Contents

Quick Selection Guide

Specifications	 **801** **General Purpose**	 **802G** **Gravity Return**	 **802M and 802MC** **Pre-Wired Factory Sealed**	 **802R** **Sealed Contact**
Description	• General purpose limit switch for a wide variety of applications	• Plug-in gravity return switch • Designed for conveyor-type operations with small or lightweight objects	• Compact, prewired switch • Factory sealed to meet the requirements of demanding applications, wet or dry	• Similar construction to the 802T nonplug-In • Glass hermetically sealed reed switch (used as the switching element to provide high contact reliability)
Features	• Mounting option; surface	• Mounting options: surface, manifold	• Cable entry and wire strands (epoxy sealed to protect against fluids entering or wicking into the switch) • Mounting options: surface.	• Enclosure: gasketed, transparent plastic cover • Allows inspection of terminals without removing the cover • Mounting option: surface
Contact Rating	• NEMA A600	• NEMA B600	• 2-circuit: NEMA A600 4-circuit: NEMA B300	• NEMA B600
Temperature Rating	• -0…40°C (32…104°F)	• 0…110°C (32…230°F)	• 0…80°C (32…176°F)	• -29…121°C (-20…250°F)
Actuators	• Lever, maintained	• Three adjustable rod levers	• Lever, maintained • Top and side push (with or without rollers)	• Lever • Low operating force • Top and side push (with or without rollers) • Cat whisker • Wobble stick
Enclosure	• NEMA Type 1, Type 4 or Type 7 and 9	• NEMA Type 1	• NEMA Types 1, 4, 4X, 6P and 13; IP67 (IEC529)	• NEMA Types 13
Additional Info	• See page 5-9	• See page 5-13	• See page 5-15	• See page 5-34

Quick Selection Guide

 **802T** **Plug-In Style**	 **802T** **Low Energy**	 **802T** **NonPlug-In Style**	 **802X** **Watertight or Hazardous Location**	 **802XR** **Sealed Contact Hazardous Location**
• Plug-in construction provides quick and easy installation • New front-mounting design and method of mode change in head make it easy to apply	• Similar body style to standard 802T plug-in limit switches • Direct connection to PLCs and other low energy circuits	• Ideal for applications which require heavy-duty pilot ratings • High degree of versatility and a rugged, oiltight construction	• NEMA Types 7 and 9 • Designed for hazardous locations only • Class I, Groups B, C, D Class II, Groups E, F and G, Class III	• Designed for hazardous locations • Contains sealed glass contact switch for greater contact reliability
• Circuitry: 4-circuit version (for most types the same size as the 2-circuit switches) • Seals: Viton seals for special applications • Mounting options: surface, manifold	• Conduit and mini receptacle wiring options • Plug-in style for ease of wiring • UL listed, CSA certified and CE marked for all applicable directives.	• Dual, air operated • 2-pole vertical or horizontal lever • Operated time delay • Mounting options: surface, cavity, manifold	• Mounting option: surface	• Mounting option: surface
• 2-Circuit: NEMA A600 4-Circuit: NEMA A300	• 1 N.O. and 1 N.C. contact • Slow break before make • DC 0.40 VA load per pole max and 0.025 VA load per pole min.	• NEMA A600	• NEMA A600	• NEMA B600
• -18…110°C (0…230°F); Optional: -40…110°C (-40…230°F),	• -18…110 (0…230) • -40…110 (-40…230) low temp model	• -18…54°C (0…130°F) Optional: -29…121°C (-20…250°F)	• -46…121°C (-50…250°F)	• -29…121°C (-20…250°F)
• Lever • Maintained • Low operating force • Top and side push (with or without rollers) • Cat whisker • Wobble stick • Neutral position	• Lever • Side push rod • Top push roller • Side push vertical roller	• Lever • Maintained, low operating force • Top and side push (with or without rollers) • Cat whisker • Wobble stick • Neutral position	• Lever • Maintained, top and side push (with or without rollers) • Wobble stick • Neutral position	• Lever • Top and side push (with or without rollers) • Wobble stick
• NEMA Types 1, 4, 6P (select side rotary styles), 13	• IP30	• NEMA Types 1, 13	• NEMA Types 7 and 9 Class I, Groups B, C or D Class II, Groups E, F or G Class III	• NEMA Types 7 and 9 Class I, Groups B, C or D Class II, Groups E, F or G
• See page 5-41	• See page 5-48	• See page 5-54	• See page 5-74	• See page 5-81

Quick Selection Guide

Specifications	 **802B** **Compact**	 **802B** **Precision**	 **802B** **Small Precision**	 **802T** **Safety Limit Switches**
Description	• Compact metal body • Prewired to maintain enclosure seals • Industry standard mounting for ease of installation.	• Precision style limit switch • Industry standard mounting • Low trip and reset points for more precise sensing	• metal bodied for use in industrial applications • Twelve different styles available for solving multiple applications	• designed for use in control reliable applications and safety applications per ISO 14119
Features	• 3 m cable standard • AC or DC LED versions • Low current versions • Booted and panel mount versions • UL/CSA and CE Marked for all applicable directives	• 1/2 in. NPT conduit entry • Grounding screw • Booted models • Side and flange mounting available • UL/CSA and CE Marked for all applicable directives	• 12 different actuators • Screw termination • Small size • Booted and Panel mount versions • UL/CSA and CE marked for all applicable directives	• Direct opening action • Snap acting contacts • Rugged metal construction • Long life and reliability • Plug-in design • NEMA 6P/IP67 sealing
Contact Rating	• SPDT Form C • NEMA B300	• SPDT Form C • 15 A @ 125/250/480 V AC	• SPDT Form C • NEMA B300	• 2-circuit: A600/AC-15 Q300/DC-13 • 4-circuit: A300 Q300/DC-13
Temperature Rating	• -10…70°C (14…158°F)	• -10…80°C (14…176°F)	• -10…80°C (14…176°F)	• -18C…+110°C (0F…+230°F)
Actuators	• Rotary arm • Center rotary arm • Wobble stick • Top push • Top push bevel • Top push roller • Top push cross roller	• Top push • Top push roller • Top push cross roller • Roller lever • One-way roller lever	• Top push • Top push roller • Top push cross roller • Hinge lever • Short hinge lever • Roller lever • Short roller lever • One-way roller lever • Short one-way roller lever	• Lever • Top push roller • Side push vertical roller • Side push horizontal roller
Enclosure	• NEMA 1, 3, 4, 6, 12, 13 and IP67	• Nonbooted: NEMA 1 and IP 60 • Booted: NEMA 1, 3, 4 and IP65	• NEMA 1, 3, 4, 6, 13 and IP67	• NEMA 4, 6P, 12, 13 and IP67
Additional Info	• See page 5-88	• See page 5-97	• See page 5-105	• See page 5-109

Quick Selection Guide

 **440P-A** **22 mm Metal Safety Limit switches**	 **440P-C** **22 mm Plastic Safety Limit switches**	 **440P-M** **30 mm Metal Safety Limit switches**	 **440P-M** **15 mm Plastic Safety Limit switches**	 **Operating Lever**
• Compact die-cast alloy metal body with prewired 2 m cable exiting bottom or side of switch mounting for ease of installation • Industry standard mounting for ease of installation • Choice of actuator heads	• Conforms to EN50047 (22 mm) • Glass reinforced thermoplastic housing • Most feature direct opening contacts designed to meet IEC 947 • Available in snap-acting, slow make/break with 2 or 3 pole contact arrangement • Heads can be rotated in 90° increments for flexible mounting	• Conforms to EN50041 (30 mm x 60 mm) • Cast aluminum housing • Most feature direct opening contacts designed to meet IEC 947 • Available in snap-acting, slow make/break with 2, 3 or 4 pole contact arrangement. • Heads can be rotated in 90° increments for flexible mounting	• Small size with mounting hole options • Choice of actuator position • UL approved glass filled polyester housing	• To be used with 802T, 802M, 802MC, 802X and 802XR limit switches
• Rugged die cast enclosure • Positive operation, forced disconnection of contacts (direct opening action) • Snap-acting contact actuation • Contacts 1 N.C. + 1 N.O. • Prewired 2 meter cable, bottom or side exit • UL Recognized, TÜV and CE Marked for all applicable directives	• Available in1/2 in. NPT, M20 and QD versions • Cat. 1 device per EN954-1, dual-channel interlocks suitable for Cat. 3 or 4 systems • cULus, TÜV, CCC, and CE Marked for all applicable directives • Mounting options: surface	• Available in1/2 in. NPT, M20 and QD versions • Cat. 1 device per EN954-1, dual-channel interlocks suitable for Cat. 3 or 4 systems • cULus, TÜV, CCC, and CE Marked for all applicable directives • Mounting options: surface	• Positive operation, forced disconnection of contacts • Contacts, 1 N.C. & 1 N.O. • CSA NRTL/C and CE Marked for all applicable directives	• Various lengths materials and styles to suit specific applications
• 1 N.O. and 1 N.C. snap acting contact, AC15/B330, DC 13/Q300	• A600/AC-15 • N600/DC-13	• A600/AC-15 • N600/DC-13	• 1 N.O. and 1 N.C. contact • Slow break before make	—
• 2…+70°C (35.6…158°F)	• -25…80°C (-13…176°F)	• -25…80°C (-13…176°F)	• -25…80°C (-113…176°F)	—
• Roller plunger • Dome plunger • Cross roller plunger • Lever arm	• Roller plunger • Dome plunger • Hinge lever • Short lever • Offset hinge • Adjustable lever • Large rubber roller	• Roller plunger • Dome plunger • Short lever • Adjustable lever • Rod lever • Spring rod • Telescope arm	• Roller plunger	• Rod levers • Roller levers
• NEMA 1, IP66 and IP67	• IP66	• IP66	• IP30	—
• See page 5-114	• See page 5-116	• See page 5-122	• See page 5-128	• See page 5-130

Technical Definitions and Terminology

Actuator: A switch mechanism that when moved as intended, operates the switch contacts. This mechanism transmits the applied force from the actuating device…the contact block, causing the contacts to operate.

Actuator Free Position: The initial position of the actuator when there is no external force (except gravity) applied to the actuator.

Actuator Operating Position: The position of the actuator when the contacts operate.

Actuator Resetting Position: The position of the actuator at which the contacts move from the operated position to the “normal” position.

Differential Travel (Travel to reset contacts): The angle or distance through which the actuator moves from the contact operating position to the actuator resetting position, or the distance between the operating point and the release point.

Normal Contact Position: The position of the contacts when no operating force is applied.

Operating Contact Position: The position to which the contacts move when the actuator is deflected to or beyond the actuator operating position.

Operating Force: The straight line force in the designed direction applied to the switch actuator to cause the contacts to move to the operated position.

Operating Torque: The torque that must be applied to the actuator to cause the movable contacts to move to the operated contact position.

Overtravel: The movement of the actuator beyond the contact operating position.

Pretravel (Travel to the operate contacts): Travel to operate the contacts from the actuator free position.

Slow Make-Slow Break: A type of contact structure with no overcenter mechanism. Contacts move at a speed directly proportional to the speed of operation of the actuator. Contacts may touch with little contact pressure.

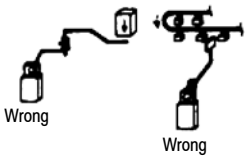
Snap Action: In this type of contact structure, movement of the actuator applies force to an overcenter mechanism, which creates a fast change in contact state once the overcenter position has been exceeded.

Snap Action/IEC Positive Opening Action: This contact structure is very similar to the snap action contact with one addition: continued operation of the operating mechanism beyond the normal snap action position applies force directly to the normally closed (N.C.) contact if it has not opened with the snap action mechanism. This helps to ensure opening of even a welded contact. For example, if a contact has a snap action operating point at 40° rotary movement, the direct opening action point may be at 60° or more. No direct opening action forces are applied to the N.O. contact.

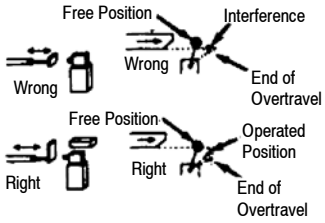
Total or Maximum Travel: The sum of the pretravel and the overtravel.

Application Considerations

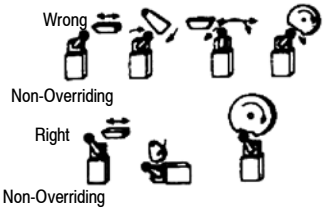
Actuator Consideration



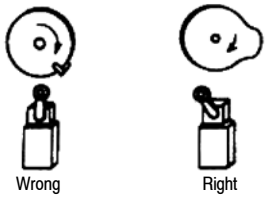
Limit switches are designed for proper performance with the actuators with which they are supplied. Supplementary actuators should not be used unless the limit switches are specifically designed for them.



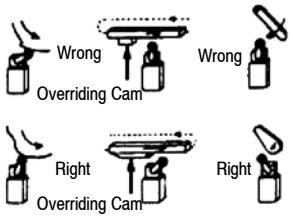
Operating mechanism for limit switches should be so designed that under any operating or emergency conditions the limit switch is not operated beyond its overtravel limit position. A limit switch should not be used as a mechanical stop.



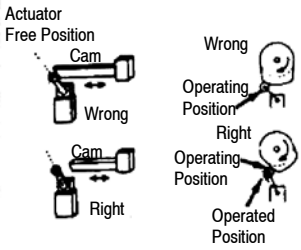
For limit switches with lever actuators, the actuating force should be applied as nearly perpendicular to the lever as practical and perpendicular to the shaft axis about which the lever rotates.



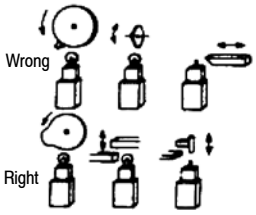
Where relatively fast motions are involved cam arrangements should be such that the actuator does not receive a severe impact. Cams should be designed such that the limit switch will be held operated long enough to operate relays, valves, etc.



Cam or dog arrangements should be such that the actuator is not suddenly released to snap back freely.

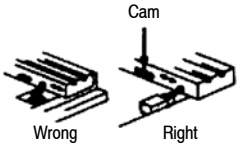


A limit switch actuator must be allowed to move far enough for positive operation of the contacts.

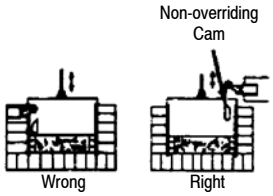


For limit switches with push rod actuators the actuating force should be applied as nearly as possible in line with the push rod axis.

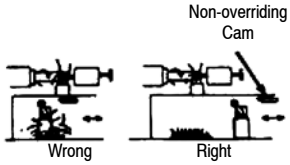
Location and Installation



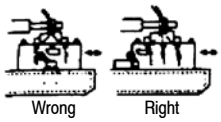
Limit switches should be mounted rigidly and in readily accessible locations with suitable clearances to permit easy service and replacement when necessary. Cover plates should face the maintenance access point.



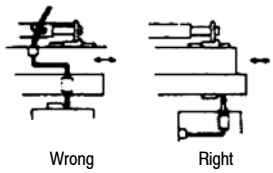
Limit switches should not be used in locations where temperature or atmosphere conditions are beyond those for which they have been specifically designed.



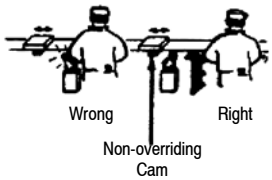
Limit switches should be placed in locations where machining chips do not accumulate under normal operating conditions.



Limit switches should not be submerged in or splashed with oils, coolants or other liquids.



The location of oiltight limit switches and the method of connecting them should be such that condensation in the conduit cannot enter the switch enclosure.



Limit switches should be mounted in locations which will prevent false operation by normal movements of operator or machine components.

Notes


801-ASA11


801-ASC17


801-CMC21


801-FSC148


801-ASC1411

Description

The Bulletin 801 line of general purpose limit switches includes many types of switches for use in a wide variety of applications. Many different contact arrangements are available. Slow and snap action contact operating mechanisms are available. Snap action limit switches are designed to provide high snap through force once the mechanism has traveled the required distance. Refer to the table on page 5–12 for limit switch selection.

Figure 1

Lever on right side as illustrated. Clockwise operation only. Lever can be adjusted through 360°.

Figure 2

Contacts are operated in both directions of roller lever. With roller on inside, lever is adjustable through 49° either side of center line. With roller on outside, lever is adjustable through 360°.

Figure 3

Similar to Figure 2 except roller lever is longer for use where more space is necessary between limit switch and its operating device. The total height from base of limit switch to the end of roller is 181.0 mm (7.125 in.).

Figure 4

Same contact operation in either direction, with roller on either inside or outside. Starting position of lever is adjustable 43° either side of center line.

Figure 5

Contact operation is obtained only in direction shown. Lever is free to move in opposite direction, but contacts are not actuated. With roller on inside, starting position of lever can be adjusted through 128° from extreme left position; with roller on outside, the roller lever is adjustable through 360°.

Figure 6

Similar to Figure 5, except that operation is to the left.

Figure 7

For clockwise operation. Ratchet type. When lever is moved to right, contacts are operated. Lever is spring return, but contacts remain in the operated position. Next movement of roller lever to the right returns the contacts to their original position. This completes cycle of operation. Lever is adjustable through 360°.

Figure 8

Similar to Figure 7 except that operation is counterclockwise.

Figure 9

Contacts are operated when fork lever is operated in one direction and are restored to original position when lever is operated in the reverse direction. Rod or Chain/Stroke Type Actuators not shown.

Figure 10❶

Roller lever on right side. Roller 34.9 mm (1.375 in.) in diameter. Lever travels through 30° arc. Downward travel of roller, 33.3 mm (1.312 in.).

Figure 11❶

Similar to Figure 10, except roller has a rubber trim, 76.2 mm (3 in.) in diameter. Downward Travel of roller, 42.1 mm (1.656 in.).

Figure 12❶

Roller lever on right side. Steel roller, 34.9 mm (1.375 in.) in diameter. Lever travel, either direction, 30°.

Figure 13❶

For clockwise operation. Roller, 1.375 in. (34.9 mm) diameter. Downward linear travel of roller, 50 mm (1.969 in.).

❶ For NEMA 7 & 9 housing, reduce total height by 1.6 mm (0.063 in.).

Figure 14❶

Contact operation obtained when fork lever is moved in direction shown and restored to original position when lever is operated in reverse direction.

Figure 15

Contacts operate in the direction shown. Track type limit switch with roller fork lever. Rollers 22.2 mm (0.875 in.) diameter hardened steel.

Figure 16

Contacts operate when the lever is moved in either direction. Should only be used where the link between lever and operating mechanism is short, so that the weight of the connecting mechanism will not offset the force of the spring return. Maximum weight of connecting mechanism: 0.5 lb.

Figure 17

Counterweight holds contacts closed. When the hook reaches the upper limit of its travel, it raises the counterweight and the weighted lever operates the contacts. When the hook is lowered the contacts are reset.

Figure 18

Similar to Figure 1 except lever is on left side.

Figure 19

Similar to Figures 5 and 6 except contacts are arranged for maintained operation. Contacts are actuated when lever is operated in direction shown. Contacts are restored when lever is operated in reverse direction.

Figure 20

Similar to Figures 2 and 3 except contacts are arranged for sequential operation in either direction. Operation is as follows:

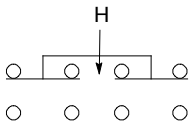
Circuit 1 opens at 14°,
Circuit 2 closes at 45°,
Total travel is 55°.

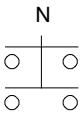
Contact Arrangements and Ratings

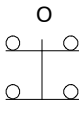
AC
- 3 A, 120V
- 1.5 A, 240V
- 0.75 A, 480V
- 0.6 A, 600V

DC
- 1.1 A, 115V
- 0.55 A, 230V
- 0.2 A, 550V

Light Duty







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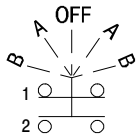
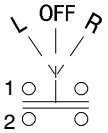


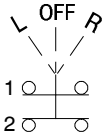
Lever Pos.	Contact Pos. 1	2
Off	C	O
A	O	O
B	O	C

F



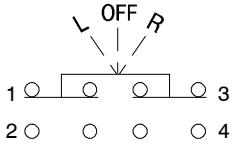
Lever Pos.	Contact Pos. 1	2
R	C	O
Off	O	O
L	O	C

G



Lever Pos.	Contact Pos. 1	2
R	C	O
Off	C	C
L	O	C

K



Lever Pos.	Contact Pos. 1	2	3	4
R	C	O	O	C
Off	C	O	C	O
L	O	C	C	O

AC
- 6A, 120V
- 3A, 240V
- 1.5A, 480V
- 1.2A, 600V

DC
- 2.2A, 115V
- 1.1A, 230V
- 0.4A, 550V

Standard Duty

Ambient Temperature Range

0…+40°C (+32…+104°F) minimum temperature based on the absence of freezing moisture or water.l

Approximate Dimensions [mm (in.)]

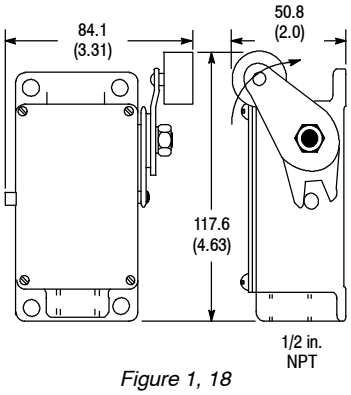


Figure 1, 18

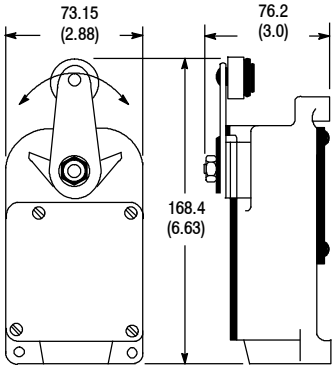


Figure 2, 3, 20

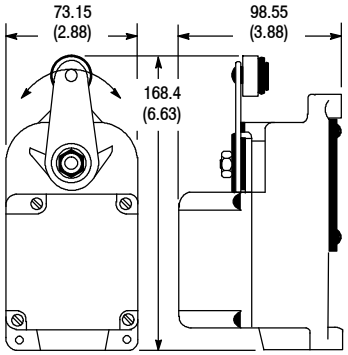


Figure 4

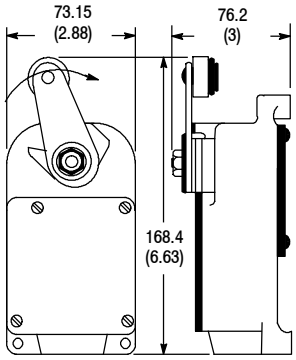


Figure 5, 6, 19

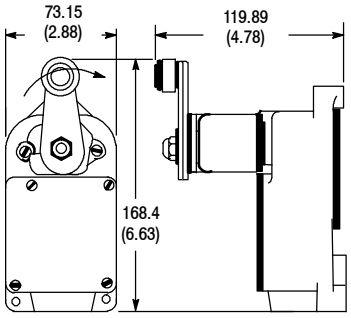


Figure 7, 8

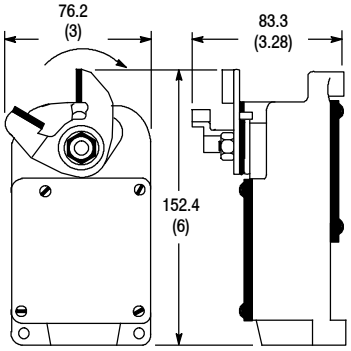


Figure 9

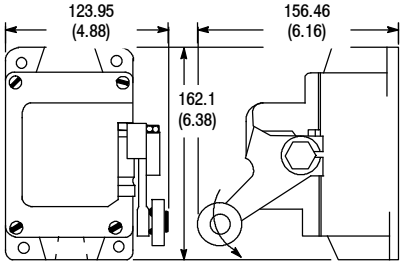


Figure 10, 11

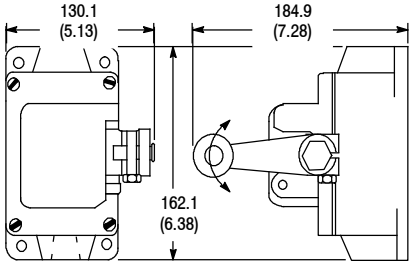


Figure 12

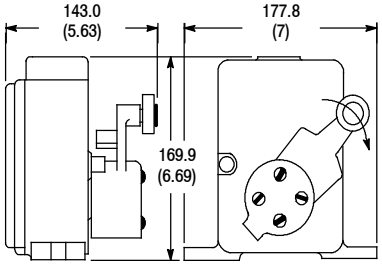


Figure 13

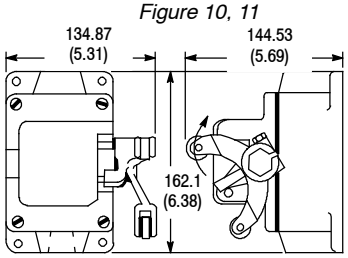


Figure 14

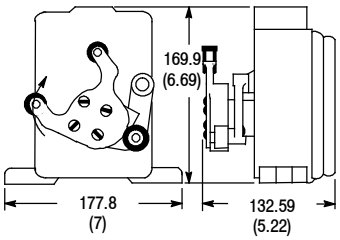


Figure 15

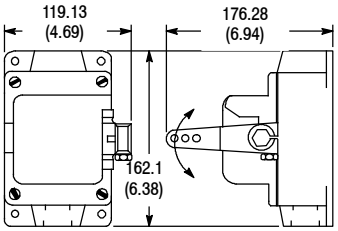


Figure 16

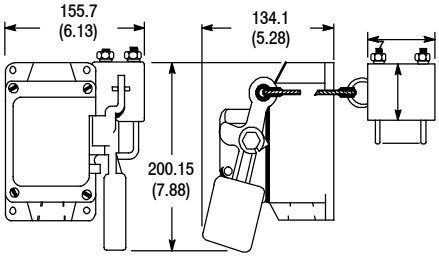


Figure 17

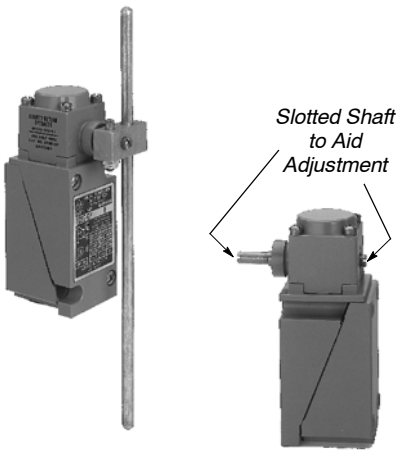
801

General Purpose

Product Selection

Type of Lever	Contact Operation	Housing Style	Contact Type & Rating ❶	Force to Operate (Max.)	Travel to Operate Contacts (Nominal)	Over Travel (Min.)	Cat. No.
NEMA Type 1 Enclosure							
Roller	Slow Action Spring Return	Figure 1	A	15.58 N (3.5 lb)	8°	3°	801-ASA11
			B	15.58 N (3.5 lb)	3°	8°	801-ASB11
		Figure 18	A	15.58 N (3.5 lb)	8°	3°	801-ASA12
		Figure 2	C	10.0 N (2.25 lb)	30°	25°	801-ASC17
			D	10.0 N (2.25 lb)	See Figure 20 ❷	See Figure 20 ❷	801-ASD17
			F	10.0 N (2.25 lb)	25°	30°	801-ASF17
			G	10.0 N (2.25 lb)	15°	40°	801-ASG17
	Snap Action Spring Return	Figure 2	C	22.25 N (5.0 lb)	25°	30°	**801-ASC21**
			C	37.82 N (8.5 lb)	9°	40°	801-ASC21X
			N	22.25 N (5.0 lb)	25°	30°	801-ASN21
			N	37.82 N (8.5 lb)	9°	40°	801-ASN21X
			O	22.25 N (5.0l bs)	25°	30°	801-ASO21
			O	37.82 N (8.5 lb)	9°	40°	801-ASO21X
			C	10.0 N (2.25 lb)	30°	25°	801-ASC313
		Figure 4	H	22.25 N (5.0 lb)	30°	20°	801-ASH22
			H	31.15 N (7.0 lb)	10°	43°	801-ASH26X
		Figure 3	C	17.8 N (4.0 lb)	25°	30°	801-ASC25
			C	31.15 N (7.0 lb)	9°	44°	801-ASC25X
			N	17.8 N (4.0 lb)	25°	30°	801-ASN25
			N	28.92 N (6.5 lb)	9°	44°	801-ASN25X
		Figure 5	C	22.25 N (5.0 lb)	25°	15°	801-ASC27
		Figure 6	C	17.8 N (4.0 lb)	25°	15°	801-ASC29
	Ratchet Type Maintained	Figure 7	C	28.92 N (6.5 lb)	68°	12°	801-ASC218
		Figure 8	C	22.25 N (5.0 lb)	68°	12°	801-ASC220
	Snap Action Maintained	Figure 19	C	10.0 N (2.25 lb)	38°	24°	801-AMC211
Fork	Snap Action Maintained	Figure 9	C	15.58 N (3.5 lb)	20.6 mm (0.81 in.)	—	801-CMC21
Rod or Chain			C	10.0 N (2.25 lb)	20.6 mm (0.81 in.)	20.6mm (0.81 in.)	801-DMC21
Stroke			C	20.0 N (4.5 lb)	14.2 mm (0.56 in.)	—	801-EMC21
NEMA Type 4 Enclosure (For Indoor Use)							
Roller	Slow Action Spring Return	Figure 10	C	27.81 N (6.25 lb)	26°	4°	801-ASC1411
			H	27.81 N (6.25 lb)	26°	4°	801-ASH1411
		Figure 11	C	17.8 N (4.0 lb)	26°	4°	801-ASC1415
		Figure 12	K	17.8 N (4.0 lb)	26°	4°	801-ASK1421
	Snap Action Spring Return	Figure 13	C	17.8 N (4.0 lb)	26.5°	6°	801-ASC2426
Fork	Slow Action Maintained	Figure 14	C	31.15 N (7.0 lb)	31.8 mm (1.25 in.)	—	801-CMC144
	Snap Action Maintained	Figure 15	C	28.92 N (6.5 lb)	38.1 mm (1.5 in.)	—	801-CMC2411
Rod or Chain	Slow Action Spring Return	Figure 16	K	13.35 N (3.0 lb)	26°	4°	801-DSK145
Weight		Figure 17	C	22.25 N (5.0 lb)	26°	4°	801-FSC148 ❸
NEMA Type 7 & 9 Enclosure							
Roller	Slow Action Spring Return	Figure 10	C	27.81 N (6.25 lb)	26°	4°	801-ASC1711
			H	27.81 N (6.25 lb)	26°	4°	801-ASH1711
		Figure 11	C	17.8 N (4.0 lb)	26°	4°	801-ASC1715
		Figure 12	K	17.8 N (4.0 lb)	26°	4°	801-ASK1721
	Snap Action Spring Return	Figure 13	C	17.8 N (4.0 lb)	26.5°	6°	801-ASC2726
Fork	Snap Action Maintained	Figure 15	C	28.92 N (6.5 lb)	38.1 mm (1.5 in.)	—	801-CMC2711

❶ See table on page 5-10.
❷ See Figure 20 on page 5-9.
❸ The following replacement parts are available: combination lever/weight = B7391, counterweight = Z1997, counterweight cable = B37939.



802G-GP with Steel Operating Lever

Description

The Bulletin 802G is a plug-in gravity return limit switch designed for conveyor applications with small or lightweight moving objects. It has an extremely low operating torque and uses the action of gravity on the lever arm to reset the contacts. Three unique lever arms are available for the Bulletin 802G in nylon or steel with adjustable lengths.

ATTENTION	Bulletin 802T or 802MC levers cannot be used on the gravity return limit switch. Teh gravity return limit switch requires the levers on page 5-14.

Specifications

Enclosure Rating	NEMA 1
Certifications	UL Listed, CSA Certified and CE Marked for applicable directives
Ambient Temperature [C (F)]	0…110° (32…230°)

AC Contact Rating (Maximum per Pole, 50 or 60Hz, Same Polarity)

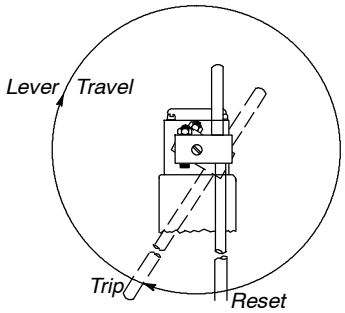
NEMA Rating Designation	Max AC Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
B600	120	30	3.00	5 A	3600	360
	240	15	1.50	5 A	3600	360
	480	7.5	0.75	5 A	3600	360
	600	6	0.60	5 A	3600	360

DC Contact Rating (Maximum per Pole, Same Polarity)

Voltage Range	Current Rating
115…125	0.4 A
230…250	0.2 A
550…600	0.1 A

Since the switch shaft can be rotated continuously through 360º, the trip point is adjustable to any angle. This adjustment is easily made using the slots provided at both ends to hold the shaft, while rotating the lever arm to the desired angle. A clamping pin is used to maintain this setting, and a set screw to hold the rod length adustment. The trip angle and lever length must be carefully adjusted to provide proper switch action.

Example: CW Operation



Features

- Light operating torque
- Unique lever arms
- Trip point adjustable to any angle

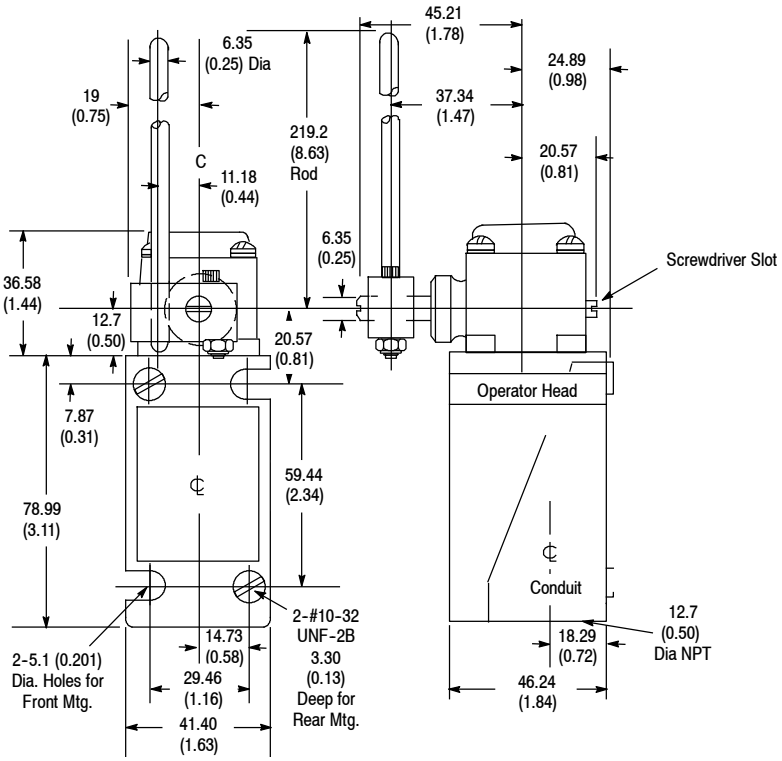
Product Selection

Contact Operation	Torque to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No.	
					Complete Switch Without Lever	Switch Without Lever and Base
1 N.O. 1 N.C.	0.018 N•m (2.5 oz•in.) (without lever)	Adj. from 10°…180°	360° CW or CCW	10°❶	**802G-GP**	802G-GP1

❶ 10° opposite trip direction, 180° in trip direction.

Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for manufacturing purposes.



802G-GP with 802G-W10 Lever
Approximate Shipping Wt. 1.5lbs (680g)

Modification for Neon Indicating Light

The Bulletin 802G gravity return limit switch can be supplied with a neon indicating light. To order, add the letter **"N"** for 120V AC 50/60 Hz or **"N5"** for 240V AC 50/60 Hz. **Example**: Catalog number **802G-GP,** becomes catalog number **802G-GPN.**

The indicating light is to be internally connected by the user to two isolated terminals in the base assembly allowing complete flexibility in the connection of the light. Switches with an indicating light have a contact rating of NEMA B300.

Operating Levers

Description	Cat. No.
6.35 mm (0.25 in.) Steel Rod, Adjustable to 219.0 mm (8.625 in.) Length	802G-W10
3.18 mm (0.125 in.) Steel Rod, Adjustable to 219.0 mm (8.625 in.) Length	802G-W10A
6.35 mm (0.25 in.) Nylon Rod, Adjustable to 219.0 mm (8.625 in.) Length	802G-W11

802MC-AY5 with
802MC-W1A Lever

Description

Bulletin 802M compact pre-wired limit switches are factory sealed to meet the demanding requirements for NEMA 1, 4, 6P, 13, and IP67 (IEC529) enclosures. Outstanding features designed into the switch make it ideal for wet environments and washdown applications.

Bulletin 802MC limit switches are also factory sealed against fluid ingress. In addition, they feature a NEMA 4X rating, making the 802MC an ideal solution for washdown applications with harsh chemicals.

A wide variety of operating heads and operating levers are available. Operating heads can be mounted in four positions, 90° apart.

Sealing System

The cable entrance and wire strands are epoxy sealed to protect against liquids entering or wicking into the switch. The interface between the operating head and base is sealed with a chemically resistant O-ring. The operating shaft for lever type switches is protected by a three-way seal. Push type switches have a special boot to prevent oil and other foreign material from entering the mechanism. A flexible diaphragm seal between the operating head and the switch body helps isolate the switch against the ingress of contaminants. After pre-wiring, the cover is factory installed and epoxy sealed.

Construction

The body and operating head of the Bulletin 802M and 802MC pre-wired limit switch are constructed from a glass filled polymer. This material is characterized by excellent dimensional stability and is resistant to moisture and numerous chemicals.

The Bulletin 802MC switch also capitalizes on the corrosion-resistant properties of the operating shaft and operating head mounting screws, which are made of Type 316 stainless steel.

The basic switching mechanism has double-throw, double-break, snap-action contacts with minimum contact bounce. The switch is pre-wired and factory sealed with “STO”❶ cable. An optional mini-type or micro-type receptacle can also be supplied. Refer to Modifications on page 5–27 and 5–33.

Installation

Although physically smaller, the Bulletin 802M switch can be interchanged with a Bulletin 802T front mounted lever operated switch by using the mounting foot adaptor included (see dimensions on page 5–18). Cam tracking characteristics from the top mounting hole of the Bulletin 802M and 802MC switch are identical to the Bulletin 802T nonplug-in rotary operated switch line.

Time saving factory pre-wiring makes the switch economical to use. There is no need to purchase a separate cable grip or cable because internal wiring by the installer is eliminated. Merely connect the STO cable to a junction box. Since the switch body is nonmetallic, no ground wire is required for the switch.

Lever Type Switches

These switches are operated by means of a lever which is clamped to a knurled shaft extending from the operating head. These devices can be easily field converted to clockwise, counterclockwise, or both directions of operation without any loose parts. Total travel is 86° in either direction. Operating heads are interchangeable and can be mounted in any of four positions 90° apart for maximum flexibility. The head is interlocked with the base unit to resist accidental shearing.

Lever type switches can be equipped with a variety of operating levers: roller lever, adjustable roller lever, micrometer adjustment roller lever, rod lever, one-way rod or roller lever and fork lever.

Push Type Switches

These switches are actuated by means of a rod or plunger located on the top or side of the operating unit. Pushing the plunger into the head causes the contacts to operate. Two types of plungers are available: rod and roller. Push type switches are supplied in spring return construction.

❶ STO is a common identification of this cable. The more complete identification of the cable used on the Bulletin 802M is STOOW-A which incorporates an oil resistant jacket and conductor insulation, for indoor and outdoor use.

802M

Pre-Wired—Factory Sealed Switches

Description

The Bulletin 802M compact pre-wired limit switch is factory sealed to meet the demanding requirements for NEMA 1, 4, 6P and 13 enclosures. Outstanding features designed into the switch make it ideal for wet environments and washdown applications.

A wide variety of operating heads and operating levers are available. Operating heads can be mounted in four positions, 90° apart.

Applications

The Bulletin 802M is designed for dry and wet applications. The superior sealing system has been developed to protect against dust, dirt, and fluids normally found in industrial environments. The device has passed harsh environmental testing such as alternately drenching with a liquid and exposing to dust and abrasive grit with the switch operating 250 times per minute.

Specifications

Enclosure Rating	NEMA 1, 4, 6P, 13 and IP67
Pollution Degree	3
Certifications	UL Listed, CSA Certified and CE Marked for applicable directives
Ambient Temperature [C (F)]	0…+80° (+32…+18°) minimum temperature based on the absence of freezing moisture or water.

AC Contact Rating (Maximum per Pole, 50 or 60Hz, 2 Circuits Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A600 AC-15	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720
	480	15	1.50	10	7200	720
	600	12	1.20	10	7200	720

AC Contact Rating (Maximum per Pole, 50 or 60Hz, 4 Circuits Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
B300	120	30	3.00	5	3600	360
	240	15	1.50	5	3600	360

DC Contact Rating (Maximum per Pole, 2 Circuits Same Polarity)

Nominal Voltage	A	Continuous Carrying Current (A)
24	1.1	5

The switch is often used in applications subject to washdowns, streams of coolant, or occasionally submerged in fluids commonly found on machines or in industrial processes. This limit switch is being used successfully in High Water Content Fluid (HWCF) applications. Contact your local Rockwell Automation sales office or Allen-Bradley distributor for applications where potentially corrosive fluids are of a particular concern.

Features

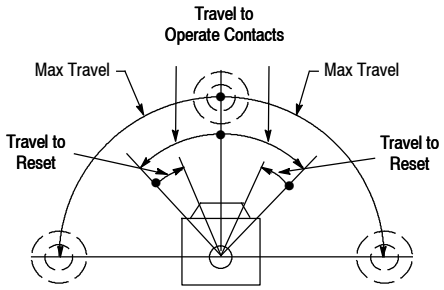
- Pre-wired and factory sealed
- Corrosion-resistant housings
- Corrosion-resistant hardware (802MC)
- Side rotary, adjustable top and top or side push styles with and without rollers
- Double-break fine silver contacts

Pre-Wired—Factory Sealed

802M Lever Type • Spring Return

Pre-Wired—Factory Sealed Switches

Range of Operation

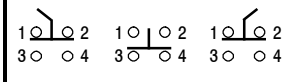
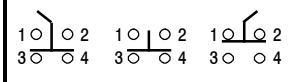
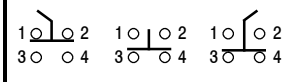
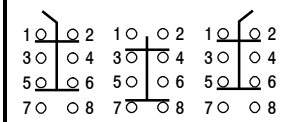
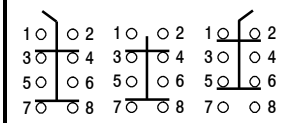
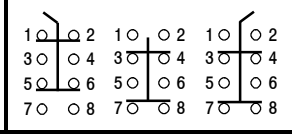


Complete Switch Without Lever

Operator Head Only

Switch Body Only

Product Selection

No. of Circuits	Lever Movement vs. Contact Operation		Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.		
							Complete Switch w/o Lever ❶	Operator Head Only	Switch Body Only ❶
2	Clockwise or Counterclockwise		0.34 N•m (3 lb•in)	15°	86°	6°	**802M-AY5**	**802M-AX**	802M-XY5
			0.56 N•m (5 lb•in)	8°		4°	**802M-HY5**	**802M-HX**	
	Clockwise		0.34 N•m (3 lb•in)	15°		6°	802M-A1Y5	802M-A1X	
			0.56 N•m (5 lb•in)	8°		4°	802M-H1Y5	802M-H1X	
	Counterclockwise		0.34 N•m (3 lb•in)	15°		6°	802M-A2Y5	802M-A2X	
			0.56 N•m (5 lb•in)	8°		4°	802M-H2Y5	802M-H2X	
4	Clockwise or Counterclockwise		0.34 N•m (3 lb•in)	15°		6°	**802M-ATY5**	**802M-AX**	802M-XTY5
			0.56 N•m (5 lb•in)	8°		4°	802M-HTY5	802M-HX	
	Clockwise		0.34 N•m (3 lb•in)	15°		6°	802M-A1TY5	802M-A1X	
			0.56 N•m (5 lb•in)	8°		4°	802M-H1TY5	802M-H1X	
	Counterclockwise		0.34 N•m (3 lb•in)	15°		6°	802M-A2TY5	802M-A2X	
			0.56 N•m (5 lb•in)	8°		4°	802M-H2TY5	802M-H2X	

❶ The standard length of STO cable is 1.52 m (5 ft). For other lengths see Modifications and Accessories.

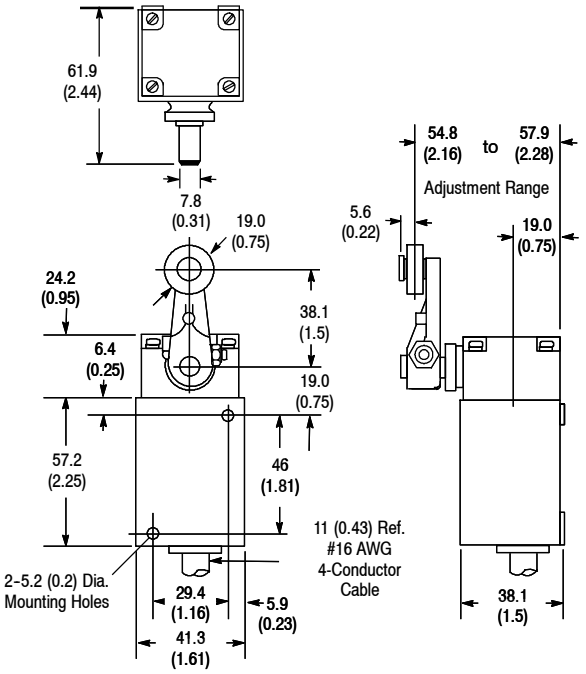
Levers—See page 5-130 for a complete listing of operating levers.
Wiring Diagrams—See page 5-24.
Modifications and Accessories—See page 5-27.

802M Lever Type • Spring Return

Pre-Wired—Factory Sealed Switches

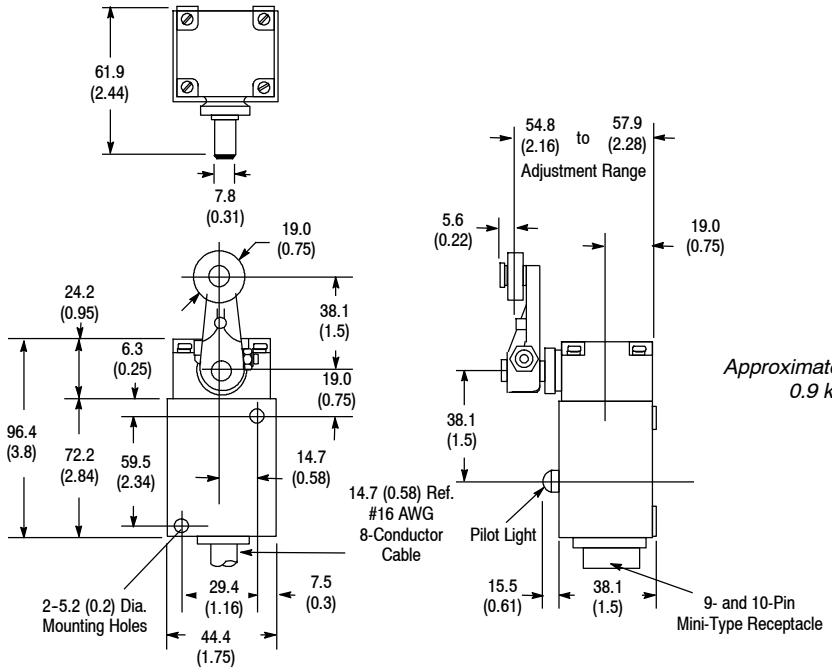
Approximate Dimensions [mm (in.)]

2-Circuit



Shipping Wt.
1lb 0.53 kg (3 oz)

4-Circuit



Approximate Shipping Wt.
0.9 kg (2 lb)

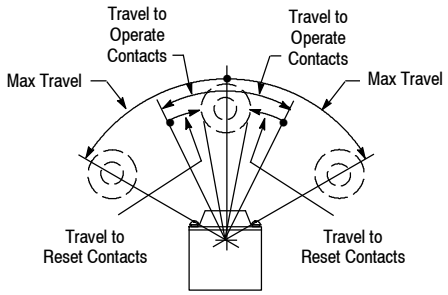
Note: Mounting foot adaptor as shown on page 5-23 is for use with 2-circuit 802M type switches only.

Levers—See page 5-130 for a complete listing of operating levers.
Wiring Diagrams—See page 5-24.
Modifications and Accessories—See page 5-27.

802M Lever Type Neutral Position • Spring Return

Pre-Wired—Factory Sealed Switches

Range of Operation

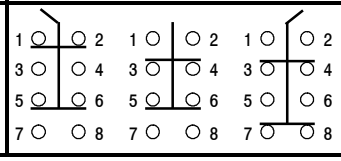


Complete Switch Without Lever

Operator Head Only

Switch Body Only

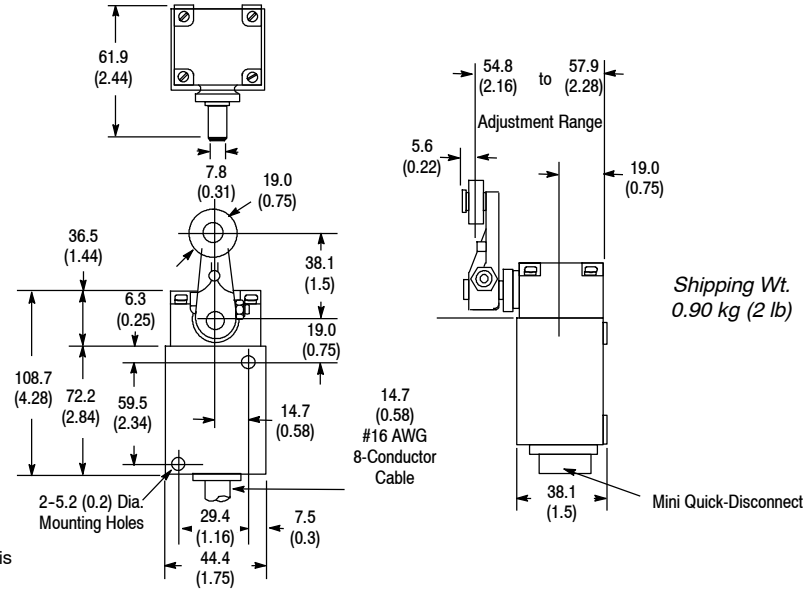
Product Selection

No. of Circuits	Lever Movement vs. Contact Operation	Torque to Operate (Max) CW	Torque to Operate (Max) CCW	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No. Complete Switch w/o Lever ❶❷	Cat. No. Operator Head Only ❷	Cat. No. Switch Body Only ❶
4		7 lb•in) (0.79 N•m)	7.5 lb•in) (0.85 N•m)	16°	75°	7°	802M-NPY5	802M-NPX	802M-XNPY5

❶ The standard length of STO cable is 1.52 m (5 ft). For other lengths see Modifications and Accessories.

❷ Operating lever 802T-W3F should not be used with this switch.

Approximate Dimensions [mm (in.)]



Shipping Wt. 0.90 kg (2 lb)

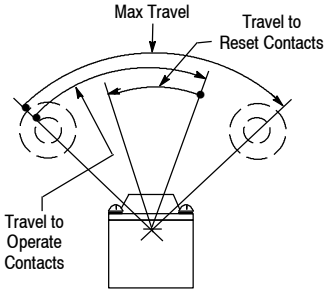
Note: Mounting foot adaptor as shown on page 5-23 is for use with 2-circuit 802M type switches only.

Levers—See page 5-130 for a complete listing of operating levers.
Wiring Diagrams—See page 5-24
Modifications and Accessories—See page 5-27.

802M Lever Type • Maintained Contact

Pre-Wired—Factory Sealed Switches

Range of Operation

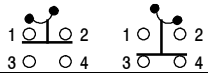
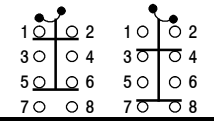


Complete Switch Without Lever

Operator Head Only

Switch Body Only

Product Selection

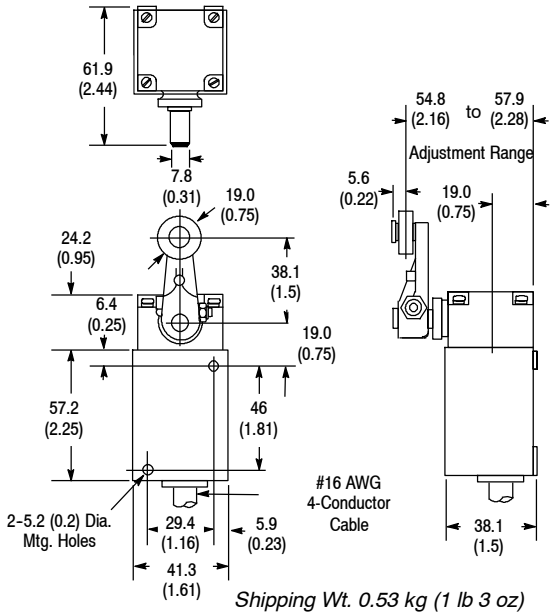
No. of Circuits	Lever Movement vs. Contact Operation		Torque to Operate (Max.)	Travel to Operate Contacts (Max.)❷	Max Travel❷	Travel to Reset Contacts (Max.)	Cat. No.		
							Complete Switch w/o Lever ❶	Operator Head Only	Switch Body Only ❶
2	Clockwise or Counterclockwise		0.31 N•m (2.75 lb•in)	75°	87°	35°	802M-AMY5	802M-AMX	802M-XY5
4	Clockwise or Counterclockwise						802M-AMTY5		802M-XTY5

❶ The standard length of STO cable is 1.52 m (5 ft). For other lengths see Modifications and Accessories.

❷ From one maintained position to the other.

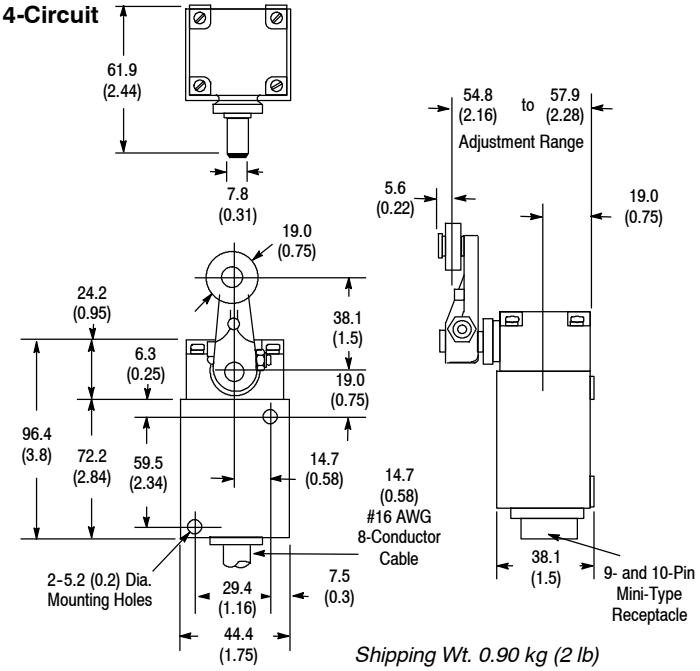
Approximate Dimensions [mm (in.)]

2-Circuit



Shipping Wt. 0.53 kg (1 lb 3 oz)

4-Circuit



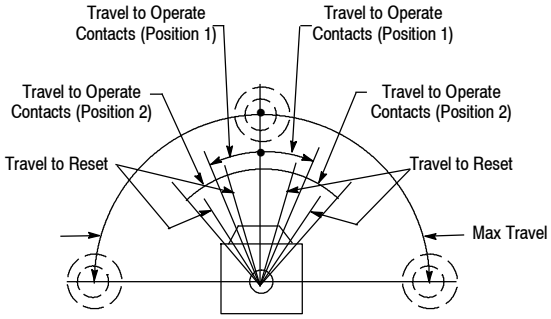
Shipping Wt. 0.90 kg (2 lb)

Levers—See page 5-130 for a complete listing of operating levers.
Wiring Diagrams—See page 5-24.
Modifications and Accessories—See page 5-27.

802M Lever Type Sequential • Spring Return

Pre-Wired—Factory Sealed Switches

Range of Operation

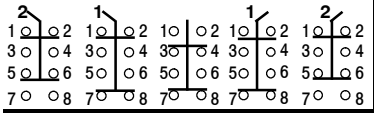


Complete Switch Without Lever

Operator Head Only

Switch Body Only

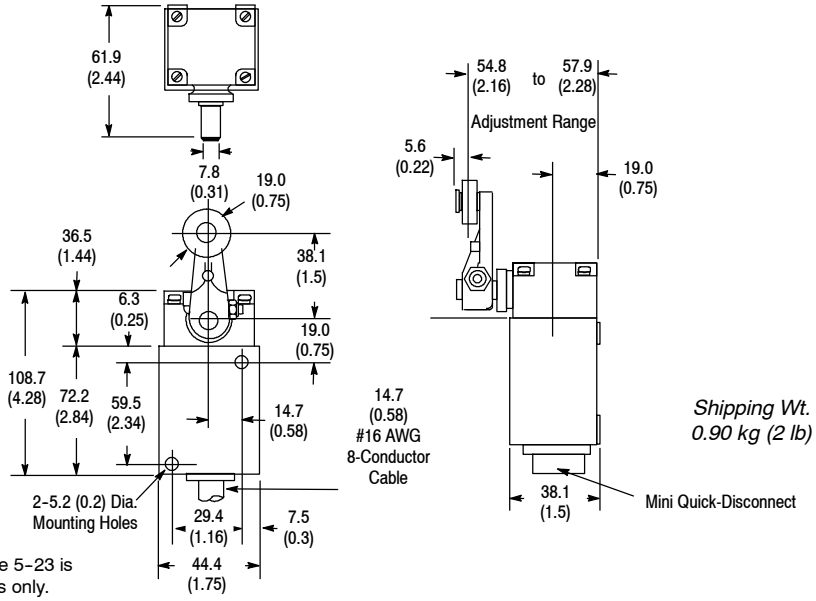
Product Selection — 4-Circuit

Lever Movement vs. Contact Operation	Position 1	Position 2	To Max Travel	Position 1	Position 2	Max Travel	Travel to Reset Contacts (Max.)	Cat. No. Complete Switch w/o Lever ❶❷	Cat. No. Operator Head Only ❷	Cat. No. Switch Body Only ❶
Counterclockwise / Clockwise 	0.79 N•m (7 lb•in)	0.9 N•m (8 lb•in)		10° ± 3°	20° ± 3°	88°	4° ± 3°	802M-ASY5	802M-ASX	802M-XSY5

❶ The standard length of STO cable is 1.52 m (5 ft). For other lengths see Modifications and Accessories.

❷ Operating lever 802T-W3F should not be used with this switch.

Approximate Dimensions [mm (in.)]



Shipping Wt. 0.90 kg (2 lb)

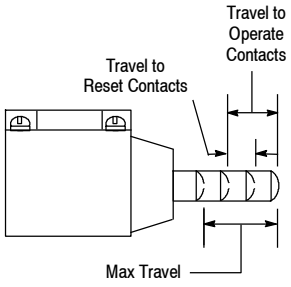
Note: Mounting foot adaptor as shown on page 5-23 is for use with 2-circuit 802M type switches only.

Levers—See page 5-130 for a complete listing of operating levers.
Wiring Diagrams—See page 5-24.
Modifications and Accessories—See page 5-27.

802M Push Type • Spring Return

Pre-Wired—Factory Sealed Switches

Range of Operation



Switch Body Only

Adjustable Top Push Rod Switch and Head

Adjustable Side Push Rod Switch and Head

Top Push Rod Head

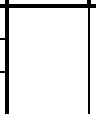
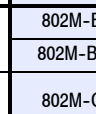
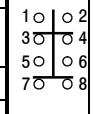
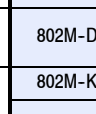
Side Push Rod Head

Top Push Roller Head

Side Push Vertical Roller Head

Side Push Horizontal Roller Head

Product Selection

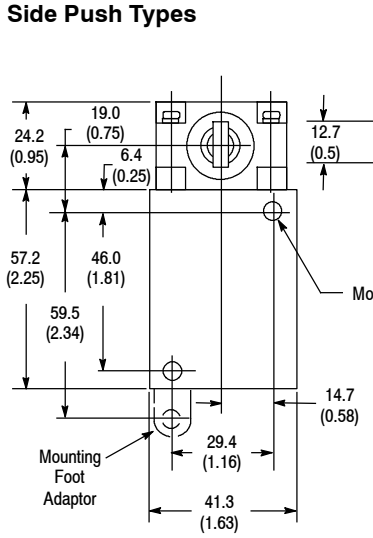
No. of Circuits	Operator Type	Contact Operation		Force to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No.		
		Normal	Operated					Complete Switch ❶	Operator Head Only	Switch Body Only ❶
2	Top Push Rod			13.3 N (3 lb)	1.45 mm (0.057 in.)	5.26 mm (0.207 in.)	0.56 mm (0.022 in.)	802M-BY5	802M-BX	802M-XY5
	Adjustable Top Push Rod							802M-BAY5	802M-BAX	
	Side Push Rod			20 N (4.5 lb)	2.59 mm (0.102 in.)	5.16 mm (0.203 in.)	1.14 mm (0.045 in.)	802M-CY5	802M-CX	
	Top Push Roller			14.7 N (3.3 lb)	1.45 mm (0.057 in.)	5.26 mm (0.207 in.)	0.56 mm (0.022 in.)	**802M-DY5**	**802M-DX**	
	Side Push Vertical Roller			20 N (4.5 lb)	2.59 mm (0.102 in.)	5.1 mm (0.203 in.)	1.14 mm (0.045 in.)	**802M-KY5**	**802M-KX**	
	Side Push Horizontal Roller							802M-K1Y5	802M-K1X	
	Adjustable Side Push Rod							802M-CAFY5	802M-CAFX	
4	Top Push Rod			13.3 N (3.5 lb)	1.45 mm (0.057 in.)	5.13 mm (0.202 in.)	0.076 mm (0.030 in.)	802M-BTY5	802M-BX	802M-XTY5
	Adjustable Top Push Rod							802M-BATY5	802M-BAX	
	Side Push Rod			20 N (4.5 lb)	3.18 mm (0.125 in.)	5.54 mm (0.218 in.)	1.14 mm (0.045 in.)	802M-CTY5	802M-CX	
	Top Push Roller			14.7 N (3.5 lb)	1.45 mm (0.057 in.)	5.13 mm (0.202 in.)	0.076 mm (0.030 in.)	802M-DTY5	802M-DX	
	Side Push Vertical Roller			20 N (4.5 lb)	3.18 mm (0.125 in.)	5.54 mm (0.218 in.)	1.14 mm (0.045 in.)	802M-KTY5	802M-KX	
	Side Push Horizontal Roller							802M-K1TY5	802M-K1X	
	Adjustable Side Push Rod				2.59 mm (0.102 in.)	5.16 mm (0.203 in.)		802M-CAFTY5	802M-CAFX	

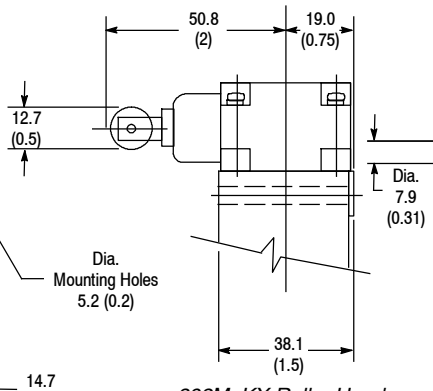
❶ The standard length of STO cable is 1.52 m (5 ft). For other lengths see Modifications and Accessories.

Wiring Diagrams—See page 5-24.
Modifications and Accessories—See page 5-27.

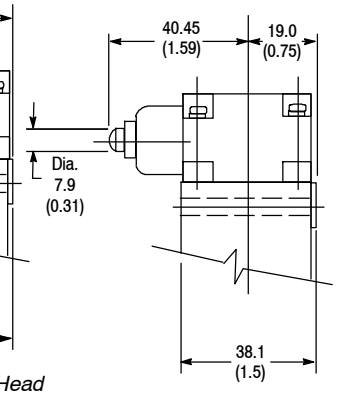
Approximate Dimensions [mm (in.)]

Side Push Types

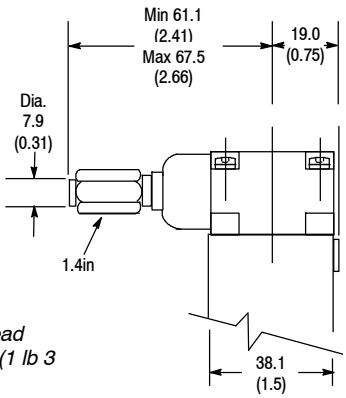




802M-KX Roller Head
Shipping Wt. 0.53 kg (1 lb 3 oz)

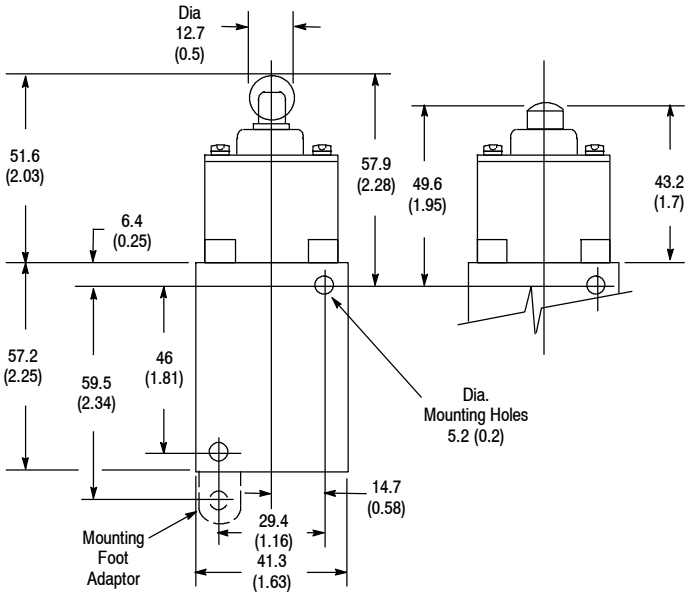


802M-CX Rod Head
Shipping Wt. 0.53 kg (1 lb 3 oz)

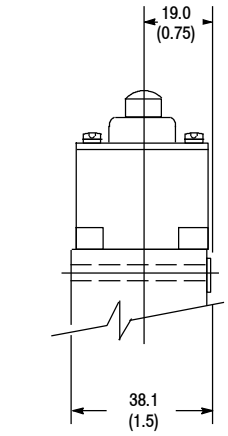


802M-CAFX Adjustable Head
Shipping Wt. 0.53 kg (1 lb 3 oz)

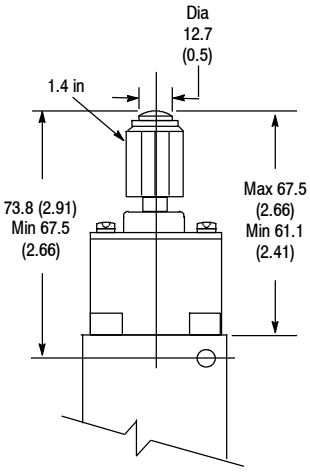
Top Push Types



802M-DX Roller Head
Shipping Wt. 0.53 kg (1 lb 3 oz)



802M-BX Rod Head
Shipping Wt. 0.53 kg (1 lb 3 oz)



802M-BAX Adjustable Head
Shipping Wt. 0.53 kg (1 lb 3 oz)

Note: Mounting foot adaptor as shown above is for use with 2-circuit 802M type switches only.

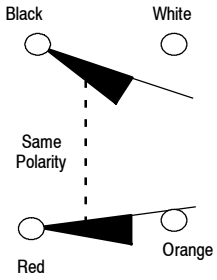
Wiring Diagrams—See page 5-24.
Modifications and Accessories—See page 5-27.

802M Wiring Diagrams for 2-Circuit Models

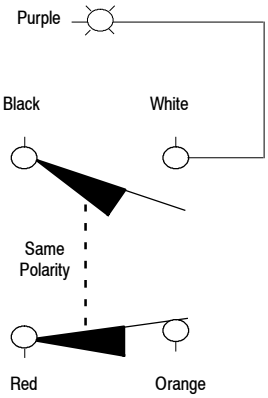
Pre-Wired—Factory Sealed Switches

Cable Models

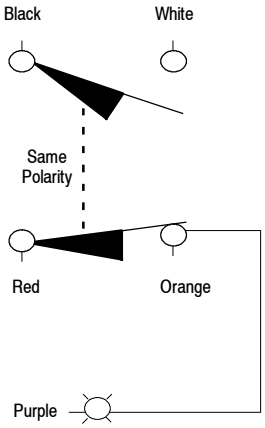
(See Applicable Codes and Laws)



Cable Models with One Indicating Light



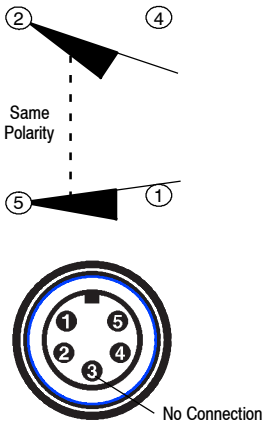
Light Wired to N.O. (White) Wire



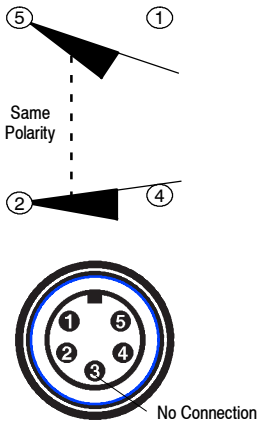
Light Wired to N.C. (Orange) Wire

5-Pin Mini-Type Receptacle

"J1" Wiring

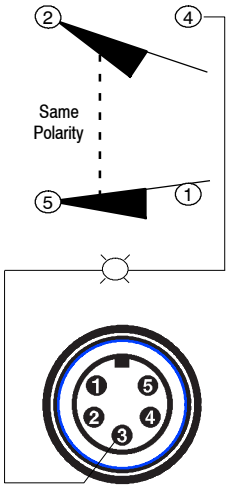


"J9" Wiring

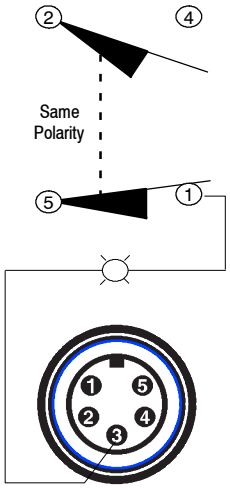


5-Pin Mini-Type Receptacle with One Indicating Light

"J1" Wiring

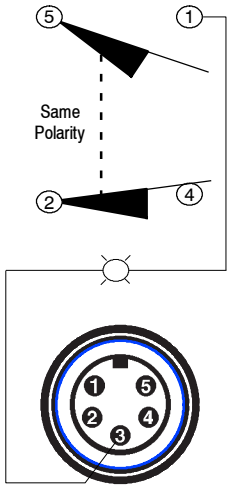


Light Wired to N.O.

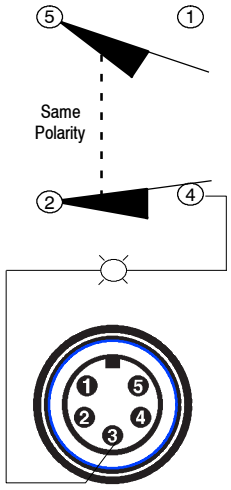


Light Wired to N.C.

"J9" Wiring



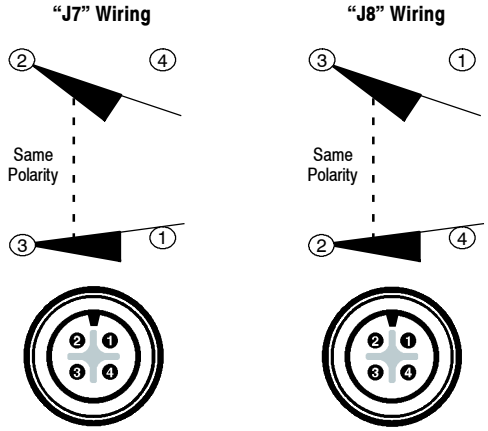
Light Wired to N.O.



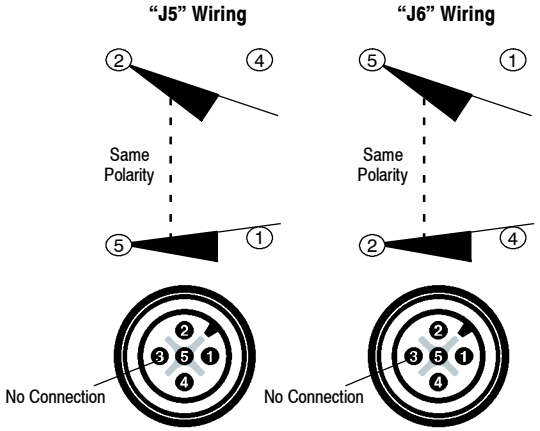
Light Wired to N.C.

802M Wiring Diagrams for 2-Circuit Models

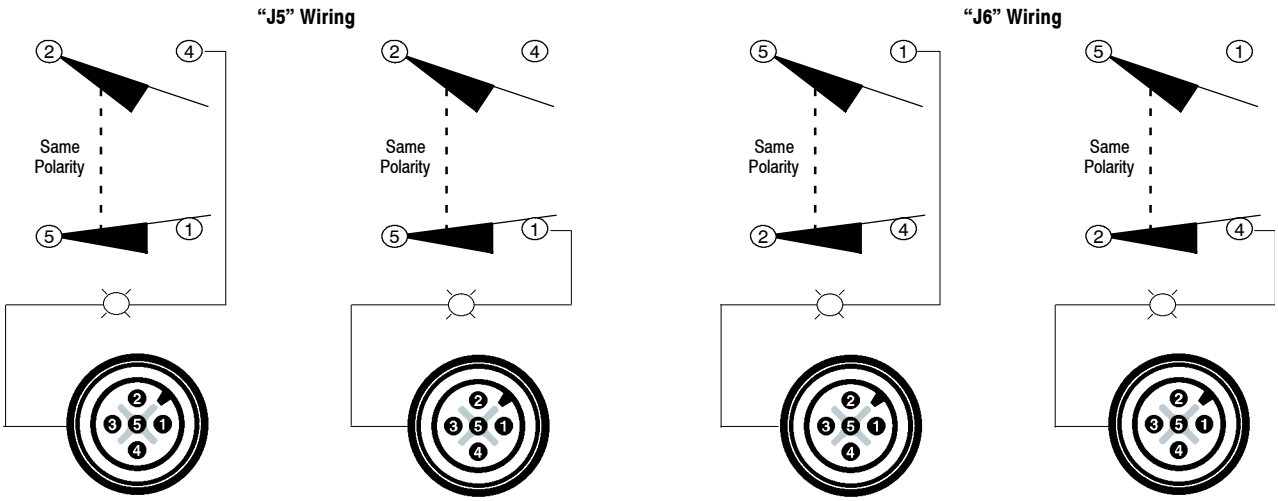
4-Pin Micro-Type Receptacle (DC only)



5-Pin Micro-Type Receptacle (DC only)



5-Pin Micro-Type Receptacle with One Indicating Light (DC only)

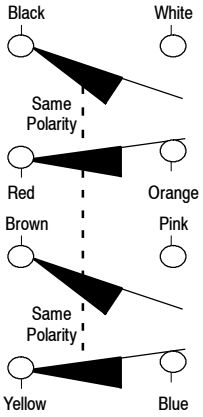


802M Wiring Diagrams for 4-Circuit Models

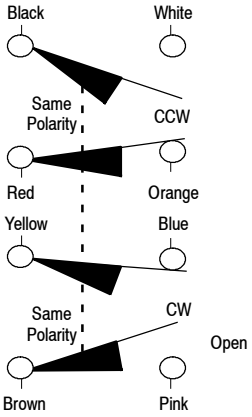
Pre-Wired—Factory Sealed Switches

Cable Models

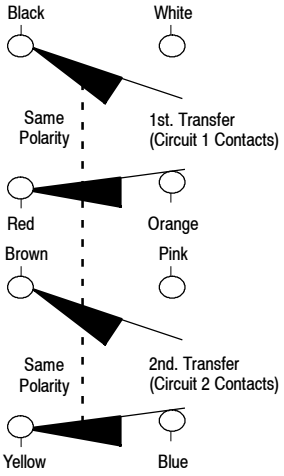
(See Applicable Codes and Laws)



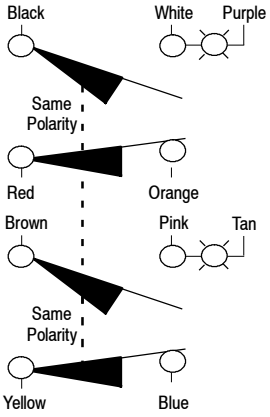
Neutral Position with Cable



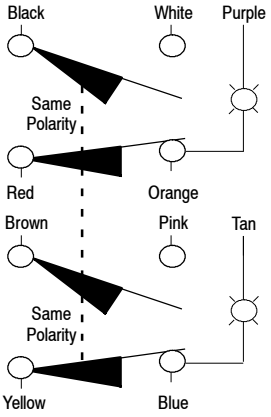
Sequential with Cable



Cable Models with Two Indicating Lights

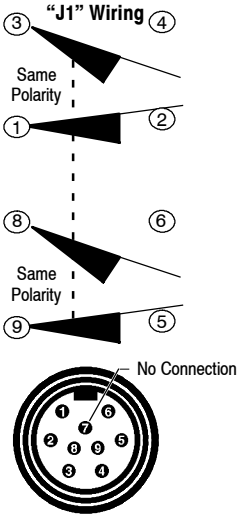


Light Wired to N.O. (White) Wire, and N.O. (Pink) Wire

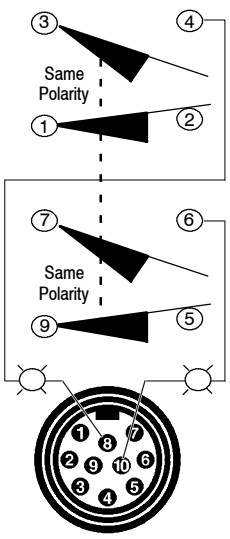


Light Wired to N.C. (Orange) Wire, and N.C. (Blue) Wire

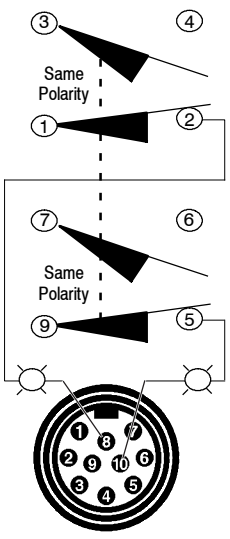
9-Pin Mini-Type Receptacle



10-Pin Mini-Type Receptacle with Two Indicating Lights



Light Wired to N.O.



Light Wired to N.C.

24V DC Switches

All two-circuit 802M limit switches are available with silver-nickel contacts rated for 24V DC applications. To order a switch rated for 24V DC use, insert the letter **Z** before the cable or connector designation. Example: 802M–A**Z**Y5 is a 24V DC version of the 802M–AY5. The use of the 24V DC micro connector option or 24V DC indicating light option require the switch be rated for 24V DC operation.

Extended Cable Lengths

The factory installed type STO cable is normally supplied in 1.52 m (5 ft) lengths. Extended cable lengths are available in multiples of four feet. To order, replace the suffix **Y5** in the cat. no. with the appropriate suffix from the table below. Example: To order a lever type two-circuit spring return switch with 1.83 m (8 ft) of STO cable the cat. no. would be 802M–A**Y8**.

Additional Cable Length

Modification	Cat. Number Suffix
1.83 m (8 ft) Cable	Y8
3.66 m (12 ft) Cable	Y12
4.78 m (16 ft) Cable	Y16

❶ A 5-pin, 9-pin or 10-pin plug-in receptacle is supplied to facilitate retrofitting existing installations. The normal ground wire pin is not required and is not connected inside the switch.

❷ STO is a common identification of this cable. The more complete identification of the cable used on the Bulletin 802M is STOOW-A which incorporates an oil resistant jacket and conductor insulation, for indoor and outdoor use.

5-Pin Mini-Type Receptacle❶ (2-Circuit Models Only)

802M with Mini-Type Receptacle 2-Circuit

To order a Bulletin 802M pre-wired limit switch with a 5-pin mini connector in place of the 1.52 m (5 ft) of "STO"❷ cable, replace the **Y5** in the cat. no. with the suffix **J1** or **J9** depending upon the wiring configuration required. Maximum voltage rating for this receptacle is 250V AC.

An appropriate female connector with cable (889N–F5AFC–6F) is available on page 8–4 in Connection Systems.

9-Pin Mini-Type Receptacle❶ (4-Circuit Models without Indicator Lights Only)

802M with Mini-Type Receptacle 4-Circuit

To order a Bulletin 802M pre-wired limit switch with a 9-pin mini connector in place of the 1.52 m (5 ft) of STO cable, replace the **Y5** in the cat. no. with the suffix **J1**. Maximum voltage rating for this receptacle is 250V AC.

An appropriate female connector with cable (889N–F9AF–2) is available on page 8–14 in Connection Systems.

10-Pin Mini-Type Receptacle❶ (4-Circuit Models with 2 Indicating Lights Only)

To order a Bulletin 802M pre-wired limit switch with a 10-pin mini connector and two indicating lights, replace the **Y5** in the cat. no. with the suffix **J4**. Maximum voltage rating for this receptacle is 250V AC. Also, specify the indicating lights per the table on page 5–28.

Example: Cat. No. 802M–ATY5 with mini-connector and (2) 120V AC indicating lights wired to one side of each N.O. contact would be Cat. No. 802M–AT**J4**L1F.

An appropriate female connector with cable (889N–F10AF–2) is available on page 8–14 in Connection Systems.

4-Pin Micro-Type Receptacle (2-Circuit 24V DC Models Only)

802M with Micro-Type Receptacle—2-Circuit

To order a Bulletin 802M pre-wired limit switch with a 4-pin micro connector in place of the 1.52 m (5 ft) of "STO"❷ cable, replace the **Y5** in the cat. no. with the suffix **J7** or **J8** depending upon the wiring configuration required. This option requires that the switch is rated 24V DC.

An appropriate female connector with cable (889D–F4AC–2) is available on page 8–16 in Connection Systems.

5-Pin Micro-Type Receptacle (2-Circuit 24V DC Models Only)

To order a Bulletin 802M pre-wired limit switch with a 5-pin micro connector in place of the 1.52 m (5 ft) of "STO"❷ cable, replace the **Y5** in the cat. no. with the suffix **J5** or **J6** depending upon the wiring configuration required. This option requires that the switch is rated 24V DC.

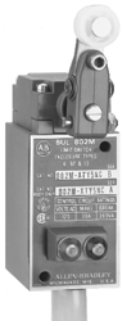
An appropriate female connector with cable (889D–F5AC–2) is available on page 8–16 in Connection Systems.

802M Modifications

Pre-Wired—Factory Sealed Switches

Indicating Lights

802M with Indicating Light
2-Circuit

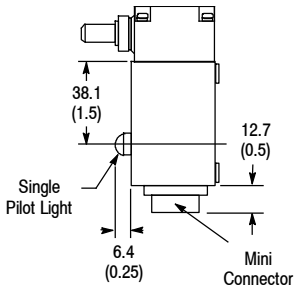


802M with Indicating Lights
4-Circuit

2-Circuit—Bulletin 802M pre-wired limit switches can be supplied with an indicating light which is wired to one side of either the N.O. or N.C. contact. The second lead of the light is available as a fifth conductor for wiring flexibility. See pages 5-24 through 5-25 for wiring diagrams.

To order, add the appropriate suffix listed in the table to the right to the cat. no. Example: Cat. No. 802M-AY5 with a 120V AC LED indicating light wired to one side of the N.O. contact would be Cat. No. 802M-AY5**L1F**.

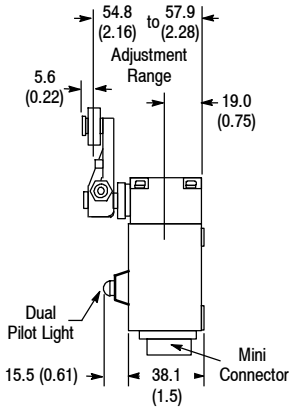
Example: Cat. No. 802M-AY5 with mini-connector and 120V AC indicating light wired to one side of the N.O. contact would be Cat. No. 802M-AJ1**L1F**.



4-Circuit—Bulletin 802M pre-wired limit switches can be supplied with 2 indicating lights wired to one side of each N.O. or N.C. contact of the 4-circuit contact block. Second leads from each light are available as ninth and tenth conductors for wiring flexibility. See page 5-26 for wiring diagram.

To order, add the appropriate suffix listed in the table to the right to the cat. no.

Example: Cat. No. 802M-ATY5 with 120V AC LED indicating lights wired to one side of each N.C. contact would be Cat. No. 802M-ATY5**L1C.**



LED Indicating Lights		
Voltage	**Wired to ❶**	**Cat. No. Suffix**
24V DC ❷	N.O. Contact	LF
	N.C. Contact	LC
120V AC 50-60Hz	N.O. Contact	L1F
	N.C. Contact	L1C

Neon Indicating Lights		
Voltage	**Wired to ❶**	**Cat. No. Suffix**
120V AC 50-60Hz	N.O. Contact	NF
	N.C. Contact	NC
240V AC 50-60Hz	N.O. Contact	N5F
	N.C. Contact	N5C

Fitting for Liquid-Tight Flexible Metal Conduit

802M 2-circuit switches can be obtained provided with a fitting for liquid-tight flexible metal conduit (flexible metal conduit not provided) and a pigtail for wiring. Add the following suffix to the cat. no. (dashes indicate pigtail length):

GS_ straight-out fitting
GF_ front oriented 90° elbow fitting
GL_ left oriented 90° elbow fitting
GB_ back oriented 90° elbow fitting
GR_ right oriented 90° elbow fitting.

Example: GS5=5 foot long pigtail. Additional cable length over 1.5 m (5 ft) is available in multiples of 1.2 m (4 ft).

❶ See wiring diagrams page 5-24…5-26.
❷ Requires the switch be rated for 24V DC operation.

Adaptor Foot

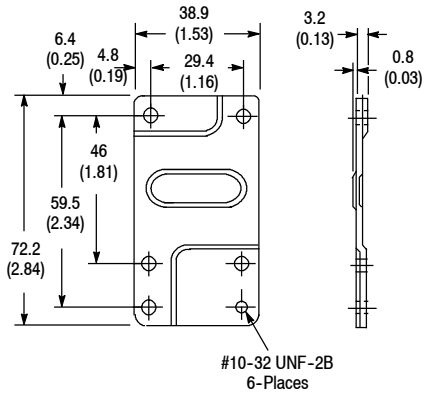
To mount a 2-circuit 802M in the same 1.16 in. x 2.34 in. mounting hole pattern as an 802T, an adaptor foot is required and is included with each 802M as shipped. This accessory is made of steel and is chromate plated to resist corrosion. To obtain replacement adaptor feet, order Cat. No. 40246-008-02.

Rear Mounting Adaptor Kit

For rear mounting of 2-circuit or 4-circuit Bulletin 802M pre-wired limit switch (not suitable for use on Bulletin 802MC).

Kit includes mounting plate and two screws for mounting adaptor plate to switch. To mount to surface from rear use two #10-32 screws. Select proper screw length to pass through adaptor plate without bottoming against back of limit switch.

Order Cat. No. 802M-N1.



Approximate Shipping Wt. 0.2 kg (8 oz)

802MC

Corrosion-Resistant Pre-Wired—Factory Sealed Switches

Description

The Bulletin 802MC is a pre-wired limit switch especially designed to provide additional corrosion protection in wet or dry locations commonly found in industrial process. By using a polymeric enclosure and Type 316 stainless steel for the exposed metal parts, the Bulletin 802MC provides a tougher defense against environmental contaminants to provide the user with more dependable operation and longer lasting performance. In addition, this switch is factory sealed and is particularly effective in applications where it may be subjected to dust, dirt, streams of liquids or occasionally submerged in fluids.

Specifications

Enclosure Rating	NEMA 1, 4X, 6P, 13 and IP66/67 (IEC529)
Pollutions Degree	3
Certifications	UL Listed, CSA Certified and CE Marked for applicable directives
Ambient Temperature [C (F)]❶	0…+80° (+32…+180°)

AC Contact Rating (Maximum per Pole, 50 or 60Hz, 2 Circuits Same Polarity)

NEMA Rating Designation	Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A600 AC-15	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720
	480	15	1.50	10	7200	720
	600	12	1.20	10	7200	720

DC Contact Rating (Maximum per Pole, 2 Circuits Same Polarity)

Nominal Voltage	A	Continuous Carrying Current
24	1.1	5

❶ Minimum temperature is based on the absence of freezing moisture or water.

Applications

Typical examples of Bulletin 802MC applications are plating facilities, chemical or fertilizer plants, meat packing plants, dairies, breweries and other processing industries, where equipment might be hosed down regularly with cleaning solutions.

Features

- Pre-wired and factory sealed
- Corrosion resistant
- Submersible

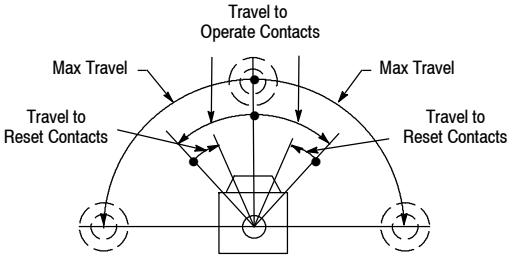
Corrosion-Resistant Pre-Wired

Visit our website: *www.ab.com/catalogs*.
Preferred availability cat. nos. are printed in **bold**.

802MC Lever Type • Spring Return

Corrosion-Resistant Pre-Wired—Factory Sealed Switches

Range of Operation

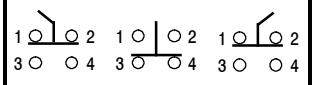
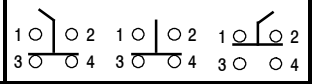
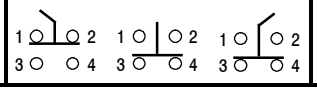


Complete Switch Without Lever

Operator Head Only

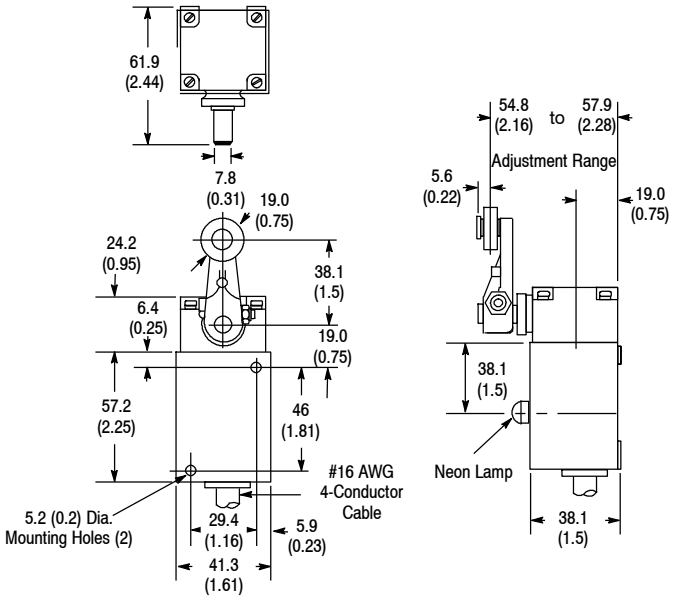
Base Only

Product Selection

No. of Circuits	Lever Movement vs. Contact Operation		Torque to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No.		
							Complete Switch w/o Lever ❶	Operator Head Only	Switch Only ❶
2	Clockwise or Counterclockwise		0.34 N•m (3 lb•in)	15°	86°	6°	**802MC-AY5**	**802MC-AX**	802MC-XY5
	Clockwise						802MC-A1Y5	802MC-A1X	
	Counterclockwise						802MC-A2Y5	802MC-A2X	

❶ The standard length of STO cable is 1.52 m (5 ft). For other lengths, see Modifications and Accessories.

Approximate Dimensions [mm (in.)]



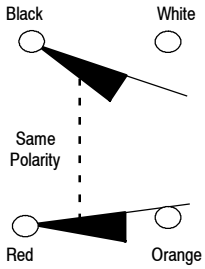
Levers—See page 5-130 for a complete listing of operating levers.
Wiring Diagrams—See page 5-32.
Modifications and Accessories—See page 5-33.

802MC Wiring Diagrams

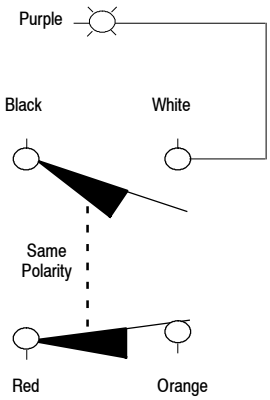
Corrosion-Resistant Pre-Wired—Factory Sealed Switches

Cable Models

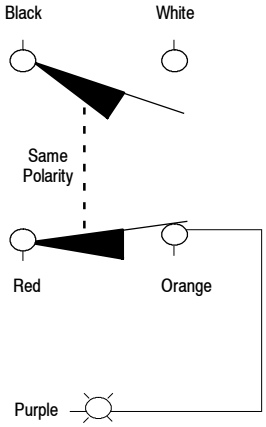
(See Applicable Codes and Laws)



Cable Models with Indicating Light

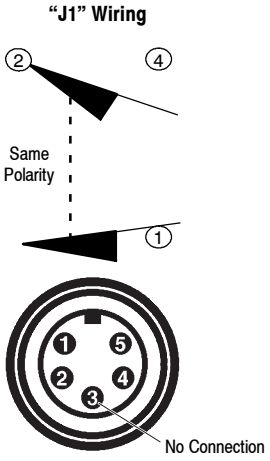


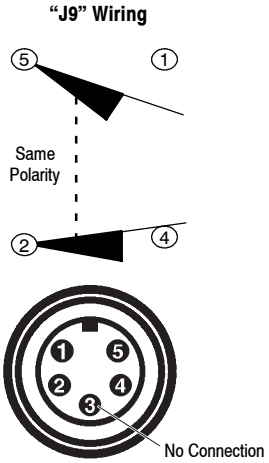
Light Wired to N.O. (White) Wire



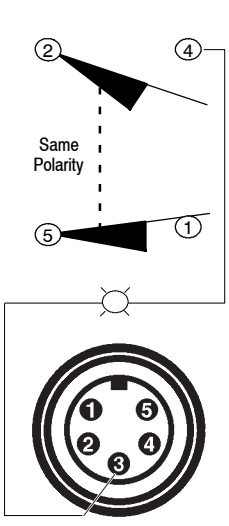
Light Wired to N.C. (Orange) Wire

5-Pin Mini-Type Receptacle

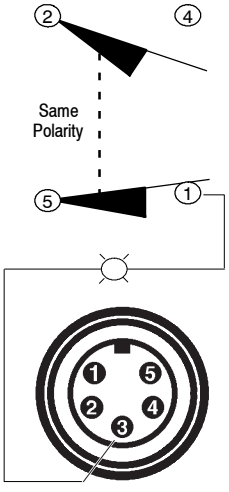




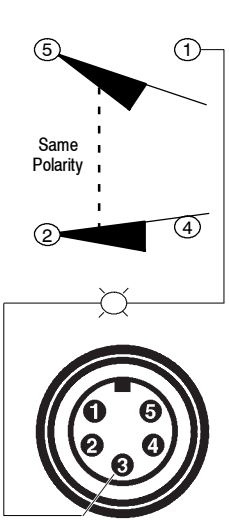
5-Pin Mini-Type Receptacle with Indicating Light



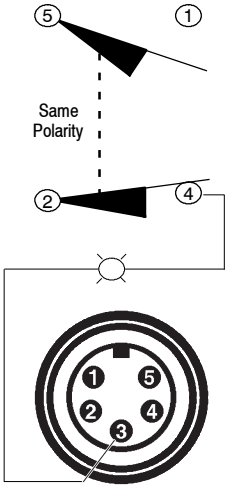
Light Wired to N.O.



Light Wired to N.C.



Light Wired to N.O.



Light Wired to N.C.

Neon Indicating Light

5-Pin Mini-Type Receptacle

Indicating Light

Bulletin 802MC pre-wired limit switches can be supplied with an indicating light wired to one side of either the N.O. or N.C. contact. The second lead of the light is available as a fifth conductor for wiring flexibility.

To order, add the appropriate suffix listed in the table below to the cat. no.. Example: Cat. No. 802MC–AY5 with a 120V AC LED indicating light wired across the N.O. contact would be Cat. No. 802MC–AY5**L1F**.

LED Indicating Light

Voltage	Wired to	Cat. No. Suffix
24V DC ❶	N.O. Contact	LF
	N.C. Contact	LC
120V AC 50–60 Hz	N.O. Contact	L1F
	N.C. Contact	L1C

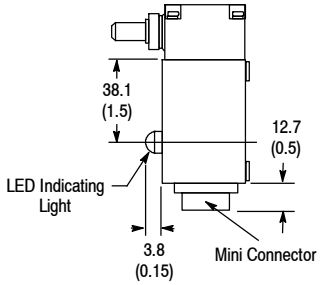
Neon Indicating Light

Voltage	Wired to	Cat. No. Suffix
120V AC 50–6 0Hz	N.O. Contact	NF
	N.C. Contact	NC
240V AC 50–60 Hz	N.O. Contact	N5F
	N.C. Contact	N5C

5-Pin Mini-Type Receptacle❷—2-Circuit Contact Block

To order a Bulletin 802MC pre-wired limit switch with a 5-pin mini connector in place of the 1.52 m (5 ft) of "STO"❸ cable, replace the **Y5** in the cat. no. with the suffix **J1** or **J9** depending upon the wiring configuration required. Maximum voltage rating for this receptacle is 250V AC.

An appropriate female connector with cable (889N–F5AFC–6F) is available on page 8–4 in Connection Systems.



❶ Requires switch to be rated for 24V DC operation.

❷ A 5-pin mini-type receptacle is supplied to facilitate retro-fitting existing installations. The normal ground wire pin is not required and is not connected inside the switch.

❸ STO is a common identification of this cable. The more complete identification of the cable used on the Bulletin 802M is STOOW–A which incorporates an oil resistant jacket and conductor insulation, for indoor and outdoor use.

Cable Length

The factory installed pre-wired, type STO cable is normally supplied in 1.52 m (5 ft) lengths. Extended cable lengths are available in multiples of 4 feet. To order, replace the suffix **Y5** in the cat. no. with the appropriate suffix from the table below. Example: To order a lever type spring return switch with 1.83 m (8 ft) of STO cable the cat. no. would be 802MC–A**Y8**.

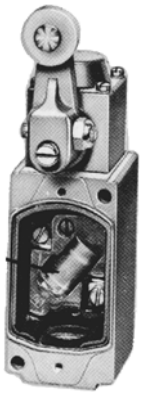
Modification	Cat. No. Suffix
1.83 m (8 ft) Cable	Y8
3.66 m (12 ft) Cable	Y12
4.78 m (16 ft) Cable	Y16

2-Circuit 24V DC Switches

All 2-circuit 802MC limit switches are available with silver-nickel contacts and rated for 24V DC applications. To order a switch rated for 24V DC use, insert the letter **Z** before the cable or connection designation. Example: 802MC–A**Z**Y5 is a 24V DC version of the 802MC–AY5. The use of the 24V DC pilot light option requires the switch be rated for 24V DC operation.

802R
Sealed Contact Switches

Sealed Contact Switch



802R-AF (cover removed) with 802T-W1 Lever

Description

This sealed contact limit switch features a rugged single contact, hermetically sealed in a glass envelope, that has excellent contact reliability even in contaminated atmospheres. The switch is Programmable Controller compatible (24V and above) and is pilot duty rated NEMA B600 for AC and NEMA P300 for DC as shown on page 5–35. The enclosure is NEMA Type 13.

Lever Type Switches

These switches can be equipped with any one of seven different operating levers: roller lever, adjustable roller lever, micrometer adjustment roller lever, rod lever, one-way rod or roller lever and fork lever. These can be used interchangeably on all lever type switches **except the low operating force switch**, which requires the lever indentified by Cat. No. 802T–W5.

The micrometer adjustment roller lever, Cat. No. 802T–W6, is designed especially for installations where the position of the roller is a critical factor. This lever has a pivoted roller which can be turned laterally. After clamping the lever to the switch shaft, the position of the roller can be precisely adjusted through an arc of 7.5° on either side of the center or straight-line position.

Push Type Switches

Switches in this category are actuated by means of a rod or plunger located on the top or side of the operating head. Pushing the plunger into the head causes the contacts to operate. Three types of plungers are available: push rod, adjustable push rod and steel push roller.

Wobble Stick and Cat Whisker Type Switches

Both switches are actuated by a rod or wire extending from the top of the operating head. Moving the rod through a specified angle in any direction causes the contacts to operate. All wobble stick and cat whisker switches are supplied with spring return construction only.

Ambient Temperature Range

Bulletin 802R limit switches, except devices with wobble stick or cat whisker operators, have an ambient temperature range of –29…+121°C (–20…+250°F). Wobble stick and cat whisker limit switches are rated from –18…+54°C (0…+130°F).
Note: Temperature ranges below 0°C (+32°F) are based on the absence of freezing moisture or water.

Underwriters' Laboratories, Inc. Listed, CSA Certified

These switches are listed by Underwriters' Laboratories, Inc. for use in **Class 1, Division 2, Groups A, B, C and D hazardous locations** as defined by the National Electrical Code.

802R-AF

Description

This sealed contact limit switch features a rugged single contact, hermetically sealed in a glass envelope, that has excellent contact reliability even in contaminated atmospheres. The switch is Programmable Controller compatible (24 volts and above) and is pilot duty rated NEMA B600 for AC and NEMA P300 for DC as shown to the right. The enclosure is NEMA Type 13.

Specifications

Enclosure Rating	NEMA 13
Approvals	UL Listed and CSA Certified
Ambient Temperature [C (F)]	-29…+121° (-20…+250°) Exception: Wobble stick and cat whisker devices are rated from -18…+54° (0…+130°)

AC Contact Rating (Maximum per Pole, 50 or 60 Hz, Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
B600	120	30	3.00	5	3600	360
	240	15	1.50	5	3600	360
	480	7.5	0.75	5	3600	360
	600	6	0.60	5	3600	360

DC Contact Rating (Maximum per Pole, Same Polarity)

NEMA Rating Designation	Voltage Range	Current Rating
P300	115…125	1.1 A
	230…250	0.55 A

Features

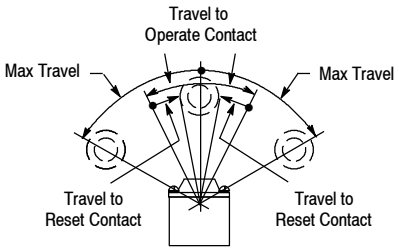
- PLC compatible
- High contact reliability in contaminated atmospheres

Sealed Contact

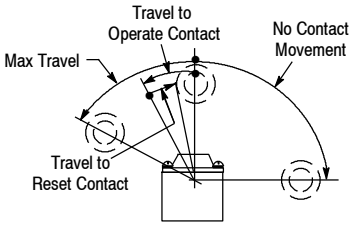
802R Lever Type • Spring Return

Sealed Contact Switches

Range of Operation



Lever Operation with Standard Levers



Lever Operation When "One-Way" Levers 802T-W7 or W8 Are Used

802R-AF Without Lever

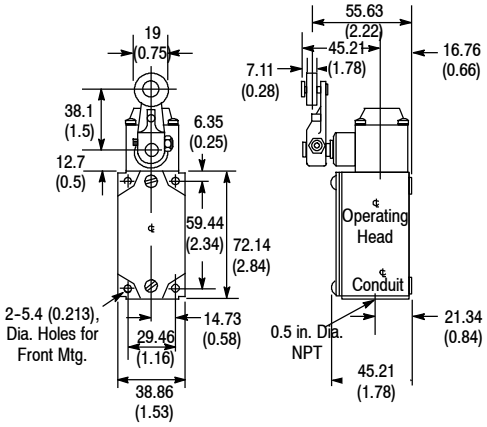
802R-ALFW5

Product Selection—Standard and Low Operating Torque Models

Lever Movement	Torque to Operate (Max.)	Travel to Operate Contact (Max.)	Max Travel	Travel to Reset Contact (Max.)	Contact Type	Cat. No.
Clockwise or Counterclockwise	0.34 N.m (3 lb•in)	16°	42°	9°	N.O.	**802R-AF**
					N.C.	802R-AC
	0.51 N.m (4.5 lb•in)	7°	53°	3.5°	N.O.	802R-HF
					N.C.	802R-HC
Clockwise			50°		N.O.	802R-H1F
					N.C.	802R-H1C
Counterclockwise					N.O.	802R-H2F
					N.C.	802R-H2C
Clockwise Lever cannot move counterclockwise	0.45 N.m (4 lb•in)	20°	91°	11°	N.O.	802R-L1F
					N.C.	802R-L1C
Counterclockwise Lever cannot move clockwise					N.O.	802R-L2F
					N.C.	802R-L2C
Clockwise or Counterclockwise	0.09 N•m (0.78 lb•in)	22°	43°	12°	N.O.	802R-ALFW5 ❶
					N.C.	802R-ALCW5 ❶
Clockwise Lever cannot be moved counterclockwise					N.O.	802R-AL1FW5 ❶
					N.C.	802R-AL1CW5 ❶
Counterclockwise Lever cannot be moved clockwise					N.O.	802R-AL2FW5 ❶
					N.C.	802R-AL2CW5 ❶

❶ These low operating force limit switches can only be supplied with the catalog number **802T-W5** rod lever. The rod can easily be formed to meet special application requirements. The contact is restored to its normal position when pressure on the rod is released.

Approximate Dimensions [mm (in.)]

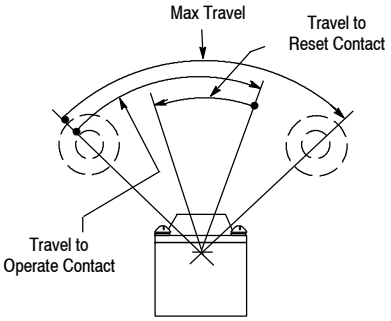


Standard Switch with 802T-W1 Lever
Shipping Wt. 0.35 kg (12.5 oz)

Note: Details regarding wiring Allen-Bradley Limit Switches to Allen-Bradley PLCs can be found in publications 802T-4.0, 4.1, 4.2, and 4.3.

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-39.

Range of Operation



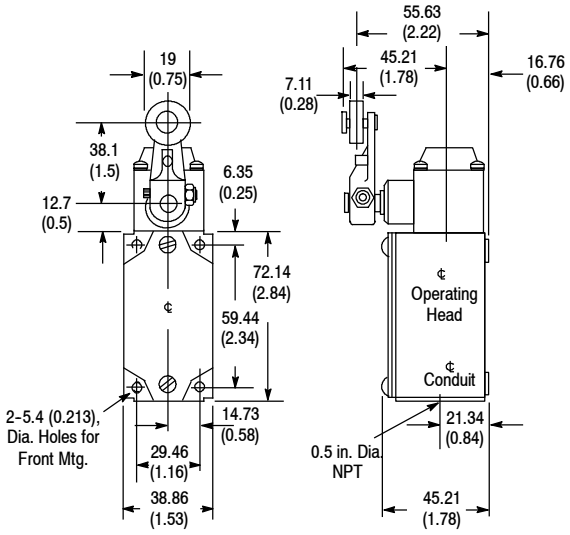
Switch Without Lever

Product Selection

Lever Movement	Torque to Operate (Max)	Travel to Operate Contact (Max)	Max Travel	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Clockwise or Counterclockwise	0.25 N•m (2.25 lb•in)	70° ❶	84° ❶	35°	N.O.	802R-AMF
					N.C.	802R-AMC

❶ From one maintained position to the other.

Approximate Dimensions [mm (in.)]



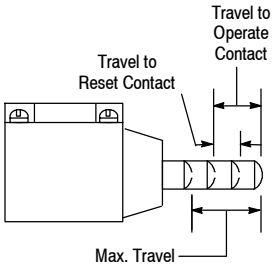
Standard Switch with 802T-W1 Lever
Shipping Wt. 0.35 kg (12.5 oz)

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-39.

802R Push Type • Spring Return

Sealed Contact Switches

Range of Operation

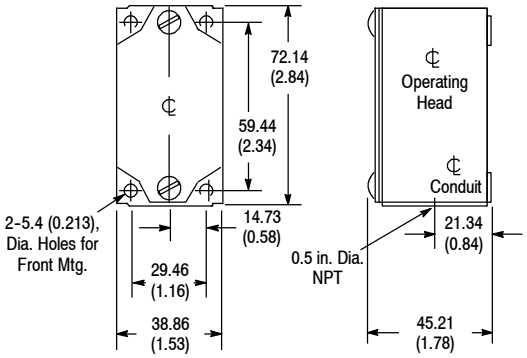


Top Push Rod | *Adjustable Top Push Rod* | *Side Push Rod* | *Top Push Roller* | *Side Push Roller*

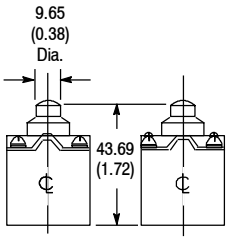
Product Selection

Operator Type	Force to Operate (Max)	Travel to Operate Contact (Max)	Max Travel	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Top Push Rod	15.6 N (3.5 lb)	1.75 mm (0.069 in.)	5.13 mm (0.202 in.)	0.71 mm (0.028 in.)	N.O.	802R-BF
					N.C.	802R-BC
Adjustable Top Push Rod					N.O.	802R-BAF
					N.C.	802R-BAC
Side Push Rod	20.0 N (4.5 lb)	3.18 mm (0.125 in.)	5.54 mm (0.218 in.)	1.45 mm (0.057 in.)	N.O.	802R-CF
					N.C.	802R-CC
Top Push Roller	15.6 N (3.5 lb)	1.75 mm (0.069 in.)	5.13 mm (0.202 in.)	0.71 mm (0.028 in.)	N.O.	802R-DF
					N.C.	802R-DC
Side Push Vertical Roller	20.0 N (4.5 lb)	3.18 mm (0.125 in.)	5.54 mm (0.218 in.)	1.45 mm (0.057 in.)	N.O.	802R-KF
					N.C.	802R-KC
Side Push Horizontal Roller					N.O.	802R-K1F
					N.C.	802R-K1C

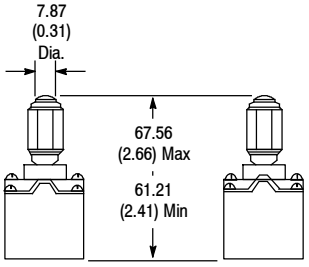
Approximate Dimensions [mm (in.)]



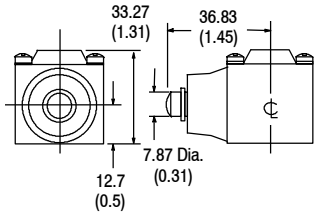
Standard Switch
Shipping Wt. 0.35 kg (12.5 oz)



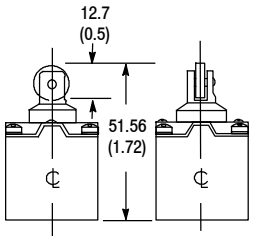
Z-36615
Top Push Rod Head
Shipping Wt. 0.12 kg (4.25 oz)



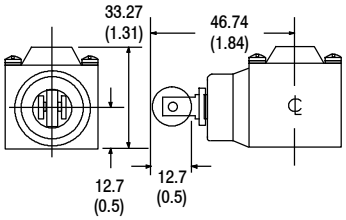
40182-022-52
Adjustable Top Push Rod Head
Shipping Wt. 0.12 kg (4.25 oz)



Z-36616
Side Push Rod Head
Shipping Wt. 0.12 kg (4.25 oz)



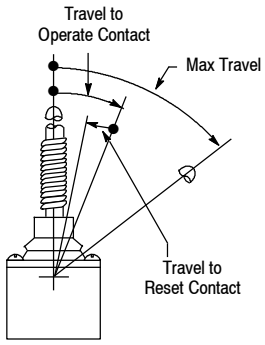
Z-36618
Top Push Roller Head
Shipping Wt. 0.12 kg (4.25 oz)



Z-36622
Side Push Vertical Roller Head
Shipping Wt. 0.12 kg (4.25 oz)

Modifications and Accessories—See page 5-39.

Range of Operation ❶



Wire Wobble Stick

Cat Whisker

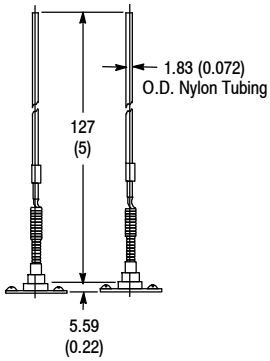
Product Selection

Operator Type	Torque to Operate (Max.)	Travel to Operate Contact (Max.)	Max Travel ❶	Travel to Reset Contact (Max.)	Contact Type	Cat. No.
Wire Wobble Stick	0.51 N•m (4.5 lb•in)	11°	11°	5°	N.O.	802R-WS1F ❷
					N.C.	802R-WS1C ❷
Wire Cat Whisker	0.06 N•m (8 oz•in)	25°	25°	14°	N.O.	802R-CWF ❷
					N.C.	802R-CWC ❷

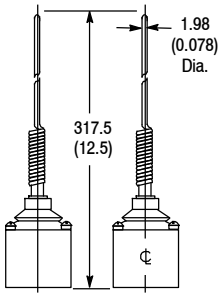
❶ These switches should be mounted in such a way that the wobble or cat whisker will not be deflected beyond the "Maximum Travel" position. This is to avoid excessive backlash, which could cause undesirable repetition of contact action.

❷ Ambient temperature -18°C…54°C (0°F…130°F).

Approximate Dimensions [mm (in.)]



Z-35607
Cat Whisker Head
Shipping Wt. 0.3 kg (1 oz)



Z-35617
Wire Wobble Stick Head
Shipping Wt. 0.17 kg (6 oz)

Modification for Transparent Cover

Switches can be furnished with a gasketed, transparent plastic cover. This modification enables the electrician to inspect terminal wiring without removing the switch cover. To order, add the letter **Z** to the cat. no. of the standard switch. Example: Cat. No. 802R-DF becomes Cat. No. 802R-DF**Z**.

Conduit Seal Cat. No. 802T-N3

A synthetic rubber conduit seal is available to protect the conduit opening against the ingress of oil into the wiring compartment. Each wire hole in the seal has a thin inner wall which is pierced when a wire is passed through. Thus, any unused opening remains sealed.

Special Conduit Lock Nut Cat. No. 802T-X4

This option, a "Tru-Seal" lock nut with threaded PTFE insert, is a valuable accessory for any Bulletin 802R which is connected by means of conduit.

Plug-in Style 802T-AP with Lever

NonPlug-in Style 802T-A with Lever

Description

Bulletin 802T limit switches are ideal for applications in which heavy duty pilot ratings, small size, a high degree of versatility and a rugged NEMA Type 4 and 13 oiltight construction are desirable. An important factor in the automation of industry, these limit switches are being applied extensively on conveyor systems, transfer machines, automatic turret lathes, milling and boring machines, radial drills, and many other types of modern, high speed production equipment.

High Degree of Versatility

Bulletin 802T limit switches can be mounted in any position, with operating heads that can be rotated and fastened in any one of four positions 90° apart. Most operating levers are interchangeable and can be rotated and clamped in any position through 360°. Accessories can be added to switches already in the field.

NEMA Type 4, 13 and 6P ❶ Oiltight Construction

802T limit switches feature NEMA Type 4 and 13 construction with synthetic rubber seals to protect the operating parts against entry of oil, dust, abrasives, water and coolant, within the limits of NEMA-specified tests.

❶ Plug-in lever type except low-torque models.

Rugged, Dependable Contact Block

The contacts used in Bulletin 802T switches are snap-action type with high snap-through force resulting in minimum contact rebound. Double break, fine silver contacts are electrically independent, but cannot be used on opposite polarities.

Easy Mounting and Wiring

Each switch base has four mounting holes: two “through” holes for front mounting and two tapped holes in the back for rear mounting. The pressure plate type terminals on the contact block face to the front of the switch and have ample wiring space around them. The switch conduit opening is a $^{1}/_{2}$-inch threaded pipe tap in the bottom of the housing.

Direct Opening Action Position Interlock Switches

Bulletin 802T Direct Opening Action limit switches have been designed for use in control reliable applications and safety applications per ISO 14119.

Direct Opening Action assures that the normally closed contacts open when the limit switch is actuated. This opening will occur even in the event of a contact weld condition, up to 10 Newtons.

Lever Type Switches

These switches are operated by means of a lever which is clamped to a knurled shaft extending from the operating head.

Lever type switches can be equipped with a variety of operating levers: roller lever, adjustable roller lever, micrometer adjustment roller lever, rod lever, one-way rod or roller lever and fork lever. These can be used interchangeably on all lever type switches except the **low operating force switch.**

Push Type Switches

These switches are actuated by means of a rod or plunger located on the top or side of the operating head. Pushing the plunger into the head causes the contacts to operate. Two types of plungers are available: rod type and steel roller. Side push rod switches can be supplied in spring return or maintained contact constructions. An adjustable length top push rod is also available. The contacts are snap-acting with high snap-through force resulting in minimum contact rebound.

Wobble Stick and Cat Whisker Type Switches

Both switches are actuated by a rod or wire extending from the top of the operating head. Moving the rod through a specified angle in any direction causes the contacts to operate. All wobble stick and cat whisker switches are supplied with spring return construction only. The contacts are snap-action type with high snap-through force resulting in minimum contact rebound.

Dual Switches

The dual switch is actually two limit switches which function independently but have a co mm on enclosure. These switches are used for installations where two switches would be mounted side by side. There is a saving on installation time and fittings (see page 5-71).

Plug-in Switches

Plug-in style limit switches can reduce costly downtime by eliminating the need for rewiring switches. The head and switch body can be replaced without disturbing the wiring chamber in the base. These units, featuring a castle lock head design, snap-action contacts and reliable plug-in connection are available in 2-circuit or 4-circuit construction. Plug-in style limit switches are listed on page 5-41.

Four-Circuit NonPlug-in Switches

These switches contain two single pole single throw contact blocks (a total of two N.O. and two N.C. contacts) mounted in a co mm on enclosure. The blocks are mounted one above the other in the vertical limit switch construction, or side by side in the horizontal construction. Switch plungers are mechanically coupled in both constructions. When actuated, contacts in both blocks are operated. These switches in both types of construction are listed on page 5-54.

General Information

Plug-in Style . . . . . page 5-41
NonPlug-in Style . . . . . page 5-54

Operating Levers

Lever Selection . . . . . page 5-130

Description

Bulletin 802T limit switches are ideal for applications in which heavy duty pilot ratings, small size, a high degree of versatility and a rugged NEMA Type 4, 13 and 6P❶ construction are desirable. An important factor in the automation of industry, these limit switches are being applied extensively on conveyor systems, transfer machines, automatic turret lathes, milling and boring machines, radial drills, and many other types of modern, high speed production equipment.

A wide variety of operating heads and operating levers are available. Operating heads can be mounted in four positions, 90° apart.

Features

- Front mount for simplified mounting
- Plug-in style for ease of wiring
- Side rotary, wobble stick, cat whisker, adjustable top and top or side push styles with and without rollers
- Quick mode change to clockwise and counterclockwise operation only
- Castle lock head design for high durability

Specifications

Enclosure Rating	NEMA 4, 13, 6P❶ and IP67
Pollution Degree	3
Certifications	UL Listed, CSA Certified CE Marked for applicable directives
Ambient Temperature [C (F)]❷	-18…+110° (0…+230°) Exception: Wobble stick and cat whisker devices are rated from -18…+54° (0…+130°)

AC Contact Rating (Maximum per Pole, 50 or 60 Hz, 2 Circuits Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A600 AC-15	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720
	480	15	1.50	10	7200	720
	600	12	1.20	10	7200	720
B600❸ AC-15	120	30	3.00	5	3600	360
	240	15	1.50	5	3600	360
	480	7.5	0.75	5	3600	360
	600	6	0.60	5	3600	360

AC Contact Rating (Maximum per Pole, 50 or 60 Hz, 4 Circuits Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A300	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720

DC Contact Rating (Maximum per Pole)

Circuits	Voltage Range	Current Rating
2	115-125	0.4 A
	230-250	0.2 A
	550-600	0.1 A
4	115-125	0.4 A
	230-250	0.2 A

Plug-in Style

Lever Type • Spring Return page 5-42
Standard and Low Operating Torque Models

Lever Type • Maintained . . page 5-44
Contact and Neutral Position

Push Type • Spring Return . page 5-45

Wobble Stick and Cat . . . . . page 5-47
Whisker • Spring Return

Modifications and . . . . . page 5-53
Accessories

802T Operating Levers

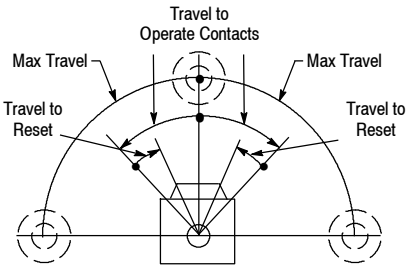
Lever Selection . . . . . page 5-130

❶ Plug-in lever type except low-torque models.
❷ Temperature range below 0 °C (+32 °F) is based on the absence of freezing moisture or water. See page 5-53 for low temperature options.
❸ Low operating torque-spring return ratings only.

802T Lever Type • Spring Return

Plug-in Style Oiltight Switches

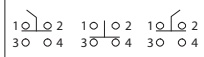
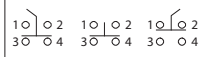
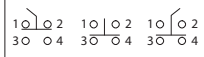
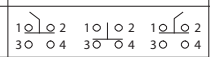
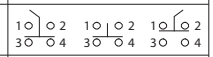
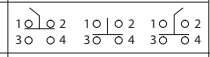
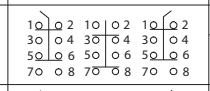
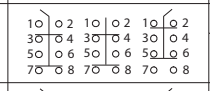
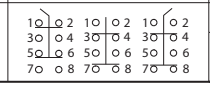
Range of Operation



Switch Without Lever

Switch Without Lever and Base

Product Selection—Standard and Low Operating Torque Models

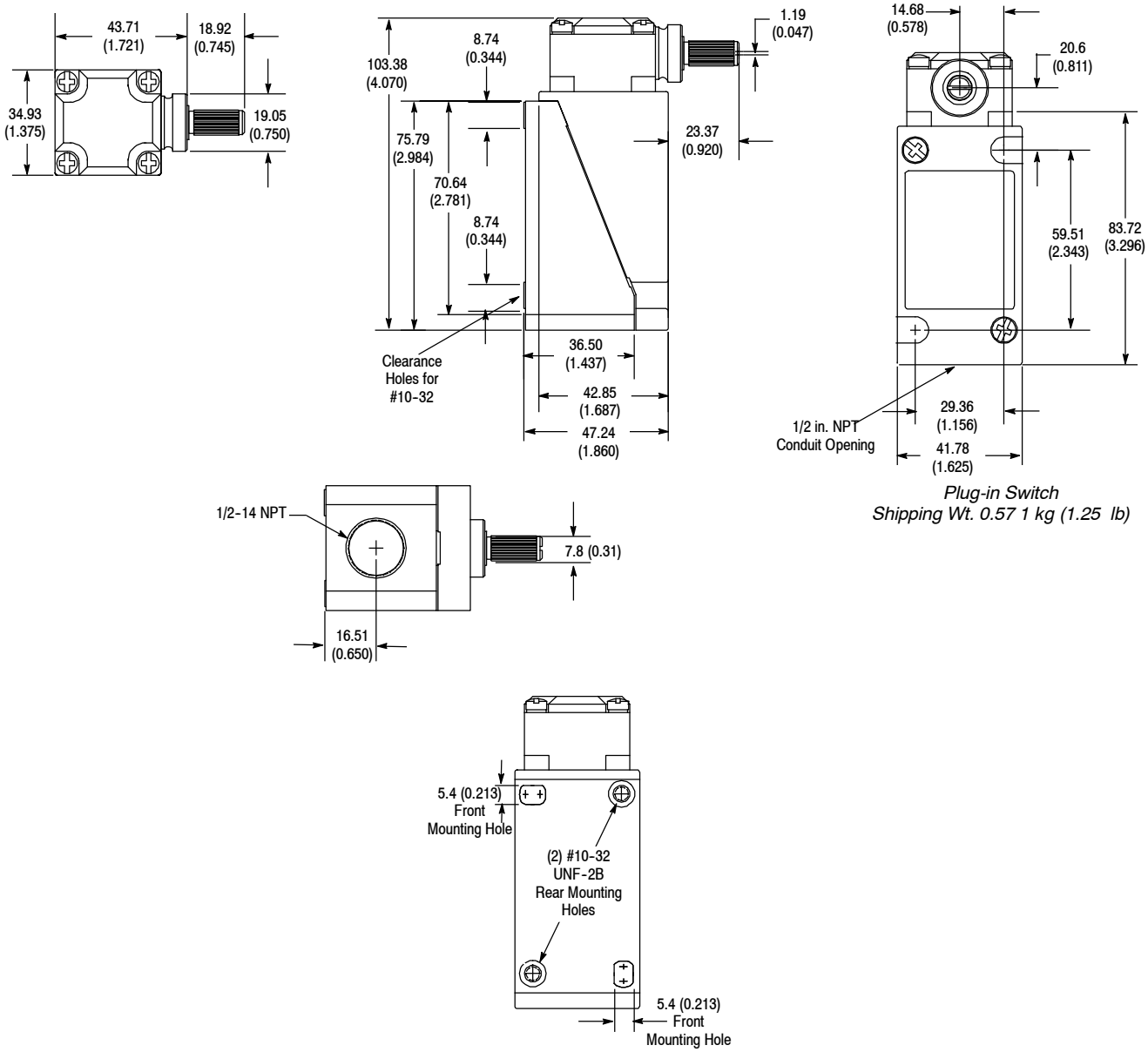
Number of Circuits	Lever Movement vs. Contact Operation		Torque/Force to Operate, Max.	Travel to Operate Contacts, Max.	Max. Travel	Travel to Reset Contacts, Max.	Cat. No. Switch w/o Lever	Cat. No. Switch w/o Lever and Base
2	Clockwise or Counterclockwise		0.29 N•m (2.6 lb•in) Nominal	13°	90°	7°	802T-AP	802T-AP1
				18°			★ 802T-A5P	★ 802T-A5P1
			0.56 N•m (5 lb•in)	5° Nominal		2.5° Nominal	802T-FP	802T-FP1
				9°		4°	802T-HP	802T-HP1
	Clockwise		0.29 N•m (2.6 lb•in)	13°		7°	802T-A1P	802T-A1P1
				18°			★ 802T-A3P	★ 802T-A3P1
			0.56 N•m (5 lb•in)	9°		4°	802T-H1P	802T-H1P1
	Counterclockwise		0.29 N•m (2.6 lb•in)	13°		7°	802T-A2P	802T-A2P1
				18°			★ 802T-A4P	★ 802T-A4P1
			0.56 N•m (5 lb•in)	9°		4°	802T-H2P	802T-A2P1
	Clockwise or Counterclockwise		0.16 N•m (1.5 lb•in)	13°		7°	802T-ALP	802T-ALP1
	Clockwise						‡ 802T-AL1P	‡ 802T-AL1P1
	Counterclockwise						802T-AL2P	802T-AL2P1
4	Clockwise or Counterclockwise		0.45 N•m (4 lb•in)	13°	90°	7°	802T-ATP	802T-ATP1
			0.79 N•m (7 lb•in)	9°		4°	802T-HTP	802T-HTP1
	Clockwise		0.45 N•m (4 lb•in)	13°		7°	802T-A1TP	802T-A1TP1
			0.79 N•m (7 lb•in)	9°		4°	802T-H1TP	802T-H1TP1
	Counterclockwise		0.45 N•m (4 lb•in)	13°		7°	802T-A2TP	802T-A2TP1
			0.79 N•m (7 lb•in)	9°		3.5°	802T-H2TP	802T-H2TP1

★ Fluorinated elastomer shaft seal is supplied with these devices.
‡ Low operating torque model.

Approximate Dimensions—See page 5-43.
Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-53.

New

Approximate Dimensions [mm (in.)]



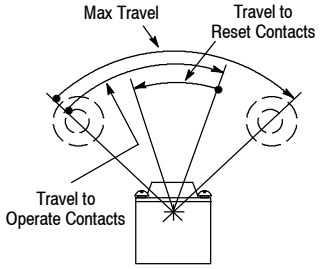
Plug-in Switch
Shipping Wt. 0.57 1 kg (1.25 lb)

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-53.

802T Lever Type • Maintained Contact and Neutral Position

Plug-in Style Oiltight Switches

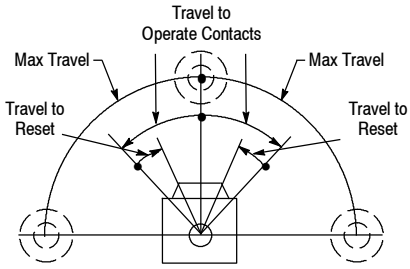
Range of Operation



Maintained Contact Models

Switch Without Lever

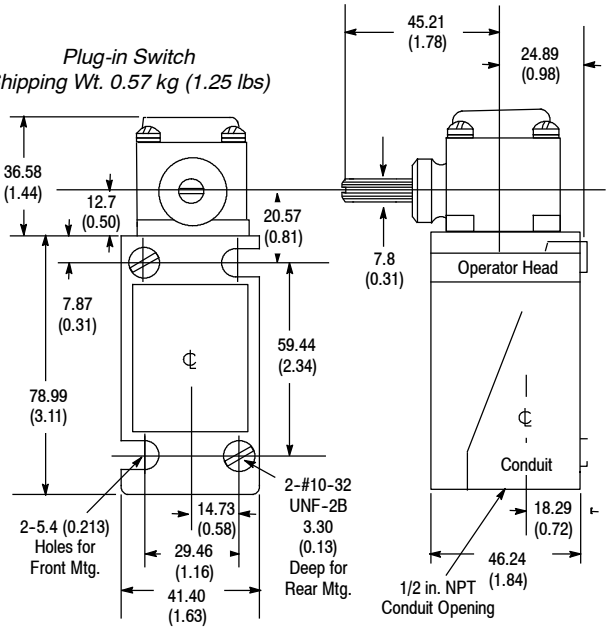
Switch Without Lever and Base



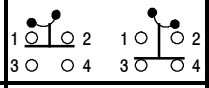
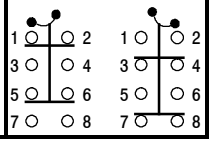
Neutral Position Models

Approximate Dimensions [mm (in.)]

Plug-in Switch
Shipping Wt. 0.57 kg (1.25 lbs)

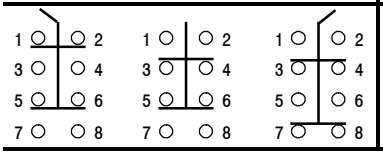


Product Selection—Maintained Contact Models

No. of Circuits	Lever Movement vs. Contact Operation		Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No. Switch w/o Lever	Cat. No. Switch w/o Lever & Base
2	Clockwise or Counterclockwise		0.31 N•m (2.75 lb•in)	70° ❶	88° ❶	32°	**802T-AMP**	802T-AMP1
4	Clockwise or Counterclockwise		0.32 N•m (2.8 lb•in)				**802T-AMTP**	802T-AMTP1

❶ From one maintained position to another.

Product Selection—Neutral Position Models

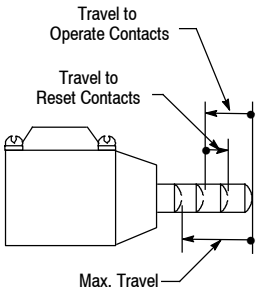
Lever Movement vs. Contact Operation	Torque to Operate (Max.) Clockwise	Torque to Operate (Max.) Counter-clockwise	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No. Switch w/o Lever	Cat. No. Switch w/o Lever & Base
	0.28 N•m (2.5 lb•in)	0.47 N•m (4.2 lb•in)	13°	75°	7°	**802T-NPTP**	802T-NPTP1

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-53.

802T Push Type • Spring Return

Plug-in Style Oiltight Switches

Range of Operation



Top Push Rod | *Adjustable Top Push Rod* | *Side Push Rod* | *Top Push Roller* | *Side Push Horizontal Roller*

Product Selection

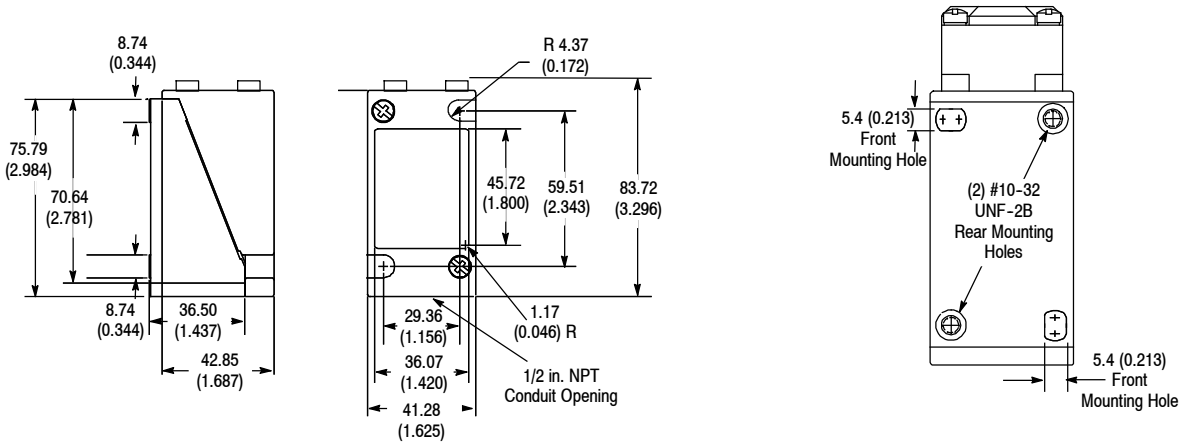
Number of Circuits	Contact Operation		Operator Type	Torque/Force to Operate, Max.	Travel to Operate Contacts, Max.	Maximum Travel	Travel to Reset Contacts, Max.	Cat. No.	
	Normal	Operated						Switch w/o Lever	Switch w/o Lever and Base
2	1○ ○2 3○ ○4	1○ ○2 3○ ○4	Top Push Rod	13.8 N (3.1 lb)	1.4 mm (0.057 in.)	6.0 mm (0.236 in.)	0.9 mm (0.034 in.)	802T-BP	802T-BP1
			Adjustable Top Push Rod					802T-BAP	802T-BAP1
			Side Push Rod	16.4 N (3.7 lb)	3.3 mm (0.131 in.)	5.7 mm (0.226 in.)	1.9 mm (0.074 in.)	802T-CP	802T-CP1
			Top Push Roller	13.8 N (3.1 lb)	1.4 mm (0.057 in.)	6.0 mm (0.236 in.)	0.9 mm (0.034 in.)	802T-DP	802T-DP1
			Side Push Vertical Roller	16.4 N (3.7 lb)	3.3 mm (0.131 in.)	5.7 mm (0.226 in.)	1.9 mm (0.074 in.)	802T-KP	802T-KP1
			Side Push Horizontal Roller					802T-K1P	802T-K1P1
4	1○ ○2 3○ ○4 5○ ○6 7○ ○8	1○ ○2 3○ ○4 5○ ○6 7○ ○8	Top Push Rod	22.2 N (5.0 lb)	1.4 mm (0.057 in.)	6.0 mm (0.236 in.)	0.9 mm (0.034 in.)	802T-BTP	802T-BTP1
			Adjustable Top Push Rod					802T-BATP	802T-BATP1
			Side Push Rod	24.9 N (5.6 lb)	3.3 mm (0.131 in.)	5.7 mm (0.226 in.)	1.9 mm (0.074 in.)	802T-CTP	802T-CTP1
			Top Push Roller	22.2 N (5.0 lb)	1.4 mm (0.057 in.)	6.0 mm (0.236 in.)	0.9 mm (0.034 in.)	802T-DTP	802T-DTP1
			Side Push Vertical Roller	24.9 N (5.6 lb)	3.3 mm (0.131 in.)	5.7 mm (0.226 in.)	1.9 mm (0.074 in.)	802T-KTP	802T-KTP1
			Side Push Horizontal Roller					802T-K1TP	802T-K1TP1

Modifications and Accessories—See page 5-53.

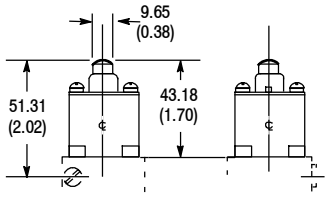
802T Push Type • Spring Return

Plug-in Style Oiltight Switches

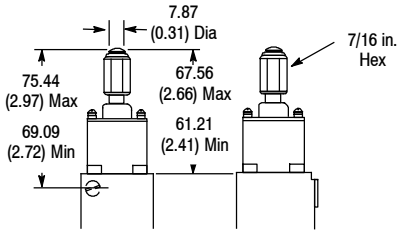
Approximate Dimensions [mm (in.)]



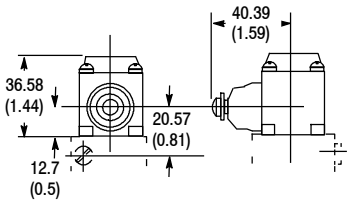
Switch Body



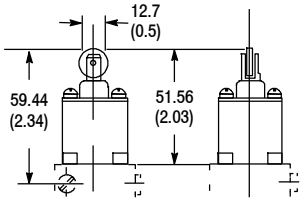
40146-013-59
Top Push Rod Head
Shipping Wt. 0.142 kg (5 oz)



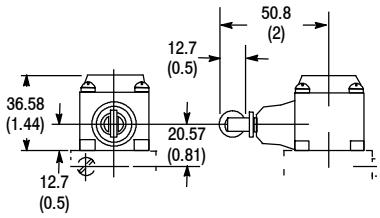
40146-013-65
Adjusted Top Push Rod Head
Shipping Wt. 0.142 kg (5 oz)



40146-017-63
Side Push Rod Head
Shipping Wt. 0.142 kg (5 oz)



40146-013-60
Top Push Roller Head
Shipping Wt. 0.142 kg (5 oz)



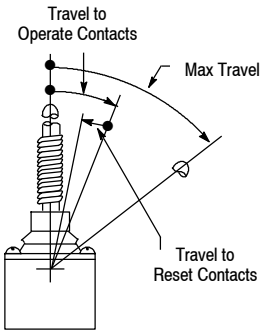
40146-017-64
Side Push Roller Head
Shipping Wt. 0.142 kg (5 oz)

Modifications and Accessories—See page 5-53.

802T Wobble Stick and Cat Whisker • Spring Return

Plug-in Style Oiltight Switches

Range of Operation❶

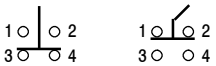


Wobble Stick
Nylon Extension

Wobble Stick
Wire Extension

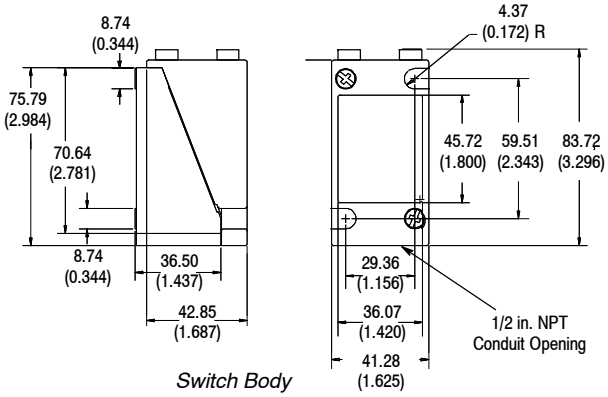
Wire Cat
Whisker

Product Selection

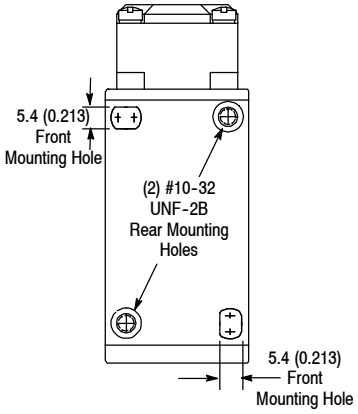
Operator Type	Contact Operation	Torque to Operate (Max.) ❷	Travel to Operate Contacts (Max.)❷	Max Travel❶❷	Travel to Reset Contacts (Max.)❷	Cat. No.	
						Complete Switch	Switch Without Base
Nylon Wobble Stick		0.51 N•m (4.5 lb•in)	9°	10°	5°	**802T-WSP**	802T-WSP1
Wire Wobble Stick						**802T-WS1P**	802T-WS1P1
Wire Cat Whisker		0.06 N•m (8 oz•in)	21°	28°	14°	**802T-CWP**	802T-CWP1

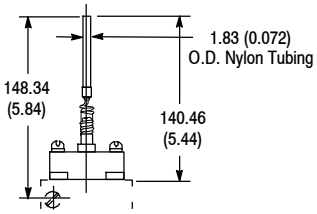
❶ These switches should be mounted in such a way that the wobble stick or cat whisker will not be deflected beyond the "Maximum Travel" position, as this could cause undesirable repetition of contact action on rebound.
❷ Operating travels and torque are measured at rigid section of stick or cat whisker.

Approximate Dimensions [mm (in.)]

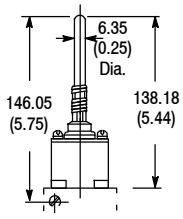


Switch Body

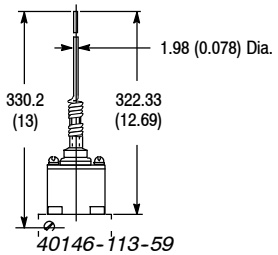




40146-126-53
Cat Whisker Head
Shipping Wt. 0.09 kg (3 oz)



40146-113-53
Nylon Wobble Stick Head
Shipping Wt. 0.2 kg (7 oz)



40146-113-59
Wire Wobble Stick Head
Shipping Wt. 0.17 kg (6 oz)

Modifications and Accessories—See page 5-53.

802T Low Energy

Plug-in Style Oiltight Switches

Specifications

Certifications	UL Listed, CSA Certified and CE Marked for all applicable directives
Environmental	
Enclosure Type Rating	NEMA 4, 13, and 6P❷
Ambient Temperature [C (F)] ❶	-18…+110° (0…+230°) -40…110° (-40…230°) low temp. model
Input Voltage	5…28V DC
DC Contact Rating	0.40V A load per pole max 0.025V A load per pole min

Description

Intended for direct connection to PLCs and other low energy circuits, the components and design of these low energy limit switches are optimized for long life.

The primary concern of low energy switching is contact contamination. Since low energy loads do not arc or burn the contacts clean, contaminants may cause erratic switch behavior. Rockwell Automation's low energy limit switches are designed with welded gold and silver alloy contacts to provide a protective barrier against surface oxides. A stationary waffle shape contact optimizes contact pressure to stabilize the contact resistance in the region of the micro load. A prism shaped crossbar contact provides high pressure to penetrate foreign particles which could prevent contact closure. These low energy limit switches are suitable for machine connectivity and low voltage facilities. They have a low input voltage of 5...28V DC with contact ratings of 0.025V A min. and 0.40V A max. per pole.

Bulletin 802T low energy limit switches are ideal for applications in which heavy duty pilot ratings, a high degree of versatility and a rugged NEMA Type 4, 13 and 6P rating are required. Similar to our full line of standard 802T plug-in style limit switches, our low energy limit switches exist in lever type spring return and push type spring return. Operating heads can be mounted in four positions, 90° apart.

In today's age of low energy controls, electromechanical switches are more frequently interfacing directly with low energy circuits. Switching low energy loads presents a unique challenge. Rockwell Automation is perfectly situated to assist you with all your low energy switching needs.

Features

- Welded gold and silver alloy contacts provide a barrier against surface oxides
- Stationary waffle shape contact reduces the impact of contamination build-up
- Prism shaped crossbar contact provides high pressure to penetrate foreign particles which could prevent contact closure
- Snap-acting spanner replicates same reliability performance of our legacy NEMA products
- Lever type and push type operating styles
- Plug-in style for ease of wiring and conduit and mini-receptacle wiring options
- Enclosure rating NEMA 4, 13 and 6P❷
- UL Listed, CSA Certified and CE Marked for applicable directives
- 5…28V DC and 0.025V A min. and 0.40V A max. load per pole

Plug-in Style

Lever Type • Spring Return page 5-49
Push Type • Spring Return . page 5-51

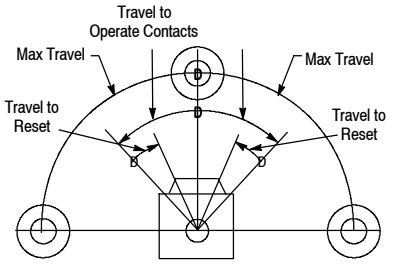
❶ Temperature range below 0°C (+32°F) is based on the absence of freezing moisture or water.
❷ 6P only applies to lever type, except low torque.

Visit our website: *www.ab.com/catalogs*.
Preferred availability cat. nos. are printed in **bold**.

802T Low Energy Lever Type • Spring Return

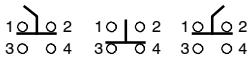
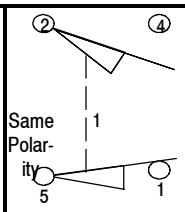
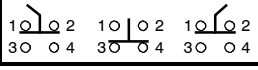
Plug-in Style Oiltight Switches

Range of Operation



Switch
without Lever

Product Selection—Standard and Low Operating Torque Models

No. of Circuits	Contact Operation for Clockwise or Counterclockwise Movement	Max. Torque to Operate [N•m (lb•in.)]	Max. Travel to Operate (degrees)	Maximum Travel (degrees)	Max. Travel to Reset (degrees)	Switch Type	Cat. No. Switch w/o Lever
2		0.29 (2.6)	13	90	7	Conduit	**802T-AGP**
All low energy limit switches are designed to operate in an ambient temperature of -18…110°C (0…230°F). This 802T-AGPE limit switch is modified for low temperature operation at -40…110°C (-40…230°F). All other specifications are identical to the 802T-AGP.						Conduit/Low Temp.	802T-AGPE
Identical to 802T-AGP but with pre-wired five-pin mini connector.						Mini Connector	802T-AGPJ1 ❶
2		0.106 (1.3) max.	13	90	7	Conduit/Low Torque	**802T-ALGP**

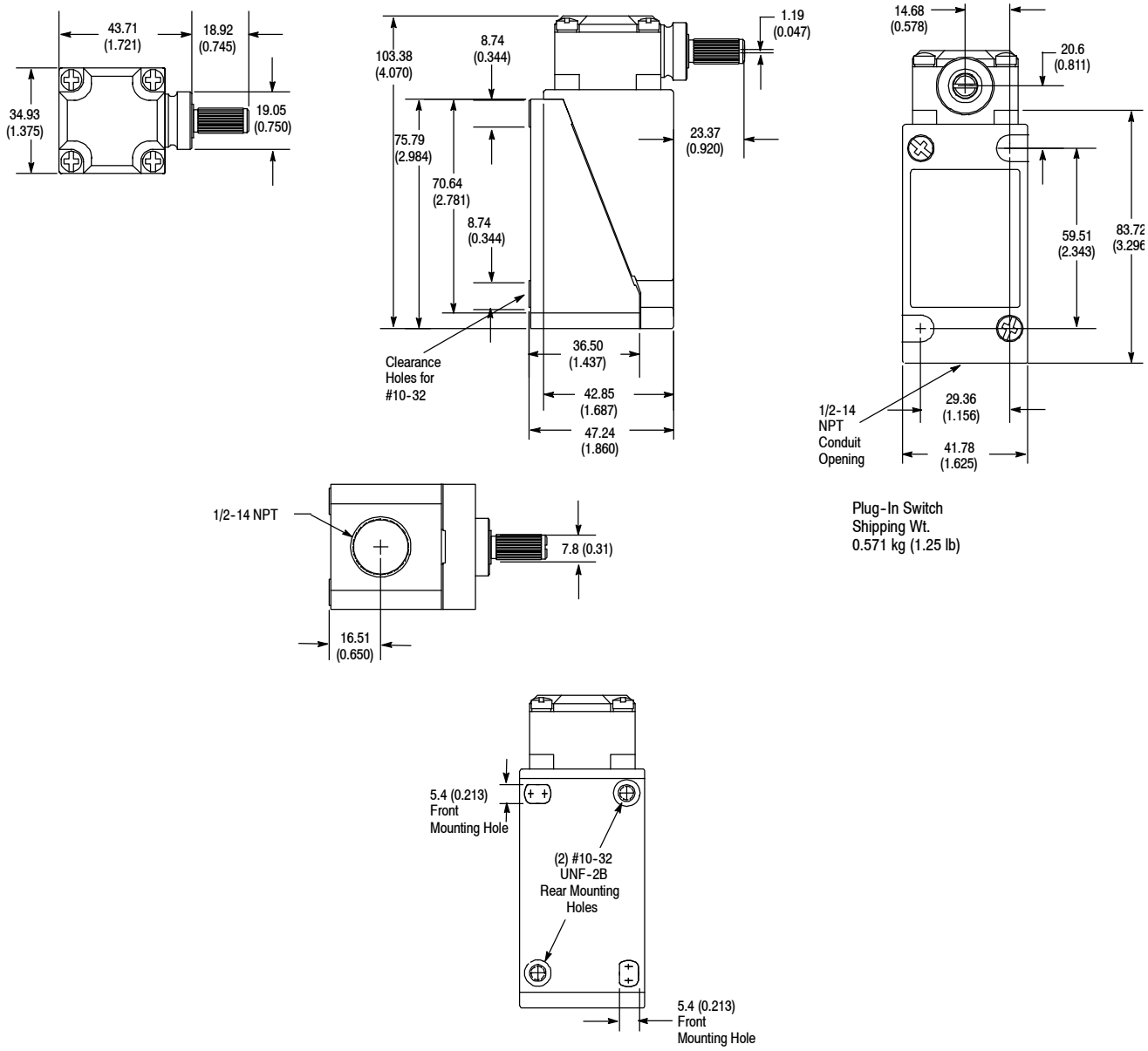
❶ Recommended standard cordset is 889N-F5AFC-6F—straight female 5-pin mini to flying leads, 1.8 m (6 ft) long. For additional cable lengths or styles, see page 8-4.

Levers—See page 5-130 for a complete listing of operating levers.

802T Low Energy Lever Type • Spring Return

Plug-in Style Oiltight Switches

Approximate Dimensions [mm (in.)]

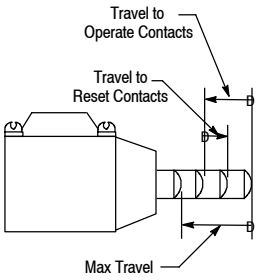


Plug-In Switch
Shipping Wt.
0.571 kg (1.25 lb)

802T Low Energy Push Type • Spring Return

Plug-in Style Oiltight Switches

Range of Operation



Side Push Rod

Top Push Roller

Side Push Vertical Roller

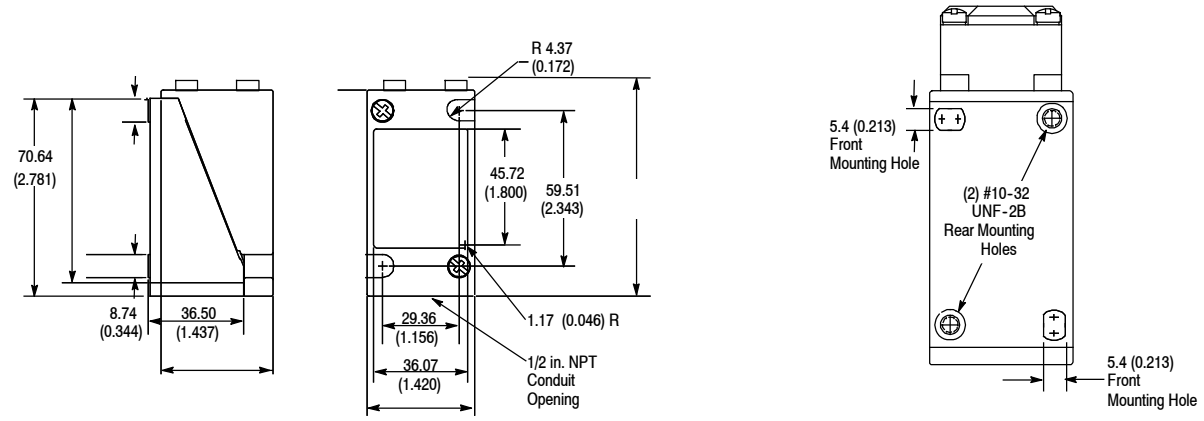
Product Selection

No. of Circuits	Contact Operation		Operator Type	Force to Operate [N•m(lb]	Travel to Operate [mm (in.)]	Maximum Travel [mm (in.)]	Travel to Reset [mm (in.)]	Cat. No.
	Normal	Operated						
2			Side Push Rod	16.4 (3.68) max.	3.3 (0.131) max.	5.7 (0.226)	1.3 (0.052) max.	802T-CGP
			Top Push Roller	13.8 (3.1) max.	1.4 (0.057) max.	6.0 (0.236)	0.7 (0.028)	**802T-DGP**
			Side Push Vertical Roller	16.4 (3.68) max.	3.3 (0.131) max.	5.7 (0.226)	1.3 (0.052) max.	802T-KGP

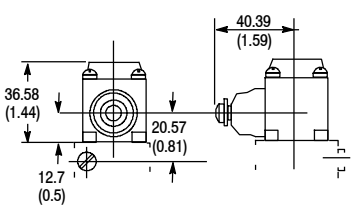
802T Low Energy Push Type • Spring Return

Plug-in Style Oiltight Switches

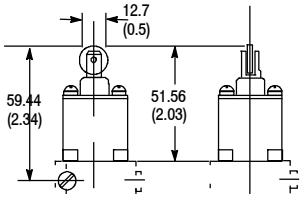
Approximate Dimensions [mm (in.)]



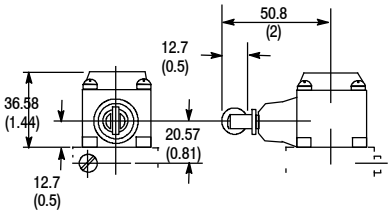
Switch Body



40146-017-63
Side Push Rod Head
Shipping Wt. 0.142kg (5oz)



40146-013-60
Top Push Roller Head
Shipping Wt. 0.142kg (5oz)



40146-017-64
Side Push Roller Head
Shipping Wt. 0.142kg (5oz)

Manifold Mount

Indicating Light

Manifold Mount

All two-circuit plug-in limit switches can be supplied with a special terminal base which permits mounting the switch manifold style on a machine base, panel or raceway. As shown above, this base is supplied with a wiring hole and gasket on the back.

To order a manifold mount switch, add the letter **U** to the listed cat. no.. Example: Cat. No. 802T–AP becomes Cat. No. 802T–AP**U**.

Indicating Light

Bulletin 802T two-circuit plug-in limit switches (except for the cat whisker, wobble stick, and manifold mount devices) can be supplied with an indicating light. To order add the letter **N** for 120V AC, 50/60 Hz or **N5** for 240V AC 50/60 Hz. Example: Cat. No. 802T–AP becomes Cat. No. 802T–AP**N**.

The indicating light is internally connected to two isolated terminals in the base assembly allowing the user to wire the light to either the N.O. or the N.C. contact. Switches with an indicating light have a contact rating of NEMA A300.

Where an indicator light and a pre-wired 5-pin mini connector are used, the light is pre-wired to the N.C. contact with J1 wiring and to the N.O. contact with J9 wiring. Indicating lights are not available on 4-circuit 802T switches.

Fluorinated Elastomer Seals

To order limit switches with all fluorinated elastomer seals, add the letter **V** to the end of the listed cat. no. Not available on manifold mount, low operating torque, low temperature or limit switches with an indicating light.

To order lever type limit switches with the fluorinated elastomer shaft seal only, add **V1** to the end of the listed cat. no.

Base Assembly

The limit switch base, including the terminal block, is available as a separate unit per the following table.

	Cat. No.
2–Circuit Base	**802T–X7**
2–Circuit Base with Indicating Light	**802T–X7 N**
2–Circuit Manifold Mount Base	**802T–X7U**
4–Circuit Base	**802T–X8**

Low Temperature Operation

Plug-in limit switches are designed to operate in an ambient temperature range of –18…+110°C (0…+230°F), –18…+54°C (0…+130°F) for wobble stick and cat whisker. Special limit switches modified for low temperature operation at –40…+110°C (–40…+230°F) are available. Temperature ranges below 0°C (+32°F) are based on absence of freezing moisture or water. To order, add the letter **E** to cat. no. **Not available** on wobble stick, cat whisker or pre-wired cable switches; standard on low torque and maintained devices.

Pre-Wired Cable

To order factory installed pre-wired type **"STOOW-A"** cable for 2-circuit (5-conductor) and 4-circuit (9-conductor) switches, add the suffix **Y** plus the number of feet required. Example: To order an 802T-AP with 2.4 m (5 ft) of cable the cat. no. would become 802T–AP**Y5**.

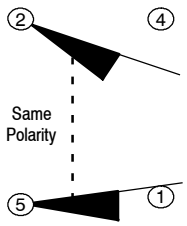
The standard cable length is 2.4 m (5 ft). Extended cable lengths are available in multiples of 1.22 m (4 ft) only.

Mini-Type Receptacles

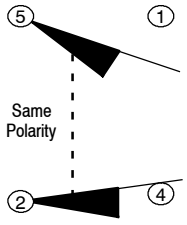
To order a bulletin 802T pre-wired limit switch with a five-pin (2 circuit) or nine pin (4 circuit) mini connector, add the suffix **J1** or **J9** depending on desired wiring (J9 wiring not available for 4-circuit models).

5-Pin Mini-Type Receptacle

"J1" Wiring



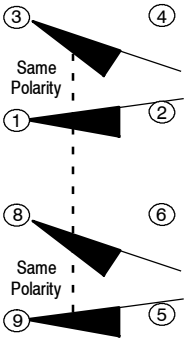
"J9" Wiring



An appropriate female connector with cable (889N–F5AFC–6F) is available on page 8–4 in Connection Systems.

9-Pin Mini-Type Receptacle

"J1" Wiring ("J9" wiring not available for 4 circuit)



An appropriate female connector with cable (889N–F9AF–2) is available on page 8–14 in Connection Systems.

802T

NonPlug-in Style Oiltight Switches

Description

Bulletin 802T limit switches are ideal for applications in which heavy duty pilot ratings, small size, a high degree of versatility and a rugged NEMA Type 13 oiltight construction are desirable. An important factor in the automation of industry, these limit switches are being applied extensively on conveyor systems, transfer machines, automatic turret lathes, milling and boring machines, radial drills, and many other types of modern, high speed production equipment.

A wide variety of operating heads and operating levers are available. Operating heads can be mounted in four positions, 90° apart.

Features

- Side rotary, wobble stick, cat whisker, adjustable top and top or side push styles, with or without rollers
- Rugged construction
- Proven reliability

Specifications

Enclosure Rating	NEMA 13, IP54
Pollution Degree	3
Certifications	UL Listed, CSA Certified and CE Marked for applicable directives
Ambient Temperature [C (F)]❶	Nonplug-in limit switches are designed to operate in an ambient temperature range of -18…+54° (0…+130°).

AC Contact Rating (Maximum per Pole, 50 or 60 Hz, Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A600 AC-15	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720
	480	15	1.50	10	7200	720
	600	12	1.20	10	7200	720

DC Contact Rating (Maximum per Pole, Same Polarity)

Voltage Range	Current Rating
115-125	0.4 A
230-250	0.2 A
550-600	0.1 A

❶ Temperature range below 0°C (+32°F) is based on the absence of freezing moisture or water. See page 5-73 for Extended Temperature Option.

NonPlug-in Style

2-Circuit

4-Circuit Vertical Construction

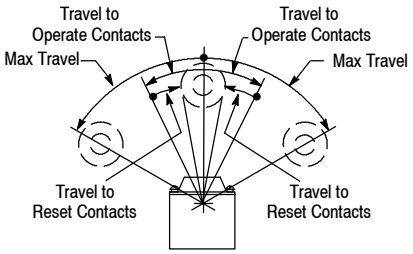
4-Circuit Horizontal Construction

Operating Levers

802T 2-Circuit Lever Type • Spring Return

NonPlug-in Style Oiltight Switches

Range of Operation

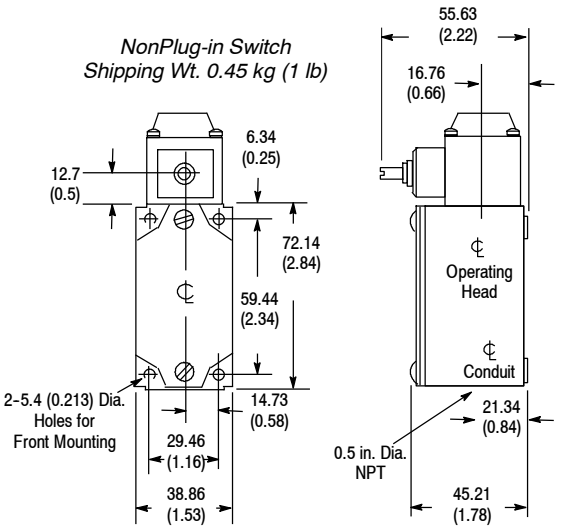


Lever Operation with Standard Levers

802T-A

802T-ALW5

Approximate Dimensions [mm (in.)]



Product Selection—Standard and Low Operating Torque Models

Lever Movement vs. Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Clockwise or Counterclockwise	0.34 N•m (3 lb•in)	16.5°	43°	8°	**802T-A**
	0.51 N•m (4.5 lb•in)	6°	50°	3°	**802T-H**
Clockwise	0.40 N•m (3.5 lb•in)	16.5°	43°	8°	802T-A1
	0.51 N•m (4.5 lb•in)	6.5°	50°	3°	802T-H1
Counterclockwise	0.40 N•m (3.5 lb•in)	16.5°	43°	8°	802T-A2
	0.51 N•m (4.5 lb•in)	6.5°	50°	3°	802T-H2
Clockwise Lever cannot move counterclockwise	0.45 N•m (4 lb•in)	20°	91°	11°	802T-L1
Counterclockwise Lever cannot move clockwise					802T-L2
Clockwise or Counterclockwise	0.09 N•m (12.5 oz•in)	22°	43°	12°	802T-ALW5❶
Clockwise					802T-AL1W5❶
Counterclockwise					802T-AL2W5❶

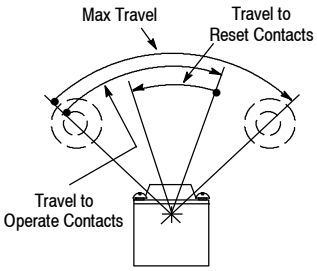
❶ These low operating torque limit switches can only be supplied with cat. no. **802T-W5** rod lever. The rod can easily be formed to meet special application requirements.

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

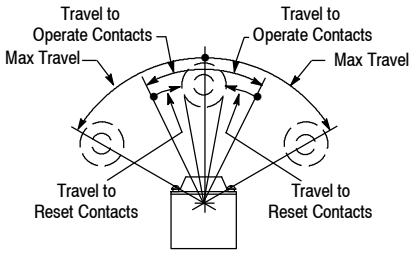
802T 2-Circuit Lever Type • Maintained Contact and Neutral Position

NonPlug-in Style Oiltight Switches

Range of Operation



Maintained Contact Models

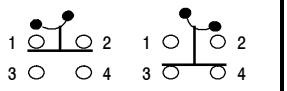
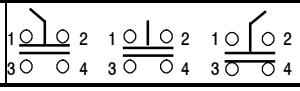


Neutral Position Models

802T-AM

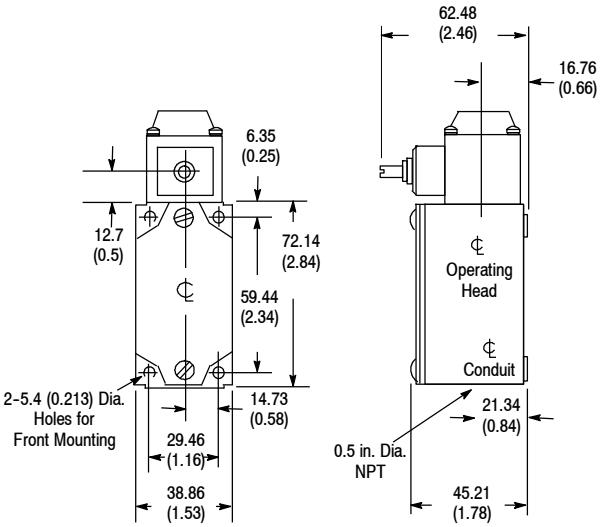
802T-NP

Product Selection

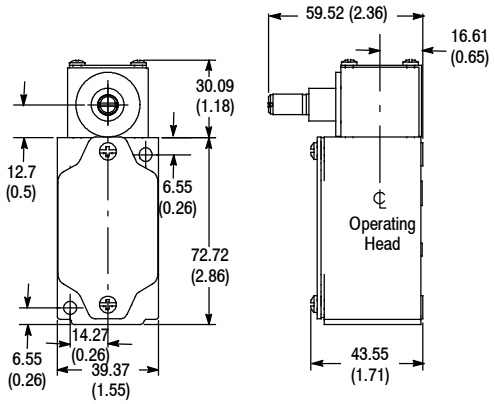
Contact Type	Lever Movement vs. Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Maintained		0.25 N•m (2.25 lb•in)	70° ❶	84° ❶	50°	**802T-AM**
Neutral Position			12°	53°	6°	**802T-NP**

❶ From one maintained position to the other.

Approximate Dimensions [mm (in.)]



NonPlug-in Switch
Shipping Wt. 0.45 kg (1 lb)
802T-AM



NonPlug-in Switch
Shipping Wt. 0.45 kg (1 lb)
802T-NP

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

802T 1-Circuit Lever Type with Time Delay • Spring Return

NonPlug-in Style Oiltight Switches

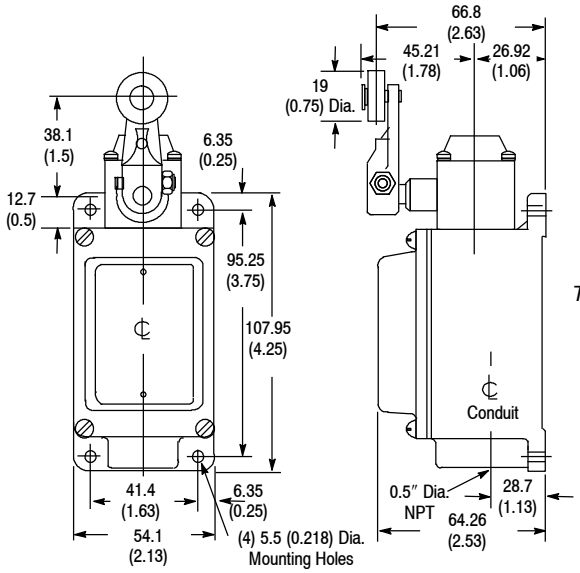
802T-R1TD with 802T-W1 Lever

Product Selection

Lever Movement vs. Contact Operation❸			Torque to Operate (Max.)	Travel to Operate Contact (Max.)	Overtravel	Max Travel	Cat. No.	
							On-Delay❷❹❺	Off-Delay❷❻
Clockwise Lever cannot move counterclockwise	1 ○ ○ 2	1 ○ ○ 2	0.23 N•m (2 lb•in)	45°❶	45°❶	Approx. 90°	802T-R1TD	802T-R7TD
	1 ○ ○ 2	1 ○ ○ 2					802T-R3TD	802T-R5TD
Counterclockwise Lever cannot move clockwise	1 ○ ○ 2	1 ○ ○ 2					802T-R2TD	802T-R8TD
	1 ○ ○ 2	1 ○ ○ 2					802T-R4TD	802T-R6TD

❶ Required for Timing Accuracy.
❷ The time delay is adjustable from 0.5…15 seconds ± 25%.
❸ Contacts are rated for 3 A, 120V AC maximum.
❹ The lever travel must be faster than the timing setting.
❺ Time delay occurs after lever is moved to operated position
❻ Time delay occurs after lever is moved from operated to normal position

Approximate Dimensions [mm (in.)]



Time Delay Switch with 802T-W1 Lever
Shipping Wt. 0.90 kg (2 lbs)

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

802T 2-Circuit Push Type • Spring Return and Maintained Contact

NonPlug-in Style Oiltight Switches

Top Push Rod

Adjustable Top Push Rod

Side Push Rod

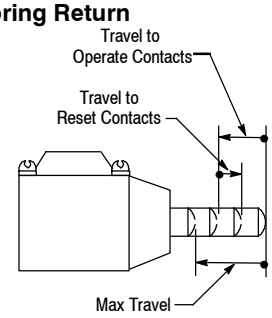
Top Push Roller

Side Push Roller

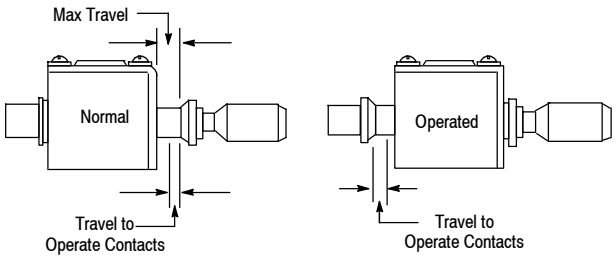
Side Push Rod Maintained

Range of Operation

Spring Return



Maintained



Product Selection

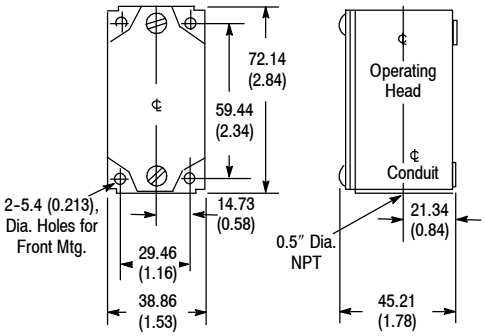
Operator Type	Contact Operation: Normal	Contact Operation: Operated	Force to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Top Push Rod	1 ○ ○ 2 / 3 ○ ○ 4	1 ○ | ○ 2 / 3 ○ ○ 4	15.6 N (3.5 lb)	1.9 mm (0.075 in.)	5.1 mm (0.202 in.)	0.8 mm (0.030 in.)	**802T-B**
Adjustable Top Push Rod							802T-BA
Top Push Roller							**802T-D**
Side Push Rod	1 ○ | ○ 2 / 3 ○ ○ 4	1 ○ ○ 2 / 3 ○ ○ 4	20.0 N (4.5 lb)	3.2 mm (0.125 in.)	5.5 mm (0.218 in.)	1.5 mm (0.057 in.)	**802T-C**
Side Push Vertical Roller							**802T-K**
Side Push Horizontal Roller							802T-K1
Maintained Contact Side Push Rod			35.6 N (8 lbs)	4.87 mm (0.192 in.) Nominal	5.96 mm (0.235 in.)	5.30 mm (0.209 in.) Nominal	802T-CM

Modifications and Accessories—See page 5-73.

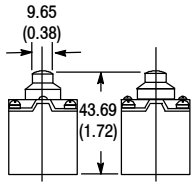
802T 2-Circuit Push Type • Spring Return and Maintained Contact

NonPlug-in Style Oiltight Switches

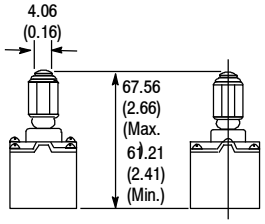
Approximate Dimensions [mm (in.)]



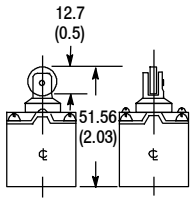
NonPlug-in Switch
Shipping Wt. 0.45 kg (1 lb)



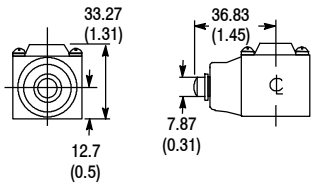
802T-B Top Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



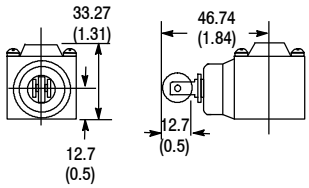
802T-BA Adjustable
Top Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



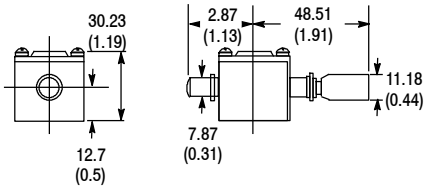
802T-D Top Push Roller Head
Shipping Wt. 0.128 kg (4.5 oz)



802T-C Side Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



802T-K Side Push Roller Head
Shipping Wt. 0.128 kg (4.5 oz)



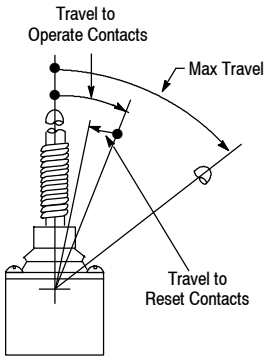
802T-CM Maintained Side Push Rod Head
Shipping Wt. 4.5 oz (0.128 kg)

Modifications and Accessories—See page 5-73.

802T 2-Circuit Wobble Stick and Cat Whisker • Spring Return

NonPlug-in Style Oiltight Switches

Range of Operation

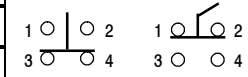


Wobble Stick
Nylon Extension

Wobble Stick
Wire Extension

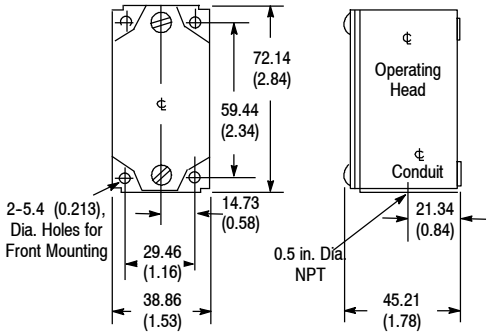
Cat Whisker

Product Selection

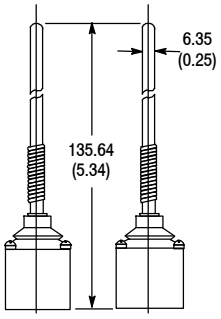
Operator Type	Contact Operation	Torque to Operate (Max.)❶	Travel to Operate Contacts (Max.)❶	Max Travel❶	Travel to Reset Contacts (Max.)❶	Cat. No.
Nylon Wobble Stick		0.51 N•m (4.5 lb•in)	9°	10°	4°	**802T-WS**
Wire Wobble Stick						802T-WS1
Wire Cat Whisker		0.06 N•m (8 oz•in)	21°	22°	14°	802T-CW

❶ Operating travels and torque are measured at rigid section of stick or cat whisker.

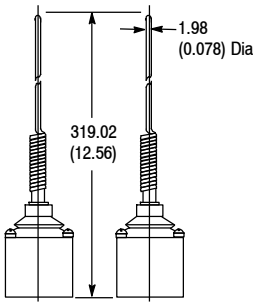
Approximate Dimensions [mm (in.)]



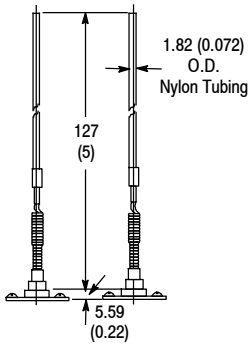
NonPlug-in Switch
Shipping Wt.
0.45 kg (1 lb)



Z-18210 Nylon
Wobble Stick Head
Shipping Wt.
0.128 kg (4.5 oz)



Z-18211 Wire
Wobble Stick Head
Shipping Wt.
0.149 kg (5.25 oz)



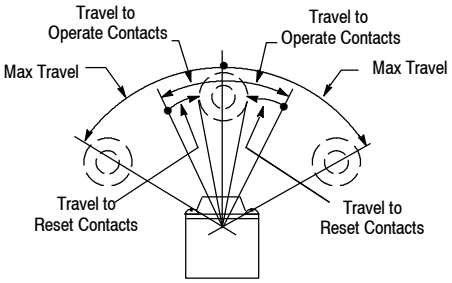
Z-25142
Cat Whisker Head
Shipping Wt.
0.028 kg (1 oz)

Modifications and Accessories—See page 5-73.

802T Vertical 4-Circuit Push Type • Spring Return & Maintained Contact

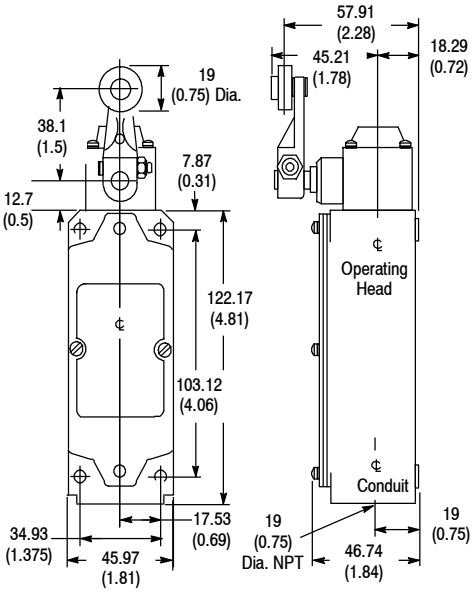
NonPlug-in Style Oiltight Switches

Range of Operation



Switch Without Lever

Approximate Dimensions [mm (in.)]



4 Circuit NonPlug-in Switch with 802T-W1 Lever
Shipping Wt. 0.57 kg (1.25 lb)

Product Selection

Lever Movement vs. Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Clockwise or Counterclockwise	0.34 N•m (3 lb•in)	18°	42°	14°	802T-AT
	0.68 N•m (6 lb•in)	9°	50°	6°	802T-HT
Clockwise	0.40 N•m (3.5 lb•in)	18°	42°	14°	802T-A1T
	0.68 N•m (6 lb•in)	9°	50°	6°	802T-H1T
Counterclockwise	0.40 N•m (3.5 lb•in)	18°	42°	14°	802T-A2T
	0.68 N•m (6 lb•in)	9°	50°	6°	802T-H2T
Clockwise Lever cannot move counterclockwise	0.45 N•m (4 lb•in)	28°	91°	18°	802T-L1T
Counterclockwise Lever cannot move clockwise					802T-L2T
Maintained Contact Clockwise or Counterclockwise	0.34 N•m (3 lb•in)	75°	84° From one maintained position to the other	50°	802T-AMT

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

Visit our website: *www.ab.com/catalogs*.
Preferred availability cat. nos. are printed in **bold**.

Allen-Bradley

802T Vertical 4-Circuit Push Type • Spring Return & Maintained Contact

NonPlug-in Style Oiltight Switches

Top Rod

Adjustable Top Push Rod

Side Rod

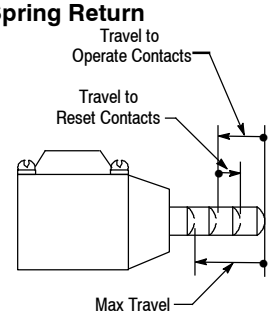
Top Roller

Side Roller

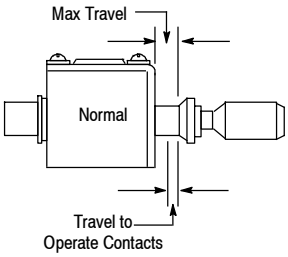
Side Rod

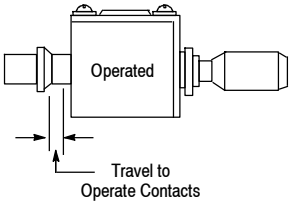
Range of Operation

Spring Return

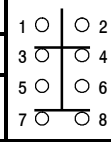
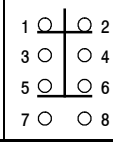
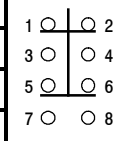
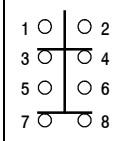


Maintained





Product Selection

Operator Type	Contact Operation		Force to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Catalog Number ❶
	Normal	Operated					
Top Push Rod			24.4 N (5.5 lb)	3.6 mm (0.140 in.)	6.0 mm (0.234 in.)	1.6 mm (0.062 in.)	802T-BT
Adjustable Top Push Rod							802T-BAT
Side Push Rod			28.9 N (6.5 lb)			2.4 mm (0.094 in.)	802T-CT
Top Push Roller			24.4 N (5.5 lb)			1.6 mm (0.062 in.)	802T-DT
Side Push Vertical Roller			28.9 N (6.5 lb)			2.4 mm (0.094 in.)	802T-KT
Side Push Horizontal Roller							802T-K1T
Maintained Contact Side Push Rod			62.2 N (14 lb)	3.93 mm (0.155 in.) Nominal	5.96 mm (0.235 in.)	5.30 mm (0.180 in.) Nominal	802T-CMT

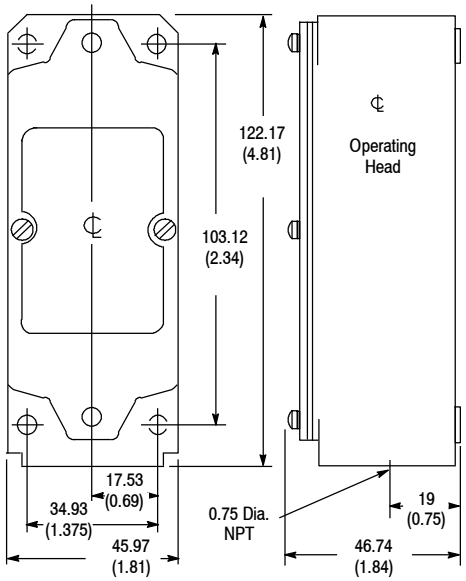
❶ These devices are not available with fluorinated elastomer seals or neon indicating lights.

Modifications and Accessories—See page 5-73.

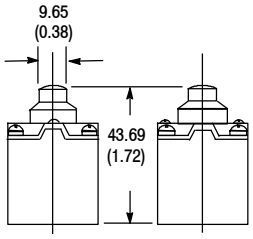
802T Vertical 4-Circuit Push Type • Spring Return & Maintained Contact

NonPlug-in Style Oiltight Switches

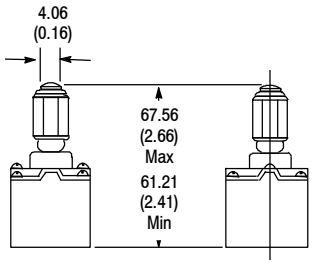
Approximate Dimensions [mm (in.)]



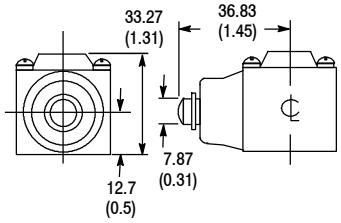
NonPlug-in Switch
Shipping Wt. 0.57 kg (1.25 lb)



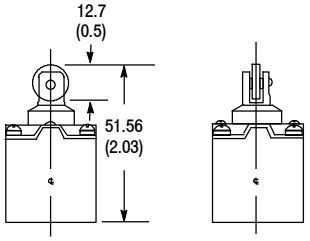
802T-BT
Top Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



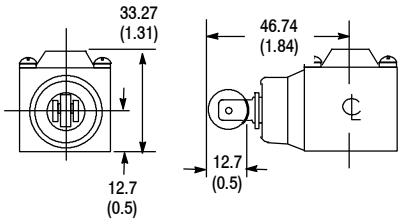
Adjustable Top Push Rod Head
for 802T-BAT
Shipping Wt. 0.128 kg (4.5 oz) ❶



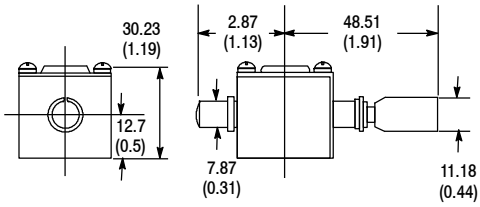
802T-CT
Side Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



802T-DT
Top Push Roller Head
Shipping Wt. 0.128 kg (4.5 oz)



802T-KT
802T-K1T
Side Push Roller Head
Shipping Wt. 0.128 kg (4.5 oz)



802T-CMT
Maintained Side Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)

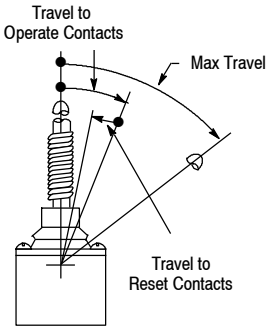
❶ Not a saleable item.

Modifications and Accessories—See page 5-73.

802T Vertical 4-Circuit Wobble Stick and Cat Whisker • Spring Return

NonPlug-in Style Oiltight Switches

Range of Operation

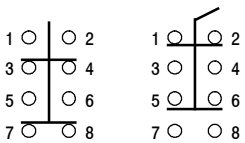


Travels Are Measured at Rigid Section of Stick or Whisker

Wobble Stick

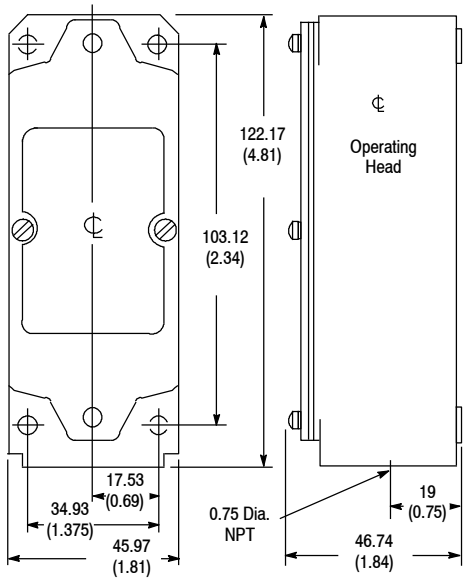
Cat Whisker

Product Selection

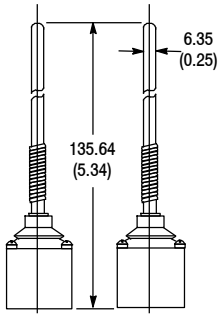
Operator Type	Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel ❶	Travel to Reset Contacts (Max.)	Cat. No.
Nylon Wobble Stick		0.79 N•m (7 lb•in)	12°	12°	9°	802T-WST
Wire Cat Whisker						802T-WS1T

❶ These switches should be mounted in such a way that the wobble stick or cat whisker will not be deflected beyond the "Maximum Travel" position, as this could cause undesirable repetition of contact action on rebound.

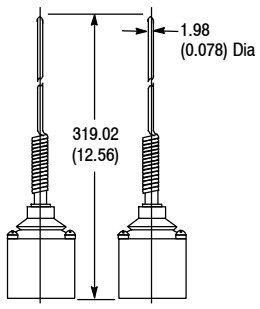
Approximate Dimensions [mm (in.)]



NonPlug-in Switch Shipping Wt. 0.45 kg (1 lb)



Z-18210 Nylon Wobble Stick Head Shipping Wt. 0.128 kg (4.5 oz)



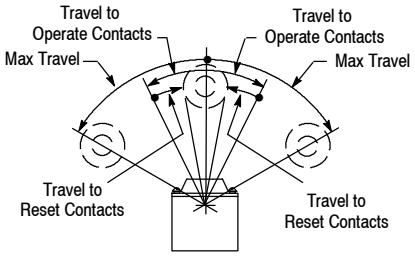
Z-18211 Wire Wobble Stick Head Shipping Wt. 0.149 kg (5.25 oz)

Modifications and Accessories—See page 5-73.

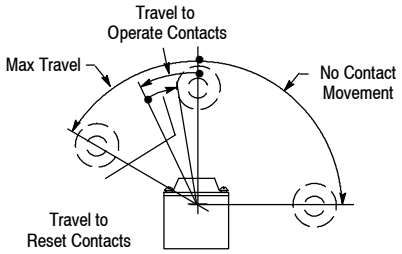
802T Horizontal 4-Circuit Lever Type • Spring Return

NonPlug-in Style Oiltight Switches

Range of Operation



Lever Operation When Standard Levers Are Used



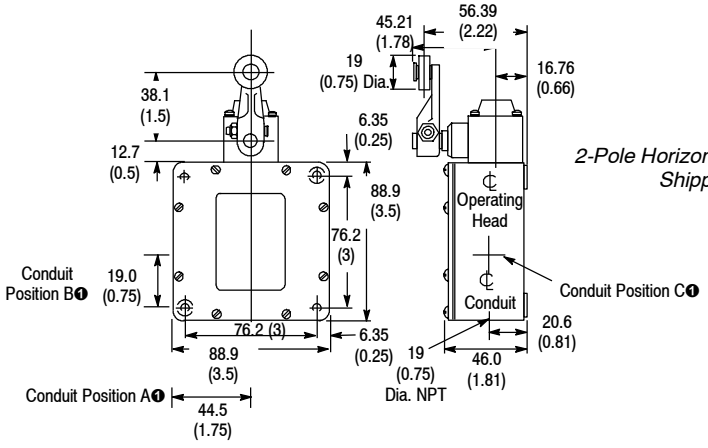
Lever Operation When 802T-W7 and W8 "One-Way" Levers Are Used

Switch Without Lever

Product Selection

Lever Movement vs. Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Clockwise or Counterclockwise	0.34 N•m (3 lb•in)	14°	42°	8°	802T-ATH
	0.68 N•m (6 lb•in)	6°	50°	3°	802T-HTH
Clockwise	0.39 N•m (3.5 lb•in)	14°	42°	8°	802T-A1TH
	0.68 N•m (6 lb•in)	6°	50°	3°	802T-H1TH
Counterclockwise	0.39 N•m (3.5 lb•in)	14°	42°	8°	802T-A2TH
	0.68 N•m (6 lb•in)	6°	50°	3°	802T-H2TH
Clockwise Lever cannot move counterclockwise	0.45 N•m (4 lb•in)	20°	91°	11°	802T-L1TH
Counterclockwise Lever cannot move clockwise					802T-L2TH

Approximate Dimensions [mm (in.)]



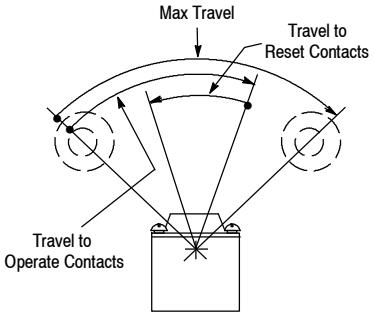
2-Pole Horizontal Switch with 802T-W1 Lever Shipping Wt. 0.91 kg (2 lbs)

❶Conduit positions for modifications S1, S2, S3

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

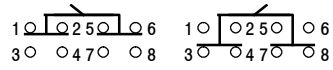
802T Horizontal 4-Circuit Lever Type • Maintained Contact

Range of Operation

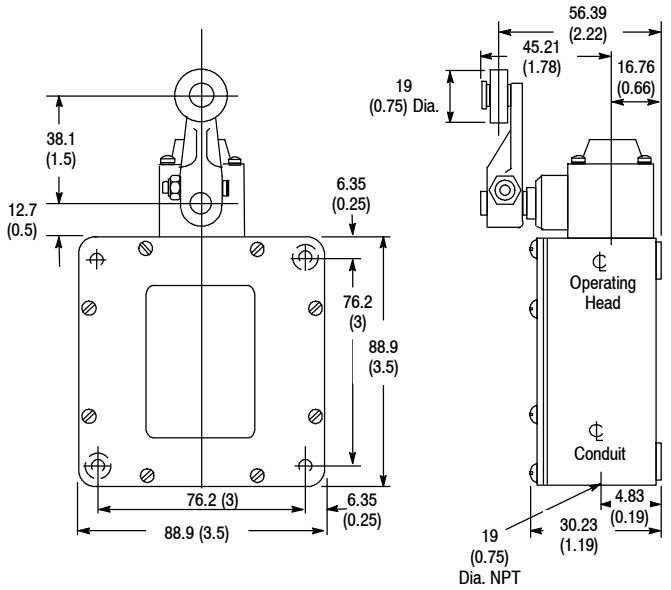


Switch
Without Lever

Product Selection

Lever Movement vs. Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Clockwise or Counterclockwise 	0.34 N•m (3 lb•in)	70°	84° From one maintained position to the other	35°	802T-AMTH

Approximate Dimensions [mm (in.)]



2-Pole Horizontal Switch
with 802T-W1 Lever
Shipping Wt. 0.91 kg (2 lb)

Levers—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

802T Horizontal 4-Circuit Push Type • Spring Return & Maintained Contact

NonPlug-in Style Oiltight Switches

Top Push Rod

Adjustable Top Push Rod

Side Push Rod

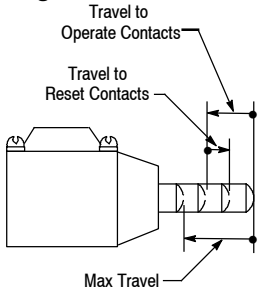
Top Push Roller

Side Push Roller

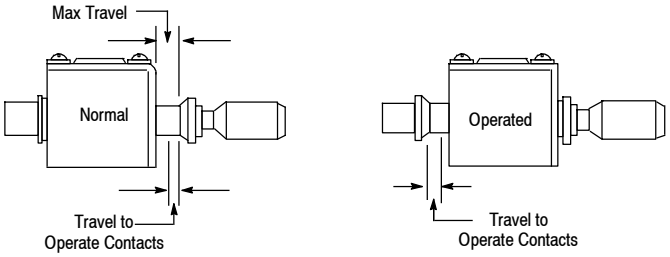
Side Push Rod Maintained Contact

Range of Operation

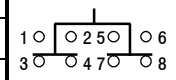
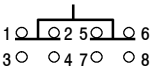
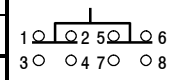
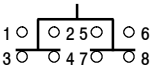
Spring Return



Maintained



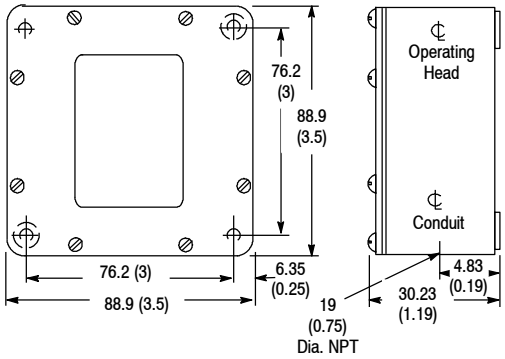
Product Selection

Operator Type	Contact Operation: Normal	Contact Operation: Operated	Force to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.
Top Push Rod			24.4 N (5.5 lbs)	2.4 mm (0.094 in.)	5.9 mm (0.234 in.)	1.2 mm (0.046 in.)	802T-BTH
Adjustable Top Push Rod							802T-BATH
Top Push Roller							802T-DTH
Side Push Rod				2.8 mm (0.109 in.)		1.6 mm (0.062 in.)	802T-CTH
Side Push Vertical Roller							802T-KTH
Side Push Horizontal Roller							802T-K1TH
Maintained Contact Side Push Rod			62.2 N (14 lbs)	4.87 mm (0.192 in.) Nominal	5.96 mm (0.235 in.)	5.30 mm (0.209 in.) Nominal	802T-CMTH

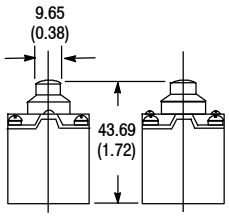
Modifications and Accessories—See page 5-73.

802T Horizontal 4-Circuit Push Type • Spring Return & Maintained Contact

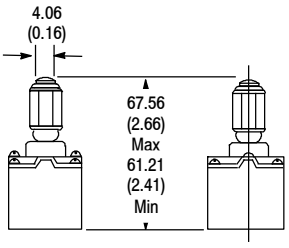
Approximate Dimensions [mm (in.)]



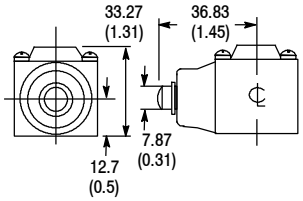
2-Pole Horizontal Switch Base
Shipping Wt. 0.91 kg (2 lb)



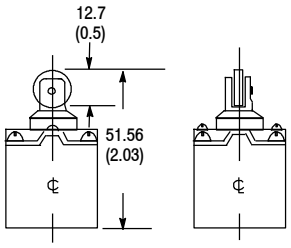
Z-19243
Top Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



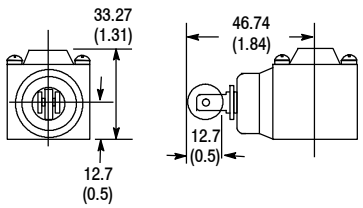
Adjustable Top Push Rod Head
for 802T-KTH
Shipping Wt. 0.128 kg (4.5 oz) ❶



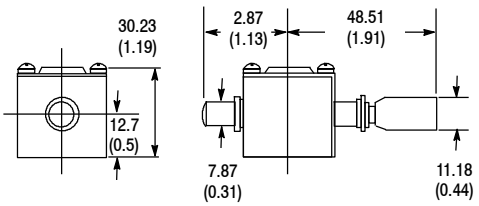
Z-21165
Side Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)



Z-19241
Top Push Roller Head
Shipping Wt. 0.128 kg (4.5 oz)



Z-21166
Side Push Roller Head
Shipping Wt. 0.128 kg (4.5 oz)



Z-21168
Maintained Side Push Rod Head
Shipping Wt. 0.128 kg (4.5 oz)

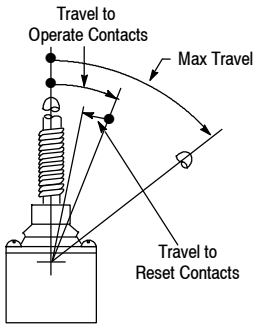
❶ Not a saleable item.

Modifications and Accessories—See page 5-73.

802T Horizontal 4-Circuit Wobble Stick & Cat Whisker • Spring Return

NonPlug-in Style Oiltight Switches

Range of Operation ❶

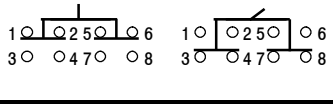


Travels Are Measured at Rigid Section of Stick

Wobble Stick

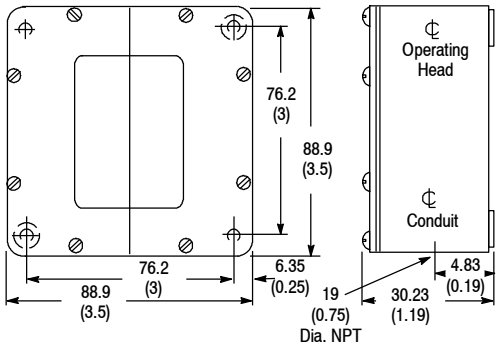
Cat Whisker

Product Selection

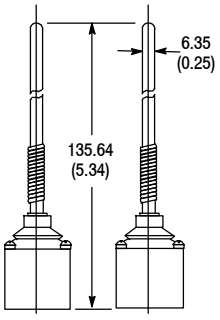
Operator Type	Contact Operation	Torque to Operate (Max.)	Travel to Operate Contacts (Max.)	Max Travel ❶	Travel to Reset Contacts (Max.)	Cat. No.
Nylon Wobble Stick		0.79 N•m (7 lb•in)	12°	12°	9°	802T-WSTH
Wire Cat Whisker						802T-WS1TH

❶ These switches should be mounted in such a way that the wobble stick or cat whisker will not be deflected beyond the "Maximum Travel" position, as this could cause undesirable repetition of contact action on rebound.

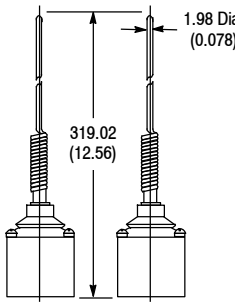
Approximate Dimensions [mm (in.)]



2-Pole Horizontal Switch
Shipping Wt. 0.91 kg (2 lb)



Z-29195 Nylon Wobble Stick Head
Shipping Wt. 0.128 kg (4.5 oz)



Z-32109 Wire Wobble Stick Head
Shipping Wt. 0.149 kg (5.25 oz)

Modifications and Accessories—See page 5-73.

802T Dual Switch Lever and Push Types • Spring Return

NonPlug-in Style Oiltight Switches

Dual Switch with 802T-W1 Levers

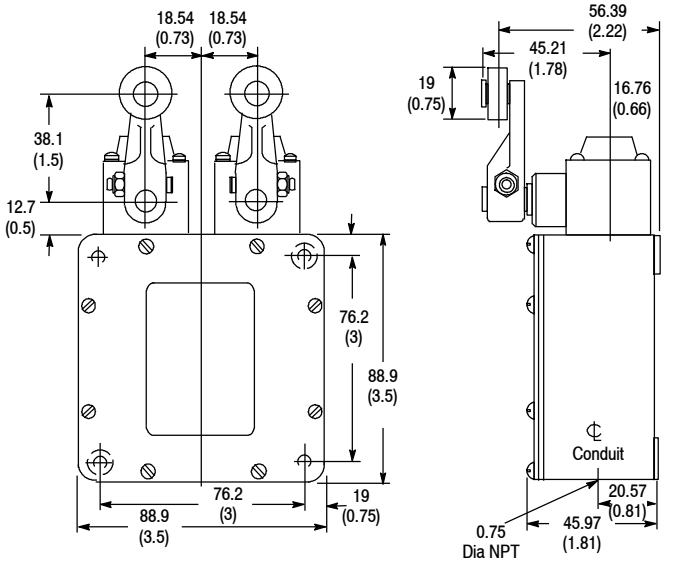
Product Selection❶

		Right Hand Switch					
		802T-A	**802T-H**	**802T-A1**	**802T-A2**	**802T-C**	**802T-D**
Left Hand Switch	802T-A	802T-AD	802T-AHD	802T-AA1D	802T-AA2D	802T-ACD	802T-ADD
	802T-H	802T-HAD	802T-HD	802T-HA1D	802T-HA2D	802T-HCD	802T-HDD
	802T-A1	802T-A1AD	802T-A1HD	802T-A1D	802T-A1A2D	802T-A1CD	802T-A1DD
	802T-A2	802T-A2AD	802T-A2HD	802T-A2A1D	802T-A2D	802T-A2CD	802T-A2DD
	802T-C	802T-CAD	802T-CHD	802T-CA1D	802T-CA2D	802T-CD	802T-CDD
	802T-D	802T-DAD	802T-DHD	802T-DA1D	802T-DA2D	802T-DCD	802T-DD

❶ Ordering Information—Refer to limit switch listings on pages 5-55 and 5-59 determine which units and levers are correct for the desired application. Select left limit switch from left hand vertical column. Select right hand switch from right hand horizontal column. The correct cat. no. is found at the intersecting box.

❷ Most levers listed on page 5-130 can be used. When dual limit switch combinations are desired, consult your local Rockwell Automation sales office or Allen-Bradley Distributor(see page 13-1).

Approximate Dimensions [mm (in.)]



Dual Switch with 802T-W1 Levers
Shipping Wt. 0.91 kg (2 lbs)

Levers❷—See page 5-130 for a complete listing of operating levers.
Modifications and Accessories—See page 5-73.

802T Air-Operated • Spring Return

NonPlug-in Style Oiltight Switches

Product Selection

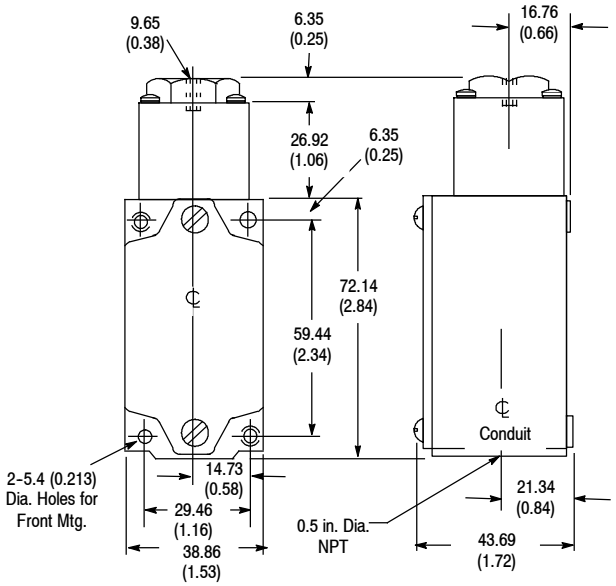
Contact Operation❶	Cat. No.	
	Single Unit ❷	Double Unit ❸
Will operate when 25 psi (172 kPa) ±25% of air pressure is applied, and will reset with a pressure drop of 6…15 psi (41…103 kPa). Maximum allowable pressure is 100 psi (680 kPa).	802T-P	802T-2P

❶ When the switch is in the reset state a small rod protrudes from the top of the die casting. The rod is flush with the surface when the switch trips on higher pressure. The switch can be manually operated by pressing down on the rod.

❷ Contact operation similar to 2-circuit devices.

❸ Contact operation similar to 4-circuit horizontal construction devices.

Approximate Dimensions [mm (in.)]



Air-Operated Switch
Shipping Wt. 0.34 kg (12 oz)

Modifications and Accessories—See page 5-73.

Cavity Mounting

Front View *Rear View*

802T-AO with 802T-W1A Lever

Manifold Mounting

802T-AMU with 802T-W4A Lever

Cavity Mounting

Except for the types identified by Cat. Nos. 802T-B, 802T-D, 802T-WS, 802T-WS1, and 802T-CW, Bulletin 802T switches can be supplied in a special construction for cavity mounting in a machine base or panel. With this construction, the actuator and contact block are mounted on the back of a gasket steel plate. To order a switch for cavity mounting, add the letter **O** to the cat. no. of the corresponding surface mounted switch. Example: Cat. No. 802T-A becomes cat. no. 802T-A**O** (shown).

Manifold Mounting

All two-circuit Bulletin 802T switches can be supplied with a special base which permits mounting the switch manifold style on a machine base, panel or raceway. This base is equipped with a wiring hole and synthetic rubber gasket on the back (see illustration).

To order a switch with a manifold mounting base, add the letter **U** to the cat. no. Example: Cat. No. 802T-AM becomes cat. no. 802T-AM**U** (shown).

Transparent Cover

Switches can be furnished with a gasket, transparent plastic cover. This modification enables the electrician to inspect terminal wiring without removing the switch cover. Not available on cat whisker, time delay or cavity style mounted limit switches.

To order a switch with a transparent cover, add the letter **Z** to the cat. no. of the switch. For example: Cat. No. 802T-D becomes Cat. No. 802T-D**Z**.

Extended Temperature Operation

Bulletin 802T nonplug-in limit switches are designed to operate in a temperature range of -18…+54°C (0…+130°F). Special limit switches modified for extended temperature operation -29…+121°C (-20…+250°F) are available.

Note: Temperature ranges below 0°C (+32°F) are based on the absence of freezing moisture or water.

To order a Bulletin 802T modified for extended temperature operation, insert the letter **E** after the operating head designation. Example: Cat. No. 802T-A becomes Cat. No. 802T-A**E**. (Cat. Nos. 802T-WS, WS1, CW, P, 2P and the time delay limit switches are not available for extended temperature operation. Cat. Nos. 802T-A3 and A4 are available for extended temperature operation except with a reduction in damping.)

Special Conduit Positions

Dual operating head switches can be obtained with up to three conduit openings. The location of conduit openings A, B, and C are illustrated in the dimension drawing on page 5-66. The conduit opening in Position A is 3/4 in. NPT, the conduit openings in Position B and C are 1/2 inch NPT. To order a switch with special conduit positioning, add the suffix **S1**, **S2** or **S3** to the cat. no. per the following:

S1=Position A+B
S2=Position A+C
S3=Position B+C

Neon Indicating Lights (2-Circuit Models Only)

Two circuit Bulletin 802T surface mounted limit switches can be supplied with two neon indicating lights—AC 208/240V, 50…60 Hz and 120V, 50…60 Hz. To order, add the letter **N** for 120V or **N5** for 240V before the lever designation. Example: Cat. No. 802T-A1 with indicating lights would be 802T-A1**N**. Not available on 4-circuit devices.

In addition, indicating light kits as shown in the table below are available for field installation on two circuit devices.

Limit Switch Construction	Light Kit Cat. No.	
	120V AC 50…60 Hz	208/240V AC 50…60 Hz
Surface Mounted	**802T-N1**	**802T-N4**
Neutral Position	**802T-N2**	**802T-N10**

Conduit Seal

A synthetic rubber conduit seal is available to protect the conduit opening against entry of oil and moisture. The seal can be added easily before switch installation and should be installed so that the 5/8 inch diameter projection (the other projection is 23/32 inch diameter) faces against the shoulder at the bottom of the pipe tap. The seal can accommodate up to four wires of #12 gauge or smaller. Each wire hole in the seal has a thin inner wall which is pierced when a wire is passed through. Thus, any unused opening remains sealed. The seat is designed for single contact block, surface mounted base limit switches having 1/2 inch conduit openings.

Conduit seal Cat. No. **802T-N3**

Special Conduit Lock Nut

This option, a “Tru-Seal” nut with threaded PTFE insert, is a valuable accessory for any Bulletin 802T which is connected by means of conduit.

“Tru-Seal” lock nut for 1/2 inch conduit Cat. No. **802T-X4**

802X

Watertight or Hazardous Location Switches

Description

Bulletin 802X NEMA Type 7 and 9 limit switches are designed for use in atmospheres and locations defined as Class I, Groups B, C or D, Division 1, Class II, Groups E, F or G, or Class III in the National Electrical Code. Typical applications for this switch include refineries, distilleries, grain elevators and flour mills. For Class I, Division 2 locations, a Bulletin 802R limit switch may also be used (see page 5–34).

Bulletin 802X NEMA Type 4 watertight limit switches are designed for use indoors in locations where their internal parts require protection against seepage of water and splashing, falling or hose-directed water within the limits of the NEMA specified tests for Type 4 watertight enclosures. They are not sleet- (ice-) proof. Typical applications are dairies and food processing plants.

Specifications

Enclosure Rating	NEMA 7 and 9/Class I, Groups B, C and D or Class II, Groups E, F and G or Class III; NEMA 4/nonhazardous locations
Certifications	UL Listed and CSA Certified
Ambient Temperature [C (F)]❶	Push type with spring return and all lever types except neutral position: -46…+121° (-50…+250°) Wobble stick and cat whisker devices: -29…+54° (-20…+130°) Side push maintained: -46…+121° (-50…+250°) Neutral position: -18…+121° (0…+250°).

AC Contact Rating (Maximum per Pole, 50 or 60Hz, same polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A600	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720
	480	15	1.50	10	7200	720
	600	12	1.20	10	7200	720

DC Contact Rating (Maximum per Pole)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
P150	125	1.1		5	138	

❶ Temperature ranges below 0°C (+32°F) are based on the absence of freezing moisture or water.

A wide variety of operating heads and operating levers are available. Operating heads can be mounted in four positions, 90° apart. The enclosure base has two through holes for front mounting, two tapped holes for rear mounting and two tapped holes for side mounting.

Features

- Multiple operator styles: side rotary, wobble stick, cat whisker, adjustable top push and top or side push with or without rollers

Watertight or Hazardous Location

Lever Type • Spring Return page 5–75
Standard and Neutral Position Models

Lever Type • . . . . . page 5–76
Maintained Contact

Push Type • Spring Return . page 5–77

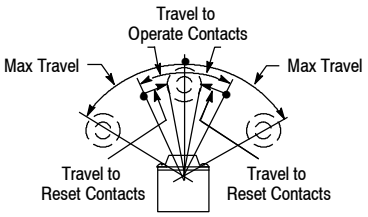
Push Type • . . . . . page 5–79
Maintained Contact

Wobble Stick and . . . . . page 5–80
Cat Whisker • Spring Return

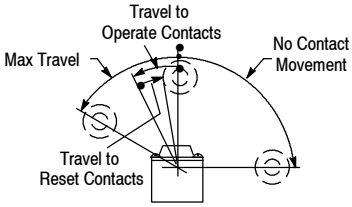
802X Lever Type • Spring Return

Watertight or Hazardous Location Switches

Range of Operation



Lever Operation When Levers Except 802T-W7 and W8 Are Used



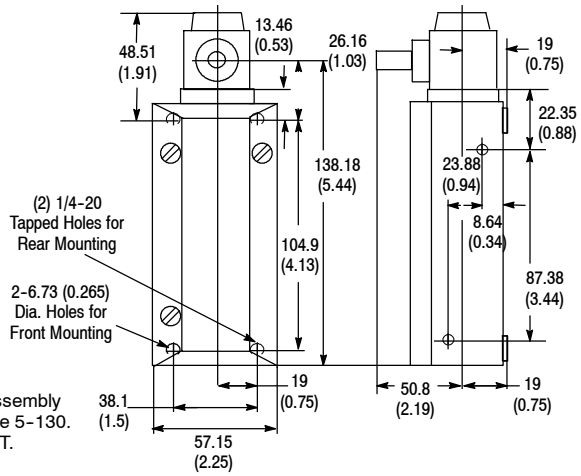
Lever Operation When 802T-W7 and W8 "One-Way" Levers Are Used

Switch Without Lever

Product Selection—Standard and Neutral Position Models

Lever Movement vs. Contact Operation	Torque to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No. NEMA 4	Cat. No. NEMA 7 and 9
Clockwise or Counterclockwise	0.34 N•m (3 lb•in)	16.5°	43°	8°	**802X-A4**	**802X-A7**
	0.51 N•m (4.5 lb•in)	6°	50°	3°	—	**802X-H7**
Clockwise	0.34 N•m (3.5 lb•in)	16.5°	43°	8°	802X-A14	802X-A17
	0.51 N•m (4.5 lb•in)	6°	50°	3°	—	802X-H17
Counterclockwise	0.34 N•m (3.5 lb•in)	16.5°	43°	8°	802X-A24	802X-A27
	0.51 N•m (4.5 lb•in)	6°	50°	3°	—	802X-H27
Clockwise	0.45 N•m (4 lb•in)	20°	91°	11°	802X-L14	802X-L17
Counterclockwise					802X-L24	802X-L27
Neutral Position Switch with Normally Open Contacts	0.25 N•m (2.25 lb•in)	12°	53°	6°	—	802X-NP7

Approximate Dimensions [mm (in.)]



Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Approximate Shipping Wt. 0.9 kg (2 lbs)

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. x 0.25 in. deep C'Bore for front mounting.

2—1/4-20 x 0.56 in. deep Tapped holes for rear mounting.

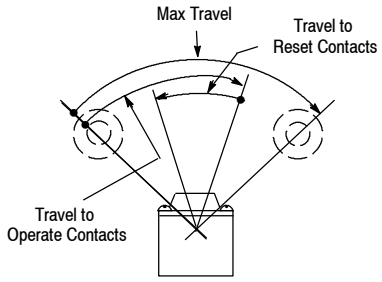
2—1/4-20 x 0.5 in. deep Tapped holes for side mounting.

Levers—See page 5-130 for a complete listing of operating levers.

802X Lever Type • Maintained Contact

Watertight or Hazardous Location Switches

Range of Operation



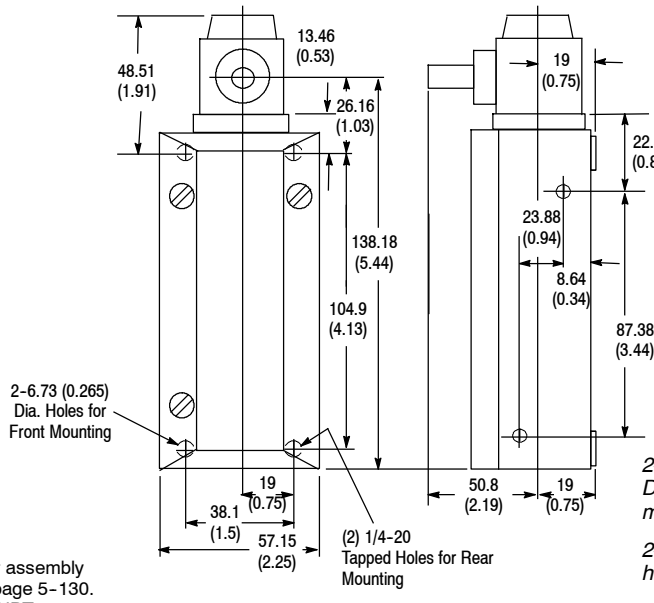
Switch Without Lever

Product Selection

Lever Movement vs. Contact Operation	Torque to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No.	
					NEMA 4	NEMA 7 & 9
Clockwise or Counterclockwise 	0.25 N•m (2.25 lb•in)	70° ❶	84° ❶	35°	802X-AM4	**802X-AM7**

❶ From one maintained position to the other.

Approximate Dimensions [mm (in.)]



Approximate Shipping Wt. 0.9 kg (2 lbs)

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. x 0.25 in. deep C'Bore for front mounting.

2—1/4-20 x 0.56 in. deep Tapped holes for rear mounting.

2—1/4-20 x 0.5 in. deep Tapped holes for side mounting.

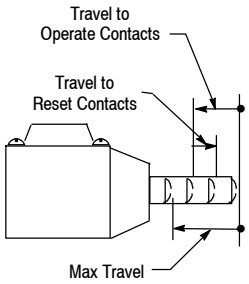
Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Levers—See page 5-130 for a complete listing of operating levers.

802X Push Type • Spring Return

Watertight or Hazardous Location Switches

Range of Operation



Top Push Rod

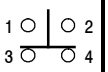
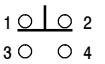
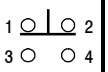
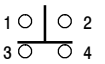
Adjustable Top Push Rod

Side Push Rod

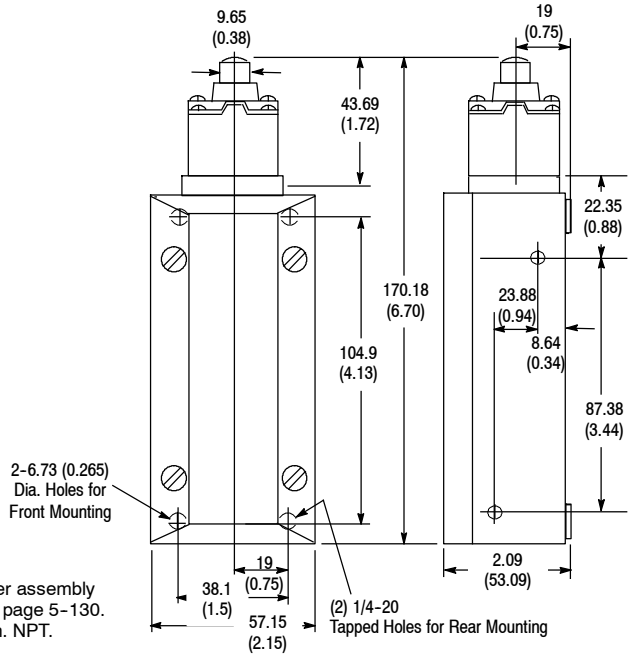
Top Push Roller

Side Push Roller

Product Selection

Operator Type	Contact Operation		Force to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel	Travel to Reset Contacts (Max)	Cat. No.	
	Normal	Operated					NEMA 4	NEMA 7 and 9
Top Push Rod			15.6 N (3.5 lbs)	1.9 mm (0.075 in.)	5.1 mm (0.202 in.)	0.8 mm (0.030 in.)	802X-B4	**802X-B7**
Adjustable Top Push Rod							802X-BA4	802X-BA7
Side Push Rod			20.0 N (4.5 lbs)	3.2 mm (0.125 in.)	5.5 mm (0.218 in.)	1.5 mm (0.057 in.)	802X-C4	802X-C7
Top Push Roller			15.6 N (3.5 lbs)	1.9 mm (0.075 in.)	5.1 mm (0.202 in.)	0.8 mm (0.030 in.)	802X-D4	802X-D7
Side Push Vertical Roller			20.0 N (4.5 lbs)	3.2 mm (0.125 in.)	5.5 mm (0.218 in.)	1.5 mm (0.057 in.)	802X-K4	802X-K7
Side Push Horizontal Roller							802X-K14	802X-K17

Approximate Dimensions [mm (in.)]



Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Approximate Shipping Wt. 0.9 kg (2 lbs)

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. x 0.25in deep C'Bore for front mounting.

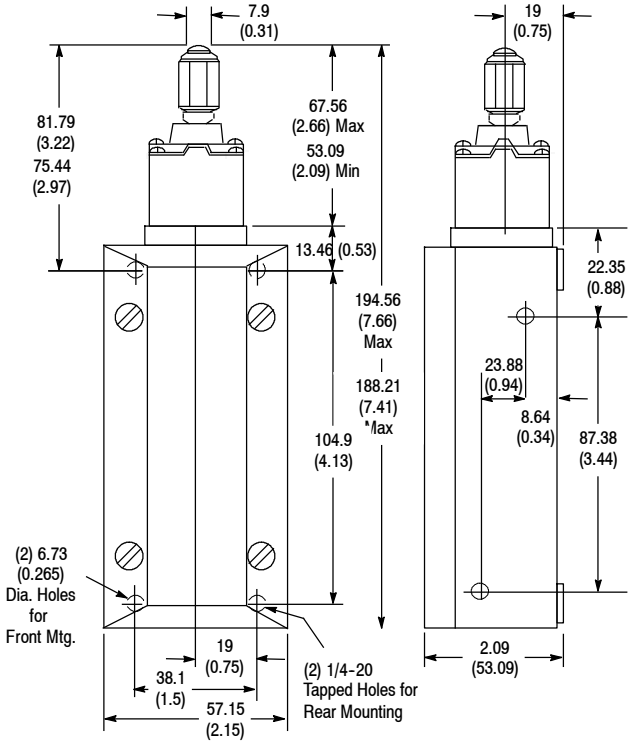
2—1/4-20 x 0.56in deep Tapped holes for rear mounting.

2—1/4-20 x 0.5in deep Tapped holes for side mounting.

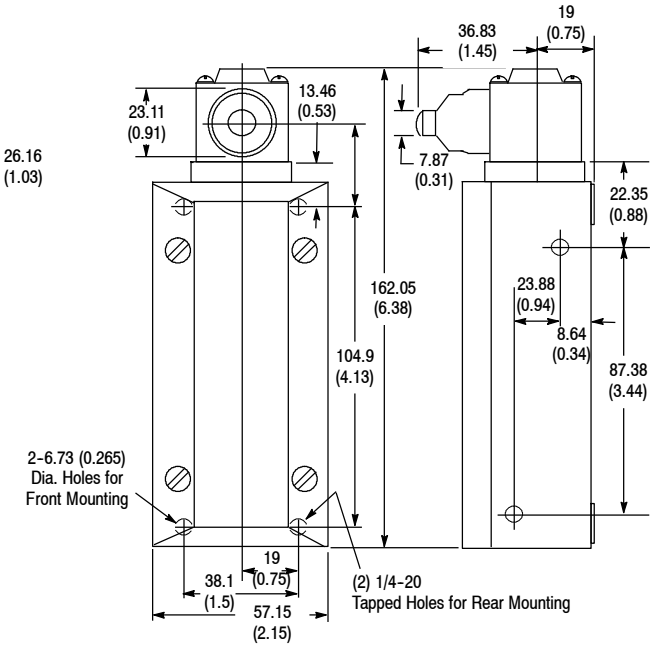
802X Push Type • Spring Return

Watertight or Hazardous Location Switches

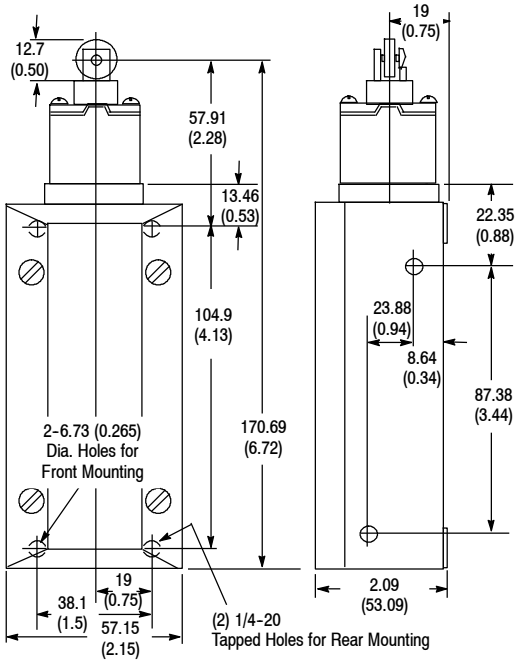
Approximate Dimensions [mm (in.)]



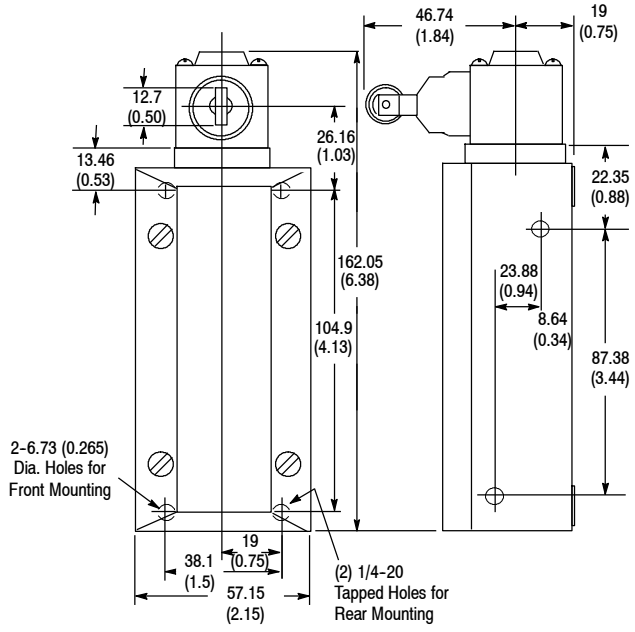
Bulletin 802X
Adjustable Top Push Rod Type



Bulletin 802X
Side Push Rod Type



Bulletin 802X
Top Push Roller Type



Bulletin 802X
Side Push Roller Type

Approximate Shipping Wt. 0.9 kg (2 lbs)

Note: For operating head and lever assembly dimensions not shown, see page 5-130.
Conduit pipe opening 1/2 in. NPT.

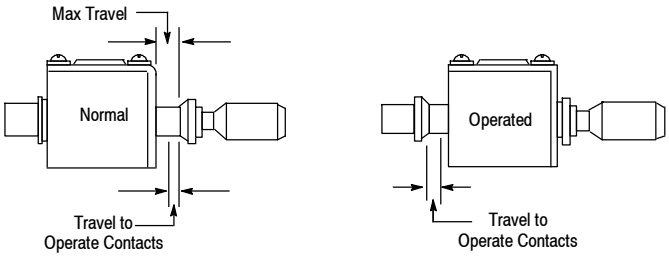
Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. x 0.25 in. deep C'Bore for front mounting.

2—1/4-20 x 0.56 in. deep Tapped holes for rear mounting.

2—1/4-20 x 0.5 in. deep Tapped holes for side mounting.

Range of Operation

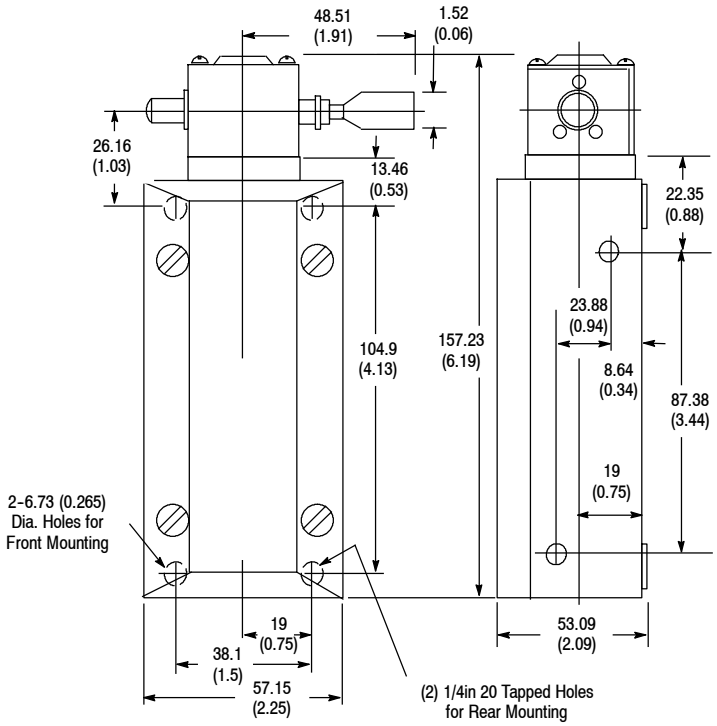


Side Push Rod

Product Selection

Operator Type	Contact Operation		Force to Operate (Max)	Travel to Operate Contacts	Max Travel	Travel to Reset Contacts (Max)	Cat. No.	
	Normal	Operated					NEMA 4	NEMA 7 and 9
Side Push Rod	1 2 3 4	1 2 3 4	35.49 N (8 lbs)	4.81 mm (0.192 in.) Nominal	5.96 mm (0.235 in.)	5.30 mm (0.209 in.) Nominal	—	802X-CM7

Approximate Dimensions [mm (in.)]

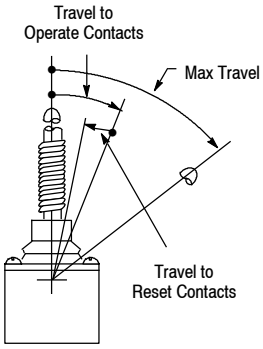


Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

802X Push Type • Wobble Stick and Cat Whisker • Spring Return

Watertight or Hazardous Location Switches

Range of Operation ❶



Travels are measured at rigid section of stick or whisker.

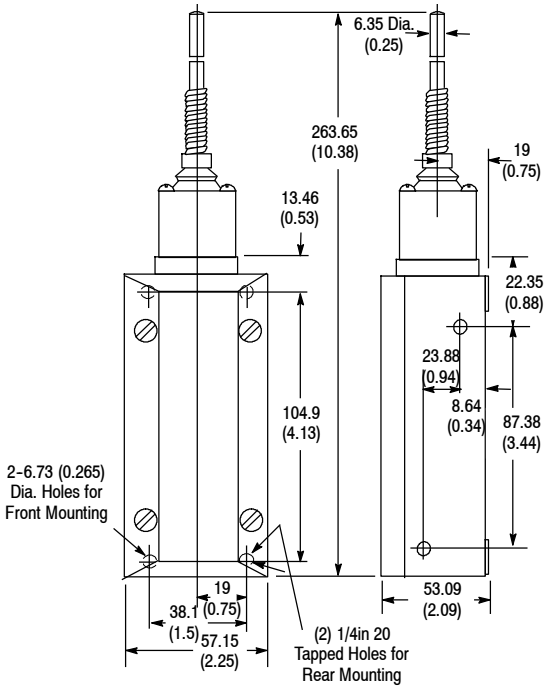
Wobble Stick *Cat Whisker*

Product Selection

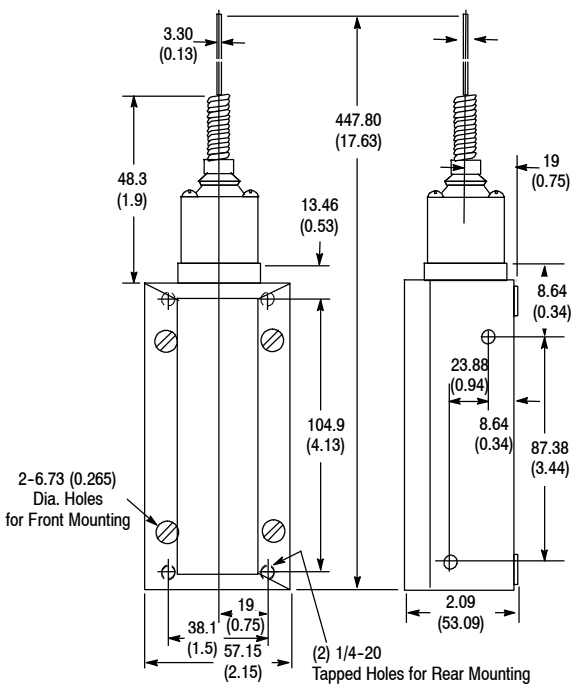
Operator Type	Contact Operation		Torque to Operate (Max)	Travel to Operate Contacts (Max)	Max Travel ❶	Travel to Reset Contacts (Max)	Cat. No.	
	Normal	Operated					NEMA 4	NEMA 7 & 9
Nylon Wobble Stick	1 ○ ○ 2 3 ○ ○ 4	1 ○ ○ 2 3 ○ ○ 4	0.51N.m (4.5lb in.)	9°	10°	4°	802X-WS4	802X-WS7
Wire Cat Whisker							802X-WS14	802X-WS17

❶ These switches should be mounted in such a way that the wobble stick will not be deflected beyond the "Maximum Travel" position, as this could cause undesirable repetition of contact action on rebound.

Approximate Dimensions [mm (in.)]



802X-WS4 and 802X-WS7



Bulletin 802X Wire Wobble Stick Type

Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Description

Bulletin 802XR NEMA Type 7 and 9 limit switches for hazardous locations are designed to operate in atmospheres and locations defined as Class I, Groups B, C or D or Class II, Groups E, F or G in the National Electrical Code. Typical applications for this switch include refineries, distilleries, grain elevators and flour mills. For Class I, Division 2 locations, a Bulletin 802R limit switch may also be used (see page 5-34).

As an added protection, the contact is hermetically sealed in a glass envelope for excellent contact reliability even in contaminated atmospheres. This switch is Programmable Controller compatible (24V and above) and is pilot duty rated NEMA B600 for AC and NEMA P300 for DC as shown in the specification.

Specifications

Enclosure Rating	NEMA 7 and 9
Certifications	UL Listed and CSA Certified
Ambient Temperature [C (F)] ❶	-29…+121° (-20…+250°) except devices with wobble stick operators. Wobble stick models are rated from -18…+54° (0…+130°)

AC Contact Rating (Maximum per Pole, 50 or 60Hz, Same Polarity)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
B600	120	30	3.00	5A	3600	360
	240	15	1.50	5A	3600	360
	480	7.5	0.75	5A	3600	360
	600	6	0.60	5A	3600	360

DC Contact Rating (Maximum per Pole)

NEMA Rating Designation	Voltage Range	Current Rating
P300	115-125	1.1 A
	230-250	0.55 A

Note: Temperature range below 0°C (+32°F) is based on the absence of freezing moisture or water.

Features

- Class I, Groups B, C, and D or Class II, Groups E, F and G
- Side rotary, wobble stick, adjustable top and top or side push styles with and without rollers

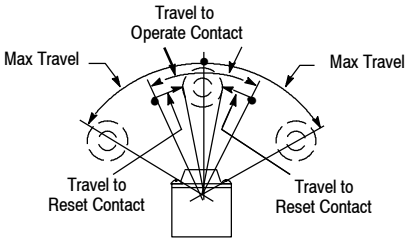
Sealed Contact

Lever Type • Spring Return page 5-82
Lever Type • Maintained Contact . . . . . page 5-83
Push Type • Spring Return . page 5-84
Cat Whisker • Spring Return . . . . . page 5-86

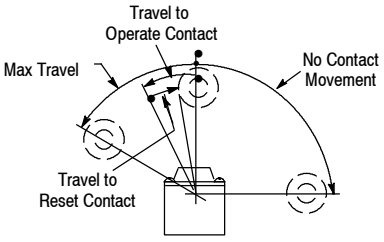
802XR Lever Type • Spring Return

Sealed Contact Hazardous Location Switches

Range of Operation



Lever Operation With Standard Levers



Lever Operation With W7 and W8 "One-Way" Levers

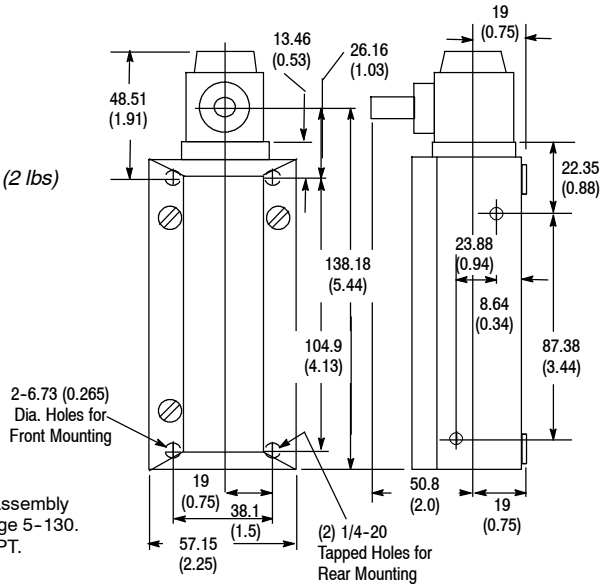
Switch Without Lever

Product Selection

Lever Movement	Torque to Operate (Max)	Travel to Operate Contact (Max)	Max Travel	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Clockwise or Counterclockwise	0.34 N•m (3 lb•in)	16°	42°	9°	N.O.	**802XR-AF7**
					N.C.	802XR-AC7
	0.51 N•m (4.5 lb•in)	7°	53°	3.5°	N.O.	802XR-HF7
					N.C.	802XR-HC7
Clockwise	0.167 N•m (1.5 lb•in)	17°	42°	10°	N.O.	802XR-A3F7
					N.C.	802XR-A3C7
	0.51 N•m (4.5 lb•in)	7°	50°	3.5°	N.O.	802XR-H1F7
					N.C.	802XR-H1C7
Counterclockwise	0.167 N•m (1.5 lb•in)	17°	42°	10°	N.O.	802XR-A4F7
					N.C.	802XR-A4C7
	0.51 N•m (4.5 lb•in)	7°	50°	3.5°	N.O.	802XR-H2F7
					N.C.	802XR-H2C7
Clockwise Lever cannot move counterclockwise	0.45 N•m (4 lb•in)	20°	91°	11°	N.O.	802XR-L1F7
					N.C.	802XR-L1C7
Counterclockwise Lever cannot move clockwise					N.O.	802XR-L2F7
					N.C.	802XR-L2C7

Approximate Dimensions [mm (in.)]

Approximate Shipping Wt. 0.9 kg (2 lbs)



Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. C'Bore 0.25 in. deep for front mounting.

2—1/4-20 Tapped holes 0.56 in. deep for rear mounting.

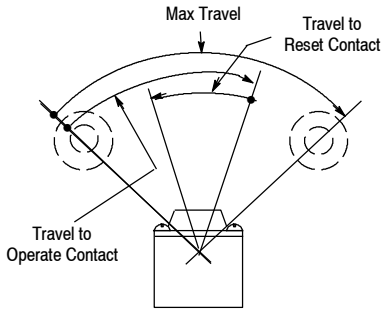
2—1/4-20 Tapped holes 0.5 in. deep for side mounting.

Levers—See page 5-130 for a complete listing of operating levers.

802XR Lever Type • Maintained Contact

Sealed Contact Hazardous Location Switches

Range of Operation



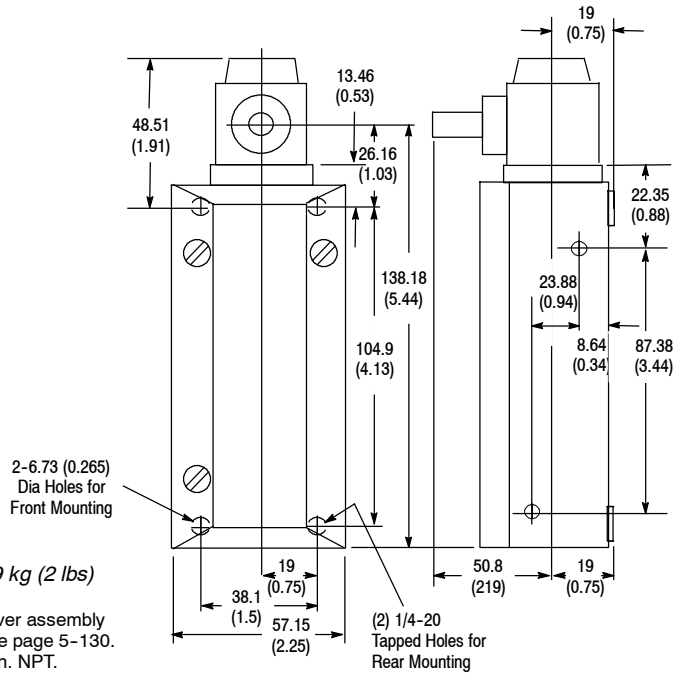
Switch
Without Lever

Product Selection

Lever Movement	Torque to Operate (Max)	Travel to Operate Contact (Max)	Max Travel	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Counterclockwise	0.25 N•m (2.25 lb•in)	70° ❶	84° ❶	35°	N.O.	802XR-AMF7
					N.C.	802XR-AMC7

❶ From one maintained position to the other.

Approximate Dimensions [mm (in.)]



Approximate Shipping Wt. 0.9 kg (2 lbs)

Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. C'Bore 0.25 in. deep for front mounting.

2—1/4-20 Tapped holes 0.56 in. deep for rear mounting.

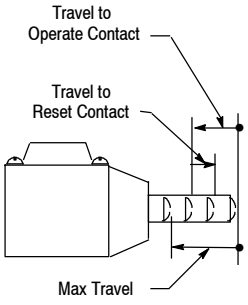
2—1/4-20 Tapped holes 0.5 in. deep for side mounting.

Levers—See page 5-130 for a complete listing of operating levers.

802XR Push Type • Spring Return

Sealed Contact Hazardous Location Switches

Range of Operation



Top Push Rod

Adjustable Top Push Rod

Side Push Rod

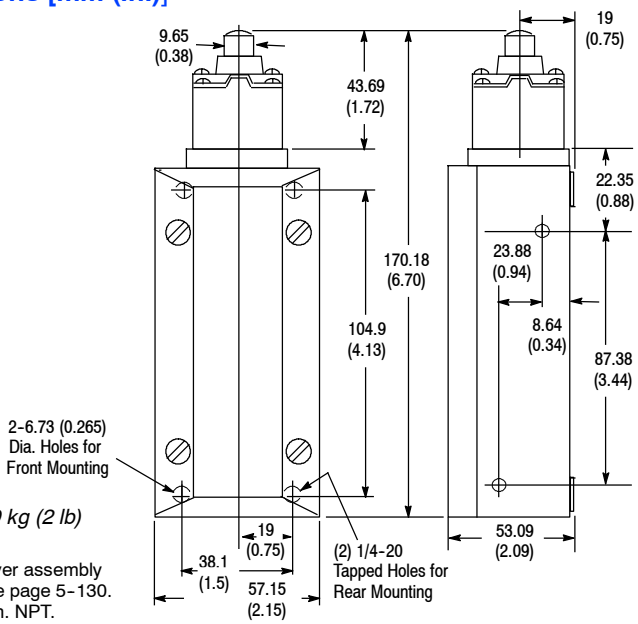
Top Push Roller

Side Push Roller

Product Selection

Operator Type	Force to Operate (Max)	Travel to Operate Contact (Max)	Max Travel	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Top Push Rod	13.4 N (3 lb)	1.75 mm (0.069 in.)	5.1 mm (0.202 in.)	0.71 mm (0.028 in.)	N.O.	802XR-BF7
					N.C.	802XR-BC7
Adjustable Top Push Rod	15.6 N (3.5 lb)				N.O.	802XR-BAF7
					N.C.	802XR-BAC7
Side Push Rod	20.0 N (4.5 lb)	3.2 mm (0.125 in.)	5.5 mm (0.218 in.)	1.5 mm (0.057 in.)	N.O.	802XR-CF7
					N.C.	802XR-CC7
Top Push Roller	15.6 N (3.5 lb)	1.75 mm (0.069 in.)	5.1 mm (0.202 in.)	0.71 mm (0.028 in.)	N.O.	802XR-DF7
					N.C.	802XR-DC7
Side Push Vertical Roller	20.0 N (4.5 lb)	3.2 mm (0.125 in.)	5.5 mm (0.0218 in.)	1.5 mm (0.057 in.)	N.O.	802XR-KF7
					N.C.	802XR-KC7
Side Push Horizontal Roller					N.O.	802XR-K1F7
					N.C.	802XR-K1C7

Approximate Dimensions [mm (in.)]



Approximate Shipping Wt. 0.9 kg (2 lb)

Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

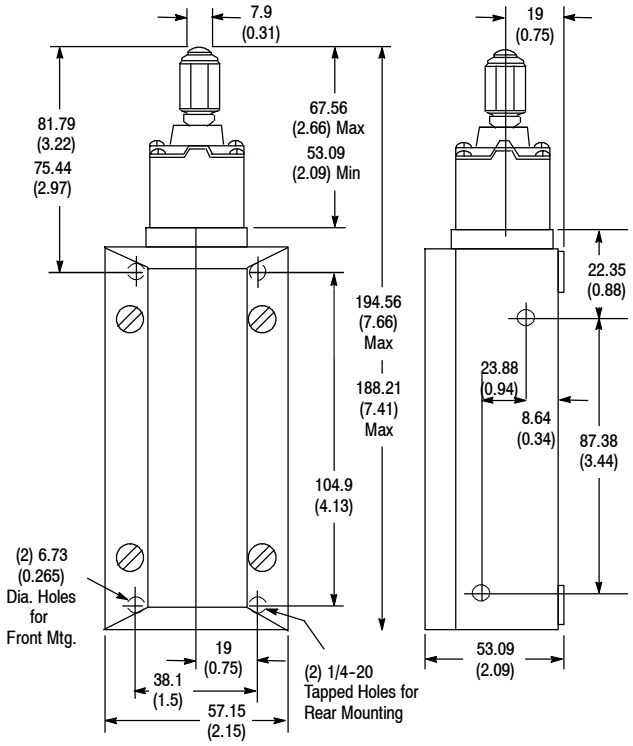
Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. C'Bore 0.25 in. deep for front mounting.

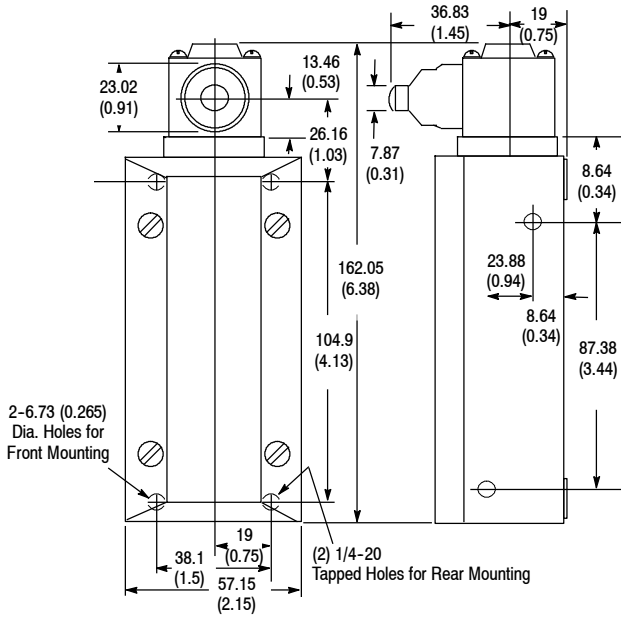
2—1/4-20 Tapped holes 0.56 in. deep for rear mounting.

2—1/4-20 Tapped holes 0.5 in. deep for side mounting.

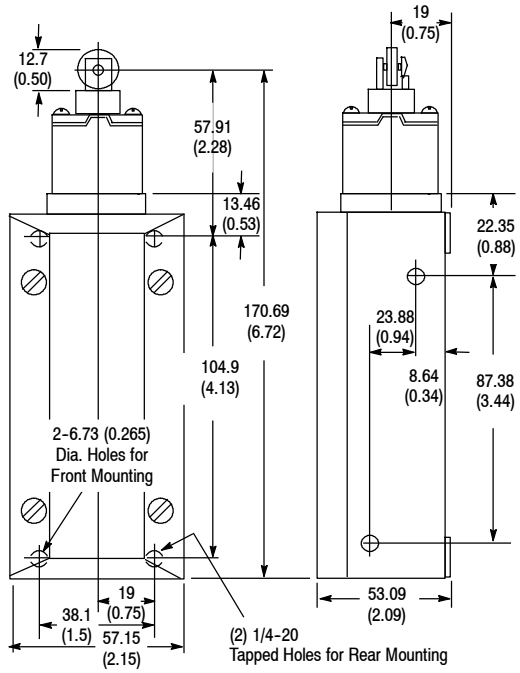
Approximate Dimensions [mm (in.)]



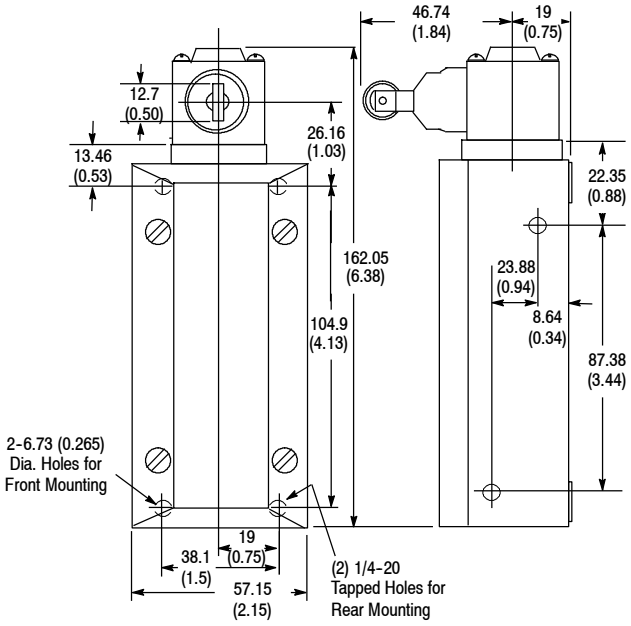
Bulletin 802XR Adjustable Top Push Rod Type



Bulletin 802XR Side Push Rod Type



Bulletin 802XR Top Push Roller Type



Bulletin 802XR Side Push Roller Type

Approximate Shipping Wt. 0.9 kg (2 lb)

Note: For operating head and lever assembly dimensions not shown, see page 5-130.
Conduit pipe opening 1/2 in. NPT.

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. C'Bore 0.25 in. deep for front mounting.

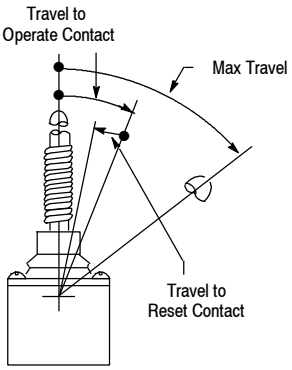
2—1/4-20 Tapped holes 0.56 in. deep for rear mounting.

2—1/4-20 Tapped holes 0.5 in. deep for side mounting.

802XR Cat Whisker • Spring Return

Sealed Contact Hazardous Location Switches

Range of Operation ❶



Travels Are Measured at Rigid Section of Operator

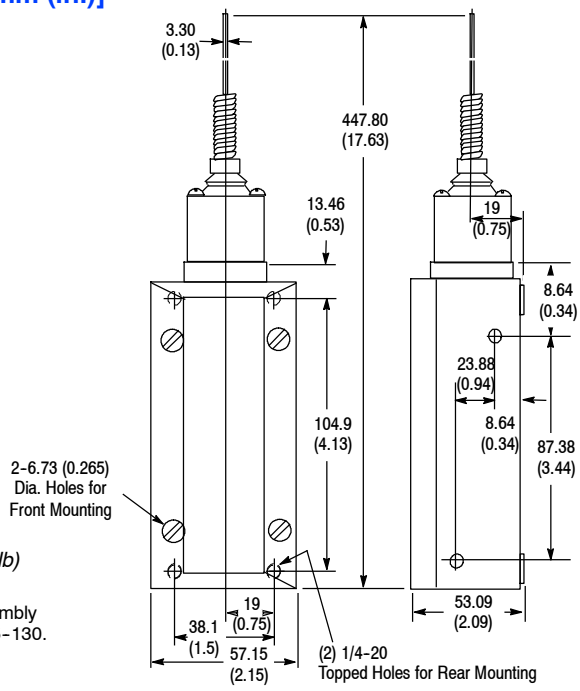
Cat Whisker

Product Selection

Operator Type	Torque to Operate (Max)	Travel to Operate Contact (Max)	Max Travel ❶	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Wire Cat Whisker	0.51 N•m (4.5 lb•ft)	11°	11°	5°	N.O.	802XR-WS1F7
					N.C.	802XR-WS1C7

❶ These switches should be mounted in such a way that the operator will not be deflected beyond the "Maximum Travel" position, as this could cause undesirable repetition of contact action on rebound.

Approximate Dimensions [mm (in.)]



Approximate Shipping Wt. 0.9 kg (2lb)

Note: For operating head and lever assembly dimensions not shown, see page 5-130. Conduit pipe opening 1/2 in. NPT.

Mounting Hole Dimensions

2—0.265 Dia. through hole with 0.500 Dia. C'Bore 0.25 in. deep for front mounting.

2—1/4-20 Tapped holes 0.56 in. deep for rear mounting.

2—1/4-20 Tapped holes 0.5 in. deep for side mounting.

802B Compact, Precision and Small Precision

Compact

Precision

Small Precision

Description

Bulletin 802B consists of different body styles: compact, precision and small precision. Each style has been designed to withstand the rugged environments that industrial applications demand. Each style utilizes industry standard mounting dimensions and operating characteristics. The 802B family of limit switches can be mounted in areas that traditional NEMA limit switches can not, due to their size and mounting options.

The 802B compact limit switch uses a die-cast housing with a 3m prewired cable. This limit switch is available with 13 unique head configurations. Each head style can be ordered as a standard model, LED indicator model, or as a low current model. The compact limit switch maintains NEMA 6 and IP67 enclosure ratings by utilizing a triple seal construction.

The 802B precision limit switch uses a die-cast housing with 1/2 NPT conduit entry. This limit switch is available with 5 unique head configurations. Each different head is available as standard or with a rubber boot for additional sealing. Two different mounting styles are available. Side mount or flange rubber boot for additional sealing. Two different mounting styles are available: side mount or flange mount.

The 802B small precision limit switch is similar to the 802B Precision limit switch with some additional features. This switch offers an enclosure rating of

NEMA 6 and IP67 which is achieved by a rubber cable gland sealing the control cable entry. This limit switch offers 12 different head configurations, including some that are unique to this product offering.

Specifications

	Compact	Precision	Small Precision
Certifications	UL Listed, CSA Certified and CE Marked for all applicable directives	UL Listed, CSA Certified and CE Marked for all applicable directives	UL Recognized, CSA Certified and CE Marked for all applicable directives
Enclosure Rating	NEMA 1,3,4,6,12,13 and IP67	NonBooted: NEMA 1 and IP60 Booted: NEMA 1,3,4, and IP65	NEMA 1, 3, 4, 6, 13 and IP67
Mechanical Life	Approx. 10,000,000 operations ❶	Approx. 10,000,000 operations ❶	Approx. 10,000,000 operations ❷
Electrical Life	Approx. 200,000 operations (3 A 250 V AC, resistive load) ❶	Approx. 500,000 operations (15 A 250 V AC, resistive load) ❶	Approx. 500,000 operations (10 A 250 V AC, resistive load) ❷
Operating Speed			
Top Push	0.1 mm…0.5 m per second	0.01 mm…0.5 m per second	0.05 mm…0.5 m per second
Side Rotary	1 mm…1 m per second	—	—
Lever Type	—	0.02 mm…0.5 m per second	—
Operating Frequency			
Mechanical	120 operations/minute	120 operations/minute	120 operations/minute
Electrical	30 operations/minute	20 operations/minute	20 operations/minute
Operating Temperature [C (F)]	-10…70° (14…158°) with no icing	-10…80° (14…176°) with no icing	-10…80° (14…176°) with no icing
Short Circuit Protection	Quick blow fuse suitable for rated current is recommended	Quick blow fuse suitable for rated current is recommended	Quick blow fuse suitable for rated current is recommended
Contact Type	SPDT Form C	SPDT Form C	SPDT Form C

❶ Life expectancy has been calculated at an operating temperature of 5…35°C (41…95°F) and an operating humidity of 40…70%.

❷ Life expectancy has been calculated at an operating temperature of 20°C (68°F) and an operating humidity of 65%.

Features

- Rugged die-cast housing
- Industry standard dimensions
- Compact size
- Multiple mounting options
- Wide range of operating voltage and current ratings

Style

802B Compact, Precision and Small Precision

Specifications

Compact

Rated Voltage	Non-Inductive Resistive Load	Inductive Load			Inrush Current	
		Inductive	Motor Load			
			N/O	N/C	N/O	N/C
Standard Models						
125V AC	5 A	3 A	1.3 A	2.5 A	10 A max	20 A max
250V AC	5 A	2 A	0.8 A	1.5 A		
8V DC	5 A	5 A	3 A	3 A		
14V DC	5 A	4 A	3 A	3 A		
30V DC	4 A	3 A	3 A	3 A		
125V DC	0.4 A	0.4 A	0.05 A	0.05 A		
250V DC	0.2 A	0.2 A	0.03 A	0.03 A		
AC LED Models						
125V AC	5 A	3 A	1.3 A	2.5 A		
125V DC	0.4 A	0.4 A	0.05 A	0.05 A		
DC LED Models						
30V DC	4 A	3 A	3 A	3 A		
Low Current Models						
125V AC	0.1 A	—				
8V DC	0.1 A					
14V DC	0.1 A					
30V DC	0.1 A					

UL/CSA Approved Ratings

NEMA Rating Designation	Rated Voltage	A		Continuous Current	Volt	Amps
		Make	Break			
B300	120V AC	30	3	5	3,600	360
	240V AC	15	1.5			
AC LED Versions						
B150	120V AC	30	3	5	3,600	360

Leakage Current for LED Models

	Voltage	Leakage Current	Resistance		
AC LED	125	1.7 mA	68 kΩ		
DC LED	30		15 kΩ		

Precision

Rated Voltage	Non-Inductive Resistive Load	Inductive Load			Inrush Current		UL/CSA Approved Ratings		
		Inductive	Motor Load						
			N/O	N/C	N/O	N/C	Rated Voltage	Current	Horsepower
125V AC	15 A	15 A	2.5 A	5 A	15 A max	30 A max	120V AC	15 A	1/8 HP 1/4 HP
250V AC	15 A	2.5 A	1.5 A	3 A			250V AC	15 A	
480V AC	10A	1.5 A	0.75 A	1.5 A			480V AC	15 A	
125V DC	0.5 A	0.5 A	0.05 A				125V DC	0.5 A	—
250V DC	0.25 A	0.25 A	0.03 A				250V DC	0.25 A	

Small Precision

Rated Voltage	Non-Inductive Resistive Load	Inductive Load			Inrush Current		UL/CSA Approved Ratings					
		Inductive	Motor Load				NEMA Rating Designation	Rated Voltage	A		Continuous Current	Volt	Amps
			N/O	N/C	N/O	N/C			Make	Break			
125V AC	10A	10 A	2.5 A	5 A	15 A max	30 A max	A300	120V AC	60	6	10	7,200	720
250V AC	10A	10 A	1.5 A	3 A				240V AC	30	3			
8V DC	10A	6 A	2.5 A	5 A									
14V DC	10A	6 A	2.5 A	5 A									
30V DC	6A	5 A	2.5 A	5 A									
125V DC	0.5 A	0.05 A	0.05 A										
250V DC	0.25 A	0.03 A	0.03 A										

Rotary Arm

Center Rotary Arm

Wobble Stick

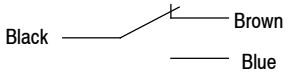
Product Selection

Head Type	Torque to Operate	Travel to Operate	Reference Value		Output Type	Cat. No.	
			Max Travel	Travel to Reset		Pre-leaded	Quick-Disconnect❶
Rotary Arm	0.216 N•m (2 lb•in.)	25°	70°	3°	Standard	**802B-CSAAXSXC3**	802B-CSAAXSXD4
							802B-CSAAXSXR4
					AC LED	802B-CSAAXSLC3	802B-CSAAXSLR4
					DC LED	802B-CSDAXSLC3	802B-CSDAXSLD4
					Low Voltage/Current	802B-CSDAXSXC3	—
Center Rotary Arm	0.216 N•m (2 lb•in.)	10 ±3°	65°	4°	Standard	802B-CSAA2XSXC3	—
					AC LED	802B-CSAA2XSLC3	—
					DC LED	802B-CSDA2XSLC3	—
					Low Voltage/Current	802B-CSDA2XSXC3	—
Wobble Stick	0.118 N•m (1.04 lb•in.)	15°	18° (Nominal Value)	11° (Nominal Value)	Standard	**802B-CSACXSXC3**	802B-CSACXSXD4
							802B-CSACXSXR4
					AC LED	802B-CSACXSLC3	—
					DC LED	802B-CSDCXSLC3	—
					Low Voltage/Current	802B-CSDCXSXC3	—

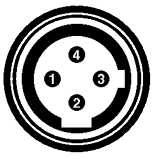
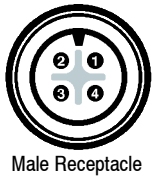
Wiring

Pre-leaded Models

COM	NO	NC	Ground
Black	Blue	Brown	Green/Yellow

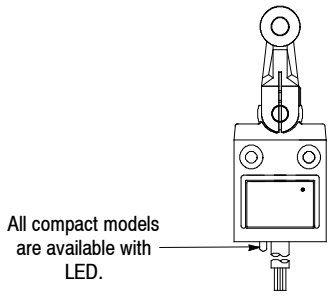


Quick-Disconnect Models

AC QD Pin-out:		DC QD Pin-out:	
Pin 1 = Common		Pin 1 = N/O	
Pin 2 = N/O		Pin 2 = Common	
Pin 3 = N/C		Pin 3 = Grnd.	
Pin 4 = Grnd.	Male Receptacle	Pin 4 = N/C	Male Receptacle

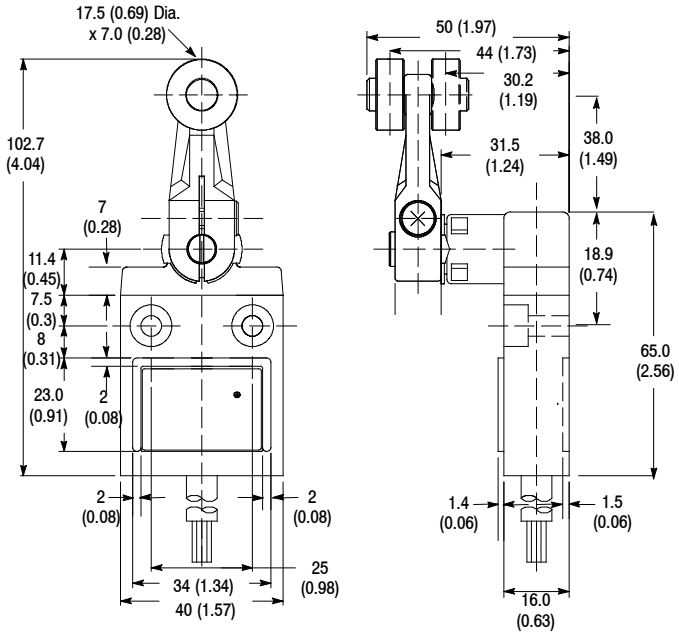
❶ For quick-disconnect versions the last two digits indicate connector type:
802B-xxxxxxxD4 Indicates a 4-pin DC micro style connector
802B-xxxxxxxR4 Indicates a 4-pin AC micro style connector

QD is on a 6 inch pigtail.

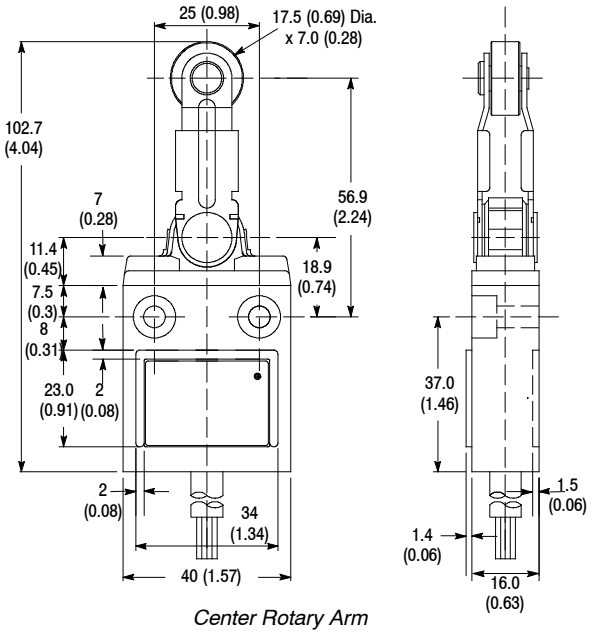


An appropriate female connector with cable is available in Connection Systems.
4-pin micro DC = (889D-F4AC-2) on page 8-16
4-pin micro DC = (889R-F4AEA-2) on page 8-28

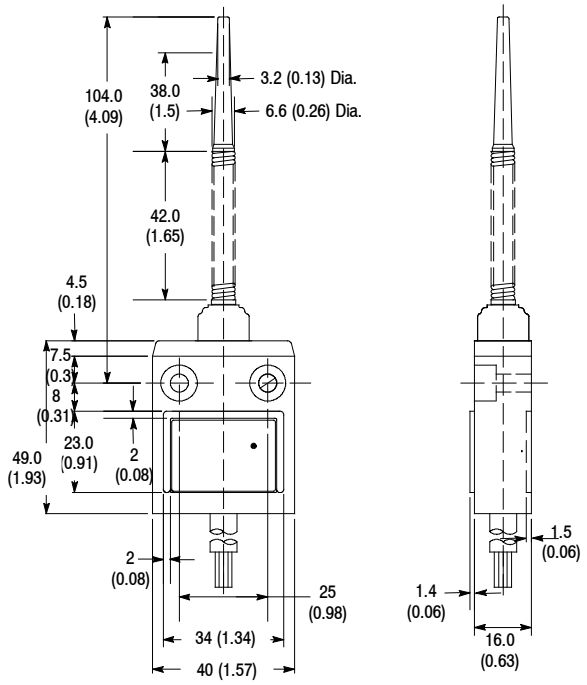
Approximate Dimensions [mm (in.)]



Rotary Arm



Center Rotary Arm



Wobble Stick

Counter Bore = 102. mm Dia
Mounting Hole = 5.1 mm Dia
Counter Bore Depth = 5.8 mm
Mounting Hole Depth = 10.1 mm
Cable Dia. = 8.5 mm

Top Push

Top Push Bevel

Top Push Roller

Top Push Cross Roller

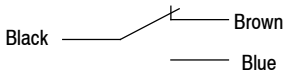
Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Output Type	Cat. No.	
						Pre-leaded	Quick-Disconnect❶
Top Push	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	**802B-CSABXSXC3**	802B-CSABXSXD4
							802B-CSABXSXR4
					AC LED	802B-CSABXSLC3	802B-CSABXSLR4
					DC LED	802B-CSDBXSLC3	802B-CSDBXSLD4
					Low Voltage/Current	802B-CSDBXSXC3	—
Top Push Bevel	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	802B-CSAB1XSXC3	—
					AC LED	802B-CSAB1XSLC3	—
					DC LED	802B-CSDB1XSLC3	—
					Low Voltage/Current	802B-CSDB1XSXC3	—
Top Push Roller	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	**802B-CSADXSXC3**	802B-CSADXSXD4
							802B-CSADXSXR4
					AC LED	802B-CSADXSLC3	802B-CSADXSLR4
					DC LED	802B-CSDDXSLC3	802B-CSDDXSLD4
					Low Voltage/Current	802B-CSDDXSXC3	—
Top Push Cross Roller	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	**802B-CSAD1XSXC3**	802B-CSAD1XSXD4
							802B-CSAD1XSXR4
					AC LED	802B-CSAD1XSLC3	802B-CSAD1XSLR4
					DC LED	802B-CSDD1XSLC3	802B-CSDD1XSLD4
					Low Voltage/Current	802B-CSDD1XSXC3	—

Wiring

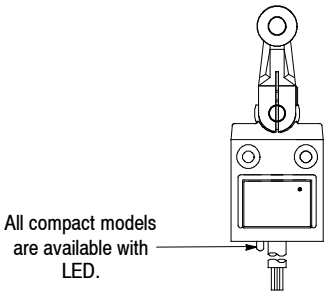
Pre-leaded Models

COM	NO	NC	Ground
Black	Blue	Brown	Green/Yellow



Quick-Disconnect Models

AC QD Pin-out:		DC QD Pin-out:	
Pin 1 = Common		Pin 1 = N/O	
Pin 2 = N/O		Pin 2 = Common	
Pin 3 = N/C		Pin 3 = Grnd.	
Pin 4 = Grnd.	Male Receptacle	Pin 4 = N/C	Male Receptacle



❶ For quick-disconnect versions the last two digits indicate connector type:
802B-xxxxxxxD4 Indicates a 4-pin DC micro style connector
802B-xxxxxxxR4 Indicates a 4-pin AC micro style connector

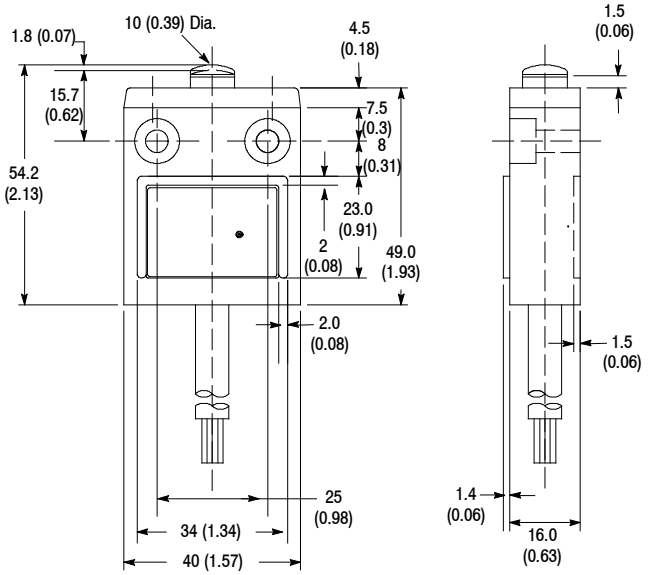
QD ia on a 6 in. pigtail.

An appropriate female connector with cable is available in Connection Systems.
4-pin micro DC = (889D-F4AC-2) on page 8-16
4-pin micro DC = (889R-F4AEA-2) on page 8-28

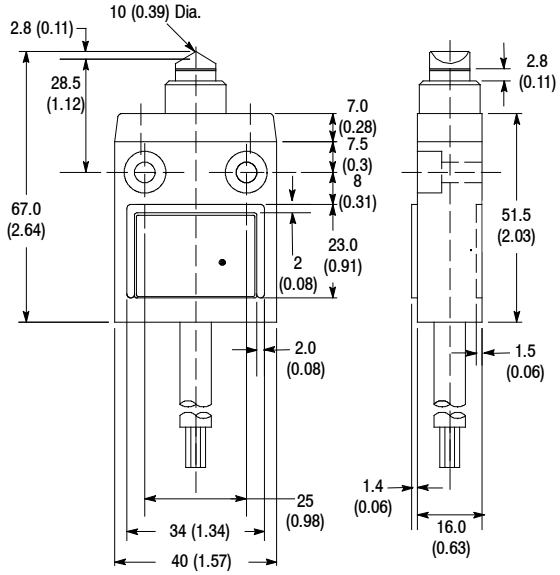
802B Compact

Small Metal Body

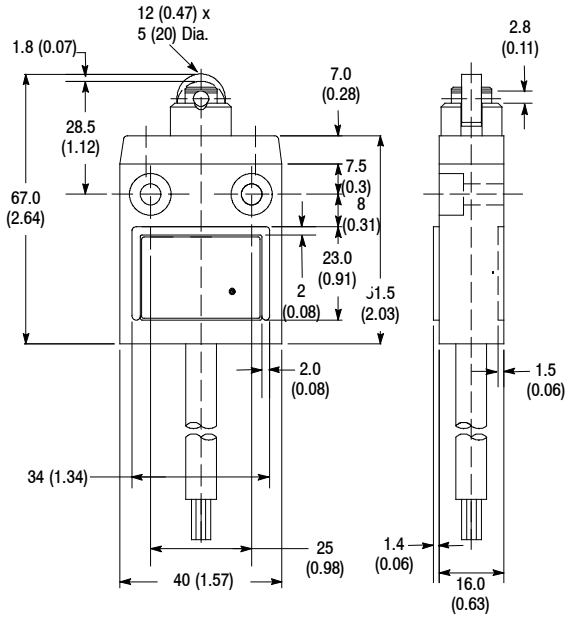
Approximate Dimensions [mm (in.)]



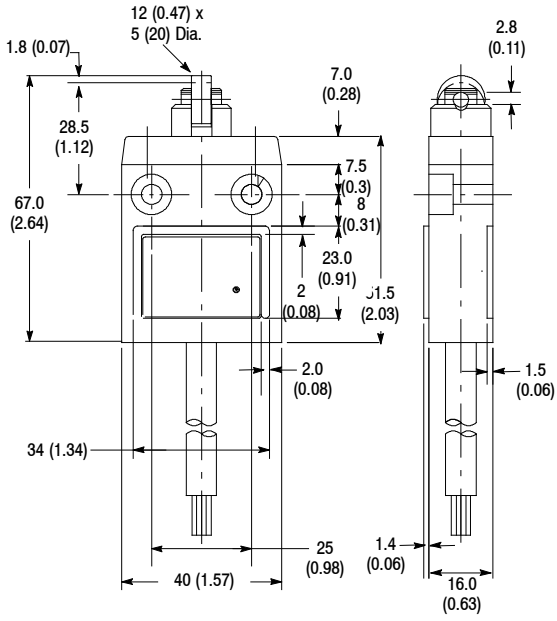
Top Push



Top Push Bevel



Top Push Roller



Top Push Cross Roller

Top Push
Panel Mount

Top Push Roller
Panel Mount

Top Push Cross
Roller Panel Mount

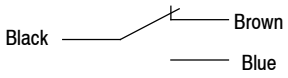
Product Selection

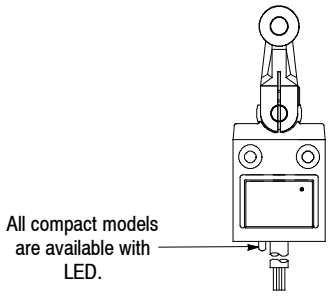
Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Output Type	Cat. No.
Top Push Panel Mount	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	802B-CPABXSXC3
					AC LED	802B-CPABXSLC3
					DC LED	802B-CPDBXSLC3a.
					Low Voltage/Current	802B-CPDBXSXC3
Top Push Roller Panel Mount	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	802B-CPADXSXC3
					AC LED	802B-CPADXSLC3
					DC LED	802B-CPDDXSLC3
					Low Voltage/Current	802B-CPDDXSXC3
Top Push Cross Roller Panel Mount	11.77 N (2.65 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	802B-CPAD1XSXC3
					AC LED	802B-CPAD1XSLC3
					DC LED	802B-CPDD1XSLC3
					Low Voltage/Current	802B-CPDD1XSXC3

Wiring

Preleaded Models

COM	NO	NC	Ground
Black	Blue	Brown	Green/Yellow

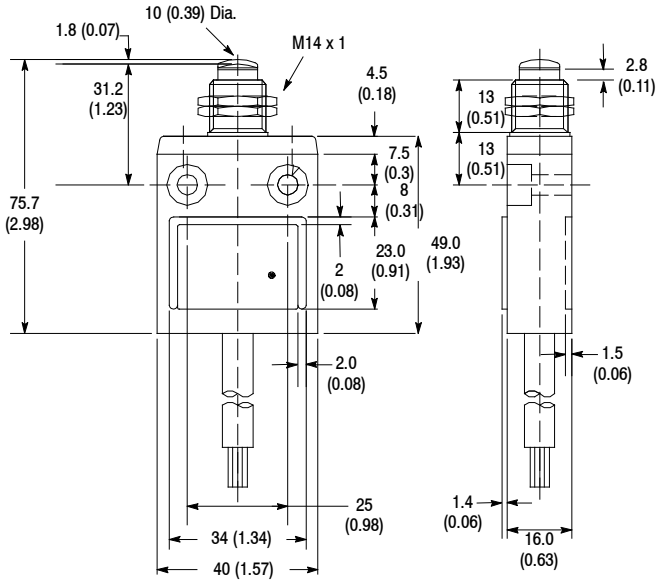




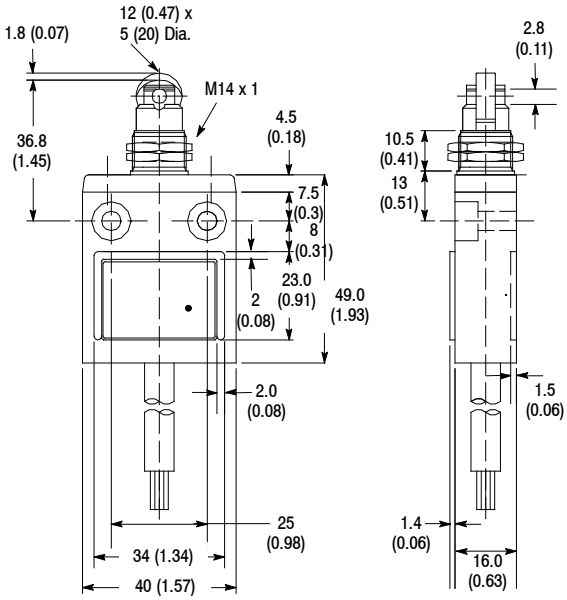
802B Compact

Small Metal Body

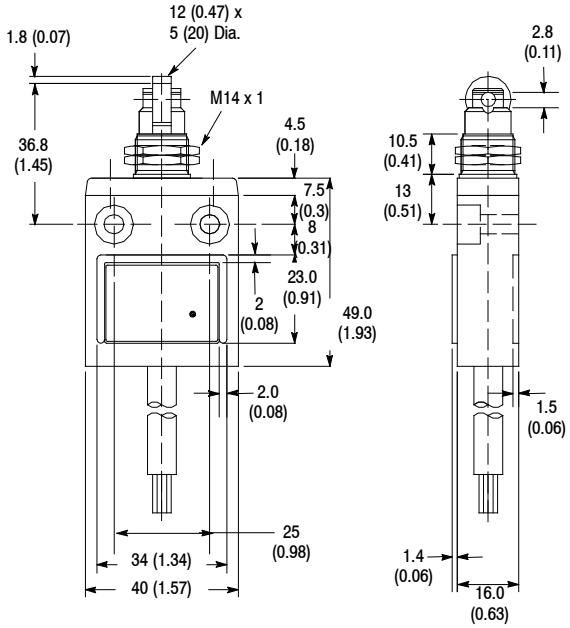
Approximate Dimensions [mm (in.)]



Top Push Panel Mount



Top Push Roller Panel Mount



Top Push Cross Roller Panel Mount

Top Push Booted Head

Top Push Roller Booted Head

Top Push Cross Roller Booted Head

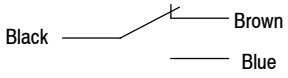
Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Output Type	Cat. No.	
						Pre-leaded	Quick-Disconnect❶
Top Push Booted Head	17.65 N (3.97 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	**802B-CSABBSXC3**	802B-CSABBSXD4
							802B-CSABBSXR4
					AC LED	802B-CSABBSLC3	802B-CSABBSLR4
					DC LED	802B-CSDBBSLC3	802B-CSDBBSLD4
					Low Voltage/Current	802B-CSDBBSXC3	—
Top Push Roller Booted Head	17.65 N (3.97 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	802B-CSADBSXC3	802B-CSADBSXD4
							802B-CSADBSXR4
					AC LED	802B-CSADBSLC3	802B-CSADBSLR4
					DC LED	802B-CSDDBSLC3	802B-CSDDBSLD4
					Low Voltage/Current	802B-CSDDBSXC3	—
Top Push Cross Roller Booted Head	17.65 N (3.97 lb)	1.8 mm (0.071 in.)	5 mm (0.197 in.)	0.2 mm (0.008 in.)	Standard	802B-CSAD1BSXC3	802B-CSAD1BSXD4
							802B-CSAD1BSXR4
					AC LED	802B-CSAD1BSLC3	802B-CSAD1BSLR4
					DC LED	802B-CSDD1BSLC3	802B-CSDD1BSLD4
					Low Voltage/Current	802B-CSDD1BSXC3	—

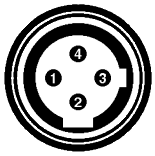
Wiring

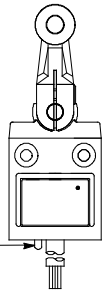
Preleaded Models

COM	NO	NC	Ground
Black	Blue	Brown	Green/Yellow



Quick-Disconnect Models

AC QD Pin-out:		DC QD Pin-out:	
Pin 1 = Common		Pin 1 = N/O	
Pin 2 = N/O		Pin 2 = Common	
Pin 3 = N/C		Pin 3 = Grnd.	
Pin 4 = Grnd.	Male Receptacle	Pin 4 = N/C	Male Receptacle



All compact models are available with LED.

❶ For quick-disconnect versions the last two digits indicate connector type:
802B-xxxxxxD4 Indicates a 4-pin DC micro style connector
802B-xxxxxxR4 Indicates a 4-pin AC micro style connector

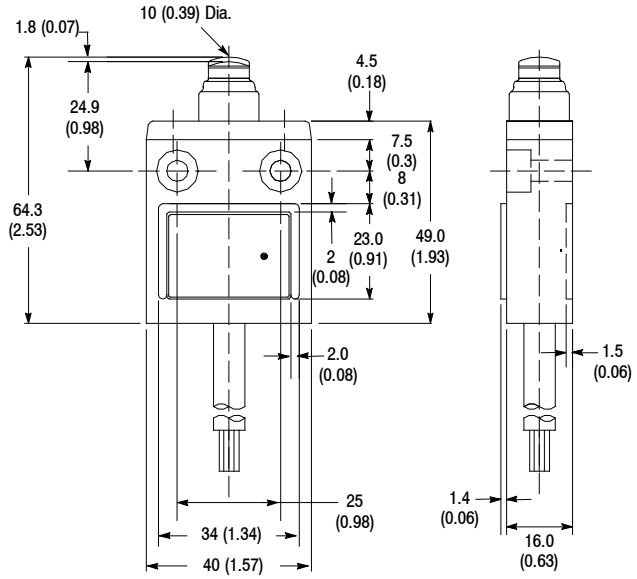
QD is on a 6 in. pigtail.

An appropriate female connector with cable is available in Connection Systems.
4-pin micro DC = (889D-F4AC-2) on page 8-16
4-pin micro DC = (889R-F4AEA-2) on page 8-28

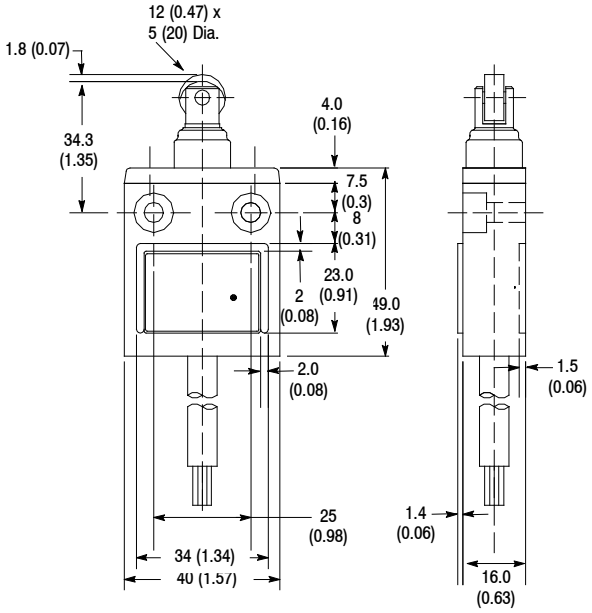
802B Compact

Small Metal Body

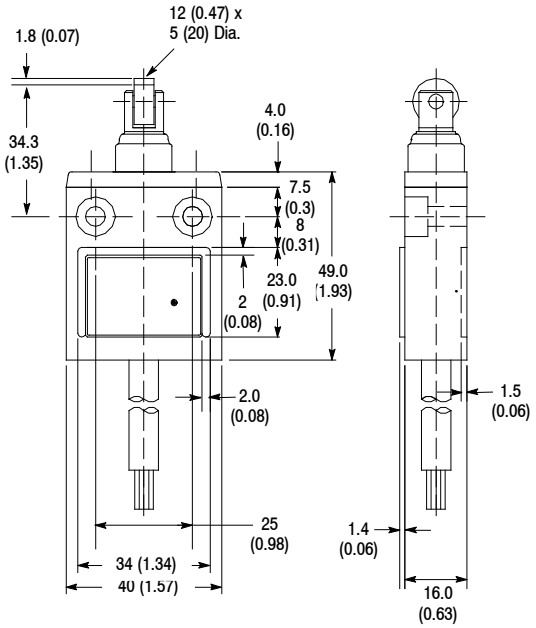
Approximate Dimensions [mm (in.)]



Top Push Sealed Head



Top Push Roller Sealed Head



Top Push Cross Roller Sealed Head

Top Push | *Top Push Roller* | *Top Push Cross Roller* | *Roller Lever* | *One-Way Roller Lever*

Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Mounting Style	Cat. No.
Top Push	2.45…3.43 N (0.55…0.77 lb)	0.4 mm (0.016 in.)	5.9 mm (0.232 in.)	0.05 mm (0.002 in.)	Side	802B-PSABXSX
Top Push Roller		0.5 mm (0.020 in.)	4.1 mm (0.161 in.)			802B-PSADXSX
Top Push Cross Roller						802B-PSAD1XSX
Roller Lever	5.59 N (1.28 lb)	4 mm (0.157 in.)	10 mm (0.394 in.)	0.4 mm (0.016 in.)		802B-PSARXSX
One-Way Roller Lever						802B-PSAR2XSX

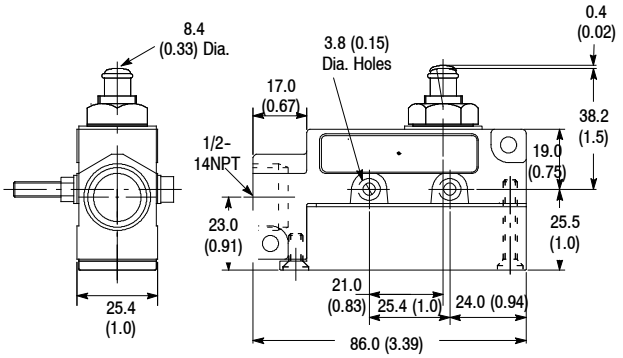
Wiring Diagrams

1	3	2	
⊕ Com	⊕ N.O.	⊕ N.C.	Com 1 — NC 2, NO 3

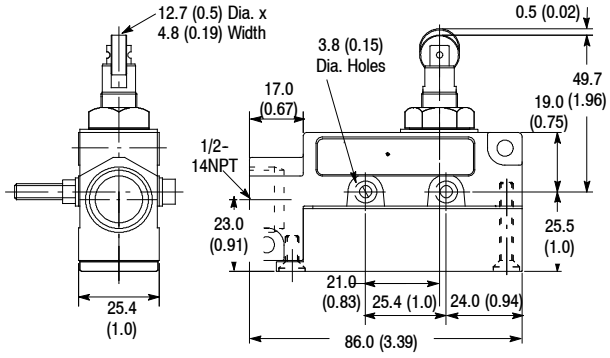
802B Precision

Small Metal Body

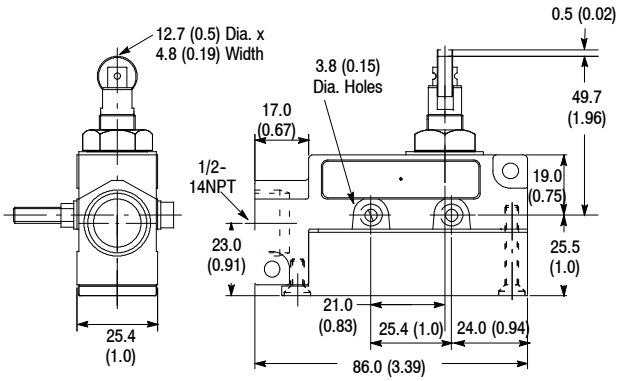
Approximate Dimensions [mm (in.)]



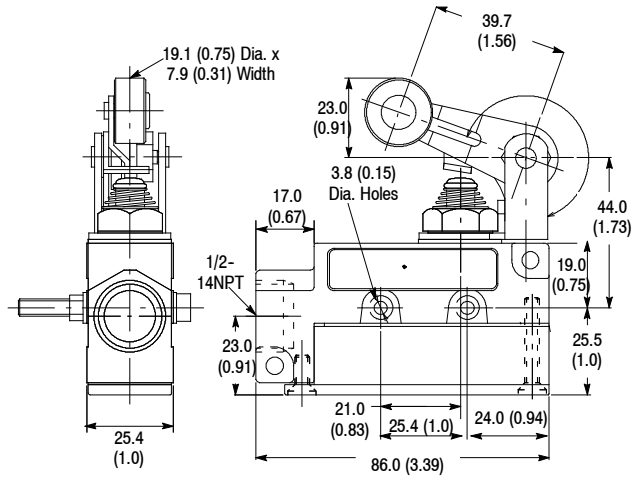
802B-PSABXSX



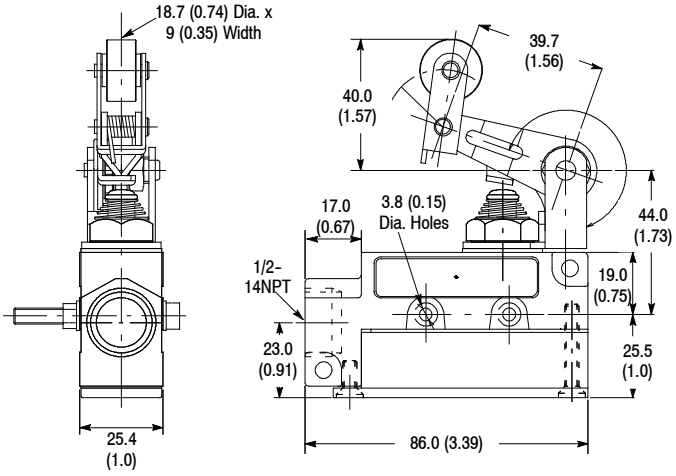
802B-PSADXSX



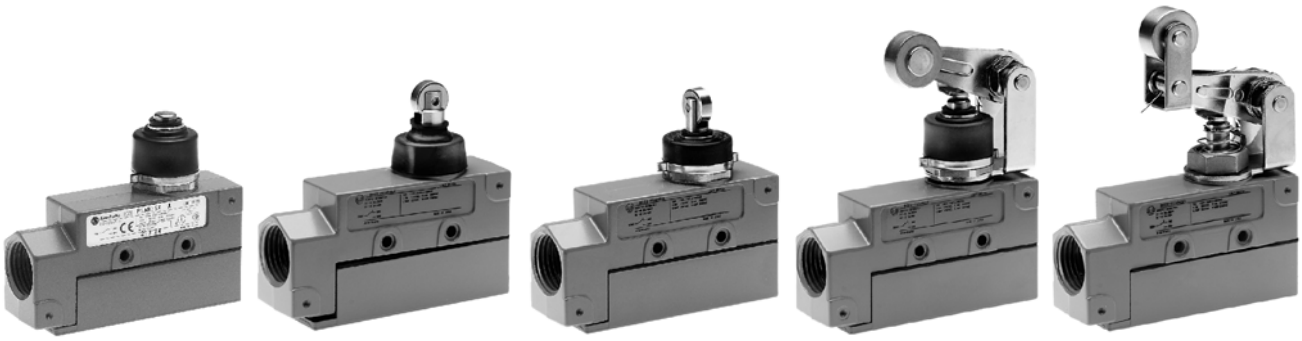
802B-PSD1XSX



802B-PSARXSX



802B-PSAR2XSX



Top Push Booted | *Top Push Roller Booted* | *Top Push Cross Roller Booted* | *Roller Lever Booted* | *One-Way Roller Lever Booted*

Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Mounting Style	Cat. No.
Top Push Booted	7.85 N (1.76 lb)	2 mm (0.079 in.)	7 mm (0.276 in.)	0.1 mm (0.004 in.)	Side	**802B-PSABBSX**
Top Push Roller Booted	4.9 N (1.09 lb)	1 mm (0.039 in.)	4.5 mm (0.177 in.)	0.12 mm (0.005 in.)		**802B-PSADBSX**
Top Push Cross Roller Booted						802B-PSAD1BSX
Roller Lever Booted	6.28 N (1.40 lb)	5 mm (0.197 in.)	11 mm (0.433 in.)	0.4 mm (0.016 in.)		**802B-PSARBSX**
One-Way Roller Lever Booted						802B-PSAR2BSX

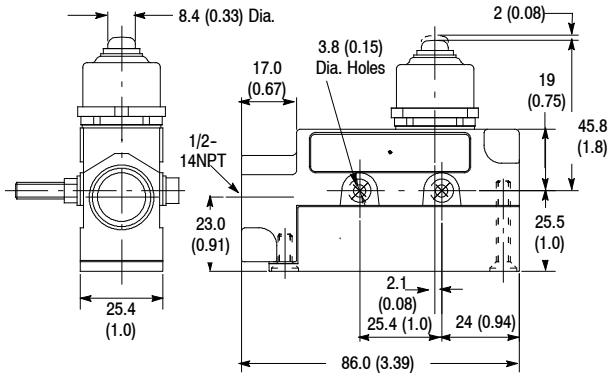
Wiring Diagrams

1	3	2	
⊕ Com	⊕ N.O.	⊕ N.C.	Com 1 — NC 2 NO 3

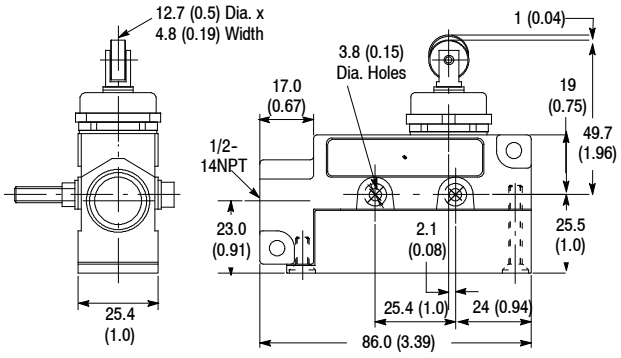
802B Precision

Small Metal Body

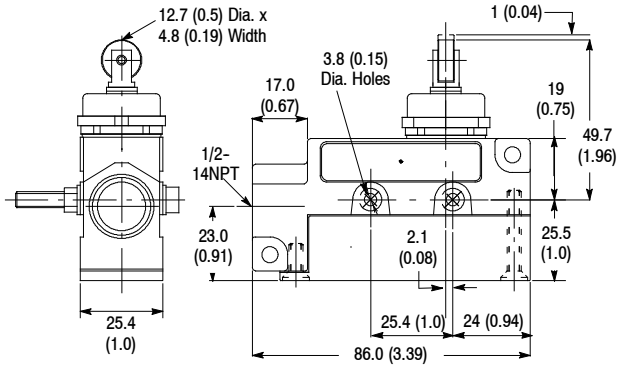
Approximate Dimensions [mm (in.)]



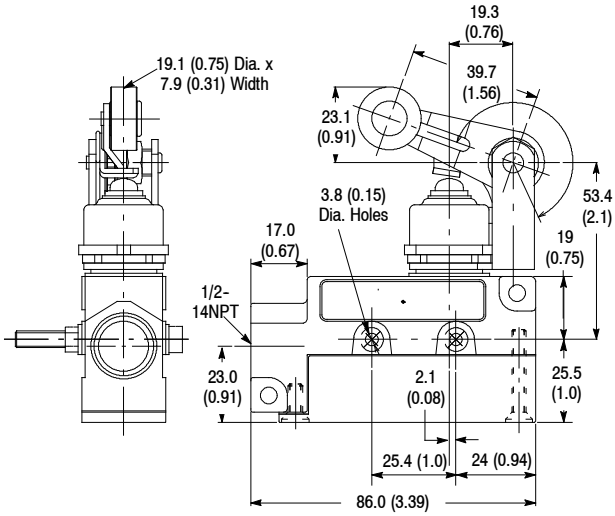
802B-PSABBSX



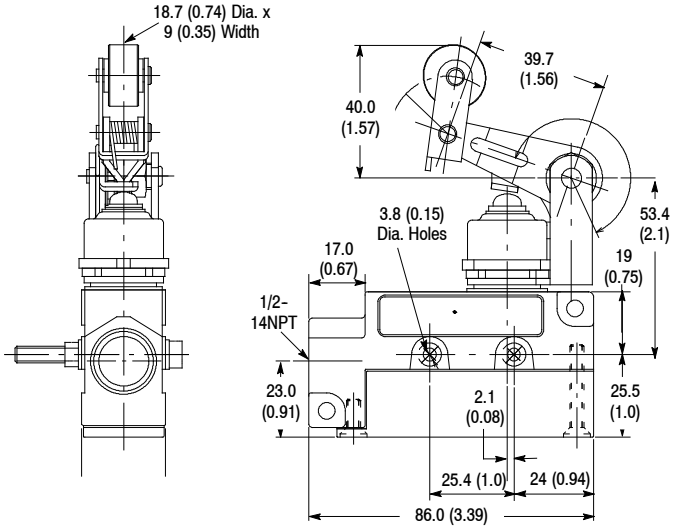
802B-PSADBSX



802B-PSAD1BSX



802B-PSARBSX



802B-PSAR2BSX

Top Push | *Top Push Roller* | *Top Push Cross Roller* | *Roller Lever* | *One-Way Roller Lever*

Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Mounting Style	Cat. No.
Top Push	2.45…3.43 N (0.55…0.77 lb)	0.4 mm (0.016 in.)	5.9 mm (0.232 in.)	0.05 mm (0.002 in.)	Flange	802B-PFABXSX
Top Push Roller		0.5 mm (0.020 in.)	4.1 mm (0.161 in.)			802B-PFADXSX
Top Push Cross Roller						802B-PFAD1XSX
Roller Lever	5.59 N (1.28 lb)	4 mm (0.157 in.)	10 mm (0.394 in.)	0.4 mm (0.016 in.)		802B-PFARXSX
One-Way Roller Lever						802B-PFAR2XSX

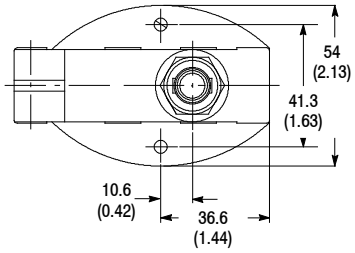
Wiring Diagrams

1	3	2	
⊕ Com	⊕ N.O.	⊕ N.C.	Com 1 — NC 2, NO 3

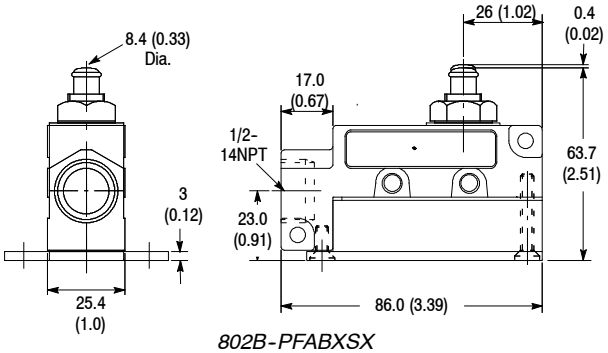
802B Precision

Small Metal Body

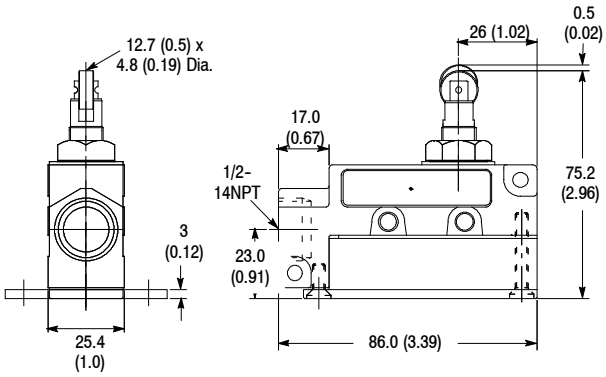
Approximate Dimensions [mm (in.)]



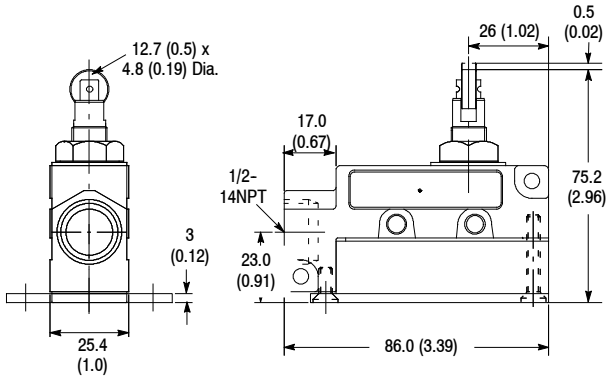
Top View



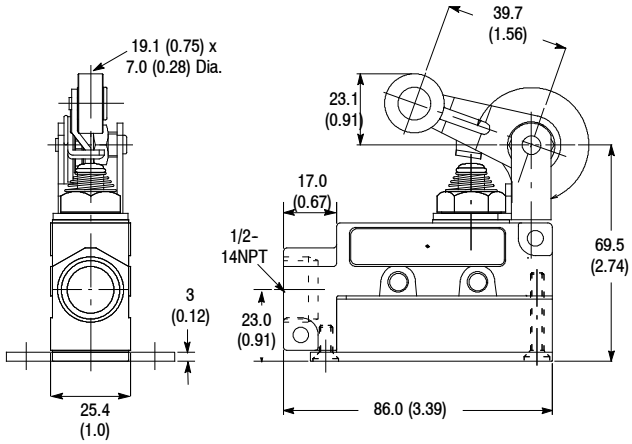
802B-PFABXSX



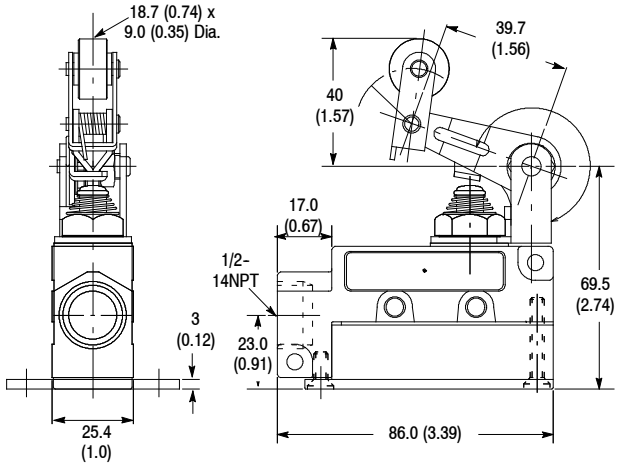
802B-PFADXSX



802B-PFAD1XSX



802B-PFARXSX



802B-PFAR2XSX

Top Push Booted

Top Push Roller Booted

Top Push Cross Roller Booted

Roller Lever Booted

One-Way Roller Lever Booted

Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Mounting Style	Cat. No.
Top Push Booted	7.85 N (1.76 lb)	2 mm (0.079 in.)	7 mm (0.276 in.)	0.1 mm (0.004 in.)	Flange	802B-PFABBSX
Top Push Roller Booted	4.9 N (1.09 lb)	1 mm (0.039 in.)	4.5 mm (0.177 in.)	0.12 mm (0.005 in.)		802B-PFADBSX
Top Push Cross Roller Booted						802B-PFAD1BSX
Roller Lever Booted	6.28 N (1.40 lb)	5 mm (0.197 in.)	11 mm (0.433 in.)	0.4 mm (0.016 in.)		802B-PFARBSX
One-Way Roller Lever Booted						802B-PFAR2BSX

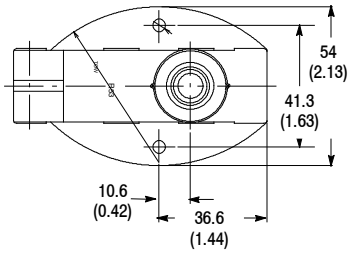
Wiring Diagrams

1	3	2	
⊕ Com	⊕ N.O.	⊕ N.C.	Com 1 — NC 2 NO 3

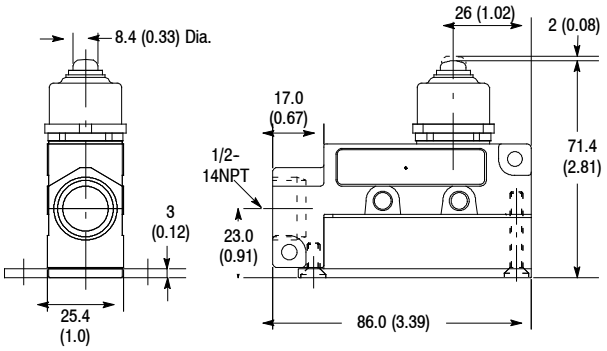
802B Precision

Small Metal Body

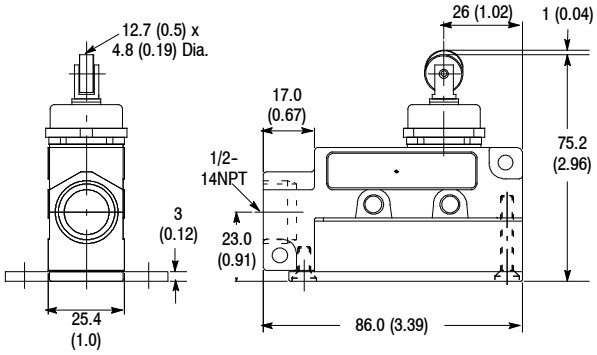
Approximate Dimensions [mm (in.)]



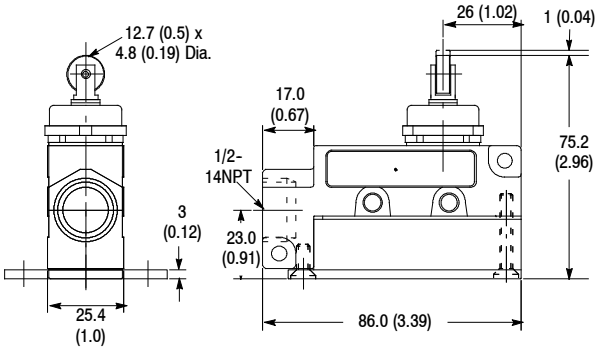
Top View



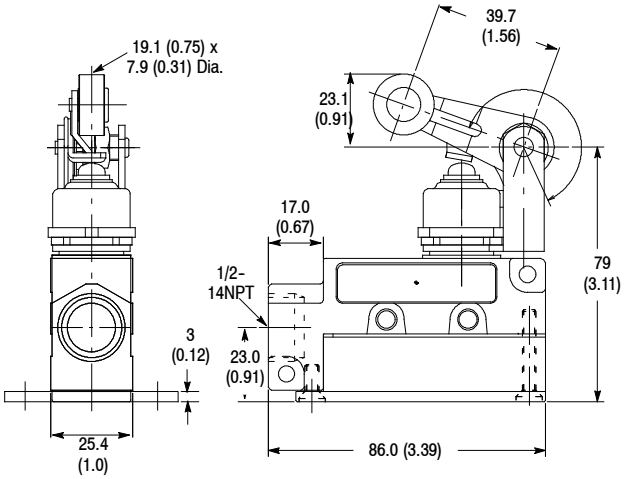
802B-PFABBSX



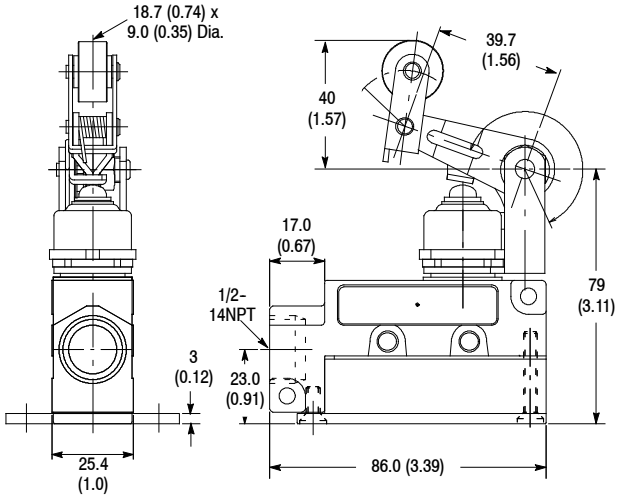
802B-PFADBSX



802B-PFAD1BSX



802B-PFARBSX



802B-PFAR2BSX

802B Small Precision

Small Metal Body

Top Push

Top Push Panel Mount

Top Roller Panel Mount

Top Push Cross Roller Panel Mount

Top Push Roller Booted

Top Push Cross Roller Booted

Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Mounting Style	Cat. No.
Top Push	11.8 N (2.65 lb)	1.5 mm (0.059 in.)	3.9 mm (0.154 in.)	0.2 mm (0.008 in.)	Side	802B-SSABXSX
Top Push Panel Mount			4.5 mm (0.177 in.)			802B-SPABXSX
Top Push Roller Panel Mount						802B-SPADXSX
Top Push Cross Roller Panel Mount						802B-SPAD1XSX
Top Push Roller Booted	6.86 N (1.54 lb)		4 mm (0.157 in.)			**802B-SSADBSX**
Top Push Cross Roller Booted						802B-SSAD1BSX

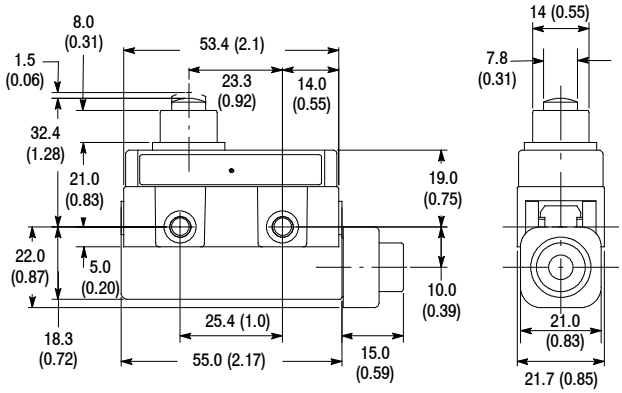
Wiring Diagrams

1	3	2	
⊕ **Com**	⊕ **N.O.**	⊕ **N.C.**	Com 1 — NC 2 NO 3

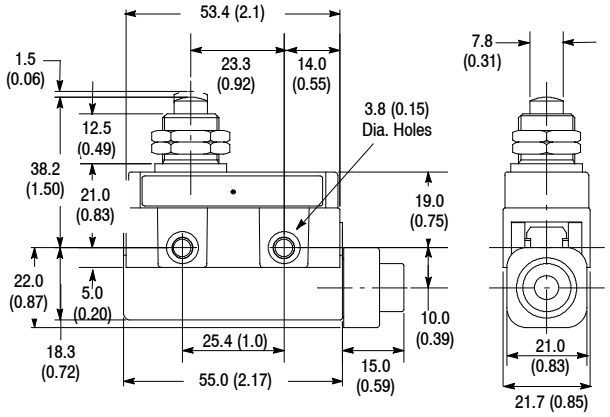
802B Small Precision

Small Metal Body

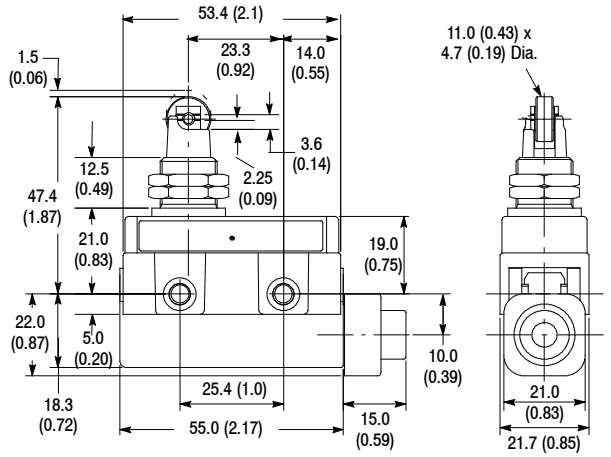
Approximate Dimensions [mm (in.)]



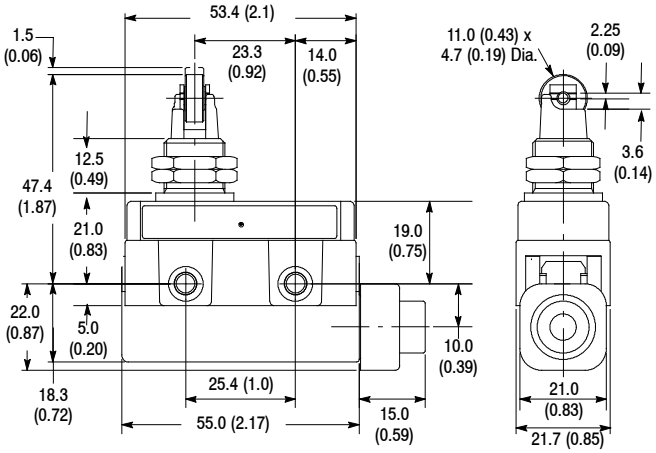
802B-SSABXSX



802B-SPABXSX

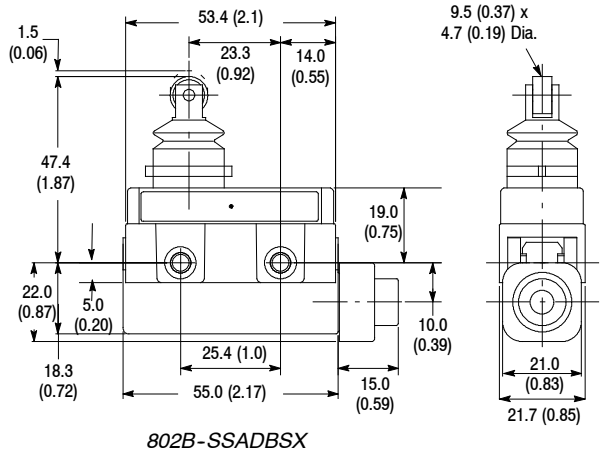


802B-SPADXSX

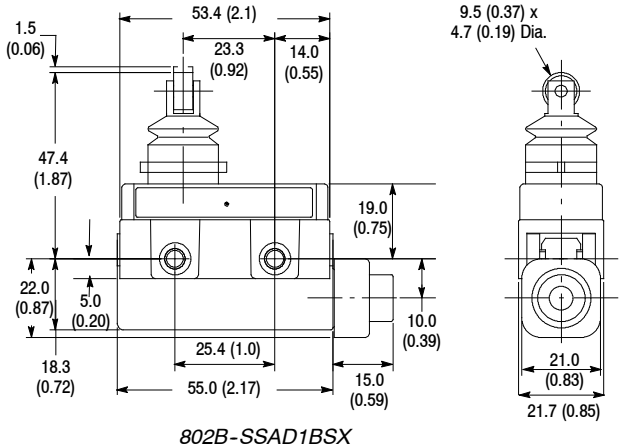


802B-SPAD1XSX

7.8
(0.31)



802B-SSADBSX



802B-SSAD1BSX

802B Small Precision

Small Metal Body

Short Hinge Lever

Hinge Lever

Short Roller Lever

Roller Lever

Short One-Way Roller Lever

One-Way Roller Lever

Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Mounting Style	Cat. No.
Short Hinge Lever	3.92 N (0.88 lb)	6.2±1.2 mm (0.244 in.)	12.2 mm (0.480 in.)	1 mm (0.04 in.)	Side	802B-SSAH1XSX
Hinge Lever	2.75 N (0.62 in.)	8.2±1.2 mm (0.323 in.)	16.6 mm (0.645 in.)	1.4 mm (0.055 in.)		802B-SSAHXSX
Short Roller Lever	3.92 N (0.88 lb)	6.2±1.2 mm (0.244 in.)	12.2 mm (0.480 in.)	1 mm (0.04 in.)		802B-SSAR1XSX
Roller Lever	2.75 N (0.62 in.)	8.3±1.2 mm (0.327 in.)	16.7 mm (0.657 in.)	1.4 mm (0.055 in.)		802B-SSARXSX
Short One-Way Roller Lever	3.92 N (0.88 lb)	6.2±1.2 mm (0.244 in.)	12.2 mm (0.480 in.)	1 mm (0.04 in.)		802B-SSAR3XSX
One-Way Roller Lever	2.75 N (0.62 in.)	8.2±1.2 mm (0.244 in.)	16.6 mm (0.654 in.)	1.4 mm (0.055 in.)		802B-SSAR2XSX

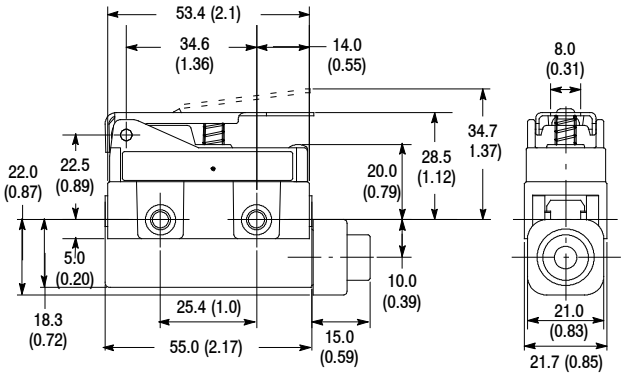
Wiring Diagrams

1	3	2	
⊕ Com	⊕ N.O.	⊕ N.C.	Com 1 — NC 2 NO 3

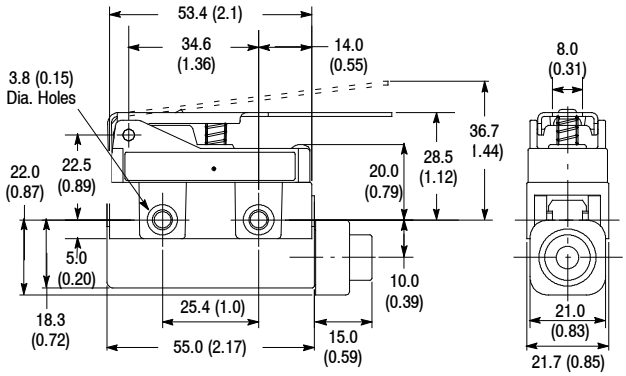
802B Small Precision

Small Metal Body

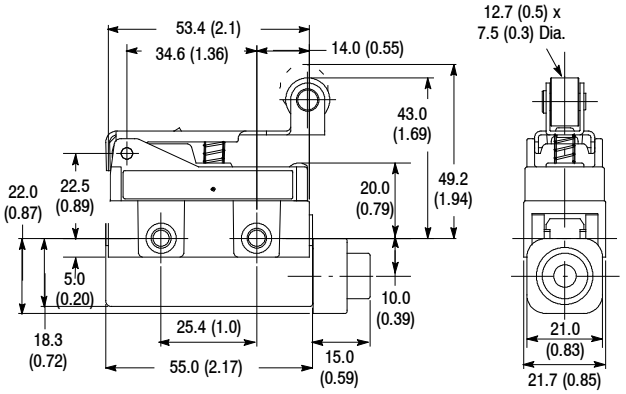
Approximate Dimensions [mm (in.)]



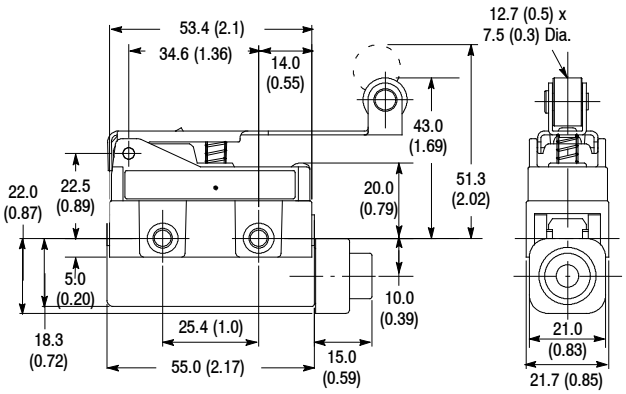
802B-SSAH1XSX



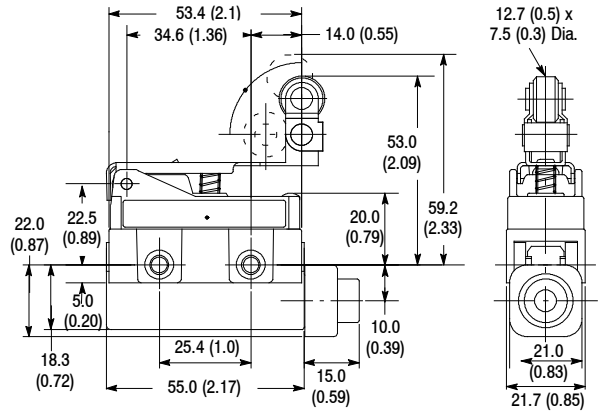
802B-SSAHXSX



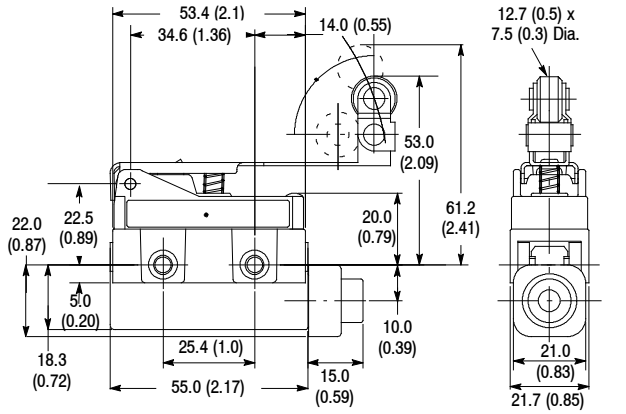
802B-SSAR1XSX



802B-SSARXSX



802B-SSAR3XSX



802B-SSAR2XSX

802T Safety Limit Switches

Direct Opening Action Position Interlock Switches

Description

Bulletin 802T direct opening action limit switches have been designed for use in control reliable applications and safety applications per ISO 14119. These limit switches utilize the same mounting dimensions as other NEMA style limit switches. The rugged metal construction and plug-in body are designed for use in harsh industrial environments.

Direct opening action assures that the normally closed contacts open when the limit switch is actuated. This opening will occur even in the event of a contact weld condition, up to 10 Newtons.

ATTENTION

To ensure that the normally closed (safety) contacts open, the limit switch actuator must be displaced beyond the point of Direct Opening Action (see specifications).

Features

- Direct opening action
- Snap acting contacts
- Rugged metal construction
- Long life and reliability
- Plug-in design
- NEMA 6P/IP67 sealing
- Equal length mounting back base

Specifications

Enclosure Rating	NEMA 4, 6P, 12, 13 and IP67
Pollution Degree	3
Certifications	cULus Listed, TÜV, and CE Marked for all applicable directives
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
Operating Temperature [C (F)]	-18…+110° (0…+230°)
Cable Versions Temperature [C (F)]	-18…60° (0…140°)
Storage Temperature [C (F)]	-40…121° (-40…250°)

AC Contact Rating (Maximum per Pole, 50 or 60Hz, 2 Circuits)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A600 AC-15	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720
	480	15	1.50	10	7200	720
	600	12	1.20	10	7200	720

AC Contact Rating (Maximum per Pole, 50 or 60Hz, 4 Circuits)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
A300 AC-15	120	60	6.00	10	7200	720
	240	30	3.00	10	7200	720

DC Contact Rating (Maximum per Pole)

NEMA Rating Designation	Max Voltage	A		Continuous Carrying Current	VA	
		Make	Break		Make	Break
Q300 DC 13	250	0.27	0.27	2.5	69	69
	125	0.55	0.55	2.5	69	69

Low Voltage DC

24 V DC @ 1.1 Amps resistive load

Typical Applications

- Machine guards
- Access gates and doors
- Cranes or hoists
- Transfer stations
- Indexing tables
- Robotic cells

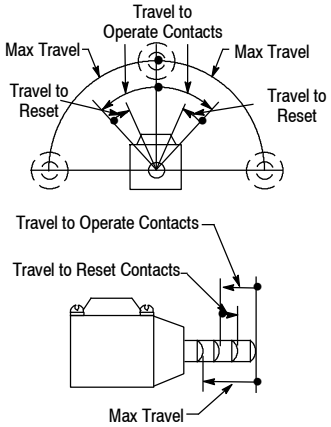
Direct Opening Action

Lever Type • Spring Return page 5-110
Top Push Roller • Spring Return . . . . . page 5-110
Side Push Verticle Roller • Spring Return . . . . . page 5-110
Side Push Horizontal Roller • Spring Return . . . . . page 5-110
Dimensions . . . . . page 5-111
Modifications . . . . . page 5-112

802T Safety Limit Switches

Direct Opening Action Position Interlock Switches

Range of Operation



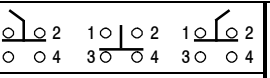
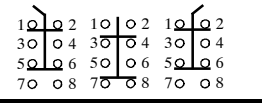
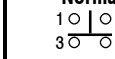
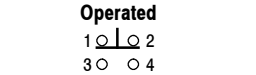
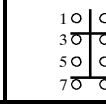
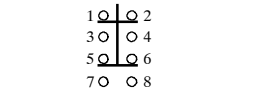
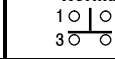
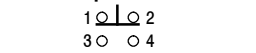
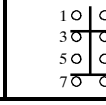
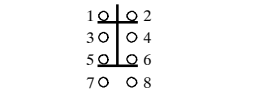
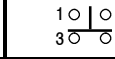
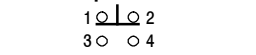
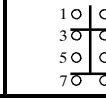
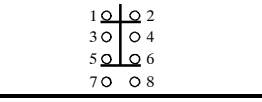
Lever Type Spring Return

Top Push Roller Spring Return

Side Push Verticle Roller Spring Return

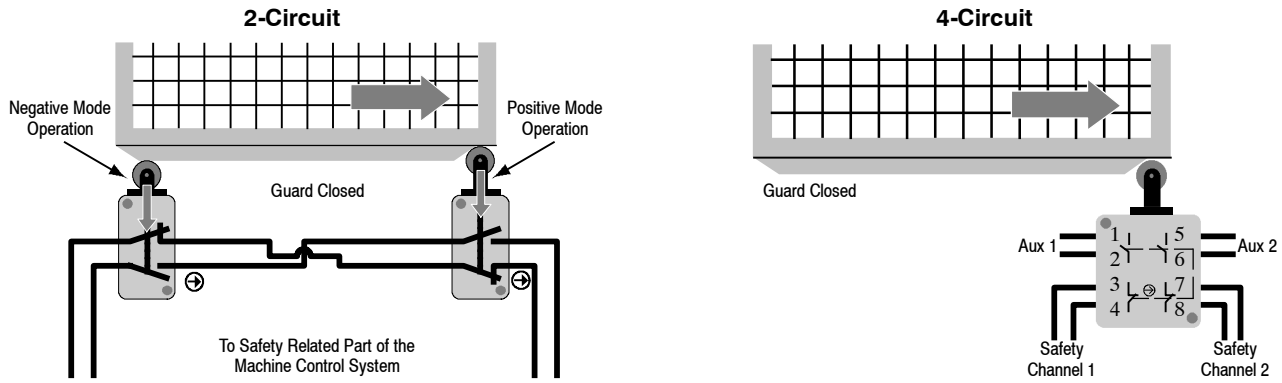
Side Push Horizontal Roller Spring Return

Selection Guide

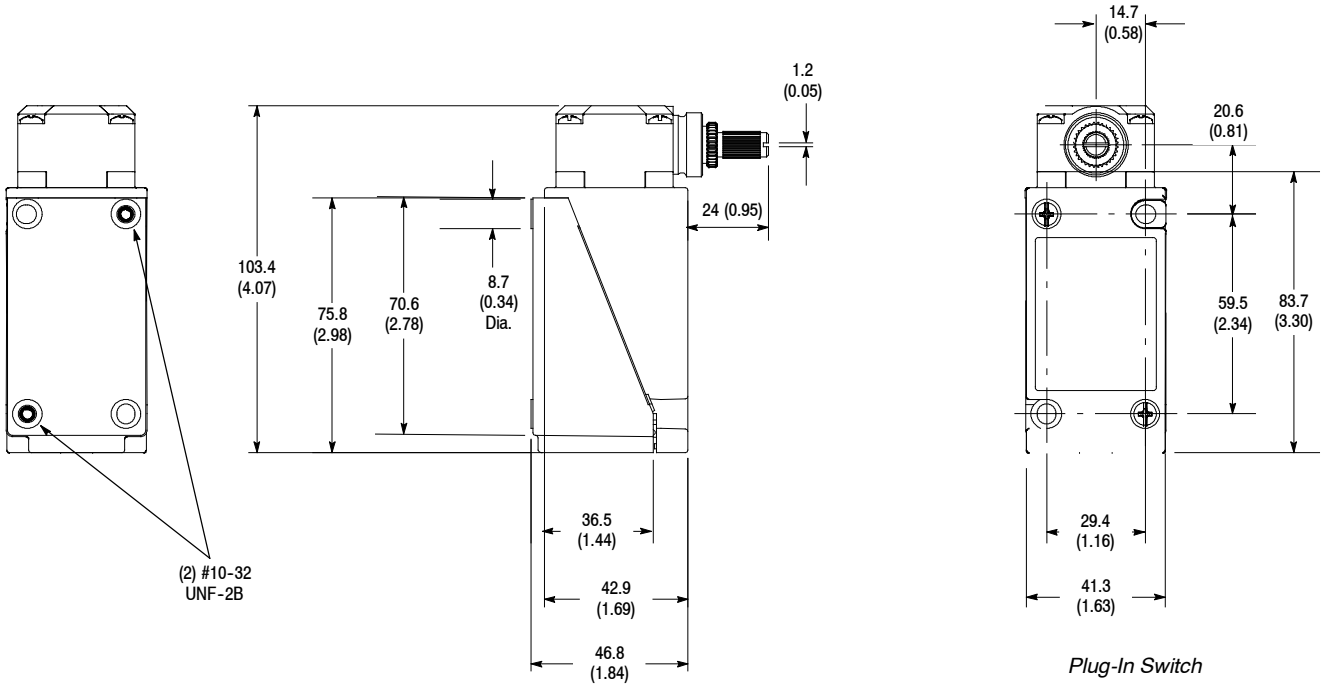
Number of Circuits	Lever Movement vs. Contact Operation		Torque/ Force to Operate (Max)	Travel to Operate (Max)	Torque/ Force to Operate Direct Opening Action (Min)	Travel to Operate Direct Opening Action (Min)	Max Travel	Travel to Reset Contacts (Max)	Cat. No.
Lever Type • Spring Return									
2	Clockwise or Counter Clockwise		0.45 N•m (4.0 lb•in)	13°	0.90 N•m (8.0 lb•in)	25°	90°	7°	**Switch w/o Lever 802T-APD**
4									**802T-ATPD**
Top Push Roller • Spring Return									
2	**Normal** 	**Operated** 	28.47 N•m (6.4 lb•ft)	1.17 mm (0.046 in.)	66.72 N (15.0 lb•in)	2.29 mm (0.090 in.)	5.99 mm (0.236 in.)	0.64 mm (0.025 in.)	**Complete Switch** 802T-DPD
4									802T-DTPD
Side Push Verticle Roller • Spring Return									
2	**Normal** 	**Operated** 	24.5 N•m (5.5 lb•ft)	2.08 mm (0.082 in.)	53.4 N (12.0 lb•ft)	4.19 mm (0.165 in.)	5.74 mm (0.226 in.)	1.14 mm (0.045 in.)	**Complete Switch** 802T-KPD
4									802T-KTPD
Side Push Horizontal Roller • Spring Return									
2	**Normal** 	**Operated** 	24.5 N•m (5.5 lb•ft)	2.08 mm (0.082 in.)	53.4 N (12.0 lb•ft)	4.19 mm (0.165 in.)	5.74 mm (0.226 in.)	1.14 mm (0.045 in.)	**Complete Switch** 802T-K1PD
4									802T-K1TPD

Modifications and Accessories—See page 5-112.

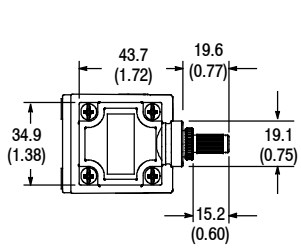
Typical Example of a Dual Channel Safety Application



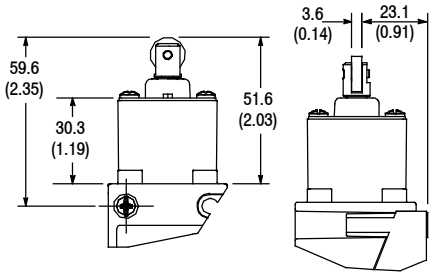
Approximate Dimensions [mm (in.)]



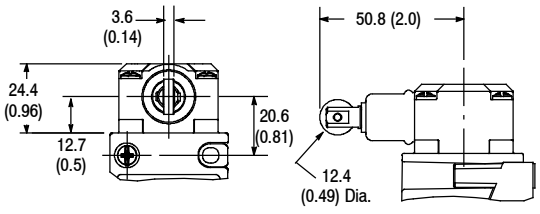
Plug-In Switch



Lever Type Head



Top Push Roller Head



Side Push Roller Head

802T Safety Limit Switches

Direct Opening Action Position Interlock Switches

Modifications

Metric Conduit Entry

To order a limit switch with a 20 mm conduit entry, add the suffix **S6** to the Cat. No. example: 802T–APD**S6**.

Pre-wired Cable

To order factory installed pre-wired type STOOW–A cable (5 conductor), add the suffix **Y** plus the number of feet required. The standard cable length is 1.52 m (5 ft). Extended cable lengths are available in multiples of 1.22 m (4 ft) only.

Example: To order a limit switch with a factory installed 1.52 m (5 ft) cable, the Cat. No. would become 802T–APD**Y5**. To order a limit switch with a factory installed 2.44 m (8 ft) cable, the Cat. No. would become 802T–APD**Y8**.

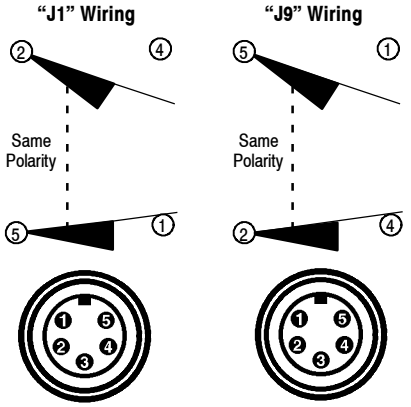
Mini Style Quick-Disconnect

To order a Bulletin 802T pre-wired limit switch with a 5-pin (2 circuit) or 9-pin (4 circuit) mini connector, add the suffix **J1** or **J9** depending on desired wiring (**J9** wiring not available for four-circuit models) to the Cat. No. example: 802T–APD**J1.**

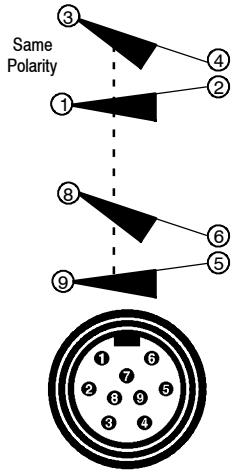
An appropriate female connector with cable is available in Connection Systems.

5-pin mini = (889N-F5AFC-6F) on page 8-4
9-pin mini = (889N-F9AF-2) on page 8-14
5-pin mini = (889R-F5AEA-2) on page 8-28
5-pin mini = (889D-F5AC-2) on page 8-16

5-Pin Mini-Type Receptacle (2 circuit)

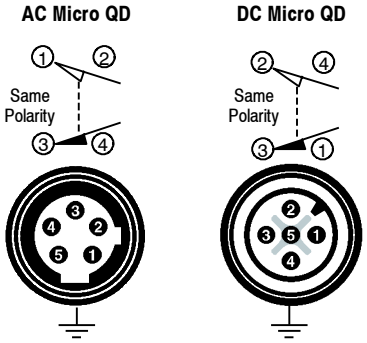


9-Pin Mini-Type Receptacle (4 circuit)
"J1" Wiring ("J9" wiring not available for 4 circuit)



Micro Style Quick-Disconnect

Micro quick-disconnects are available with a 5-pin 2 keyway AC or 5-pin single keyway DC. To order a limit switch with a AC micro quick-disconnect, add the suffix **R5** to the cat. no. To order a limit switch with a DC micro quick-disconnect, add the suffix **D5** to the Cat. No. example: 802T–APDR5 and 802T–APDD5.



Pin 5 = Ground

Levers

Type	Roller			Cat. No.
	Material	Diameter [mm (in.)]	Width [mm (in.)]	
 Non-Adj. Cast Lever 1.5 in. Radius Roller on Front	Nylon	19 (0.75)	7.11 (0.28)	802T-W1
	Nylon	19 (0.75)	25.4 (1.0)	802T-W1H
	Steel	19 (0.75)	6.35 (0.25)	802T-W1A
	Ball Bearing	19 (0.75)	5.84 (0.23)	802T-W1B

22 mm Small Plastic

22 mm Compact Metal

30 mm Large Metal

15 mm Plastic

General Description

The 440P limit switch family offers a full range of international-style solutions for both safety and standard sensing applications. Available in four different body styles—30 mm metal, 22 mm metal and plastic and 15 mm plastic—with a broad selection of operator types, circuit arrangements and connection options, the Bul. 440P is ideal for a wide variety of applications. These include material handling, packaging, elevators, escalators, scissor lifts, industrial trucks and tractors, cranes and hoists, overhead door, as well as general safety guarding applications.

Mechanical Enclosure

The large metal-body (440P-M) models feature die-cast alloy construction and conform to EN 50041 (30 mm x 60 mm), while the small plastic (440P–C) models are constructed of a glass-filled polymer and conform to EN 50047 (22 mm). Both body types are IP66 rated and available with M20 or 1/2 in. NPT conduit opening or in micro quick-disconnect versions. The 15 mm plastic models (440P–M18001 and 440P–M18002) are constructed of glass-filled polyester and are IP30 rated. The 22 mm metal models (440P-A) have a painted body and are IP65, IP66, IP67, and IP69K (pre-leaded cable versions). Pre-leaded cable and micro quick disconnect configurations are offered.

Actuator Type

The Bul. 440P international-style limit switches are available with a wide variety of actuators to solve a broad range of applications. All lever-type switches include their respective actuator arm. Bul. 440P actuators are offered as replaceable products.

The large, metal-body style is available in the following operator types:

- Metal roller plunger
- Metal dome plunger
- Short lever with metal or plastic roller
- Adjustable lever with plastic or large rubber roller
- Metal rod lever
- Metal spring rod
- Telescopic arm

The compact metal body style is available in the following operator types:

- Roller plunger
- Dome plunger
- Short lever with plastic or 1 in. wide plastic roller
- Cross roller plunger
- Adjustable lever with plastic or metal roller

All, except the lever versions, are available with panel mount threading.

The small, plastic-body style is available in the following operator types:

- Adjustable lever with plastic or large rubber roller
- Short lever with plastic or metal roller
- Hinge lever
- Roller plunger
- Dome plunger
- Offset hinge lever

The 15 mm plastic-body switch is available with a roller plunger actuator.

Contact Arrangements

All 440P international-style limit switches contain positive opening-action contacts, making them ideal for safety-related applications. The small, plastic models include a choice of snap-acting, slow-break/make with 2- or 3-contacts configurations, while the large metal switches contain snap-acting, slow-break contacts in 2-, 3-, or 4-contact configurations. The 15 mm plastic versions are slow-break, 2-circuit models. The small metal models are all snap-acting.

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.

All units are supplied with an integral two meter cable.

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

- Rugged die-cast enclosure
- Positive operation, forced disconnection of contacts (direct-opening action)
- Snap-acting contact actuation
- Contacts 1 N.C. + 1 N.O.
- 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

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
Auxiliary Contacts	1 N.O. snap-acting
Thermal Current 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:

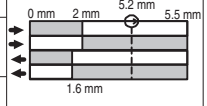
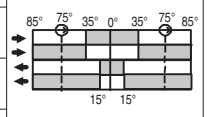
4-pin Male Micro M12 Connectors (D4 suffix)	
AC	**DC**
30V, 3 A	30V, 3 A

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

New

Product Selection

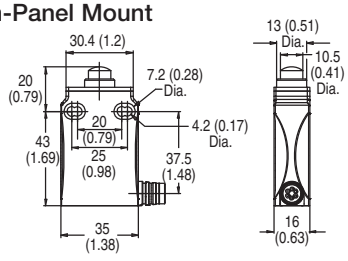
All switch contacts are snap-acting with 1 N.C (safety) and 1 N.O. (aux.) circuit.

Operator Type	Contact Opening Characteristics □Open ■Closed ⊖ Positive Opening Point	Max Force/Torque to Operate	Panel Mount	Cat. No. 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
Roller Plunger		10 N (2.25 lb)	No	440P-ARPS11C	440P-ARPS11CS	440P-ARPS11D4	440P-ARPS11D5
			Yes	440P-ARP1S11C	440P-ARP1S11CS	—	440P-ARP1S11D5
Dome Plunger			No	440P-ADPS11C	440P-ADPS11CS	440P-ADPS11D4	440P-ADPS11D5
			Yes	440P-ADP1S11C	440P-ADP1S11CS	—	440P-ADP1S11D5
Cross Roller Plunger			No	440P-ACRS11C	440P-ACRS11CS	440P-AS11D4	440P-ACRS11D5
			Yes	440P-ACR1S11C	440P-ACR1S11CS	—	440P-ACR1S11D5
Short Lever - Wide Roller		0.2 N•m (1.77 lb•in)	NA	440P-AWLS11C	440P-AWLS11CS	440P-AWLS11D4	440P-AWLS11D5
Short Lever - Nylon Roller				440P-ASLS11C	440P-ASLS11CS	440P-ASLS11D4	440P-ASLS11D5
Adj. Lever - Nylon Roller				440P-AALS11C	440P-AALS11CS	440P-AALS11D4	440P-AALS11D5
Adj. Lever - Metal Roller				440P-AA1LS11C	440P-AA1LS11CS	440P-AA1LS11D4	440P-AA1LS11D5

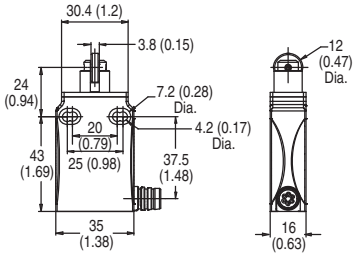
Approximate Dimensions—mm (inches)

Dimensions are not intended to be used for installation purposes.

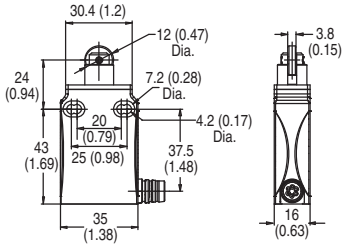
Non-Panel Mount



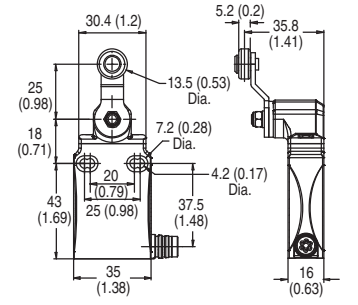
Dome Plunger



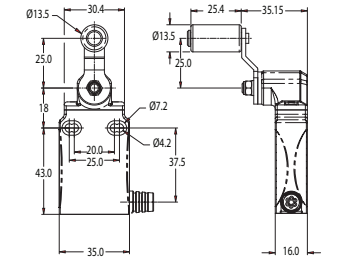
Cross Roller Plunger



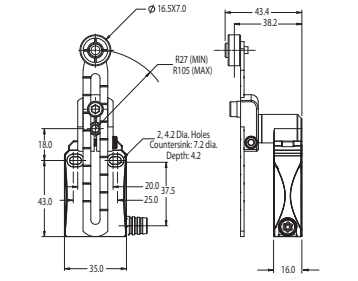
Roller Plunger



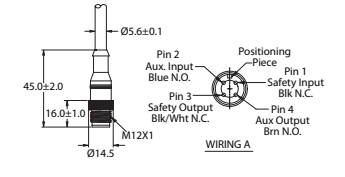
Lever Type



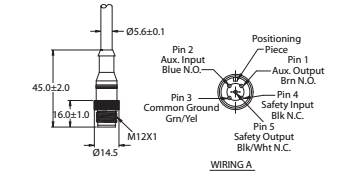
Wide Roller Plunger



Adjustable Lever Type



4-pin Micro Quick Disconnect

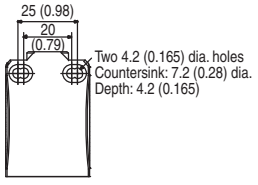


5-pin Micro Quick Disconnect

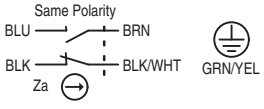
Note: Only non-panel mount pre-leaded side out models shown. Body dimensions for panel mount models as well as pre-leaded bottom out and 4-pin/5-pin micro connector mounted on a 6 in. pigtail models are identical. For other dimension drawings, refer to Installation and Operating Instructions.

- 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



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.

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

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 Specifications❶**
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

❶ 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

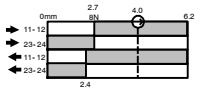
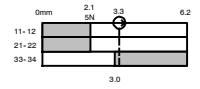
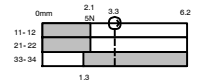
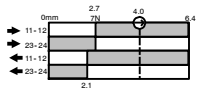
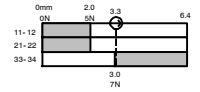
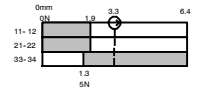
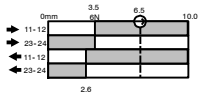
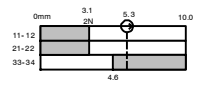
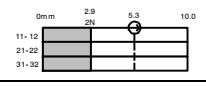
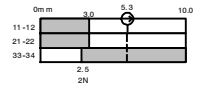
Features

- 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

New

Product Selection

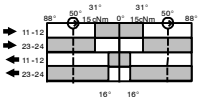
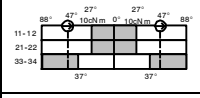
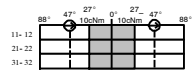
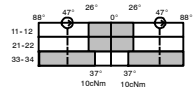
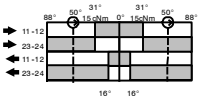
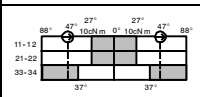
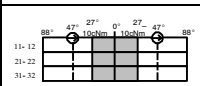
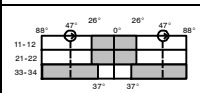
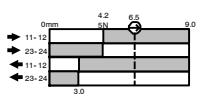
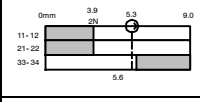
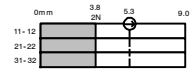
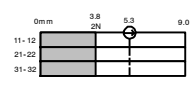
Operator Type	Contact		Contact Type	Typical Force/ Torque to Operate	Contact Opening Characteristics □ Open ■ Closed ❸ Positive Opening Point	Cat. No.		
	Safety	Aux.				1/2 inch NPT Conduit	M20 Conduit	Quick Disconnect ❶
 Roller Plunger 	1 N.C.	1 N.O.	Snap Acting	5 N		440P-CRPS11E	**440P-CRPS11B**	440P-CRPS11D4
	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

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

440P Safety Limit Switches

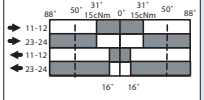
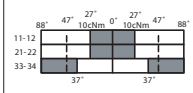
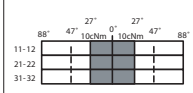
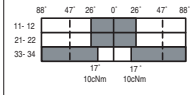
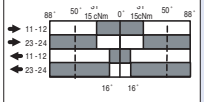
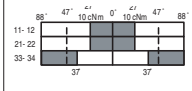
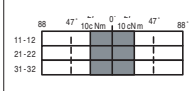
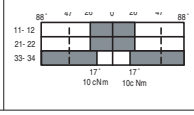
22mm Plastic Position Switches

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 ❶
 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

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

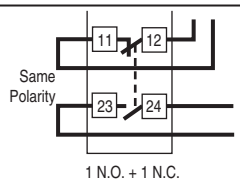
Product Selection (continued)

Description	Contact			Typical Force/Torque to Operate	Contact Opening Characteristics □Open ■Closed ⊖ Positive Opening Point	Cat. No.		
	Safety	Auxiliary	Type			1/2 inch NPT Conduit	M20 Conduit	Connector Style★
	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
Adjustable Lever ‡	2 N.C.	1 N.O.	MBB	0.14 N•m		440P-CALM12E	440P-CALM12B	440P-CALM12R6
	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
Rubber Roller ‡	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

Connector Pinout		1 N.C. + 1 N.O.	
		Terminal	Contact
 	1	11	N.C.
	3	12	
	2	23	N.O.
	4	24	

§ See Product Selection tables for positive opening circuits.

Connector Ratings

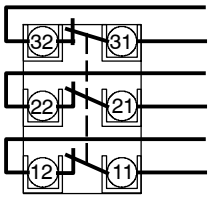
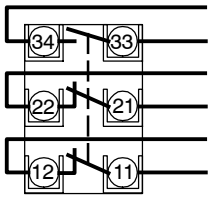
	Max. Ratings		Applicable Standards
	AC	DC	
4-Pin Micro (M12)	250V, 2.5 A	250V, 2.5 A	IEC 61076-2-101:2003
6-Pin Micro (M12)	30V, 2 A	30V, 2 A	

440P Safety Limit Switches

22mm Plastic Position Switches

Typical Wiring Diagrams (continued) ❶

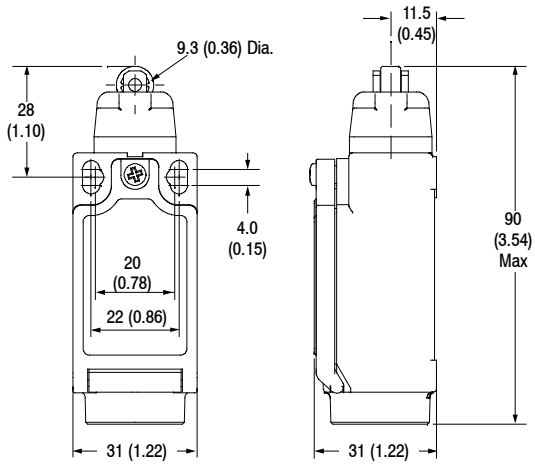
Three-Circuit Type R6 6-Pin Micro Connector

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		12	
			2	21	N.C.	21	N.C.
			6	22		22	
			3	33	N.O.	31	N.C.
			4	34		32	

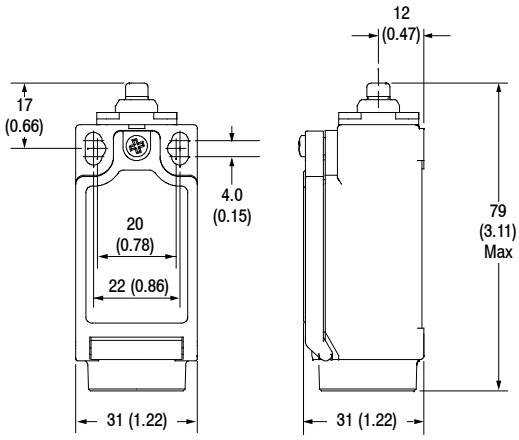
❶ See Product Selection tables for positive opening points.

Approximate Dimensions [mm (in.)]

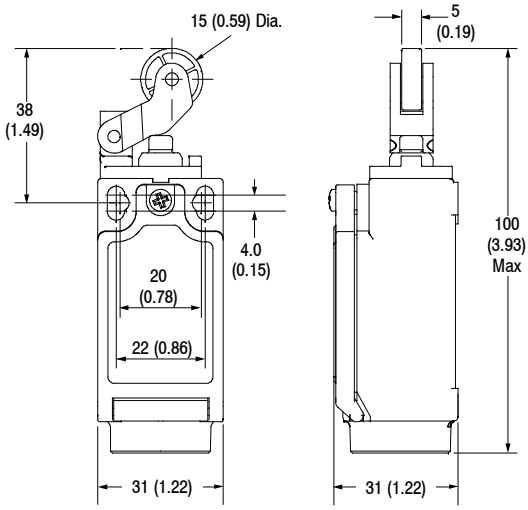
Dimensions are not intended to be used for installation purposes.



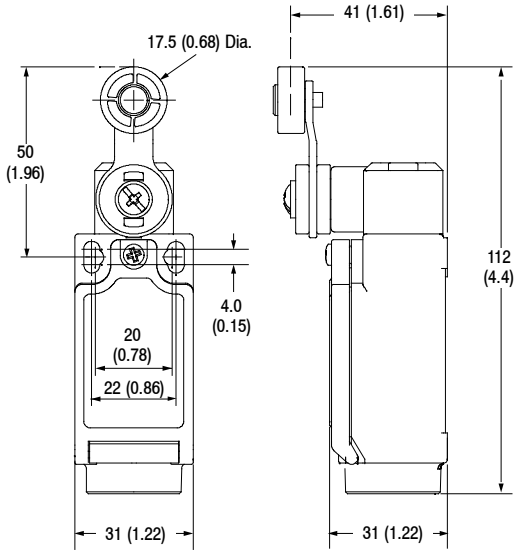
Roller Plunger



Dome Plunger



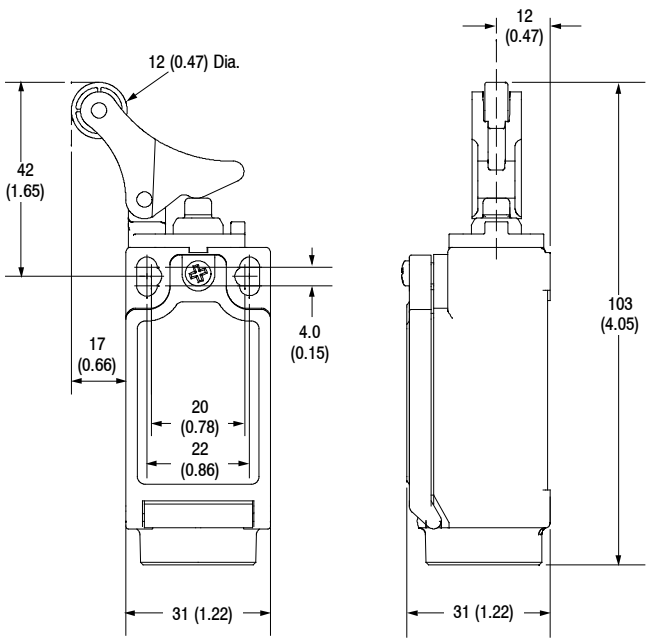
Hinge Lever



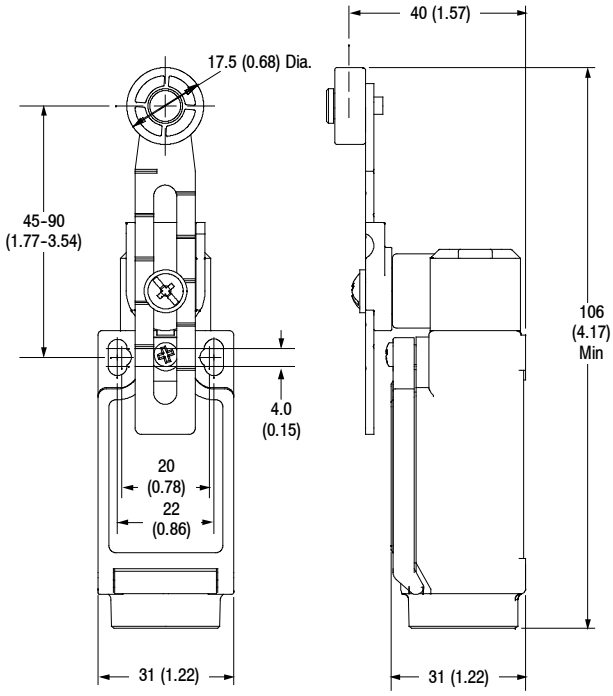
Short Lever
(Metal & Plastic Roller)

Approximate Dimensions [mm (in.)]

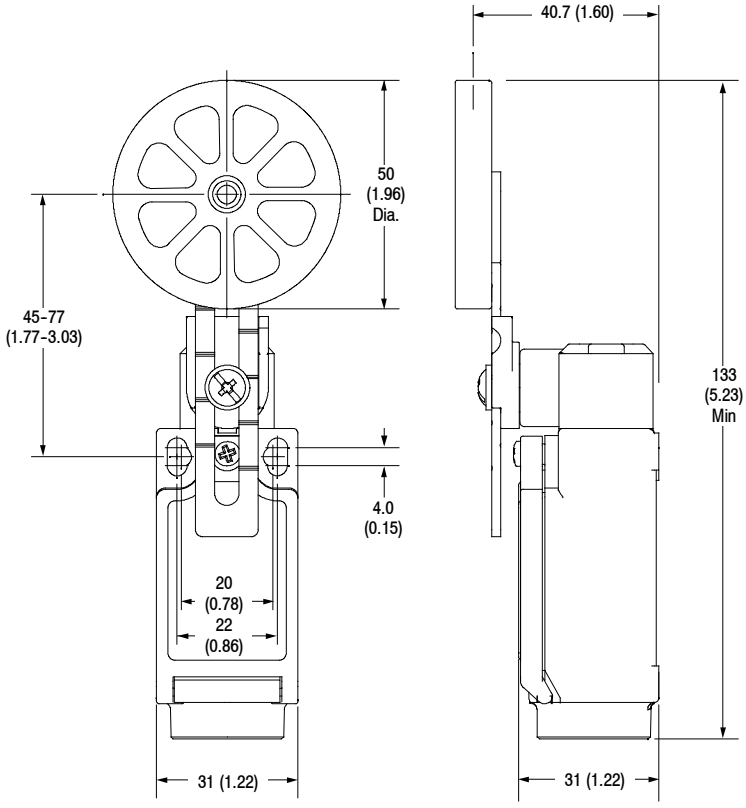
Dimensions are not intended to be used for installation purposes.



Offset Hinge



Adjustable Lever



Rubber Roller

440P Safety Limit Switches

30mm Metal Position Switches

The 30 mm metal safety limit switches conform to EN 50041 and have been developed to provide a range of options including a choice of snap-acting, slow-acting, and break before make (BBM) with 2-, 3-, and 4-circuit configurations and a choice of actuator heads. The distance between the horizontal mounting holes is 30 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.

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

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, CE and CCC 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 Specifications❶**				
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)	0.1 A	0.13 A	0.27 A	09.55 A
Thermal Current (Ith)	8 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	Die cast alloy				
Actuator Material	See Product Selection table				
Enclosure Protection	IP66				
Operating Temperature [C (F)]	-25...+65° (-13...+149°)				
Pollution Degree ❷	3				
Mechanical Life Expectancy	1 x 10^7 operations with no electrical load				
Conduit Entry	M20 or 1/2 inch NPT				
Fixing	2 x M5				
Mounting	Any position				
Color	Red				

❶ Maximum for:

Two-Circuit N5 5-Pin Mini Connector	
AC	DC
300V, 2.5 A	300V, 2.5 A
Four-Circuit M9 12-Pin M23 Connector	
AC	DC
60V, 2.5 A	60V, 2.5 A

❷ Conductive pollution occurs, or dry, nonconductive pollution occurs which becomes conductive due to condensation.

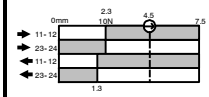
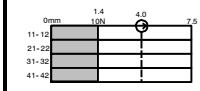
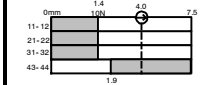
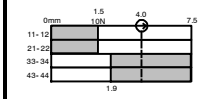
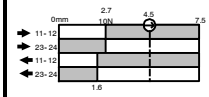
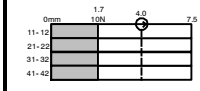
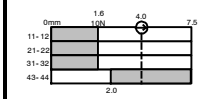
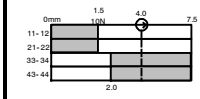
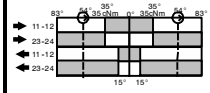
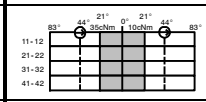
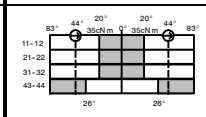
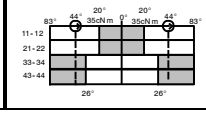
Features

- 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. + 2 N.O., 3 N.C. + 1 N.O., or 4 N.C.
- Conforms to EN 50041, EN 1088, EN 60947-5-1, EN 292 and EN 60204-1

Safety Limit Switches

New

Product Selection

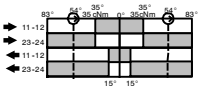
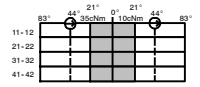
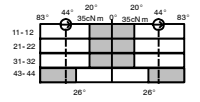
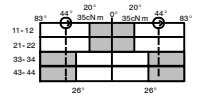
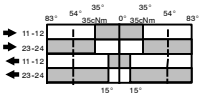
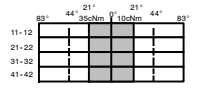
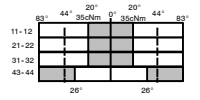
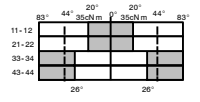
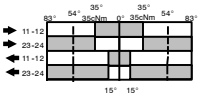
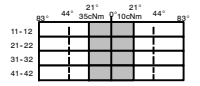
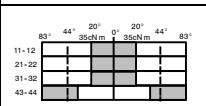
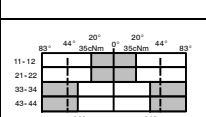
Operator Type	Contacts		Contact Type	Typical Force/ Torque to Operate	Contact Opening Characteristics □ Open ■ Closed ❸ Positive Opening Point	Cat. No.		
	Safety	Aux.				1/2 inch NPT Conduit	M20 Conduit	Quick Disconnect ❶
 Metal Roller Plunger	1 N.C.	1 N.O.	Snap Acting	13 N		440P-MRPS11E	**440P-MRPS11B**	440P-MRPS11N5
	4 N.C.	—	—	11 N		440P-MRPB04E	440P-MRPB04B	440P-MRPB04M9
	3 N.C.	1 N.O.	BBM	11 N		440P-MRPB13E	440P-MRPB13B	440P-MRPB13M9
	2 N.C.	2 N.O.	BBM	11 N		**440P-MRPB22E**	440P-MRPB22B	440P-MRPB22M9
 Metal Dome Plunger	1 N.C.	1 N.O.	Snap Acting	13 N		440P-MDPS11E	440P-MDPS11B	440P-MDPS11N5
	4 N.C.	—	—	11 N		440P-MDPB04E	440P-MDPB04B	440P-MDPB04M9
	3 N.C.	1 N.O.	BBM	11 N		440P-MDPB13E	440P-MDPB13B	440P-MDPB13M9
	2 N.C.	2 N.O.	BBM	11 N		440P-MDPB22E	440P-MDPB22B	440P-MDPB22M9
 Metal Short Lever	1 N.C.	1 N.O.	Snap Acting	0.34 N•m		**440P-MSLS11E**	**440P-MSLS11B**	440P-MSLS11N5
	4 N.C.	—	—	0.20 N•m		440P-MSLB04E	440P-MSLB04B	440P-MSLB04M9
	3 N.C.	1 N.O.	BBM	0.34 N•m		440P-MSLB13E	440P-MSLB13B	440P-MSLB13M9
	2 N.C.	2 N.O.	BBM	0.34 N•m		440P-MSLB22E	440P-MSLB22B	440P-MSLB22M9
Recommended standard cordset, 2 m, 5-pin mini connector (see page 8-1 for additional lengths).								889N-F5AE-6F
Recommended standard cordset, 2 m, 12-pin 9 wire (see page 8-1 for additional lengths).								889M-F12X9AE-2

❶ N5 = 5-pin mini connector.
M9 = 12-pin M23 connector (use 9 wire).

440P Safety Limit Switches

30mm Metal Position Switches

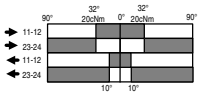
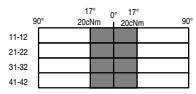
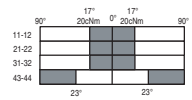
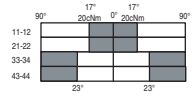
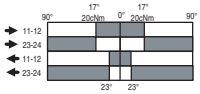
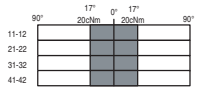
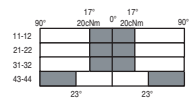
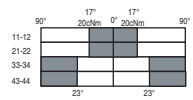
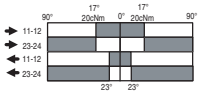
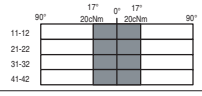
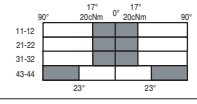
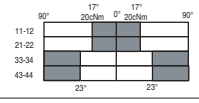
Product Selection (continued)

Operator Type	Contacts: Safety	Contacts: Aux.	Contact Type	Typical Force/ Torque to Operate	Contact Opening Characteristics (□ Open ■ Closed ◕ Positive Opening Point)	Cat. No.: 1/2 inch NPT Conduit	Cat. No.: M20 Conduit	Cat. No.: Quick Disconnect ❶
 Metal Short Lever, Metal Roller	1 N.C.	1 N.O.	Snap Acting	0.34 N•m		440P-MMHS11E	440P-MMHS11B	440P-MMHS11N5
	4 N.C.	—	—	0.20 N•m		440P-MMHB04E	440P-MMHB04B	440P-MMHB04M9
	3 N.C.	1 N.O.	BBM	0.34 N•m		440P-MMHB13E	440P-MMHB13B	440P-MMHB13M9
	2 N.C.	2 N.O.	BBM	0.34 N•m		440P-MMHB22E	440P-MMHB22B	440P-MMHB22M9
 Metal Adjustable Lever ❷	1 N.C.	1 N.O.	Snap Acting	0.34 N•m		**440P-MALS11E**	440P-MALS11B	440P-MALS11N5
	4 N.C.	—	—	0.20 N•m		440P-MALB04E	440P-MALB04B	440P-MALB04M9
	3 N.C.	1 N.O.	BBM	0.34 N•m		440P-MALB13E	440P-MALB13B	440P-MALB13M9
	2 N.C.	2 N.O.	BBM	0.34 N•m		**440P-MALB22E**	440P-MALB22B	440P-MALB22M9
 Metal Rod Lever ❷	1 N.C.	1 N.O.	Snap Acting	0.34 N•m		440P-MARS11E	440P-MARS11B	440P-MARS11N5
	4 N.C.	—	—	0.20 N•m		440P-MARB04E	440P-MARB04B	440P-MARB04M9
	3 N.C.	1 N.O.	BBM	0.34 N•m		440P-MARB13E	440P-MARB13B	440P-MARB13M9
	2 N.C.	2 N.O.	BBM	0.34 N•m		440P-MARB22E	440P-MARB22B	440P-MARB22M9
Recommended standard cordset, 2 m, 5-pin mini connector (see page 8-1 for additional lengths).								889N-F5AE-6F
Recommended standard cordset, 2 m, 12-pin 9 wire (see page 8-1 for additional lengths).								889M-F12X9AE-2

❶ N5 = 5-pin mini connector.
M9 = 12-pin M23 connector (use 9 wire).

❷ Not positive opening

Product Selection (continued)

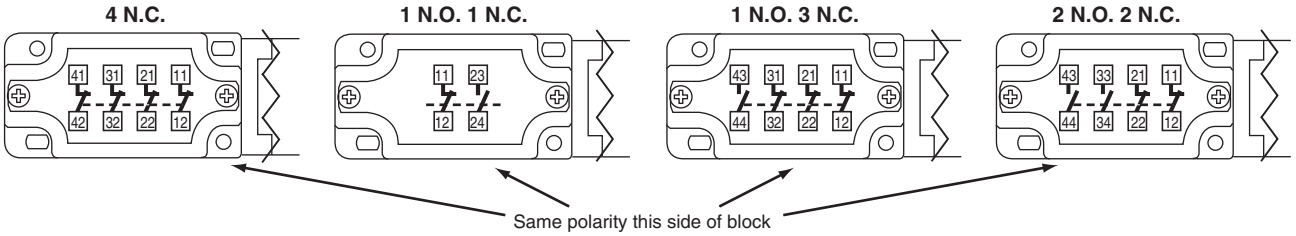
Description	Safety Contacts	Auxiliary Contacts	Contact Type	Typical Force/Torque to Operate	Contact Opening Characteristics □ Open ■ Closed ⊖ Positive Opening Point	Cat. No. 1/2 inch NPT Conduit	Cat. No. M20 Conduit	Cat. No. Connector ★
 ***Metal Spring Rod ‡***	1 N.C.	1 N.O.	Snap Acting	0.20 N•m (1.77 lb•in)		440P-MSRS11E	440P-MSRS11B	440P-MSRS11N5
	4 N.C.	—	—	0.20 N•m (1.77 lb•in)		440P-MSRB04E	440P-MSRB04B	440P-MSRB04M9
	3 N.C.	1 N.O.	BBM	0.20 N•m (1.77 lb•in)		440P-MSRB13E	440P-MSRB13B	440P-MSRB13M9
	2 N.C.	2 N.O.	BBM	0.20 N•m (1.77 lb•in)		440P-MSRB22E	440P-MSRB22B	440P-MSRB22M9
 ***Telescopic Arm ‡***	1 N.C.	1 N.O.	Snap Acting	0.20 N•m (1.77 lb•in)		440P-MTAS11E	440P-MTAS11B	440P-MTAS11N5
	4 N.C.	—	—	0.20 N•m (1.77 lb•in)		440P-MTAB04E	440P-MTAB04B	440P-MTAB04M9
	3 N.C.	1 N.O.	BBM	0.20 N•m (1.77 lb•in)		440P-MTAB13E	440P-MTAB13B	440P-MTAB13M9
	2 N.C.	2 N.O.	BBM	0.20 N•m (1.77 lb•in)		440P-MTAB22E	440P-MTAB22B	440P-MTAB22M9
 ***Large Rubber Roller‡***	1 N.C.	1 N.O.	Snap Acting	0.20 N•m (1.77 lb•in)		440P-MRRS11E	440P-MRRS11B	440P-MRRS11N5
	4 N.C.	—	—	0.20 N•m (1.77 lb•in)		440P-MRRB04E	440P-MRRB04B	440P-MRRB04M9
	3 N.C.	1 N.O.	BBM	0.34 N•m (3.01 lb•in)		440P-MRRB13E	440P-MRRB13B	440P-MRRB13M9
	2 N.C.	2 N.O.	BBM	0.34 N•m (3.01 lb•in)		440P-MRRB22E	440P-MRRB22B	440P-MRRB22M9
Recommended standard cordset, 2 m, 5-pin mini connector.								889N-F5AE-6F
Recommended standard cordset, 2 m, 12-pin 9-wire.								889M-F12X9AE-2

★ N5 = 5-pin mini connector.
M9 = 12-pin M23 connector (use 9 wire).
‡ Not positive opening

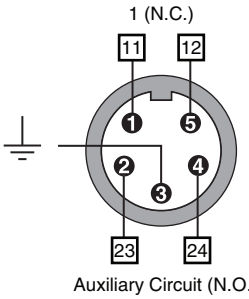
440P Safety Limit Switches

30 mm Metal Position Switches

Typical Wiring Diagrams



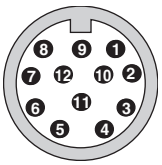
N5 Connector 2 Circuit 5-Pin Mini Connector



Connector Ratings

	Max. Ratings		Applicable Standards
	AC	DC	
5-Pin Mini (M12)	300V, 2.5 A	300V, 2.5 A	IEC 61076-2-101:2003
12-Pin (M23)	60V, 2.5 A	60V, 2.5 A	

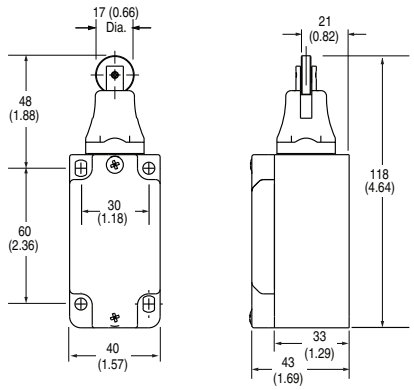
M9 12-Pin M23 Connector



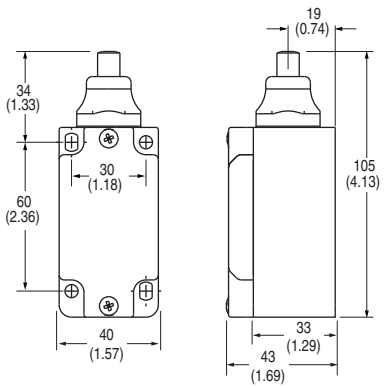
Connector Pinout		4 N.C.		3 N.C. 1 N.O.		3 N.C.	
		Terminal	Contact	Terminal	Contact	Terminal	Contact
	1	11	N.C.	11	N.C.	11	N.C.
	3	12		12		12	
	4	21	N.C.	21	N.C.	21	N.C.
	6	22		22		22	
	7	31	N.C.	31	N.C.	33	N.O.
	8	32		32		34	
	9	41	N.C.	43	N.O.	43	N.O.
	10	42		44		44	
	12	Ground					

Approximate Dimensions—mm (inches)

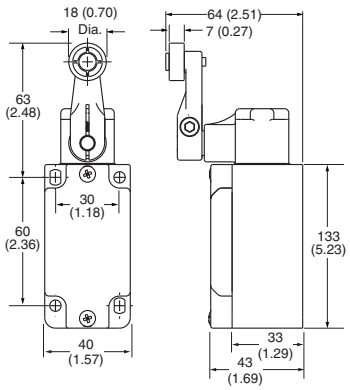
Dimensions are not intended to be used for installation purposes.



Roller Plunger



Dome Plunger



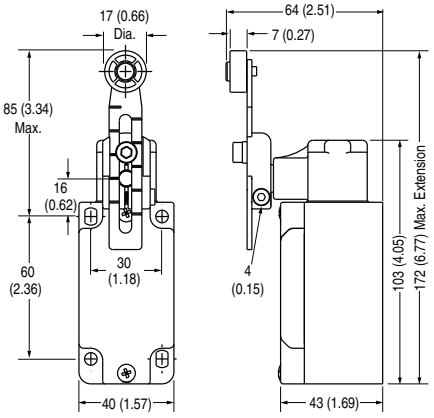
Short Lever, (Metal & Plastic Roller)

New

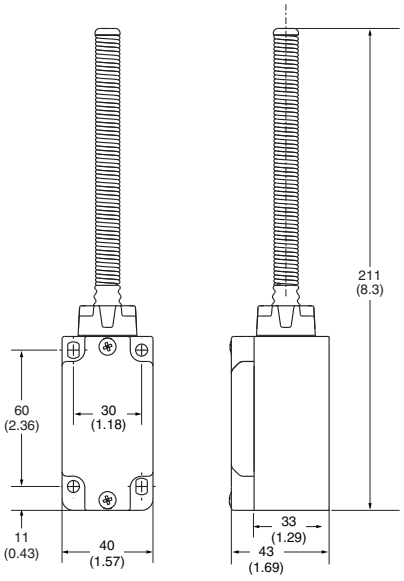
Allen-Bradley

Approximate Dimensions—mm (inches) (continued)

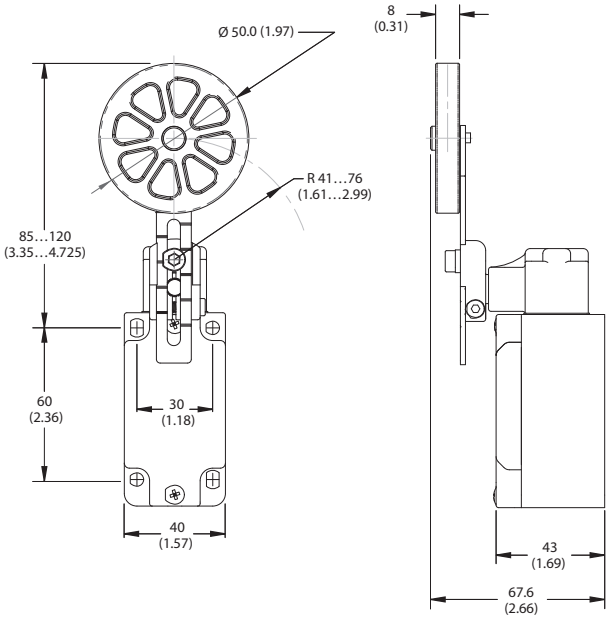
Dimensions are not intended to be used for installation purposes.



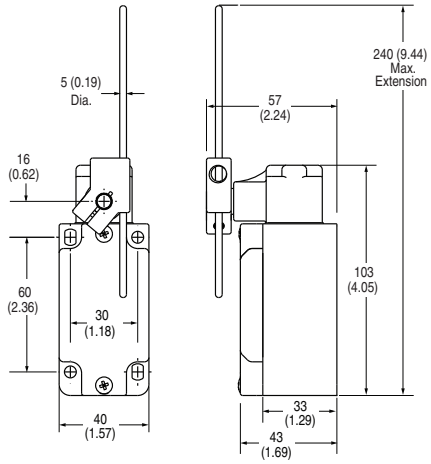
Adjustable Lever



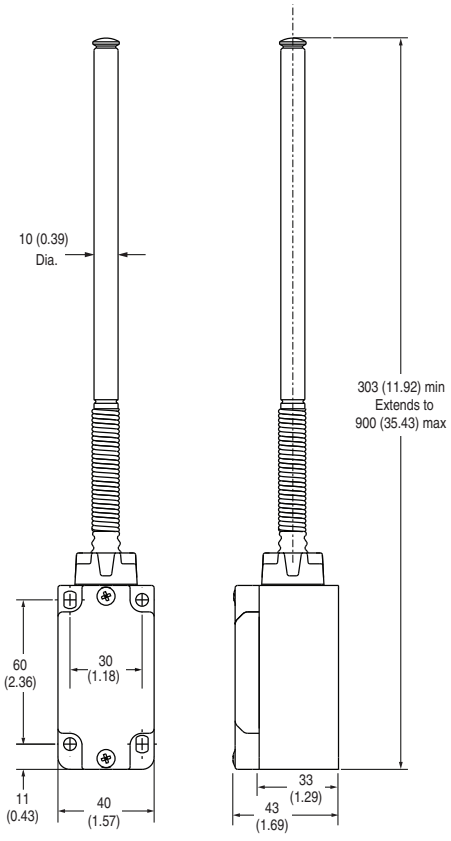
Spring Rod



Adjustable Lever with Rubber Roller



Rod Lever



Telescopic Arm

440P Safety Limit Switches

15mm Plastic Position Interlock Switches

Imp 1

Imp 2

Description

The Imp offers safety switch performance of bigger units in the most compact case available. Designed with two mounting hole options and a choice of actuator positions, the Imp will fit in the most confined spaces.

Features

- Positive operation, forced disconnection of contacts
- Contacts, 1 N.C. & 1 N.O.

Specifications

Standards	EN60947-5-1,EN292-1, EN60204-1, EN1088
Certifications	CE Marked for all applicable directives and CSA NRTL/C
Safety Contacts	1 N.C. positive break
Utilization Category	AC 15
AC (Ue)	500 V 250 V 100 V
(Ie)	1 A 2 A 5 A
DC	250 V 0.5 A, 24 V 2 A
Max. Switched Current/ Voltage/Load	500 V/500 VA
Thermal Current (Ith)	10 A
Minimum Current	5 V 5 mA DC
Safety Contact Gap	>2 x 2 mm (0.079 in.)
Rated Insulation Voltage	(Ui) 500 V
Rated Impulse Withstand Voltage	(Uimp) 2500 V
Auxiliary Contacts	1 N.O.
Pollution Degree	3
Actuator Travel for Positive Opening	2.5 mm (0.098 in.)
Break Contact Min. Force	10 N (2.25 lb)
Maximum Actuator Travel	5 mm (0.197 in.)
Maximum Actuation Speed	160 mm (6.29 in.) per sec
Maximum Actuation Frequency	2 Cycle per sec
Case Material	UL approved glass filled polyester
Actuator Material	Acetal
Protection	IP30
Conduit Entry	3x breakouts
Operating Temperature [C (F)]	-25…+80° (-13…+176°)
Mounting	2 x M3 front or 2 x M4 top
Mechanical Life	10,000,000 operations
Electrical Life	1,000,000 operations
Color	Red

Position Interlock Switch

Selection Guide . . . . . page 5-129
Dimensions . . . . . page 5-129
Wiring Diagram . . . . . page 5-129
Operating Levers . . . . . page 5-130

440P Safety Limit Switches

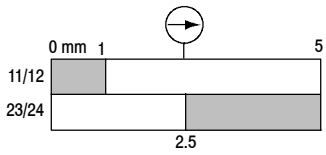
15mm Plastic Position Interlock Switches

Range of Operation

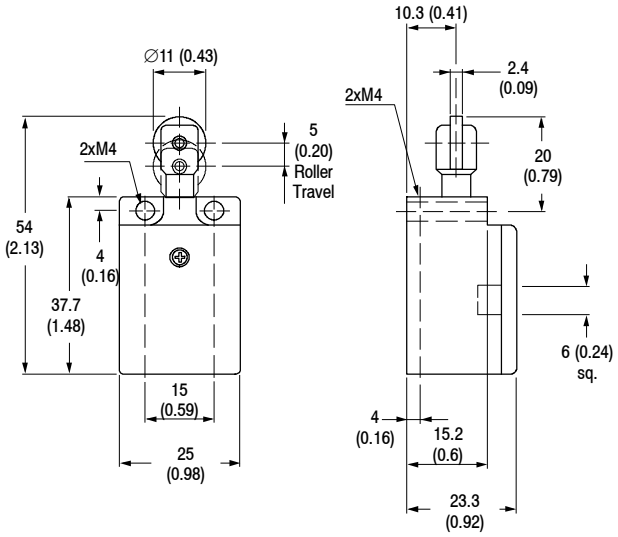
Imp 1

Imp 2

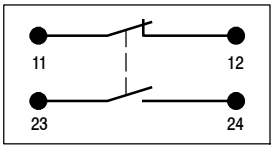
Selection Guide

Contact Action ☐ Contact Open ▩ Contact Closed	Conduit	Contact		Type	Operator Type		Cat. No.
	3x breakouts	Slow break before make	1 N.O. & 1 N.C.	Imp 1 (roller parallel to switch front)	Top Push Roller		440P-M18001
				Imp 2 (roller perpendicular to switch front)	Top Push Cross Roller		440P-M18002

Approximate Dimensions [mm (in.)]



Wiring Diagram



1 N.O. & 1 N.C.

Operating Levers

For use with 802T, 802M, 802MC, 802X, 802XR

Roller Levers

Type	Roller			Cat. No.
	Material	Dia.	Width	
 *Non-Adj. Cast Lever 0.75″ Radius*	Metal	0.75″	0.27″	802T-W9A
 *Non-Adj. Cast Lever 1.5″ Radius Roller on Front*	Nylon	0.75″	0.28″	**802T-W1**
	Nylon	0.75″	1″	**802T-W1H**
	Dual Nylon	0.75″	1″ each	802T-W1HH
	Steel	0.75″	0.25″	**802T-W1A**
	Steel	0.75″	0.75″	802T-W1N
	Ball Bearing	0.75″	0.23″	**802T-W1B**
	Beryllium Copper (Nonsparking)	0.75″	0.28″	802T-W1J
	Nylon	0.75″	0.75″	802T-W1L
 *Non-Adj. Cast Lever 1.5″ Radius Roller on Rear*	Nylon	0.75″	0.28″	802T-W1E
	Nylon	0.75″	1″	**802T-W1D**
	Nylon	1.5″	0.28″	802T-W1G
	Steel	0.75″	0.25″	**802T-W1F**
	Steel	0.75″	0.75″	**802T-W1C**
	Nylon	0.75″	0.75″	802T-W1M
 *Non-Adj. Steel Lever 2.0″ Radius Roller on Front*	Nylon	0.75″	0.28″	802T-W20
	Nylon	0.75″	1″	802T-W20D
	Steel	0.75″	0.25″	802T-W20A
	Steel	0.75″	0.75″	802T-W20B
	Ball Bearing	0.75″	0.23″	802T-W20C
	Beryllium Copper	0.75″	0.28″	802T-W20E
 *Non-Adj. Steel Lever 2.0″ Radius Roller on Rear*	Nylon	0.75″	0.28″	802T-W20J
	Nylon	0.75″	1″	802T-W20K
	Steel	0.75″	0.25″	802T-W20L
	Steel	0.75″	0.75″	802T-W20M
	Ball Bearing	0.75″	0.23″	802T-W20N
	Beryllium Copper	0.75″	0.28″	802T-W20P
 *Non-Adj. Steel Lever 2 1/8″ Radius Roller on Front*	Nylon	0.75″	0.75″	802T-W18
	Nylon	0.75″	1″	802T-W18A

Approximate Dimensions—See page 5-133.

Type	Roller			Cat. No.
	Material	Dia.	Width	
 *Non-Adj. Steel Lever 2.5″ Radius Roller on Front*	Nylon	0.75″	0.28″	802T-W25
	Nylon	0.75″	1″	802T-W25D
	Steel	0.75″	0.25″	802T-W25A
	Steel	0.75″	0.75″	802T-W25B
	Ball Bearing	0.75″	0.23″	802T-W25C
	Beryllium Copper	0.75″	0.28″	802T-W25E
 *Non-Adj. Steel Lever 2.5″ Radius Roller on Rear*	Nylon	0.75″	0.28″	802T-W25J
	Nylon	0.75″	1″	802T-W25K
	Steel	0.75″	0.25″	802T-W25L
	Steel	0.75″	0.75″	802T-W25M
	Ball Bearing	0.75″	0.23″	802T-W25N
	Beryllium Copper	0.75″	0.28″	802T-W25P
 *Non-Adj. Steel Lever 3.0″ Radius Roller on Front*	Nylon	0.75″	0.28″	802T-W30
	Nylon	0.75″	1″	802T-W30D
	Steel	0.75″	0.25″	802T-W30A
	Steel	0.75″	0.75″	802T-W30B
	Ball Bearing	0.75″	0.23″	802T-W30C
	Beryllium Copper	0.75″	0.28″	802T-W30E
 *Non-Adj. Steel Lever 3.0″ Radius Roller on Rear*	Nylon	0.75″	0.28″	802T-W30J
	Nylon	0.75″	1″	802T-W30K
	Steel	0.75″	0.25″	802T-W30L
	Steel	0.75″	0.75″	802T-W30M
	Ball Bearing	0.75″	0.23″	802T-W30N
	Beryllium Copper	0.75″	0.28″	802T-W30P
 *Adjustable Lever 1.19″ to 3″ Radius*	Nylon	0.75″	0.28″	**802T-W2**
	Nylon	0.75″	1″	**802T-W2D**
	Nylon	1.5″	0.28″	**802T-W2A**
	Steel	0.75″	0.25″	**802T-W2B**
	Ball Bearing	0.75″	0.23″	**802T-W2C**
	Steel	1.4″	0.27″	802T-W2E
	Rubber	1.5″	0.5″	802T-W2R
	Beryllium Copper	0.75″	0.28″	802T-NX94
 *Adjustable Lever 1.19″ to 3.5″ Radius*	Nylon	0.75″	0.28″	**802T-W17**
	Metal			802T-W17B
	Nylon	1.5″		802T-W17A

Operating Levers

For use with 802T, 802M, 802MC, 802X, 802XR

Roller Levers (continued)

Type	Roller Material	Roller Dia.	Roller Width	Cat. No.
 *Fork Lever 1.5″ Radius*	Nylon; L.H. Roller on Front; R.H. Roller on Back	0.75″	0.28″	802T-W4
	Steel; L.H. Roller on Front; R.H. Roller on Back	0.75″	0.25″	802T-W4B
	Nylon; Both Rollers on Front	0.75″	0.28″	**802T-W4A**
	Nylon; Both Rollers on Rear	0.75″	0.28	802T-NX115
	Nylon; Both Rollers on Front	0.75″	1″	802T-W4F
	Steel; Both Rollers on Front	0.75″	0.25″	**802T-W4C**
	Nylon; L.H. Roller on Back; R.H. Roller on Front	0.75″	0.28″	802T-W4D
 *Micrometer Adjustment Lever ❹ 1.5″ Radius*	Nylon R.H. Adj.	0.75″	0.28″	802T-W6
	Steel R.H. Adj.	0.75″	0.25″	**802T-W6A**
	Ball Bearing R.H. Adj.	0.75″	0.23″	802T-W6B
	Nylon L.H. Adj.	0.75″	0.28″	802T-W6C
	Steel L.H. Adj.	0.75″	0.25″	802T-W6D
	Ball Bearing L.H. Adj.	0.75″	0.23″	802T-W6E
	Nylon R.H. Adj.	0.75″	1″	802T-W6F
 *Non-Adj. One-Way Lever 1.5″ Radius*	Nylon	0.75″	0.28″	802T-W7❶
	Steel	0.75″	0.25″	802T-W7A❶
	Ball Bearing	0.75″	0.23″	802T-W7B❶
 *Non-Adj. Offset Lever 1.44″ Radius Roller on Front*	Nylon	0.75″	0.28″	802T-W12❷
	Steel	0.75″	0.25″	**802T-W12A❷**
	Bearing Roller	0.75″	0.23″	802T-W12B
 *Non-Adj. Offset Lever 1.44″ Radius Roller on Rear*	Nylon	0.75″	0.28″	802T-W12E
	Steel	0.75″	0.25″	802T-W12F

Approximate Dimensions—See page 5-133.

Roller Levers—Corrosion-Resistant

Type	Material	Roller Dia.	Roller Width	Cat. No.
 *1.5″ Radius Roller on Front*	Type 316 stainless steel roller, roller pin and clamp pin One-piece cast aluminum arm is protected with TUFRAM®❸	0.75″	0.25″	**802MC-W1A**
 *1.5″ Radius Roller on Rear*	Nylon Roller One-piece cast aluminum arm is protected with TUFRAM®❸	1.5″	0.28″	802MC-W1G
 *Non-Adj. Offset Lever 1.44″ Radius Roller on Front*	Nylon Roller One-piece cast aluminum arm is protected with TUFRAM®❸	0.75″	0.28″	802MC-W12
 *Adjustable 1.19″-3″ Radius*	Type 316 stainless steel roller, roller pin, clamp pin and adjustable lever arm Block is cast aluminum protected with TUFRAM®❸	0.75″	0.25″	**802MC-W2B**

❶ Do not use on maintained contact limit switches.

❷ When mounted on Plug-In devices, the offset lever provides equivalent cam tracking to the NonPlug-In devices using catalog number 802T-W1 levers.

❸ TUFRAM is a synergistic coating which combines the advantages of anodizing with a controlled infusion of PTFE for added corrosion resistance.

❹ The micrometer adjustment roller lever is designed especially for installations where the position of the roller is a critical factor. This lever has a pivoted roller which can be turned laterally. After clamping the lever to the switch shaft, the position of the roller can be precisely adjusted through an arc of 7.5° on either side of the center or straight-line position.

Operating Levers

For use with 802T, 802M, 802MC, 802X, 802XR

Rod Levers

Type	Material	Dia.	Cat. No.
	Stainless Steel Rod 5″ Long	0.13″	**802T-W3❷**
	Stainless Steel Rod 8.5″ Long	0.13″	**802T-W3B❷**
	Stainless Steel Rod 12″ Long	0.13″	802T-NX50
	Stainless Steel Rod 11.5″ Long	0.13″	**802T-W3A**
		0.08″	**802T-W3F❸**
	Stainless Steel Rod 14″ Long	0.13″	802T-NX159
	Nylon Rod 12″ Long	0.25″	**802T-W3C** 802T-NX142 ❺
	Stainless Steel Rod 5″ Long	0.06″	**802T-W5❷**
	Stainless Steel Rod 5″ Long One-Way	0.06″	802T-W8❶
	Nylatron Looped Rod 6″ Long 2″ Wide Loop	0.18″	**802T-W14**
	Nylatron Looped Rod 9″ Long 2″ Wide Loop	0.18″	802T-NX119
	Steel Rod 9″ Long	0.25″	802T-W16
	Nylon Rod 9″ Long	0.25″	802T-W16A

Rod Levers—Corrosion-Resistant

Type	Material	Dia.	Cat. No.
	Type 316 stainless steel rod 5″ long Block is cast aluminum protected with TUFRAM®❹	0.13″	**802MC-W3**
	Type 316 stainless steel rod 11.5″ long Block is cast aluminum protected with TUFRAM®❹	0.08″	**802MC-W3A**
	Nylon Rod 12″ long Block is cast aluminum protected with TUFRAM®❹	0.25″	**802MC-W3C**
	Nylon Rod Only	0.25″	WF25507

Approximate Dimensions—See page 5-133.

❶ Do not use on maintained contact limit switches.

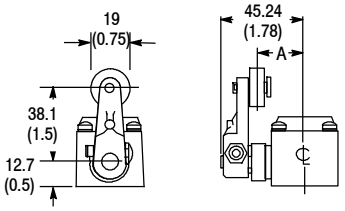
❷ Recommended for use with low operating torque switches.

❸ Not for use with 802M-NPY5 or 802M-ASY5 type switches.

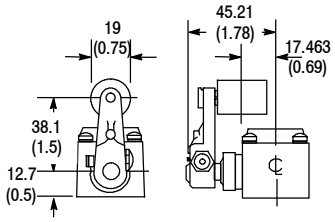
❹ TUFRAM® is a synergistic coating which combines the advantages of anodizing with a controlled infusion of PTFE for added corrosion resistance.

❺ Recommended for high impact applications.

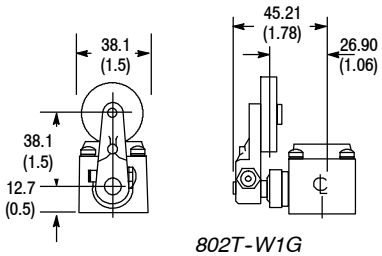
Approximate Dimensions [mm (in.)]



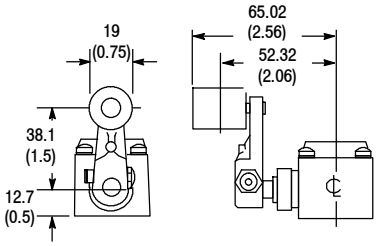
802T-W1C (Dim. A = 0.81″);
802T-W1E and 802T-W1F (Dim. A = 1.03″)
Shipping Wt. 57g (2oz). (W1C), 1 oz. (W1E), 43g (1.5oz) (W1F)



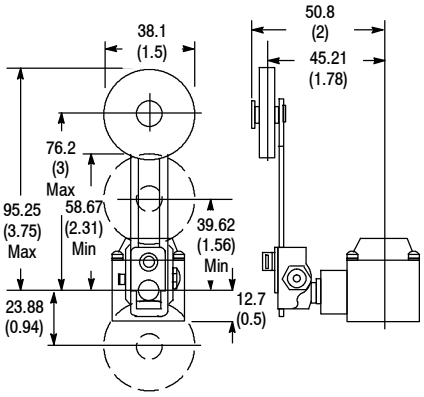
802T-W1D
Shipping Wt. 43g (1.5oz)



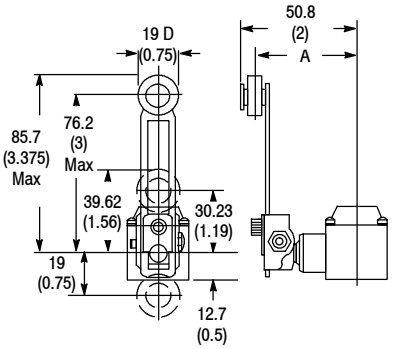
802T-W1G
Shipping Wt. 28g (1oz)



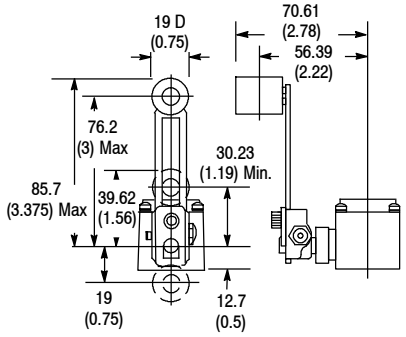
802T-W1H
Shipping Wt. 43g (1.5o)



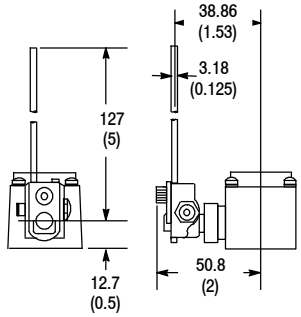
802T-W2A
Shipping Wt. 57g (2oz)



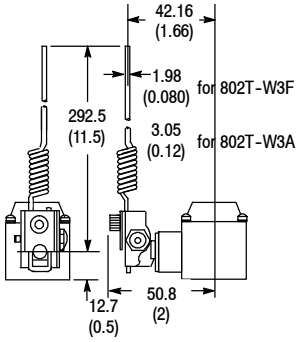
802T-W2 & 802T-W2B (Dim. A = 1.78″);
802T-W2C (Dim. A = 1.81″)
Shipping Wt. 57g (2oz)



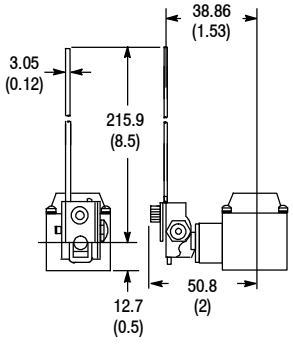
802T-W2D
Shipping Wt. 57g (2oz)



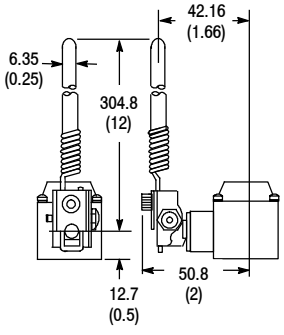
802T-W3
Shipping Wt. 43g (1.5oz)



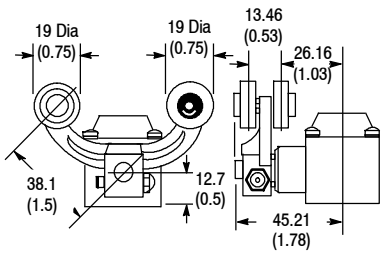
802T-W3A and 802T-W3F
Shipping Wt. 57g (2oz)



802T-W3B and 802T-W3F
Shipping Wt. 43g (1.5oz)



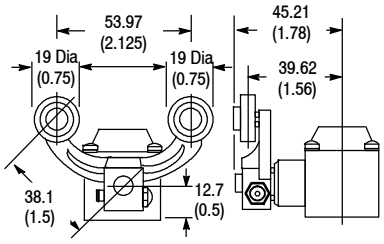
802T-W3C
Shipping Wt. 57g (2oz)



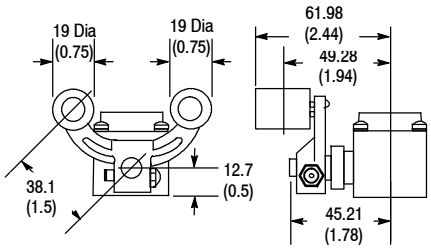
802T-W4 and 802T-W4D
Shipping Wt. 43g (1.5oz) 802T-W4B
Shipping Wt. 57g (2oz)

Operating Levers

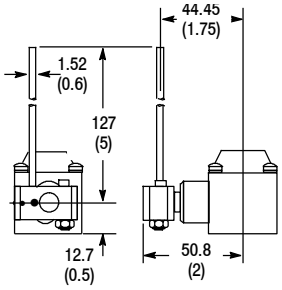
Approximate Dimensions [mm (in.)] (continued)



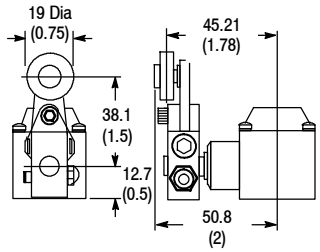
802T-W4A and 802T-W4C
Shipping Wt. 57g (2oz)



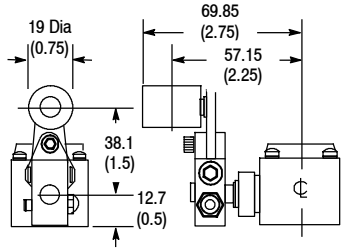
802T-W4F
Shipping Wt. 57g (2oz)



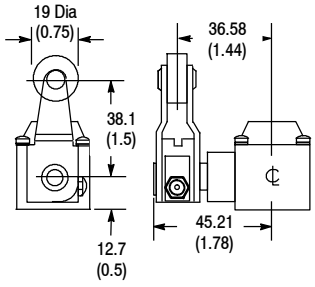
802T-W5
Shipping Wt. 28g (1oz)



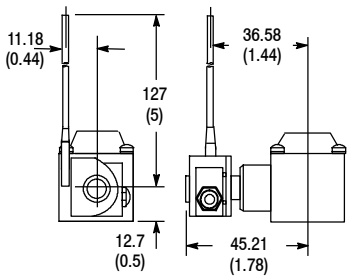
802T-W6, 802T-W6A,
802T-W6B, 802T-W6E
Shipping Wt. 57g (2oz)



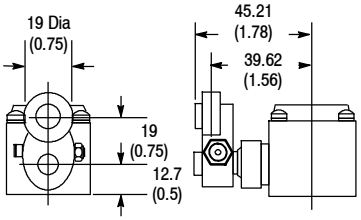
802T-W6F
Shipping Wt. 57g (2oz)



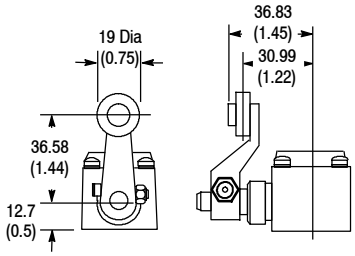
802T-W7, 802T-W7A
and 802T-W7B
Shipping Wt. 57g (2oz)



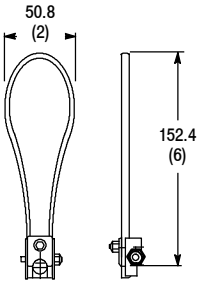
802T-W8
Shipping Wt. 43g (1.5oz)



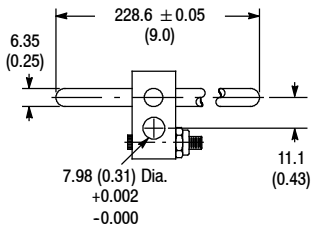
802T-W9
Shipping Wt. 28g (1oz)



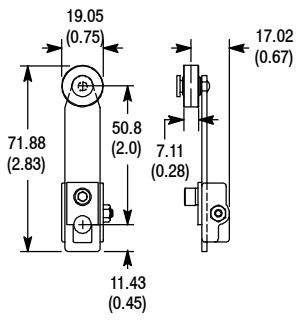
802T-W12 Shipping Wt. 1 oz. and
802T-W12A 802T-W6B, 802T-W6E
Shipping Wt. 43g (1.5oz)



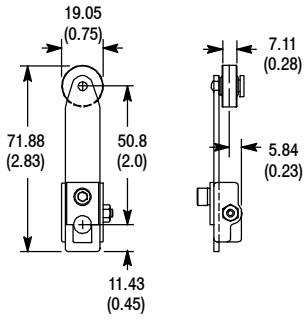
802T-W14
Shipping Wt. 43g (1.5oz)



802T-W16
802T-W16A



802T-W20
Shipping Wt. 57g (2oz)



802T-W20J
Shipping Wt. 57g (2oz)

Replacement Parts

Replacement Actuators for Bul. 440P Limit Switches

Levers

	Description	Cat. No.
	Short lever with nylon roller for 440P-ASL* or -AWL* See page 5-115.	440P-WA1
	Short lever with metal roller for 440P-ASL* or -AWL* See page 5-115.	440P-WA1A
	Short lever with wide roller for 440P-ASL* or -AWL* See page 5-115.	440P-WA1B
	Short lever with nylon roller for 440P-CSL* or -CHM* See page 5-118.	440P-WC1
	Short lever with metal roller for 440P-CSL* or -CHM* See page 5-118.	440P-WC1A
	Short lever with nylon roller for 440P-MSL* or -MMH* See page 5-123 & 5-124.	440P-WM1
	Short lever with metal roller for 440P-MSL* or -MMH* See page 5-123 & 5-124.	440P-WM1A
	Adjustable lever arm with nylon roller for 440P-AAL* or -AA1L* See page 5-115.	440P-WA2A
	Adjustable lever arm with steel roller for 440P-AAL* or -AA1L* See page 5-115.	440P-WA2B
	Adjustable lever with nylon roller for 440P-CAL*, -CRR*, -MRR* See page 5-119 & 5-124.	440P-WC2
	Adjustable lever with metal roller for 440P-CAL* or -CRR* See page 5-119.	440P-WC2B
	Adjustable lever with large rubber roller for 440P-CAL*, -CRR*, -MRR* See page 5-119 & 5-124.	440P-WC2A
	Adjustable lever with nylon roller for 440P-MAL* or -MRR* See page 5-124.	440P-WM2
	Adjustable lever with metal roller for 440P-MAL* or -MRR* See page 5-124.	440P-WM2A

Note: The actuator is included with the purchase of every Bul. 440P limit switch.

Rods

	Description	Cat. No.
	Adjustable metal rod for 440P-MAR* See page 5-124.	440P-WM3
	Metal spring rod for 440P-MSR* See page 5-125.	440P-WM4

Note: The actuator is included with the purchase of every Bul. 440P limit switch.

Telescopic Arm

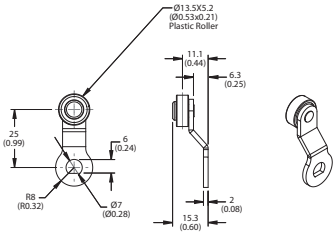
	Description	Cat. No.
	Telescopic arm for 440P-MTA* See page 5-125.	440P-WM5

Note: The actuator is included with the purchase of every Bul. 440P limit switch.

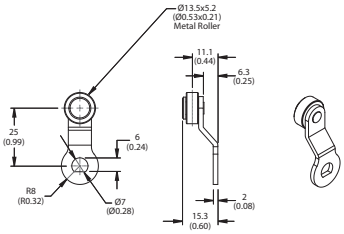
Operating Levers

Dimensions are not intended to be used for installation purposes.

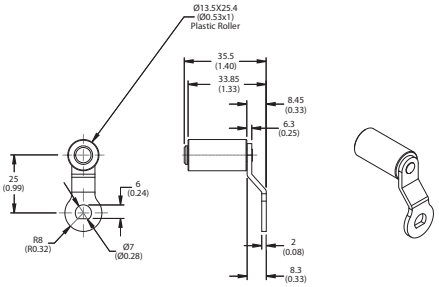
Levers



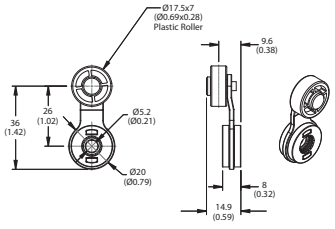
Cat. No. 440P-ASL_ or AWL_
Short Lever (Plastic Roller)



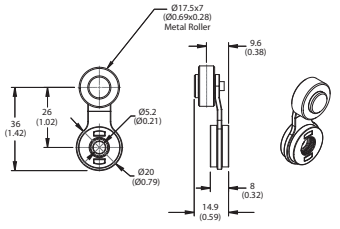
Cat. No. 440P-ASL_ or AWL_
Short Lever (Metal Roller)



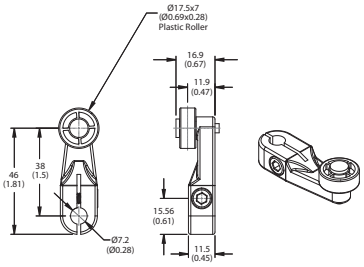
Cat. No. 440P-ASL_ or AWL_
Short Lever (Wide Roller)



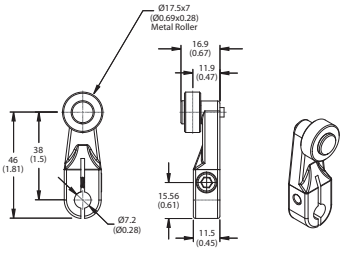
Cat. No. 440P-CSL_ or CHM_
Short Lever (Plastic Roller)



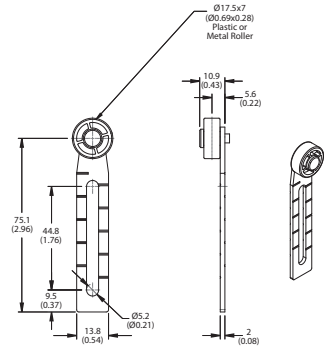
Cat. No. 440P-CSL_ or CHM_
Short Lever (Metal Roller)



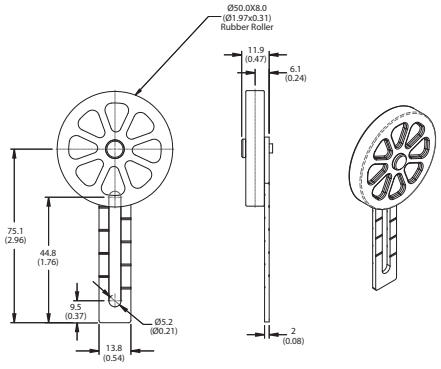
Cat. No. 440P-MSL_ or MMH_
Short Lever (Plastic Roller)



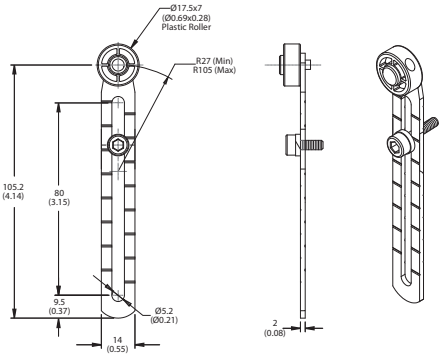
Cat. No. 440P-MSL_ or MMH_
Short Lever (Metal Roller)



Cat. No. 440P-CAL_, -CRR_, -MAL_, and -MRR_
Adjustable Lever (Plastic & Metal Roller)



Cat. No. 440P-CAL_, -CRR_, and -MRR_
Adjustable Lever (Large Rubber Roller)

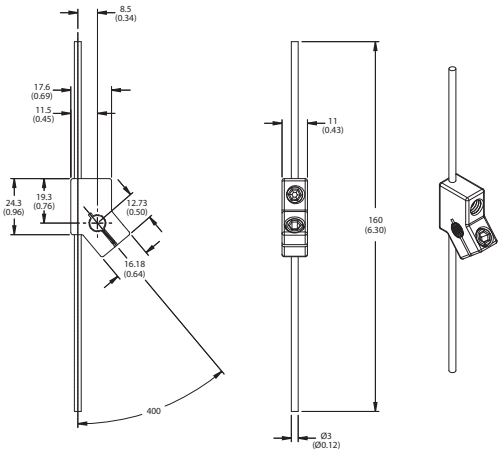


Cat. No. 440P-AAL_ or AA1L_
Adjustable Lever Arm (Plastic & Metal Roller)

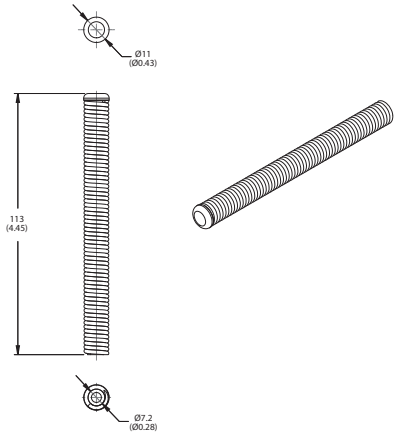
New

Allen-Bradley

Rods

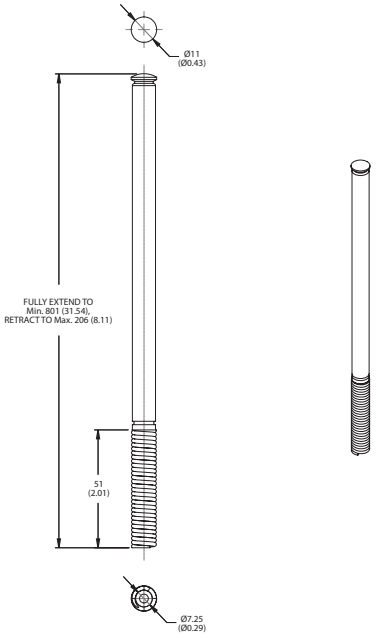


Cat. No. 440P-MAR_
Adjustable Metal Rod



Cat. No. 440P-MSR_
Metal Spring Rod

Telescopic Arms



Cat. No. 440P-MTA_
Telescopic Arm

Notes