


**PSR-SCP- 24DC/ESD/5X1/1X2/0T 5**

Order No.: 2981101

<http://catalog.phoenixcontact.net/phoenix/treeViewClick.do?UID=2981101>

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 0.5 s dropout delay, plug-in screw connection terminal blocks



Commercial data	
EAN	 4 017918 952983
sales group	G521
Pack	1 Pcs.
Customs tariff	85364900
Gross weight in pieces	0.4886 KG
Net weight per piece	0.4886 KG
Catalog page information	Page 74 (C-8-2013)

## Product notes

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

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Technical data	
<b>Dimensions</b>	
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 $\Omega$ (Input and start circuits at $U_N$ )
Delay time	0.5 s $\pm$ 20 %

### Output data

Contact type	3 enabling current paths undelayed
	2 enabling current paths delayed
	1 signaling current path undelayed
Contact material	AgSnO <sub>2</sub>
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 <sup>2</sup> ( $I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2 + I_5^2$ )
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 <b>(13/14, 23/24, 33/34)</b> and the remaining current paths and between <b>13/14, 23/24, 33/34</b> 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 <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
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**



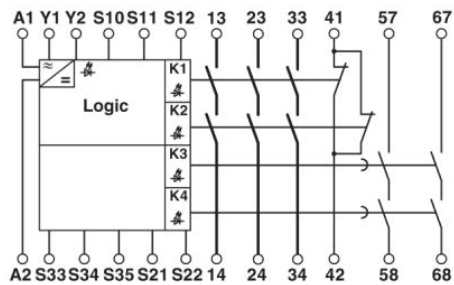
Certification cULus Listed, GOST, Functional Safety

Certifications applied for:

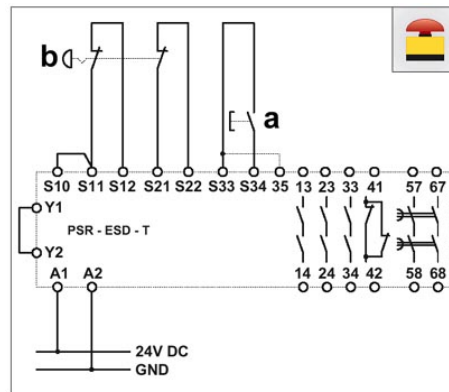
Certification Ex:

**Drawings**

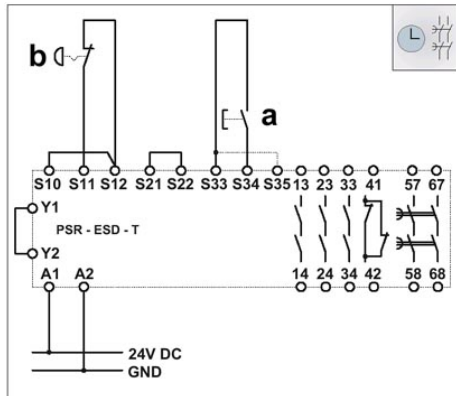
Circuit diagram



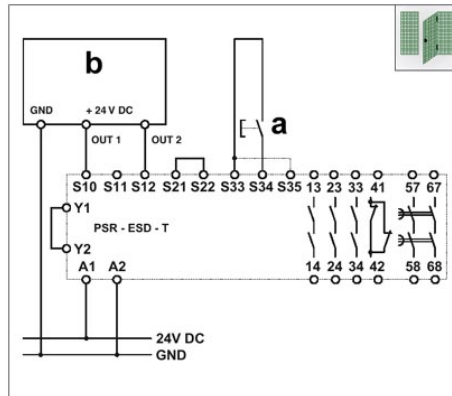
1 = logics



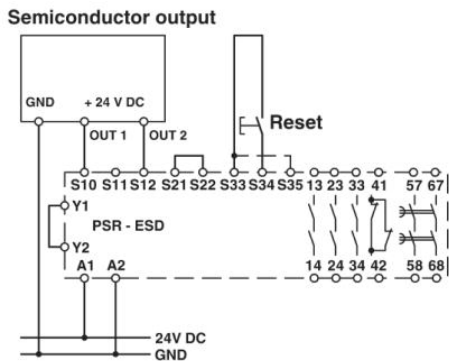
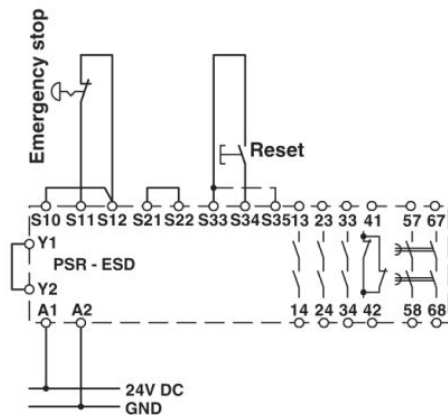
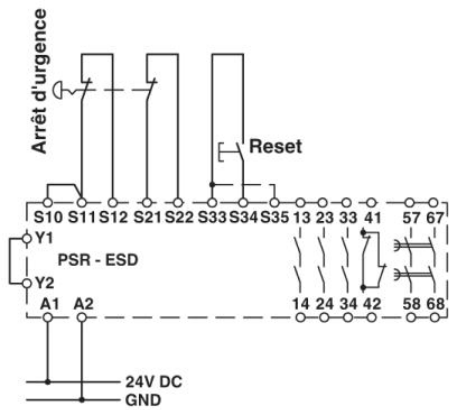
a = RESET  
 b = Emergency stop  
 Two-channel emergency stop circuit with cross circuiting detection and monitored reset button (bridge on S33/ S35: Automatic activation), suitable up to safety category 4.



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.



**Address**

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