

PLC-OSP- 24DC/ 48DC/500/W - Solid-state relay module

2980649
<https://www.phoenixcontact.com/us/products/2980649>

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PLC electronic changeover contact with spring-cage connection, for mounting on DIN rail NS 35/7,5, input: 24 V DC, output: 3-48 V DC/500 mA

Your advantages

- Resistant to vibrations and shocks
- Wear-free switching with no contact bounce
- Protective circuit in input and output
- DC voltage outputs of up to 300 V DC/1 A or up to 24 V DC/10 A
- Electronic changeover contact output up to 48 V DC/500 mA
- Status indicator
- Option of bridging adjacent modules

Commercial data

Item number	2980649
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	CK6223
Catalog page	Page 353 (C-7-2013)
GTIN	4046356051385
Weight per piece (including packing)	29.75 g
Weight per piece (excluding packing)	28.57 g
Customs tariff number	85364190
Country of origin	DE

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Technical data

Product properties

Product type	Solid-state relay module
Product family	PLC-INTERFACE
Application	With integrated solid-state relay
Operating mode	100% operating factor

Data management status

Date of last data management	21.05.2024
Article revision	04

Insulation characteristics: Standards/regulations

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

Electrical properties

Maximum power dissipation for nominal condition	0.07 W
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Standards/regulations

Rated insulation voltage	300 V
Rated surge voltage	4 kV

Input data

Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.8 ... 1.2
Input voltage range	19.2 V DC ... 28.8 V DC
Switching threshold "0" signal in reference to U_N	≤ 0.4
Switching threshold "1" signal in reference to U_N	≥ 0.8
Typical input current at U_N	3 mA
Typical response time	0.03 ms
Typical turn-off time	0.15 ms
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection
Transmission frequency	1000 Hz

Output data

Contact switching type	1 changeover contact
Design of digital output	electronic
Output voltage range	3 V DC ... 48 V DC
Limiting continuous current	500 mA (see derating curve)
Min. load current	1 mA
Voltage drop at max. limiting continuous current	< 1.2 V

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

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

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Standards and regulations

Standards/regulations

Standards/regulations	IEC 60664
	EN 50178

Mounting

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

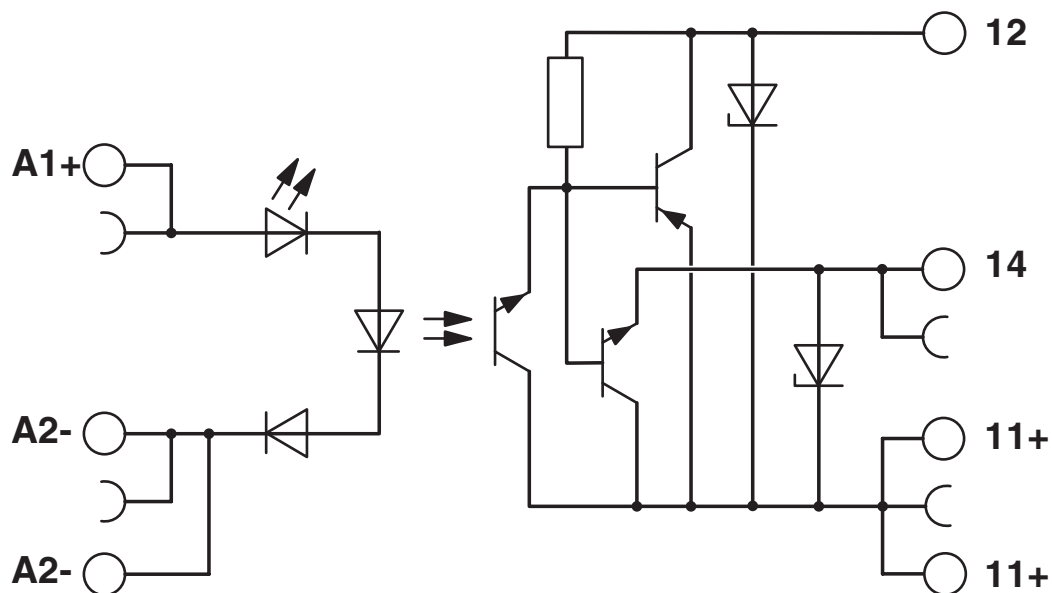
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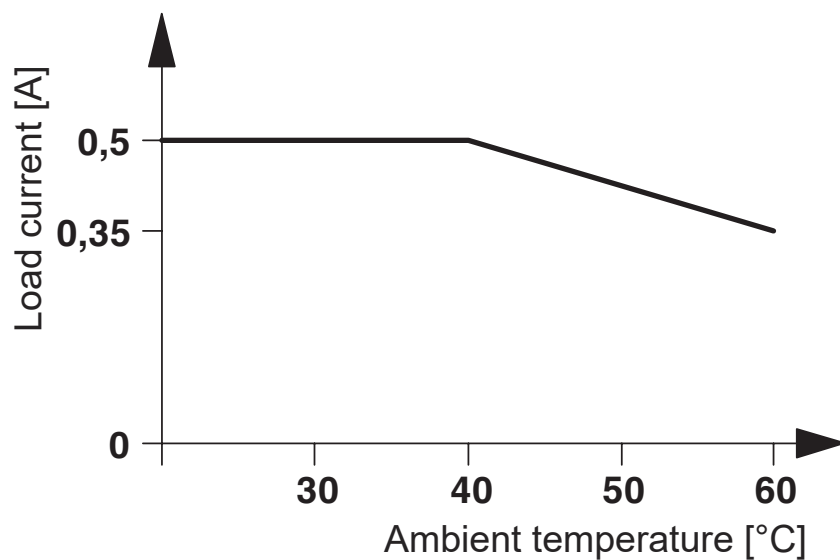
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Drawings

Circuit diagram



Diagram



The figure shows the derating curve for PLC-...24DC/48DC/500/W

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Classifications

ECLASS

ECLASS-11.0	27371604
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Environmental product compliance

China RoHS	
Environment friendly use period (EFUP)	EFUP-50 An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

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

FBST 500-PLC RD - Continuous plug-in bridge

2966786

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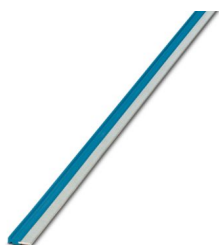
Continuous plug-in bridge, length: 500 mm, color: red

i Max. current carrying capacity: 32 A

FBST 500-PLC BU - Continuous plug-in bridge

2966692

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

i Max. current carrying capacity: 32 A

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FBST 500-PLC GY - Continuous plug-in bridge

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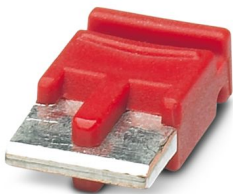
Continuous plug-in bridge, length: 500 mm, color: gray

 Max. current carrying capacity: 32 A

FBST 6-PLC RD - Single plug-in bridge

2966236

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

 Max. current carrying capacity: 6 A

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FBST 6-PLC BU - Single plug-in bridge

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



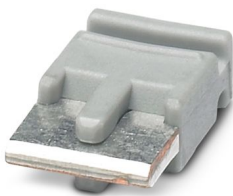
 Max. current carrying capacity: 6 A

FBST 6-PLC GY - Single plug-in bridge

2966825

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



 Max. current carrying capacity: 6 A

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FBST 8-PLC GY - Single plug-in bridge

2967688

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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

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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

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

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

1201714

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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

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

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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

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

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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

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PLC-ESK GY - Power terminal block

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

PLC-ATP BK - Separating plate

2966841

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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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SZF 1-0,6X3,5 - Screwdriver

1204517

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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

PLC-V8/FLK14/OUT - System connection

2295554

<https://www.phoenixcontact.com/us/products/2295554>



V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: IDC/FLK pin strip 1x 14-position, connection 2: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), connection 3: Screw connection 1x 2-position, number of channels: 8, control logic: positive switching

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PLC-V8/FLK14/OUT/M - System connection

2304102

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V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: IDC/FLK pin strip 1x 14-position, connection 2: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), connection 3: Screw connection 1x 2-position, number of channels: 8, control logic: minusschaltend

PLC-V8/D15S/OUT - System connection

2296058

<https://www.phoenixcontact.com/us/products/2296058>



V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: D-SUB pin strip 1x 15-position, connection 2: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), connection 3: Screw connection 1x 2-position, number of channels: 8, control logic: positive switching

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PLC-V8/D15B/OUT - System connection

2296061

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V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: D-SUB socket strip 1x 15-position, connection 2: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), connection 3: Screw connection 1x 2-position, number of channels: 8, control logic: positive switching

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