

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

Why buy this product

- ✓ 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

RoHS

Key Commercial Data

Packing unit	1 STK
Minimum order quantity	10 STK
GTIN	 4 017918 937492
GTIN	4017918937492
Weight per Piece (excluding packing)	11.740 g
Custom tariff number	85364190
Country of origin	Hungary

Technical data

Dimensions

Width	12.7 mm
Height	29 mm
Depth	15.7 mm

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Technical data

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C

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	≤ 10 V
Switching threshold "1" signal voltage	≥ 16 V
Typical input current at U_N	7 mA
Typical response time	20 μ s
Typical turn-off time	400 μ s
Type of protection	Reverse polarity protection
Protective circuit/component	Polarity protection diode
Transmission frequency	300 Hz
Power dissipation for nominal condition	0.17 W

Output data

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-wire, floating
Type of protection	Reverse polarity protection
	Surge protection
Protective circuit/component	Polarity protection diode

General

Test voltage input/output	2.5 kV (50 Hz, 1 min.)
Assembly instructions	In rows with zero spacing
Operating mode	100% operating factor
Degree of protection	RT III (wash-proof)
Flammability rating according to UL 94	V0
Designation	Standards/regulations
Standards/regulations	IEC 60664
	EN 50178
Degree of pollution	2

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Technical data

General

Overvoltage category	III
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Standards and Regulations

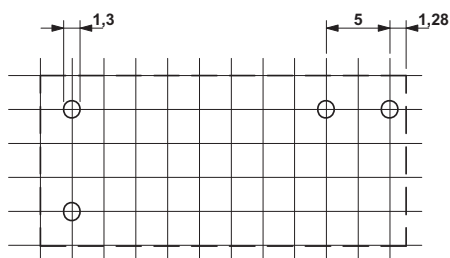
Connection in acc. with standard	CUL
Designation	Standards/regulations
Standards/regulations	IEC 60664
	EN 50178
Rated insulation voltage	100 V DC
Insulation	Basic insulation
Degree of pollution	2
Overvoltage category	III
Flammability rating according to UL 94	V0

Environmental Product Compliance

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

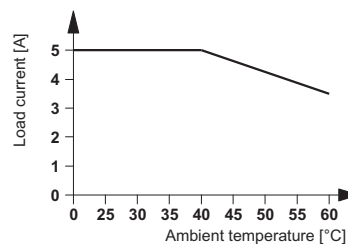
Drawings

Drilling diagram



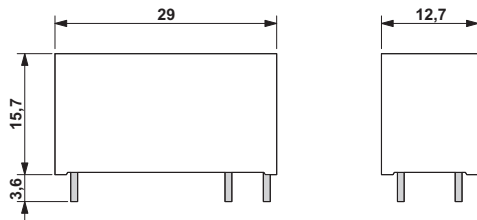
Basic pitch 2.5 mm

Diagram

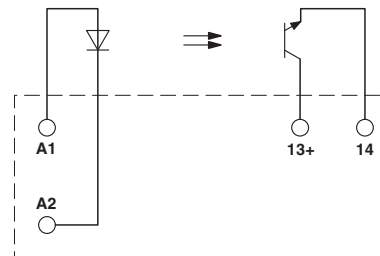


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Dimensional drawing



Circuit diagram



Pin assignments: View of the connections

Classifications

eCl@ss

eCl@ss 5.0	27371001
eCl@ss 5.1	27371001
eCl@ss 6.0	27371604
eCl@ss 7.0	27371604
eCl@ss 8.0	27371604
eCl@ss 9.0	27371604

ETIM

ETIM 2.0	EC001504
ETIM 3.0	EC001504
ETIM 4.0	EC001504
ETIM 5.0	EC001504
ETIM 6.0	EC001504

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121542
UNSPSC 11	39121542
UNSPSC 12.01	39121542
UNSPSC 13.2	39122326

Approvals

Approvals

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UL Recognized / cUL Recognized / GL / EAC / UL Recognized / cUL Recognized / PRS / cULus Recognized

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Approvals

Ex Approvals

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 195083
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 195083
GL		http://exchange.dnv.com/tari/	46016-03 HH
EAC			EAC-Zulassung
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 195083
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 195083
PRS		http://www.prs.pl/	TE/2109/880590/16
cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	

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Accessories

Additional products

Relay base - PLC-BPT- 24DC/21-21 - 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 PDTs, input voltage 24 V DC

Relay base - PLC-BSP- 24DC/21-21 - 2912439



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

Relay base - PLC-BSC- 24DC/21-21 - 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 PDTs, input voltage 24 V DC

Relay base - PLC-BPT- 48DC/21-21 - 2900285



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 PDTs, input voltage 48 V DC

Relay base - PLC-BSP- 48DC/21-21 - 2912455



14 mm PLC basic terminal block with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 2 PDTs, input voltage 48 V DC

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Accessories

Relay base - PLC-BSC- 48DC/21-21 - 2967264



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 PDTs, input voltage 48 V DC

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

Relay base - PLC-BSP- 24DC/ 1IC/ACT - 2912400



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

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

Relay base - PLC-BPT- 24DC/21HC - 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 PDT, input voltage 24 V DC

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Accessories

Relay base - PLC-BSP- 24DC/21HC - 2912345



14 mm PLC basic terminal block for high continuous currents with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 24 V DC

Relay base - PLC-BSC- 24DC/21HC - 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 PDT, input voltage 24 V DC

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

Relay base - PLC-BSP- 48DC/21HC - 2912361



14 mm PLC basic terminal block for high continuous currents with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 48 V DC

Relay base - PLC-BSC- 48DC/21HC - 2967798



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 PDT, input voltage 48 V DC

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Accessories

Relay base - RIF-1-BPT/2X21 - 2900931



RIF-1... relay base, for miniature power relay with 1 or 2 PDTs or solid-state relays of the same design, push-in connection, plug-in option for input/suppressor modules, for mounting on NS 35/7,5

Relay base - RIF-1-BSC/2X21 - 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