

PSR-SPP-24-230UC/ESAM4/3X1/1X2

Order No.: 2981127


The illustration shows the versions with screw connection



<http://catalog.phoenixcontact.net/phoenix/treeViewClick.do?UID=2981127>

Safety relay to emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, one- or two-channel operation, automatically or manually supervised activation, 3 enabling current paths, nominal input voltage 24-230 V AC/DC



Commercial data	
EAN	4 046356 051651 
Pack	1 Pcs.
Customs tariff	85364900
Product key	106505
Catalog page information	Page 39 (IF-2011)

Product notes

WEEE/RoHS-compliant since:
05/31/2007



<http://www.download.phoenixcontact.com>
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Technical data

Input data	
Input voltage range	24 V AC/DC ... 230 V AC/DC
Input voltage range in reference to U_N	0.85 ... 1.1

Typical input current at U_N	120 mA (at 24 V DC)
	20 mA (for 120 V AC)
	10 mA (for 230 V AC)
Voltage at input/start and feedback circuit	Approx. 24 V DC
Typical response time	50 ms (manual start)
	60 ms (automatic start)
Typical release time	20 ms (when controlled via S11/S12 and S21/S22)
	500 ms (when controlled via A1)
	50 ms (at 24 V DC)
	110 ms (for 120 V AC)
	280 ms (for 230 V AC)
Concurrence input 1/2	Infinite
Recovery time	1 s
Maximum switching frequency	0.5 Hz
Max. permissible overall conductor resistance	11 Ω (input voltage: $U_1 = 8.4 \text{ V} + 0.02 \times \text{load} \times (\text{V}/\Omega)$)

Output data

Contact type	3 enabling current paths
	1 signaling current path
Contact material	AgSnO ₂ , + 0.2 μm Au
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	10 V AC/DC
Limiting continuous current	6 A
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	50 A ² ($I_{TH}^2 = I_1^2 + I_2^2 + \dots + I_N^2$)
Interrupting rating (ohmic load) max.	192 W (24 V DC, $\tau = 0$ ms)
	384 W (48 V DC, $\tau = 0$ ms)
	80 W (110 V DC, $\tau = 0$ ms)
	66 W (220 V DC, $\tau = 0$ ms)
	2000 VA (250 V AC, $\tau = 0$ ms)
Maximum interrupting rating (inductive load)	48 W (24 V DC, $\tau = 40$ ms)
	48 W (48 V DC, $\tau = 40$ ms)
	48 W (110 V DC, $\tau = 40$ ms)
	48 W (220 V DC, $\tau = 40$ ms)
Switching capacity min.	360 mW

Output fuse	6 A gL/gG NEOZED (enabling current paths)
	6 A gL/gG NEOZED (signaling current paths)

General data

Width	45 mm
Height	112 mm
Depth	114.5 mm
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Relay type	Electromechanically forcibly guided, dust-proof relay.
Mechanical service life	Approx. 10 ⁷ cycles
Mounting position	Any
Category according to EN 13849-1	4
Stop category	0
Name	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated surge voltage / insulation	6 kV/safe isolation, reinforced insulation and 6 kV between input circuits and output contact current paths (13/14, 23/24, 33/34), as well as between output contact current paths (13/14, 23/24, 33/34).
Rated insulation voltage	250 V AC
Pollution degree	2
Surge voltage category	III

Connection data

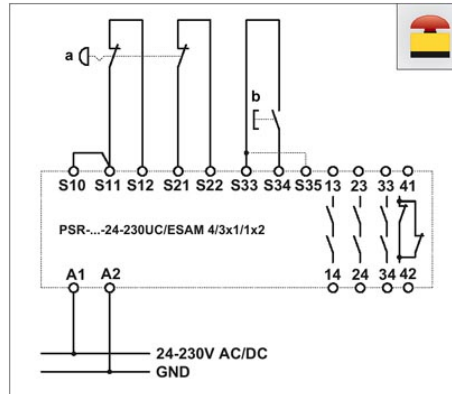
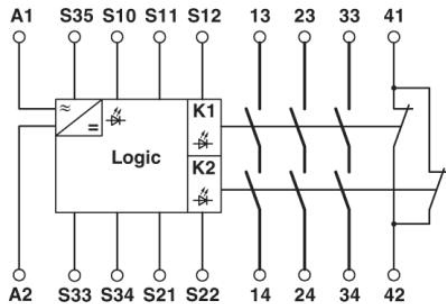
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage conn.

Certificates / Approvals

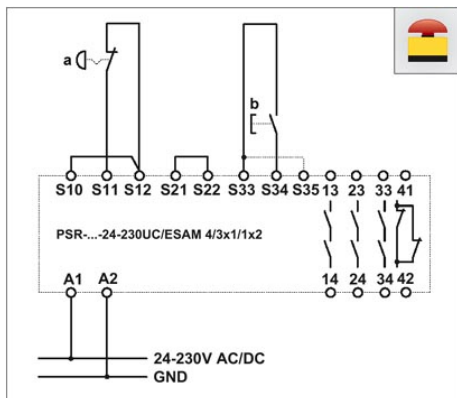
Certification CUL Listed, GOST, TUEV-RH, UL Listed

Drawings

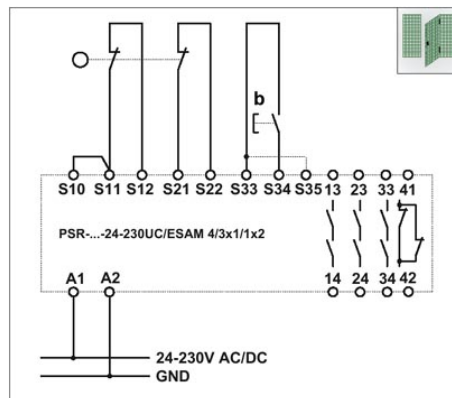
Circuit diagram



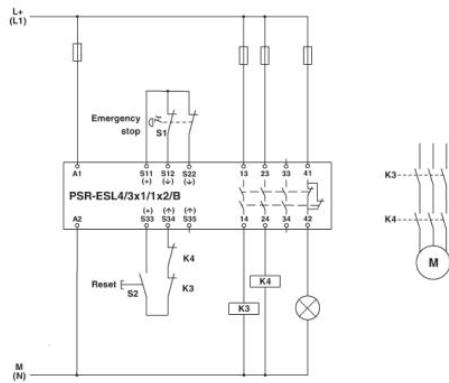
a = Emergency off, b= Reset. Two-channel emergency stop circuit with cross-circuiting detection and monitored reset button (bridge on S33/S35: Automatic activation, suitable up to safety category 4, SIL3.



a = Emergency off, b= Reset. Two-channel emergency stop circuit with monitored reset button (bridge on S33/S35: Automatic activation, suitable up to safety category 4, SIL3.



a = Emergency off, b= Reset. Two-channel protective door circuit with cross circuiting detection and monitored reset button (bridge on S33/S35: Automatic activation, suitable up to safety category 4, SIL3.



Connection data incl. use groups





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