

# Safety relays - PSR-MC42-2NO-1DO-24DC-SP - 2702902

## Technical data

### Digital inputs

Max. permissible overall conductor resistance	150 Ω
Concurrence input 1/2	∞
Protective circuit/component	Suppressor diode
Input name	Sensor circuit S1
	S32, S42
Description of the input	safety-related sensor inputs
	NPN
Number of inputs	2
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Input current range "0" signal	0 mA ... 2 mA
Inrush current	< 20 mA (typically with U <sub>S</sub> )
Current consumption	< 5 mA (typically with U <sub>S</sub> )
Filter time	max. 1.5 ms (Test pulse width of low test pulses)
	Test pulse rate = 5 x Test pulse width
	Deactivate switch-on pulses/light tests for safety applications.
Max. permissible overall conductor resistance	150 Ω
Concurrence input 1/2	∞
Protective circuit/component	Suppressor diode
Input name	Diagnostic input
	DGN
Description of the input	non-safety-related
Number of inputs	1
Input voltage range	0 V DC ... 30 V DC
Current consumption	typ. 30 mA
Protective circuit/component	Suppressor diode
Input name	Start circuit
	S34
Description of the input	NPN (manual start), PNP (autostart)
Number of inputs	1
Input voltage range "1" signal	19.2 V DC ... 30 V DC (manual start, autostart: 0 V)
Inrush current	< 10 mA (typically with U <sub>S</sub> , Δt = 100 ms)
Current consumption	< 5 mA (typically with U <sub>S</sub> at S34/24 V)
	> -5 mA (typically with U <sub>S</sub> at S34/0 V)
Max. permissible overall conductor resistance	150 Ω
Protective circuit/component	Suppressor diode

### IO-Link inputs

Designation	IO-Link
Specification	Version 1.1
Transmission speed	230 kbps (COM3)

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#### IO-Link inputs

Cycle Time	5 ms
Process data update	5 ms
Amount of process data	max. 31 Byte (Input data)
	max. 16 Byte (Output data)
Number of ports	1
Connection method	Spring-cage connection
Connection technology	3-wire
Port type	Class A
Input name	C/Q
Description of the input	IO-Link switching and communication cable
Number of inputs	1

#### Relay outputs: enabling current path

Output name	Enabling current path
	13/14, 23/24
Output description	safety-related N/O contacts
	2 NO contacts each in series, without delay, floating
Number of outputs	2 (undelayed)
Contact type	2 enabling current paths
Contact material	AgSnO <sub>2</sub>
Switching voltage	min. 12 V AC/DC
	max. 250 V AC/DC (Observe the load curve)
Limiting continuous current	6 A
Inrush current	min. 3 mA
	max. 6 A
Sq. Total current	72 A <sup>2</sup> (observe derating)
Switching capacity	min. 60 mW
Switching frequency	0.5 Hz
Mechanical service life	10x 10 <sup>6</sup> cycles
Switching capacity according to IEC 60947-5-1	4 A (24 V (DC13))
	5 A (250 V (AC15))
Output fuse	6 A gL/gG
	4 A gL/gG (for low-demand applications)

#### Alarm outputs

Designation	M1
Output description	PNP
	non-safety-related
Number of outputs	1
Voltage	approx. 22 V DC (U <sub>s</sub> - 2 V)
Current	max. 100 mA