

Safety Relays

Monitoring Safety Relays with Delayed Outputs

Minotaur MSR10D



Description

The MSR10RD has 2 N.C. dual channel input for use with gate interlocks and emergency stop buttons in higher risk applications.

The MSR10RD has output monitoring that accommodates automatic/manual or monitored manual reset. 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 MSR10RD has 8 N.O. instantaneous safety outputs and 1 N.C. instantaneous auxiliary outputs as well as 1 N.O. safety and 1 N.C. auxiliary delayed outputs. The delay is set by an internal potentiometer. 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 and 1
- 2 N.C. dual channel input
- 8 N.O. instantaneous safety outputs
- 1 N.C. instantaneous auxiliary output
- 1 N.O. delayed safety output
- 1 N.C. delayed auxiliary output
- Automatic/manual or monitored manual reset
- 152mm wide housing

Specifications

Standards	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. 3 per EN 954-1 (ISO 13849-1)
Approvals	C-Tick, CE marked for all applicable directives and cULus
Power Supply	24V AC/DC and 110/230V AC
Power Consumption	<4VA
Safety Inputs	2 N.C.
Input Simultaneity	0.5s
Maximum Input Resistance	500 Ω
Reset	Monitored Manual or Auto./Manual
Outputs	8 N.O. Safety Instantaneous 1 N.O. Safety delayed 0.1 to 10s 1 N.C. Auxiliary Instantaneous 1 N.C. Auxiliary delayed 0.1 to 10s
● Output Utilization per IEC 60947-5-1 (Inductive)	B300, AC-15 4A/250V AC, 4A/125V 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 instantaneous
Indication LEDs	Red = Power On Green = K1 Closed Green = K2 Closed Green = Off Delay Closed
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	1054g (2.32lbs)
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
Mechanical Life	2,000,000 operations
Vibration	0.75mm (0.30in) peak, 10-55Hz
Shock	30g, 11ms half sine

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

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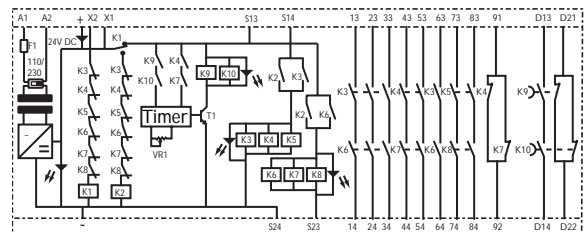
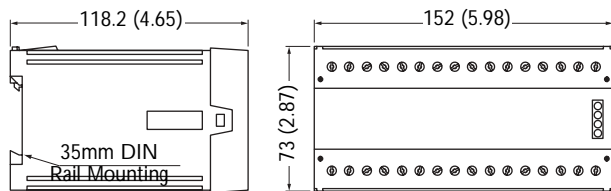
Product Selection

Inputs	Safety Outputs	Auxiliary Outputs	Reset	Delayed Timing	Catalogue Number
2 N.C.	8 N.O. Instantaneous 1 N.O. Delayed	1 N.C. Instantaneous 1 N.C. Delayed	Monitored Manual	0.1 to 10s	440R-G23029
			Automatic/Manual	1 second fixed delay	440R-G23067
				0.5 second fixed delay	440R-G23068

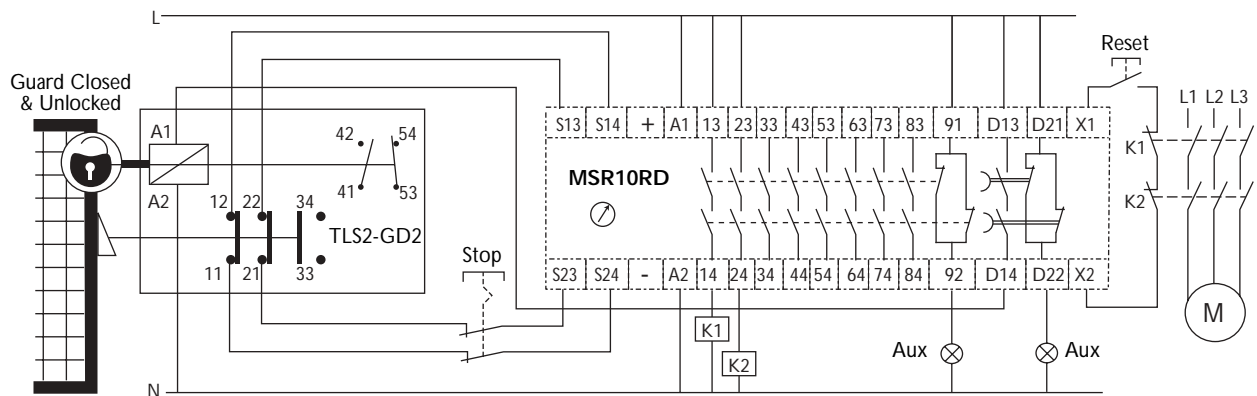
Accessories

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

Dimensions—mm (inches) Block Diagram



Typical Wiring Diagrams



*Dual Channel Guardlocking Safety Gate, Delayed Gate Release,
Manual Reset, Dual Channel Output, Monitored Output*

Application Details

