Monitoring Safety Relays

Minotaur MSR127RP/TP





Description

The MSR127RTP can be connected in three different input wiring configurations: 1 N.C., 2 N.C., or with 2 PNP connections from a light curtain. When connected in the 2 N.C. fashion, the MSR127RTP checks for cross faults across the two inputs. When connected to light curtains, the light curtain must perform the cross fault detection.

The MSR127RP has a monitored manual reset. The MSR127TP has an automatic/manual reset. Models with automatic/manual reset can have the reset jumpered or can be converted to an unmonitored manual reset by adding a normally open switch in the monitoring loop. Models with monitored manual reset provide checking of the output monitoring circuit.

The outputs include 3 normally open safety rated outputs as well as 1 normally closed auxiliary output. The safety outputs have independent and redundant internal contacts to help ensure the safety function. The auxiliary output is a nonsafety output intended to provide an external signal about the status of the safety outputs.

Features

- Category 4 per EN 954-1
- Stop category 0
- 3 Safety contacts 1 Auxiliary contact
- Cross fault monitoring
- Monitored or automatic reset
- Removable terminals
- Light curtain, E-Stop or safety gate applications

Standards	EN954-1, ISO13849-1, IEC/ EN60204-1, IEC60947-4-1, IEC60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 4 per EN 954-1 (ISO 13849-1)

CE marked for all applicable Approvals directives, cULus and BG 24V AC/DC, 115V AC or 230V AC Power Supply 0.8 to 1.1 x rated voltage, 50/60Hz

Power Consumption 2\W

Specifications

Power On Delay

1 N.C. or 2 N.C. or 2 PNP (light Safety Inputs curtain)

Input Simultaneity Infinite Max. Allowable Input Resistance 110 ohms

Monitored Manual or Auto./Manual Reset Outputs 3 N.O. Safety; 1 N.C. Auxiliary

AC-1: 5A/250V AC Output Utilization per IEC 60947-4-1 (Resistive) DC-1: 5A/24V DC

Output Utilization per IEC B300, AC-15; 5A/250V AC, 60947-5-1 (Inductive) 5A/125V AC P300, DC-13; 3A/24V DC

5A/24V DC @ 6 ops/min

Green = CH2 Closed

Thermal Current (non switching)
Units with 24V AC/DC supply: 3x4A or 2x5A 3x3A or 2x4A or 1x5A Units with 115/230V AC supply:

Fuses Output (external) 6A Slow Blow or 10A Quick Blow Min. Switched Current/Voltage 10mA/10V Contact Material $AgSnO_2 + 0.5mAu$

1s

Response Time 15ms 100ms Recovery Time Green = Power Indication LEDs Green = CH1 Closed

Impulse Withstand Voltage 2500V Pollution Degree

Operating Temperature -5°C to +55°C (+23°F to 131°F) 90% RH Humidity

Enclosure Protection IP40 (NEMA 1) Terminal Protection **IP20**

Maximum Conductor Size 0.2 to 4mm² (24-12AWG) Torque Settings—term. screws 0.4Nm (3.54lb•in)

Case Material Polyamide PA 6.6 35mm DIN rail Mounting Weight 24V DC

210g (0.463lbs) 260g (0.573lbs) 110V AC or 230V AC Electrical Life (w/Surge Supp.) 250V AC/6A/1500VA cosφ=1 100,000 operations 250V AC/2.5A/625VA cosφ=1 500,000 operations

250V AC/1.5A/375VA cosφ=0.35 300,000 operations 100,000 operations 250V AC/5A/1250VA cosφ=0.6 1,000,000 operations 24V DC/2A/48W 2,000,000 operations

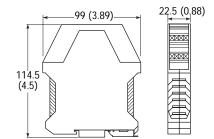
10V DC/0.01A/0.1W Mechanical Life 2,000,000 operations Vibration 10-55Hz, 0.35mm Shock 10g, 16ms, 100 shocks

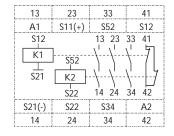
[•] See Output Ratings on page 1-29 for details. Consult factory for ratings not

Product Selection

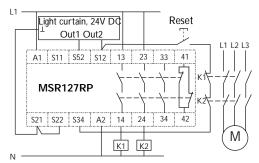
Inputs	Safety Outputs	Auxiliary Outputs	Terminal s	Power Supply	Туре	Reset	Catalogue Number
1NC, 2NC, or Light Curtain			Fixed	24V AC/DC	MSR127T	Automatic/Manual	440R-N23126
					MSR127R	Monitored Manual	440R-N23129
				115V AC	MSR127T	Automatic/Manual	440R-N23125
					MSR127R	Monitored Manual	440R-N23128
				230V AC	MSR127T	Automatic/Manual	440R-N23124
	2 N O	1 N.C.			MSR127R	Monitored Manual	440R-N23127
	3 N.O.	T N.C.	Removable	24V AC/DC	MSR127TP	Automatic/Manual	440R-N23132
					MSR127RP	Monitored Manual	440R-N23135
				115V AC	MSR127TP	Automatic/Manual	440R-N23131
					MSR127RP	Monitored Manual	440R-N23134
				230V AC	MSR127TP	Automatic/Manual	440R-N23130
					MSR127RP	Monitored Manual	440R-N23133

Dimensions—mm (inches) Block Diagram

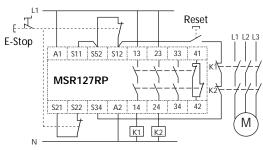




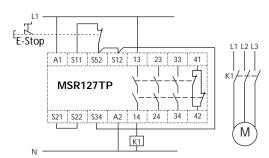
Typical Wiring Diagrams



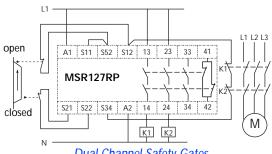
Light Curtain, Monitored Manual Reset, Monitored Output



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



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



Dual Channel Safety Gates, Automatic Reset, Monitored Output



