

440P Safety Limit Switches

22 mm Compact Metal Position Switches



Description

The 22 mm IEC-style metal safety limit switches have been developed to provide a small metal case with a choice of actuator heads.

Features

- Rugged die-cast enclosure
- Positive operation, forced disconnection of contacts (direct-opening action)
- Snap-acting contact actuation
- Contacts 1 N.C. + 1 N.O. or 2 N.C.
- Pre-wired 2 m (6.5 ft) cable with bottom or side out exit; 4-pin or 5-pin male micro M12 connector attached to a 152 mm (6 in.) pigtail

ATTENTION



For safety applications it is important that upon actuation, the guard or other moving objects should not pass completely over the switch and allow the plunger or lever to return to its original position.

Specifications

Safety Ratings						
Standards	EN 954-1, ISO 13849-1, IEC/EN 60204-1, NFPA 79, EN 1088, ISO 14119, IEC/EN 60947-5-1, ANSI B11.19, AS 4024.1					
Safety Classification	Cat.1 Device per EN 954-1 Dual channel limit switch suitable for Cat. 3 or 4 systems when ganged together					
Certifications	UL Listed, TÜV and CE Marked for all applicable directives					
Outputs						
Safety Contacts ★	1 N.C. snap-acting, 2 N.C. slow-acting					
Auxiliary Contacts	1 N.O. snap-acting					
Thermal Current <i>I</i> _{th}	10 A					
Rated Insulation Voltage	300V AC					
Contact Rating						
Maximum AC Contact Rating Per Pole‡						
NEMA Rating Designation	Max. Voltage	Amperes		Continuous Carrying Current [A]	Volt Amperes	
		Make	Break		Make	Break
AC15/B300	120	30	3.0	5	3600	360
	240	15	1.5			
Maximum DC Contact Rating Per Pole‡						
DC13/Q300	240	0.27	0.27	2.5	69	69
Operating Characteristics						
Actuation Speed, Max.	250 mm/s					
Actuation Speed, Min.	100 mm/min.					
Actuation Frequency, Max.	6000 ops/hr					
Mechanical Life	1 x 10 ⁷ operations with no electrical load					
Environmental						
Enclosure Type Rating	Type 1, IP65, IP66, IP67, and IP69K (preleaded versions)					
Operating Temperature [C (F)]	2...+70° (35.6...+158°)					
Pollution Degree	3					
Physical Characteristics						
Housing Material	Die-cast alloy					
Actuator Material	Various polymers and metals					
Mounting	2 x M4, any position					
Vibration	IEC 68-2-6 (10...55 Hz, 0.35 mm amplitude)					
Shock	IEC 68-2-7 (30 Gn 3 pulses per axis)					
Connection	2 m (6.5 ft) cable or micro quick disconnect on a 6 in. pigtail					
Color	Red body/black head					

★ The safety contacts are described as normally closed (N.C.) i.e., with the guard closed, actuator in place (where relevant) and the machine able to be started.

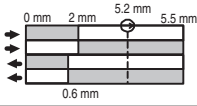
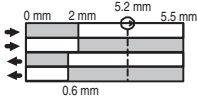
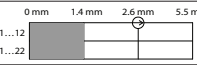
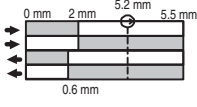
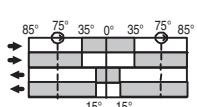
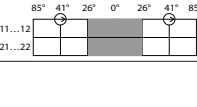
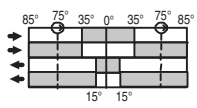
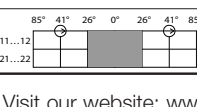
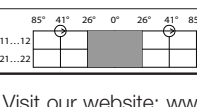
‡ Maximum for:

4-pin Male Micro M12 Connectors (D4 suffix)	
AC	DC
30V, 3 A	30V, 3 A
5-pin Male Micro M12 Connectors (D5 suffix)	
AC	DC
60V, 3 A	60V, 3 A



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Product Selection

Operator Type	Contact			Max Force/ Torque to Operate	Contact Opening Characteristics □ Open ■ Closed ⊖ Positive Opening Point	Cat. No.			
	Safety	Aux.	Type			2 m (6.5 ft) Bottom Cable Style	2 m (6.5 ft) Side Cable Style	4-pin Micro QD Style	5-pin Micro QD Style
	1 N.C.	1 N.O.	Snap Acting	10 N (2.25 lb)		440P-ARPS11C	440P-ARPS11CS	440P-ARPS11D4	440P-ARPS11D5
Roller Plunger	2 N.C.	—	—			440P-ARPB02C	440P-ARPB02CS	440P-ARPB02D4	440P-ARPB02D5
	1 N.C.	1 N.O.	Snap Acting			440P-ARP1S11C	440P-ARP1S11CS	—	440P-ARP1S11D5
Roller Plunger Panel Mount	1 N.C.	1 N.O.	Snap Acting			440P-ADPS11C	440P-ADPS11CS	440P-ADPS11D4	440P-ADPS11D5
	1 N.C.	1 N.O.	Snap Acting			440P-ADPB02C	440P-ADPB02CS	440P-ADPB02D4	440P-ADPB02D5
Dome Plunger	2 N.C.	—	—			440P-ADP1S11C	440P-ADP1S11CS	—	440P-ADP1S11D5
	1 N.C.	1 N.O.	Snap Acting	10 N (2.25 lb)		440P-ACRS11C	440P-ACRS11CS	440P-ACRS11D4	440P-ACRS11D5
Dome Plunger Panel Mount	1 N.C.	1 N.O.	Snap Acting			440P-ACR1S11C	440P-ACR1S11CS	—	440P-ACR1S11D5
	1 N.C.	1 N.O.	Snap Acting			440P-AWLS11C	440P-AWLS11CS	440P-AWLS11D4	440P-AWLS11D5
Cross Roller Plunger	1 N.C.	1 N.O.	Snap Acting			440P-ASLS11C	440P-ASLS11CS	440P-ASLS11D4	440P-ASLS11D5
	1 N.C.	1 N.O.	Snap Acting			440P-ASLB02C	440P-ASLB02CS	440P-ASLB02D4	440P-ASLB02D5
Cross Roller Plunger Panel Mount	2 N.C.	—	—			440P-AALS11C	440P-AALS11CS	440P-AALS11D4	440P-AALS11D5
	1 N.C.	1 N.O.	Snap Acting	0.2 N•m (1.77 lb•in)		440P-AA1LS11C	440P-AA1LS11CS	440P-AA1LS11D4	440P-AA1LS11D5
Short Lever Wide Roller	1 N.C.	1 N.O.	Snap Acting			440P-AA1LB02C	440P-AA1LB02CS	440P-AA1LB02D4	440P-AA1LB02D5
	1 N.C.	1 N.O.	Snap Acting						
Short Lever Nylon Roller	2 N.C.	—	—						
	1 N.C.	1 N.O.	Snap Acting						
Adj. Lever Nylon Roller	2 N.C.	—	—						
	1 N.C.	1 N.O.	Snap Acting	0.2 N•m (1.77 lb•in)					
Adj. Lever Metal Roller	2 N.C.	—	—						



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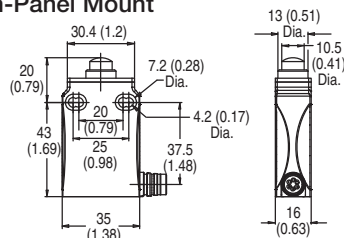
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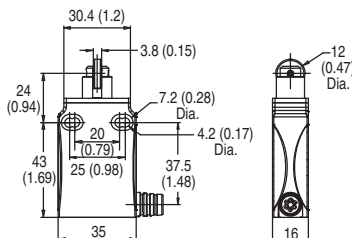
Approximate Dimensions—mm (inches)

Dimensions are not intended to be used for installation purposes.

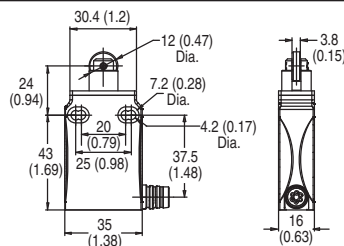
Non-Panel Mount



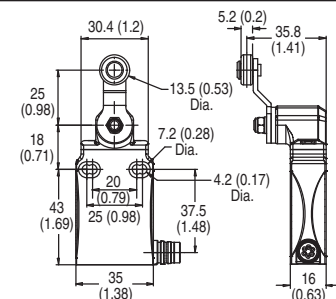
Dome Plunger



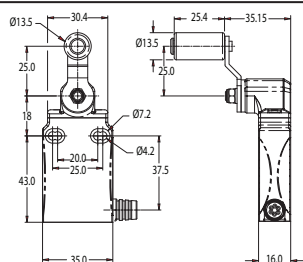
Cross Roller Plunger



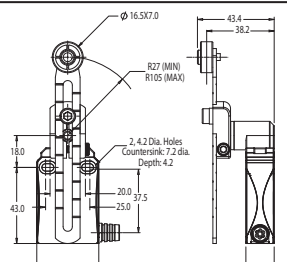
Roller Plunger



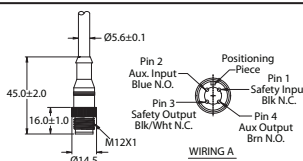
Lever Type



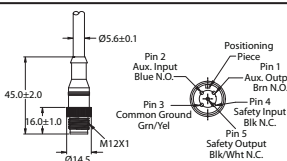
Wide Roller Plunger



Adjustable Lever Type



4-pin Micro Quick Disconnect

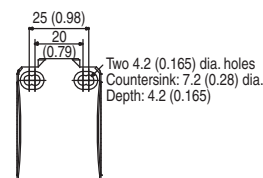


5-pin Micro Quick Disconnect

Note: Only non-panel mount pre-leaded side out models shown. Body dimensions for panel mount models as well as pre-leaded bottom out and 4-pin/5-pin micro connector mounted on a 6 in. pigtail models are identical. For other dimension drawings, refer to Installation and Operating Instructions.

- Side cable style shows strain relief only. Units include a 2 m integral cable.
- Bottom cable style units have same dimensions as side cable style.
- Panel mount clearance hole = 13 mm (0.51 in.)

Counter Sinkhole



Typical Wiring Diagrams

