

PLC-RPT- 12DC/21/MS - Relay module



2909666

<https://www.phoenixcontact.com/in/products/2909666>

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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 and manual operation, 1 changeover contact, 12 V DC input voltage

Your advantages

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

Commercial data

Item number	2909666
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CK6
Product key	DK62AA
Catalog page	Page 365 (C-5-2019)
GTIN	4055626377995
Weight per piece (including packing)	35.49 g
Weight per piece (excluding packing)	31.27 g
Customs tariff number	85364190
Country of origin	DE

PLC-RPT- 12DC/21/MS - Relay module



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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....
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Product properties

Product type	Relay Module
Product family	PLC-INTERFACE
Application	Palm switch
Operating mode	100% operating factor
Mechanical service life	1x 10 ⁷ cycles

Data management status

Date of last data management	11.12.2024
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Electrical properties

Maximum power dissipation for nominal condition	0.18 W
Test voltage (Winding/contact)	4 kV AC (50 Hz, 1 min., winding/contact)

Insulation characteristics: Coil/contact

Rated insulation voltage	250 V
Rated impulse withstand voltage	6 kV
Overvoltage category	III
Degree of pollution	3

Input data

Coil side

Nominal input voltage U _N	12 V DC
Input voltage range	9.7 V DC ... 16.8 V DC (20 °C)
Nominal voltage (plugged-in electromechanical relay)	12 V DC
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at U _N	15.3 mA
Typical response time	5 ms
Typical release time	8 ms
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection; Freewheeling diode
Operating voltage display	Yellow LED

Output data

Switching

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Contact switching type	1 changeover contact
Type of switch contact	Single 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 (at 100 mA)
Limiting continuous current	6 A
Maximum inrush current	10 A (4 s)
Min. switching current	10 mA (12 V)
Short-circuit current	200 A (conditional short-circuit current)
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)
Output fuse	4 A gL/gG NEOZED
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 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

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Ambient conditions

Degree of protection (Relay)	RT II (Relay)
Degree of protection (Relay base)	IP20 (Relay base)
Ambient temperature (operation)	-40 °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

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

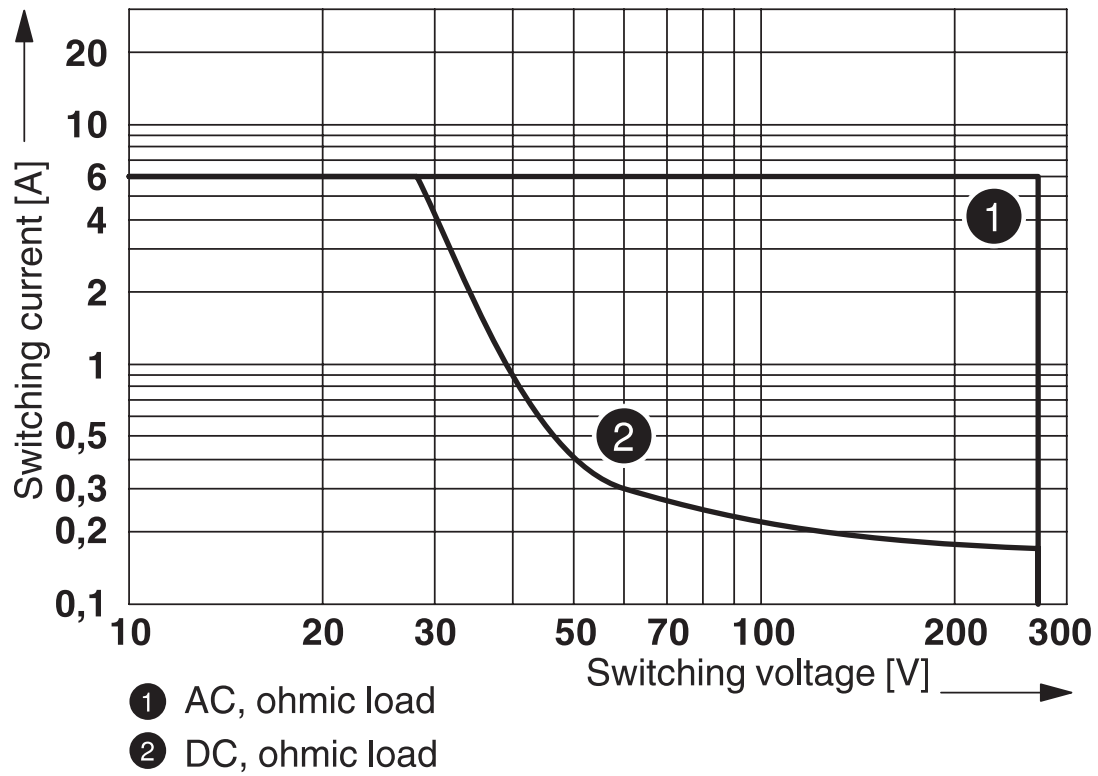
Standards/regulations	IEC 60664
	IEC 60664A
	DIN VDE 0110
	IEC 60255/DIN VDE 0435 (in relevant parts)

Mounting

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

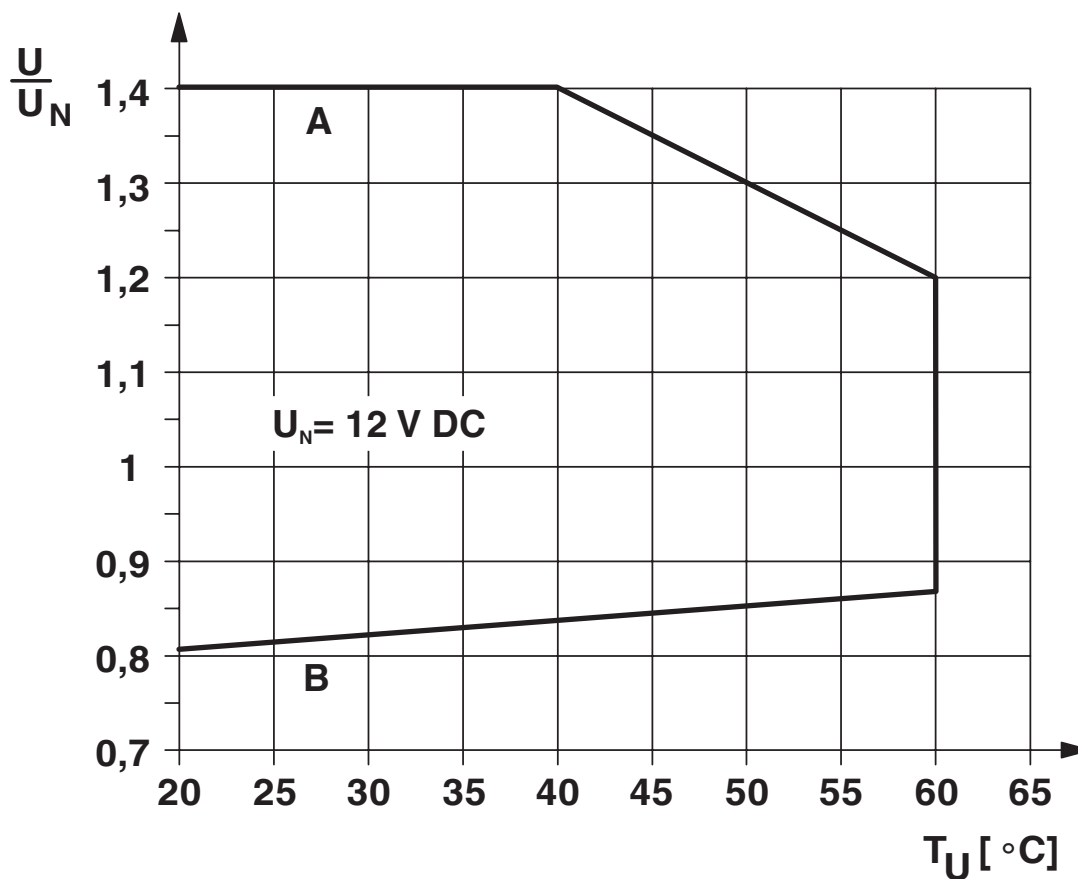
Drawings

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



Permissible humidity for operation and storage.

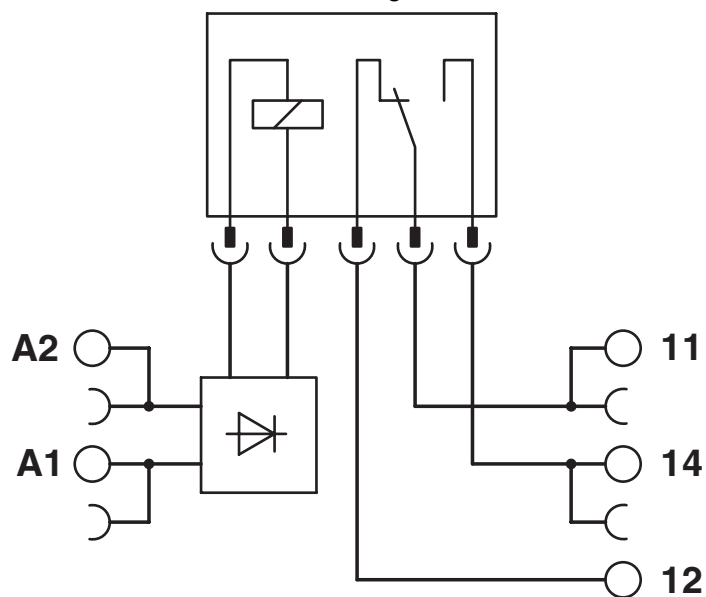
The maximum permissible ambient temperature as specified in the data sheet must be observed.

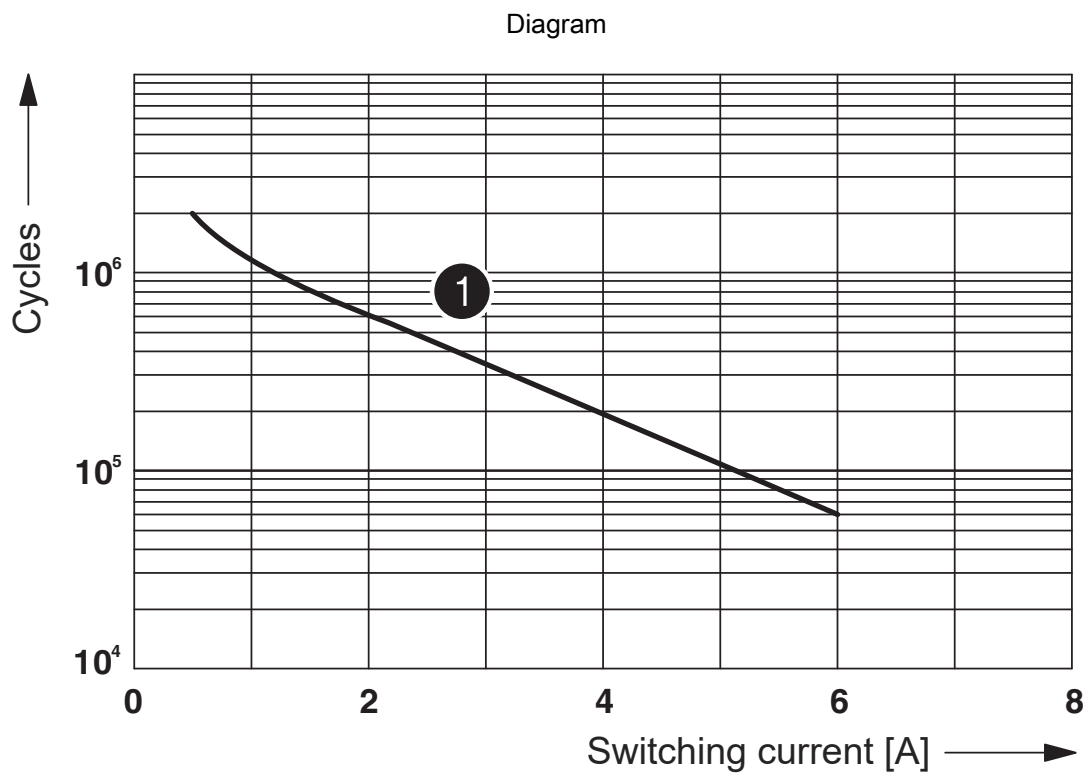
Area A: Ice buildup at ambient temperatures $\leq 0^\circ\text{C}$ must be prevented

Area B: Condensation at ambient temperatures $> 0^\circ\text{C}$ must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature $\leq 25^\circ\text{C}$.

Circuit diagram





① 250 V AC, ohmic load

Electrical service life

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Approvals

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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-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	27371601

ETIM

ETIM 9.0	EC001437
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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.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
SCIP	f33540d4-9de2-4fae-9728-0bcc6c454b8b

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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, length: 500 mm, color: red

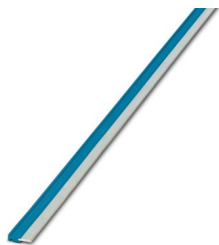


Max. current carrying capacity: 32 A

FBST 500-PLC BU - Continuous plug-in bridge

2966692

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



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



Max. current carrying capacity: 32 A

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FBST 500-PLC GY - Continuous plug-in bridge

2966838

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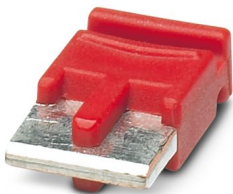
Continuous plug-in bridge, length: 500 mm, color: gray

 Max. current carrying capacity: 32 A

FBST 6-PLC RD - Single plug-in bridge

2966236

<https://www.phoenixcontact.com/in/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/in/products/2966812>



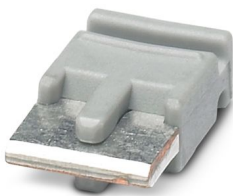
Single plug-in bridge, number of positions: 2, length: 6 mm, color: blue

 Max. current carrying capacity: 6 A

FBST 6-PLC GY - Single plug-in bridge

2966825

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

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



 Max. current carrying capacity: 6 A

PLC-FA-5X20 - Fuse adapter

1186510

<https://www.phoenixcontact.com/in/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/in/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/in/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/in/products/1051003>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

ZB 6 CUS - Zack marker strip

0824992

<https://www.phoenixcontact.com/in/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, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

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ZB 6,LGS:FORTL.ZAHLEN - Zack marker strip

1051016

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

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

1051029

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

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ZB 6,LGS:GLEICHE ZAHLEN - Zack marker strip

1051032

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

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

1051414

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

PLC-RPT- 12DC/21/MS - Relay module



2909666

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ZB 6,LGS:U-N - Marker for terminal blocks

1051430

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 6.15 mm

UC-TM 6 - Marker for terminal blocks

0818085

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 80, text field height: 10.5 mm, text field width: 5.6 mm

PLC-RPT- 12DC/21/MS - Relay module



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UC-TM 6 CUS - Marker for terminal blocks

0824589

<https://www.phoenixcontact.com/in/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, Number of individual labels: 80, text field height: 10.5 mm, text field width: 5.6 mm

UCT-TM 6 - Marker for terminal blocks

0828736

<https://www.phoenixcontact.com/in/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: latching, for terminal block width: 6.2 mm, Number of individual labels: 60, text field height: 10.5 mm, text field width: 5.6 mm

PLC-RPT- 12DC/21/MS - Relay module

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UCT-TM 6 CUS - Marker for terminal blocks

0829602

<https://www.phoenixcontact.com/in/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, Number of individual labels: 60, text field height: 10.5 mm, text field width: 5.6 mm

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

PLC-RPT- 12DC/21/MS - Relay module



2909666

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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

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

PLC-RPT- 12DC/21/MS - Relay module

2909666

<https://www.phoenixcontact.com/in/products/2909666>



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

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

PLC-RPT- 12DC/21/MS - Relay module



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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, galvanized, Standard profile, color: silver

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, galvanized, Standard profile, color: silver

PLC-RPT- 12DC/21/MS - Relay module



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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

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

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

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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

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

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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

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, galvanized, Standard profile, color: silver

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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, galvanized, Standard profile, color: silver

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



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

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PLC-ATP BK - Separating plate

2966841

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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/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>

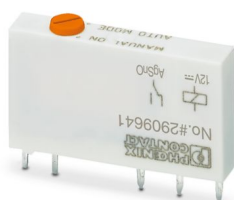


Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

REL-MR- 12DC/21/MS - Single relay

2909641

<https://www.phoenixcontact.com/in/products/2909641>



Plug-in miniature power relay, with power contact, 1 changeover contact, manual operation, 12 V DC input voltage

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