

# MSR117T

## Description

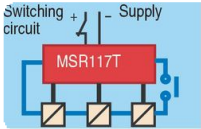
The MSR117T has one normally closed single-channel input for use with gate interlocks and emergency stop buttons in lower risk applications. The MSR117T has output monitoring that can accommodate an automatic/manual reset function. Automatic/manual reset can use a jumper or can be used to check operation of the contacts.

The MSR117T has three normally open safety outputs and one normally closed auxiliary output. 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.

The MSR117T can be activated via the terminals A1-A2 and the feedback/reset loop X1-X2. Then the safety outputs 13-14, 23-24 and 33-34 close and enable operation.

## Features

- Category 4 per EN 954-1
- Stop category 0
- Single channel input
- Three N.O. safety outputs
- One N.C. auxiliary output
- 22.5 mm wide housing



- Contactor monitoring circuit
- Contactor switching circuit
- Supply inclusive of switching circuit
- Contactor
- Monitored by Minotaur

## Specifications

Safety Ratings	
Standards	IEC/EN 60204-1, ISO 12100, ISO 13849-1 (EN 954-1)
Safety Classification	Cat. 4 per EN 954-1 (ISO 13849-1), SIL CL3 per EN IEC 62061, PLe per ISO 13849-1
Functional Safety Data ★ Note: For up-to-date information, visit <a href="http://www.ab.com/safety/">http://www.ab.com/safety/</a>	PFH <sub>D</sub> : < 2.53 x 10-9 MTTFd: > 425 years Suitable for performance levels PLe (according to ISO 13849-1:2006) and for use in SIL3 systems (according to IEC 62061) depending on the architecture and application characteristics
Certifications	CE Marked for all applicable directives, cULus, and TÜV
Power Supply	
Input Power Entry	24V AC/DC
Power Consumption	2 W
Inputs	
Safety Inputs	1 N.C.
Input Resistance, Max.	25 ohms
Reset	Auto./Manual or Monitored Manual
Power On Delay/ Recovery Time	1 sec/110 ms
Response Time	30 ms
Outputs	
Safety Contacts	3 N.O.
Auxiliary Contacts	1 N.C.
Thermal Current <i>I<sub>Ith</sub></i>	2 x 5 A or 3 x 4 A
Rated Impulse withstand Voltage	2500V
Switching Current @ Voltage, Min.	10 mA @ 10V
Fuses, Output	6 A slow blow or 10 A quick blow (external)
Electrical Life	230V AC/4 A/880V A cosφ=0.35...0.1 M 230V AC/1.7 A/375V A cosφ=0.6...0.5 M 30V DC/2 A/60 = 1 M 10V DC/0.01 A/0.1 W = 2 M
Mechanical Life	2,000,000 cycles
Environmental and Physical Characteristics	
Enclosure Type Rating/ Terminal Protection	IP40 (NEMA 1), DIN 0470/ IP20, DIN 0470
Operating Temperature [C (F)]	-5...+55 ° (23...131 °)
Vibration	10...55 Hz, 0.35 mm
Shock	10 g, 16 ms 100 shocks
Mounting	35 mm DIN Rail
Weight [g (lb)]	180 (0.37)
Conductor Size, Max.	0.2...4 mm <sup>2</sup> (24...12 AWG) wire size only

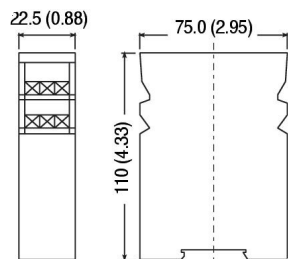
★ Usable for ISO 13849-1:2006 and IEC 62061. Data is based on the following assumptions:  
- Mission time/Proof test interval of 20 years  
- Functional test at least once within six-month period

### Product Selection

Inputs	Safety Outputs	Auxiliary Outputs	Terminals	Reset Type	Power Supply	Cat. No.
1 N.C.	3 N.O.	1 N.C.	Fixed	Auto./Manual or Monitored Manual	24V AC/DC	440R-B23211

### Approximate Dimensions

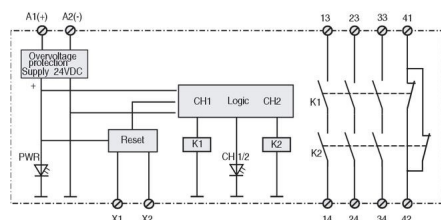
Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.



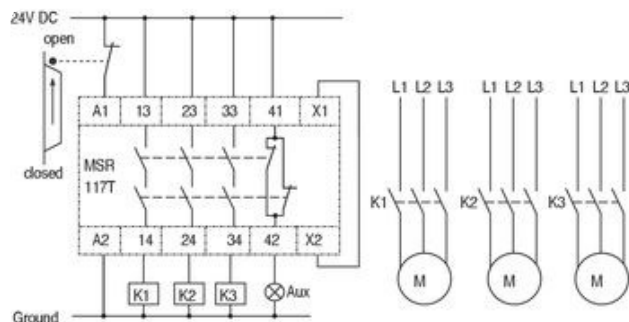
## Connections

A1	X1	X2
13	23	33
LED Indication POWER (GREEN) - Illuminates when power on (GREEN) - Illuminates when K1K2 closed		
14	24	34
41	42	A2

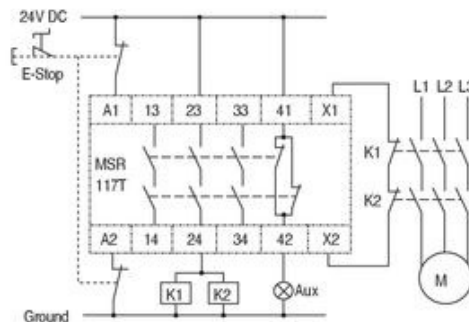
## Block Diagram



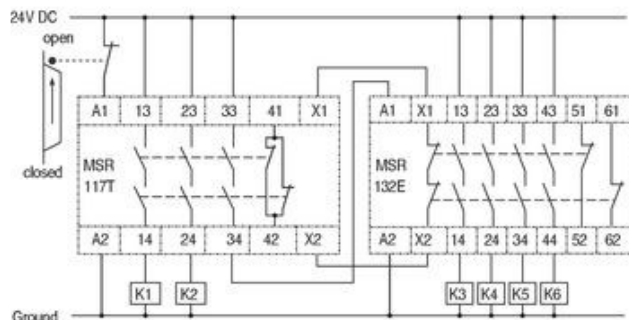
## Typical Wiring Diagrams



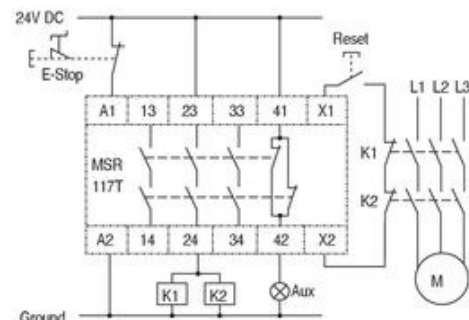
Single Channel Gate Interlock, Automatic Reset,  
Single Channel Output, No Monitored Output



Dual Channel E-Stop, Automatic Reset,  
Single Channel Output, Monitored Output



Single Channel Gate Interlock, Automatic Reset,  
Single Channel Output Expansion



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