

PSR-SPP- 24UC/ESA2/4X1/1X2/B

Order No.: 2963954

The figure shows a version with a screw connection



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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 spring-cage terminal blocks



Commercial data

EAN	 4 017918 904821
sales group	G500
Pack	1 Pcs.
Customs tariff	85371099
Gross weight in pieces	0.276 KG
Net weight per piece	0.19438 KG
Catalog page information	Page 69 (C-8-2013)

Product notes

WEEE/RoHS-compliant since:
11/23/2006



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Technical data

Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °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
	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 μ m 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, $\tau = 0$ ms, N/C contact 51/52: 72 W)
	288 W (48 V DC, $\tau = 0$ ms, N/C contact 51/52: 144 W)
	110 W (110 V DC, $\tau = 0$ ms)
	88 W (220 V DC, $\tau = 0$ ms)
	1500 VA (250 V AC, $\tau = 0$ ms, N/C contact 51/52: 750 VA)
Maximum interrupting rating (inductive load)	42 W (24 V DC, $\tau = 40$ ms)
	42 W (48 V DC, $\tau = 40$ ms)
	42 W (110 V DC, $\tau = 40$ ms)
	42 W (220 V DC, $\tau = 40$ ms)

Switching capacity min.	0.4 W
Output fuse	6 A fast blow
	C6 (24 V AC/DC) automatic device

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	1 (up to Cat. 4 depending on the application)
Stop category	0
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/N/C contacts 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 ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage connection

Certificates / Approvals



Certification

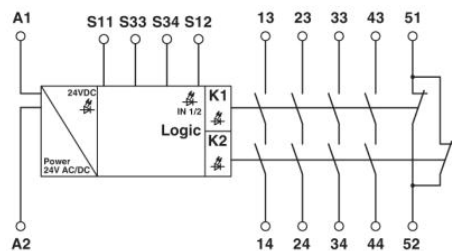
cULus Listed, GOST, Functional Safety

Certifications applied for:

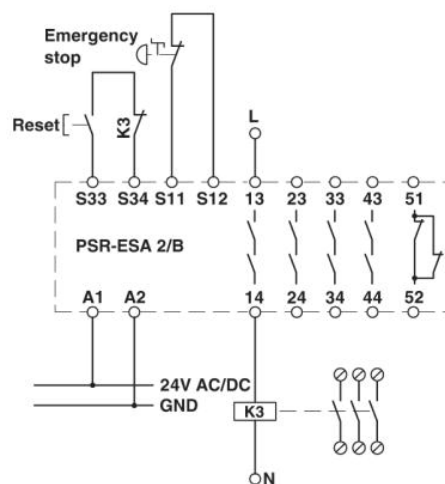
Certification Ex:

Drawings

Circuit diagram



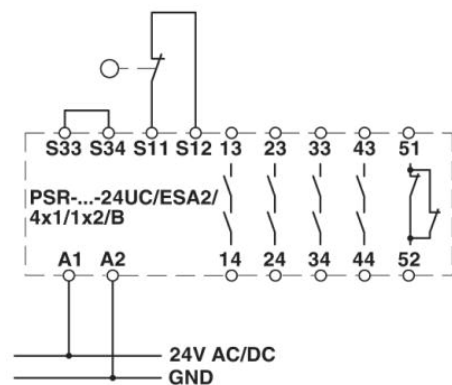
1 = logics



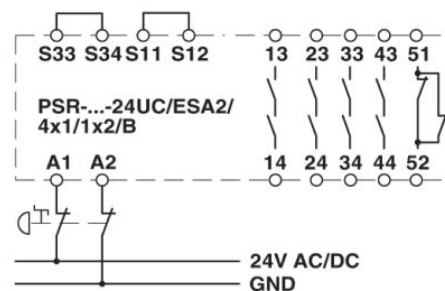
a = RESET

b = Emergency stop

One-channel emergency stop circuit with manual activation and monitored contact expansion, suitable up to safety category 2.



One-channel safety door monitoring with automatic activation, suitable up to safety category 1.



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