

PSR-SCP- 24DC/ESD/5X1/1X2/ T 3

Order No.: 2981224



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Safety relay for emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, automatic or manual activation, 3 N/O contacts, 1 N/C contact, 2 N/O contacts with fixed 3.0 s dropout delay, plug-in screw connection terminal blocks



Commercial data

EAN	 4 017918 949020
sales group	G521
Pack	1 Pcs.
Customs tariff	85371099
Gross weight in pieces	0.4848 KG
Net weight per piece	0.4848 KG
Catalog page information	Page 74 (C-8-2013)

Product notes

WEEE/RoHS-compliant since:
03/21/2007



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Technical data

Dimensions

Width	45 mm
Height	99 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 DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	150 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)
Concurrence input 1/2	Infinite
Recovery time	1 s
Max. permissible overall conductor resistance	11 Ω (Input and start circuits at U_N)
Delay time	3 s ± 20 %

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
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, $\tau = 0$ ms) 288 W (48 V DC, $\tau = 0$ ms) 110 W (110 V DC, $\tau = 0$ ms) 88 W (220 V DC, $\tau = 0$ ms) 1500 VA (250 V AC, $\tau = 0$ ms)

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 (undelayed)
	C6 (24 V AC/DC) automatic device (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 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
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

Certificates / Approvals



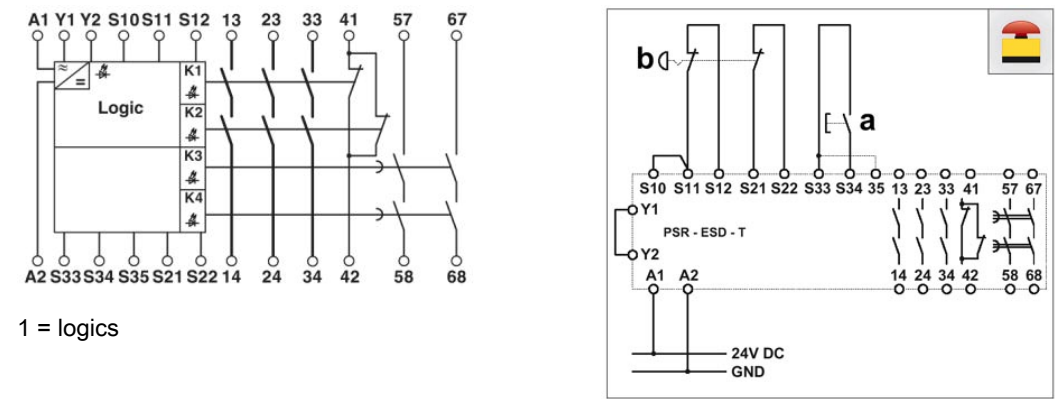
Certification cULus Listed, GOST, Functional Safety

Certifications applied for:

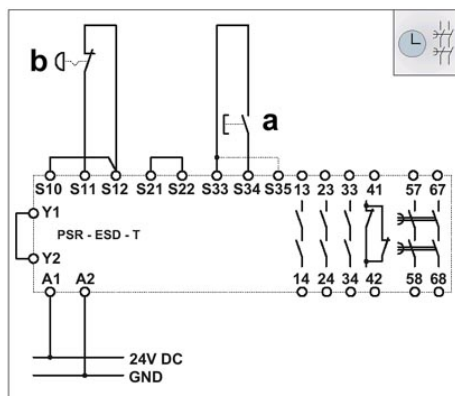
Certification Ex:

Drawings

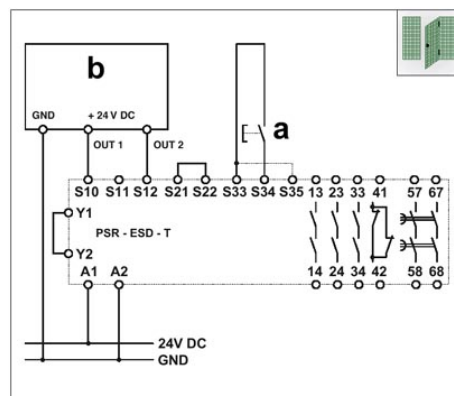
Circuit diagram



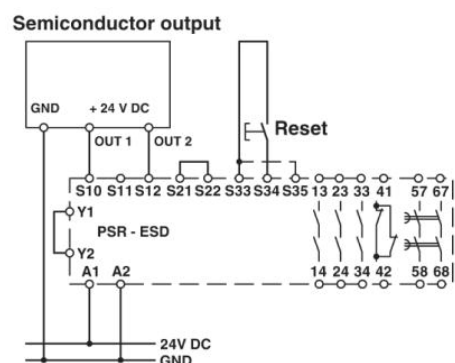
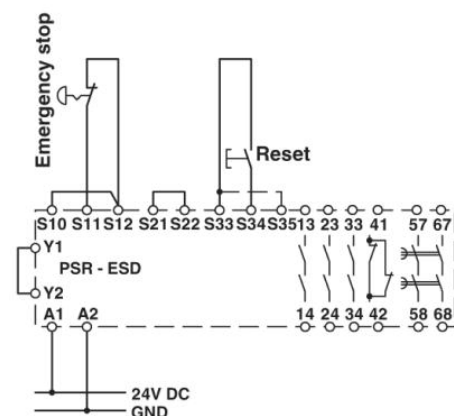
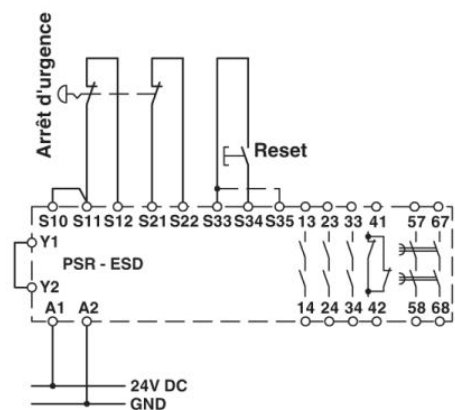
a = RESET
b = Emergency stop
Two-channel emergency stop circuit
with cross circuiting detection and
monitored reset button (bridge on S33/
S35: Automatic activation), suitable up to
safety category 4.



a = RESET
 b = Emergency stop
 Single-channel emergency stop circuit with monitored reset button (bridge on S33/S35: Automatic activation), suitable up to safety category 2, safety category 4 only when automatically disconnecting switches are used and cables are installed in separate plastic sheaths.



a = RESET
 b = semiconductor output
 Two-channel limit switch monitoring with semiconductor output and monitored reset button (bridge on S33/S35: Automatic activation), suitable up to safety category 4 depending on the limit switch.



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