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MF Series

Tamper-Resistant Ferroresonant Safety Interlock Switch

- Tamper resistant—the combination of magnetic and ferroresonant signals required to close the safety contacts makes the MF Series switch very tamper resistant. Fulfills the requirements of category 3 (EN 954-1).
- Compact size—the MF Series switch is pre-wired and mounts easily on 1-in. square tubing
- Misalignment tolerant—actuator misalignment of up to 0.27 in. is tolerated by the MF Series switch
- Color LED Status Indicator on the MF Series switch makes it easy to determine the status of the switch
- NEMA 6 enclosure enables the MF Series switch to withstand high pressure steam cleaning
- Expandable system—the MF Series switches can be wired in Series/Parallel so that multiple doors may be guarded. The safety monitoring relay or control unit must accept 1 NC/1 NO inputs. See wiring diagram example.
- Long life—the MF Series switch is designed for a minimum of one million actuations.
- A Rapid Delivery Product: Select models are available for shipment today or within 3 to 5 days



Conforms to EN292, EN60204, EN954-1, EN1088, EN60947-5-3

Specifications

Electrical	All Models
Power Supply:	24 VDC
Power Consumption:	2 VA/2 W
Internal Fuse:	1 A on switch contacts
External Fuse (Customer Supplied):	0.5 A
Contact Configuration:	1 N/O + 1 N/C
Contact Operating Distance:	9 mm ON/10 mm OFF
Max Switched AC:	0.5 A/120 VAC
Max Switched DC:	0.5 A/24 VDC
Min Switched Current/Voltage:	10 mA/10 V
Cable Length:	100 m max.
Mechanical	
Mounting:	4 x M4 screws
Case Material:	ABS plastic
Weight:	270 g (9.5 oz.)
Color:	Red
Dual Indicator:	Green = Guard Closed; Red = Guard Open
Environmental	
Protection:	IP67 (NEMA 6)
Operating Temperature:	-10 to 55°C (14 to 131°F)
Humidity:	90% RH at 50°C (122°F)
Compliance	
Standards:	EN292, EN60204, EN954-1, EN1088, EN60947-5-3
Approvals/Listings:	CE marked for all applicable directives, UL and cULus pending

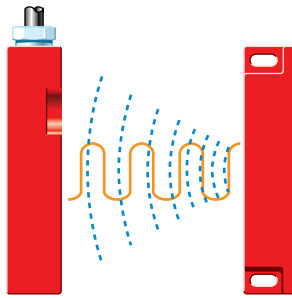
Specifications are subject to change without notice.

Note: The safety contacts of the STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

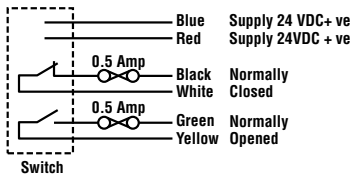
Operation

Operating Principle

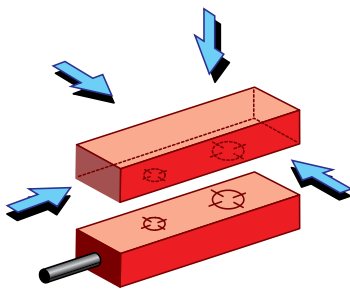
On presenting the actuator to the switch, the high intensity magnetic field, together with a resonant frequency signal, causes the contacts to close. On removing the actuator (opening the door), the safety contacts open, isolating the machine. The switch can not be overridden by magnets, tools, etc.



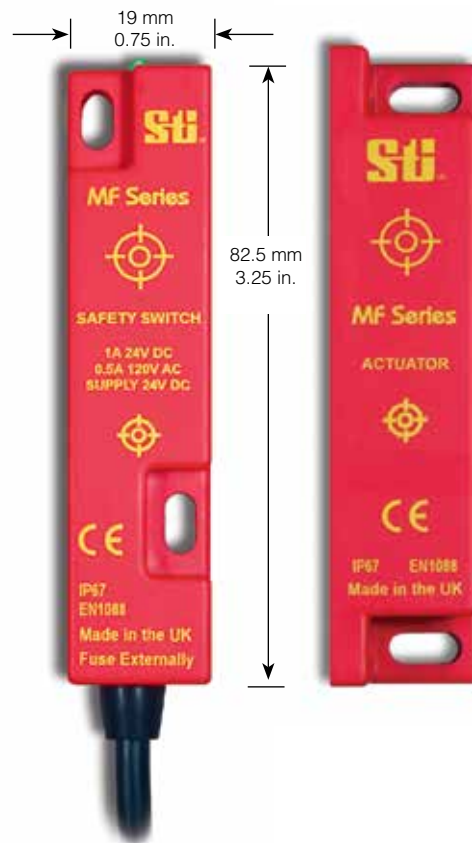
Switch Contacts and Connections



Mounting Examples

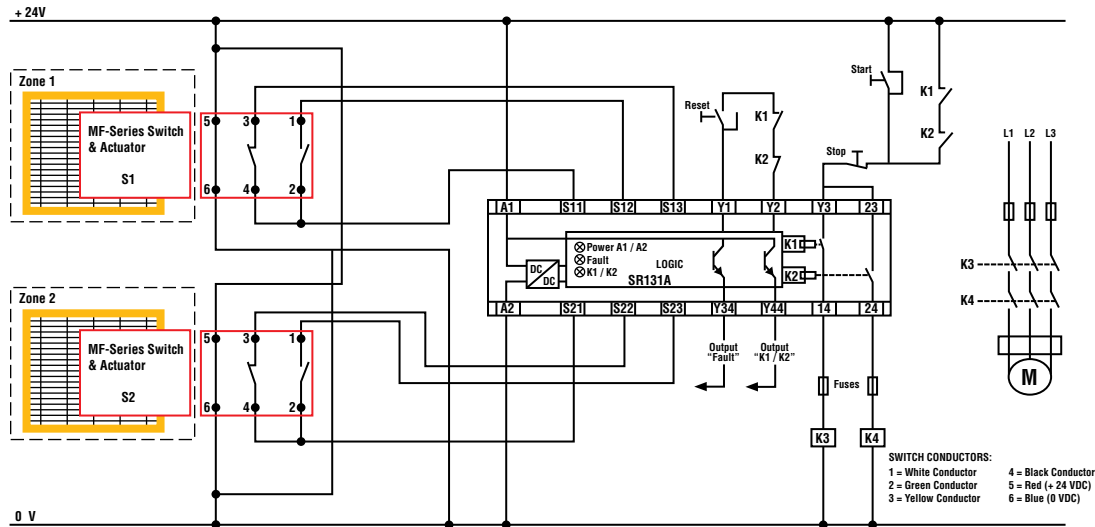
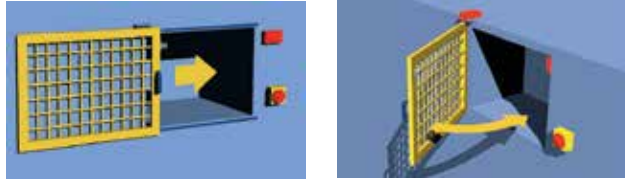


Actual Size

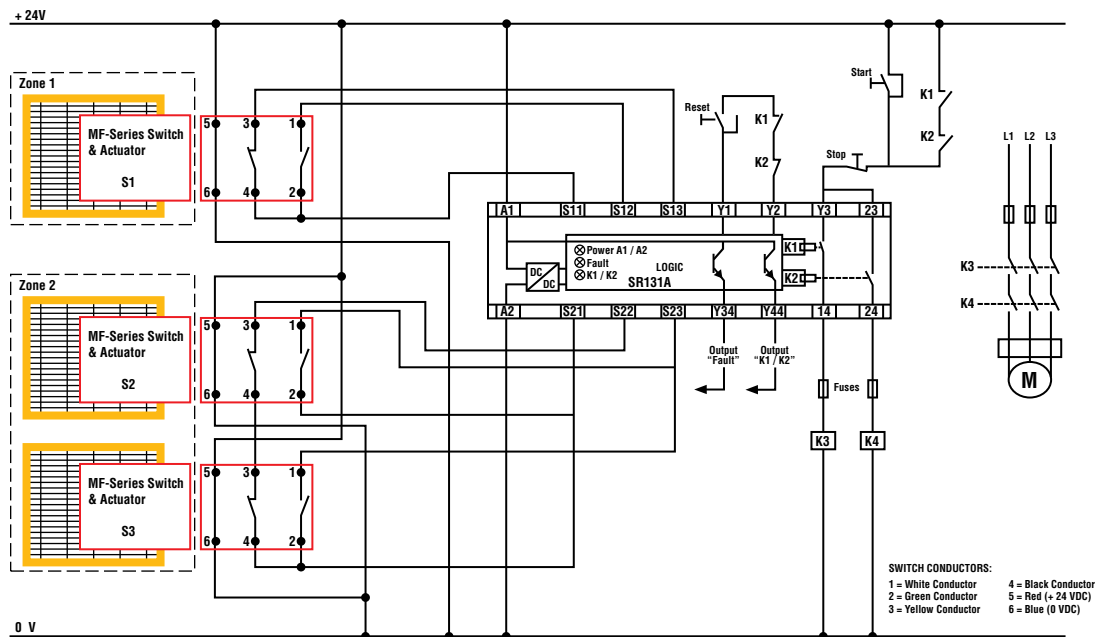


Applications

Typical applications are on sliding guard doors or swinging guard doors.



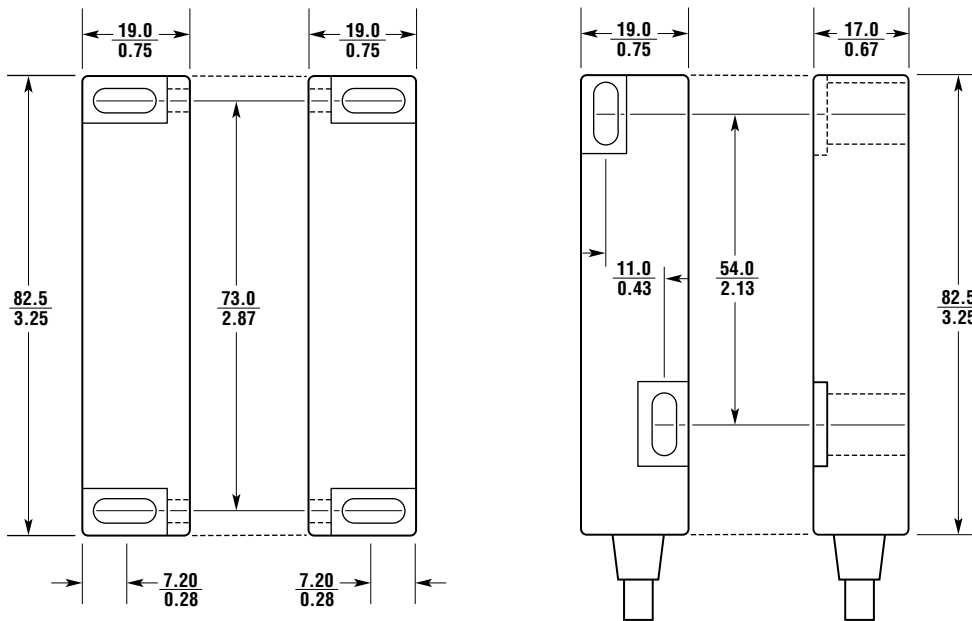
The MF Series switch and actuators are integrated with an SR131A safety monitoring relay. Each sensor has a dedicated channel for the highest level of safety.



The MF Series switch and actuators are integrated with an SR131A safety monitoring relay. The safety contacts of the MF switches for zone 2 are wired in Series/Parallel. This method allows multiple gates or switches to be wired to a single channel on the safety monitoring relay or control unit.

Dimensions

(mm/in.)



Ordering

Model	Contacts	Wiring Entry	Part No.
MF-2PC5 Switch & Actuator	1 N/C + 1 N/O	5 m	44518-1050
MF-2PC10 Switch & Actuator	1 N/C + 1 N/O	10 m	44518-1070
MF-2PSA Spare Actuator			44518-1700

Recommended safety monitoring relay for this product: SR131A or SR231A.

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