

PLC-BPT- 24UC/ 1/ACT - Relay base

2900450

<https://www.phoenixcontact.com/us/products/2900450>



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6.2 mm PLC basic terminal block for output functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 24 V AC/DC

Your advantages

- PLC actuator series with solid-state power relays for coupling the controller and actuators, such as motors, contactors, valves, etc.

Commercial data

Item number	2900450
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	CK62A1
Catalog page	Page 379 (C-5-2019)
GTIN	4046356512381
Weight per piece (including packing)	28.11 g
Weight per piece (excluding packing)	28.1 g
Customs tariff number	85366990
Country of origin	DE

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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	Relay socket
Product family	PLC-INTERFACE
Application	Output function
Operating mode	100% operating factor
Compatible components	Miniature relay, REL-MR-24DC/21, REL-MR-24DC/21AU; miniature optocoupler, OPT-24DC/24DC/2, OPT-24DC/48DC/100, OPT-24DC/230AC/1

Input data

Nominal input voltage U_N	24 V AC/DC
	The nominal voltage of the plug-on electromechanical relay or solid-state relay (see necessary accessories) deviates from the nominal input voltage of the base with integrated upstream circuit
Protective circuit	Bridge rectifier

Relay assembly

Rated control circuit supply voltage U_S	24 V AC/DC
Voltage range with reference to U_S	0.8 ... 1.2
Typical input current at U_N	15.6 mA (50 Hz) 8.5 mA (60 Hz)
Typical response time	5 ms
Typical release time	30 ms
Operating voltage display	Yellow LED
Protective circuit	Bridge rectifier; Bridge rectifier

Optocoupler assembly

Rated control circuit supply voltage U_S	24 V AC/DC
Voltage range with reference to U_S	0.8 ... 1.2
Typical input current at U_N	15 mA (50 Hz) 8.3 mA (60 Hz)
Typical response time	10 ms
Typical release time	20 ms
Operating voltage display	Yellow LED
Protective circuit	Bridge rectifier; Bridge rectifier

Output data

Compatible components	Miniature relay, REL-MR-24DC/21, REL-MR-24DC/21AU; miniature optocoupler, OPT-24DC/24DC/2, OPT-
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	24DC/48DC/100, OPT-24DC/230AC/1
Maximum switching voltage	33 V DC
Minimum switching voltage	3 V DC
Limiting continuous current	3 A (see derating curve)
Voltage drop at max. limiting continuous current	≤ 150 mV
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection Parallel polarity protection diode
	Surge protection
Maximum switching voltage	48 V DC
Minimum switching voltage	3 V DC
Limiting continuous current	100 mA
Voltage drop at max. limiting continuous current	≤ 1 V
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection Parallel polarity protection diode
	Surge protection
Maximum switching voltage	253 V AC
Minimum switching voltage	24 V AC
Limiting continuous current	0.75 A (see derating curve)
Voltage drop at max. limiting continuous current	≤ 1 V
Output circuit	2-conductor floating, zero voltage switch
Protective circuit	RCV circuit
Leakage current	≤ 1 mA
Max. load value	4.5 A ² s (tp = 10 ms, at 25 °C)

Connection data

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

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

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Ambient temperature (operation)	-20 °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

DNV GL 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

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

Mounting

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

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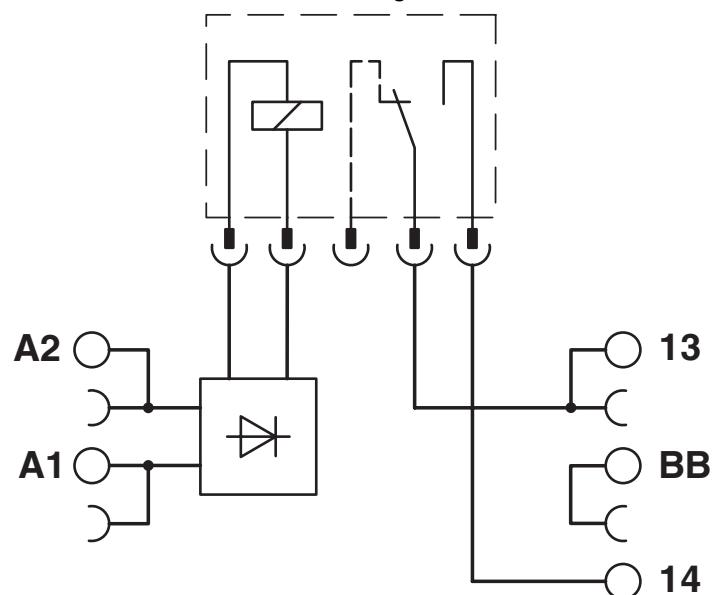
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<https://www.phoenixcontact.com/us/products/2900450>

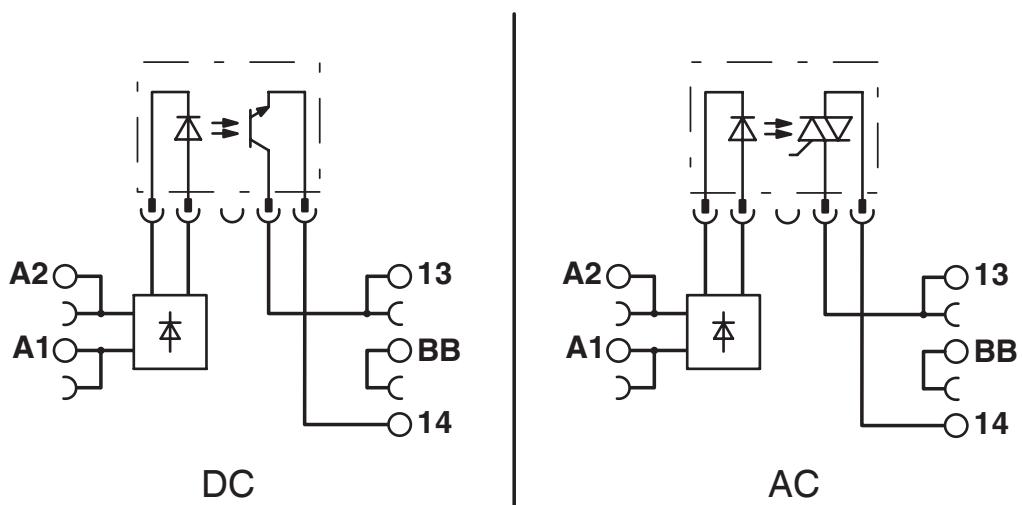


Drawings

Circuit diagram



Circuit diagram



PLC-BPT- 24UC/ 1/ACT - Relay base

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2900450>



cUL Recognized

Approval ID: FILE E 238705



UL Recognized

Approval ID: FILE E 238705



EAC

Approval ID: RU D-DE.B*00573/18



DNV GL

Approval ID: TAE0000196

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27371603
ECLASS-12.0	27371603
ECLASS-13.0	27371603

ETIM

ETIM 9.0	EC001456
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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	f2608036-99a3-436b-9cbd-b1abad5de81f

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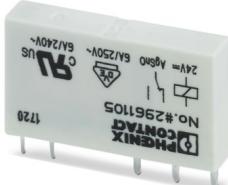
Mandatory accessories

REL-MR- 24DC/21 - Single relay

2961105

<https://www.phoenixcontact.com/us/products/2961105>

Plug-in miniature power relay, with power contact, 1 changeover contact, input voltage 24 V DC

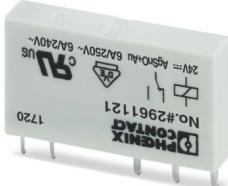


REL-MR- 24DC/21AU - Single relay

2961121

<https://www.phoenixcontact.com/us/products/2961121>

Plug-in miniature power relay, with multi-layer gold contact, 1 changeover contact, input voltage 24 V DC



Accessories



Note: Applying some accessories below might limit this product.

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FBST 500-PLC RD - Continuous plug-in bridge

2966786

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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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

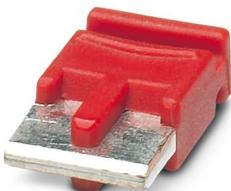
Max. current carrying capacity: 32 A

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-BPT- 24UC/ 1/ACT - Relay base



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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



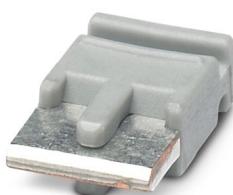
Max. current carrying capacity: 6 A

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

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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

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-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-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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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.

PLC-FA-I-5X20-120-230UC - Fuse adapter

1186508

<https://www.phoenixcontact.com/us/products/1186508>



Safety plug adapter for use on a 6.2 mm PLC basic terminal block. For 5 x 20 mm fuses. Operating voltage: 120 ... 230 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

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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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



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



PLC-BPT- 24UC/ 1/ACT - Relay base



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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



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-BPT- 24UC/ 1/ACT - Relay base



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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

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

PLC-BPT- 24UC/ 1/ACT - Relay base

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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

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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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

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



PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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

PLC-BPT- 24UC/ 1/ACT - Relay base



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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



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



PLC-BPT- 24UC/ 1/ACT - Relay base



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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

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-BPT- 24UC/ 1/ACT - Relay base



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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



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



PLC-BPT- 24UC/ 1/ACT - Relay base

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<https://www.phoenixcontact.com/us/products/2900450>



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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Phoenix Contact USA

586 Fulling Mill Road

Middletown, PA 17057, United States

(+717) 944-1300

info@phoenixcon.com