

Safety relays - PSR-SCP- 24DC/ESP4/2X1/1X2 - 2981020

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Safety relay for SIL 3 high and low-demand applications, also approved according to EN 50156, Germanischer Lloyd, and EN ISO 13849, emergency stop and safety door monitoring, single-channel, 2 enabling current paths, 1 alarm contact, plug-in screw terminal blocks, width: 22.5 mm

Your advantages

- Up to Cat. 4/PL e in accordance with ISO 13849-1, SIL 3 in accordance with IEC 62061, SIL 3 in accordance with IEC 61508
- 1-channel control
- Safe isolation
- With inrush current reduction, therefore suitable for coupling to failsafe controllers (PSR-ESP4)



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 911065
GTIN	4017918911065
Weight per Piece (excluding packing)	200.000 g
Custom tariff number	85371098
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	22.5 mm
Height	99 mm

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Dimensions

Depth	114.5 mm
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Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	≤ 2000 m (Above sea level)

Input data

Rated control circuit supply voltage U_s	24 V DC -15 % / +10 %
Rated control supply current I_s	typ. 50 mA DC
Power consumption at U_s	1.2 W
Inrush current	1 A ($\Delta t < 10$ ms at U_s)
Typical response time	60 ms (Automatic/manual start)
Typical release time	20 ms
Recovery time	approx. 1 s
Operating voltage display	Green LED
Status display	Green LED
Protective circuit	Surge protection Suppressor diode, 33 V (A1 - A2, Y2 - A2)
	Reverse polarity protection
Filter time	max. 3 ms (Test pulse duration)

Output data

Contact type	2 enabling current paths
	1 signaling current path (type B according to EN 50205)
Contact material	AgSnO ₂ , gold-flashed
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Minimum switching voltage	10 V
Limiting continuous current	6 A (N/O contact/N/C contact, high demand)
	4 A (N/O contact, for low-demand applications)
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	72 A ² (observe derating)
Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0$ ms)
	200 W (48 V DC, $\tau = 0$ ms)
	77 W (110 V DC, $\tau = 0$ ms)
	70 W (220 V DC, $\tau = 0$ ms)

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Output data

	1500 VA (250 V AC, $\tau = 0$ ms)
Switching capacity min.	0.2 W
Mechanical service life	approx. 10^7 cycles
Switching capacity (360/h cycles)	5 A (24 V (DC13))
	5 A (230 V (AC 15))
Output fuse	6 A gL/gG NEOZED (High demand)
	4 A gL/gG NEOZED (Low demand)
	Also applies to applications according to EN 50156-1.

General

Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3
Nominal operating mode	100% operating factor
Net weight	168.97 g
Mounting position	On horizontal and vertical DIN rail
Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing material	Polyamide
Housing color	yellow

Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3

Safety-related characteristic data

Stop category in accordance with IEC 60204	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN ISO 13849
Performance level (PL)	e
Category	4

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Safety-related characteristic data

Designation	EN 62061
Safety Integrity Level (SIL)	3

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated insulation voltage	250 V
Rated surge voltage/insulation	6 kV / Safe isolation, increased insulation
	Basic insulation 4 kV between all current paths and housing
Degree of pollution	2
Overvoltage category	III
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g
Conformance	CE-compliant

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"