

## Interlock Switches

# Non contact Switches

## Sentinel 1



### Description

The Sentinel 1 is an electro-magnetically coded standalone Non contact interlock. It operates without a safety relay while providing a highly coded system to help prevent defeat of the switch by simple magnets. Self-checking and monitoring functions are contained in the switching unit which also has LED status indication.

The Sentinel 1 has 1 N.O. and 1 N.C. output and is supplied pre-wired. A replaceable fuse for overload protection is easily accessed by removing the front of the switch with a security bit.

### Features

- Non contact actuation
- Electro-magnetic coding
- Standalone operation
- Plastic box style housing (IP65)
- Terminal connections

### Specifications

Standards	EN 954-1, ISO 13849-1, IEC/EN 60204-1, NFPA79, EN1088, ISO 14119, IEC60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 3 per EN954-1
Approvals	CE marked for all applicable directives
Power Supply	24V AC/DC, 48V AC, 110V AC, 230V AC
Power Consumption	< 2VA
Internal Fuses	Power 250mA replaceable N.C. Output 2A replaceable
Operating Distance	Make 7mm (0.28in) Break 10mm (0.39in)
Misalignment Tolerance	±5mm (0.2) make and break
Output Rating	B300, AC-15, 2A/250V AC P300, DC-13, 2A/250V DC
Minimum Switching Capability	10mA/10V
Indication LEDs	Green = Guard closed
Impulse Withstand Voltage	2500V
Operating Temperature	-25°C to +125° C (-13F to +257F)
Humidity	90% RH
Enclosure Protection	IP65 (NEMA 13)
Cable	0.75 sq. mm <sup>2</sup> (18 AWG) 2 wire PVC Jacket OD 7.5mm (.3in)
Case Material	Red reinforced ABS
Mounting	Any position M4 mounting security screws included
Weight (not including cable)	Sensor Actuator 120g (0.26lbs) 39g (0.09lbs)
Electrical Life	100,000 at rated load
Mechanical Life	1,000,000 at no load
Vibration	10-55Hz, 1mm displacement
Shock	8g, 11ms half-sine

**Product Selection**

Safety Contacts	Auxiliary Contacts	Power Supply	Connection	Catalogue Number
1 N.C.	1 N.O.	24V AC/DC	2m Cable	<b>440N-N15017</b>
			4m Cable	<b>440N-N15023</b>
			6m Cable	<b>440N-N15021</b>
			12m Cable	<b>440N-N15041</b>
		48V AC	2m Cable	<b>440N-N15028</b>
		110V AC	2m Cable	<b>440N-N15015</b>
			6m Cable	<b>440N-N15027</b>
		230V AC	2m Cable	<b>440N-N15013</b>
			4m Cable	<b>440N-N15024</b>
			12m Cable	<b>440N-N15040</b>

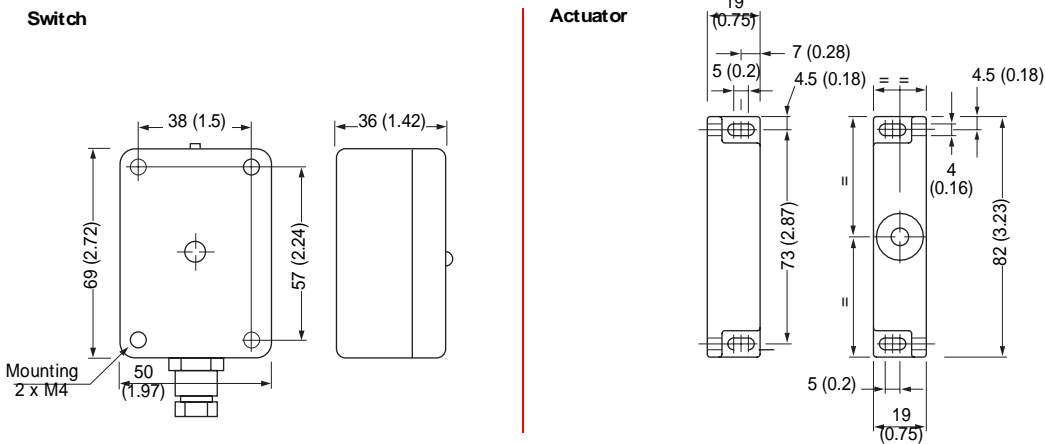
**Note:** Contacts are described with the guard door closed, that is, actuator in place. Switch is shipped complete with actuator.

**Accessories**

Description	Page Number	Catalogue Number
Replacement Actuator	—	<b>440N-A15005</b>
Replacement Fuse 2A	14-2	<b>440A-A09197</b>
Replacement Fuse 250mA	14-2	<b>440A-A09196</b>

**Approximate Dimensions—mm (inches)**

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



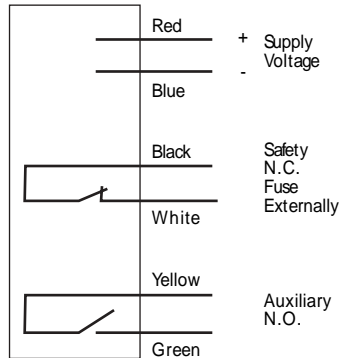
## Interlock Switches

# Non contact Switches

## Sentinel 1

### Typical Wiring Diagrams

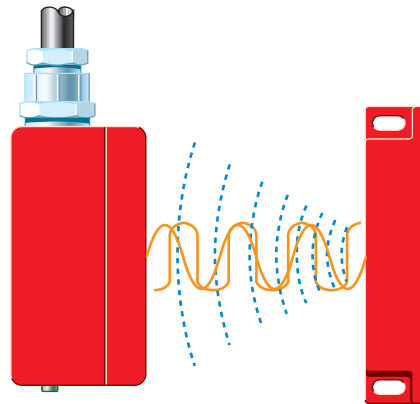
Sentinel 1 Sensor



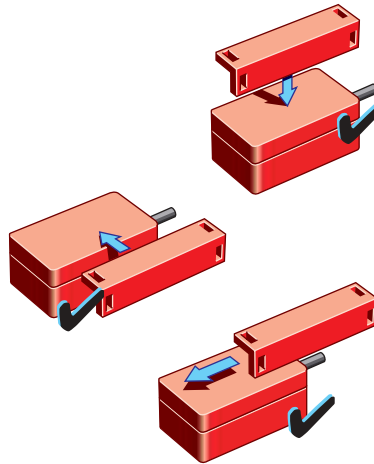
### Application Details

#### Operating Principle

On presenting the actuator to the switch, the high-intensity electromagnetic 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.

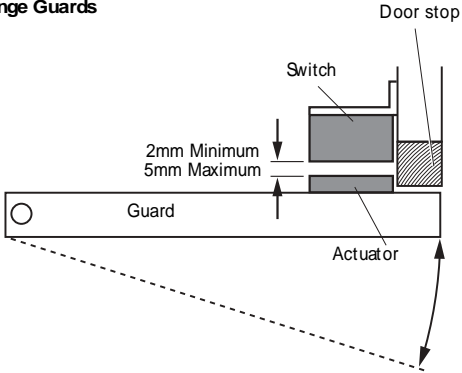


#### Actuator Approaches

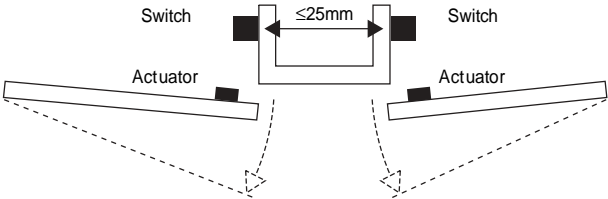


**Application Details—Installation Mounting**

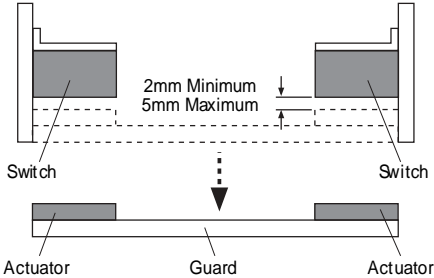
**Hinge Guards**



**Double Hinge Guards**



**Lift Off Guards**



**Sliding Guards**

