MSR125H/HP

Description

The Allen-Bradley Guardmaster Minotaur MSR125H/HP is a logic unit for monitoring and interfacing two-hand control devices with a safety-related circuit. The MSR125H/HP is for use with mechanical switches and the Rockwell Automation Bulletin 800Z Zero-Force Touch Buttons.

The MSR125H/HP has two normally open safety outputs. The safety outputs have independent and redundant internal contacts to support the safety function.

The MSR125H/HP requires the two switches to be operated within 0.5 seconds of each other and will only authorize the ON state while both switches are held down. If one of the switches is released, the output goes to the OFF state and the machine cannot be restarted until both buttons are released and then operated simultaneously.

The MSR125H/HP conforms to EN 574 Category IIIC, which gives specific requirements for two-hand control units and logic devices.

The MSR125H has fixed terminals and the MSR125HP has removable terminals.

Features

- Category 4 per EN 954-1
- Safety category IIIC per EN 574
- Two-hand control unit
- Two N.O. safety outputs
- Fixed or removable terminals
- 22.5 mm wide housing

LED Indicators

Green	Power on
Green	CH1 Output Active
Green	CH2 Output Active

Specifications

Safety Ratings		
Standards	EN 574, EN 954-1, ISO 13849-1, IEC/EN 60204-1, IEC 60947-4-1, IEC 60947-5-1, ANSI B11.19, AS 4024.1	
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: < 1.44 x 10-9 MTTFd: > 385 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 BG	
Power Supply		
Input Power Entry	24V DC, 24V AC, 115V AC, 230V AC	
Power Consumption	2 W	
Inputs		
Safety Inputs	1 N.C. + 1 N.O.	
Input Simultaneity	<0.5 sec	
Input Resistance, Max.	40 Ω	
Reset	Automatic	
Power On Delay/ Recovery Time	1 second/500 ms	
Response Time	20 ms	
Outputs		
Safety Contacts	2 N.O.	
Thermal Current/$_{Ith}$	1 x 6 A or 2 x 4 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 = 0.35...0.1 M 250V AC/2.5 A/625VA cosϕ = 0.6...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 operations	
Utilization Category		
Resistive: AC-1	8 A @ 250V AC	
Resistive: DC-1	6 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
Resistive UL:	B300, R300, 8 A/250V AC, 6 A/24V DC, 30V DC Resistive	
Environmental and Physical Characteristics		
Enclosure Type Rating/ Terminal Protection	IP40 (NEMA 1), DIN 0470/ IP20, DIN 0470	
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: 210 (0.46); 115/230V AC: 260 (0.57)	
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

Product Selection

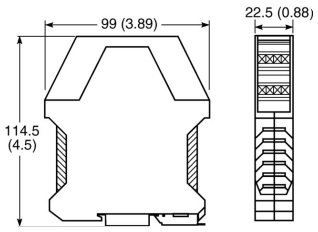
Inputs	Button Type	Safety Outputs	Terminals	Reset Type	Power Supply	Cat. No.
1 N.C. + 1 N.O. (Two-Hand Control)	Mechanical or Bulletin 800Z	2 N.O.	Removable (MSR125HP)	Automatic	24V DC	440R-D23171
					24V AC	440R-D23170
					115V AC	440R-D23169
					230V AC	440R-D23168
			Fixed (MSR125H)		24V DC	440R-D23166
					115V AC	440R-D23164
					230V AC	440R-D23163

Accessories

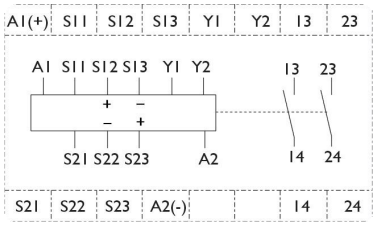
Description	Cat. No.
Bag of 4, 4-Pin Screw Terminal Blocks	440R-A23209
Bag of 4, 4-Pin Spring Clamp Terminal Blocks	440R-A23228

Approximate Dimensions

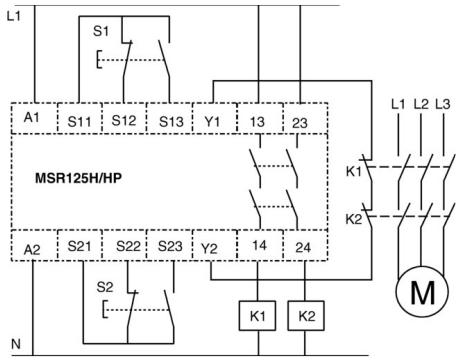
Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.



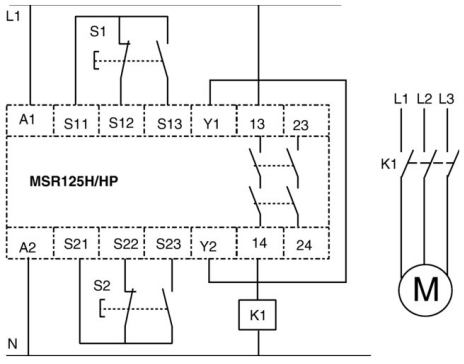
Block Diagram



Typical Wiring Diagrams



Two-Hand Control, Dual Channel, Auto Reset, Output Monitoring



Two-Hand Control, Dual Channel, Auto Reset, No Output Monitoring