Monitoring Safety Relays

Minotaur MSR6R/T



Description

The MSR6R/T has an internal switch that allows the user to select either 1 N.C. single channel input for use with gate interlock and emergency stop buttons in lower risk applications or 2 N.C. dual channel inputs for higher risk applications.

The MSR6R/T has an internal selector switch that can accommodate automatic/manual or a monitored manual reset function. Automatic/manual reset can use a jumper or can be used to check operation of the contacts. Monitored manual requires the use of a manually operated normally open momentary switch to activate the outputs.

The MSR6R/T 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.

Features

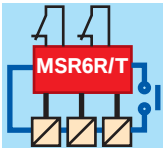
- Category 3 per EN 954-1
- Stop category 0
- Switch selectable input
- 3 N.O. safety outputs
- 1 N.C. auxiliary output
- Switch selectable reset
- 45mm wide housing

Specifications

Standards	EN 954-1, ISO13849-1, IEC/EN 60204-1, IEC 60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 3 per EN 954-1 (ISO 13849-1)
Approvals	C-Tick, CE marked for all applicable directives, cULus & TUV
Power Supply	24V AC/DC, 110V or 230V AC 50/60Hz
Power Consumption	<4VA
Safety Inputs	2 N.C.
Input Simultaneity	0.5 seconds
Maximum Input Resistance	500 Ω
Reset	Monitored Man. or Auto./Man.
Outputs	3 N.O. Safety; 1 N.C. Auxiliary
❶ Output Utilization per IEC 60947-5-1 (Inductive)	B300 AC-15; 4A/250V AC, 4A/120V AC P300 DC-13; 3A/24V DC
Thermal Current (non switching)	4A
Fuses Input (internal, replace.) Output (external)	500mA time lag 5A quick acting
Min. Switched Current/Voltage	10mA/10V
Maximum Dropout Time	50ms
Indication LEDs	Red = Power On; Green = K1 Closed; Green = K2 Closed; Amber = Single Channel Mode
Impulse Withstand Voltage	2500V
Installation Group	C in accordance with VDE 0110
Pollution Degree	3
Operating Temperature	-10°C to +55°C (+14°F to +131°F)
Humidity	90% RH
Enclosure Protection	IP40, (NEMA 1), DIN 0470
Terminal Protection	IP20, DIN 0470
Conductor Size	1 x 2.5mm^2 (14AWG) stranded, 1 x 4mm^2 (12AWG) solid
Torque Settings—term. screws	1N·m (8.85lb·in)
Case Material	Red Polycarbonate
Mounting	35mm DIN rail
Weight	510g (1.12lbs)
Electrical Life 220V AC/4A/880VA cosφ=0.35 220V AC/1.7A/375VA cosφ=0.6 30V DC/2A/60W 10V DC/0.01A/0.1W	 100,000 operations 500,000 operations 1,000,000 operations 2,000,000 operations
Mechanical Life	2,000,000 operations
Vibration	0.75mm (0.30in) peak, 10-55Hz
Shock	30g, 11ms half sine

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

Application Details



- Contactor monitoring circuit
- Contactor switching circuit
- Supply inclusive of switching circuit
- Contactor
- Monitored by Minotaur

Use a slotted screwdriver to pop open cover to reveal switches & fuse.

Input Switch → D
Replacement Fuse → S
Reset Switch → R / T



D & S Input Selector Switch
D = Dual channel input.
S = Single channel input.

R&T Reset Selector Switch
R = Monitored manual reset facility with system check for high integrity utilizing a momentary push button. The push and release feature means the button can not be held in.
T = Automatic system check.

Allen-Bradley
GuardMaster®

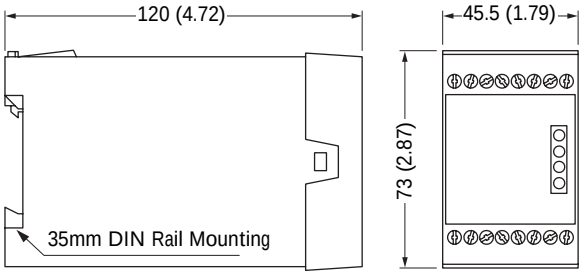
Product Selection

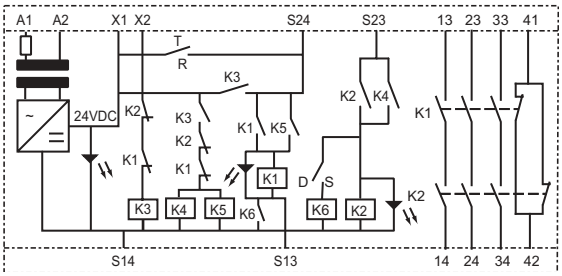
Inputs	Safety Outputs	Auxiliary Outputs	Power Supply	Catalogue Number
1 N.C or 2 N.C.	3 N.O.	1 N.C.	24V AC/DC	**440R-C23017**
			110V AC	**440R-C23018**
			230V AC	**440R-C23019**

Accessories

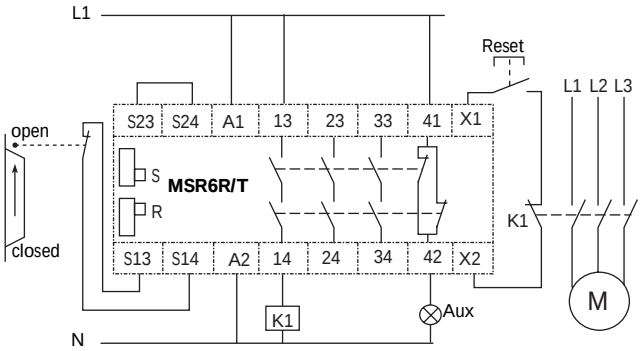
Description	Page Number	Catalogue Number
500mA Fuse	14-6	**440R-A31562**

Dimensions—mm (inches) Block Diagram

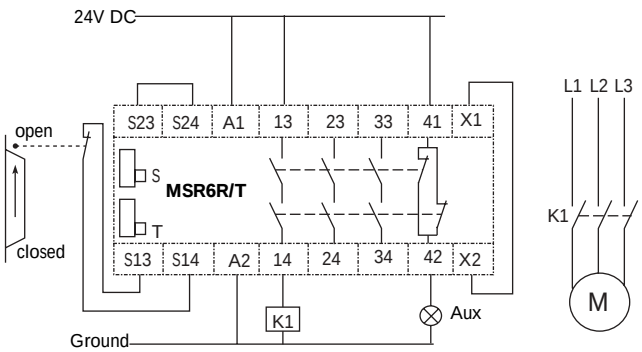




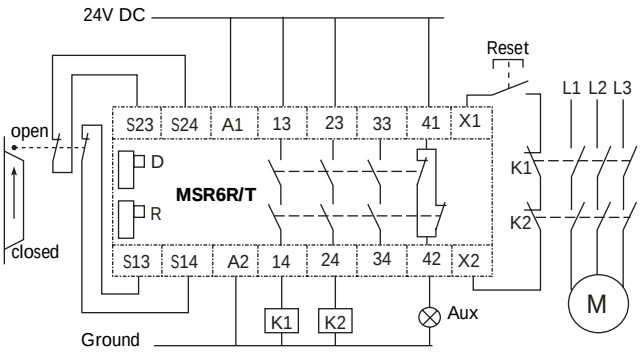
Typical Wiring Diagrams



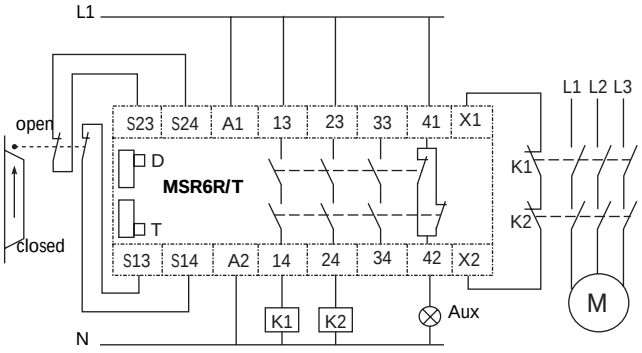
Single-Channel Safety Gate, Monitored Manual Reset, Single-Channel Output, Monitored Output



Single-Channel Safety Gate, Automatic Reset, Single-Channel Output, No Monitored Output



Dual-Channel Safety Gate, Monitored Manual Reset, Dual-Channel Output, Monitored Output



Dual-Channel Safety Gate, Automatic Reset, Dual-Channel Output, Monitored Output