Two Hand Relays

Minotaur 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 Allen-Bradley Bulletin 800Z Zero-Force Touch Buttons.

The MSR125H/HP has 2 N.O. safety outputs. The safety outputs have independent and redundant internal contacts to help ensure 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 EN574 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
- 2 N.O. safety outputs
- Removable terminals
- 22.5mm wide housing

Specifications

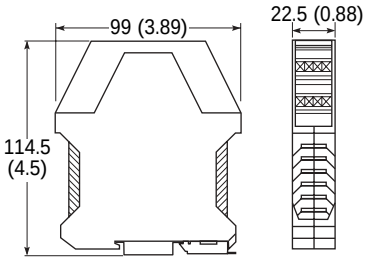
Standards	EN 574, EN 954-1, ISO 13849-1, IEC/EN 60204-1, IEC 60947-4-1, IEC 60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 4 per EN 954-1 (ISO 13849-1) Cat. IIIC per EN 574
Approvals	C-Tick, CE marked for all applicable directives, cULus & BG
Power Supply	24V DC, 115V AC or 230V AC
Power Consumption	2W
Safety Inputs	1 N.C. and 1 N.O.
Input Simultaneity	<0.5s
Maximum Input Resistance	40 ohms
Reset	Automatic
Outputs	2 N.O. Safety
Output Utilization per IEC 60947-4-1 (Resistive)	AC-1: 6A/250V AC DC-1: 6A/24V DC
❶ Output Utilization per IEC 60947-5-1 (Inductive)	B300, AC-15 6A/250V AC, 6A/125V AC P300, DC-13; 3A/24V DC 6A/24V DC @ 6 ops/min
Thermal Current (non switching)	1x6A, 2 x 4A
Fuses Output (external)	6A slow blow or 10A quick blow
Min. Switched Current/Voltage	10mA/10V
Power On Delay	1s
Response	20ms
Recovery Time	500ms
Indication LEDs	Green = Power on Green = CH1 Output Active Green = CH2 Output Active
Impulse Withstand Voltage	2500V
Operating Temperature	-5°C to +55°C (+23° to +131°F)
Humidity	90% RH
Enclosure Protection	IP40 (NEMA 1), DIN 0470
Terminal Protection	IP20, DIN 0470
Conductor Size	0.2-4mm^2 (24-12AWG)
Installation Group	C in accordance with VDE 0110
Pollution Degree	2
Torque Settings—term. screws	0.4-0.5N·m (3.54-4.43lb•in)
Case Material	Polyamide PA 6.6
Mounting	35mm DIN rail
Weight 24V DC 115 and 230V AC	210g (0.463 lbs) 260g (0.573 lbs)
Electrical Life (w/Surge Supp.) 250V AC/6A/1500VA cosφ=1 250V AC/2.5A/625VA cosφ=1 250V AC/1.5A/375VA cosφ=0.35 250V AC/5A/1250VA cosφ=0.6 24V DC/2A/48W 10V DC/0.01A/0.1W	 100,000 operations 500,000 operations 300,000 operations 100,000 operations 1,000,000 operations 2,000,000 operations
Mechanical Life	2,000,000 operations
Vibration	0-55Hz 0.35mm
Shock	10g, 16ms, 100 shocks

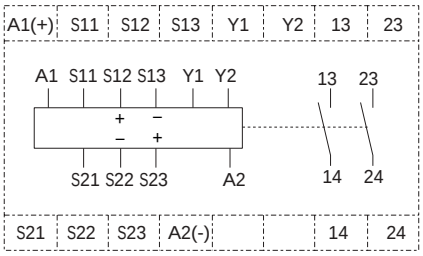
❶ See Output Ratings on page 1-29 for details. Consult factory for ratings not shown.

Product Selection

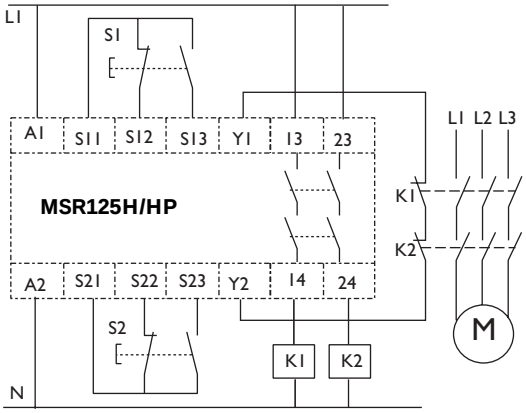
Inputs	Input Buttons	Safety Outputs	Terminals	Power Supply	Catalogue Number
1 N. C. 1 N. O.	Mechanical or Bulletin 800Z	2 N. O.	Removable MSR125HP	24V DC	**440R-D23171**
				115V AC	**440R-D23169**
				230V AC	**440R-D23168**
			Fixed MSR125H	24V DC	**440R-D23166**
				115V AC	**440R-D23164**
				230V AC	**440R-D23163**

Dimensions—mm (inches) Block Diagram

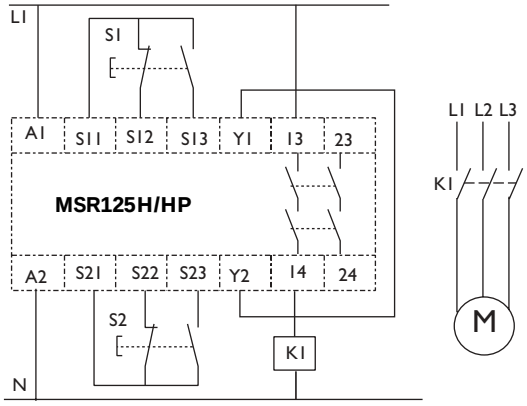




Typical Wiring Diagrams



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



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