

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



2966650

<https://www.phoenixcontact.com/de/produkte/2966650>

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PLC-INTERFACE, consisting of PLC-BSC.../21 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: 120 V AC/110 V DC, output: 3 - 33 V DC/3 A

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## Your advantages

- Slim design
- Efficient connection to system cabling using V8 adapter
- RT III sealed solid-state relay
- Functional plug-in bridges
- Zero voltage switch at AC output
- High switching power
- Integrated input circuit

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



2966650

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## Commercial Data

Item number	2966650
Packing unit	10 pc
Minimum order quantity	1 pc
Sales Key	G1 - Relais
Product Key	CK6213
Catalog Page	Page 373 (C-5-2019)
GTIN	4017918130497
Weight per Piece (including packing)	38,9 g
Weight per Piece (excluding packing)	32,04 g
Customs tariff number	85364900
Country of origin	DE

## Technical Data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Solid-state relay module
Application	Universal
Operating mode	100% operating factor

#### Insulation characteristics

Overvoltage category	III
Pollution degree	2
Insulation	Basic insulation

### Electrical properties

Maximum power dissipation for nominal condition	0.42 W
Test voltage Input/output	2.5 kV (50 Hz, 1 min., input/output)

### Input data

Nominal input voltage $U_N$	120 V AC
	110 V DC
Input voltage range in reference to $U_N$	0.9 ... 1.1
Input voltage range	108 V AC ... 132 V AC
	99 V DC ... 121 V DC
Switching threshold "0" signal in reference to $U_N$	$\leq 0.3$
Switching threshold "1" signal in reference to $U_N$	$\geq 0.8$
Typical input current at $U_N$	3.5 mA
Typical response time	3.5 ms (at $U_N$ )
Typical turn-off time	7 ms (at $U_N$ )
Operating voltage display	Yellow LED
Protective circuit	Bridge rectifier; Bridge rectifier
Transmission frequency	10 Hz

### Output data

Contact type	1 N/O contact
Design of digital output	electronic
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-conductor, floating

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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 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>
	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
Torque	0.6 Nm ... 0.8 Nm

## Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

## Material specifications

Flammability rating according to UL 94	V0 (Housing)
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## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C

## Approval data

### 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

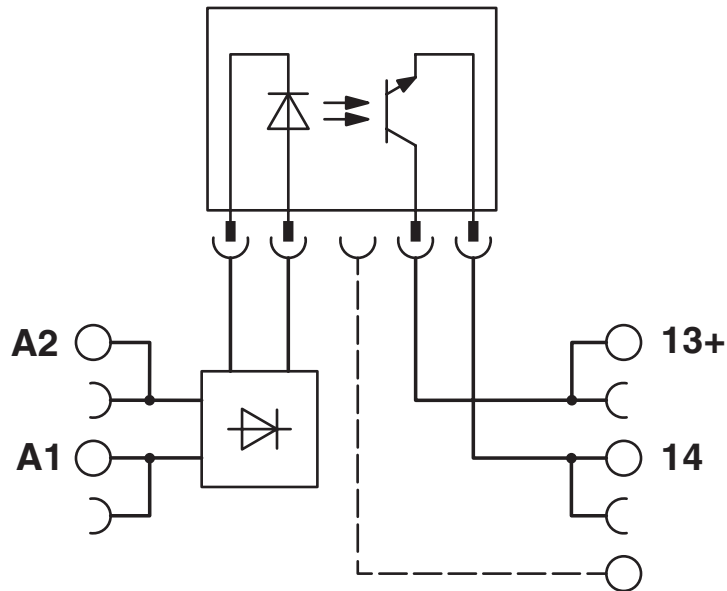
Mounting type	DIN rail mounting
Assembly instructions	in rows with zero spacing
Mounting position	any

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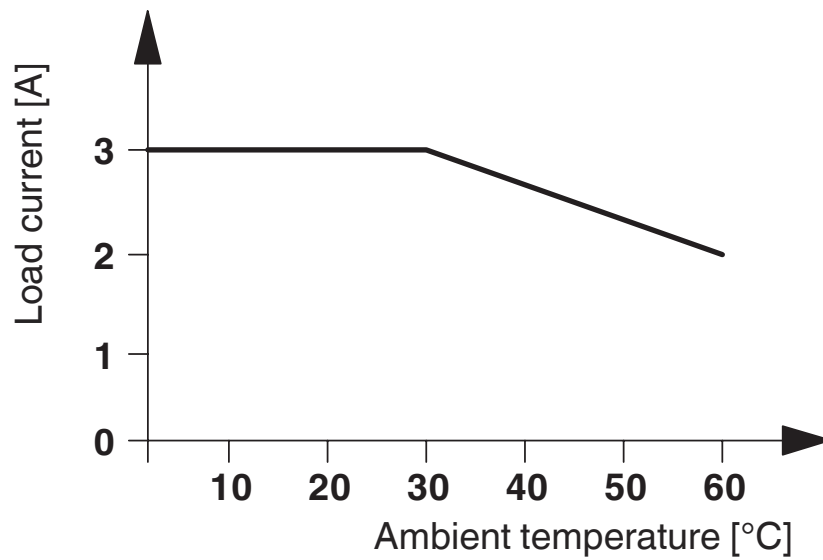
<https://www.phoenixcontact.com/de/produkte/2966650>

## Drawings

Circuit diagram



Diagram



# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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## Approvals



**cUL Recognized**  
Approval ID: FILE E 238705



**UL Recognized**  
Approval ID: FILE E 238705



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



**DNV GL**  
Approval ID: TAE0000196

Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
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**EAC**  
Approval ID: RU\*C-DE.\*08.B.00010



**PRS**  
Approval ID: TE/2109/880590/16



**UL Listed**  
Approval ID: FILE E 172140



**cUL Listed**  
Approval ID: FILE E 172140

**cULus Recognized**

**cULus Listed**

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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## Classifications

### ECLASS

ECLASS-9.0	27371604
ECLASS-10.0.1	27371604
ECLASS-11.0	27371604

### ETIM

ETIM 8.0	EC001504
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
	Hexahydromethylphthalic anhydride
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.

### Continuous plug-in bridge

Continuous plug-in bridge - FBST 500-PLC RD - 2966786

<https://www.phoenixcontact.com/de/produkte/2966786>



Continuous plug-in bridge, color: red

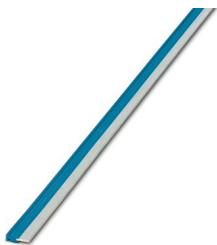
 Max. current carrying capacity: 32 A

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### Continuous plug-in bridge

Continuous plug-in bridge - FBST 500-PLC BU - 2966692

<https://www.phoenixcontact.com/de/produkte/2966692>



Continuous plug-in bridge, color: blue

 Max. current carrying capacity: 32 A

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## Continuous plug-in bridge

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

<https://www.phoenixcontact.com/de/produkte/2966838>



Continuous plug-in bridge, color: gray

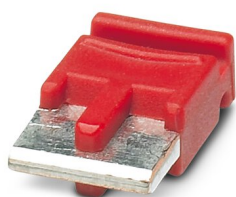
 Max. current carrying capacity: 32 A

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## Single plug-in bridge

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

<https://www.phoenixcontact.com/de/produkte/2966236>



Single plug-in bridge, color: red

 Max. current carrying capacity: 6 A

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## Single plug-in bridge

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

<https://www.phoenixcontact.com/de/produkte/2966812>

Single plug-in bridge, color: blue



 Max. current carrying capacity: 6 A

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## Single plug-in bridge

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

<https://www.phoenixcontact.com/de/produkte/2966825>

Single plug-in bridge, color: gray



 Max. current carrying capacity: 6 A

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

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<https://www.phoenixcontact.com/de/produkte/2966650>


## Single plug-in bridge

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

<https://www.phoenixcontact.com/de/produkte/2967688>

Single plug-in bridge, color: gray



 Max. current carrying capacity: 6 A

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## Separating plate

Separating plate - PLC-ATP BK - 2966841

<https://www.phoenixcontact.com/de/produkte/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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## Zack marker strip

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003

<https://www.phoenixcontact.com/de/produkte/1051003>



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

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## Power terminal block

Power terminal block - PLC-ESK GY - 2966508

<https://www.phoenixcontact.com/de/produkte/2966508>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

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<https://www.phoenixcontact.com/de/produkte/2966650>

## Zack marker strip

Zack marker strip - ZB 6 CUS - 0824992

<https://www.phoenixcontact.com/de/produkte/0824992>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, 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

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## Screwdriver

Screwdriver - SZF 1-0,6X3,5 - 1204517

<https://www.phoenixcontact.com/de/produkte/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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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<https://www.phoenixcontact.com/de/produkte/2966650>

## Zack marker strip

Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016

<https://www.phoenixcontact.com/de/produkte/1051016>



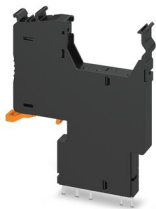
Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 6. 15 x 10.5 mm, Number of individual labels: 10

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## Fuse adapter

Fuse adapter - PLC-FA-5X20 - 1186510

<https://www.phoenixcontact.com/de/produkte/1186510>



Safety plug adapter for use on a 6.2 mm PLC basic terminal block. For 5 x 20 mm fuses. Operating voltage: Universal. Without fuse failure indication.

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

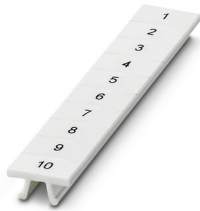
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<https://www.phoenixcontact.com/de/produkte/2966650>

## Zack marker strip

Zack marker strip - ZB 6,QR:FORTL.ZAHLEN - 1051029

<https://www.phoenixcontact.com/de/produkte/1051029>



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 6. 15 x 10.5 mm, Number of individual labels: 10

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## Fuse adapter

Fuse adapter - PLC-FA-I-5X20-12-24UC - 1186499

<https://www.phoenixcontact.com/de/produkte/1186499>



Safety plug adapter for use on a 6.2 mm PLC basic terminal block. For 5 x 20 mm fuses. Operating voltage: 12 ... 24 V AC/DC. With LED for fuse failure indication.



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<https://www.phoenixcontact.com/de/produkte/2966650>

## Zack marker strip

Zack marker strip - ZB 6,LGS:GLEICHE ZAHLEN - 1051032

<https://www.phoenixcontact.com/de/produkte/1051032>



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

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## Marker for terminal blocks

Marker for terminal blocks - ZB 6,LGS:L1-N,PE - 1051414

<https://www.phoenixcontact.com/de/produkte/1051414>



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

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## Marker for terminal blocks

Marker for terminal blocks - ZB 6,LGS:U-N - 1051430

<https://www.phoenixcontact.com/de/produkte/1051430>



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: U, V, W, N, GND, U, V, W, N, GND, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

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## Marker for terminal blocks

Marker for terminal blocks - UC-TM 6 - 0818085

<https://www.phoenixcontact.com/de/produkte/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: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



2966650

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## Marker for terminal blocks

Marker for terminal blocks - UC-TM 6 CUS - 0824589

<https://www.phoenixcontact.com/de/produkte/0824589>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, 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

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## Marker for terminal blocks

Marker for terminal blocks - UCT-TM 6 - 0828736

<https://www.phoenixcontact.com/de/produkte/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: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 60

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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<https://www.phoenixcontact.com/de/produkte/2966650>

## Marker for terminal blocks

Marker for terminal blocks - UCT-TM 6 CUS - 0829602

<https://www.phoenixcontact.com/de/produkte/0829602>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, 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

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## DIN rail perforated

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

<https://www.phoenixcontact.com/de/produkte/0801733>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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<https://www.phoenixcontact.com/de/produkte/2966650>

## DIN rail, unperforated

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

<https://www.phoenixcontact.com/de/produkte/0801681>



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

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## DIN rail perforated

DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119

<https://www.phoenixcontact.com/de/produkte/1204119>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

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<https://www.phoenixcontact.com/de/produkte/2966650>

## DIN rail, unperforated

DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM-VPE 10 - 1204122

<https://www.phoenixcontact.com/de/produkte/1204122>



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

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## DIN rail, unperforated

DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704

<https://www.phoenixcontact.com/de/produkte/0801704>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

2966650

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## DIN rail perforated

DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421

<https://www.phoenixcontact.com/de/produkte/1206421>



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

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## DIN rail, unperforated

DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434

<https://www.phoenixcontact.com/de/produkte/1206434>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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## DIN rail, unperforated

DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM-VPE 10 - 0801762

<https://www.phoenixcontact.com/de/produkte/0801762>



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

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## End cap

End cap - NS 35/ 7,5 CAP - 1206560

<https://www.phoenixcontact.com/de/produkte/1206560>

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





# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

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<https://www.phoenixcontact.com/de/produkte/2966650>

## DIN rail perforated

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

<https://www.phoenixcontact.com/de/produkte/1201730>



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

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## DIN rail, unperforated

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

<https://www.phoenixcontact.com/de/produkte/1201714>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

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<https://www.phoenixcontact.com/de/produkte/2966650>

## DIN rail perforated

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602

<https://www.phoenixcontact.com/de/produkte/0806602>



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

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## DIN rail, unperforated

DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM-VPE 10 - 1204135

<https://www.phoenixcontact.com/de/produkte/1204135>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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## DIN rail, unperforated

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

<https://www.phoenixcontact.com/de/produkte/1201756>



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

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## DIN rail perforated

DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599

<https://www.phoenixcontact.com/de/produkte/1206599>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2

2966650

<https://www.phoenixcontact.com/de/produkte/2966650>

## DIN rail, unperforated

DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586

<https://www.phoenixcontact.com/de/produkte/1206586>



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

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## DIN rail, unperforated

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM-VPE 10 - 1201895

<https://www.phoenixcontact.com/de/produkte/1201895>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



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## End cap

End cap - NS 35/15 CAP - 1206573

<https://www.phoenixcontact.com/de/produkte/1206573>

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



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## DIN rail, unperforated

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM-VPE 10 - 1201798

<https://www.phoenixcontact.com/de/produkte/1201798>



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

# Solid-state relay module - PLC-OSC-120UC/ 24DC/ 2



2966650

<https://www.phoenixcontact.com/de/produkte/2966650>

## Relay base

Relay base - PLC-BSC-120UC/21 - 2966032

<https://www.phoenixcontact.com/de/produkte/2966032>

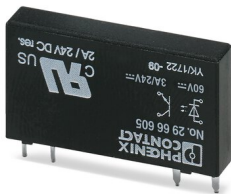


6.2 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 120 V AC/DC

## Miniature solid-state relay

Miniature solid-state relay - OPT-60DC/ 24DC/ 2 - 2966605

<https://www.phoenixcontact.com/de/produkte/2966605>



Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input: 60 V DC, output: 3 ... 33 V DC/3 A

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