

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

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 SIL 3 high and low-demand applications, also approved according to EN 50156, Germanischer Lloyd, and EN ISO 13849, emergency stop and safety door monitoring, single-channel, 2 enabling current paths, 1 alarm contact, plug-in screw terminal blocks, width: 22.5 mm

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-channel control
- ✓ Safe isolation
- ✓ With inrush current reduction, therefore suitable for coupling to failsafe controllers (PSR-ESP4)



Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 911065
GTIN	4017918911065
Weight per Piece (excluding packing)	24.000 g
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
-------------------------	---

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
---------------------------------	------------------

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

Technical data

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 %
Max. permissible humidity (storage/transport)	75 %
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g
Maximum altitude	≤ 2000 m (Above sea level)

Input data

Rated control circuit supply voltage U_s	24 V DC -15 % / +10 %
Rated control supply current I_s	typ. 50 mA DC
Inrush current	< 1 A
Voltage at input/start and feedback circuit	24 V DC
Typical response time	60 ms (Automatic/manual start)
Typical release time	20 ms
Recovery time	approx. 1 s
Status display	Green LED

Output data

Contact type	2 enabling current paths
	1 signaling current path (type B according to EN 50205)
Contact material	AgSnO ₂ , gold-flashed
Minimum switching voltage	10 V
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A (N/O contact/N/C contact, high demand)
	4 A (N/O contact/N/C contact, low demand)
Inrush current, minimum	10 mA
Maximum inrush current	6 A
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, $\tau = 0 \text{ ms}$)
	200 W (48 V DC, $\tau = 0 \text{ ms}$)
	77 W (110 V DC, $\tau = 0 \text{ ms}$)
	70 W (220 V DC, $\tau = 0 \text{ ms}$)
	1500 VA (250 V AC, $\tau = 0 \text{ ms}$)
Maximum interrupting rating (inductive load)	42 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.	0.2 W
Output fuse	6 A gL/gG NEOZED (High demand)
	4 A gL/gG NEOZED (Low demand)

General

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

Technical data

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Mechanical service life	Approx. 10 ⁷ cycles
Nominal operating mode	100% operating factor
Net weight	24 g
Mounting type	DIN rail mounting
Mounting position	On horizontal and vertical DIN rail
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Control	single-channel
Housing material	Polyamide PA non-reinforced
Housing color	yellow

Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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)	1 (up to SIL 3 depending on the application)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	1 (up to SIL 3 depending on the application)
Designation	EN ISO 13849
Performance level (PL)	c (up to PL e depending on the application)
Category	1 (up to Cat. 4 depending on the application)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	1 (up to SILCL 3 depending on the application)

Standards and Regulations

Shock	15g
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

Technical data

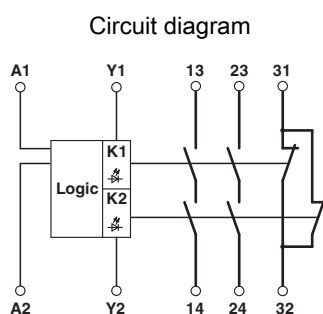
Standards and Regulations

Rated insulation voltage	250 V
Rated surge voltage/insulation	6 kV / Safe isolation, increased insulation
Degree of pollution	2
Overvoltage category	III
Vibration (operation)	10 Hz ...150 Hz, 2g
Conformance	CE-compliant

Environmental Product Compliance

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

Drawings



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
eCl@ss 9.0	27371819

ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449
ETIM 6.0	EC001449

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

Classifications

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 / EAC / Functional Safety / DNV GL / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
-----------	---	---	---------------

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
------------	---	---	---------------

Functional Safety		01/205/0763.01/1.50
-------------------	---	---------------------

EAC		EAC-Zulassung
-----	---	---------------

Functional Safety		968/EZ 406.02/15
-------------------	---	------------------

EAC		7500651.22.01.00244
-----	---	---------------------

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

Approvals

Functional Safety		968/EZ 406.02/15
DNV GL	https://www.dnvgl.com/	TAA00000K4
cULus Listed		