

# Interlock Switches

## Tongue Switches

### Cadet 3



### Description

The Cadet 3 is a tongue (or key) operated safety interlock switch designed to fit at the leading edge of sliding, hinged or lift-off guards. With its dual entry slots and rotatable head, the versatile Cadet 3 can offer up to eight different actuator entry options. The unique compact housing (90.5 x 31 x 30.4mm (3.56 x 1.22 x 1.19in)) has industry standard DIN 50047 fixing centres for ease of mounting.

Operation of the switch is achieved through the insertion of a specially profiled stainless steel key that is permanently mounted to the guard door. A semi-flexible key allows the Cadet 3 to be used on small radii doors (60mm or 2.36in).

Available with a variety of contact configurations, the Cadet 3 is sealed to IP67. A blanking plug is supplied for the unused key entry.

### Features

- Compact size
- Ideal for small, light weight guards
- Contacts, 2 N.C. + 1 N.O. or 3 N.C.
- Sealed to IP67
- Eight possible actuator entry points, easy to install
- Industry standard fixing centres to DIN 50047

### 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, TUV Nord
Safety Contacts	2 N.C. or 3 N.C. direct opening action
Designation/Utilization Cat.	A600/AC-15 (Ue) (Ie) N600/DC-13 (Ue) (Ie)
	600V 500V 240V 120V 1.2A 1.4A 3A 6A 600V 500V 250V 125V 0.4A 0.55A 1.1A 2.2A
Thermal Current (Ith)	10A
Min Current	5V 5mA DC
Typical Contact Resistance	5mΩ
Rtd. Insulation Voltage	(Ui) 500V
Rtd. Impulse Withstand Volt.	(Uimp) 2500V
Auxiliary Contacts	1 N.O.
Pollution Degree ①	3
Actuator Travel for Positive Opening	5mm (0.098in)
Min Operating Radius	150mm (5.905in) (60mm (2.36in) with GD2 kit)
Break Contact Min Force	15N (3.38pd)
Max Actuation Speed	160mm (6.299) per sec
Max Actuation Frequency	2 Cycle per sec
Case Material	UL approved glass filled polyester
Actuator Material	Stainless Steel
Protection	IP67
Conduit Entry	1 x M16 or quick-disconnect 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	80g (0.176lbs)
Colour	Red


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

### Applications






**Note:** Lift-off guards require good alignment when using tongue actuated interlock switches.  
**IMPORTANT:** It must not be possible to lift the guard without actuating the interlock. An interlock on either side may be required.

**Product Selection**

Safety Contacts	Auxiliary Contacts	BBM/MBB	Actuator	Catalogue Number		
				M16 Conduit	M16 Conduit/ 1/2in Adaptor	Quick Disconnect
3 N.C.	—	—	Flat	440K-C21096	440K-C21048	440K-C21090
			90°	440K-C21097	440K-C21057	440K-C21091
			GD2 Metal Alignment Guide with Semi-Flex Actuator	—	440K-C21062	440K-C21092
			—	440K-C21070	—	—
2 N.C.	1 N.O.	BBM	Flat	440K-C21098	440K-C21050	440K-C21054
			90°	440K-C21061	440K-C21058	440K-C21067
			GD2 Metal Alignment Guide with Semi-Flex Actuator	—	440K-C21074	440K-C21088
			—	440K-C21055	—	—
		MBB	Flat	440K-C21052	440K-C21093	440K-C21060
			90°	440K-C21065	440K-C21094	440K-C21068
			GD2 Metal Alignment Guide with Semi-Flex Actuator	—	440K-C21095	440K-C21089
			—	440K-C21080	—	—
		Recommended mating cable, 2m (6.5ft). See page 15-11 for details and additional lengths.				889R-F6ACA-2

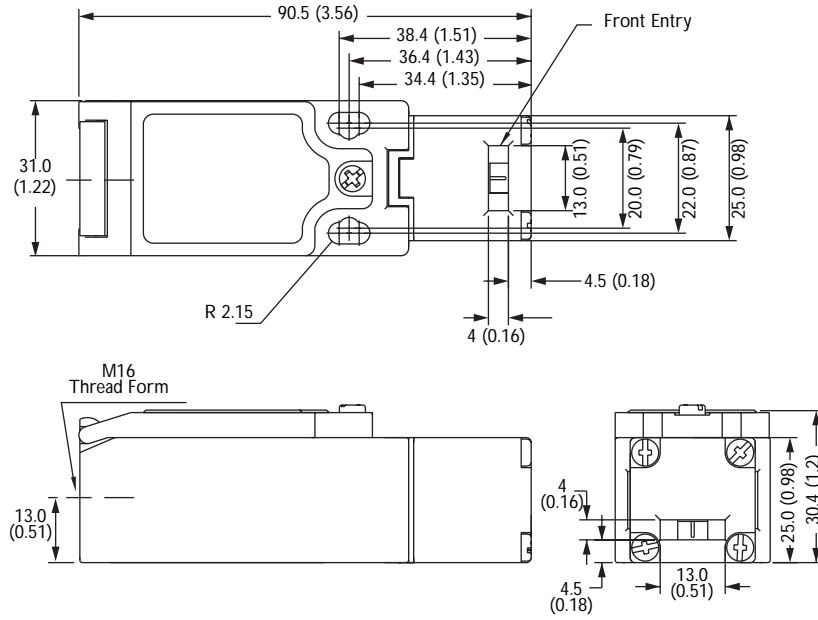
**Accessories**

Description	For Dimensions See Page	Catalogue Number	
	Flat Actuator	14-6	440K-A21014
	90° Actuator	14-6	440K-A21006
	GD2 Metal Alignment Guide with Semi-Flexible Actuator	14-6	440K-A21030

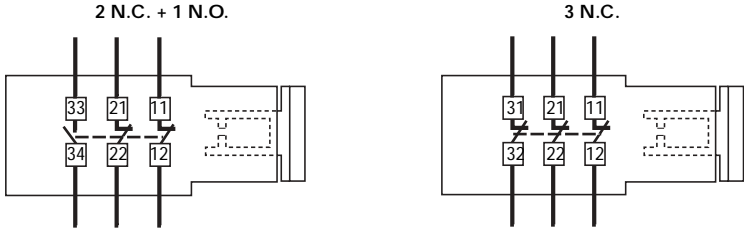
Interlock Switches  
**Tongue Switches**  
**Cadet 3**

**Approximate Dimensions—mm (inches)**

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



Typical Wiring Diagrams (shown with guard closed, actuator inserted)



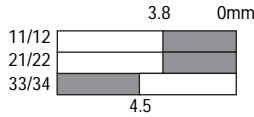
Connector Pinout		2 N.C. + 1 N.O.		3 N.C.	
		Terminal	Contact	Terminal	Contact
	1	11	N.C.	11	N.C.
	5	12	N.C.	12	N.C.
	2	21	N.C.	21	N.C.
	6	22	N.C.	22	N.C.
	3	33	N.O.	31	N.C.
	4	34	N.O.	32	N.C.

**Contact Action**

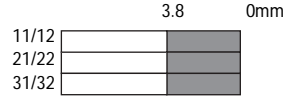
□ Contact Open ■ Contact Closed

Actuator withdrawal distance from full insertion

**2 N.C. + 1 N.O. (BBM)**



**3 N.C.**



**2 N.C. + 1 N.O. (MBB)**

