

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



2900398

<https://www.phoenixcontact.com/us/products/2900398>

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PLC-INTERFACE with confirmation contact, consisting of basic terminal block with push-in connection and integrated miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/10 A

Your advantages

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

Commercial data

Item number	2900398
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	DK62A3
GTIN	4046356506960
Weight per piece (including packing)	32.48 g
Weight per piece (excluding packing)	32.4 g
Customs tariff number	85364190
Country of origin	DE

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Technical data

Notes

Notes on operation	The PLC-ATP partition plate must be installed for voltages greater than 250 V (L1, L2, L3) between identical terminal blocks on adjacent modules.
Notes on operation	The PLC-ATP separating plate should be installed for safe isolation between adjacent modules
Notes on operation	Do not connect adjacent channels to SELV/ PELV and voltages dangerous to the touch.
Notes on operation	The system installer must ensure the touch protection of the product (at voltages > 25 V AC/60 V DC). The product is a built-in device without protection against direct contact.
Notes on operation	At least one functional insulation against adjacent modules is complied with in the support rail direction. If the application has higher requirements on the insulation (basic or reinforced insulation), then these must be realized through suitable measures (e. g., partition plates).
Notes on operation	Do not use to separate SELV / PELV circuits from other circuits, because safe isolation is not guaranteed.

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: Air clearances and creepage distances between the power circuits

Insulation	Basic insulation
Overvoltage category	II
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	0.07 W
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Air clearances and creepage distances between the power circuits

Rated insulation voltage	50 V DC
Rated surge voltage	0.5 kV

Input data

Rated actuating voltage U_C	24 V DC
Rated actuating current I_C	3.5 mA
Switching threshold "0" signal in reference to U_N	< 0.4
Switching threshold "1" signal in reference to U_N	> 0.8
Typical response time	100 μ s

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Typical turn-off time	500 µs
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection
Surge voltage protection	> 33 V
Transmission frequency	100 Hz

Output data

Designation	DC voltage output
Contact switching type	1 N/O contact
Design of digital output	electronic
Contact connection type	Power contact
Output voltage range	8 V DC ... 33 V DC
Limiting continuous current	10 A (see derating curve)
Quiescent current	5.2 mA
Voltage drop at max. limiting continuous current	< 50 mV
Output circuit	3-conductor, ground-referenced
Protective circuit	Inverse diode
	Surge protection
Designation	Alarm output
Output voltage range	3 V DC ... 33 V DC
Limiting continuous current	100 mA
Surge voltage protection	> 33 V
Voltage drop at max. limiting continuous current	< 1.2 V
Output circuit	2-conductor, floating
Error indication	Red LED
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection; Suppressor diode

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.14 mm² ... 2.5 mm²
Conductor cross-section flexible	0.14 mm² ... 2.5 mm²
	0.2 mm² ... 2.5 mm² (Single ferrule)
	2x 0.5 mm² ... 1 mm² (TWIN ferrule)
Conductor cross-section AWG	26 ... 14

Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

Material specifications

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Color	gray (RAL 7042)
Flammability rating according to UL 94 (Housing)	V0 (Housing)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Degree of protection (Installation location)	IP54 (Installation location)
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

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

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

Air clearances and creepage distances between the power circuits

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

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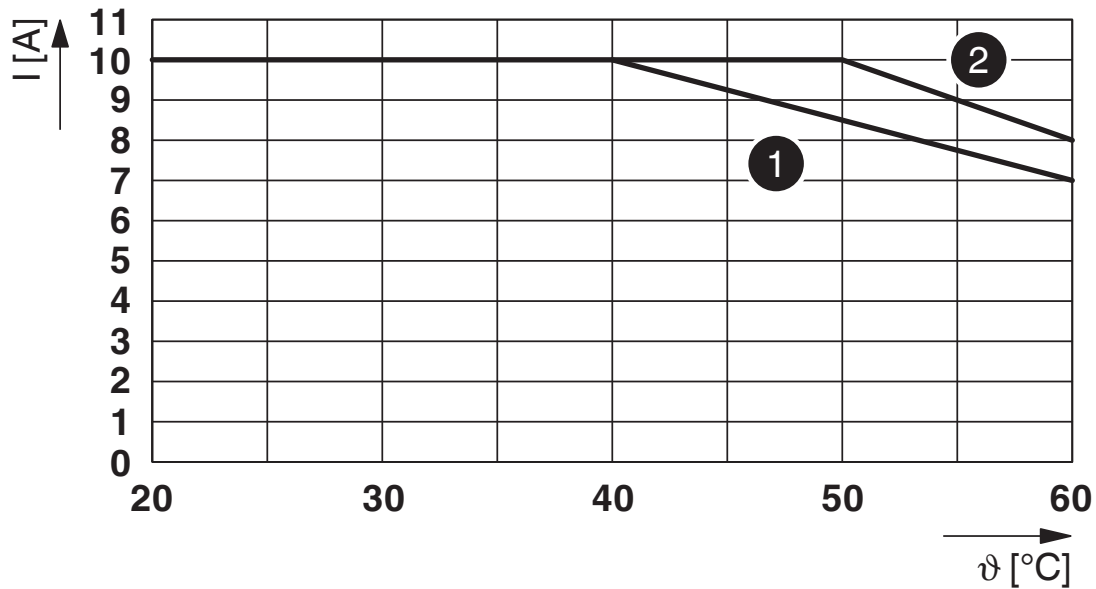


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Drawings

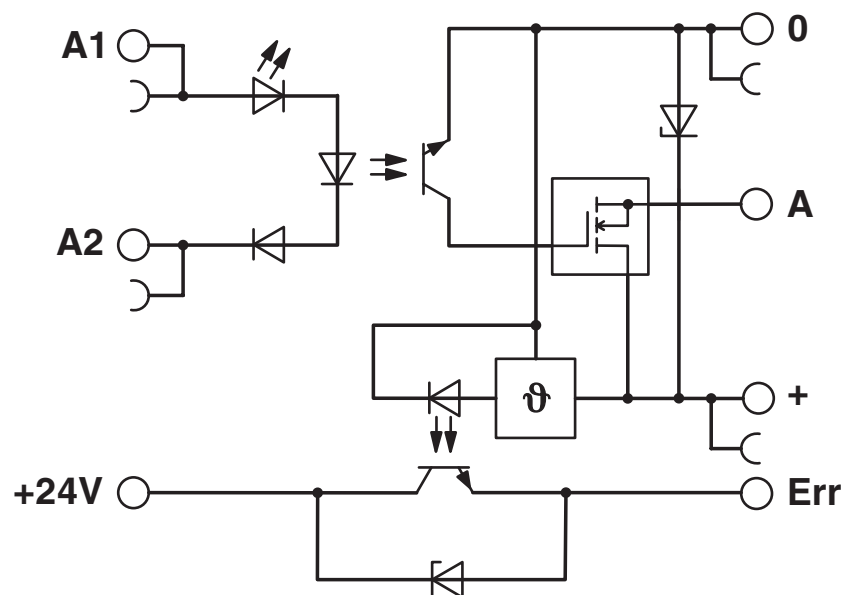
Diagram



Limiting continuous current

- 1) Aligned without spacing
- 2) Aligned with >6 mm spacing

Circuit diagram



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Approvals

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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	6f0460dd-1928-4d12-9e16-f43d9dfd37c4

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Accessories

i 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>



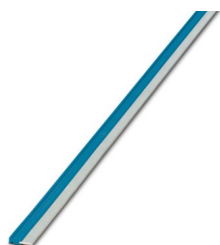
Continuous plug-in bridge, length: 500 mm, color: red

i 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

i Max. current carrying capacity: 32 A

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FBST 500-PLC GY - Continuous plug-in bridge

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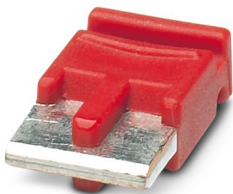
Continuous plug-in bridge, length: 500 mm, color: gray

 Max. current carrying capacity: 32 A

FBST 6-PLC RD - Single plug-in bridge

2966236

<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

PLC-OPT- 24DC/ 24DC/10/R - 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



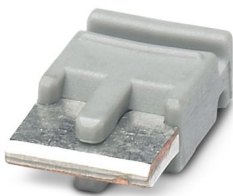
 Max. current carrying capacity: 6 A

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-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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

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

PLC-OPT- 24DC/ 24DC/10/R - 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: positive switching

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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: positive switching

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-OPT- 24DC/ 24DC/10/R - 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/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-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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

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

1279135

<https://www.phoenixcontact.com/us/products/1279135>



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

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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

1487020

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

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

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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-colored

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-colored

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



2900398

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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-colored

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-colored

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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-colored

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

1206434

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

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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

NS 35/ 7,5 CAP - End cap

1206560

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

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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-colored

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-colored

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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

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-colored

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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-colored

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-colored

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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-colored

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

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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NS 35/15 CAP - End cap

1206573

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



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-colored

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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-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

PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



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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

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