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PLC-INTERFACE consisting of PLC-BSC.../21-21/SO46/HI basic terminal block with screw connection and plugin miniature relay with power contact, 2 changeover contacts, nominal input voltage of 230 V AC, with defined activation and deactivation thresholds



## **Key Commercial Data**

Packing unit	1 pc
Minimum order quantity	10 pc
GTIN	4 055626 798479
GTIN	4055626798479
Custom tariff number	85364900
Country of origin	Germany

## Technical data

## Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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## **Dimensions**

Width	14 mm
Height	80 mm
Depth	94 mm

## Ambient conditions

Ambient temperature (operation)	-40 °C 50 °C
Ambient temperature (storage/transport)	-40 °C 85 °C
Maximum altitude	≤ 2000 m

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## Technical data

## Ambient conditions

Degree of protection	RT III (Relay)
	IP20 (Relay base)
	≥ IP54 (Installation location)

## Coil side

Nominal input voltage U <sub>N</sub>	230 V AC
Typical input current at U <sub>N</sub>	16 mA
Switch-on threshold	190 V AC
Switch-off threshold	170 V AC
Typical response time	10 ms
Typical release time	8 ms
Coil voltage	60 V DC
Input circuit	RC element with threshold value switch
Protective circuit	Bridge rectifier
Operating voltage display	Yellow LED
Power dissipation for nominal condition	1.04 W

## Contact side

Contact type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
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 orFBST 500)
Minimum switching voltage	5 V AC/DC (at 10 mA)
Min. switching current	10 mA (At 5 V)
Maximum inrush current	15 A (300 ms)
Limiting continuous current	6 A
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	85 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	57 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)

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## Technical data

## Contact side

3 A (at 250 V, AC15)

## General

Test voltage	4 kV AC (50 Hz, 1 min., winding/contact)
	2.5 kV AC (50 Hz, 1 min., changeover contact/changeover contact)
Operating mode	100% operating factor
Flammability rating according to UL 94	V0 (Housing)
Mechanical service life	3x 10 <sup>7</sup> cycles
Mounting position	any
Assembly instructions	in rows with zero spacing

## Connection data

Connection name	Coil side
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.14 mm² 2.5 mm²
Conductor cross section flexible	0.14 mm² 2.5 mm²
	0.2 mm <sup>2</sup> 2.5 mm <sup>2</sup> (Single ferrule)
	2x 0.5 mm² 1.5 mm² (TWIN ferrule)
Conductor cross section AWG	26 14
Torque	0.6 Nm 0.8 Nm

## Connection data 2

Connection name	Contact side
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.14 mm² 2.5 mm²
Conductor cross section flexible	0.14 mm² 2.5 mm²
	0.2 mm <sup>2</sup> 2.5 mm <sup>2</sup> (Single ferrule)
	2x 0.5 mm² 1.5 mm² (TWIN ferrule)
Conductor cross section AWG	26 14
Torque	0.6 Nm 0.8 Nm

## Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	IEC 60664
	EN 50178

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## Technical data

## Standards and Regulations

Rated surge voltage	4 kV
Insulation	Basic insulation
	Safe isolation, reinforced insulation, and 6 kV between input circuit and output contact current paths
Pollution degree	2
Overvoltage category	III

## Conformance/approvals

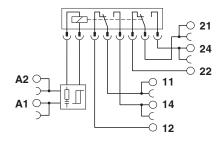
Designation	Corrosive gas test
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

## **Environmental Product Compliance**

REACh SVHC	Lead 7439-92-1		
China RoHS	Environmentally Friendly Use Period = 50 years		
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"		

## Drawings

## Circuit diagram

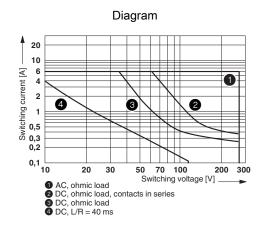


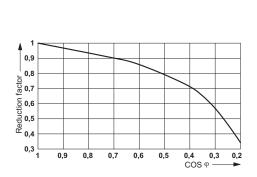
# Diagram 10<sup>7</sup> 10<sup>8</sup> 10<sup>9</sup> 10<sup>9</sup> 10<sup>9</sup> 10<sup>9</sup> 10<sup>9</sup> 250 V AC, ohmic load (DC coils) 250 V AC, ohmic load (AC coils)

Electrical service life

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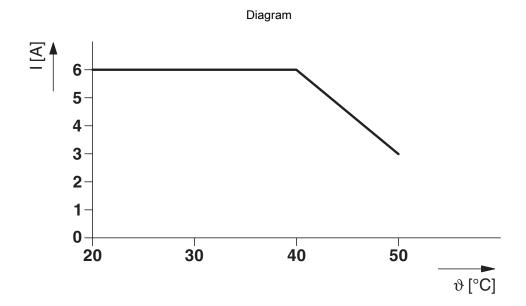




Diagram

Interrupting rating

Service life reduction factor



Derating curve

## Articles in set

Relay base - PLC-BSC-230AC/21-21/SO46/HI - 1079384



14 mm PLC basic terminal block, resistant to interference voltages of up to 190 V AC, thanks to defined activation and deactivation thresholds with screw connection, without relay, for mounting on DIN rail NS 35/7,5, 2 changeover contacts, input voltage of 230 V AC



## Articles in set

Single relay - REL-MR-110DC/21-21 - 2961202



Plug-in miniature power relay, with power contact, 2 changeover contacts, input voltage 110 V DC

## Classifications

## eCl@ss

eCl@ss 10.0.1	27371601
eCl@ss 11.0	27371601
eCl@ss 9.0	27371601

## **ETIM**

ETIM 6.0	EC001437
ETIM 7.0	EC001437

## **UNSPSC**

UNSPSC 18.0	39122334
UNSPSC 19.0	39122334
UNSPSC 20.0	39122334
UNSPSC 21.0	39122334

## Approvals

## Approvals

## Approvals

UL Listed / UL Recognized / cUL Recognized / cUL Listed / DNV GL / EAC / EAC / cULus Recognized / cULus Listed

Ex Approvals

## Approval details

**UL Listed** 



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 172140

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## Approvals

UL Recognized	<b>7.1</b>	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Recognized	<b>.PL</b>	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Listed	C UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140
DNV GL	A COMMITTEE COMM	https://approvalfinder.dnvgl.com/	TAE0000196
EAC	EAC		TR_TS_D_00573_c
EAC	EAC		RU*C- DE.*08.B.00010
cULus Recognized	c <b>911</b> us		
cULus Listed	C UL US		

## Accessories

Accessories

Bridge



## Accessories

Continuous plug-in bridge - FBST 500-PLC BU - 2966692



Continuous plug-in bridge, color: blue

Continuous plug-in bridge - FBST 500-PLC GY - 2966838



Continuous plug-in bridge, color: gray

Single plug-in bridge - FBST 6-PLC RD - 2966236



Single plug-in bridge, color: red

Single plug-in bridge - FBST 6-PLC BU - 2966812



Single plug-in bridge, color: blue

Single plug-in bridge - FBST 6-PLC GY - 2966825



Single plug-in bridge, color: gray



## Accessories

Single plug-in bridge - FBST 8-PLC GY - 2967688



Single plug-in bridge, color: gray

Single plug-in bridge - FBST 14-PLC BK - 2967691



Single plug-in bridge, color: black

## DIN rail

DIN rail perforated - NS 35/7,5 PERF 2000MM - 0801733



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

DIN rail perforated - NS 35/7,5 WH PERF 2000MM - 1204119



DIN rail perforated, acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver



## Accessories

DIN rail, unperforated - NS 35/7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

DIN rail, unperforated - NS 35/7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

DIN rail perforated - NS 35/7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

DIN rail, unperforated - NS 35/7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

DIN rail, unperforated - NS 35/7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored



## Accessories

End cap - NS 35/7,5 CAP - 1206560

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



DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver



## Accessories

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



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

DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



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

End cap - NS 35/15 CAP - 1206573



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



## Accessories

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

## Labeled terminal marker

Zack marker strip - ZB 10 CUS - 0824941



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

## Zack marker strip - ZB10,LGS:FORTL.ZAHLEN - 1053014



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

## Zack marker strip - ZB10,QR:FORTL.ZAHLEN - 1053027



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

#### Marker for terminal blocks - ZB10,LGS:L1-N,PE - 1053412



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: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10



## Accessories

Marker for terminal blocks - ZB10,LGS:U-N - 1053438



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: U, V, W, N, GND, U, V, W, N, GND, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 10 CUS - 0824605



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: 10.2 mm, lettering field size: 9.6 x 10.5 mm, Number of individual labels: 48

Marker for terminal blocks - UCT-TM 10 CUS - 0829623



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: 10.2 mm, lettering field size: 8.9 x 9.6 mm, Number of individual labels: 36

Zack marker strip - ZB 12 CUS - 0824942



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 12.2 mm, lettering field size: 10.5 x 12.15 mm, Number of individual labels: 5

Zack marker strip - ZB 12,LGS:L1-N,PE - 0812146



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 12.2 mm, lettering field size: 10.5 x 12.15 mm, Number of individual labels: 5



## Accessories

Marker for terminal blocks - UC-TM 12 CUS - 0824613



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: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

Marker for terminal blocks - UCT-TM 12 CUS - 0829630



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: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

## Partition plate

Separating plate - PLC-ATP BK - 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

#### Power module

Power terminal block - PLC-ESK GY - 2966508



Power terminal block, for the input of up to four potentials, for mounting on NS 35/7.5

#### Screwdriver tools



## Accessories

Screwdriver - SZF 1-0,6X3,5 - 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

## Terminal marking

Zack marker strip - ZB 10:UNBEDRUCKT - 1053001



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.5 x 10.15 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 10 - 0818069



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 9.6 x 10.5 mm, Number of individual labels: 48

Marker for terminal blocks - UCT-TM 10 - 0829142



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: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 8.9 x 9.6 mm, Number of individual labels: 36

Zack marker strip - ZB 12:UNPRINTED - 0812120



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 12.2 mm, lettering field size: 12 x 10.5 mm, Number of individual labels: 5



## Accessories

Marker for terminal blocks - UC-TM 12 - 0819194



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

Marker for terminal blocks - UCT-TM 12 - 0829144



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: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

#### Spare parts

Relay base - PLC-BSC-230AC/21-21/SO46/HI - 1079384



14 mm PLC basic terminal block, resistant to interference voltages of up to 190 V AC, thanks to defined activation and deactivation thresholds with screw connection, without relay, for mounting on DIN rail NS 35/7,5, 2 changeover contacts, input voltage of 230 V AC

Single relay - REL-MR-110DC/21-21 - 2961202



Plug-in miniature power relay, with power contact, 2 changeover contacts, input voltage 110 V DC

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