

PSR-SCP- 24UC/ESM4/2X1/1X2

Order No.: 2963718



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2-channel safety relay for emergency off and safety door circuits, 2 N/O contacts, 1 N/C contact, undelayed, with start button monitoring for category 4 / EN 954-1, safe isolation, pluggable connecting terminal blocks, width: 22.5 mm



Commercial data	
EAN	4017918599379
Pack	1 pcs.
Customs tariff	85364900
Weight/Piece	0.1945 KG
Catalog page information	Page 20 (IF-2009)

Product notes

WEEE/RoHS-compliant since:
07/14/2006



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Technical data

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	20 ms (Monitored/manual start)
Typical release time	45 ms (Single-channel)
	10 ms (two-channel)
Concurrence input 1/2	Infinite
Recovery time	1 s
Max. permissible overall conductor resistance	Approx. 50 Ω (Input and start circuits at U_N)

Output data

Contact type	2 enabling current paths, 1 signaling current path
Contact material	AgSnO ₂ , + 0.2 μ m Au
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC
Limiting continuous current	6 A
Maximum inrush current	6 A
Inrush current, minimum	25 mA
Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0$ ms)
	288 W (48 V DC, $\tau = 0$ ms)
	77 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)	48 W (24 V DC, $\tau = 40$ ms)
	40 W (48 V DC, $\tau = 40$ ms)
	35 W (110 V DC, $\tau = 40$ ms)
	35 W (220 V DC, $\tau = 40$ ms)
Switching capacity min.	0.4 W
Output fuse	10 A gL/gG NEOZED
	6 A gL/gG NEOZED

General data

Width	22.5 mm
Height	114.5 mm
Depth	99 mm
Ambient temperature (operation)	-20 °C ... 55 °C

Ambient temperature (storage/transport)	-20 °C ... 70 °C
Service life mechanical	Approx. 10 ⁷ cycles
Mounting position	Any
Category in acc. with EN 954-1	4
Category as per ISO 13849-1	4
Performance Level as per ISO 13849-1	e
Functional safety (SIL)	SIL 3 acc. to IEC 61508
	SIL 3 as per IEC 62061
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, increased insulation
Rated insulation voltage	250 V
Pollution degree	2
Surge voltage category	III
MTTF _d	96 years (high)
T10d	9.6 years (maximum usage time of the device)
DC	99% (high)
Note	Specifications are applicable only if the safety function is requested at least once a year. Calculation basics: d _{op} = 365,25 d; h _{op} = 24 h; t _{cycle} = 3600 s; B10d (AC15 5 A) = 300000; part in SIL = 15%.
PFH	High-Demand: 1.92 x 10 ⁻⁹ 1/h (proof test interval (T ₁): 180 months)
PFDAV	Low demand: 1.14 x 10 ⁻⁴ (proof test interval (T ₁): 36 months)
Note	Specifications are applicable only if the safety function is requested at least once a year.

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
Type of connection	Screw connection

Certificates / Approvals

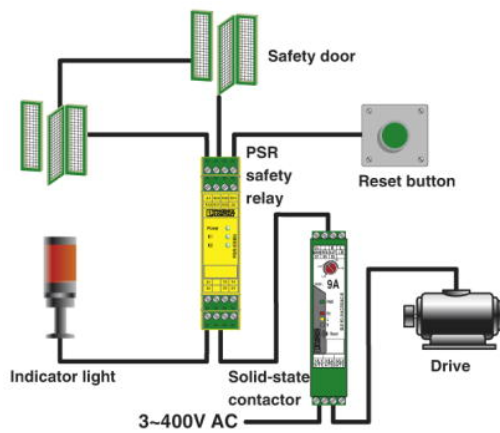


Certification

CUL Listed, GOST, TUEV-RH, UL Listed

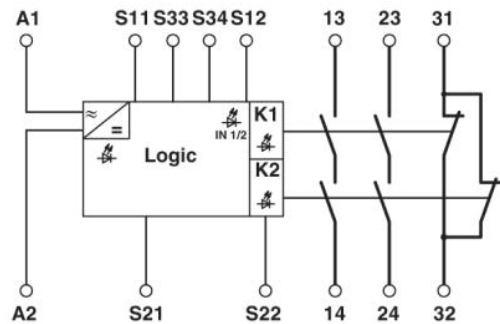
Drawings

Application drawing



Example of a safety door application with a PSR safety relay PSR-ESM4.

Circuit diagram



1 = logics

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