

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



2980144

<https://www.phoenixcontact.com/us/products/2980144>

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PLC-INTERFACE for output functions, consisting of PLC-BSC.../ACT 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: 5 V DC, output: 3 - 33 V DC/3 A

## Your advantages

- Actuator connected directly to relay module
- No need for additional modular terminal blocks
- Efficient connection to system cabling using V8 adapter
- Time savings of up to 60 %
- Relay modules with safe isolation according to DIN EN 50178 between coil and contact
- Space savings of up to 80 %
- Functional plug-in bridges

## Commercial data

Item number	2980144
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C462
Product key	CK6213
Catalog page	Page 376 (C-5-2019)
GTIN	4017918727499
Weight per piece (including packing)	38.318 g
Weight per piece (excluding packing)	35.738 g
Customs tariff number	85364900
Country of origin	DE

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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## Technical data

### Product properties

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

### Insulation characteristics

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

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

### Electrical properties

Maximum power dissipation for nominal condition	0.05 W
Test voltage (Input/output)	2.5 kV (50 Hz, 1 min., input/output)

### Input data

Nominal input voltage $U_N$	5 V DC
Input voltage range in reference to $U_N$	0.8 ... 1.2
Input voltage range	4 V DC ... 6 V DC
Switching threshold "0" signal in reference to $U_N$	$\leq 0.25$
Switching threshold "1" signal in reference to $U_N$	$\geq 0.8$
Typical input current at $U_N$	9.5 mA
Typical response time	20 $\mu$ s (at $U_N$ )
Typical turn-off time	300 $\mu$ s (at $U_N$ )
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode Freewheeling diode; Freewheeling diode
Transmission frequency	300 Hz

### Output data

Contact switching 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
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection

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## 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	0.6 Nm ... 0.8 Nm

## Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 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)	-25 °C ... 70 °C

## Approvals

### CE

Certificate	CE-compliant
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### UKCA

Certificate	UKCA-compliant
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### Shipbuilding approval

Certificate	TAE0000196
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### Corrosive gas test

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

### DNV GL data

Temperature	D
Humidity	A
Vibration	B/C
EMC	B

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Enclosure	Required protection according to the Rules shall be provided upon installation on board
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## EMC data

Low Voltage Directive	Conformance with Low Voltage Directive
Electromagnetic compatibility	Conformance with EMC directive

## Standards and regulations

### Standards/regulations

Standards/regulations	IEC 60947-5-1
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## Mounting

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

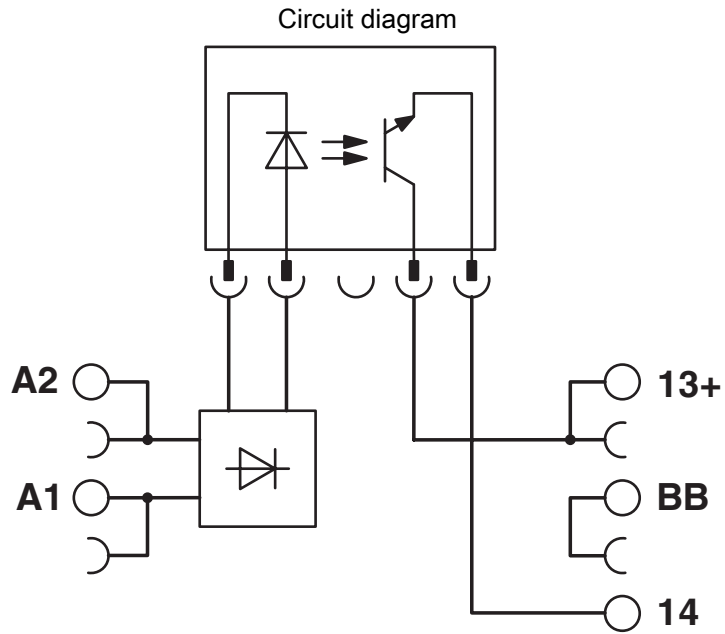
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## Drawings



# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2980144>



**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



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



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



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



**cULus Listed**  
Approval ID: E140324

**cULus Recognized**

**cULus Listed**

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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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
	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.


### 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

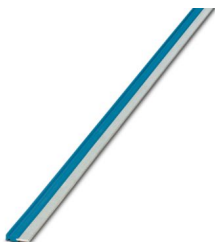
 Max. current carrying capacity: 32 A

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### 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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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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

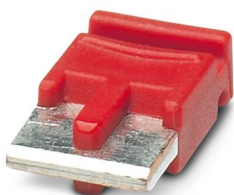
 Max. current carrying capacity: 32 A

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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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## 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

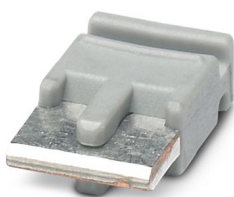
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## FBST 6-PLC GY - Single plug-in bridge

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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - 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-FA-5X20 - Fuse adapter

1186510

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



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<https://www.phoenixcontact.com/us/products/2980144>

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

1186499

<https://www.phoenixcontact.com/us/products/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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## ZB 6:UNBEDRUCKT - Zack marker strip

1051003

<https://www.phoenixcontact.com/us/products/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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## ZB 6 CUS - Zack marker strip

0824992

<https://www.phoenixcontact.com/us/products/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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## ZB 6,LGS:FORTL.ZAHLEN - Zack marker strip

1051016

<https://www.phoenixcontact.com/us/products/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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## ZB 6,QR:FORTL.ZAHLEN - Zack marker strip

1051029

<https://www.phoenixcontact.com/us/products/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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## ZB 6,LGS:GLEICHE ZAHLEN - Zack marker strip

1051032

<https://www.phoenixcontact.com/us/products/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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## ZB 6,LGS:L1-N,PE - Marker for terminal blocks

1051414

<https://www.phoenixcontact.com/us/products/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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## ZB 6,LGS:U-N - Marker for terminal blocks

1051430

<https://www.phoenixcontact.com/us/products/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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## UC-TM 6 - Marker for terminal blocks

0818085

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

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

0824589

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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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## UCT-TM 6 - Marker for terminal blocks

0828736

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

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

0829602

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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - 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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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<https://www.phoenixcontact.com/us/products/2980144>

## 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- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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<https://www.phoenixcontact.com/us/products/2980144>

## 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- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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<https://www.phoenixcontact.com/us/products/2980144>

## 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- 5DC/ 24DC/ 2/ACT - 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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - 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- 5DC/ 24DC/ 2/ACT - 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- 5DC/ 24DC/ 2/ACT - 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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - 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- 5DC/ 24DC/ 2/ACT - 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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - 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

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## 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

# PLC-OSC- 5DC/ 24DC/ 2/ACT - Solid-state relay module



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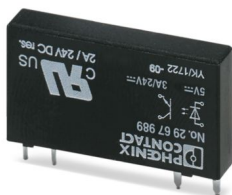
<https://www.phoenixcontact.com/us/products/2980144>

## OPT- 5DC/ 24DC/ 2 - Miniature solid-state relay

2967989

<https://www.phoenixcontact.com/us/products/2967989>

Plug-in miniature solid-state relay, power solid-state relay, 1 N/O contact, input voltage: 5 V DC



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