

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



2980678

<https://www.phoenixcontact.com/in/products/2980678>

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PLC-INTERFACE, integrated solid-state relay, with screw connection, for mounting on NS 35/7,5 DIN rails, input: 24 V DC, output: 12 - 300 V DC/1 A

## Your advantages

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

## Commercial data

Item number	2980678
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CK6
Product key	DK6223
GTIN	4046356051415
Weight per piece (including packing)	36.53 g
Weight per piece (excluding packing)	36.53 g
Customs tariff number	85364900
Country of origin	DE

## Technical data

### Product properties

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

### Insulation characteristics: Standards/regulations

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

### Data management status

Date of last data management	15.09.2025
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### Electrical properties

Maximum power dissipation for nominal condition	0.19 W
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### Standards/regulations

Rated insulation voltage	300 V
Rated surge voltage	2.5 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 $U_N$	8 mA
Typical response time	0.3 ms
Typical turn-off time	0.7 ms
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection; Varistor
Transmission frequency	50 Hz

### Output data

Designation	Output data
Contact switching type	1 N/O contact
Design of digital output	electronic
Contact connection type	Power contact
Output voltage range	12 V DC ... 300 V DC (Partition plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal points in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...)
Limiting continuous current	1 A (see derating curve)

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Voltage drop at max. limiting continuous current	< 500 mV
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection; Varistor

## 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	94 mm

## Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94 (Housing)	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

### 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

### Shipbuilding data

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Temperature	D
Humidity	A
Vibration	B/C
EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

## EMC data

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

## Standards and regulations

### Standards/regulations

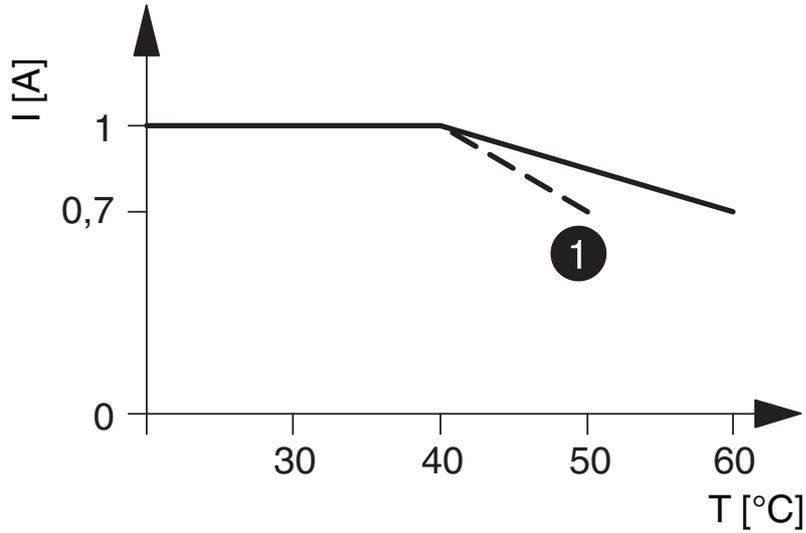
Standards/regulations	IEC 60947-5-1
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## Mounting

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

Drawings

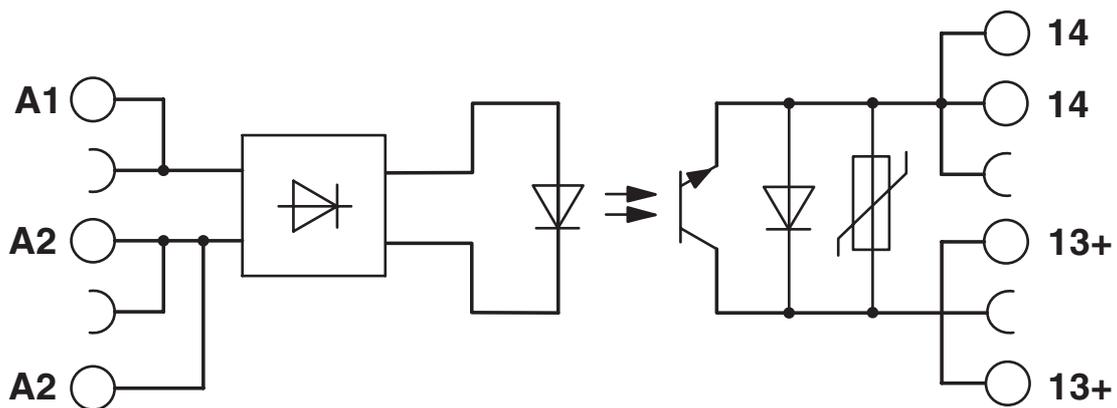
Diagram



① Input voltages 220 V DC/230 V AC

The figure shows the derating curve for PLC-...300DC/1

Circuit diagram



# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/2980678>



**EAC**

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



**DNV GL**

Approval ID: TAE0000196



**cULus Listed**

Approval ID: E140324

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## Classifications

### ECLASS

ECLASS-13.0	27371604
ECLASS-15.0	27371604

### ETIM

ETIM 9.0	EC001504
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### 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.)	Lead(CAS: 7439-92-1)
SCIP	f557af83-0c49-4e57-983b-1dd853dd0699

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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/in/products/2966786>



Continuous plug-in bridge, nominal current: 32 A, length: 500 mm, color: red

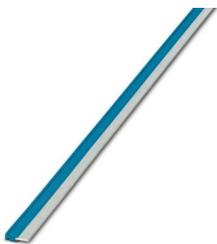
 Max. current carrying capacity: 32 A

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

2966692

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



Continuous plug-in bridge, nominal current: 32 A, length: 500 mm, color: blue

 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, nominal current: 32 A, length: 500 mm, color: gray

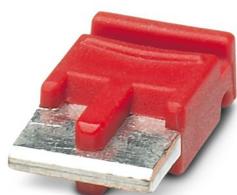
 Max. current carrying capacity: 32 A

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

2966236

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



Single plug-in bridge, number of positions: 2, nominal current: 6 A, 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/in/products/2966812>



Single plug-in bridge, number of positions: 2, nominal current: 6 A, 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/in/products/2966825>



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

 Max. current carrying capacity: 6 A

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

2967688

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



Single plug-in bridge, number of positions: 2, nominal current: 6 A, length: 8 mm, color: gray

 Max. current carrying capacity: 6 A

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## FBST 14-PLC BK - Single plug-in bridge

2967691

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Single plug-in bridge, number of positions: 2, nominal current: 10 A, length: 14 mm, color: black

 Max. current carrying capacity: 10 A

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

2295554

<https://www.phoenixcontact.com/in/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

<https://www.phoenixcontact.com/in/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-OSC- 24DC/300DC/ 1 - Solid-state relay module



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## PLC-V8/D15S/OUT - System connection

2296058

<https://www.phoenixcontact.com/in/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

<https://www.phoenixcontact.com/in/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: positive switching

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

2905137

<https://www.phoenixcontact.com/in/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

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

2907443

<https://www.phoenixcontact.com/in/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-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

2907446

<https://www.phoenixcontact.com/in/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

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

1452919

<https://www.phoenixcontact.com/in/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

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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## PLC-V8R/ETH-MP/BM - Communication module

1279135

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PLC-INTERFACE Ethernet gateway basic module with 2x RJ45 connection and multi-protocol connection (PROFINET, EtherNet/IP™, and Modbus/TCP) with 8 I/Os, for plug-in connection to 8 digital or analog PLC-INTERFACE terminal blocks, can be extended to 56 I/Os, Push-in connection

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## PLC-V8R/PT-24DC/EM - Extension module

1487020

<https://www.phoenixcontact.com/in/products/1487020>



PLC-INTERFACE Ethernet gateway extension module with 16 I/Os, for plug-in connection to 8 PLC-INTERFACE terminal blocks for extending the PLC-V8R.../BM basic module (max. 3 extension modules can be connected to 1 basic module), Push-in connection

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

0801733

<https://www.phoenixcontact.com/in/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/in/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-colored

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

1204119

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



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

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

1204122

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



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

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

0801704

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



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

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

1206421

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



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

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

1206434

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



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

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

0801762

<https://www.phoenixcontact.com/in/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/300DC/ 1 - Solid-state relay module



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

1206560

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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/in/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-colored

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

1201714

<https://www.phoenixcontact.com/in/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-colored

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

0806602

<https://www.phoenixcontact.com/in/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/300DC/ 1 - Solid-state relay module



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

1204135

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



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

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

1201756

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



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

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

1206599

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



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

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

1206586

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



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

# PLC-OSC- 24DC/300DC/ 1 - Solid-state relay module



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

1201895

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

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



# PLC-OSC- 24DC/300DC/ 1 - 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/in/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-colored

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## PLC-ATP BK - Separating plate

2966841

<https://www.phoenixcontact.com/in/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- 24DC/300DC/ 1 - Solid-state relay module



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## PLC-ESK GY - Power terminal block

2966508

<https://www.phoenixcontact.com/in/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/in/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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