## Safety Relays

# **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

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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			
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 <sup>2</sup> (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			
See Output Ratings on page 1-29 for details. Consult factory for ratings not				

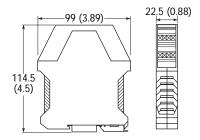
<sup>•</sup> See Output Ratings on page 1-29 for details. Consult factory for ratings not



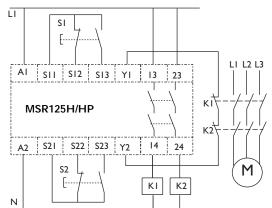
#### **Product Selection**

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

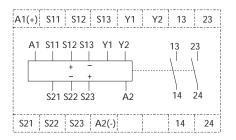
## Dimensions—mm (inches) Block Diagram

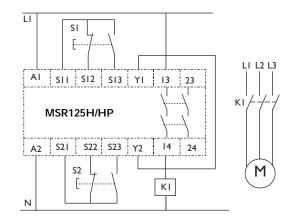


## **Typical Wiring Diagrams**



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





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

