

Safety relays - PSR-MS60-2NO-24DC-SC - 2904958

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Safety relay for emergency stop, safety doors, and light grids up to SILCL 3, Cat. 4, PL e, 2-channel operation, automatic start, 2 enabling current paths (1-channel), $U_S = 24\text{ V DC}$, fixed screw terminal block

Why buy this product

- Up to Cat.4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061
- Low housing width of just 6.8 mm
- Two-channel control
- 2 single-channel enabling current paths
- Automatic activation



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 904889
Weight per Piece (excluding packing)	69.0 g
Custom tariff number	85371099
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Note

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

Width	6.8 mm
Height	93.1 mm
Depth	102.5 mm

Ambient conditions

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Ambient conditions

Ambient temperature (operation)	-40 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °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)
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g
Maximum altitude	max. 2000 m (Above sea level)

Input data

Rated control supply voltage U_s	24 V DC -15 % / +10 %
Power consumption at U_s	typ. 0.96 W
Rated control supply current I_s	typ. 40 mA
Typical inrush current	4.5 A ($\Delta t = 120 \mu s$ at U_s)
Current consumption	< 5 mA (with U_s/I_x to S12)
	< 5 mA (with U_s/I_x to S22)
Voltage at input/start and feedback circuit	24 V DC -15 % / +10 %
Typical response time	< 175 ms
Typical pick-up time	< 250 ms (when controlled via A1)
Typical release time	< 20 ms (when controlled via A1 or S12 and S22.)
Recovery time	< 500 ms
Status display	2 x green LEDs
Maximum switching frequency	0.5 Hz
Max. permissible overall conductor resistance	150 Ω

Output data

Contact type	2 enabling current paths
Contact material	AgSnO ₂
Minimum switching voltage	10 V AC/DC
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A (N/O contact)
Inrush current, minimum	3 mA
Maximum inrush current	6 A
Sq. Total current	72 A ² (see to derating)
Switching capacity	min. 30 mW
Output fuse	6 A gL/gG (N/O contact)
	4 A gL/gG (for low-demand applications)

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with IEC/EN 61810-3 (EN 50205)
Mechanical service life	10 x 10 ⁶ cycles
Net weight	69 g

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Technical data

General

Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Mounting position	vertical or horizontal
Control	Two-channel
Parameters as per EN ISO 13849	4
Stop category	0
Parameters for IEC 61508	3
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated surge voltage/insulation	Safe isolation, reinforced insulation 6 kV between input circuit and enabling current path (13/14) and enabling current path (23/24) Basic insulation 4 kV between all current paths and housing
Rated insulation voltage	250 V AC
Pollution degree	2
Overvoltage category	III
Housing material	PBT

Connection data

Connection method	Screw connection
pluggable	no
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	12
Stripping length	12 mm
Screw thread	M3

Classifications

eCl@ss

eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 8.0	27371819

ETIM

ETIM 5.0	EC001449
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Approvals

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UL Listed / cUL Listed / Functional Safety / EAC / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed 

cUL Listed 

Functional Safety

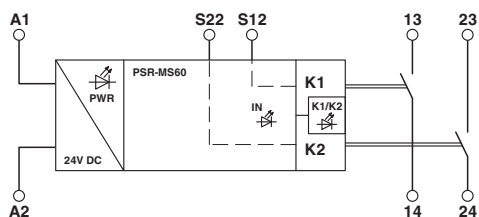
EAC

cULus Listed 

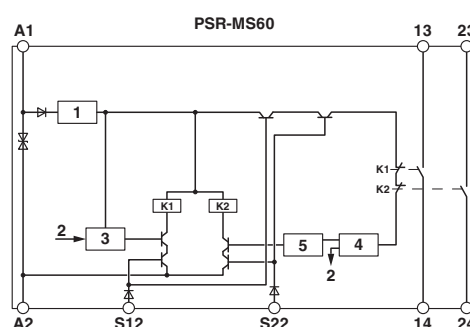
Drawings

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Block diagram



Block diagram



- Key:
- 1 = Voltage limitation
 - 2 = Channel 1
 - 3 = Control circuit channel 1
 - 4 = Start channel 1 and 2
 - 5 = Control circuit channel 2
 - K1, K2 = Force-guided elementary relays

Application drawing

