Relay Module - PLC-RPT- 24DC/21

2900299

https://www.phoenixcontact.com/de/produkte/2900299

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PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with Push-in connection and plug-in miniature relay with power contact, for mounting on NS 35/7,5 DIN rail, 1 changeover contact, input voltage 24 V DC

Your advantages

- Slim design
- Efficient connection to system cabling using V8 adapter
- RT III sealed relay
- Safe isolation according to DIN EN 50178 between coil and contact
- Functional plug-in bridges
- Integrated input circuit and interference suppression circuit

Commercial Data

Item number	2900299
Packing unit	10 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	G1 - Relais
Product Key	CK623A
Catalog Page	Page 364 (C-5-2019)
GTIN	4046356506991
Weight per Piece (including packing)	35,2 g
Weight per Piece (excluding packing)	32,466 g
Customs tariff number	85364190
Country of origin	DE

Set consists of

Relay base

Relay base - PLC-BPT- 24DC/21 - 2900445

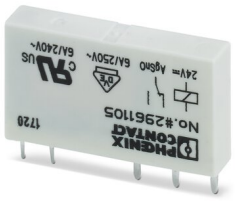
https://www.phoenixcontact.com/de/produkte/2900445

6.2 mm PLC basic terminal block with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V DC

Single relay

Single relay - REL-MR- 24DC/21 - 2961105

https://www.phoenixcontact.com/de/produkte/2961105



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

Technical Data

Notes

Notes on operation	Separating plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or FBST 500....

Utilization restriction

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

Product properties

Product type	Relay Module
Application	Universal
Operating mode	100% operating factor
Mechanical service life	2x 10^7 cycles

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Maximum power dissipation for nominal condition	0.22 W
Test voltage	4 kV AC (50 Hz, 1 min., winding/contact)

Input data

Coil side

Nominal input voltage U_N	24 V DC
Input voltage range	18.5 V DC ... 33.6 V DC (20 °C)
Typical input current at U_N	9 mA
Typical response time	5 ms
Typical release time	8 ms
Protective circuit	Reverse polarity protection; Polarity protection diode
	Freewheeling diode; Freewheeling diode
Operating voltage display	Yellow LED

Output data

Switching

Contact type	1 changeover contact
Type of switch contact	Single contact
Drive and function	monostable
Drive (polarity)	bipolar
Type of contact	Power contact
Contact material	AgSnO

Maximum switching voltage	250 V AC/DC (The separating plate PLC-ATP should be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...)
Minimum switching voltage	5 V (100 mA)
Limiting continuous current	6 A
Maximum inrush current	10 A (4 s)
Min. switching current	10 mA (12 V)
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	20 W (at 48 V DC)
	18 W (at 60 V DC)
	23 W (at 110 V DC)
	40 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.1 A (at 220 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 230 V, AC15)

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid	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

Flammability rating according to UL 94	V0 (Housing)

Environmental and real-life conditions

Ambient conditions

Degree of protection	RT III (Relay)
	IP20 (Relay base)
Ambient temperature (operation)	-40 °C ... 70 °C (see to derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approval data

Corrosive gas test

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

Standards and regulations

Standards/regulations

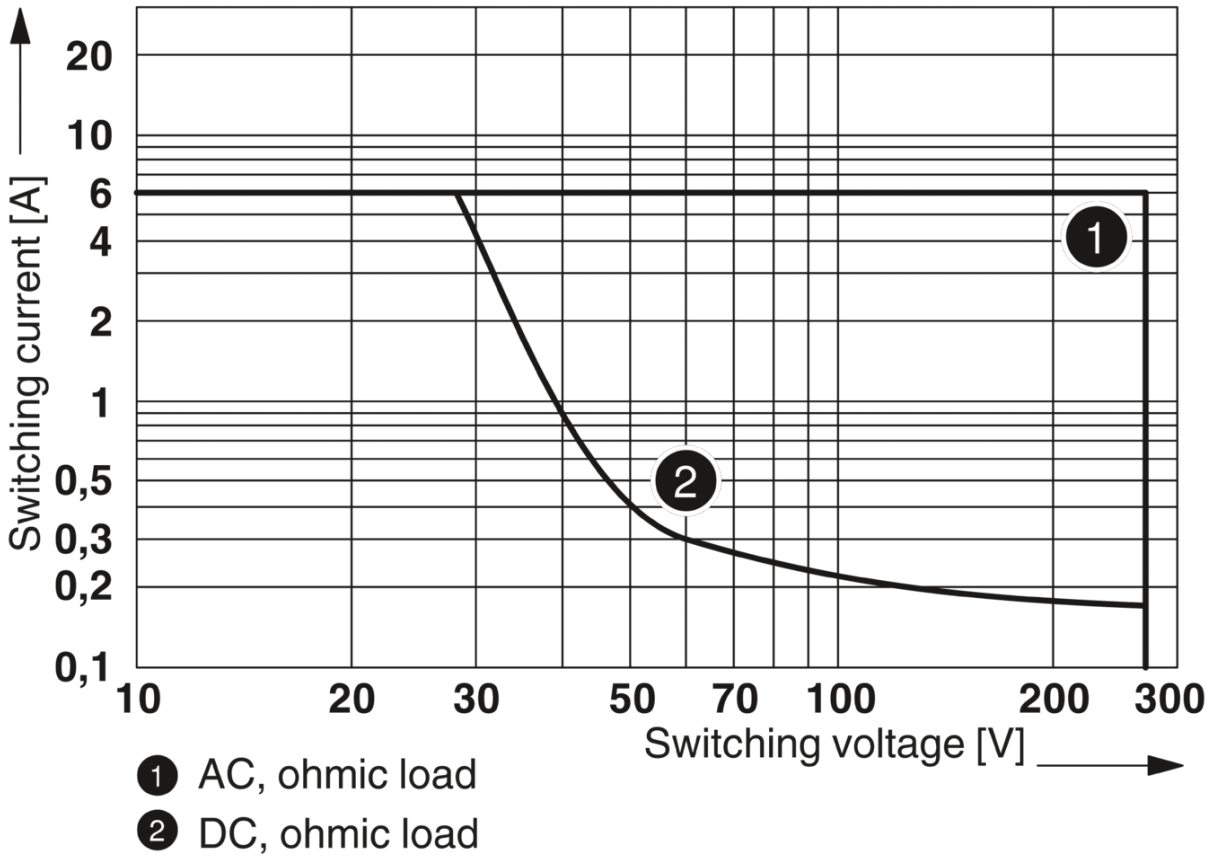
Standards/regulations	IEC 60664
	IEC 60664A
	DIN VDE 0110
	DIN EN 50178/VDE 0160 (in relevant parts)
	DIN EN 50178/VDE 0160
	IEC 60255/DIN VDE 0435 (in relevant parts)

Mounting

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

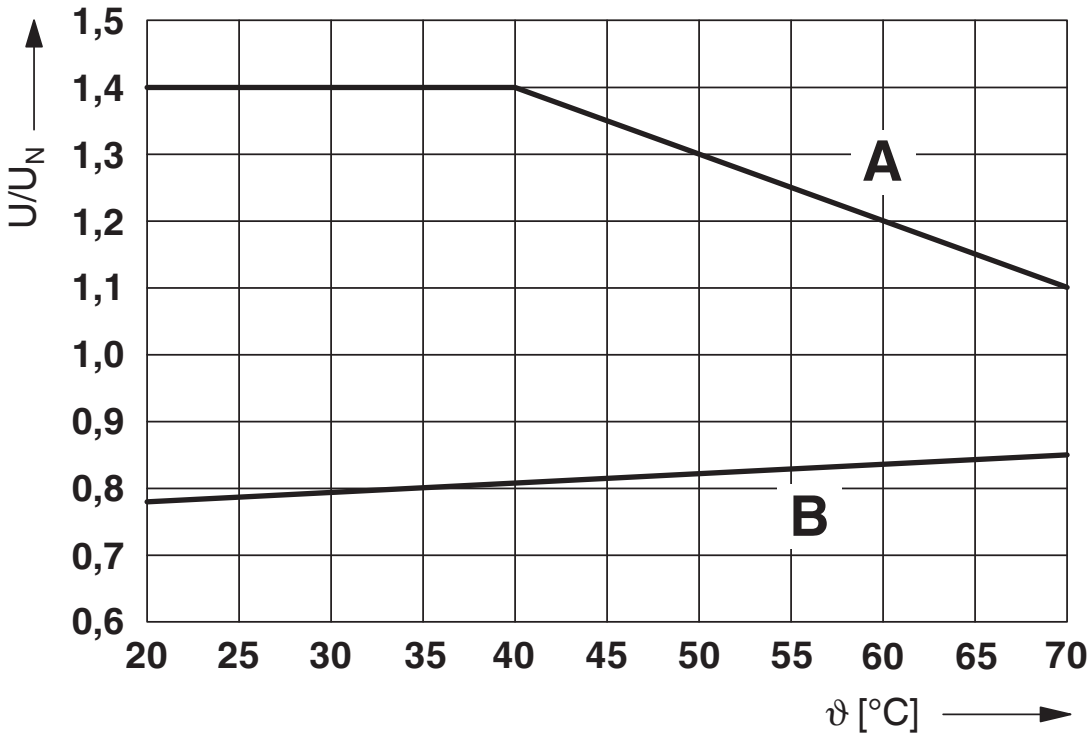
Drawings

Diagram



Interrupting rating

Diagram



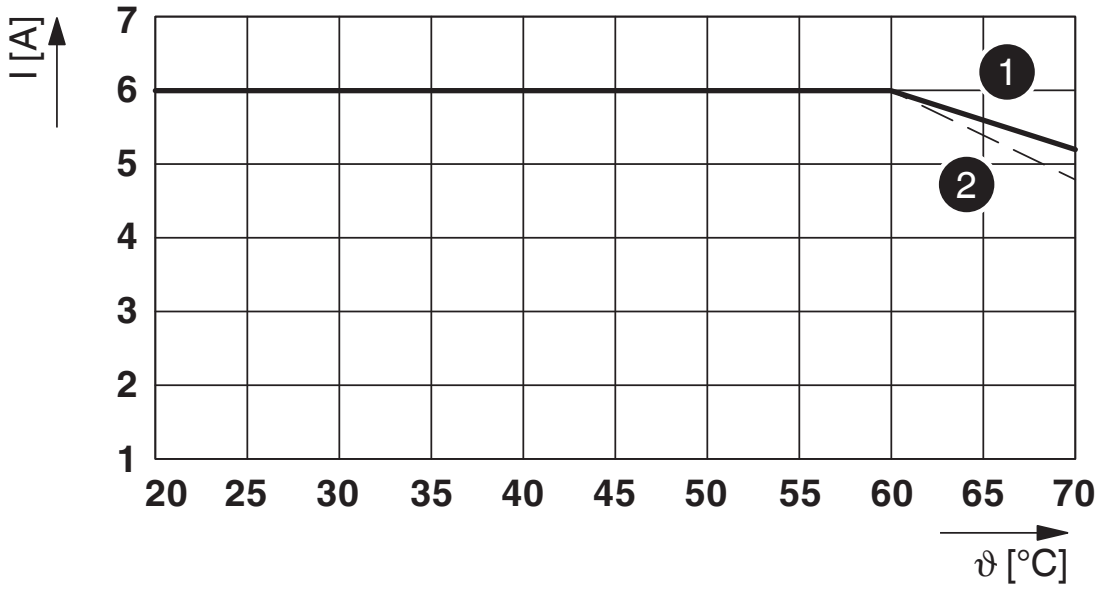
Curve A

Maximum permissible continuous voltage U_{max} with limiting continuous current on the contact side (see relevant technical data)

Curve B

Minimum permissible operate voltage U_{op} after pre-excitation (see relevant technical data)

Diagram

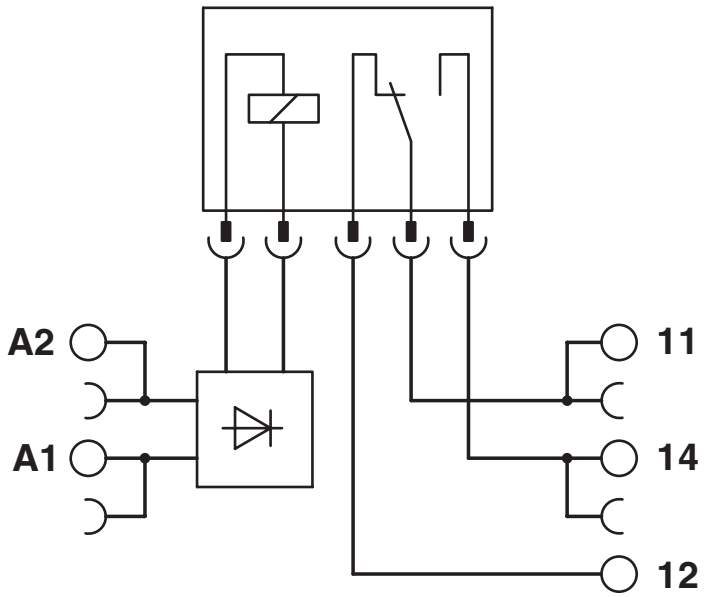


Limiting continuous current per contact for 0.85 ... 1.1 U_N (contact-side)

(1) Limiting continuous current for horizontal installation position without clearance

(2) Limiting continuous current for vertical installation position without clearance

Circuit diagram



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
			-	-

UL Listed
Approval ID: FILE E 172140

cUL Listed
Approval ID: FILE E 172140

RC FRT
Approval ID: B.00094

cULus Recognized

cULus Listed

Classifications

ECLASS

ECLASS-9.0	27371601
ECLASS-10.0.1	27371601
ECLASS-11.0	27371601

ETIM

ETIM 8.0	EC001437

UNSPSC

UNSPSC 21.0	39122300

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”

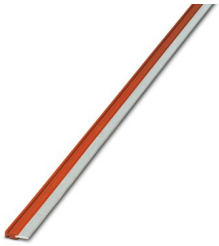
Accessories

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



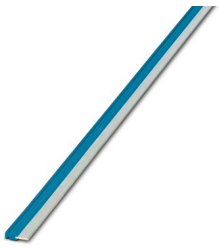
Continuous plug-in bridge, color: red

Max. current carrying capacity: 32 A

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

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

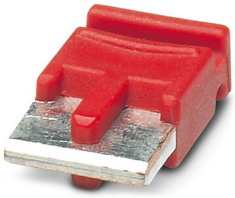
Max. current carrying capacity: 32 A

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

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

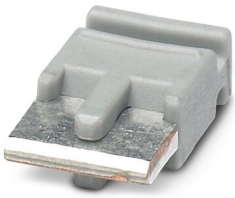
Max. current carrying capacity: 6 A

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

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

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

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

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

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

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

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

System connection

System connection - PLC-V8/FLK14/OUT - 2295554

https://www.phoenixcontact.com/de/produkte/2295554

V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: Screw connection 1x, connection 2: IDC/FLK pin strip 1x 14-position, connection 3: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), number of channels: 8, control logic: plusschaltend

Zack marker strip

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

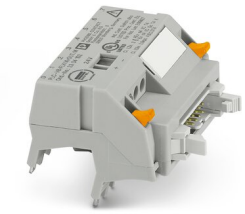
https://www.phoenixcontact.com/de/produkte/1051029

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

System connection

System connection - PLC-V8/FLK14/OUT/M - 2304102

https://www.phoenixcontact.com/de/produkte/2304102



V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: Screw connection 1x, connection 2: IDC/FLK pin strip 1x 14-position, connection 3: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), number of channels: 8, control logic: minusschaltend

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

Adapter module

Adapter module - PLC-V8/D15S/OUT - 2296058

https://www.phoenixcontact.com/de/produkte/2296058

V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: Screw connection 1x, connection 2: D-SUB pin strip 1x 15-position, connection 3: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), number of channels: 8, control logic: plusschaltend

Marker for terminal blocks

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

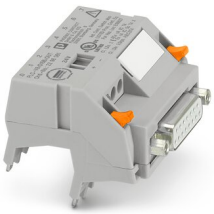
https://www.phoenixcontact.com/de/produkte/1051414

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

System connection

System connection - PLC-V8/D15B/OUT - 2296061

https://www.phoenixcontact.com/de/produkte/2296061



V8 adapter for 8 x PLC-INTERFACE (6.2 mm), controller: PLC system cabling of output cards, connection 1: Screw connection 1x, connection 2: D-SUB socket strip 1x 15-position, connection 3: Plug-in connection (Can be snapped onto 8x PLC-INTERFACE terminals), number of channels: 8, control logic: plusschaltend

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

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.

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

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.

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

Fuse adapter

Fuse adapter - PLC-FA-I-5X20-120-230UC - 1186508

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

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

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

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)

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)

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)

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)

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)

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)

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)

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)

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

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)

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)

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)

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)

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

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)

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)

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)

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

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)

Relay base

Relay base - PLC-BPT- 24DC/21 - 2900445

https://www.phoenixcontact.com/de/produkte/2900445

6.2 mm PLC basic terminal block with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V DC

Relay Module - PLC-RPT- 24DC/21

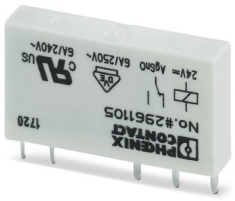
2900299

https://www.phoenixcontact.com/de/produkte/2900299

Single relay

Single relay - REL-MR- 24DC/21 - 2961105

https://www.phoenixcontact.com/de/produkte/2961105



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

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PHOENIX CONTACT Deutschland GmbH
Flachsmarktstraße 8
D-32825 Blomberg
+49 52 35/3-1 20 00
info@phoenixcontact.de