

# Interlock Switches

## Guard Locking Switches

### Spartan



### Description

The Spartan is a positive mode, tongue operated guard locking interlock switch that locks a machine guard closed until power is isolated and ensures that it remains isolated while the guard is open. It is available in two contact configurations: two safety (N.C.) contacts and one auxiliary (N.O.) contact or three safety (N.C.) contacts. The Spartan head has two entry slots and it can be rotated to provide four actuator entry points. A blanking plug is provided to seal the unused slot.

The guard may only be opened when a signal is applied to the Spartan's internal solenoid which releases the lock mechanism. Therefore the Spartan is ideal for machines which do not stop immediately or where premature interruption of the machine could cause damage to tooling and components or cause an additional hazard.

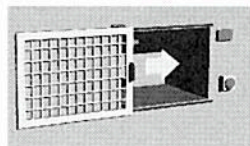
The locking mechanism withstands forces up to of 1200N (270lbs.) and an LED provides visual indication of switch status.

A catch kit with actuator alignment is also supplied to relieve stress on the locking solenoid and to protect the unit from actuator damage due to poor guard alignment. Manual release points with security screws or special key allow the locked Spartan to be released in the event of total power failure on a machine.

### Features

- Power to release
- Lid mounted status indication
- High locking force—1200N (270lbs.)
- 2 N.C. & 1 N.O. or 3 N.C.
- Rotatable head: 4 possible key entry slots

### Typical 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.


### 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 and TUV Nord
Safety Contact	2 N.C. or 3 N.C. direct opening action
Utilization Cat.	AC 15 AC (Ue) 500V 250V 100V (Ie) 1A 2A 5A DC 250V/0.5A24V/2A
Maximum Switched Current/Volt/Load	500V/500VA
Thermal Current (Ith)	10A
Min Current	5V 5mA DC
Safety Contact Gap	>2mm
Rtd. Insulation Voltage	500V
Rtd. Impulse withstand Volt	2500V
Auxiliary Contacts	1 N.O.
Pollution Degree ①	3
Max Actuation Speed	160mm/second (6.3 in/sec)
Max Actuation Frequency	1 cycle/second
Case Material	UL Approved glass filled polyester
Actuator Material	Stainless steel
Protection	IP 67
Conduit Entry	1 x M20 or quick disconnect style
Operating Temperature	-20°C to 60°C (-4°F to +140°F)
Fixing	2 x M5
Mounting	Any position
Mechanical Life	1,000,000 operations
Electrical Life	1,000,000 operations
Weight	260g (0.57 lb)
Colour	Red
Max Holding Force	1200N (270lbs)
Min Operating Radius	175mm (6.9in)
LED Indication	Solenoid monitor LED
Power Supply	24V AC/DC, 110V AC, 230V AC (solenoid)
Solenoid Power	Typically 7W 100% ED



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

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**Product Selection**

Actuator	Solenoid Voltage	Contacts		Catalogue Number		
		Safety	Aux.	M20 Conduit	M20 Conduit/ 1/2in Adaptor	Quick Disconnect
Standard	24 V AC/DC	2 N.C.	1 N.O.	440G-S36001	440G-S36044	440G-S36058
		3 N.C.	—	440G-S36007	440G-S36047	440G-S36059
	110 V AC/DC	2 N.C.	1 N.O.	440G-S36003	440G-S36045	440G-S36060
		3 N.C.	--	440G-S36009	440G-S36048	440G-S36061
	230V AC/DC	2 N.C.	1 N.O.	440G-S36005	440G-S36046	440G-S36062
		3 N.C.	—	440G-S36011	440G-S36049	440G-S36063
 Mating cable 2m (6.5ft). See page 15-13 for details and additional lengths.					889M-F12X9AE-2	

**Accessories**

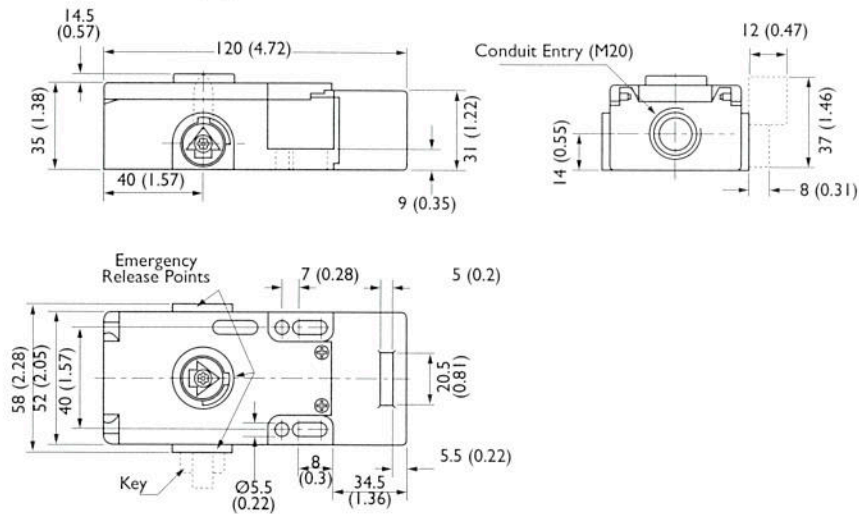
Description	For Dimensions refer to page	Catalogue Number
 Replacement Actuator with Catch Retainer and Guide	14-4	440G-A36050
 Emergency Override	14-4	440G-A36026

3-Interlock Switches

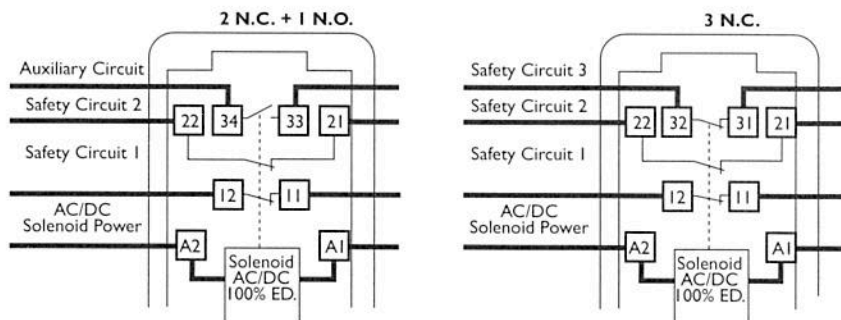
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## Approximate Dimensions—mm (inches)

Dimensions are not intended to be used for installation purposes.



## Typical Wiring Diagrams



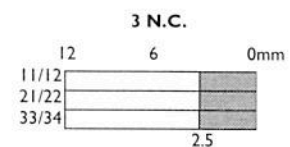
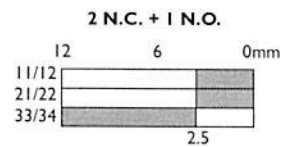
3-Interlock Switches

Connector Pinout	2 N.C. + 1 N.O.		3 N.C.	
	Terminal	Contact	Terminal	Contact
	1	A1	A1	Solenoid Power
	3	A2	A2	Solenoid Power
	4	11	11	N.C.
	6	12	12	N.C.
	7	21	21	N.C.
	8	22	22	N.C.
	9	33	31	N.C.
	10	34	32	N.C.

### Contact Action

Contact Open  Contact Closed

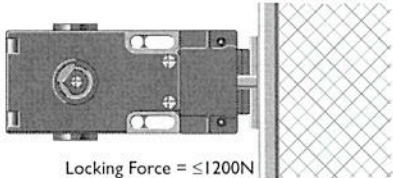
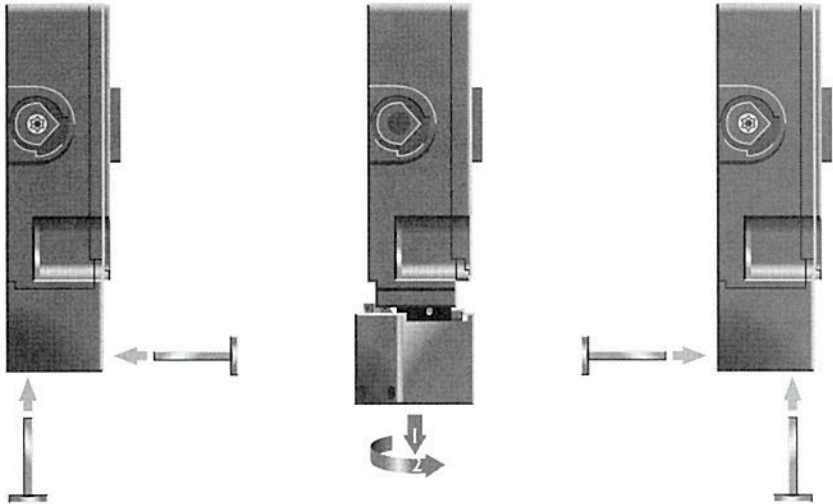
Actuator withdrawal distance from full insertion





Application Details

4 possible actuator entry positions



3-Interlock Switches