

## Miniature solid-state relay - OPT-24DC/230AC/ 2 - 2982171

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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/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
- Switching power of up to 24 V DC/5 A



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	10 pc
GTIN	 4 017918 996970
GTIN	4017918996970
Weight per Piece (excluding packing)	10.330 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
Degree of protection	RT III (wash-proof)

### 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	< 8.4 V DC
Switching threshold "1" signal voltage	> 18 V DC
Typical input current at $U_N$	7 mA
Typical response time	10 ms
Typical turn-off time	10 ms
Type of protection	Reverse polarity protection
Protective circuit/component	Polarity protection diode
Transmission frequency	10 Hz
Power dissipation for nominal condition	0.17 W

### Output data

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 <sup>2</sup> s (tp = 10 ms, at 25 °C)
Voltage drop at max. limiting continuous current	≤ 1 V
Output circuit	2-conductor floating, zero voltage switch
Type of protection	Surge protection
Protective circuit/component	RC element

### General

Test voltage input/output	2.5 kV (50 Hz, 1 min.)
Mounting position	any
Assembly instructions	See derating curve
Operating mode	100% operating factor

### Standards and Regulations

# Miniature solid-state relay - OPT-24DC/230AC/ 2 - 2982171

## Technical data

### Standards and Regulations

Connection in acc. with standard	CUL
Designation	Standards/regulations
Standards/regulations	IEC 60664
	EN 50178
Rated insulation voltage	250 V AC
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	III
Flammability rating according to UL 94	V0

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Classifications

### eCl@ss

eCl@ss 5.0	27371001
eCl@ss 5.1	27371000
eCl@ss 6.0	27371600
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
ETIM 7.0	EC001504

### UNSPSC

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

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## Approvals

### Approvals

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#### Approvals


UL Recognized / cUL Recognized / UL Recognized / cUL Recognized / EAC / EAC


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#### Ex Approvals

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### Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
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EAC			TR_TS_D_00573_c
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EAC			TR_TS_S_00010_c
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## Accessories

### Additional products

## Miniature solid-state relay - OPT-24DC/230AC/ 2 - 2982171

### Accessories

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

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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

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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

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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

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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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## Miniature solid-state relay - OPT-24DC/230AC/ 2 - 2982171

### 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

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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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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

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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

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Relay base - PLC-BPT- 48DC/21HC - 2900256



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 48 V DC

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## Miniature solid-state relay - OPT-24DC/230AC/ 2 - 2982171

### Accessories

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

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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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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

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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

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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

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## Miniature solid-state relay - OPT-24DC/230AC/ 2 - 2982171

### 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

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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