Safety relays - PSR-MC70-2NO-1DO-24DC-SC - 2702094

Technical data

Digital inputs

Filter time	max. 3 ms (Test pulse width of low test pulses)
	min. 21 ms (Test pulse rate for low test pulse)
	Test pulse rate = 7 x Test pulse width
Max. permissible overall conductor resistance	150 Ω

Relay outputs: enabling current path

Output name	Enabling current paths
	13/14, 27/28
Output description	safety-related N/O contacts
Number of outputs	1 (undelayed, single-channel)
	1 (delayed, single-channel)
Contact type	2 enabling current paths
Contact material	$AgSnO_2$
Switching voltage	min. 12 V AC/DC
	max. 250 V AC/DC (Observe the load curve)
Limiting continuous current	6 A (observe derating)
Inrush current	min. 3 mA
	max. 6 A
Sq. Total current	72 A^2 (observe derating)
Switching capacity	min. 60 mW
Mechanical service life	10x 10^6 cycles
Output fuse	6 A gL/gG (N/O contact)
	4 A gL/gG (for low-demand applications)

Alarm outputs

Designation	M1
Output description	PNP
	non-safety-related
Number of outputs	1
Voltage	approx. 23 V DC (U_S - 1 V)
Current	max. 100 mA
Maximum inrush current	500 mA (Δt = 1 ms at U_s)
Short-circuit protection	Yes

Times

Typical response time at US	< 35 ms (automatic start)
	< 30 ms (manual, monitored start)
Typical release time at US	< 20 ms (when controlled via S12 (only for undelayed contact 13/14))
	< 5 ms (when interrupted via A1; applicative deactivation via A1/A2 is not permitted)
Delay time range	0.2 s ... 60 s ±5 % (can be set for 27/28)
Restart time	< 1 s (Boot time)

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Technical data

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with IEC/EN 61810-3 (EN 50205)
Nominal operating mode	100% operating factor
Net weight	115.153 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing material	PBT
Housing color	yellow
Status display	5 x bi-color LED

Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

Safety-related characteristic data

Stop category	1
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	1 (up to SIL 3 depending on the application)
Designation	EN ISO 13849
Performance level (PL)	c (up to PL e depending on the application)
Category	1 (up to Cat. 3 depending on the application)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	1 (up to SILCL 3 depending on the application)

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated insulation voltage	250 V AC
	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV: between all current paths and housing Safe isolation, reinforced insulation 6 kV: between (A1, A2, S11, S12, S21, S22, S34, M1) and enabling current path (13/14)