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PLC-INTERFACE, consisting of a relay base and plug-in safety relay with force-guided contacts in accordance with DIN EN 61810-3, Push-in connection, 2 changeover contacts, forcibly actuated, Input voltage: 24 V AC/DC

#### **Product Description**

The force-guided coupling relay module is approved for industrial control equipment in accordance with UL 508 (cULus listed). The requirements for type A in accordance with DIN EN 61810-3 are satisfied if the circuit is designed as 1 N/O contact / 1 N/C contact.



# **Key Commercial Data**

Packing unit	10 pc
GTIN	4 055626 486062
GTIN	4055626486062
Weight per Piece (excluding packing)	64.000 g
Custom tariff number	85364190
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area	
Dimensions		
Width	14 mm	

Width	14 mm
Height	80 mm
Depth	104 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C 60 °C
Ambient temperature (storage/transport)	-20 °C 85 °C
Maximum altitude	≤ 2000 m
Degree of protection	RT II (Relay)



# Technical data

## Ambient conditions

IP20 (Relay base)
≥ IP54 (Installation location)

## Coil side

Nominal input voltage U <sub>N</sub>	24 V AC/DC
Input voltage range in reference to U <sub>N</sub>	see diagram
Typical input current at U <sub>N</sub>	30 mA
Typical response time	3 ms 15 ms
Typical release time range	3 ms 15 ms
Coil voltage	24 V DC
Protective circuit	Bridge rectifier
Operating voltage display	Yellow LED

### Contact side

Contact type	2 changeover contacts, forcibly actuated
Type of switch contact	Single contact
Contact material	AgNi
Force-guided contacts in accordance with EN 50205	Type B
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (10 mA)
Min. switching current	10 mA (5 V)
Maximum inrush current	6 A
Limiting continuous current	6 A
Interrupting rating (ohmic load) max.	144 W (24 V DC)
	288 W (48 V DC)
	88 W (110 V DC)
	110 W (220 V DC)
	1500 VA (250 V AC)
Switching capacity min.	150 mW
Switching capacity	3 A (24 V, DC13)
	3 A (230 V, AC15)

### General

Test voltage relay winding/relay contact	4 kV <sub>rms</sub> (50 Hz, 1 min.)
Test voltage PDT/PDT	2.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Operating mode	100% operating factor
Mechanical service life	approx. 10 <sup>7</sup> cycles
Mounting position	any
Assembly instructions	In rows with zero spacing
B <sub>10d</sub>	600000 Cycles (AC1; 250 V / 6 A; 1 NO)
	900000 Cycles (AC1; 250 V / 3 A; 1 NO)
	1800000 Cycles (AC1; 250 V / 1,5 A; 1 NO)



# Technical data

## General

180000 Cycles (AC15; 250 V / 3 A; 1 NO)
560000 Cycles (AC15; 250 V / 2 A; 1 NO)
4600000 Cycles (AC15; 250 V / 0,75 A; 1 NO)
360000 Cycles (DC13; 24 V / 3 A; 1 NO)
740000 Cycles (DC13; 24 V / 1,5 A; 1 NO)
4200000 Cycles (DC13; 24 V / 0,75 A; 1 NO)

#### Connection data

Connection name	Coil side
Connection method	Push-in connection
Stripping length	8 mm
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 mm <sup>2</sup> 1 mm <sup>2</sup> (TWIN ferrule)
Conductor cross section AWG	26 14

### Connection data 2

Connection name	Contact side
Connection method	Push-in connection
Stripping length	8 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

### Standards and Regulations

Designation	Standards/regulations
Standards/regulations	EN 50178
	DIN EN 61810-3
Rated insulation voltage	250 V AC
Rated surge voltage	6 kV
Insulation	Safe isolation, reinforced insulation
Pollution degree	2
Overvoltage category	III
UL, USA	UL 508
	UL 508 Recognized
UL, USA/Canada	cUL 508
	cUL 508 Recognized

## Conformance/approvals

Designation	UL, USA
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# Technical data

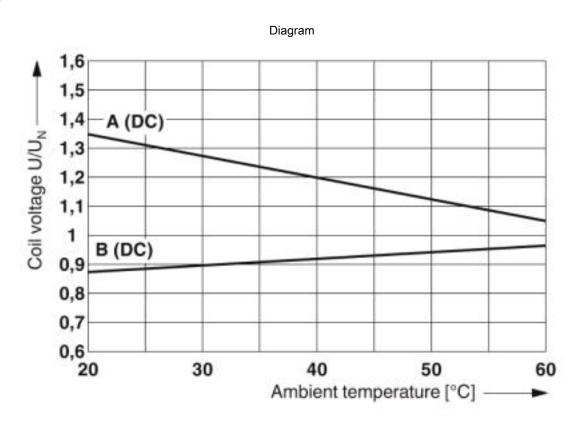
## Conformance/approvals

Identification	UL 508
	UL 508 Recognized
Designation	UL, USA/Canada
Identification	UL 508
	UL 508 Recognized

## **Environmental Product Compliance**

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

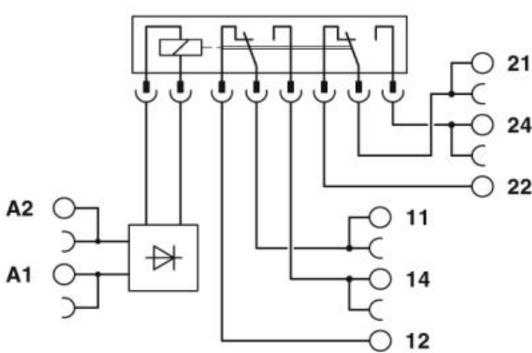
# Drawings



Curve A: maximum continuous voltage at limiting continuous current Curve B: minimum pick-up voltage for pre-excitation with  $U_N$  and limiting continuous current







### Articles in set

Safety relays - REL-SR- 24DC/2X21/FG - 2908777



Safety relay with force-guided contacts in accordance with DIN EN 61810-3, contact type: 2 changeover contacts. The requirements for type A in accordance with DIN EN 61810-3 are satisfied if the circuit is designed as 1 N/O contact / 1 N/C contact.

## Classifications

# eCl@ss

eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

### **ETIM**

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437



## Classifications

### **ETIM**

ETIM 5.0	EC001437
ETIM 6.0	EC001437
ETIM 7.0	EC001437

### **UNSPSC**

UNSPSC 13.2	39122334
UNSPSC 18.0	39122334
UNSPSC 19.0	39122334
UNSPSC 20.0	39122334
UNSPSC 21.0	39122334

# Approvals

## Approvals

#### Approvals

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

Ex Approvals

## Approval details

UL Listed http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 172140

cUL Listed cUL Listed http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 172140

DNV GL https://approvalfinder.dnvgl.com/ TAE0000196-02

EAC TR\_TS\_D\_00573\_c



# Approvals

EAC

EHC

TR\_TS\_S\_00010\_c

cULus Listed



#### Accessories

#### Accessories

Bridge

Continuous plug-in bridge - FBST 500-PLC RD - 2966786



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

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



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

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



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

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



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



### Accessories

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



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

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



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

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



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

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



Single plug-in bridge, length: 14 mm, number of positions: 2, color: black

#### DIN rail

DIN rail, unperforated - NS 35/ 7,5 V2A UNPERF 2000MM - 0801377



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Stainless steel V2A, uncoated, length: 2000 mm, color: silver



### Accessories

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



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver



### Accessories

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



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

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



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

#### Labeled terminal marker

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

#### 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



#### Accessories

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

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 - ZB10/WH-100:UNBEDRUCKT - 5060883



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, 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: 1000

#### 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

### Spare parts

Safety relays - REL-SR- 24DC/2X21/FG - 2908777



Safety relay with force-guided contacts in accordance with DIN EN 61810-3, contact type: 2 changeover contacts. The requirements for type A in accordance with DIN EN 61810-3 are satisfied if the circuit is designed as 1 N/O contact / 1 N/C contact.



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