Safety relays - PSR-SPP- 24UC/ESAM4/3X1/1X2/B - 2900510

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The figure shows a version with a screw connection

Safety relay for emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, single or two-channel operation, 3 enabling current paths, nominal input voltage of 24 V AC/DC, plug-in spring-cage terminal blocks

Product Features

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

Key commercial data

package_quantity	1
GTIN	4046356513784

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C

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
Typical input current at U_N	65 mA DC

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Input data

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
Status display	Green LED
Max. permissible overall conductor resistance	approx. 50 Ω (Input and start circuits at U_N)

Output data

Contact type	3 enabling current paths
Contact type	1 signaling current path
Contact material	$AgSnO_2$, + 0.2 µm Au
Minimum switching voltage	10 V AC/DC
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A (N/O contact)
Limiting continuous current	5 A (N/C contact)
Inrush current, minimum	10 mA
Maximum inrush current	6 A
Sq. Total current	72 A^2 ($I_{TH}^2 = I_1^2 + I_2^2 + I_3^2$)
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	288 W (48 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	77 W (110 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	88 W (220 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	1500 VA (250 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	48 W (24 V DC, τ = 40 ms)
Maximum interrupting rating (inductive load)	40 W (48 V DC, τ = 40 ms)
Maximum interrupting rating (inductive load)	35 W (110 V DC, τ = 40 ms)
Maximum interrupting rating (inductive load)	33 W (220 V DC, τ = 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

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	4
Stop category	0

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Technical data

General

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 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 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	1.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage connection

Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Proof test interval	240 Months
Duration of use	240 Months
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Proof test interval	66 Months
Duration of use	240 Months
Designation	EN ISO 13849
Performance level (PL)	e
Category	4
Duration of use	240 Months
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3
Duration of use	240 Months

classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901

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classifications

eCl@ss

eCl@ss 6.0	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819

ETIM

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

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

Approval details

UL Listed

GOST

cUL Listed

Functional Safety

cULus Listed

Drawings

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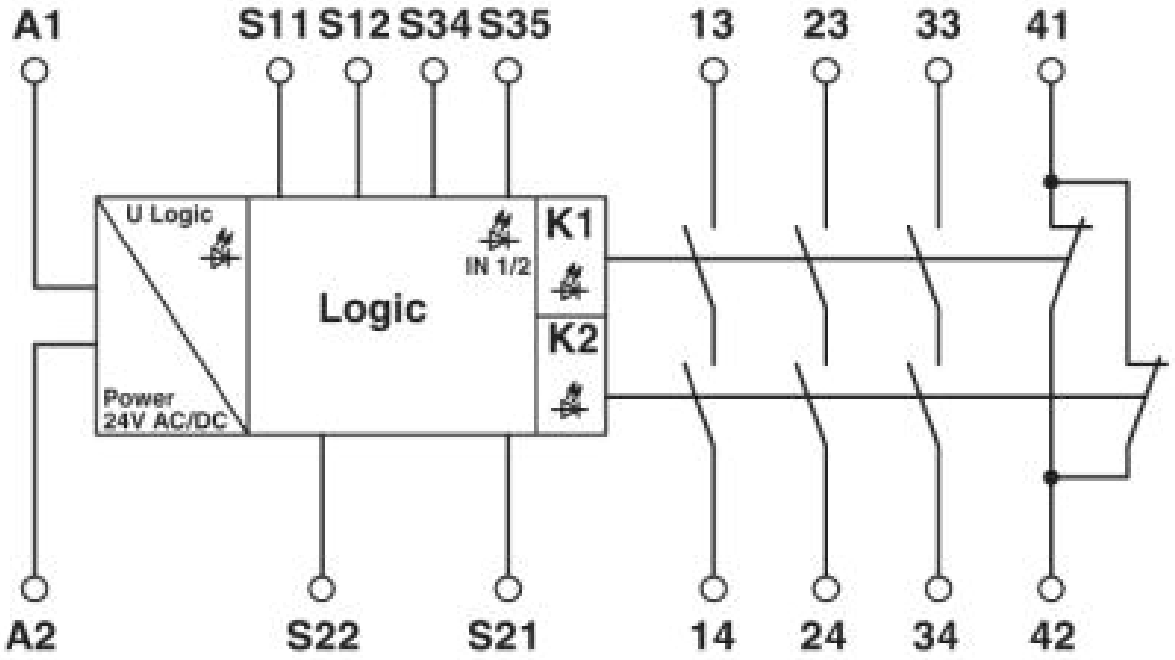
Circuit diagram



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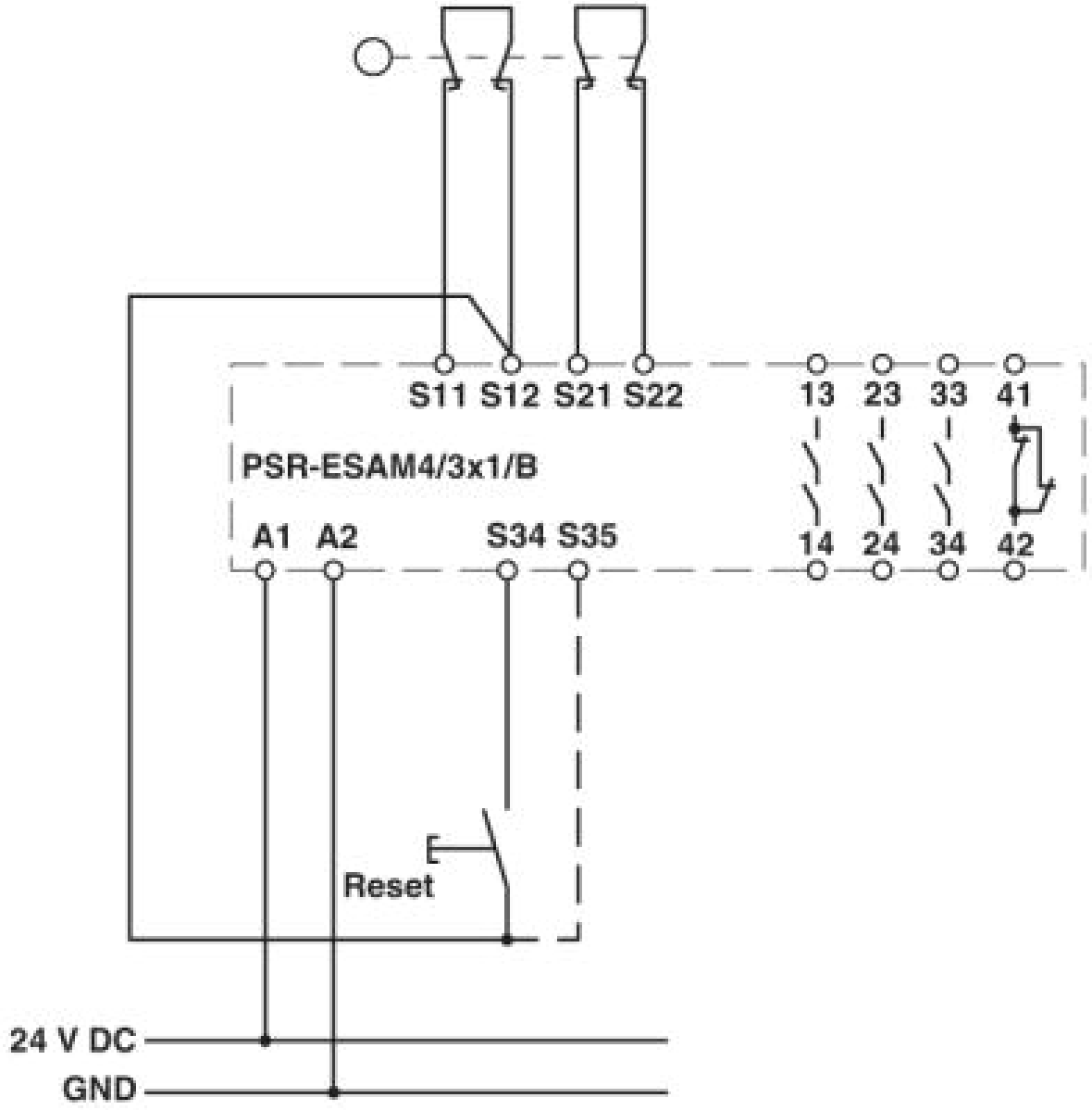

Cable-operated switch

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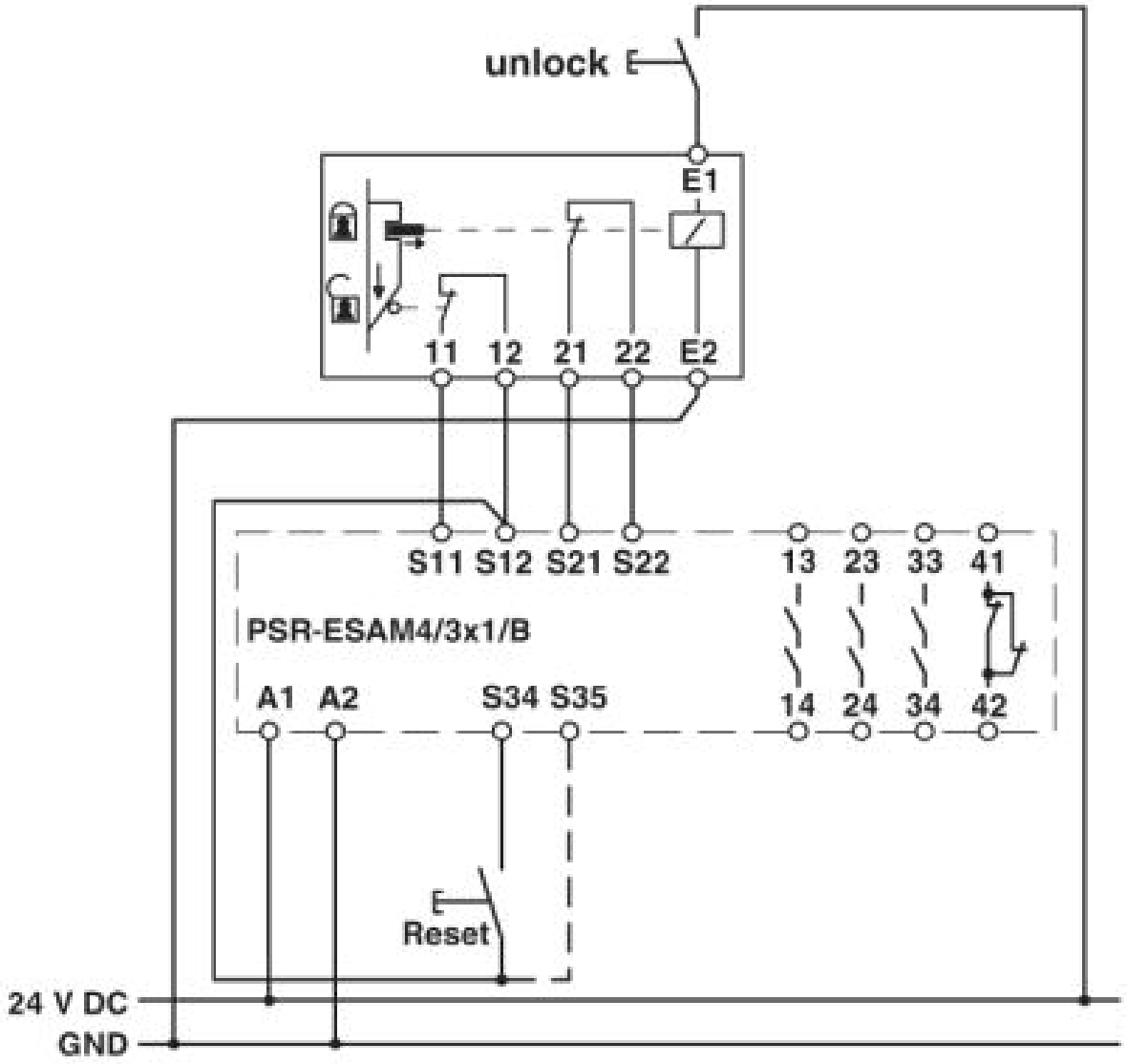

Switch with guard locking