Safety relays - PSR-SCP- 24UC/ESA2/4X1/1X2/B - 2963802

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Safety relay for emergency stop and safety door up to SIL 1, SIL CL 1, Cat. 1, PL c, depending on the application up to SIL 3, SIL CL 3, Cat. 4, PL e, single-channel operation, 4 enabling current paths, nominal input voltage of 24 V AC/DC, plug-in screw terminal blocks

Why buy this product

- Up to Cat. 1/PL c according to ISO 13849-1, SILCL 1 according to IEC 62061, SIL 1 according to IEC 61508
- Depending on the application, up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- Basic insulation
- Single-channel control
-

Key commercial data

Packing unit	1 pc
GTIN	4 017918 892661
Weight per Piece (excluding packing)	249.8 g
Custom tariff number	85371099
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

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Technical data

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
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 AC/DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	140 mA AC
	65 mA DC
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	65 ms
Typical release time	45 ms
Recovery time	1 s
Status display	Green LED
Max. permissible overall conductor resistance	approx. 22 Ω (Input and start circuits at U_N)

Output data

Contact type	4 enabling current paths
	1 signaling current path
Contact material	$AgSnO_2$, + 0.2 µm Au
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	72 A^2 ($I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2$)
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms, N/C contact 51/52: 72 W)
	288 W (48 V DC, τ = 0 ms, N/C contact 51/52: 144 W)
	110 W (110 V DC, τ = 0 ms)
	88 W (220 V DC, τ = 0 ms)
	1500 VA (250 V AC, τ = 0 ms, N/C contact 51/52: 750 VA)
Maximum interrupting rating (inductive load)	42 W (24 V DC, τ = 40 ms)
	42 W (48 V DC, τ = 40 ms)
	42 W (110 V DC, τ = 40 ms)
	42 W (220 V DC, τ = 40 ms)
Switching capacity min.	0.4 W
Output fuse	6 A fast blow
	C6 (24 V AC/DC) automatic device

General

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Technical data

General

Relay type	Electromechanically forcibly guided, dust-proof relay.
Mechanical service life	Approx. 10^7 cycles
Net weight	249.8 g
Mounting type	DIN rail mounting
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Mounting position	any
Parameters as per EN ISO 13849	1 (up to Cat. 4 depending on the application)
Stop category	0
Parameters for IEC 61508	1
Designation	Air clearances 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/N/C contacts and enabling current paths).
Rated insulation voltage	250 V
Pollution degree	2
Surge voltage category	III

Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

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

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Classifications

ETIM

ETIM 2.0	EC000196
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 / Functional Safety / UL Listed / cUL Listed / EAC / EAC / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed

cUL Listed

Functional Safety

Functional Safety

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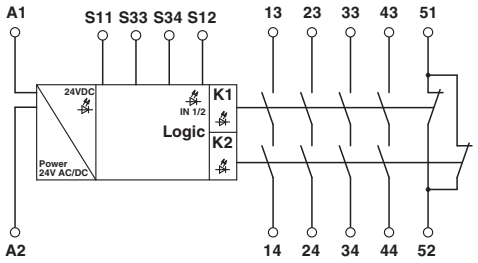
Drawings

Circuit diagram



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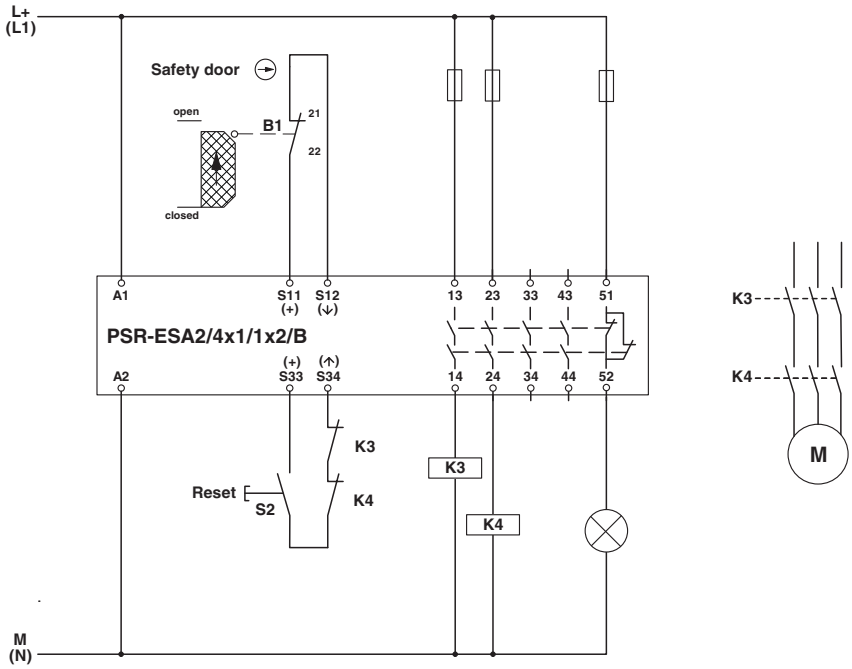
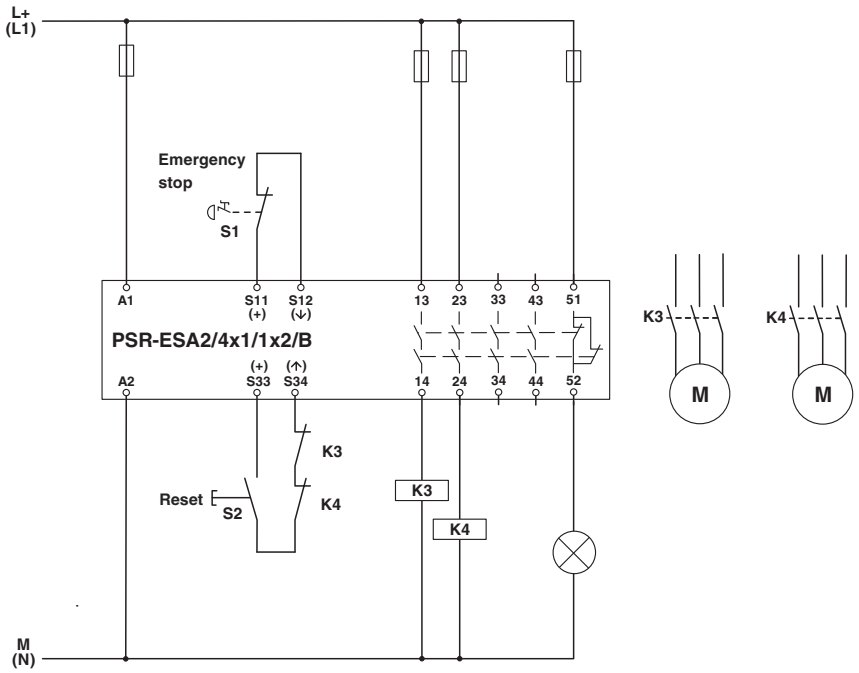
Circuit diagram



Single-channel safety door monitoring

Circuit diagram



Single-channel emergency stop monitoring

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