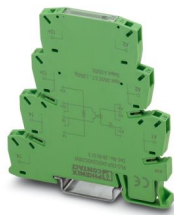


PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513
<https://www.phoenixcontact.com/us/products/2980513>

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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°C to $+70^{\circ}\text{C}$, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

Your advantages

- Shock resistance in accordance with DIN 50155 (requirements in accordance with EN 61373)
- Temperature range: -25°C ... $+70^{\circ}\text{C}$
- Input voltage range of $0.7 - 1.25 \times U_N$

Commercial data

Item number	2980513
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	CK6223
Catalog page	Page 415 (C-5-2017)
GTIN	4046356103947
Weight per piece (including packing)	29.83 g
Weight per piece (excluding packing)	27.99 g
Customs tariff number	85364190
Country of origin	DE

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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Technical data

Product properties

Product type	Solid-state relay module
Product family	PLC-INTERFACE
Application	Railway applications
Operating mode	100% operating factor

Data management status

Date of last data management	07.05.2024
Article revision	04

Insulation characteristics: Air clearances and creepage distances between the power circuits

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

Electrical properties

Maximum power dissipation for nominal condition	0.2 W
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Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V
Rated surge voltage	4 kV

Input data

Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	$0.7 \dots 1.25$ ($t < 1 \text{ s} = 0.6 \dots 1.4 \times U_N$)
Input voltage range	16.8 V DC ... 30 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	8.5 mA
Typical response time	40 μs
Typical turn-off time	200 μs
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode
Transmission frequency	300 Hz

Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output nominal voltage	24 V DC
Output voltage range	3 V DC ... 33 V DC ($t < 1 \text{ s} = 1.40 \times U_N$)
Limiting continuous current	3 A (see derating curve)
Surge voltage protection	> 33 V DC
Voltage drop at max. limiting continuous current	< 200 mV

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Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection; Suppressor diode

Connection data

Input side

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section rigid	0.14 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 2.5 mm ²
Conductor cross section AWG	26 ... 14

Output side

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section rigid	0.14 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 2.5 mm ²
Conductor cross section AWG	26 ... 14

Dimensions

Width	6.2 mm
Height	80 mm
Depth	86 mm

Material specifications

Color	green (RAL 6021)
Flammability rating according to UL 94	V0 (Housing)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	IEC 60664
	EN 50178

Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

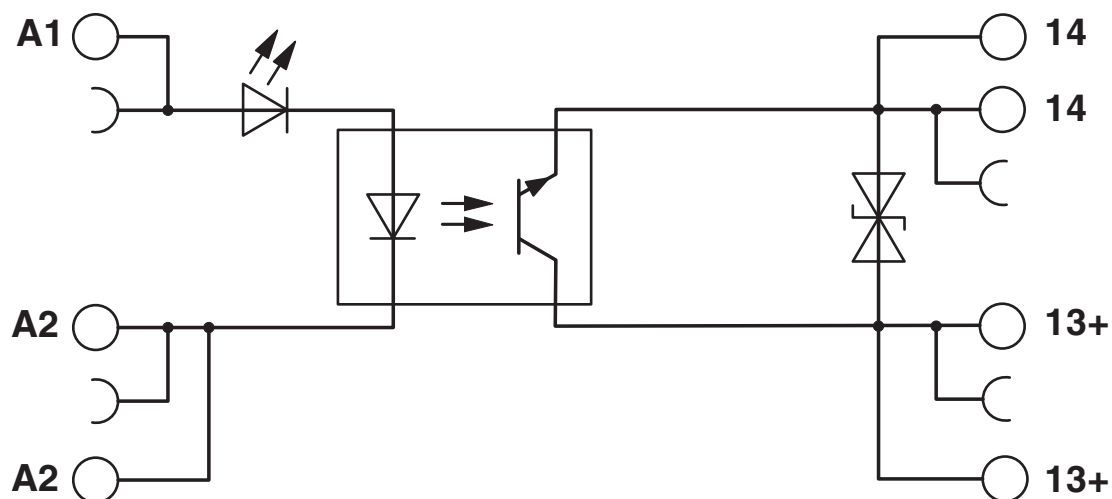
PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module

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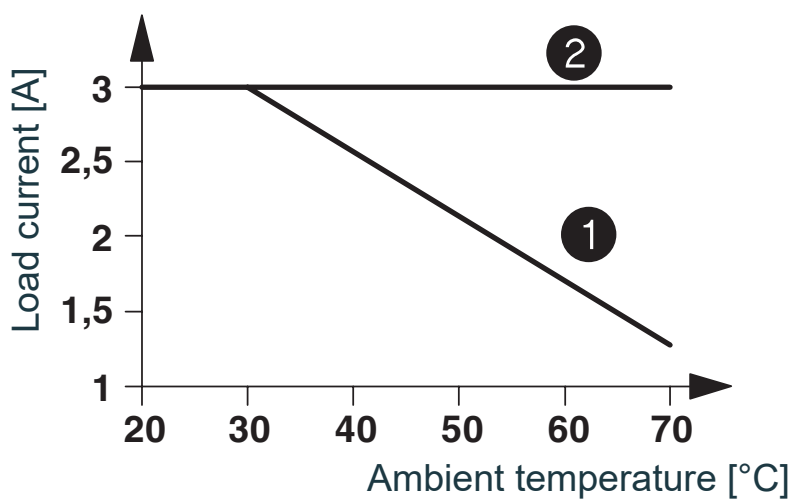
<https://www.phoenixcontact.com/us/products/2980513>

Drawings

Circuit diagram



Diagram



- ① In rows with zero spacing
- ② in rows with > 20 mm spacing

The figure shows the load current as function of the ambient temperature range PLC-OSP-.../24DC/3RW. Duty cycle: 100% operating factor

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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Classifications

ECLASS

ECLASS-11.0	27371604
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PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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Accessories

i Note: Applying some accessories below might limit this product.

FBST 500-PLC RD - Continuous plug-in bridge

2966786

<https://www.phoenixcontact.com/us/products/2966786>



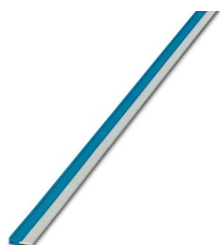
Continuous plug-in bridge, length: 500 mm, color: red

i Max. current carrying capacity: 32 A

FBST 500-PLC BU - Continuous plug-in bridge

2966692

<https://www.phoenixcontact.com/us/products/2966692>



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

i Max. current carrying capacity: 32 A

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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FBST 500-PLC GY - Continuous plug-in bridge

2966838

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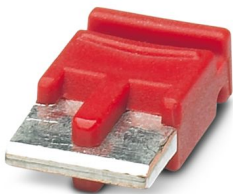
Continuous plug-in bridge, length: 500 mm, color: gray

 Max. current carrying capacity: 32 A

FBST 6-PLC RD - Single plug-in bridge

2966236

<https://www.phoenixcontact.com/us/products/2966236>



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

 Max. current carrying capacity: 6 A

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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FBST 6-PLC BU - Single plug-in bridge

2966812

<https://www.phoenixcontact.com/us/products/2966812>

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



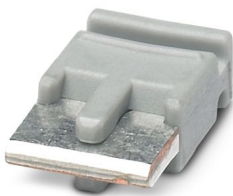
 Max. current carrying capacity: 6 A

FBST 6-PLC GY - Single plug-in bridge

2966825

<https://www.phoenixcontact.com/us/products/2966825>

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



 Max. current carrying capacity: 6 A

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

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FBST 8-PLC GY - Single plug-in bridge

2967688

<https://www.phoenixcontact.com/us/products/2967688>

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



 Max. current carrying capacity: 6 A

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

0801377

<https://www.phoenixcontact.com/us/products/0801377>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Stainless steel V2A, uncoated, Standard profile, color: silver

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

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

0801733

<https://www.phoenixcontact.com/us/products/0801733>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

NS 35/ 7,5 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

0801762

<https://www.phoenixcontact.com/us/products/0801762>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

<https://www.phoenixcontact.com/us/products/2980513>

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

1201714

<https://www.phoenixcontact.com/us/products/1201714>



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

NS 35/15 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201895

<https://www.phoenixcontact.com/us/products/1201895>



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

<https://www.phoenixcontact.com/us/products/2980513>

NS 35/15-2,3 UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201798

<https://www.phoenixcontact.com/us/products/1201798>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

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

1201756

<https://www.phoenixcontact.com/us/products/1201756>



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

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NS 35/15 PERF 2000MM - DIN rail perforated

1201730

<https://www.phoenixcontact.com/us/products/1201730>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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

0801681

<https://www.phoenixcontact.com/us/products/0801681>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

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PLC-ESK GY - Power terminal block

2966508

<https://www.phoenixcontact.com/us/products/2966508>



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

PLC-ATP BK - Separating plate

2966841

<https://www.phoenixcontact.com/us/products/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

PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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<https://www.phoenixcontact.com/us/products/2980513>

SZF 1-0,6X3,5 - Screwdriver

1204517

<https://www.phoenixcontact.com/us/products/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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