

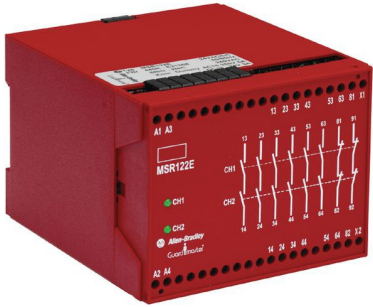
MSR122E

Description

The MSR122E is designed to be an expansion relay for use with the Minotaur safety relays. The MSR122E is typically used in safety system applications where additional outputs switching connections are needed to help shut down a manufacturing process, properly and safely.

The MSR122E can be connected as a single channel (1 N.C.) or dual channel (2 N.C.) input configuration.

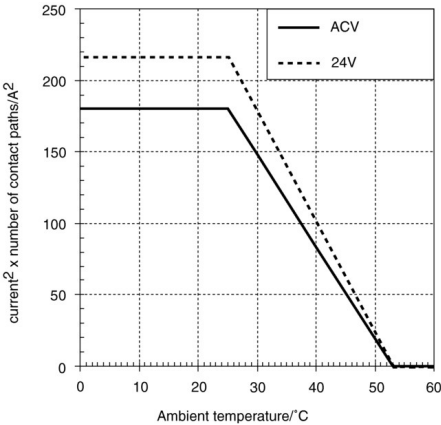
The outputs include 6 normally open safety rated outputs used to shut down the manufacturing system and 1 normally closed auxiliary output to indicate the status of the MSR122E. One additional normally closed output is available to allow the host relay to monitor the status of the MSR122E. The safety, auxiliary and monitoring outputs have independent and redundant internal contacts to help ensure the safety function.



Features

- Safety category according to wiring
- 6 Safety contacts
- 1 Auxiliary contact
- 1 Monitoring contact

Contact Current Limit Curve



LED Indicators

PWR: Green	Power on
Flashing Green/Red	Failure
CH1/2 IN: Static Green	Input closed
Flashing Green	Time lapse
CHT1: Green	Output CH1 Active
CHT2: Green	Output CH2 Active

Specifications

Standards	EN 954-1, ISO 13849-1, IEC/EN 60204-1, IEC 60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 4 per EN 954-1 (ISO13849-1)
Certifications	CE Marked for all applicable directives, cULus, C-Tick, and BG
Power Supply	24V AC/DC, 115V AC or 230V AC; 0.8...1.1 x rated voltage, 50/60Hz (0.85...1.1 x 24V DC)
Power Consumption	3 W
Safety Inputs	1 N.C. or 2 N.C.
Input Simultaneity	Infinite
Input Resistance, Max.	160 Ω
Safety Outputs	6 N.O. Safety 2 N.C. Auxiliary 1 N.C. Monitoring
Thermal Current	See limit curve Max 10 A (nonswitching) in one current path
Fuses, Output	External 6 A slow-blow or 10 A fast acting
Switching Current @ Voltage, Min.	10 mA/10V
Contact Material	AgSnO ₂ + 0.5 μ Au
Response Time	30 ms
Status Indicators	Green = CH1 Closed Green = CH2 Closed
Rated Impulse withstand Voltage	2500V
Pollution Degree	2
Operating Temperature [C (F)]	-5...50° (23...122°)
Enclosure Type Rating	IP40 (NEMA 1)
Terminal Protection	IP20
Conductor Size, Max.	0.2...4 mm ² (24...12 AWG)
Torque Settings—terminal screws	0.4 N•m (3.54 lb•in)
Mounting	35 mm DIN Rail
Weight [g (lb)]	550 (1.21)
Mechanical Life	5,000,000 operations
Vibration	10...55 Hz, 0.35 mm
Shock	10 g, 16 ms, 100 shocks

Electrical Life	(With Surge Suppression) 250V AC/10A/2500VA $\cos\phi = 1$ - 300,000 operations 250V AC/5A/1250VA $\cos\phi = 1$ - 700,000 operations 250V AC/5A/1250VA $\cos\phi = 0.35$ - 350,000 operations 250V AC/5A/1250VA $\cos\phi = 0.6$ - 500,000 operations 24V DC/2A/48W - 1,000,000 operations 10V DC/0.01A/0.1W - 2,000,000 operations
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Utilization Category		
Resistive: AC-1	10 A @ 250V AC	
Resistive: DC-1	10 A @ 24V DC	
Inductive: N.O.—AC-15	5 A @ 250V AC	5 A @ 125V AC
Inductive: N.C.—AC-15	2 A @ 250V AC	2 A @ 125V AC
Inductive: N.O.—DC-13	4 A @ 24V DC	
Inductive: N.C.—DC-13	10 A @ 24V DC @ 6 ops/min B300	

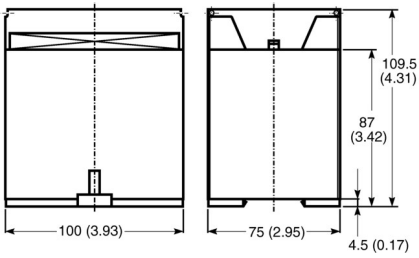
* See Output Ratings on **Output Ratings** for details. Consult factory for ratings not shown.

Product Selection

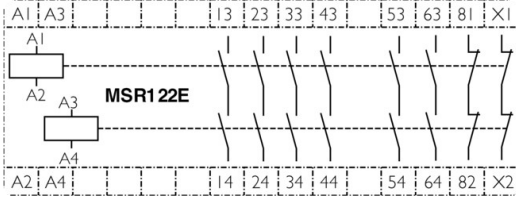
Inputs	Safety Outputs	Auxiliary Outputs	Terminals	Reset Type	Power Supply	Cat. No.
1 N.C. or 2 N.C.	6 N.O.	2 N.C.	Fixed	Automatic	24V AC/DC	440R-E21358
					115V AC	440R-E21357
					230V AC	440R-E21356

Approximate Dimensions

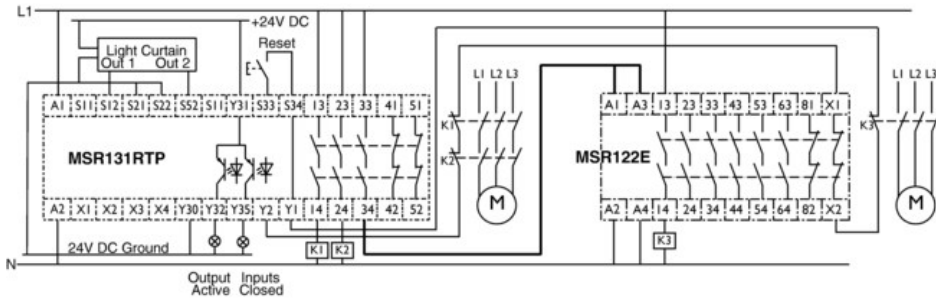
Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.



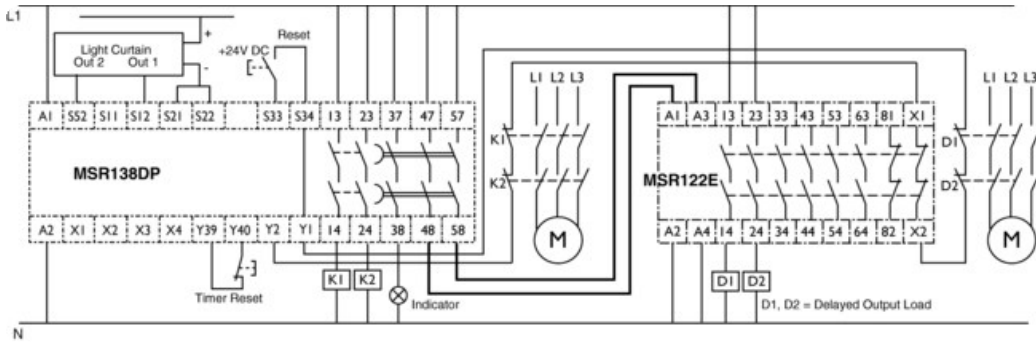
Block Diagram



Typical Wiring Diagrams



120/230V AC Host (MSR131) with Dual Channel Light Curtain Input and Single Channel Expansion (MSR122) with Monitoring



120/230V AC Host (MSR138) with Dual Channel Light Curtain Input and Dual Channel Delayed Expansion (MSR122) with Monitoring