

MSR7R & MSR7C

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Description

The Allen-Bradley Guardmaster Minotaur MSR7R & MSR7C are logic units for monitoring and interfacing two hand control devices with a safety related circuit. The MSR7R is for use with mechanical switches and the Allen-Bradley Bulletin 800Z Zero Force Touch Buttons. The MSR7C is for use with electronic-sensing (for example, capacitive or photoelectric) palm buttons because the MSR7C will not turn its output ON if a power interruption occurs while a person's hands are on the buttons.



The MSR7 has 3 N.O. safety outputs and 1 N.C. auxiliary output. The safety outputs have independent and redundant internal contacts to help ensure the safety function. The auxiliary contact is a nonsafety output intended to provide an external signal about the status of the safety outputs.

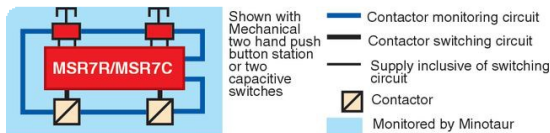
The MSR7 requires the two switches to be operated within 0.5 seconds of each other and will only authorize the ON state while both switches are held down. If one of the switches is released, the output goes to the OFF state and the machine cannot be restarted until both buttons are released and then operated simultaneously.

The MSR7 conforms to EN574 which gives specific requirements for two hand control units and logic devices. Categories IIIB or IIIC are achieved depending upon the wiring.

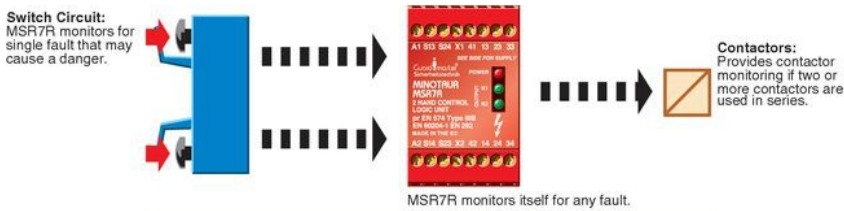
Features

- Safety category 3 per EN 954-1
- Safety category IIIB per EN 574
- Two-hand control unit
- 3 N.O. safety outputs
- 1 N.C. auxiliary output
- 45 mm wide housing

Applications



The safety function is ensured by the Minotaur.



Specifications

Standards	EN 574, EN 954-1, ISO 13849-1, IEC/EN 60204-1, IEC 60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 3 per EN 954-1 (ISO 13849-1) Cat. IIIb per EN 574
Certifications	CE Marked for all applicable directives, C-Tick, cULus & TÜV
Power Supply	24V AC/DC, 110V AC, or 230V AC
Power Consumption	<4 VA
Safety Inputs	1 N.C. & 1 N.O.
Input Simultaneity	0.5 s
Input Resistance, Max.	500 Ω
Reset Type	Automatic
Safety Outputs	3 N.O. Safety; 1 N.C. Auxiliary
Output Utilization per IEC60947-5-1 (Inductive)*	B300, AC-15: 4 A/250V AC, 4 A/125V AC P300, DC-13: 2 A/24V DC
Thermal Current	4 A (nonswitching)
Fuses, Input	500 mA time lag (Internal, replaceable)
Fuses, Output	5 A quick acting (external)
Switching Current @ Voltage, Min.	10 mA/10V
Maximum Drop-Out Time	50 ms
Status Indicators	Red = Power On Green = K1 Closed Green = K2 Closed
Rated Impulse withstand Voltage	2500V
Installation Group	C in accordance with VDE 0110
Pollution Degree	3
Operating Temperature [C (F)]	-10...55° (14...131°)
Relative Humidity	90%
Enclosure Type Rating	IP40, (NEMA 1), DIN 0470
Terminal Protection	IP20, DIN 0470
Conductor Size, Max.	1 x 2.5 mm ² (14 AWG) stranded, 1 x 4 mm ² (12 AWG) solid
Torque Settings—terminal screws	1 N•m (8.85 lb•in)
Material	Red Polycarbonate
Mounting	35 mm DIN Rail
Weight [g (lb)]	510 (1.12)
Electrical Life	220V AC/4A/880VA $\cos\phi = 0.35$ - 100,000 operations 220V AC/1.7A/375VA $\cos\phi = 0.6$ - 500,000 operations 30V DC/2A/60W - 1,000,000 operations 10V DC/0.01A/0.1W - 2,000,000 operations
Mechanical Life	2,000,000 operations
Vibration	0.75 mm (0.30 in.) peak, 10...55 Hz
Shock	30 g, 11 ms half-sine

* See Output Ratings for details. Consult factory for ratings not shown.

Product Selection

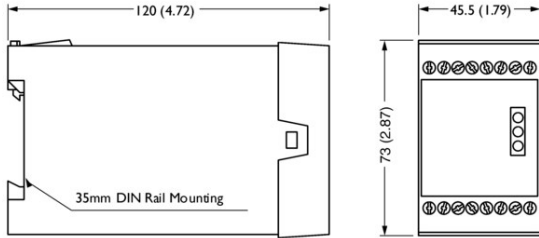
Type	Inputs	Safety Outputs	Auxiliary Outputs	Button Type	Power Supply	Cat. No.
MSR7R	1 N.C. & 1 N.O.	3 N.O.	1 N.C.	Mechanical or Bulletin 800Z	24V AC/DC	440R-D23021
					110V AC	440R-D23022
					230V AC	440R-D23023
MSR7C	1 N.C. & 1 N.O.	3 N.O.	1 N.C.	Capacitive or Photoelectric	24V AC/DC	440R-D23024
					110V AC	440R-D23025
					230V AC	440R-D23026

Accessories

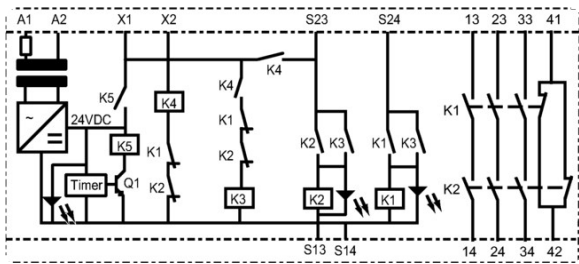
Description	Page Number	Cat. No.
500 mA fuse—Bussmann Cat. No. ETF-500 mA		440R-A31562

Approximate Dimensions

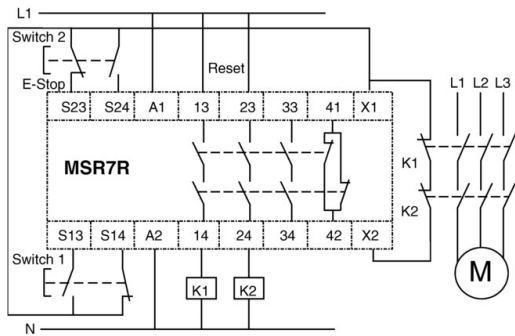
Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.



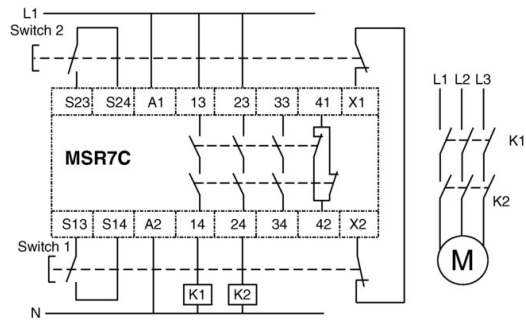
Block Diagram



Typical Wiring Diagrams



Dual Channel Two-Hand Control, Automatic Reset, Dual Channel Output, Monitored Output



Dual Channel Two-Hand Control, Automatic Reset, Dual Channel Output, No Monitored Output

Application Details

