

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



2980636

<https://www.phoenixcontact.com/us/products/2980636>

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PLC-INTERFACE with electronic changeover contact, consisting of PLC-BSC.../21 basic terminal block with screw connection and integrated miniature solid-state relay, for mounting on NS 35/7,5 DIN rail, 1 changeover contact, input: 24 V DC, output: 3 V DC ... 48 V DC/500 mA

## Your advantages

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

## Commercial data

Item number	2980636
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	CK6213
Catalog page	Page 409 (C-5-2019)
GTIN	4046356051378
Weight per piece (including packing)	34.12 g
Weight per piece (excluding packing)	33.47 g
Customs tariff number	85364190
Country of origin	DE

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



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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

### Insulation characteristics

Insulation	Basic insulation
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### Insulation characteristics: Standards/regulations

Insulation	Basic insulation
Oversupply 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 $U_N$	$\leq 0.4$
Switching threshold "1" signal in reference to $U_N$	$\geq 0.8$
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
Contact connection type	Power contact
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

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section rigid	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> 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule) 2x 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule)
Conductor cross section AWG	26 ... 14
Tightening torque	0.45 Nm ... 0.55 Nm (Usually these terminal blocks must be supported during conductor connection (held by one hand, supported on the housing))

## Dimensions

Width	6.2 mm
Height	80 mm
Depth	95 mm

## Material specifications

Color	gray (RAL 7042)
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

## Approvals

Corrosive gas test	
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

## Standards and regulations

Standards/regulations	
Standards/regulations	IEC 60664
	EN 50178

## Mounting

Mounting type	DIN rail mounting
Assembly instructions	in rows with zero spacing

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Mounting position

any

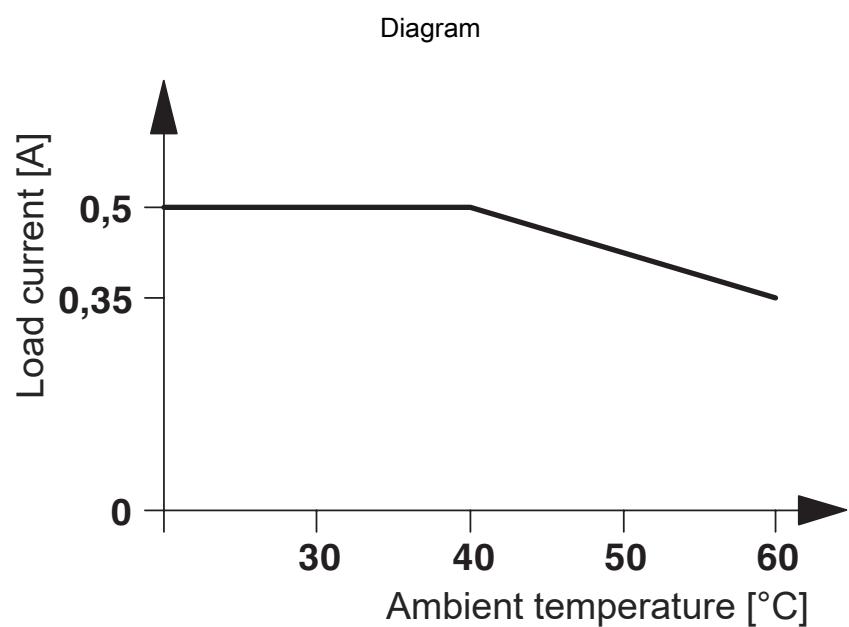
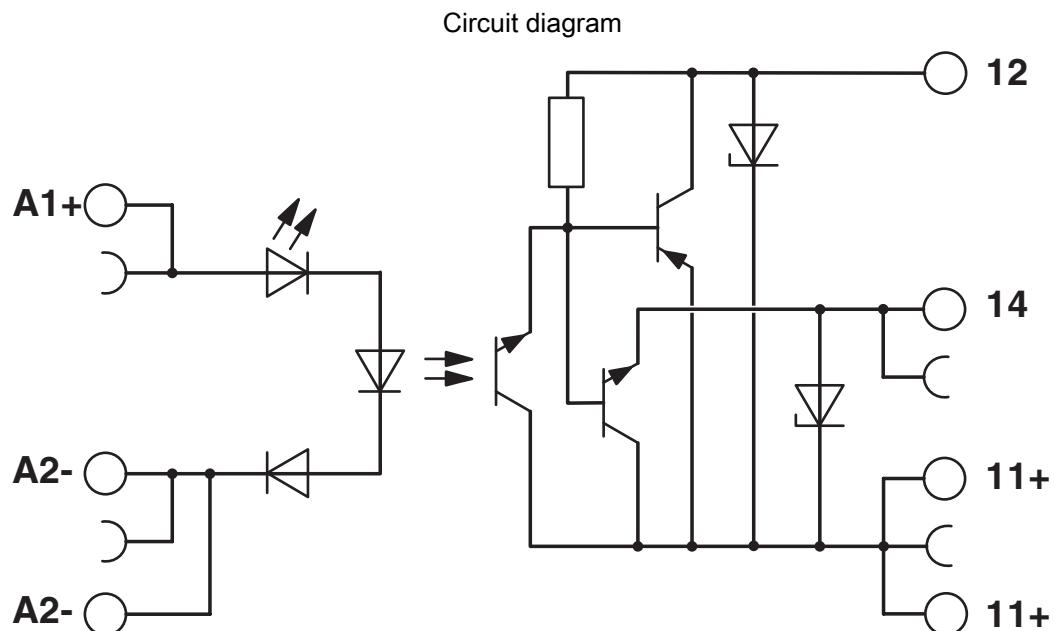
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## Drawings



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

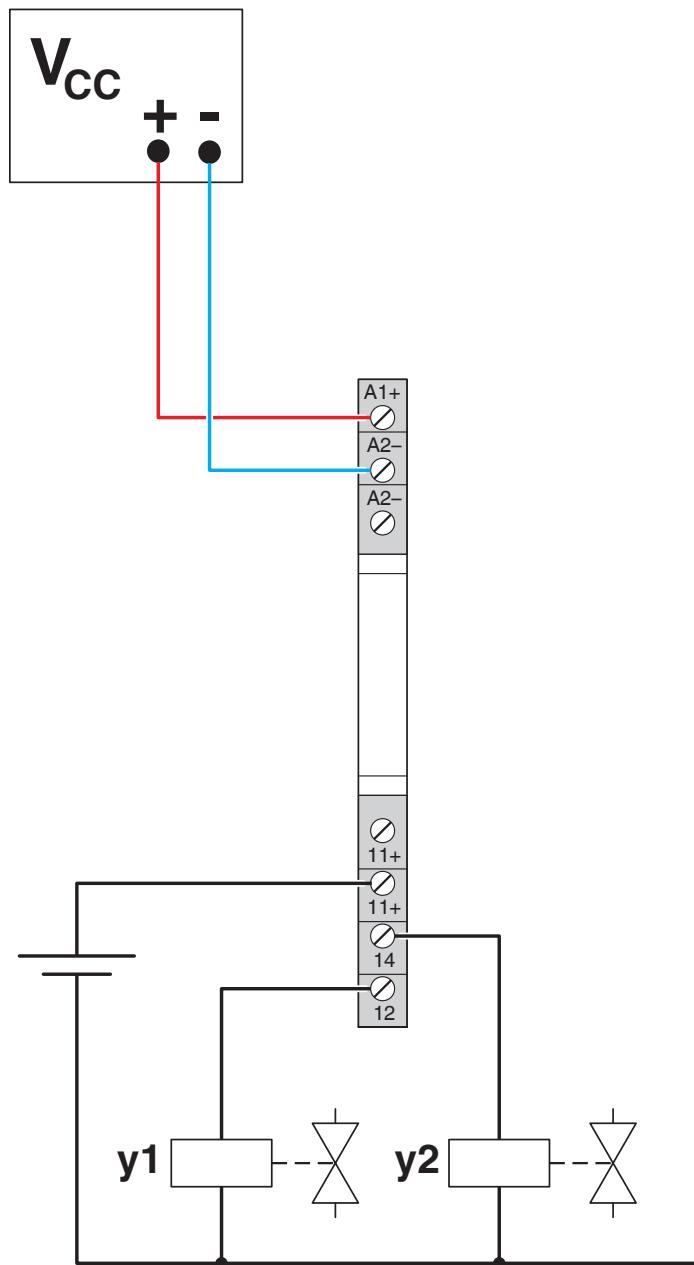
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## Application drawing



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



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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2980636>



**cUL Recognized**

Approval ID: FILE E 238705



**UL Recognized**

Approval ID: FILE E 238705



**EAC**

Approval ID: TR\_TS\_D\_00573\_c



**EAC**

Approval ID: RU\*C-DE.\*08.B.00010



**UL Listed**

Approval ID: FILE E 172140



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Approval ID: E140324

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## Classifications

### ECLASS

ECLASS-11.0	27371604
ECLASS-12.0	27371604
ECLASS-13.0	27371604

### ETIM

ETIM 9.0	EC001504
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

REACH SVHC

Lead 7439-92-1

China RoHS

Environmentally Friendly Use Period = 50 years

For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

 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>



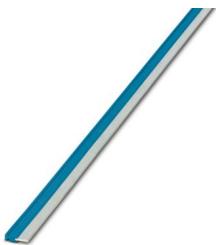
Continuous plug-in bridge, length: 500 mm, color: red

 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

 Max. current carrying capacity: 32 A

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

2966838

<https://www.phoenixcontact.com/us/products/2966838>



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

Max. current carrying capacity: 32 A

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## 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

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# PLC-OSC- 24DC/ 48DC/500/W - 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

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## 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

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



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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

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## 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: plusschaltend

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



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

2304102

<https://www.phoenixcontact.com/us/products/2304102>



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: plusschaltend

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



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## PLC-V8/D15B/OUT - System connection

2296061

<https://www.phoenixcontact.com/us/products/2296061>



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: plusschaltend

## PLC-V8C/PT-24DC/RS485 - Controller

1452919

<https://www.phoenixcontact.com/us/products/1452919>



PLC logic basic module with RS-485 connection for Modbus/RTU communication, with 16 I/Os, for plug-in connection to 8 digital or analog PLC-INTERFACE terminal blocks, can be extended to 48 I/Os, real-time clock, micro USB female connector, accommodates memory module and Bluetooth adapter, Push-in connection

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## PLC-V8C/SC-24DC/EM - Extension module

2903095

<https://www.phoenixcontact.com/us/products/2903095>

PLC logic extension module with 16 I/Os, for plug-in connection to eight PLC-INTERFACE terminal blocks for extending the basic module (a maximum of two extension modules can be connected to a basic module), screw connection



## PLC-V8C/PT-24DC/EM - Extension module

2905137

<https://www.phoenixcontact.com/us/products/2905137>

PLC logic extension module with 16 I/Os, for plug-in connection to eight PLC-INTERFACE terminal blocks for extending the basic module (a maximum of two extension modules can be connected to a basic module), Push-in connection



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



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## PLC-V8C/PT-24DC/SAM2 - Controller

2907443

<https://www.phoenixcontact.com/us/products/2907443>

PLC logic stand-alone module, Generation 2, with 16 I/Os, for plug-in connection to eight digital or analog PLC-INTERFACE terminal blocks, cannot be extended, real-time clock, micro USB female connector, accommodates memory module and Bluetooth adapter, Push-in connection



## PLC-V8C/SC-24DC/SAM2 - Controller

2907445

<https://www.phoenixcontact.com/us/products/2907445>

PLC logic stand-alone module, Generation 2, with 16 I/Os, for plug-in connection to eight digital or analog PLC-INTERFACE terminal blocks, cannot be extended, real-time clock, micro USB female connector, accommodates memory module and Bluetooth adapter, screw connection



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



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## PLC-V8C/PT-24DC/BM2 - Controller

2907446

<https://www.phoenixcontact.com/us/products/2907446>

PLC logic basic module, Generation 2, with 16 I/Os, for plug-in connection to eight digital or analog PLC-INTERFACE terminal blocks, can be extended to 48 I/Os, real-time clock, micro USB female connector, accommodates memory module and Bluetooth adapter, Push-in connection



## PLC-V8C/SC-24DC/BM2 - Controller

2907447

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PLC logic basic module, Generation 2, with 16 I/Os, for plug-in connection to eight digital or analog PLC-INTERFACE terminal blocks, can be extended to 48 I/Os, real-time clock, micro USB female connector, accommodates memory module and Bluetooth adapter, screw connection



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



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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

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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-OSC- 24DC/ 48DC/500/W - Solid-state relay module



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

1204119

<https://www.phoenixcontact.com/us/products/1204119>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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

1204122

<https://www.phoenixcontact.com/us/products/1204122>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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



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

0801704

<https://www.phoenixcontact.com/us/products/0801704>



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

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

1206421

<https://www.phoenixcontact.com/us/products/1206421>



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

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



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

1206434

<https://www.phoenixcontact.com/us/products/1206434>



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

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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-OSC- 24DC/ 48DC/500/W - Solid-state relay module



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## NS 35/ 7,5 CAP - End cap

1206560

<https://www.phoenixcontact.com/us/products/1206560>

DIN rail end piece, for DIN rail NS 35/7.5



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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

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



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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

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

0806602

<https://www.phoenixcontact.com/us/products/0806602>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: white

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



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

1204135

<https://www.phoenixcontact.com/us/products/1204135>



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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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-OSC- 24DC/ 48DC/500/W - Solid-state relay module



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

1206599

<https://www.phoenixcontact.com/us/products/1206599>



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

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

1206586

<https://www.phoenixcontact.com/us/products/1206586>



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

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



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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

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NS 35/15 CAP - End cap

1206573

<https://www.phoenixcontact.com/us/products/1206573>

DIN rail end piece, for DIN rail NS 35/15



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



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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

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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

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



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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



## 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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