

## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

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Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 60 V DC, output: 24 - 253 V AC/0.75 A

### Your advantages

- Vibration and shock resistant
- RT III-proof (wash-proof)
- Wear-free and durable
- Switching power of up to 24 V DC/5 A
- Zero voltage switch at AC output
- Can be soldered on PCB

COMPLETE RoHS

### Key Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 10 pc               |
| GTIN                                 | <br>4 017918 190521 |
| GTIN                                 | 4017918190521       |
| Weight per Piece (excluding packing) | 5.560 g             |
| Custom tariff number                 | 85364190            |
| Country of origin                    | Germany             |

### Technical data

#### Dimensions

|        |       |
|--------|-------|
| Width  | 5 mm  |
| Height | 28 mm |
| Depth  | 15 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 $U_N$               | 60 V DC                 |
| Input voltage range in reference to $U_N$ | 0.9 ... 1.1             |
| Input voltage range                       | 54 V DC ... 66 V DC     |
| Switching threshold "0" signal, voltage   | $\leq 15$ V             |
| Switching threshold "1" signal voltage    | $\geq 50$ V             |
| Typical input current at $U_N$            | 3 mA                    |
| Typical response time                     | 9 ms (at $U_N$ )        |
| Typical turn-off time                     | 700 $\mu$ s (at $U_N$ ) |
| Transmission frequency                    | 10 Hz                   |
| Power dissipation for nominal condition   | 0.18 W                  |

### Output data

|  |   |
|--|---|
| Output voltage range                             | 24 V AC ... 253 V AC                      |
| Limiting continuous current                      | 0.75 A (see derating curve)               |
| Maximum inrush current                           | 30 A (10 ms)                              |
| Min. load current                                | 10 mA                                     |
| Leakage current                                  | < 1 mA (in off state)                     |
| Max. load value                                  | 4.5 A <sup>2</sup> s                      |
| Voltage drop at max. limiting continuous current | < 1 V                                     |
| Output circuit                                   | 2-conductor floating, zero voltage switch |
| Type of protection                               | RCV circuit                               |
| Protective circuit/component                     | RCV circuit                               |

### General

|                           |                           |
|---------------------------|---------------------------|
| Test voltage input/output | 2.5 kV (50 Hz, 1 min.)    |
| Mounting position         | any                       |
| Assembly instructions     | In rows with zero spacing |
| Operating mode            | 100% operating factor     |

### Standards and Regulations

|                                  |                       |
|----------------------------------|-----------------------|
| Connection in acc. with standard | CUL                   |
| Designation                      | Standards/regulations |
| Standards/regulations            | IEC 60664             |
|                                  | EN 50178              |

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## Technical data

### Standards and Regulations

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Pollution degree     | 2                |
| Overvoltage category | III              |

### 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 5.1 | 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 |

## Approvals

### Approvals

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### Approvals









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

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## Approvals

Ex Approvals

### 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     |
| 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     |
| PRS            |    | <a href="http://www.prs.pl/">http://www.prs.pl/</a>   | TE/2109/880590/16 |
| GL             |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>   | 46016-03 HH       |
| 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     |
| 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     |
| EAC            |  |   | TR_TS_D_00573_c   |
| EAC            |  |   | TR_TS_S_00010_c   |

## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

### Accessories

#### Additional products

Relay base - PLC-BPT- 60DC/21 - 2900279



6.2 mm PLC basic terminal block with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 60 V DC

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Relay base - PLC-BSP- 60DC/21 - 2967332



6.2 mm PLC basic terminal block with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 60 V DC

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Relay base - PLC-BSC- 60DC/21 - 2966100



6.2 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 60 V DC

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Relay base - PLC-BPT-120UC/21 - 2900280



6.2 mm PLC basic terminal block with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 120 V AC/DC

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Relay base - PLC-BSP-120UC/21 - 2967167



6.2 mm PLC basic terminal block with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 120 V AC/DC

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## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

### Accessories

Relay base - PLC-BSC-120UC/21 - 2966032



6.2 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 120 V AC/DC

Relay base - PLC-BPT-230UC/21 - 2900281



6.2 mm PLC basic terminal block with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 230 V AC/DC

Relay base - PLC-BSP-230UC/21 - 2967183



6.2 mm PLC basic terminal block with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 230 V AC/DC

Relay base - PLC-BSC-230UC/21 - 2966045



6.2 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 230 V AC/DC

Relay base - PLC-BPT-120UC/ 1/SEN - 2900451



6.2 mm PLC basic terminal block for input functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 120 V AC/DC

## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

### Accessories

Relay base - PLC-BSP-120UC/ 1/SEN - 2967154



6.2 mm PLC basic terminal block for input functions with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 120 V AC/DC

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Relay base - PLC-BSC-120UC/ 1/SEN - 2966074



6.2 mm PLC basic terminal block for input functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 120 V AC/DC

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Relay base - PLC-BPT-230UC/ 1/SEN - 2900452



6.2 mm PLC basic terminal block for input functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 230 V AC/DC

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Relay base - PLC-BSP-230UC/ 1/SEN - 2967170



6.2 mm PLC basic terminal block for input functions with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 230 V AC/DC

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Relay base - PLC-BSC-230UC/ 1/SEN - 2966087



6.2 mm PLC basic terminal block for input functions with screw connection, without relay or solid-state relay, for mounting on NS 35/7,5 DIN rail, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage: 230 V AC/DC

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## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

### Accessories

#### Relay base - PLC-BPT-120UC/21/SO46 - 2900453



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 PDT, input voltage 120 V AC

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#### Relay base - PLC-BSP-120UC/21/SO46 - 2980351



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 PDT, input voltage 120 V AC

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#### Relay base - PLC-BSC-120UC/21/SO46 - 2980319



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 PDT, input voltage 120 V AC

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#### Relay base - PLC-BPT-230UC/21/SO46 - 2900455



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 PDT, input voltage 230 V AC

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#### Relay base - PLC-BSP-230UC/21/SO46 - 2980377



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 PDT, input voltage 230 V AC



## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

### Accessories

#### Relay base - PLC-BSC-230UC/21/SO46 - 2980335



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 PDT, input voltage 230 V AC

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#### Relay base - PLC-BPT-120UC/ 1/SEN/SO46 - 2900456



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with push-in connection, without relay or solid-state relay, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 120 V AC

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#### Relay base - PLC-BSP-120UC/ 1/SEN/SO46 - 2980364



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with spring-cage connection, without relay or solid-state relay, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 120 V AC

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#### Relay base - PLC-BSC-120UC/ 1/SEN/SO46 - 2980322



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with screw connection, without relay or solid-state relay, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 120 V AC

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#### Relay base - PLC-BPT-230UC/ 1/SEN/SO46 - 2900457



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with push-in connection, without relay or solid-state relay, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 230 V AC

## Miniature solid-state relay - OPT-60DC/230AC/ 1 - 2967963

### Accessories

Relay base - PLC-BSP-230UC/ 1/SEN/SO46 - 2980380



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with spring-cage connection, without relay or solid-state relay, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 230 V AC

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Relay base - PLC-BSC-230UC/ 1/SEN/SO46 - 2980348



6.2 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with screw connection, without relay or solid-state relay, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 230 V AC