

Safety Relays

Monitoring Safety Relays

Minotaur MSR126R/T



Description

The Allen-Bradley Guardmaster Minotaur MSR126R/T is a safety monitoring relay that provides the very basics for safety control systems in a 22.5mm package.

The MSR126R/T is designed for connection to a single channel safety gate, a single channel e-stop or a light curtain that provides cross fault detection. The MSR126.1R/T is designed for connection to a dual channel safety gate or e-stop, as it performs cross fault detection across the inputs.

The MSR126R and MSR126.1R are designed for applications where a monitored manual reset is required. Monitored manual reset requires the use of a manually operated normally open momentary switch to activate the outputs.

The MSR126T and MSR126.1T are designed for applications where automatic/manual reset is required. Automatic/manual reset allows a jumper across the S33-S34 circuit, and therefore does not perform output monitoring.

The outputs are only 2 normally open safety rated outputs. The safety outputs have independent and redundant internal contacts to help ensure the safety function.

Features

- Category 4 per EN 954-1
- Stop category 0
- 2 Safety contacts N.O.
- Single/dual channel operation
- Cross fault monitoring
- Monitored or automatic reset
- E-stop, safety gate or light curtain applications

Specifications

Standards	EN954-1, ISO13849-1, IEC/EN60204-1, IEC60947-4-1, IEC60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 4 per EN954-1 (ISO 13849-1)
Approvals	C-Tick, CE marked for all applicable directives, cULus (except 42V AC units) and BG
Power Supply	24V AC/DC, 42/115/230V AC (0.8 – 1.1 x rated voltage), 50/60Hz
Power Consumption	4W
Safety Inputs	1 N.C., 2 N.C. or Light Curtain
Input Simultaneity	Infinite
Max. Allowable Input Resistance	90 ohms
Reset	Auto/Manual or Monitored Manual
Outputs	2 N.O. Safety
Output Utilization per IEC 60947-4-1 (Resistive)	AC-1: 6A/250V AC DC-1: 6A/24V DC
① 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)	Max 6A in one current path
Fuses Output (external)	6A slow blow or 10A quick blow
Maximum Thermal Current, I _e	1 x 6A, 2 x 4A
Min. Switched Current/Voltage	10mA/10V
Power On Delay	300ms
Response Time	15ms
Recovery Time	100ms
Indication LEDs	Green = Power on Green = K1 Closed Green = K2 Closed
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
Mounting	35mm DIN rail
Weight 24V DC 110 and 230V AC	160g (0.353 lbs) 215g (0.474 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	10g 10-55Hz
Shock	10g, 16ms 100 shocks

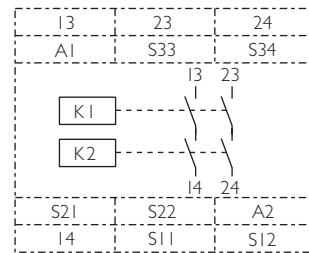
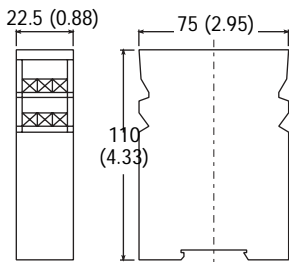
① See Output Ratings on page 1-29 for details. Consult factory for ratings not shown.

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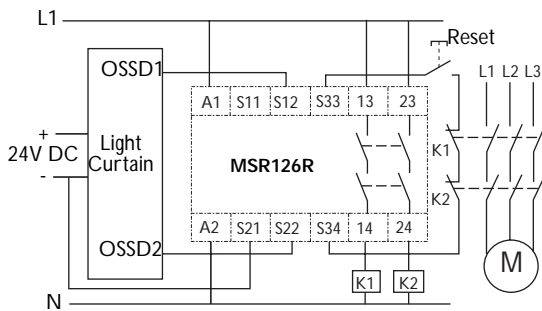
Product Selection

Safety Outputs	Auxiliary Outputs	Reset	Input	Power Supply	Catalogue Number
2 N.O.	None	Automatic/Manual	Light Curtain or Single Channel (MSR126T)	24V AC/DC	440R-N23117
				115V AC	440R-N23116
				230V AC	440R-N23115
			Dual Channel (MSR126.1T)	24V AC/DC	440R-N23114
				115V AC	440R-N23113
				230V AC	440R-N23112
		Monitored Manual	Light Curtain or Single Channel (MSR126R)	24V AC/DC	440R-N23123
				115V AC	440R-N23122
				230V AC	440R-N23121
			Dual Channel (MSR126.1R)	24V AC/DC	440R-N23120
				115V AC	440R-N23119
				230V AC	440R-N23118

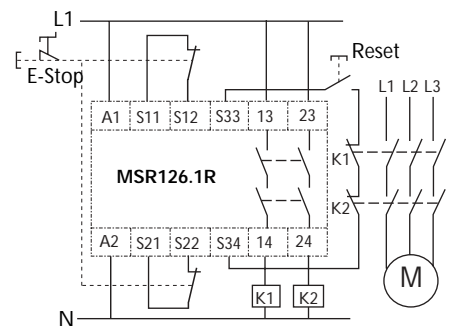
Dimensions—mm (inches) Block Diagram



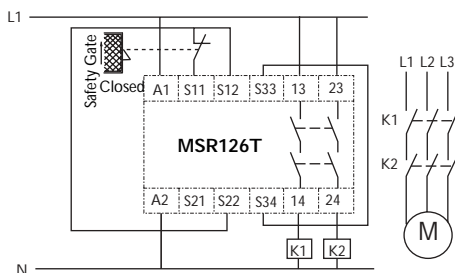
Typical Wiring Diagrams



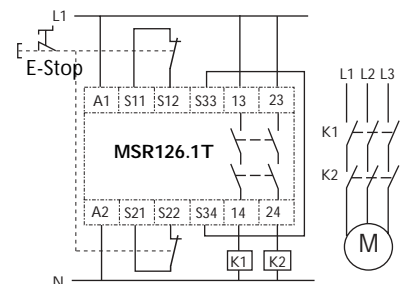
115/230V Supply, 24V DC Light Curtain, Monitored Manual Reset, Monitored Output



Dual Channel E-Stop Input, Monitored Manual Reset, Monitored Output



Single Channel Safety Gate Automatic Reset, No Output Monitoring



Dual Channel E-Stop, Automatic Reset, No Output Monitoring

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