

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



PLC-INTERFACE for input functions, consisting of PLC-BSC.../SEN basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 120 V AC/110 V DC, output: 3 - 48 V DC/100 mA

### Why buy this product

- ✓ Time savings of up to 60 %
- ✓ Efficient connection to system cabling using V8 adapter
- ✓ No need for additional modular terminal blocks
- ✓ Relay modules with safe isolation according to DIN EN 50178 between coil and contact
- ✓ Space savings of up to 80 %
- ✓ Functional plug-in bridges
- ✓ Sensor connected directly to relay module



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 10 STK                                                                                                  |
| GTIN                                 | <br>4 017918 130619 |
| GTIN                                 | 4017918130619                                                                                           |
| Weight per Piece (excluding packing) | 38.120 g                                                                                                |
| Custom tariff number                 | 85364900                                                                                                |
| Country of origin                    | Germany                                                                                                 |
| Sales Key                            | 08                                                                                                      |

### Technical data

#### Note

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---------------------------------------------------------------------------|

#### Dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |

# Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

## Technical data

### Dimensions

|       |       |
|-------|-------|
| Depth | 94 mm |
|-------|-------|

### Ambient conditions

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

### Input data

|                                                      |                      |
|------------------------------------------------------|----------------------|
| Nominal input voltage $U_N$                          | 120 V AC             |
|                                                      | 110 V DC             |
| Input voltage range in reference to $U_N$            | 0.8 ... 1.1          |
| Input voltage range                                  | 96 V AC ... 132 V AC |
|                                                      | 88 V DC ... 121 V DC |
| Switching threshold "0" signal in reference to $U_N$ | $\leq 0.3$           |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.8$           |
| Typical input current at $U_N$                       | 3.5 mA               |
| Typical response time                                | 6 ms (at $U_N$ )     |
| Typical turn-off time                                | 10 ms (at $U_N$ )    |
| Operating voltage display                            | Yellow LED           |
| Type of protection                                   | Bridge rectifier     |
| Protective circuit/component                         | Bridge rectifier     |
| Transmission frequency                               | 10 Hz                |
| Power dissipation for nominal condition              | 0.42 W               |

### Output data

|                                                  |                             |
|--------------------------------------------------|-----------------------------|
| Output voltage range                             | 3 V DC ... 48 V DC          |
| Limiting continuous current                      | 100 mA                      |
| Voltage drop at max. limiting continuous current | $\leq 1$ V                  |
| Output circuit                                   | 2-wire, floating            |
| Type of protection                               | Reverse polarity protection |
|                                                  | Surge protection            |
| Protective circuit/component                     | Polarity protection diode   |

### Connection data, input side

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection name                  | Input side                                   |
| Connection method                | Screw connection                             |
| Stripping length                 | 8 mm                                         |
| Screw thread                     | M3                                           |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 26 ... 14                                    |

### Connection data, output side

|                 |             |
|-----------------|-------------|
| Connection name | Output side |
|-----------------|-------------|

# Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

## Technical data

### Connection data, output side

|                                  |                      |
|----------------------------------|----------------------|
| Connection method                | Screw connection     |
| Stripping length                 | 8 mm                 |
| Screw thread                     | M3                   |
| Conductor cross section solid    | 0.14 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.14 mm² ... 2.5 mm² |
| Conductor cross section AWG      | 26 ... 14            |

### 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     |
| Flammability rating according to UL 94 | V0                        |
| Designation                            | Standards/regulations     |
| Standards/regulations                  | IEC 60664                 |
|                                        | EN 50178                  |
| Degree of pollution                    | 2                         |
| Overvoltage category                   | III                       |

### Standards and Regulations

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

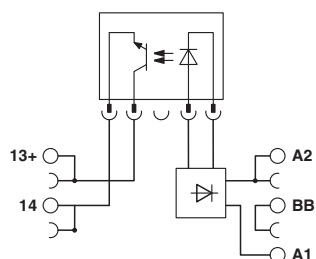
### Environmental Product Compliance

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

## Drawings

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

Circuit diagram



### 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

##### Approvals

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

##### Ex Approvals

#### Approval details

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Approvals

|                  |                                                                                     |                                                                                                                                                       |                          |
|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 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 238705            |
| UL Listed        |    | <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 172140            |
| 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 238705            |
| cUL Listed       |    | <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 172140            |
| GL               |  | <a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>                                                                             | 46016-03 HH              |
| EAC              |  |                                                                                                                                                       | RU C-<br>DE.A*30.B.01082 |
| PRS              |  | <a href="http://www.prs.pl/">http://www.prs.pl/</a>                                                                                                   | TE/2109/880590/16        |
| cULus 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> |                          |
| cULus Listed     |                                                                                     |                                                                                                                                                       |                          |

### Accessories

Accessories

Bridge

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Accessories

Continuous plug-in bridge - FBST 500-PLC RD - 2966786



Continuous plug-in bridge, length: 500 mm, color: red

Continuous plug-in bridge - FBST 500-PLC BU - 2966692



Continuous plug-in bridge, length: 500 mm, color: blue

Continuous plug-in bridge - FBST 500-PLC GY - 2966838



Continuous plug-in bridge, length: 500 mm, color: gray

Single plug-in bridge - FBST 6-PLC RD - 2966236



Single plug-in bridge, length: 6 mm, number of positions: 2, color: red

Single plug-in bridge - FBST 6-PLC BU - 2966812



Single plug-in bridge, length: 6 mm, number of positions: 2, color: blue

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Accessories

Single plug-in bridge - FBST 6-PLC GY - 2966825



Single plug-in bridge, length: 6 mm, number of positions: 2, color: gray

Single plug-in bridge - FBST 8-PLC GY - 2967688



Single plug-in bridge, length: 8 mm, number of positions: 2, color: gray

### Controller board

System connection - PLC-V8/FLK14/IN - 2296553



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of input cards; connection 1: Plug connection; connection 2: 1x IDC/FLK pin strip (14-position); number of channels: 8; control logic: positive switching

System connection - PLC-V8/FLK14/IN/M - 2304115



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of input cards; connection 1: Plug connection; connection 2: 1x IDC/FLK pin strip (14-position); number of channels: 8; control logic: negative switching

System connection - PLC-V8/D15S/IN - 2296074



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of input cards; connection 1: Plug connection; connection 2: 1x D-SUB pin strip (15-position); number of channels: 8; control logic: positive switching

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Accessories

System connection - PLC-V8/D15B/IN - 2296087



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of input cards; connection 1: Plug connection; connection 2: 1x D-SUB socket strip (15-position); number of channels: 8; control logic: positive switching

---

### DIN rail

DIN rail, unperforated - NS 35/ 7,5 V2A UNPERF 2000MM - 0801377

DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Stainless steel V2A, uncoated, length: 2000 mm, color: silver

---

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Copper, uncoated, length: 2000 mm, color: copper-colored

---

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Copper, uncoated, length: 2000 mm, color: copper-colored

# Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

## Accessories

---

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, in acc. with EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

## Labeled terminal marker

Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm

## Partition plate

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Accessories

Separating plate - PLC-ATP BK - 2966841



Separating plate, 2 mm thick, required at the start and end of a PLC terminal strip. Furthermore, it is used for: visual separation of groups, safe isolation of different voltages of neighboring PLC relays in acc. with DIN VDE 0106-101, isolation

---

### Power module

Power terminal block - PLC-ESK GY - 2966508



Power terminal block, for the input of up to four potentials, for mounting on NS 35/7.5

---

### Relay socket

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

---

### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

---

### Single solid-state relay

Miniature solid-state relay - OPT-60DC/ 48DC/100 - 2966621



Plug-in miniature solid-state relay, input solid-state relay, 1 N/O contact, input: 60 V DC, output: 3 - 48 V DC/100 mA

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Accessories

#### Terminal marking

Zack marker strip - ZB 6/WH-100:UNBEDRUCKT - 5060935



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm

Marker for terminal blocks - UC-TM 6 - 0818085



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm

Marker for terminal blocks - UCT-TM 6 - 0828736



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm

### Spare parts

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

## Solid-state relay module - PLC-OSC-120UC/ 48DC/100/SEN - 2966799

### Accessories

Miniature solid-state relay - OPT-60DC/ 48DC/100 - 2966621



Plug-in miniature solid-state relay, input solid-state relay, 1 N/O contact, input: 60 V DC, output: 3 - 48 V DC/100 mA