.0	27371604
ECLASS-13.0	27371604

ETIM

ETIM 9.0	EC001504
----------	----------

UNSPSC

UNSPSC 21.0	39122300
-------------	----------

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
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%

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

Mandatory accessories

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

2900283

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

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

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

2900260

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

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

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

2900254

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

OPT-24DC/230AC/ 2 - Miniature solid-state relay



2982171

<https://www.phoenixcontact.com/us/products/2982171>

RIF-1-BPT/2X21 - Relay base

2900931

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

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com