

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 documentation. Our general terms of use for downloads are valid.



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

Your advantages

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

Commercial data

Item number	2981486
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA211
Catalog page	Page 231 (C-6-2019)
GTIN	4046356051682
Weight per piece (including packing)	229.1 g
Weight per piece (excluding packing)	224.8 g
Customs tariff number	85371098
Country of origin	DE

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



2981486

<https://www.phoenixcontact.com/us/products/2981486>

Technical data

Product properties

Product type	Safety relays
Product family	PSRclassic
Application	Emergency stop
	Safety door
	Light grid
	Solenoid switch
Mechanical service life	approx. 10^7 cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Electrical properties

Maximum power dissipation for nominal condition	1.68 W
Nominal operating mode	100% operating factor

Air clearances and creepage distances between the power circuits

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.)

Input data

General

Rated control circuit supply voltage U_S	24 V DC
Voltage range with reference to U_S	0.85 ... 1.1
Power consumption at U_S	typ. 1.7 W
Rated control supply current I_S	typ. 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
Protective circuit	Reverse polarity protection; Suppressor diode ()
Max. permissible overall conductor resistance	50 Ω (Input and start circuits at U_S)

Output data

Contact switching type	2 enabling current paths
	1 semiconductor signaling output
Contact material	AgSnO ₂
Maximum switching voltage	250 V AC/DC (Enabling current paths)
	24 V (signal output)
Minimum switching voltage	15 V AC/DC (Enabling current paths)
Limiting continuous current	6 A (Enabling current paths)

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



2981486

<https://www.phoenixcontact.com/us/products/2981486>

	100 mA (signal output)
Maximum inrush current	6 A
Inrush current, minimum	25 mA (Enabling current paths)
Sq. Total current	$72 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2)$
Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0 \text{ ms}$)
	288 W (48 V DC, $\tau = 0 \text{ ms}$)
	77 W (110 V DC, $\tau = 0 \text{ ms}$)
	88 W (220 V DC, $\tau = 0 \text{ ms}$)
	1500 VA (250 V AC, $\tau = 0 \text{ ms}$)
Maximum interrupting rating (inductive load)	48 W (24 V DC, $\tau = 40 \text{ ms}$)
	40 W (48 V DC, $\tau = 40 \text{ ms}$)
	35 W (110 V DC, $\tau = 40 \text{ ms}$)
	33 W (220 V DC, $\tau = 40 \text{ ms}$)
Switching capacity	min. 0.4 W (Enabling current paths)
Switching capacity (360/h cycles)	6 A (24 V DC)
	5 A (230 V (AC15))
Switching capacity (3600/h cycles)	3 A (24 V (DC13))
	3 A (230 V (AC15))
Output fuse	10 A gL/gG NEOZED (Enabling current paths)
	Miniature circuit breaker C6 (24 V / 20 A power supply unit)

Connection data

Connection technology

pluggable	yes
-----------	-----

Conductor connection

Connection method	Screw connection
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	Polyamide

Characteristics

Safety data

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



2981486

<https://www.phoenixcontact.com/us/products/2981486>

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

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Maximum altitude	≤ 2000 m (Above sea level)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)

Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	IEC 60664-1
-----------------------	-------------

Mounting

Mounting type	DIN rail mounting
Mounting position	any

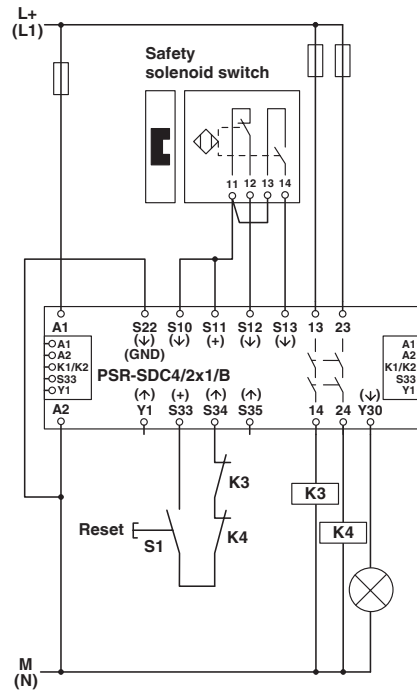
PSR-SCP- 24DC/SDC4/2X1/B - Safety relays

2981486

<https://www.phoenixcontact.com/us/products/2981486>

Drawings

Circuit diagram

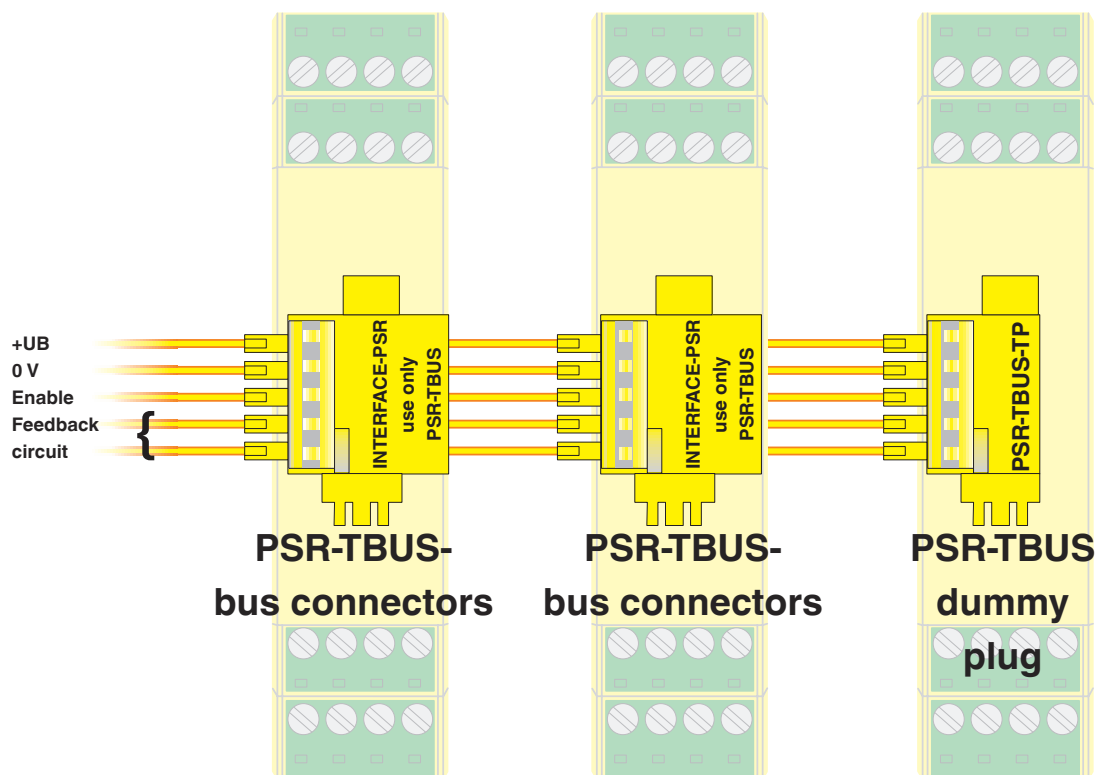


PSR-SCP- 24DC/SDC4/2X1/B - Safety relays

2981486

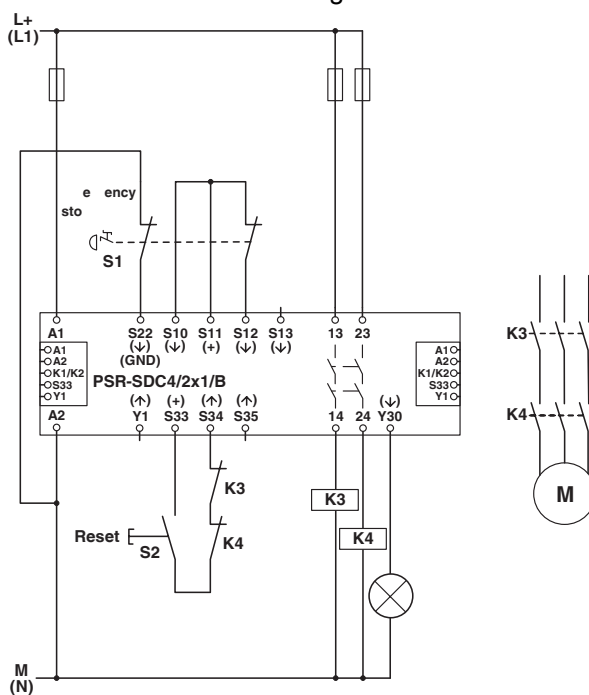
<https://www.phoenixcontact.com/us/products/2981486>

Connection diagram



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

Circuit diagram

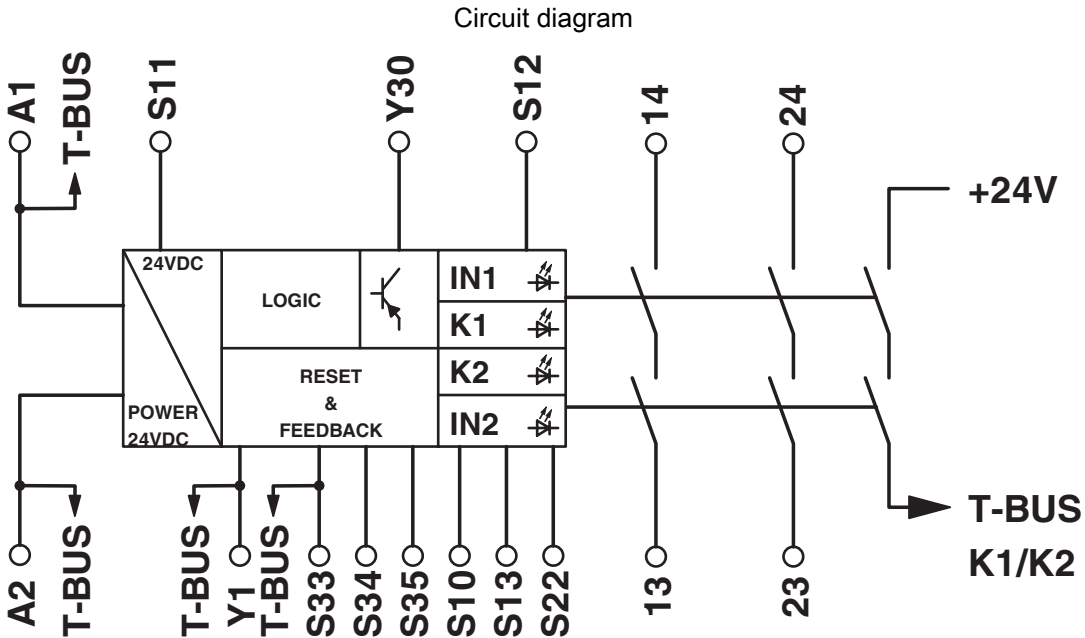
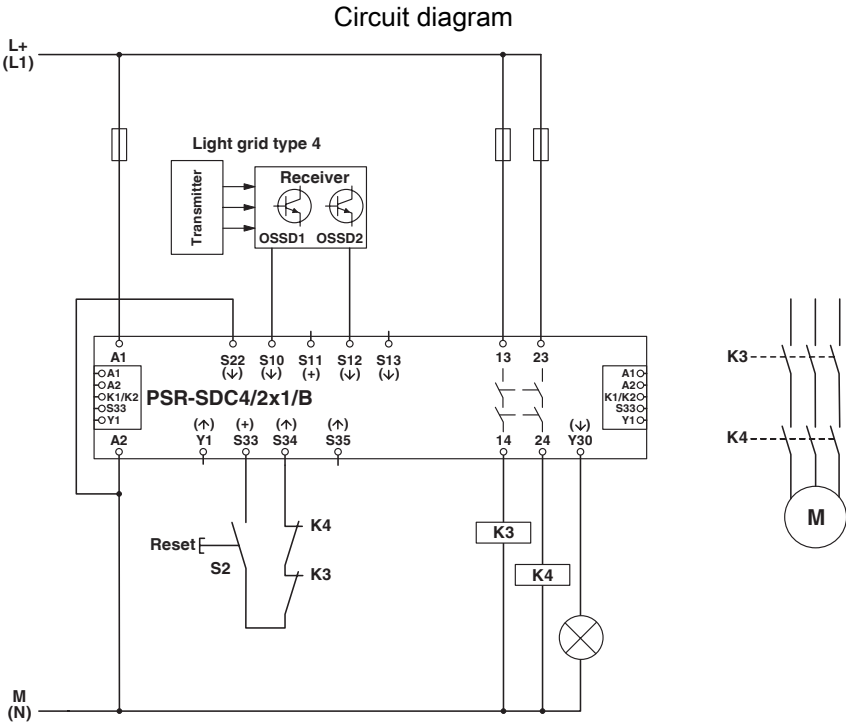


PSR-SCP- 24DC/SDC4/2X1/B - Safety relays



2981486

<https://www.phoenixcontact.com/us/products/2981486>



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




2981486


<https://www.phoenixcontact.com/us/products/2981486>

Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2981486>




EAC
Approval ID: TR_TS_D_00573_c




UL Listed
Approval ID: FILE E 140324



cUL Listed
Approval ID: FILE E 140324



Functional Safety
Approval ID: 01/205/0660.03/22



Functional Safety
Approval ID: 968/EZ 369.05/22

cULus Listed

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



2981486

<https://www.phoenixcontact.com/us/products/2981486>

Classifications

ECLASS

ECLASS-11.0	27371819
ECLASS-13.0	27371819
ECLASS-12.0	27371819

ETIM

ETIM 9.0	EC001449
----------	----------

UNSPSC

UNSPSC 21.0	39122200
-------------	----------

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.)	Lead(CAS: 7439-92-1)
SCIP	d72e7db1-94f1-4bbe-b1b1-ea81c50ae8cb

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



2981486

<https://www.phoenixcontact.com/us/products/2981486>

Accessories

PSR-TBUS - DIN rail bus connectors

2890425

<https://www.phoenixcontact.com/us/products/2890425>

DIN rail connector for safety switching devices, for supplying/controlling/monitoring (depending on the module)



PSR-TBUS-TP - DIN rail bus connectors

2981716

<https://www.phoenixcontact.com/us/products/2981716>

Blind plug for the PSR-TBUS DIN rail connector used with the modular safety relay system (PSR-SDC4)



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



2981486

<https://www.phoenixcontact.com/us/products/2981486>

PSR-TBUS - 1PCS - DIN rail bus connectors

1326060

<https://www.phoenixcontact.com/us/products/1326060>

DIN rail connector for safety switching devices, for supplying/controlling/monitoring (depending on the module)



Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com