

MSR19E

Description

The Minotaur MSR19E is a monitoring safety expansion relay unit with dual channel input. It is designed to be operated as an "extension" of a "master" safety relay. When wired properly, the outputs of the MSR19E will mimic the outputs of the master relay.

With its 8 safety outputs, the MSR19E can be used to drive multiple safety circuits. Two auxiliary normally closed contacts are available to provide indication of the status of the MSR19E, which would reflect the status of the master safety relay.

Features

- Safety category according to wiring
- Dual channel inputs
- 8 N.O. safety outputs
- 2 N.C. auxiliary outputs



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 (ISO 13849-1)
Certifications	CE Marked for all applicable directives and cULus
Power Supply	AZ1:24V AC/DC -20%, +10% & 120V AC -15%, +10% AZ2:24V AC/DC -20%, +10% & 240V AC -15%, +10%
Power Consumption	3.6W @ 24V AC/DC 6.1VA, 5.7W @ 120 and 240V AC
Safety Inputs	1 N.C. or 2 N.C.
Input Simultaneity	0.5 s
Input Resistance, Max.	100 Ω
Reset Type	Automatic
Safety Outputs	8 N.O. Safety 2 N.C. Auxiliary
Thermal Current	1 x 8 A, 2 x 7 A, 4 x 6 A, 6 x 5 A, or 8 x 4.5 A nonswitching
Fuses, Input	Internal, electronic: 20 s reset time
Fuses, Output	1.6 slow-blow (external)
Switching Current @ Voltage, Min.	20 mA @ 24V AC/DC
Maximum Drop-Out Time	20 ms
Status Indicators	Red = Input Short Green = Power Green = K1 Green = K2
Rated Impulse withstand Voltage	3000V
Installation Group	C in accordance with VDE 0110
Pollution Degree	2
Operating Temperature [C (F)]	-25...55° (-13...131°)
Relative Humidity	95%
Enclosure Type Rating	IP40, (NEMA 1), DIN 0470
Terminal Protection	IP20, DIN 0470
Conductor Size, Max.	1 x 2.5 mm ² (14 AWG)
Torque Settings—terminal screws	0.8 N•m (7 lb•in)
Material	Red Polyester PBT
Mounting	35 mm DIN Rail
Weight [g (lb)]	630 (1.4)
Mechanical Life	10,000,000 operations
Vibration	0.75 mm (0.30 in.) peak, 10...55 Hz
Shock	10 g, 11 ms half-sine

Electrical Life	220V AC/4A/880VA $\cos\phi = 0.35$ - 100,000 operations 220V AC/1.7A/375VA $\cos\phi = 0.6$ - 500,000 operations 30V DC/2A/60W - 1,000,000 operations 10V DC/0.01A/0.1W - 2,000,000 operations
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Utilization Category		
Inductive: C300 AC-15	0.75 A @ 240V AC	1.5 A @ 120V AC
Inductive: Q300 DC-13	2 A @ 24V DC	

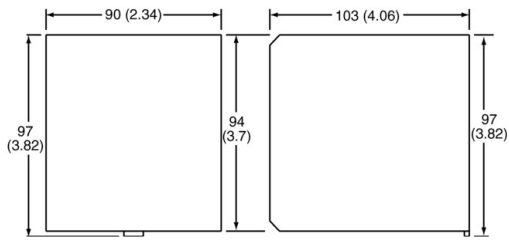
* See Output Ratings on **Output Ratings** for details. Consult factory for ratings not shown.

Product Selection

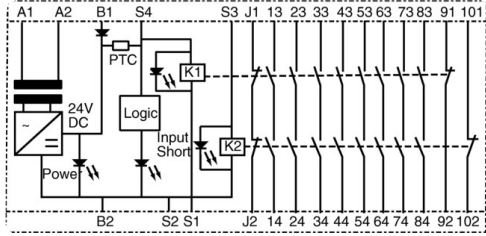
Inputs	Safety Outputs	Auxiliary Outputs	Terminals	Reset Type	Power Supply	Cat. No.
1 N.C., 2 N.C.	8 N.O.	2 N.C.	Fixed	Automatic	24V AC/DC and 120V AC	440R-ZBE820AZ1
					24V AC/DC and 240V AC	440R-ZBE820AZ2

Approximate Dimensions

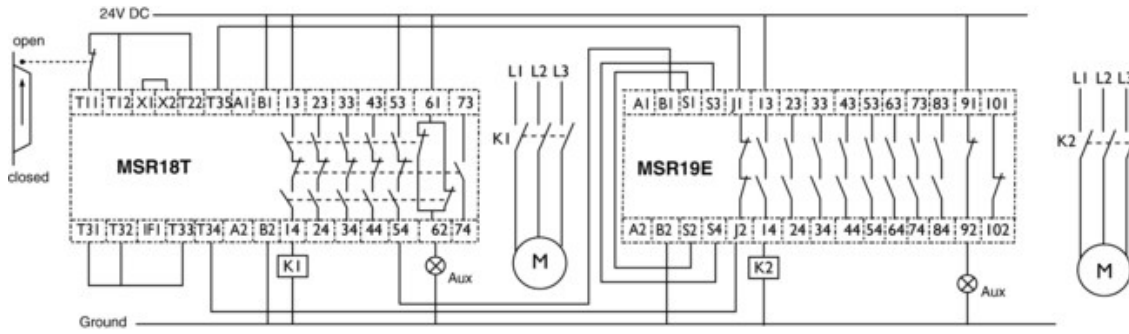
Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.



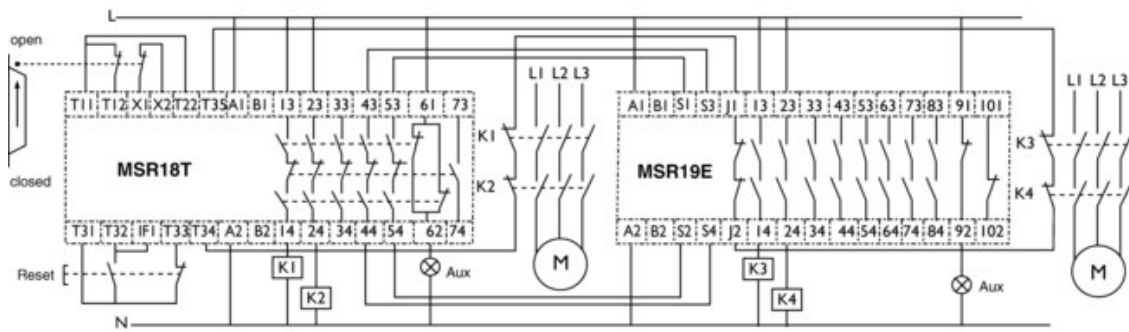
Block Diagram



Typical Wiring Diagrams



Single Channel Gate Input, Single Channel Expansion, Single Channel Output, Automatic Reset, Expansion Monitoring, No Monitored Output



Dual Channel Gate Input, Dual Channel Expansion, Dual Channel Output, Monitored Manual Reset, Expansion Monitoring, Monitored Output