Safety relays - PSR-SCP-230AC/ESAM2/3X1/1X2/B - 2901430

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Safety relay for emergency stop and safety door monitoring up to SIL 2 or Cat. 4, PL d according to EN ISO 13849, single-channel operation, 3 enabling current paths, nominal input voltage of 230 V AC/DC, plug-in screw terminal blocks

Product Features

- Up to Cat. 1/PL d according to ISO 13849-1, SIL CL 1 according to IEC 62061, SIL 1 according to IEC 61508
- Abhängig von der Applikation bis Kat.4/PL e nach ISO 13849-1, SIL CL 3 nach IEC 62061, SIL 3 nach IEC 61508
- Single-channel control
- Basic insulation

Key commercial data

package_quantity	1
GTIN	4046356592185

Technical data

Note:

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

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Input data

Nominal input voltage U_N	230 V AC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	22 mA
Voltage at input/start and feedback circuit	~ 24 V DC
Typical response time	50 ms (manual start)
Typical response time	300 ms (automatic start)

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Input data

Typical pick-up time	300 ms (when controlled via A1 or S11/S12)
Typical release time	20 ms (when controlled via S11/S12)
Typical release time	150 ms (when controlled via A1)
Recovery time	1 s
Maximum switching frequency	0.5 Hz
Max. permissible overall conductor resistance	50 Ω

Output data

Contact type	3 enabling current paths
Contact type	1 signaling current path
Contact material	$AgSnO_2$, gold-flashed
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	10 V AC/DC
Limiting continuous current	6 A (N/O contact)
Limiting continuous current	5 A (N/C contact)
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	72 A^2 ($I_{TH}^2 = I_1^2 + I_2^2 + I_3^2$)
Interrupting rating (ohmic load) max.	144 W (at 24 V DC)
Interrupting rating (ohmic load) max.	230 W (at 48 V DC)
Interrupting rating (ohmic load) max.	68 W (at 110 V DC)
Interrupting rating (ohmic load) max.	88 W (at 220 V DC)
Interrupting rating (ohmic load) max.	2000 VA (for 250 V AC)
Maximum interrupting rating (inductive load)	48 W (at 24 V DC)
Maximum interrupting rating (inductive load)	40 W (at 48 V DC)
Maximum interrupting rating (inductive load)	35 W (at 110 V DC)
Maximum interrupting rating (inductive load)	33 W (at 220 V DC)
Switching capacity min.	100 mW
Output fuse	10 A gL/gG NEOZED (enabling current paths)
Output fuse	6 A gL/gG NEOZED (signaling current paths)

General

Mechanical service life	Approx. 10^7 cycles
Mounting position	Any
Category according to EN 13849-1	1 ([NO ASSET AVAILABLE: TXB,7278399,P])
Stop category	0 (undelayed contacts)
Name	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated surge voltage / insulation	4 kV / basic insulation (safe isolation, reinforced insulation, and 6 kV between A1-A2/logic/enabling and signaling current paths)
Rated insulation voltage	250 V AC
Pollution degree	2

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General

Surge voltage category	III

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
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

classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819

ETIM

ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39121501

approvals

GOST / UL Listed / cUL Listed / Functional Safety / cULus Listed /

Approval details

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Drawings

Circuit diagram