Safety relays - PSR-SCP- 24DC/ESD/5X1/1X2/300 - 2981428

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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, automatic or manual activation, 3 N/O contacts, 1 N/C contact, 2 N/O contacts switch-off delay set at 0 to 300 s

Product Features

- Maximum of 3 undelayed and 2 dropout delay contacts
- Manually monitored and automatic activation
- Up to Cat. 3/4 and PL d/e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- For emergency stop and safety door monitoring, plus evaluation of light grids (suitable light grids available on request)
- Protective labels to prevent manipulation of the set time (PSR-ESD-300) or electronic protection against manipulation (PSR-ESD-30)
- Single and two-channel control
- Fixed delay times of 0 s ... 300 s

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	472.4 GRM
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	45 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

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Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 %
Max. permissible humidity (storage/transport)	75 %

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	155 mA DC
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	70 ms (manual start)
	600 ms (Auto-start)
Typical release time	20 ms (undelayed contacts)
Typical release time range	0.2 s ... 300 s
Concurrence input 1/2	Infinite
Recovery time	1 s
Max. permissible overall conductor resistance	22 Ω (Input and start circuits at U_N)

Output data

Contact type	3 enabling current paths undelayed
	2 enabling current paths delayed
	1 signaling current path undelayed
Contact material	$AgSnO_2$
Minimum switching voltage	15 V AC/DC
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A (N/O contact)
	3 A (N/C contact)
Inrush current, minimum	25 mA
Maximum inrush current	6 A
Sq. Total current	55 A^2 ($I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2 + I_5^2$)
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)	42 W (24 V DC, τ = 40 ms)
	40 W (48 V DC, τ = 40 ms)
	35 W (110 V DC, τ = 40 ms)

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Output data

	33 W (220 V DC, τ = 40 ms)
Switching capacity min.	0.4 W
Output fuse	6 A fast blow (undelayed)
	10 A gL/gG NEOZED (delayed)

General

Relay type	Electromechanically forcibly guided, dust-proof relay.
Mechanical service life	Approx. 10^7 cycles
Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Mounting position	any
Category according to EN 13849-1	3 (For delayed contacts)
	4 (For non-delayed contacts)
Stop category	0 (For non-delayed contacts)
	1 (For delayed contacts)
Designation	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 the enabling current paths (13/14, 23/24, 33/34) and the remaining current paths and between 13/14, 23/24, 33/34 between each other.)
Rated insulation voltage	250 V
Pollution degree	2
Surge voltage category	III

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
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

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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

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

Ex Approvals

Approvals submitted

Approval details

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Approvals

UL Listed

GOST

cUL Listed

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Functional Safety

cULus Listed

Drawings

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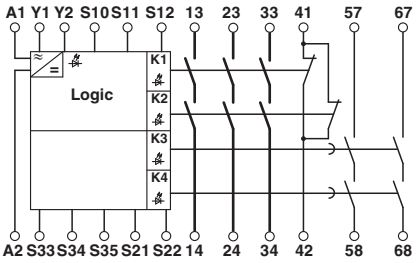
Circuit diagram



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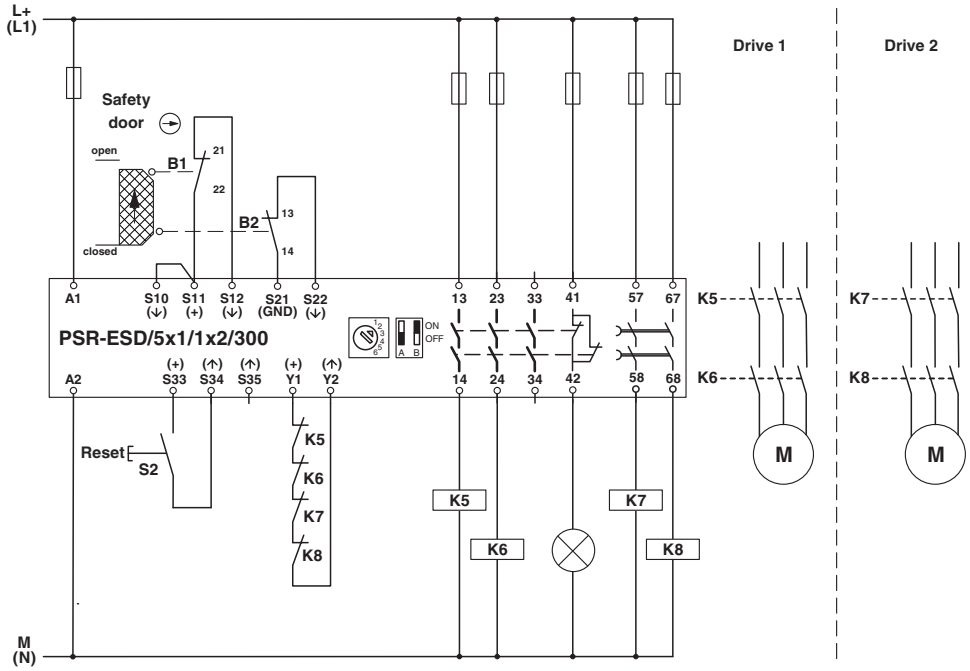

Two-channel safety door monitoring