MSR18T

Description

The Minotaur MSR18T is a monitoring safety relay unit with dual channel input, 5 safety outputs and 2 auxiliary outputs. It is designed for operation as E-Stop, safety gate applications, and 2-hand control applications.

The MSR18T is a versatile unit with extensive diagnostics. It can be used with E-Stop buttons, gate interlocks, two-hand controls as well as expansion relays when additional inputs are needed.

When used in a suitably configured circuit, the MSR18T provides additional safety rated output circuits with checking and monitoring of its status. Safety critical faults or power failures will cause them to initiate a lock-out to a safe state.

Features

- Category 4 per EN 954-1
- Stop category 0
- 24V AC/DC and 110V AC or 240V AC
- Dual channel inputs
- 5 N.O. safety outputs
- 2 N.C. auxiliary outputs
- E-Stop and gate applications
- 2-hand control applications
- 5 LEDs for comprehensive diagnostics

LED Indicators

Red	Input Short	
Green	Power	
Green	Run	
Red	Input Fault	
Red	Output Fault	

Specifications



Safety Ratings							
Standards	EN 954-1, ISO13849-1, IEC/EN 60204-1, IEC 60947-5-1, ANSI B11.19, AS40	024.1, EN 574					
Safety Classification	Cat. 4 per EN 954-1 (ISO 13849-1)						
Functional Safety Data * Note: For up-to-date information, visit http://www.ab.com/safety/	PFH _D : < 2.5 x 10-9 MTTFd: > 45662 years Suitable for performance levels PIe (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 & TÜV							
Power Supply							
Input Power Entry	-						
Power Consumption	3.6 W @ 24V AC/DC 6.1 VA, 5.7 W @ 120V/240V AC						
Inputs							
Safety Inputs	1 N.C. or 1 N.C. & 1 N.O. or 2 N.C.						
Input Simultaneity	0.5 seconds						
Input Resistance, Max.	100 Ω						
Reset	-						
Power On Delay/Recovery Time	_/_						
Response Time	_						
Outputs							
Safety Contacts							
Auxiliary Contacts							
Thermal CurrentI _{Ith}	1 x 8 A, 2 x 7 A, 3 x 5.5 A, 4 x 5 A, or 5 x 4.5 A (nonswitching)						
Rated Impulse withstand VoltageI _{1th}	3000V						
Switching Current @ Voltage, Min.	20 mA @ 24V AC/DC						
Fuses, Output (External)	1.6 slow blow (external)						
Electrical Life (Operations)	220V AC/4A/880VA cos¢ = 0.35 - 100,000 operations 220V AC/1.7A/375VA cos¢ = 0.6 - 500,000 operations 30V DC/2A/60W - 1,000,000 operations 10V DC/0.01A/0.1W - 2,000,000 operations						
Mechanical Life	5,000,000 operations						
Utilization Category							
C300/AC-15	0.75 A @ 250V AC	1.5 A @ 120V AC					
Q300/DC-13	2 A @ 24V DC						
Environmental							
Enclosure Type Rating/ Terminal Protection	-/ IP20, DIN 0470						
Operating Temperature [C (F)]	-2555° (-13131°)						
Vibration	0.75 mm (0.30 in.) peak, 1055 Hz						
Shock	5 g, 11 ms half-sine						
Physical Characteristics							
Mounting	35 mm DIN Rail						
Weight [g (lb)]	-						
Conductor Size, Max.	-						

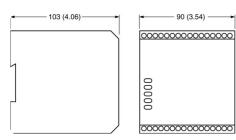
* Usable for ISO 13849-1:2006 and IEC 62061. Data is based on the following assumptions:
Mission time/Proof test interval of 20 years
Power cycled once per 8 hrs

Product Selection

Inputs	Safety Outputs	Auxiliary Outputs	Terminals	Reset Type	Power Supply	Cat. No.
1 N.C., 1 N.C. & 1 N.O., 2 N.C.	5 N.O.	2 N.C.	Fixed	Automatic/Manual or Monitored/Manual	24V AC/DC and 120V AC	440R-ZBR520AZ1
					24V AC/DC and 240V AC	440R-ZBR520AZ2

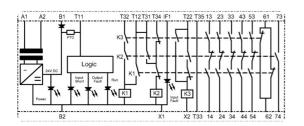
Approximate Dimensions

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

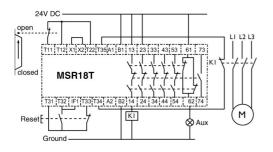


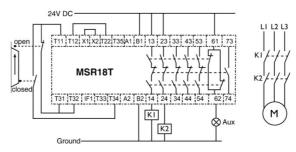
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Block Diagram

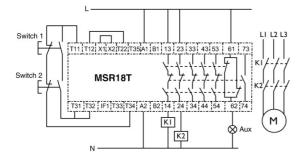


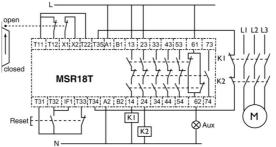
Typical Wiring Diagrams





Single-Channel Input, Monitored Manual Reset, Single-Channel Output, Monitored Output Dual-Channel Input 1 N.O. & 1 N.C., Automatic Reset, Dual-Channel Output, No Monitored Outputs





Two-Hand Control, Automatic Reset, Dual-Channel Output, No Monitored Output

Note: EN 574 Cat. 3B

Dual-Channel (2 N.C.), Monitored Manual Reset, Dual-Channel Output, Monitored Output

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