

# Safety relays - PSR-MC62-2NO-1DO-24DC-SC - 2700574

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Safety relay for two-hand control devices according to EN 574 type IIIC, up to SILCL 3, Cat. 4, PL e, synchronous activation monitoring < 0.5 s, 2 enabling current paths,  $U_S = 24 \text{ V DC}$ , plug-in screw terminal block

## Your advantages

- Up to Cat.4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061
- Type IIIC according to EN 574
- Low housing width of just 12.5 mm
- 2 enabling current paths, 1 digital signal output
- Automatic activation



## Key commercial data

<b>package_quantity</b>	1
<b>GTIN</b>	4046356966979

## Technical data

### Note

<b>Utilization restriction</b>	EMC: class A product, see manufacturer's declaration in the download area
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### Dimensions

<b>Width</b>	12.5 mm
<b>Height</b>	112.2 mm
<b>Depth</b>	114.5 mm

### Ambient conditions

<b>Ambient temperature (operation)</b>	-35 °C ... 60 °C (observe derating)
<b>Ambient temperature (storage/transport)</b>	-40 °C ... 85 °C
<b>Max. permissible relative humidity (operation)</b>	75 % (on average, 85% infrequently, non-condensing)
<b>Max. permissible humidity (storage/transport)</b>	75 % (on average, 85% infrequently, non-condensing)
<b>Shock</b>	15g
<b>Vibration (operation)</b>	10 Hz ... 150 Hz, 2g
<b>Maximum altitude</b>	≤ 2000 m (Above sea level)

### Input data

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## Technical data

### Input data

Rated control circuit supply voltage $U_s$	24 V DC -20 % / +25 %
Rated control supply current $I_s$	typ. 40 mA
Power consumption at $U_s$	typ. 0.96 W
Inrush current	typ. 20 A ( $\Delta t = 10 \mu s$ at $U_s$ )
Current consumption	< 4.2 mA (with $U_s/I_x$ to S12/S22)
Current consumption	< 5.1 mA (with $U_s/I_x$ to S35)
Voltage at input/start and feedback circuit	24 V DC -20 % / +25 %
Typical response time	< 50 ms
Typical release time	< 10 ms (when controlled via S12/S22)
Typical release time	< 5 ms (when interrupted via A1; applicative deactivation via A1/A2 is not permitted)
Concurrence input 1/2	< 0.5 s
Recovery time	< 500 ms
Status display	2 x green LEDs
Maximum switching frequency	1 Hz
Max. permissible overall conductor resistance	150 $\Omega$
Filter time	10 ms (For the logic. At A1 in the event of voltage dips at $U_s$ )

### Output data

Contact type	2 enabling current paths
Contact material	AgSnO <sub>2</sub>
Minimum switching voltage	12 V AC/DC
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Limiting continuous current	6 A (observe derating)
Inrush current, minimum	3 mA
Maximum inrush current	6 A
Sq. Total current	72 A <sup>2</sup> (observe derating)
Switching capacity	min. 60 mW
Output fuse	6 A gL/gG (N/O contact)

### Alarm outputs

Number of outputs	1 (digital, PNP)
Voltage	22 V DC ( $U_s - 2 V$ )
Current	max. 100 mA
Maximum inrush current	500 mA ( $\Delta t = 1 ms$ at $U_s$ )
Short-circuit protection	Yes

### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with IEC/EN 61810-3 (EN 50205)
Mechanical service life	10 x 10 <sup>6</sup> cycles
Nominal operating mode	100% operating factor
Net weight	131.2 g

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## Technical data

### General

<b>Mounting type</b>	DIN rail mounting
<b>Assembly instructions</b>	See derating curve
<b>Mounting position</b>	vertical or horizontal
<b>Degree of protection</b>	IP20
<b>Min. degree of protection of inst. location</b>	IP54
<b>Housing material</b>	PBT
<b>Housing color</b>	yellow

### Connection data

<b>Connection method</b>	Screw connection
<b>pluggable</b>	Yes
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section flexible min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section flexible max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG min.</b>	24
<b>Conductor cross section AWG max.</b>	12
<b>Stripping length</b>	7 mm
<b>Screw thread</b>	M3

### Safety-related characteristic data

<b>Stop category</b>	0
<b>Designation</b>	IEC 61508 - High demand
<b>Safety Integrity Level (SIL)</b>	3 (4 A DC13; 5 A AC15; 8760 switching cycles/year)
<b>Designation</b>	EN ISO 13849
<b>Performance level (PL)</b>	e (4 A DC13; 5 A AC15; 8760 switching cycles/year)
<b>Category</b>	4 (4 A DC13; 5 A AC15; 8760 switching cycles/year)
<b>Designation</b>	EN 62061
<b>Safety Integrity Level Claim Limit (SIL CL)</b>	3 (4 A DC13; 5 A AC15; 8760 switching cycles/year)

### Standards and Regulations

<b>Shock</b>	15g
<b>Designation</b>	Air clearances and creepage distances between the power circuits
<b>Standards/regulations</b>	DIN EN 50178
<b>Rated insulation voltage</b>	250 V AC
<b>Rated insulation voltage</b>	250 V AC
<b>Rated surge voltage/insulation</b>	Basic insulation 4 kV between all current paths and housing
<b>Rated surge voltage/insulation</b>	Safe isolation, reinforced insulation 6 kV:between (A1, A2, S11, S12, S21, S22, S35, M1) and enabling current path (13/14)between (A1, A2, S11, S12, S21, S22, S35, M1) and enabling current path (23/24)between enabling current paths
<b>Degree of pollution</b>	2
<b>Overvoltage category</b>	III
<b>Vibration (operation)</b>	10 Hz ...150 Hz, 2g

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## Technical data

### Standards and Regulations

<b>Conformance</b>	CE-compliant
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## Classifications

### eCl@ss

<b>eCl@ss 5.1</b>	27371901
<b>eCl@ss 6.0</b>	27371819
<b>eCl@ss 8.0</b>	27371819
<b>eCl@ss 9.0</b>	27371819

### ETIM

<b>ETIM 5.0</b>	EC001449
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### UNSPSC

<b>UNSPSC 13.2</b>	39121501
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## Approvals

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

### Approval details

<b>UL Listed</b>
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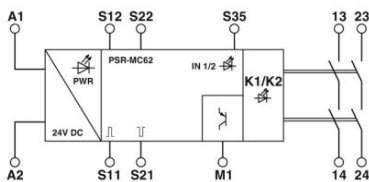
<b>cUL Listed</b>
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<b>Functional Safety</b>
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<b>cULus Listed</b>
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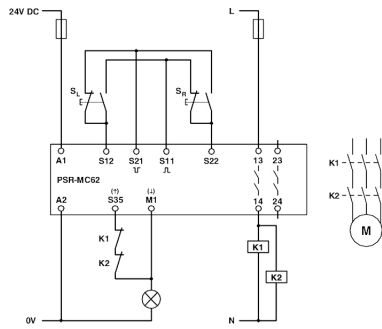
## Drawings

### Block diagram



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Circuit diagram



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