



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 6P^① 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

① Plug-in lever type except low-torque models.

② 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.

③ Low operating torque-spring return ratings only.

Specifications

Enclosure Rating	NEMA 4, 13, 6P ^① and IP67
Pollution Degree	3
Certifications	UL Listed, CSA Certified CE Marked for applicable directives
Ambient Temperature [C (F)] ^②	-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
B600 ^③ 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

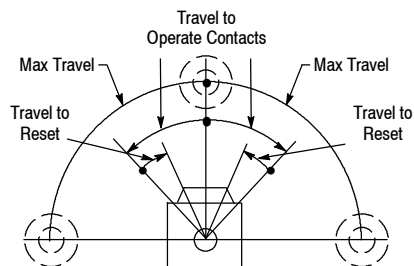
802T Operating Levers

Lever Selection page 5-130

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	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°		★ 7°	★ 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°		★ 7°	★ 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°		★ 7°	★ 802T-A4P	★ 802T-A4P1
			0.56 N•m (5 lb•in)	9°		4°	802T-H2P	802T-H2P1
4	Clockwise or Counterclockwise		0.45 N•m (4 lb•in)	13°	90°	7°	802T-ALP	802T-ALP1
						7°	† 802T-AL1P	† 802T-AL1P1
			0.79 N•m (7 lb•in)	9°			802T-AL2P	802T-AL2P1
	Clockwise		0.45 N•m (4 lb•in)	13°		7°	802T-ATP	802T-ATP1
				9°		4°	802T-HTP	802T-HTP1
			0.79 N•m (7 lb•in)	13°		7°	802T-A1TP	802T-A1TP1
				9°		4°	802T-H1TP	802T-H1TP1
	Counterclockwise		0.45 N•m (4 lb•in)	13°		7°	802T-A2TP	802T-A2TP1
				9°		3.5°	802T-H2TP	802T-H2TP1
			0.79 N•m (7 lb•in)					

★ Fluorinated elastomer shaft seal is supplied with these devices.

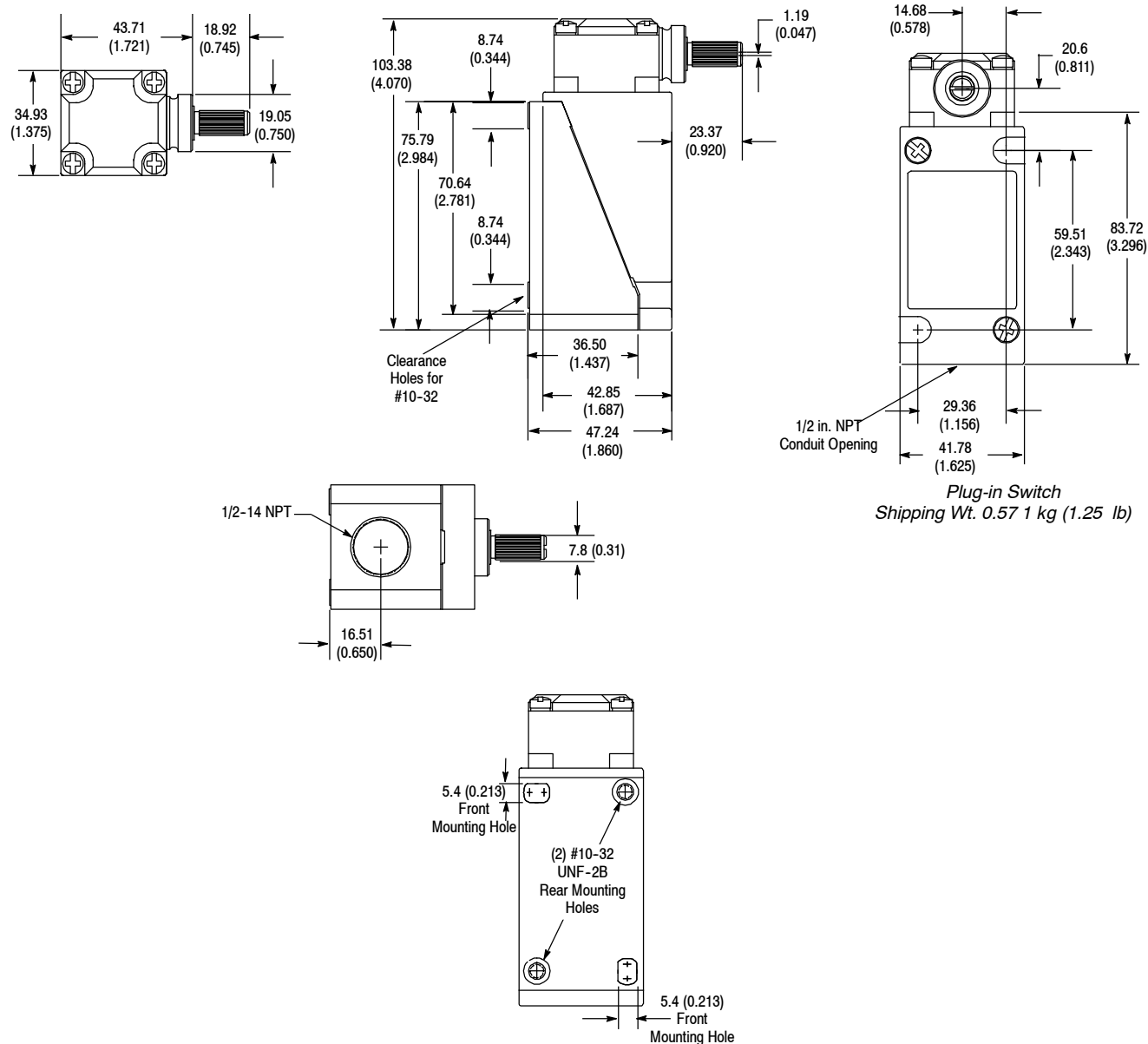
† Low operating torque model.

Approximate Dimensions—See page 5-43.

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

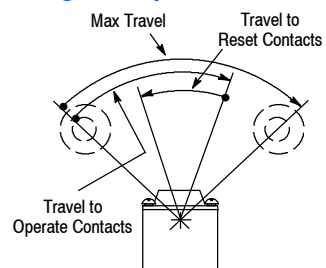
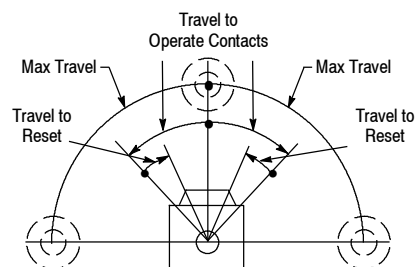
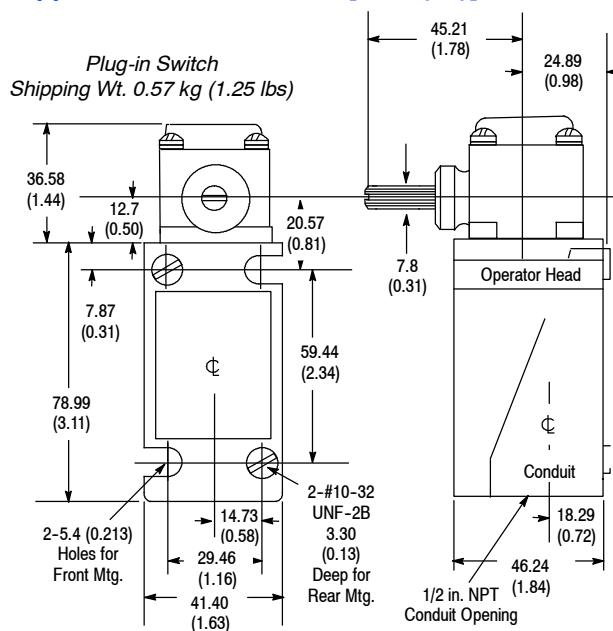
Modifications and Accessories—See page 5-53.



802T Lever Type • Spring Return**Plug-in Style Oiltight Switches****Approximate Dimensions [mm (in.)]**

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.)]****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	Switch w/o Lever & Base
2	Clockwise or Counterclockwise 	0.31 N•m (2.75 lb•in)	70° ①	88° ①	32°	802T-AMP	802T-AMP1
4	Clockwise or Counterclockwise 	0.32 N•m (2.8 lb•in)				802T-AMTP	802T-AMTP1

① From one maintained position to another.

Product Selection—Neutral Position Models

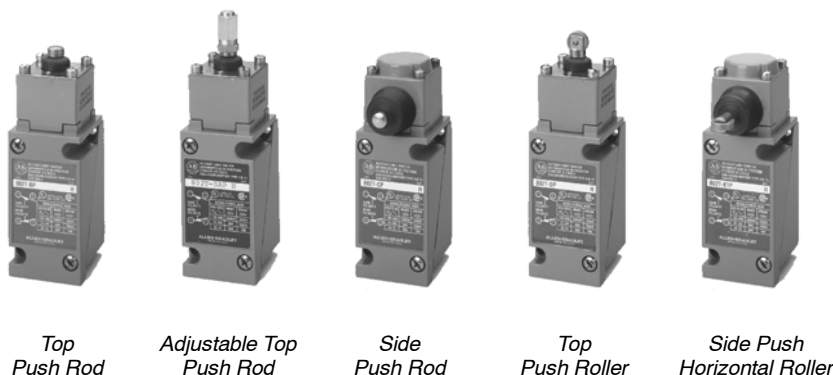
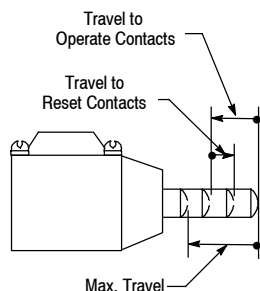
Lever Movement vs. Contact Operation	Torque to Operate (Max.)		Travel to Operate Contacts (Max.)	Max Travel	Travel to Reset Contacts (Max.)	Cat. No.	
	Clockwise	Counter-clockwise				Switch w/o Lever	Switch w/o Lever & Base
	0.28 N•m (2.5 lb•in)	0.47 N•m (4.2 lb•in)	13°	75°	7°	802T-NPTP	802T-NPTP1

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



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	<div> <div>1 ○ ○ 2</div> <div>3 ○ ○ 4</div> </div>	<div> <div>1 ○ ○ 2</div> <div>3 ○ ○ 4</div> </div>	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	<div> <div>1 ○ ○ 2</div> <div>3 ○ ○ 4</div> <div>5 ○ ○ 6</div> <div>7 ○ ○ 8</div> </div>	<div> <div>1 ○ ○ 2</div> <div>3 ○ ○ 4</div> <div>5 ○ ○ 6</div> <div>7 ○ ○ 8</div> </div>	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

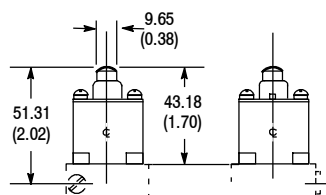
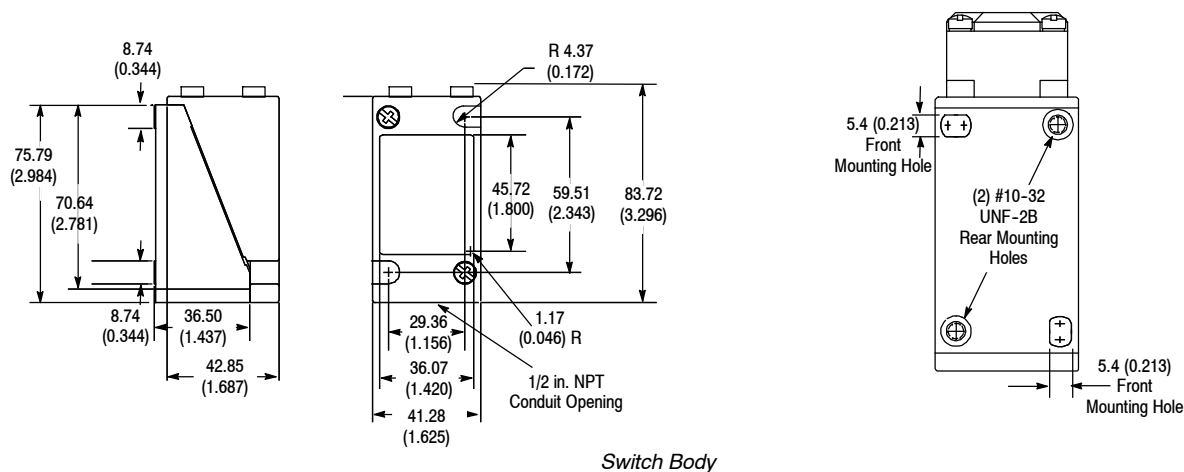
Modifications and Accessories—See page 5-53.

Limit Switches

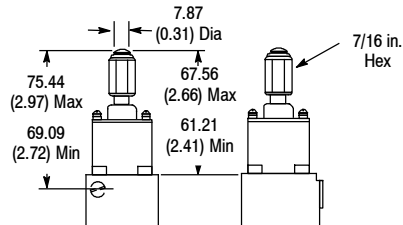
802T Push Type • Spring Return

Plug-in Style Oiltight Switches

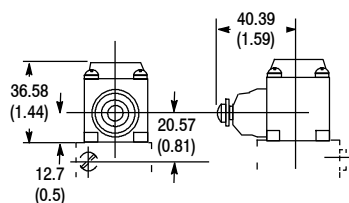
Approximate Dimensions [mm (in.)]



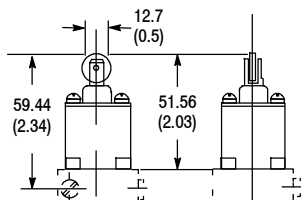
40146-013-59
Top Push Rod Head
Shipping Wt. 0.142 kg (5 oz)



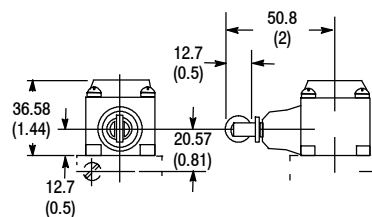
40146-013-65
Adjustable Top Push Rod Head
Shipping Wt. 0.142 kg (5 oz)



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)

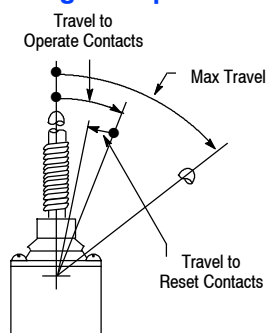


40146-017-64
Side Push Roller Head
Shipping Wt. 0.142 kg (5 oz)

Modifications and Accessories—See page 5-53.

802T Wobble Stick and Cat Whisker • Spring Return

Plug-in Style Oiltight Switches

Range of Operation^①Wobble Stick
Nylon ExtensionWobble Stick
Wire ExtensionWire Cat
Whisker

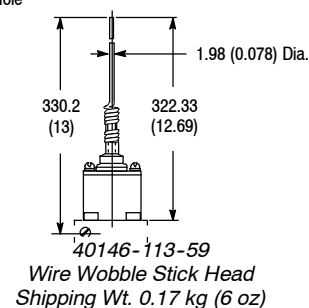
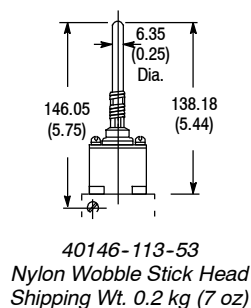
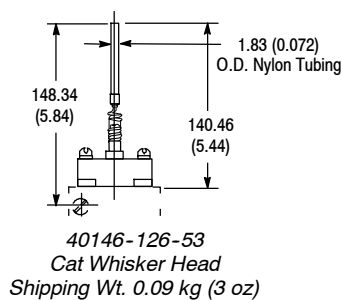
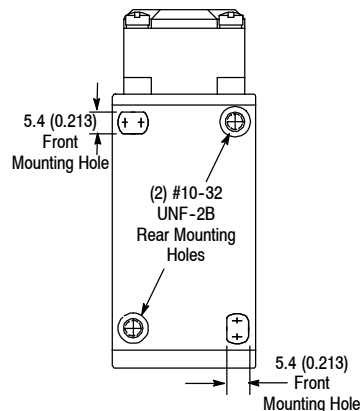
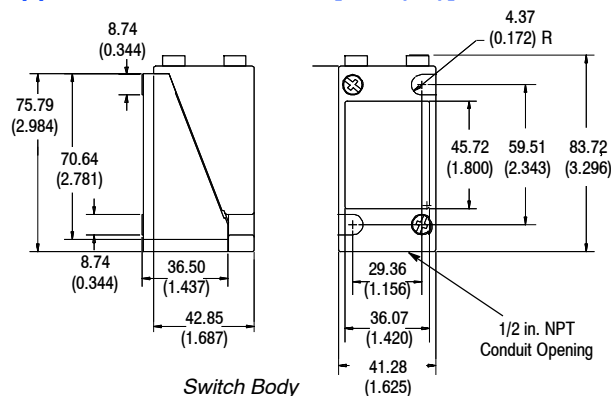
Product Selection

Operator Type	Contact Operation	Torque to Operate (Max.) ^②	Travel to Operate Contacts (Max.) ^②	Max Travel ^{①②}	Travel to Reset Contacts (Max.) ^②	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

① 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.

② Operating travels and torque are measured at rigid section of stick or cat whisker.

Approximate Dimensions [mm (in.)]



Modifications and Accessories—See page 5-53.



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.

Specifications

Certifications	UL Listed, CSA Certified and CE Marked for all applicable directives
Environmental	
Enclosure Type Rating	NEMA 4, 13, and 6P ^②
Ambient Temperature [C (F)] ^①	-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

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 6P^②
- 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

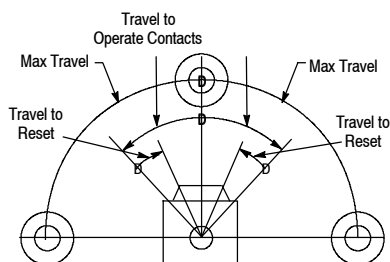
^① Temperature range below 0°C (+32°F) is based on the absence of freezing moisture or water.

^② 6P only applies to lever type, except low torque.

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.							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

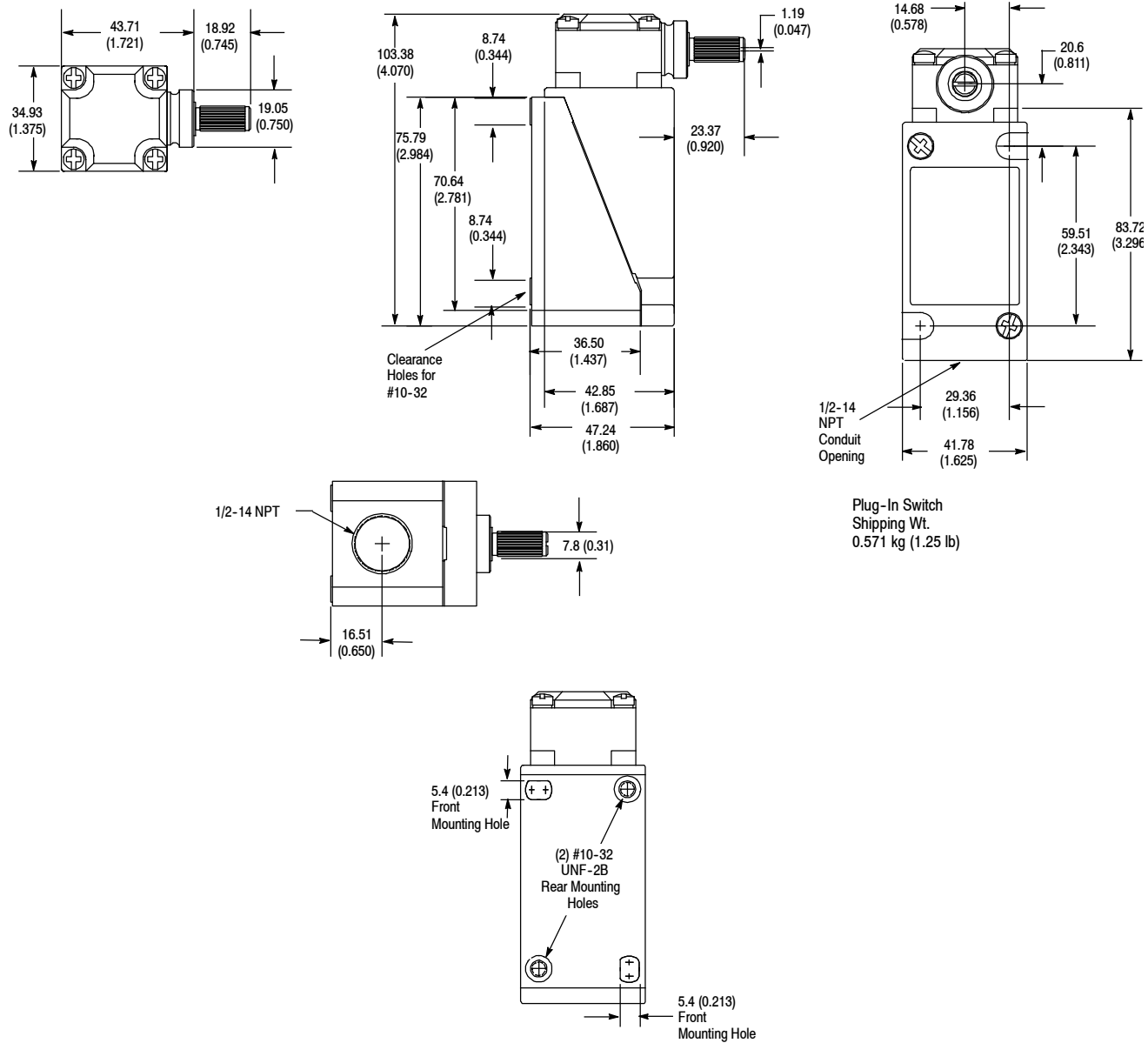
❶ Recommended standard cordset is 889N-F5AFC-6F—straight female 5-pin mini to flying leads, 1.8 m (6 ft) long. For additional cable lengths or styles, see page 8-4.

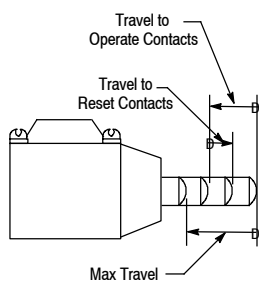
Levers—See page 5-130 for a complete listing of operating levers.

802T Low Energy Lever Type • Spring Return

Plug-in Style Oiltight Switches

Approximate Dimensions [mm (in.)]



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

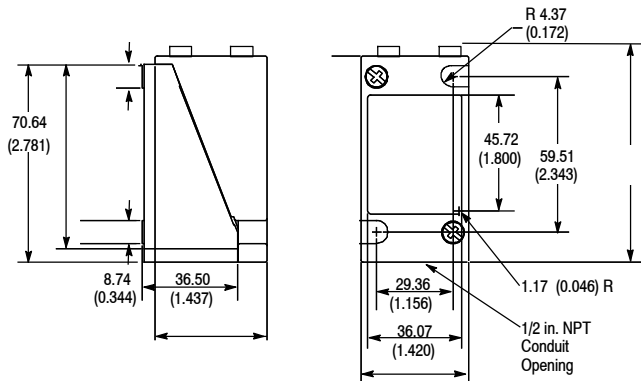
No. of Circuits	Contact Operation		Operator Type	Force to Operate [N•m(lb)]	Travel to Operate [mm (in.)]	Maximum Travel [mm (in.)]	Travel to Reset [mm (in.)]	Cat. No.
	Normal	Operated						
2			Side Push Rod	16.4 (3.68) max.	3.3 (0.131) max.	5.7 (0.226)	1.3 (0.052) max.	802T-CGP
			Top Push Roller	13.8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

Limit Switches

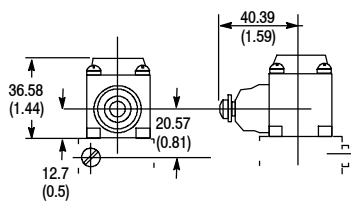
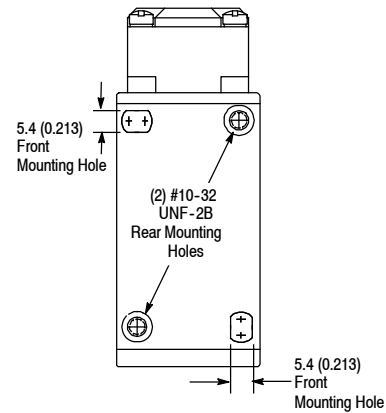
802T Low Energy Push Type • Spring Return

Plug-in Style Oiltight Switches

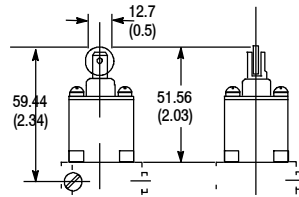
Approximate Dimensions [mm (in.)]



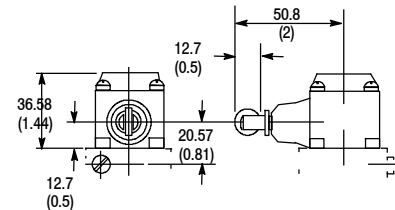
Switch Body



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)

802T Modifications and Accessories

Plug-in Style Oiltight Switches

Manifold
MountIndicating
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-APU.

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-APN.

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-APY5.

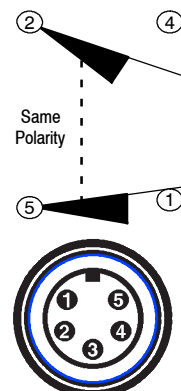
The standard cable length is 2.4 m (5 ft). Extended cable lengths are available in multiples of 1.22 m (4 ft) only.

Mini-Type Receptacles

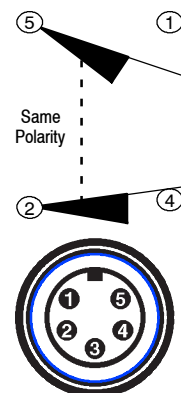
To order a bulletin 802T pre-wired limit switch with a five-pin (2 circuit) or nine pin (4 circuit) mini connector, add the suffix **J1** or **J9** depending on desired wiring (J9 wiring not available for 4-circuit models).

5-Pin Mini-Type Receptacle

“J1” Wiring



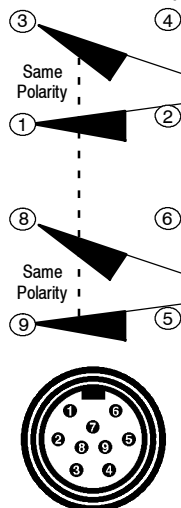
“J9” Wiring



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.