MSR138DP

Specifications

Safety Ratings		
Standards	EN 954-1, ISO 13849-1, IEC/EN 60204-1, IEC 60947-4-1, IEC 60947-5-1, ANSI B11.19, AS4024.1	
Safety Classification	Cat. 4 per EN 954-1 (ISO 13849-1), SIL CL3 per EN IEC 62061, PLe per ISO 13849-1	
Functional Safety Data ⋆ **Note**: For up-to-date information, visit http://www.ab.com/safety/	PFH_D: < 2.38 x 10-9 MTTFd: > 195 years Suitable for performance levels Ple (according to ISO 13849-1:2006) and for use in SIL3 systems (according to IEC 62061) depending on the architecture and application characteristics	
Certifications	CE Marked for all applicable directives, cULus, c-Tick, and TÜV	
Power Supply		
Input Power Entry	24V AC/DC, 115V AC or 230V AC	
Power Consumption	4 W	
Inputs		
Safety Inputs	1 N.C., 2 N.C. or LC	
Input Simultaneity	Infinite	
Input Resistance, Max.	135 Ω	
Reset	Auto./Manual or Monitored Manual	
Power On Delay/ Recovery Time	1 second/100 ms	
Response Time	15 ms	
Outputs		
Safety Contacts	2 N.O.	
Auxiliary Contacts	Delayed 3/2 N.O.	
Thermal Current/I_{th}	5 x 2.5 A or 3 x 3.5 A nonswitching	
Rated Impulse withstand Voltage	2500V	
Switching Current @ Voltage, Min.	10 mA @ 10V	
Fuses, Output	External 6 A slow blow or 10 A fast acting	
Electrical Life (Operations)	(With surge suppression) 250V AC/6 A/1500VA cosϕ = 1...0.1 M 250V AC/2.5 A/625VA cosϕ = 1...0.5 M 250V AC/1.5 A/375VA cosϕ = 0.35...0.3 M 250V AC/5 A/1250VA cosϕ = 0.6...0.1 M 24V DC/2 A/48 W = 1 M 10V DC/0.01 A/0.1 W = 2 M	
Mechanical Life	2,000,000 cycles	
Utilization Category		
Resistive: AC-1	7 A@ 250V AC	
Resistive: DC-1	7 A/24V DC	
Inductive: AC-15	6 A@ 250V AC	6 A @ 125V AC
Inductive: DC-13	3 A/24V DC	6 A/24V DC @ 6 ops/min
UL	B300, 5 A/250V AC, 24V DC	
Environmental and Physical Characteristics		
Enclosure Type Rating/ Terminal Protection	IP40 (NEMA 1)/ IP20	
Operating Temperature [C (F)]	-5...+55 ° (23...131 °)	
Vibration	10...55 Hz, 0.35 mm	
Shock	10 g, 16 ms, 100 shocks	
Mounting	35 mm DIN Rail	
Weight [g (lb)]	24V DC: 350 (0.77); 115/230V AC: 490 (1.08)	
Conductor Size, Max.	0.2...4 mm2 (24...12 AWG)	

⋆ Usable for ISO 13849-1:2006 and IEC 62061. Data is based on the following assumptions:
- Mission time/Proof test interval of 20 years
- Functional test at least once within six-month period

Product Selection

Inputs	Safety Outputs	Delayed Safety Outputs	Delayed Auxiliary Outputs	Time Delay	Terminals	Reset Type	Power Supply	Cat. No.
1 N.C., 2 N.C., Light Curtain	2 N.O.*	3 N.O.‡ (MSR138DP)	—	1.0 seconds, fixed	Removable	Auto./Manual or Monitored Manual	115V AC	440R-M23080
				0.15...3 s			24V AC/DC	440R-M23143
					Spring Clamp			440R-M23143S
				0.15...3 seconds	Removable		115V AC	440R-M23141
							230V AC	440R-M23140
				0.5...10 s			24V AC/DC	440R-M23147
					Spring Clamp			440R-M23147S
				0.5...10 seconds	Removable		115V AC	440R-M23145
							230V AC	440R-M23144
				1.5...30 seconds			24V AC/DC	440R-M23151
							115V AC	440R-M23149
							230V AC	440R-M23148
		2 N.O.‡ (MSR138.1DP)	1 N.C.	0.15...3 seconds			24V AC/DC	440R-M23084
							115V AC	440R-M23082
							230V AC	440R-M23081
				0.5...10 seconds			24V AC/DC	440R-M23088
							115V AC	440R-M23086
							230V AC	440R-M23085
				1.5...30 seconds			24V AC/DC	440R-M23092
							115V AC	440R-M23090
							230V AC	440R-M23089

* Instantaneous safety outputs Cat. 4
‡ Delayed safety outputs are Cat. 3

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