

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

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PLC-INTERFACE for output functions, consisting of PLC-BSC.../ACT 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: 5 V DC, output: 3 - 33 V DC/3 A

### Your advantages

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



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 10 pc                                                                                                   |
| GTIN         | <br>4 017918 727499 |
| GTIN         | 4017918727499                                                                                           |
| 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  |
| Depth  | 94 mm  |

#### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Ambient temperature (operation) | -25 °C ... 60 °C |
|---------------------------------|------------------|

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## Technical data

### Ambient conditions

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

### Input data

|                                                      |                             |
|------------------------------------------------------|-----------------------------|
| Nominal input voltage $U_N$                          | 5 V DC                      |
| Input voltage range in reference to $U_N$            | 0.8 ... 1.2                 |
| Input voltage range                                  | 4 V DC ... 6 V DC           |
| Switching threshold "0" signal in reference to $U_N$ | $\leq 0.25$                 |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.8$                  |
| Typical input current at $U_N$                       | 9.5 mA                      |
| Typical response time                                | 20 $\mu$ s (at $U_N$ )      |
| Typical turn-off time                                | 300 $\mu$ s (at $U_N$ )     |
| Operating voltage display                            | Yellow LED                  |
| Type of protection                                   | Reverse polarity protection |
|                                                      | Free-wheeling diode         |
| Protective circuit/component                         | Polarity protection diode   |
|                                                      | Damping diode               |
| Transmission frequency                               | 300 Hz                      |
| Power dissipation for nominal condition              | 0.05 W                      |

### Output data

|                                                  |                             |
|--------------------------------------------------|-----------------------------|
| Output voltage range                             | 3 V DC ... 33 V DC          |
| Limiting continuous current                      | 3 A (see derating curve)    |
| Maximum inrush current                           | 15 A (10 ms)                |
| Voltage drop at max. limiting continuous current | $\leq 200$ 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.)    |
| Mounting position                      | any                       |
| Assembly instructions                  | In rows with zero spacing |
| Operating mode                         | 100% operating factor     |
| Flammability rating according to UL 94 | V0 (Housing)              |

### Connection data

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| 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> |

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## Technical data

### Connection data

|                             |           |
|-----------------------------|-----------|
| Conductor cross section AWG | 26 ... 14 |
|-----------------------------|-----------|

### Connection data 2

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

### Standards and Regulations

|                                  |                       |
|----------------------------------|-----------------------|
| Connection in acc. with standard | CUL                   |
| Designation                      | Standards/regulations |
| Standards/regulations            | IEC 60664             |
|                                  | EN 50178              |
| Insulation                       | Basic insulation      |
| Pollution degree                 | 2                     |
| Overvoltage category             | III                   |

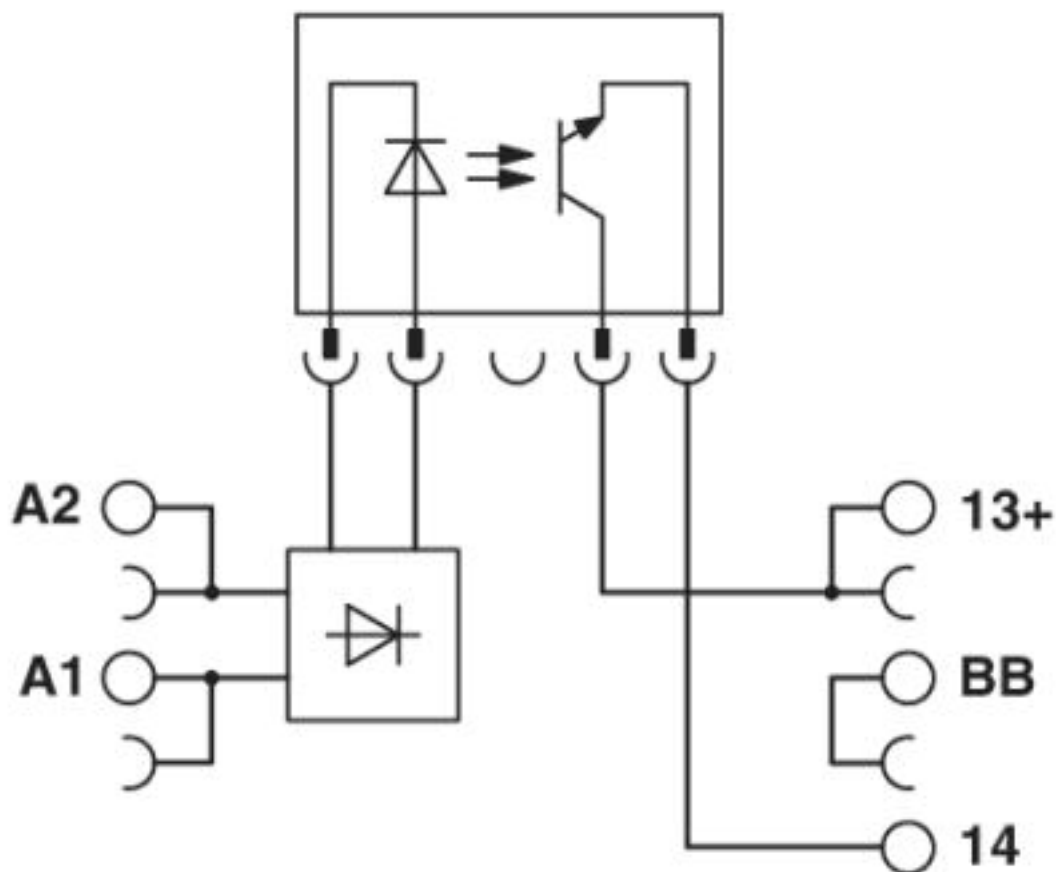
### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

Circuit diagram



### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371604 |
| eCl@ss 4.0    | 27371100 |
| eCl@ss 4.1    | 27371100 |
| eCl@ss 5.0    | 27371000 |
| 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 |

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### Classifications

#### ETIM

|          |          |
|----------|----------|
| 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 |
| UNSPSC 18.0   | 39122326 |
| UNSPSC 19.0   | 39122326 |
| UNSPSC 20.0   | 39122326 |
| UNSPSC 21.0   | 39122326 |

### Approvals

#### Approvals

#### Approvals

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

#### Ex Approvals

#### Approval details

|     |                                                                                     |                                                     |                   |
|-----|-------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------|
| PRS |  | <a href="http://www.prs.pl/">http://www.prs.pl/</a> | TE/2109/880590/16 |
|-----|-------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------|

|           |                                                                                     |                                                                                                                                                       |               |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|               |                                                                                     |                                                                                                                                                       |               |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                |                                                                                     |                                                                                                                                                       |               |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### Approvals

cUL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 172140

DNV GL



<https://approvalfinder.dnvgl.com/>

TAE0000196-03

EAC



TR\_TS\_D\_00573\_c

EAC



RU\*C-  
DE.\*08.B.00010

cULus Recognized



cULus Listed



### Accessories

#### Accessories

#### Bridge

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

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### Accessories

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



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

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



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

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



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

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



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

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



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

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DIN rail

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### Accessories

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



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

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



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

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



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

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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, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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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, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### Accessories

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, 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, 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, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Stainless steel V2A, uncoated, 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, Number of individual labels: 10

### Partition plate

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### 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

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### 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

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### Relay socket

Relay base - PLC-BSC- 5DC/ 1/ACT - 2980241



6.2 mm PLC basic terminal block for output functions 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 5 V DC

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### 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

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### Single solid-state relay

Miniature solid-state relay - OPT- 5DC/ 24DC/ 2 - 2967989



Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input voltage: 5 V DC

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### Accessories

#### Terminal marking

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



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 6 - 0818085



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

Marker for terminal blocks - UCT-TM 6 - 0828736



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 60

#### Spare parts

Relay base - PLC-BSC- 5DC/ 1/ACT - 2980241



6.2 mm PLC basic terminal block for output functions 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 5 V DC

## Solid-state relay module - PLC-OSC- 5DC/ 24DC/ 2/ACT - 2980144

### Accessories

Miniature solid-state relay - OPT- 5DC/ 24DC/ 2 - 2967989



Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input voltage: 5 V DC

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