

## Safety relays - PSR-SCP- 24UC/ESAM4/3X1/1X2/B - 2900509

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Safety relay to emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, one- or two-channel operation, automatically or manually supervised activation, 3 enabling current paths, nominal input voltage 24 V AC/DC

### Product Features

- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- Manually monitored and automatic activation in a single device
- Basic insulation
- 3 enabling current paths, 1 signaling current path
- Single and two-channel control



### Key commercial data

Packing unit	1 PCE
Catalog page	Page 12 (IF-2011)
GTIN	 4 046356 513579
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
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#### Input data

Nominal input voltage $U_N$	24 V AC/DC
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	140 mA AC

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#### Input data

Typical input current at $U_N$	65 mA DC
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	20 ms (man. start)
Typical release time	45 ms (single-channel)
Typical release time	10 ms (two-channel)
Concurrence input 1/2	Infinite
Recovery time	1 s
Max. permissible overall conductor resistance	approx. 50 $\Omega$ (Input and start circuits at $U_N$ )

#### Output data

Contact type	3 enabling current paths
Contact type	1 signaling current path
Contact material	AgSnO <sub>2</sub> , + 0.2 $\mu$ m Au
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	10 V AC/DC
Limiting continuous current	6 A (N/O contact)
Limiting continuous current	5 A (N/C contact)
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	72 A <sup>2</sup> ( $I_{TH}^2 = I_1^2 + I_2^2 + I_3^2$ )
Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0$ ms)
Interrupting rating (ohmic load) max.	288 W (48 V DC, $\tau = 0$ ms)
Interrupting rating (ohmic load) max.	77 W (110 V DC, $\tau = 0$ ms)
Interrupting rating (ohmic load) max.	88 W (220 V DC, $\tau = 0$ ms)
Interrupting rating (ohmic load) max.	1500 VA (250 V AC, $\tau = 0$ ms)
Maximum interrupting rating (inductive load)	48 W (24 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	40 W (48 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	35 W (110 V DC, $\tau = 40$ ms)
Maximum interrupting rating (inductive load)	33 W (220 V DC, $\tau = 40$ ms)
Switching capacity min.	100 mW
Output fuse	10 A gL/gG NEOZED (N/O contact)
Output fuse	6 A gL/gG NEOZED (N/C contact)

#### General data

Width	22.5 mm
Height	99 mm
Depth	114.5 mm
Ambient temperature (operation)	-20 °C ... 55 °C

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Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relay type	Electromechanically forcibly guided, dust-proof relay.
Mechanical service life	Approx. 10 <sup>7</sup> cycles
Mounting position	Any
Category according to EN 13849-1	4
Stop category	0
Name	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated surge voltage / insulation	4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.)
Rated insulation voltage	250 V
Pollution degree	2
Surge voltage category	III

#### Connection data

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

### Classifications

#### ETIM

ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

#### UNSPSC

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

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## Classifications

eCl@ss

eCl@ss 4.0	27250313
eCl@ss 4.1	27250313
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 7.0	27371819

## Approvals

Approvals

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Approvals

UL Listed / GOST / cUL Listed / UL Listed / GOST / cUL Listed / Functional Safety / cULus Listed

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Ex Approvals


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Approvals submitted


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## Approval details

UL Listed 

GOST 

cUL Listed 

UL Listed 

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## Approvals

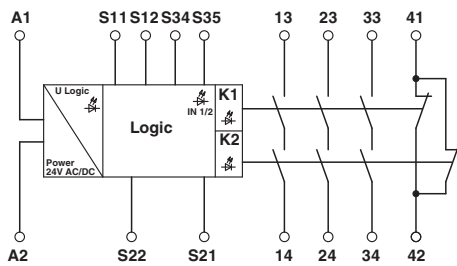


Functional Safety

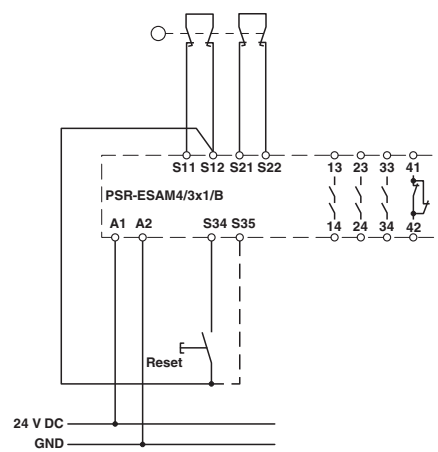


## Drawings

Circuit diagram



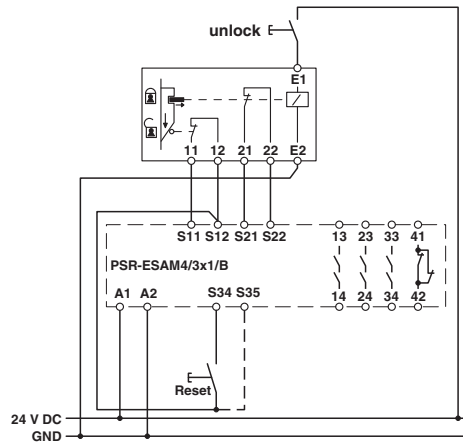
Circuit diagram



Cable-operated switch

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Circuit diagram



Switch with guard locking