

## Solid-state relay module - PLC-OSP-110DC/110DC/ 3RW - 2982566

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage connection and integrated miniature solid-state relay, range:  $0.7 \times U_N$  to  $1.25 \times U_N$ , temperature range:  $-25^\circ\text{C}$  to  $+70^\circ\text{C}$ , 1 N/O contact, input: 110 V DC, output: 12 ... 140 V DC/3 A

The illustration shows the 24 V version.

### Why buy this product

- ✓ Shock resistance according to DIN 50155 (requirements according to EN 61373)
- ✓ Temperature range of  $-25^\circ\text{C}$  to  $+70^\circ\text{C}$
- ✓ Input voltage range of  $0.7 - 1.25 \times U_N$



### Key Commercial Data

|                      |          |
|----------------------|----------|
| Packing unit         | 1 STK    |
| Custom tariff number | 85364900 |
| Country of origin    | Germany  |

### 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  | 86 mm  |

#### Ambient conditions

|                                         |                                            |
|-----------------------------------------|--------------------------------------------|
| Ambient temperature (operation)         | $-25^\circ\text{C} \dots 70^\circ\text{C}$ |
| Ambient temperature (storage/transport) | $-40^\circ\text{C} \dots 85^\circ\text{C}$ |

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## Technical data

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP20 |
|----------------------|------|

### Input data

|                                                      |                                                               |
|------------------------------------------------------|---------------------------------------------------------------|
| Nominal input voltage $U_N$                          | 110 V DC                                                      |
| Input voltage range in reference to $U_N$            | 0.7 ... 1.25 ( $t < 1 \text{ s} = 0.6 \dots 1.4 \times U_N$ ) |
| Input voltage range                                  | 77 V DC ... 137.5 V DC                                        |
| Switching threshold "0" signal in reference to $U_N$ | < 0.3                                                         |
| Switching threshold "1" signal in reference to $U_N$ | > 0.6                                                         |
| Typical input current at $U_N$                       | 5.5 mA                                                        |
| Typical response time                                | 400 $\mu\text{s}$                                             |
| Typical turn-off time                                | 200 $\mu\text{s}$                                             |
| Operating voltage display                            | Yellow LED                                                    |
| Type of protection                                   | Reverse polarity protection                                   |
|                                                      | Surge protection                                              |
| Protective circuit/component                         | Series polarity protection diode                              |
| Surge voltage protection                             | > 150 V                                                       |
| Transmission frequency                               | 300 Hz                                                        |

### Output data

|                                                  |                                                              |
|--------------------------------------------------|--------------------------------------------------------------|
| Output nominal voltage                           | 110 V DC                                                     |
| Output voltage range                             | 12 V DC ... 140 V DC ( $t < 1 \text{ s} = 1.40 \times U_N$ ) |
| Limiting continuous current                      | 3 A (see derating curve)                                     |
| Surge voltage protection                         | > 150 V                                                      |
| Voltage drop at max. limiting continuous current | < 150 mV                                                     |
| Output circuit                                   | 2-wire, floating                                             |
| Type of protection                               | Reverse polarity protection                                  |
|                                                  | Surge protection                                             |
| Protective circuit/component                     | Parallel polarity protection diode                           |

### Connection data, input side

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection name                  | Input side                                   |
| Connection method                | Spring-cage connection                       |
| Stripping length                 | 8 mm                                         |
| 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 |
|-----------------|-------------|

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### Technical data

#### Connection data, output side

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection method                | Spring-cage connection                       |
| Stripping length                 | 8 mm                                         |
| 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                                    |

#### General

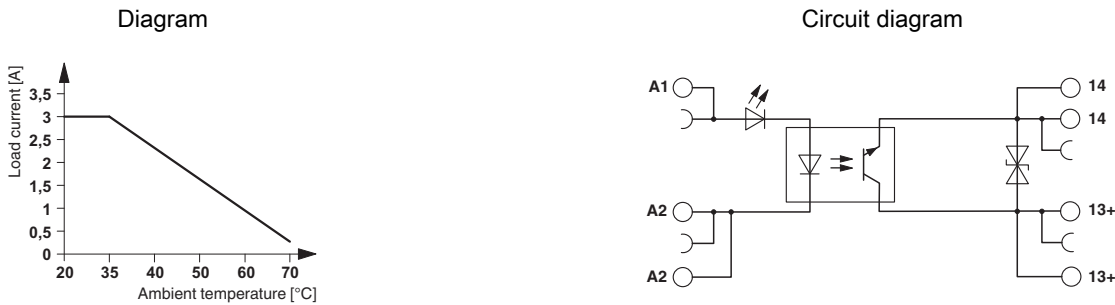
|                                |                                                                  |
|--------------------------------|------------------------------------------------------------------|
| Test voltage input/output      | 2.5 kV <sub>rms</sub>                                            |
| Mounting position              | any                                                              |
| Assembly instructions          | In rows with zero spacing                                        |
| Operating mode                 | 100% operating factor                                            |
| Designation                    | Air clearances and creepage distances between the power circuits |
| Standards/regulations          | IEC 60664                                                        |
|                                | EN 50178                                                         |
|                                | IEC 62103                                                        |
| Rated surge voltage/insulation | 4 kV / basic insulation                                          |
| Rated insulation voltage       | 160 V DC                                                         |
| Degree of pollution            | 2                                                                |
| Overvoltage category           | III                                                              |

#### Standards and Regulations

|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Connection in acc. with standard | CUL                                                              |
| Designation                      | Air clearances and creepage distances between the power circuits |
| Standards/regulations            | IEC 60664                                                        |
|                                  | EN 50178                                                         |
|                                  | IEC 62103                                                        |
| Rated insulation voltage         | 160 V DC                                                         |
| Rated surge voltage/insulation   | 4 kV / basic insulation                                          |
| Degree of pollution              | 2                                                                |
| Overvoltage category             | III                                                              |

### Drawings

Solid-state relay module - PLC-OSP-110DC/110DC/ 3RW - 2982566



Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| 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 |

UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121542 |
| UNSPSC 11     | 39121542 |
| UNSPSC 12.01  | 39121542 |
| UNSPSC 13.2   | 39121542 |

Approvals

Approvals

Approvals

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

## Solid-state relay module - PLC-OSP-110DC/110DC/ 3RW - 2982566

### Approvals

Ex Approvals

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#### Approval details

UL Listed  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 172140

cUL Listed  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 172140

GL <http://www.gl-group.com/newbuilding/approvals/index.html> 46016-03 HH

UL Recognized  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 238705

cUL Recognized  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 238705

EAC 7500651.22.01.00244

PRS <http://www.prs.pl/TE/2109/880590/16>

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

cULus Listed 

### Accessories

Accessories

Bridge

## Solid-state relay module - PLC-OSP-110DC/110DC/ 3RW - 2982566

### 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-OSP-110DC/110DC/ 3RW - 2982566

### Accessories

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

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



DIN rail, unperforated, Width: 35 mm, Height: 7.5 mm, Length: 2000 mm, Color: silver

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



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

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



DIN rail, material: Copper, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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## Solid-state relay module - PLC-OSP-110DC/110DC/ 3RW - 2982566

### Accessories

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



DIN rail, material: Steel, unperforated, height 15 mm, width 35 mm, length: 2 m

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



DIN rail, material: Copper, unperforated, 1.5 mm thick, height 15 mm, width 35 mm, length: 2 m

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



DIN rail, material: Steel, unperforated, 2.3 mm thick, height 15 mm, width 35 mm, length: 2 m

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



DIN rail, deep drawn, high profile, unperforated, 1.5 mm thick, material: aluminum, height 15 mm, width 35 mm, length 2000 mm

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



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 15 mm, width 35 mm, length: 2000 mm

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## Solid-state relay module - PLC-OSP-110DC/110DC/ 3RW - 2982566

### Accessories

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



DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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### Partition plate

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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### 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