

## Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Safety relay for emergency stop, safety door, and magnetic switches, as well as light grid, up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, 2 N/O contacts, TBUS interface, automatic or manual activation, plug-in screw connection terminal blocks

### Why buy this product

- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- Single and two-channel control
- 2 enabling current paths, 1 signaling current path
- For emergency stop and safety door monitoring, plus evaluation of light grids
- Modular system with TBUS extension



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 051682

### Technical data

#### Note

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

#### Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)

# Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

## Technical data

### Ambient conditions

Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	≤ 2000 m (Above sea level)

### Input data

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	70 mA
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	20 ms (manual start) 150 ms (automatic start)
Typical release time	10 ms
Recovery time	1 s
Max. permissible overall conductor resistance	50 Ω (Input and start circuits at $U_N$ )

### Output data

Contact type	2 enabling current paths 1 semiconductor signaling output
Contact material	AgSnO <sub>2</sub>
Minimum switching voltage	15 V AC/DC
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A (N/O contact) 100 mA (signal output)
Inrush current, minimum	25 mA
Maximum inrush current	6 A
Sq. Total current	$72 A^2 (I_{TH}^2 = I_1^2 + I_2^2)$
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms) 288 W (48 V DC, τ = 0 ms) 77 W (110 V DC, τ = 0 ms) 88 W (220 V DC, τ = 0 ms) 1500 VA (250 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	48 W (24 V DC, τ = 40 ms) 40 W (48 V DC, τ = 40 ms) 35 W (110 V DC, τ = 40 ms) 33 W (220 V DC, τ = 40 ms)
Switching capacity min.	0.4 W
Output fuse	10 A gL/gG NEOZED (N/O contact) Miniature circuit breaker C6 (24 V / 20 A power supply unit)

### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Mechanical service life	Approx. 10 <sup>7</sup> cycles

## Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

### Technical data

#### General

Net weight	196.9 g
Mounting type	DIN rail mounting
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Mounting position	any
Control	one and two channel

#### Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

#### Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN ISO 13849
Performance level (PL)	e
Category	4 (Undelayed contacts)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3

#### Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.)
Degree of pollution	2
Overvoltage category	III

# Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

## Classifications

### eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819

### ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

### UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39121501

## Approvals

### Approvals

---

#### Approvals

UL Listed / cUL Listed / Functional Safety / EAC / Functional Safety / cULus Listed

---

#### Ex Approvals

---

#### Approvals submitted

---

### Approval details

UL Listed
-----------

# Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

## Approvals



Functional Safety

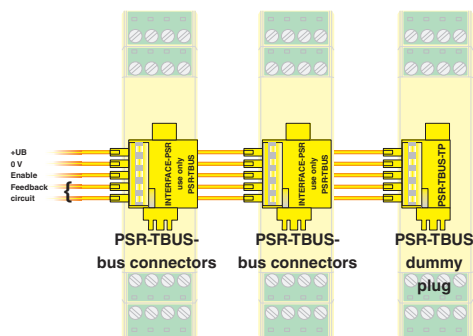
EAC

Functional Safety

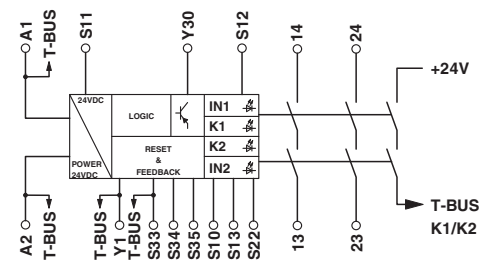


## Drawings

Connection diagram



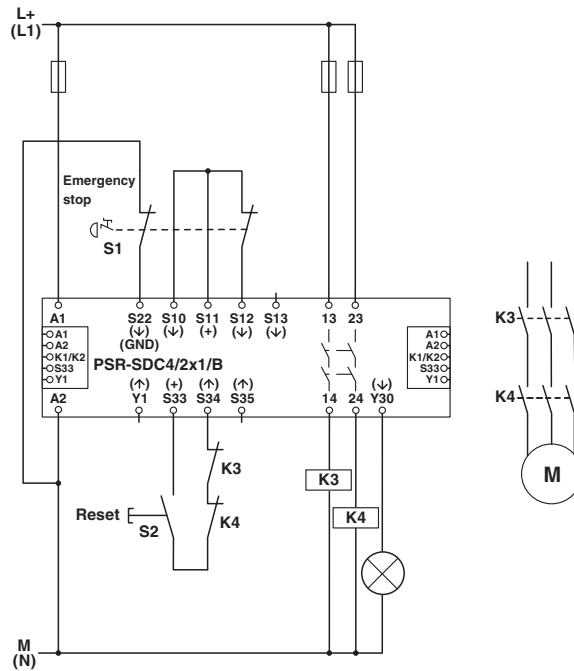
Circuit diagram



PSR-TBUS DIN rail connectors are used for cross-wiring between the modules.

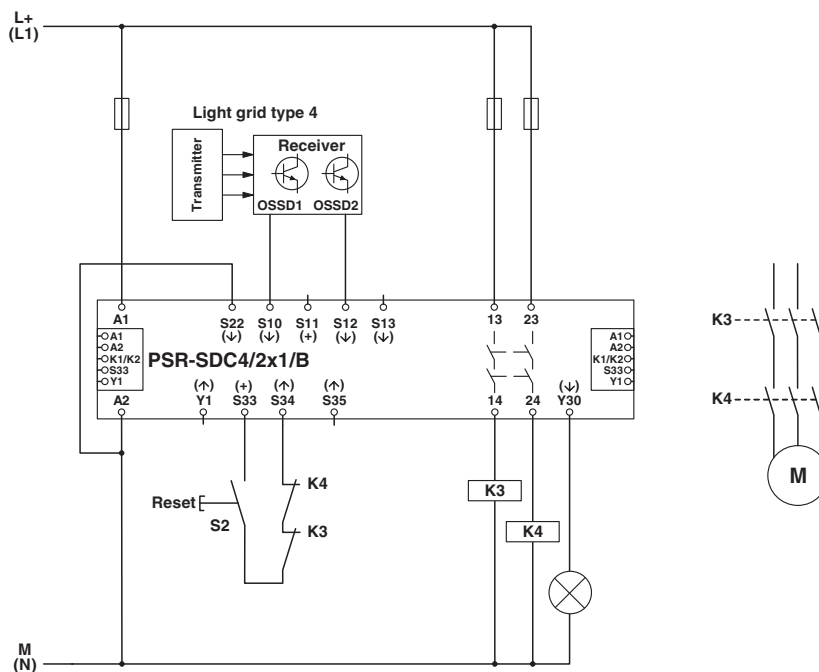
# Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

Circuit diagram



Two-channel emergency stop monitoring

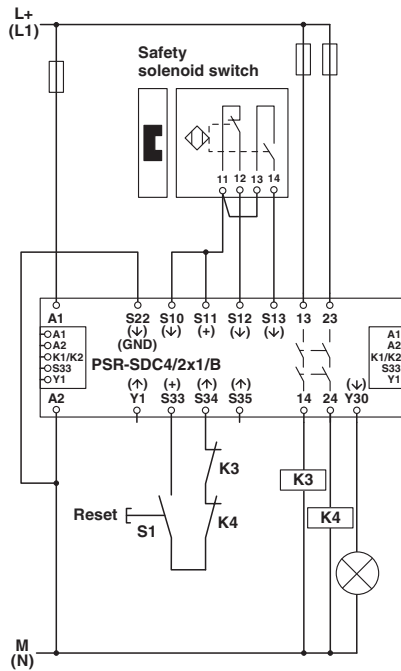
Circuit diagram



Light grid monitoring

## Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

Circuit diagram



Two-channel magnetic switch monitoring

Phoenix Contact 2016 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>