

Interlock Switches  
**Hinge Switches**  
 Ensign 3



**Description**

The Ensign 3 is a hinge actuated safety interlock switch designed to fit at the hinge point of guards. With its rotatable head, the versatile Ensign 3 offers up to four different mounting options.

Operation of the unit is achieved by the hinging action of the guard. The actuation shaft is connected to the existing hinge pin and the degree of operation can be adjusted to suit the application via the adjustable cam in the switch head.

**Note:** After adjustment, the cam must be secured in position with the supplied cam locking pin to ensure optimal performance.

The switch includes the necessary safety related functions, such as forced guided contacts and a tamper resistant mechanism, allowing machinery to be safeguarded in compliance with the machinery directive. It is sealed to IP67 and has one conduit entry, M16 or connector style.

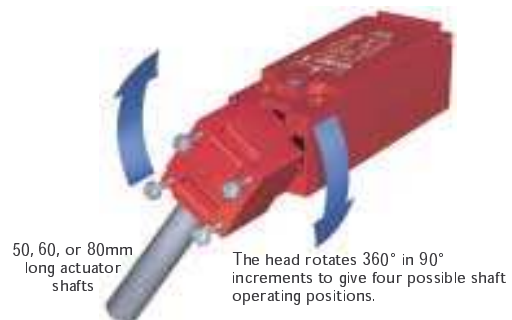
**Features**

- Compact size—90.5 x 31 x 30.4mm housing
- Ideal for small, lightweight guards
- Degree of operation can be customized with adjustable cam
- Contacts, 2 N.C. & 1 N.O. or 3 N.C. (sealed to IP67)
- Four possible shaft positions, easy to install

**Specifications**

Standards	EN954-1, ISO13849-1, IEC/EN60204-1, NFPA79, EN1088, ISO14119, IEC/EN60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 1 Device per EN954-1 Dual channel interlocks suitable for Cat. 3 or 4 systems
Approvals	CE marked for all applicable directives, cULus, BG and SUVA
Safety Contacts	2 N.C. or 3 N.C. direct opening action
Utilization Cat. AC (Ue) (Ie) DC	AC 15 500V 250V 100V 1A 2A 5A 250V 0.5A 24V 2A
Max Switched Current/ Voltage/Load	500V/500VA
Thermal Current (Ith)	10A
Minimum Current	5V 5mA DC
Safety Contact Gap	>2mm (0.08in)
Rtd. Insulation Voltage	(Ui) 500V
Rtd. Impulse withstand Voltage	(Uimp) 2500V
Auxiliary Contacts	1 N.O. (available with 2 N.C. safety contact)
Pollution Degree ①	3
Shaft Rotation to Achieve Contact Operation 3 N.C. 2 N.C., 1 N.O. (BBM) 2 N.C., 1 N.O. (MBB)	Adjustable 12° maximum; 3° minimum Adjustable 14° maximum; 5° minimum Adjustable 12° maximum; 3° minimum
Break Contact Min Force	8cNm (torque on shaft)
Case Material	UL approved glass filled polyester
Actuator Material	Stainless Steel
Protection	IP67
Conduit Entry	1 x M16 or connector style
Operating Temperature	-20°C to +80°C (-4°F to 176°F)
Fixing	2 x M4
Mounting	Any position
Mechanical Life	1,000,000 operations
Electrical Life	1,000,000 operations
Weight	100g (.22lb)
Colour	Red

① Conductive pollution occurs, or dry, non conductive pollution occurs which becomes conductive due to condensation.

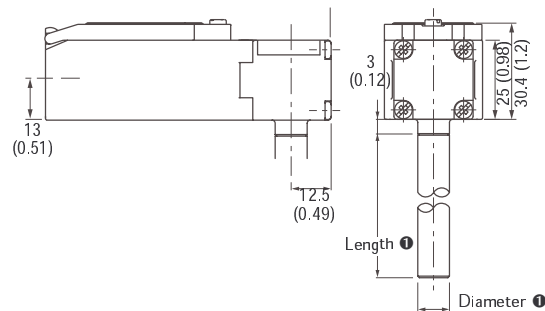
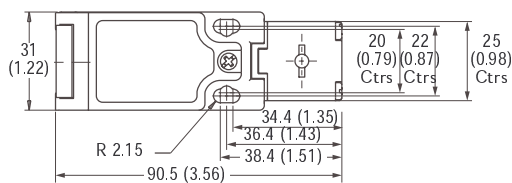


**Product Selection**

Safety Contacts	Auxiliary Contacts	BBM/MBB	Actuator Shaft Dimensions mm (inches)	Catalogue Number		
				M16 Conduit	M16 Conduit/ 1/2in Adaptor	Quick Disconnect
3 N.C.	—	—	80 x Ø10 (3.14 x 0.39)	440H-E22025	440H-E22050	440H-E22059
			60 x Ø8 (2.36 x 0.31)	440H-E22031	440H-E22051	440H-E22060
			50 x Ø10 (1.96 x 0.39)	440H-E22047	440H-E22052	440H-E22061
2 N.C.	1 N.C.	BBM	80 x Ø10 (3.14 x 0.39)	440H-E22027	440H-E22053	440H-E22037
			60 x Ø8 (2.36 x 0.31)	440H-E22033	440H-E22054	440H-E22039
			50 x Ø10 (1.96 x 0.39)	440H-E22048	440H-E22055	440H-E22062
		MBB	80 x Ø10 (3.14 x 0.39)	440H-E22029	440H-E22056	440H-E22038
			60 x Ø8 (2.36 x 0.31)	440H-E22035	440H-E22057	440H-E22040
			50 x Ø10 (1.96 x 0.39)	440H-E22049	440H-E22058	440H-E22063
Recommended standard cordset, 2m (6.5ft). See page 15-11 for additional lengths.						889R-F6ACA-2

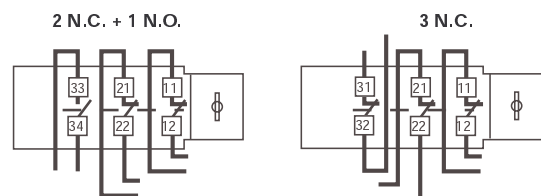
**Approximate Dimensions—mm (inches)**

*Dimensions are not intended to be used for installation purposes.*



1 See Product Selection for dimensions.

**Typical Wiring Diagrams**



Connector Pinout	2 N.C. + 1 N.O.		3 N.C.	
	Terminal	Contact	Terminal	Contact
	1	11	11	N.C.
	5	12	12	N.C.
	2	21	21	N.C.
	6	22	22	N.C.
	3	33	31	N.C.
	4	34	32	N.C.

**Contact Action**

□ Contact Open ■ Contact Closed  
 Shaft rotation

