

440P Safety Limit Switches

22mm Plastic Position Switches



Description

The 22 mm plastic safety limit switches conform to EN 50047 and have been developed to provide a range of options including a choice of snap acting, slow break/make with 2- or 3-circuit configurations and a choice of actuator heads. The distance between the mounting holes is 22 mm.

The operator heads can be rotated in 90° increments for easy mounting.

Allen-Bradley Guardmaster limit switches can be used in other applications other than guard doors, for example on moving machine beds, crane arms, lifts, elevators, etc.

Operation of these limit switches is achieved by the sliding action of the guard or other moving object deflecting the plunger or lever.

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	cULus, TÜV, CCC and CE Marked for all applicable directives			
Safety Contacts	1 N.C. snap acting, 2 N.C., 3 N.C. or 4 N.C. slow acting			
Auxiliary Contacts	1 N.O. (with 2 N.C.)			
Designation/Utilization Cat.	Contact Specifications^⓪			
A600/AC-15	(Ue)	600 V	500 V	240 V 120 V
	(Ie)	1.2 A	1.4 A	3 A 6 A
Q600/DC-13	(Ue)	600 V	500 V	250 V 125 V
	(Ie)	0.4 A	0.55 A	1.1 A 2.2 A
Thermal Current (Ith)	10 A			
Rated Insulation Voltage	600 V AC			
Rated Impulse withstand Volt	2500 V			
Travel for Positive Opening	Various (see Product Selection table)			
Max Switching Speed	250 mm/s			
Min Switching Speed	100 mm/min			
Max Switching Frequency	6000 operation per hour			
Case Material	UL approved glass-filled polybutylene terephthalate			
Roller Material	Various polymers			
Enclosure Protection	IP 66			
Operating Temperature [C (F)]	-25...+65° (-13...+149°)			
Pollution Degree	3			
Mechanical Life Expectancy	1 x 10 ⁷ operations with no electrical load			
Conduit Entry	M20 or 1/2 inch NPT			
Fixing	2 x M4			
Mounting	Any position			
Color	Red			

^⓪ Maximum for:

Two-Circuit D4 4-Pin Micro Connector	
AC	DC
250V, 2.5 A	250V, 2.5 A
Three-Circuit R6 6-Pin Micro Connector	
AC	DC
30V, 2 A	30V, 2 A

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.

Features

- Large selection of actuator heads
- Positive operation, forced disconnection of contacts
- Snap-acting, slow make before break or slow break before make contact blocks
- Contacts 1 N.C. + 1 N.O., 2 N.C. + 1 N.O. 3 N.C., 2 N.C. + 1 N.O.
- Conforms to EN 50047, EN 1088, EN 60947-5-1, EN 292 and EN 60204-1

Safety Limit Switches






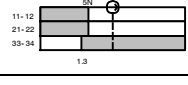


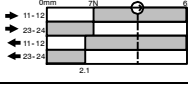
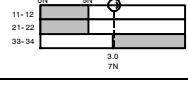
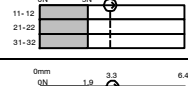
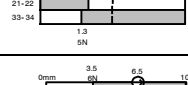


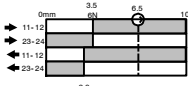
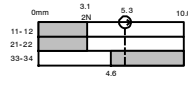
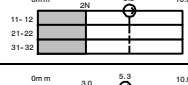
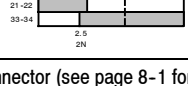
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Product Selection

Operator Type	Contact		Contact Type	Typical Force/Torque to Operate	Contact Opening Characteristics □ Open ■ Closed ● Positive Opening Point	Cat. No.		
	Safety	Aux.				1/2 inch NPT Conduit	M20 Conduit	Quick Disconnect ①
 Roller Plunger 	1 N.C.	1 N.O.	Snap Acting	5 N		440P-CRPS11E	440P-CRPS11B	440P-CRPS11D4
	2 N.C.	1 N.O.	BBM	6 N		440P-CRPB12E	440P-CRPB12B	440P-CRPB12R6
	3 N.C.	—	—	5 N		440P-CRPB03E	440P-CRPB03B	440P-CRPB03R6
	2 N.C.	1 N.O.	MBB	6 N		440P-CRPM12E	440P-CRPM12B	440P-CRPM12R6
 Dome Plunger 	1 N.C.	1 N.O.	Snap Acting	5 N		440P-CDPS11E	440P-CDPS11B	440P-CDPS11D4
	2 N.C.	1 N.O.	BBM	6 N		440P-CDPB12E	440P-CDPB12B	440P-CDPB12R6
	3 N.C.	—	—	5 N		440P-CDPB03E	440P-CDPB03B	440P-CDPB03R6
	2 N.C.	1 N.O.	MBB	6 N		440P-CDPM12E	440P-CDPM12B	440P-CDPM12R6
 Hinge Lever 	1 N.C.	1 N.O.	Snap Acting	5 N		440P-CHLS11E	440P-CHLS11B	440P-CHLS11D4
	2 N.C.	1 N.O.	BBM	6 N		440P-CHLB12E	440P-CHLB12B	440P-CHLB12R6
	3 N.C.	—	—	5 N		440P-CHLB03E	440P-CHLB03B	440P-CHLB03R6
	2 N.C.	1 N.O.	MBB	6 N		440P-CHLM12E	440P-CHLM12B	440P-CHLM12R6
Recommended standard cordset, 2 m, 4-pin, DC micro (M12) connector (see page 8-1 for additional lengths).								889D-F4AC-2
Recommended standard cordset, 2 m, 6-pin AC micro connector (see page 8-1 for additional lengths).								889R-F6ECA-2


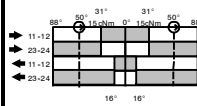
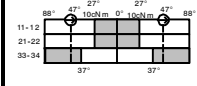
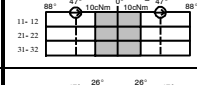
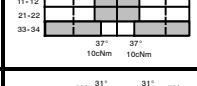

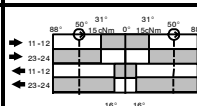
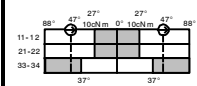
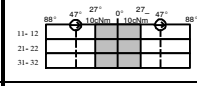
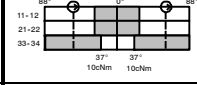

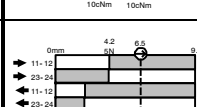
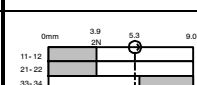
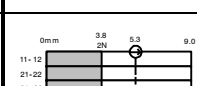
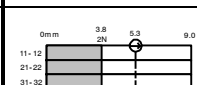
① D4 suffix uses a 4-pin DC micro (M12) connector.
R6 suffix uses a 6-pin AC micro (dual keyway) connector.

Limit Switches

440P Safety Limit Switches


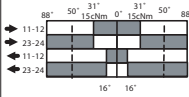
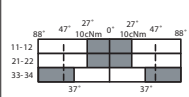
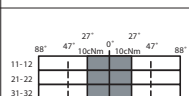
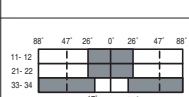

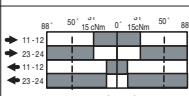
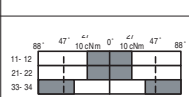
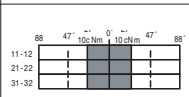

22mm Plastic Position Switches

Product Selection (continued)

Operator Type	Contact		Contact Type	Typical Force/ Torque to Operate	Contact Opening Characteristics □ Open ■ Closed ⊙ Positive Opening Point	Cat. No.		
	Safety	Aux.				1/2 inch NPT Conduit	M20 Conduit	Quick Disconnect ①
 Short Lever	1 N.C.	1 N.O.	Snap Acting	0.15 N•m		440P-CSLS11E	440P-CSLS11B	440P-CSLS11D4
	2 N.C.	1 N.O.	BBM	0.14 N•m		440P-CSLB12E	440P-CSLB12B	440P-CSLB12R6
	3 N.C.	—	—	0.14 N•m		440P-CSLB03E	440P-CSLB03B	440P-CSLB03R6
	2 N.C.	1 N.O.	MBB	0.14 N•m		440P-CSLM12E	440P-CSLM12B	440P-CSLM12R6
 Short Lever Metal Roller	1 N.C.	1 N.O.	Snap Acting	0.15 N•m		440P-CMHS11E	440P-CMHS11B	440P-CMHS11D4
	2 N.C.	1 N.O.	BBM	0.14 N•m		440P-CMHB12E	440P-CMHB12B	440P-CMHB12R6
	3 N.C.	—	—	0.14 N•m		440P-CMHB03E	440P-CMHB03B	440P-CMHB03R6
	2 N.C.	1 N.O.	MBB	0.14 N•m		440P-CMHM12E	440P-CMHM12B	440P-CMHM12R6
 Offset Hinge	1 N.C.	1 N.O.	Snap Acting	5 N		440P-COHS11E	440P-COHS11B	440P-COHS11D4
	2 N.C.	1 N.O.	BBM	6 N		440P-COHB12E	440P-COHB12B	440P-COHB12R6
	3 N.C.	—	—	5 N		440P-COHB03E	440P-COHB03B	440P-COHB03R6
	2 N.C.	1 N.O.	MBB	6 N		440P-COHM12E	440P-COHM12B	440P-COHM12R6
Recommended standard cordset, 2 m, 4-pin, DC micro (M12) connector (see page 8-1 for additional lengths)								889D-F4AC-2
Recommended standard cordset, 2 m, 6-pin AC micro connector (see page 8-1 for additional lengths)								889R-F6ECA-2

① D4 suffix uses a 4-pin DC micro (M12) connector.
R6 suffix uses a 6-pin AC micro (dual keyway) connector.

Product Selection (continued)

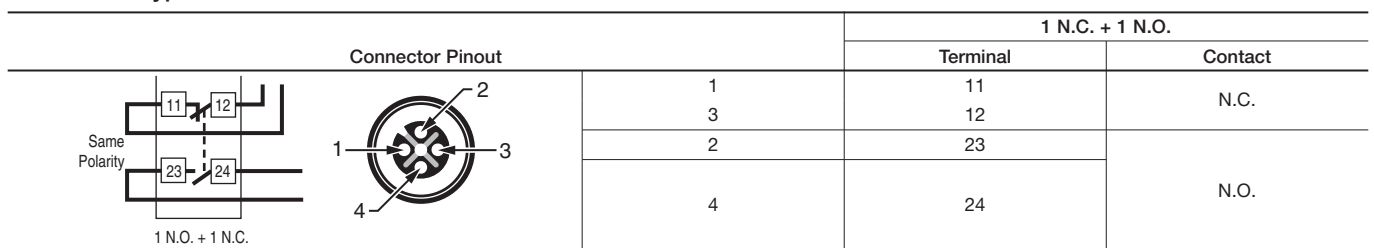
Description	Contact			Typical Force/Torque to Operate	Contact Opening Characteristics <input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed ⊕ Positive Opening Point	Cat. No.		
	Safety	Auxiliary	Type			1/2 inch NPT Conduit	M20 Conduit	Connector Style★
 Adjustable Lever ‡	1 N.C.	1 N.O.	Snap acting	0.15 N•m		440P-CALS11E	440P-CALS11B	440P-CALS11D4
	2 N.C.	1 N.O.	BBM	0.14 N•m		440P-CALB12E	440P-CALB12B	440P-CALB12R6
	3 N.C.	—	—	0.14 N•m		440P-CALB03E	440P-CALB03B	440P-CALB03R6
	2 N.C.	1 N.O.	MBB	0.14 N•m		440P-CALM12E	440P-CALM12B	440P-CALM12R6
 Rubber Roller ‡	1 N.C.	1 N.O.	Snap acting	0.15 N•m		440P-CRRS11E	440P-CRRS11B	440P-CRRS11D4
	2 N.C.	1 N.O.	BBM	0.14 N•m		440P-CRRB12E	440P-CRRB12B	440P-CRRB12R6
	3 N.C.	—	—	0.14 N•m		440P-CRRB03E	440P-CRRB03B	440P-CRRB03R6
	2 N.C.	1 N.O.	MBB	0.14 N•m		440P-CRRM12E	440P-CRRM12B	440P-CRRM12R6
Recommended standard cordset, 2 m, 4-pin, DC Micro (M12) connector.								889D-F4AC-2
Recommended standard cordset, 2 m, 6-pin, AC Micro (M12) connector.								889R-F6ACA-2

★ D4 suffix uses a 4-pin DC Micro (M12) connector and R6 suffix uses a 6-pin AC Micro (dual keyway) consumer.

‡ Not positive opening

Typical Wiring Diagrams §

Two-Circuit Type D4 4-Pin Micro Connector



§ See Product Selection tables for positive opening circuits.

Connector Ratings

	Max. Ratings		Applicable Standards
	AC	DC	
4-Pin Micro (M12)	250V, 2.5 A	250V, 2.5 A	IEC 61076-2-101:2003
6-Pin Micro (M12)	30V, 2 A	30V, 2 A	

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Typical Wiring Diagrams (continued) ①

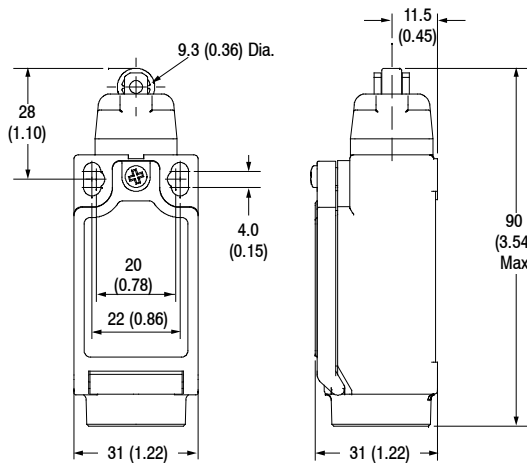
Three-Circuit Type R6 6-Pin Micro Connector

Same Polarity	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.

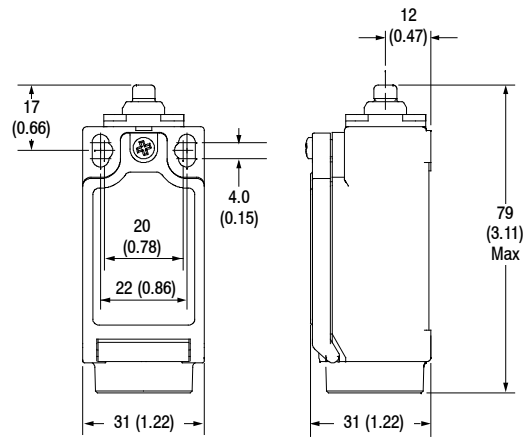
① See Product Selection tables for positive opening points.

Approximate Dimensions [mm (in.)]

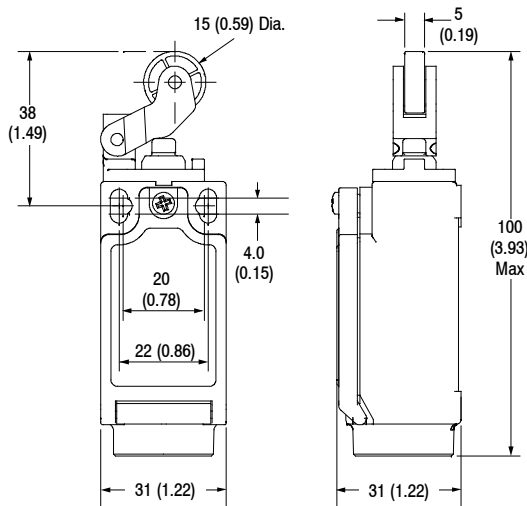
Dimensions are not intended to be used for installation purposes.



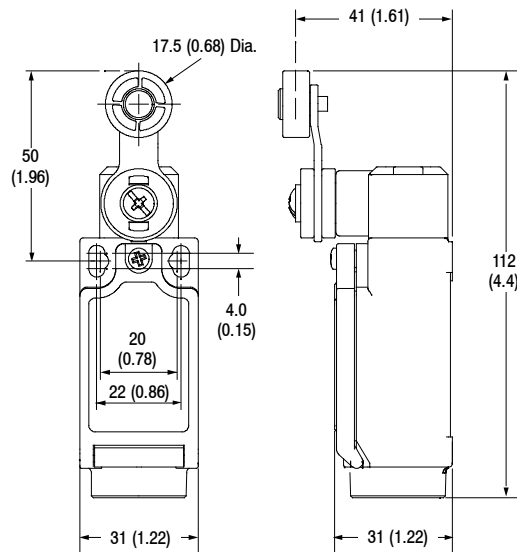
Roller Plunger



Dome Plunger



Hinge Lever



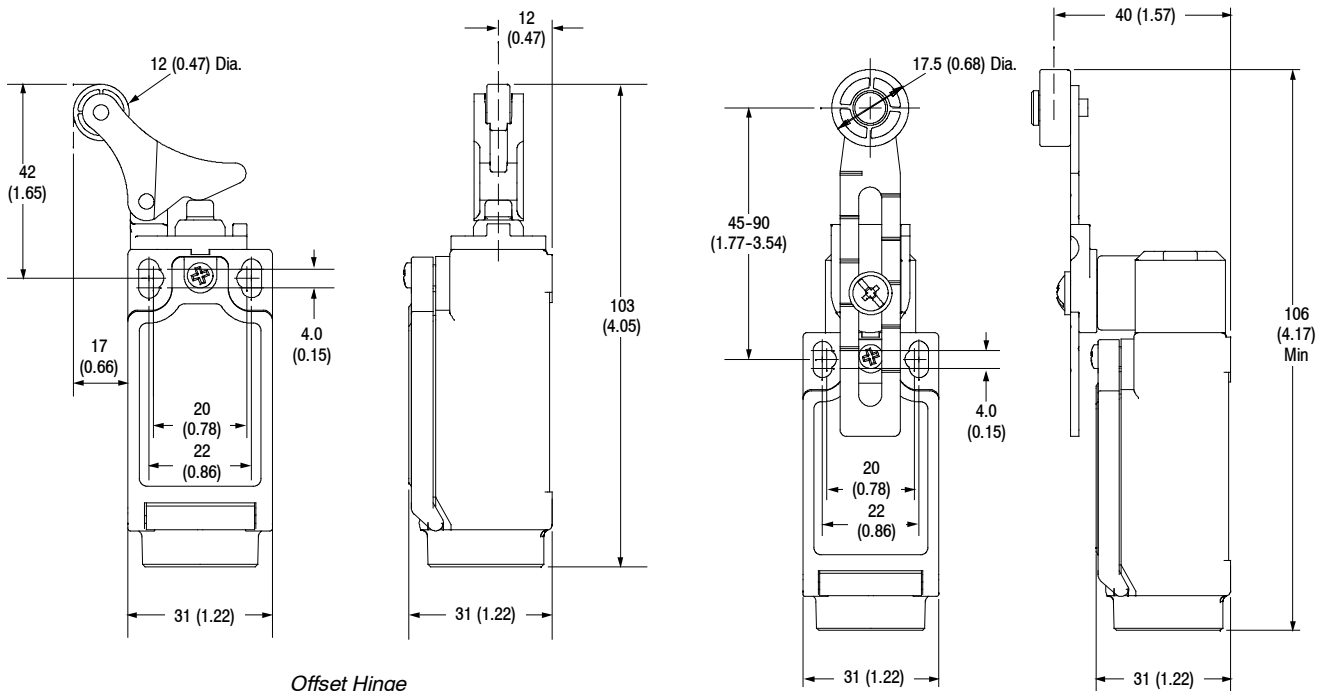
Short Lever
(Metal & Plastic Roller)

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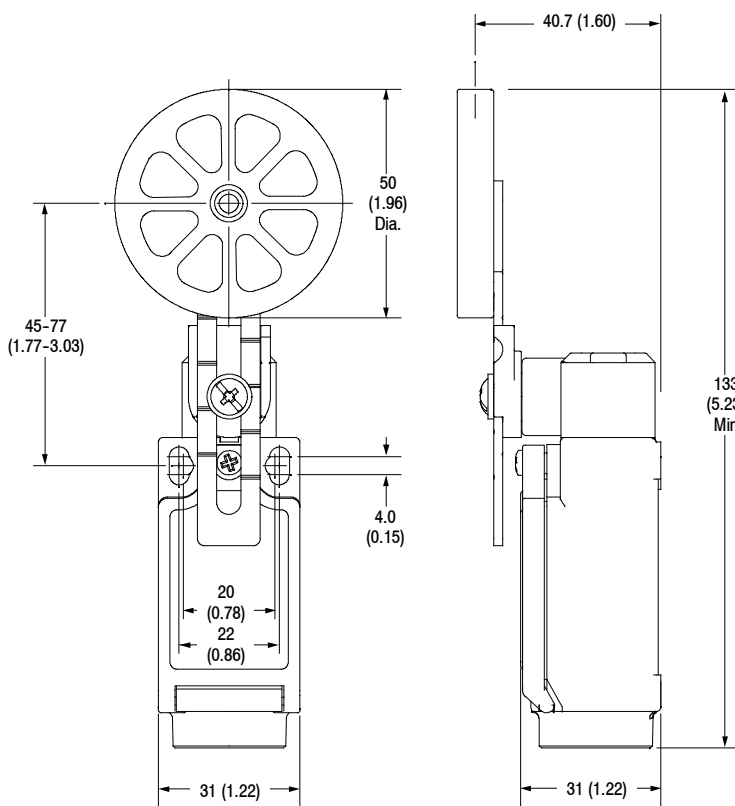
Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.



Offset Hinge

Adjustable Lever



Rubber Roller