

Magnetically Coded Non-contact Interlock Switches

The magnetically coded non-contact interlock switches have the following features:

- Non-contact actuation
- Magnetic coded sensing
- High tolerance to misalignment
- Designed for use with specified controllers



Specifications

Attribute	Value	
	MC1	MC2
Safety Ratings		
Standards	ISO14119, IEC 60947-5-3, ISO13849-1 when used with approved safety control	
Safety classification	Type 4 Interlocking Device with low coding per ISO 14119	
Functional safety data	Visit http://literature.rockwellautomation.com/idc/groups/literature/documents/sr/safety-sr001_-en-e.pdf	
Certifications	c-UL-us Listed, TÜV Certified, and CE Marked for all applicable directives www.rockwellautomation.com/certification/overview.page	
Outputs (Guard Door Closed, Actuator in Place)		
Safety outputs	2 N.C. REEDS	2 N.C. Solid-state Relays
Auxiliary outputs	—	1 x PNP, 0.2 A max.; Status: OFF (0V DC)
Operating Characteristics		
Operating distance, make	8 mm (0.3 in.)	10 mm (0.39 in.)
Operating distance, break	15 mm (0.59 in.)	25 mm (0.98 in.)
Repeat accuracy	10% of Sensing Range	
Output current	200 mA, max	
Switching current @ voltage	24V DC @ 200 mA, max	24V DC @ 200 mA +10%/-15%, max
Operating voltage/power supply	—	24V DC, +10%/-15%/50 mA max/Class 2 SELV
Frequency of operating cycle	1 Hz	
Environmental		
Enclosure type rating	IP67 (NEMA 6P)	IP 69K
Operating temperature	-10...+55 °C (+14...+131 °F)	
Relative humidity	5...95%	
Shock	IEC 68-2, 27, 30 g, 11 ms	
Vibration	IEC 68-2-6, 10...55 Hz	
Radio frequency	IEC 61000-4-3, IEC 61000-4-6	
Physical Characteristics		
Housing material	Molded ABS	Ultrador
Actuator material	Molded ABS	Ultrador
Color	Red	

Product Selection

Type	Operating Voltage/ Input Current	Safety Outputs	Auxiliary Outputs	Status Indicator	Connection	Cat. No.
MC1	—	2 N.C. REEDS	—	No	4-pin Micro (M12)	440N-Z2NRS1C
					3 m Cable	440N-Z2NRS1A
					10 m Cable	440N-Z2NRS1B
MC2	24V DC, +10%/ 15%/ 50 mA, max	2 N.C. Solid-State Relays	1 x PNP, 0.2 A max.; Status: OFF (0V DC)	Yes	8-pin Micro (M12)	440N-Z21W1PH
					3 m Cable	440N-Z21W1PA
					10 m Cable	440N-Z21W1PB

Table 21 - Connection Systems

Description	Connection to Distribution Box 4-pin Micro (M12) 2 N.C.	8-pin Micro (M12) 2 N.C. & 1 N.O.
Cordset	889D-F4AC-x ⁽¹⁾	889D-F8AB-x ⁽¹⁾
Patchcord	889D-F4ACDM-y ⁽²⁾	889D-F8ABDM-y ⁽²⁾
Distribution Box	898D-4zLT-DM4 ⁽³⁾	—
Shorting Plug	898D-41LU-DM	—
T-Port	898D-43LY-D4	—

(1) Replace x with 2 (2 m), 5 (5 m), or 10 (10 m) for standard cable lengths.

(2) Replace y with 1 (1 m), 2 (2 m), 3 (3 m), 5 (5 m), or 10 (10 m) for standard cable lengths.

(3) Replace z with 4 or 8 for number of ports.

Accessories

Description	Cat. No.
MC1 spare actuator	440N-A17233
MC2 spare actuator	440N-A32114

Approximate Dimensions

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

Figure 12 - MC1

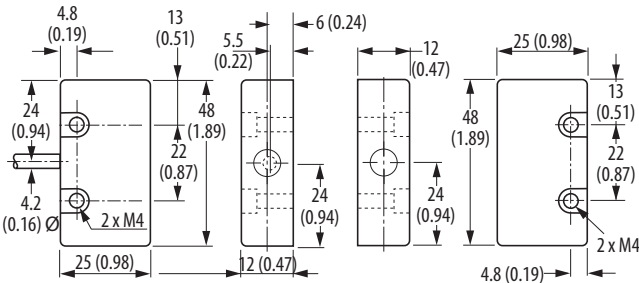
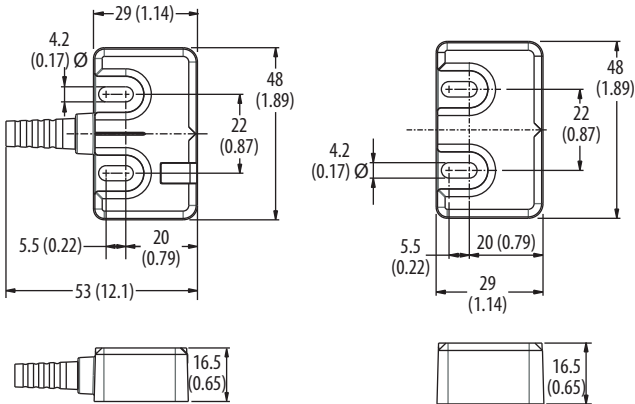


Figure 13 - MC2



Typical Wiring Diagrams

Description		MC1 — 2 N.C.	MC2 — 2 N.C. and 1 N.O.
4-pin Micro (M12)			—
8-pin Micro (M12)		—	
Cordset 889D-F4AC-x or Cable Version ⁽¹⁾	Brown	Safety A	—
	Blue		
	White	Safety B	—
	Black		

Description		MC1 — 2 N.C.	MC2 — 2 N.C. and 1 N.O.
8-pin Cordset 889D-F8AB-x or Cable Version ⁽¹⁾	Gray	—	Safety A
	Red		Safety A
	Pink		Safety B
	Yellow		Safety B
	White		Aux
	Brown		24V DC +
	Blue		Gnd
	Green		—

(1) Replace x with 2 (2 m), 5 (5 m) or 10 (10 m) for standard cable lengths.