

Position Interlock Switches

Safety Limit Switches

802T Direct Opening Action NEMA-Style 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

Typical Applications

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

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 listed, CE marked for all applicable directives and TUV for 2-circuit models
Enclosure Rating	NEMA 4, 6P, 12, 13 and IP67
Operating Temperature	-18°C to +110°C (0°F to +230°F)
Cable Versions Temperature	-18°C to 60°C (0°F to 140°F)
Storage Temperature	-40°C to 121°C (-40°F to 250°F)

AC Contact Rating

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

NEMA Rating Designation	Max 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
AC-15	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 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)

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

Low Voltage DC

24V DC @ 1.1 Amps resistive load

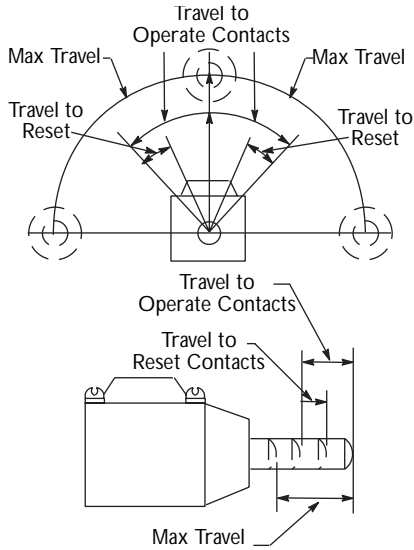
802T Operating Levers

See the Limit Switches section of the *Sensors* catalogue.

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Range of Operation



Lever Type Spring Return



Top Push Roller Spring Return



Side Push Vertical Roller Spring Return



Side Push Horizontal Roller Spring Return

Product Selection

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)	Catalogue Number	
Lever Type • Spring Return									
2	Clockwise or Counter Clockwise		0.45 N.m (4.0lbf.in)	13°	0.90 N.m (8lbf.in)	25°	90°	Switch w/o Lever 802T-APD	
4								802T-ATPD	
Top Push Roller • Spring Return									
2	Normal	Operated	28.47N (6.4lbf)	1.17mm (0.046in)	66.72N (15.0 lbf)	2.29mm (0.090in)	5.99mm (0.236in)	0.64mm (0.025in)	Complete Switch 802T-DPD
4									802T-DTPD
Side Push Vertical Roller • Spring Return									
2	Normal	Operated	24.5N (5.5lbf)	2.08mm (0.082in)	53.4N (12.0 lbf)	4.19mm (0.165in)	5.74mm (0.226in)	1.14mm (0.045in)	Complete Switch 802T-KPD
4									802T-KTPD
Side Push Horizontal Roller • Spring Return									
2	Normal	Operated	24.5N (5.5lbf)	2.08mm (0.082in)	53.4N (12.0 lbf)	4.19mm (0.165in)	5.74mm (0.226in)	1.14mm (0.045in)	Complete Switch 802T-K1PD
4									802T-K1TPD

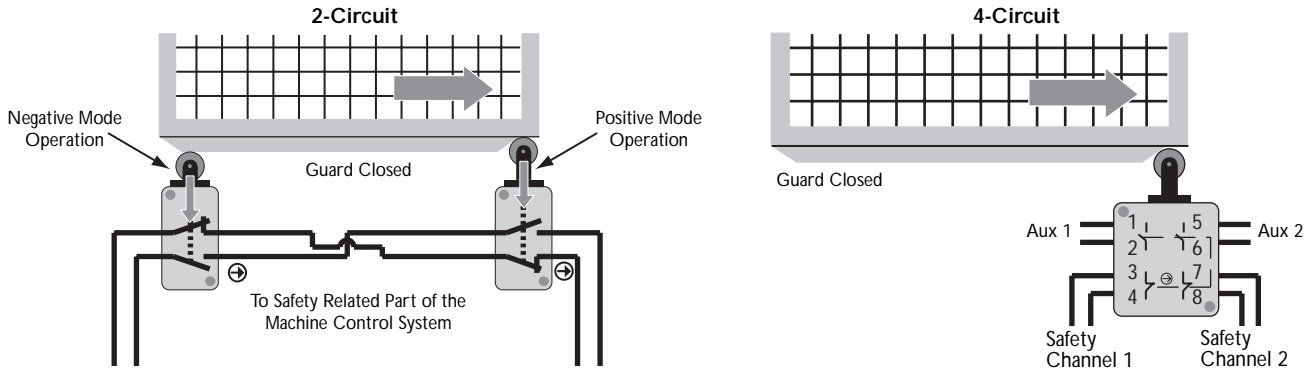
Modifications and Typical Levers—See page 7-17.

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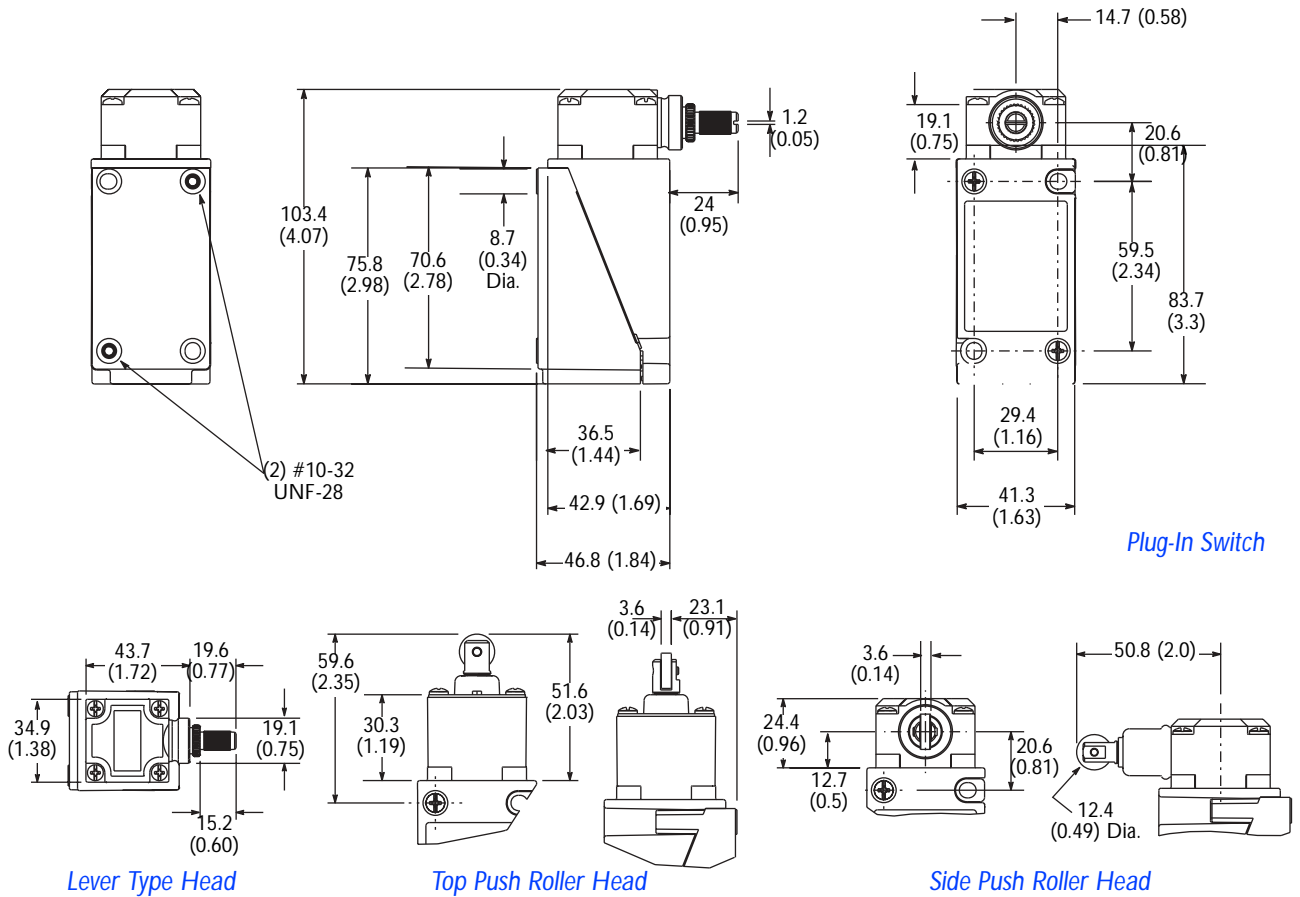
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Typical Example of a Dual Channel Safety Application



Approximate Dimensions—mm (inches)

Dimensions are not intended to be used for installation purposes.



Modifications

Metric Conduit Entry

To order a limit switch with a 20mm conduit entry, add the suffix “S6” to the catalogue number. **Example: 802T-APDS6**

Pre-wired Cable

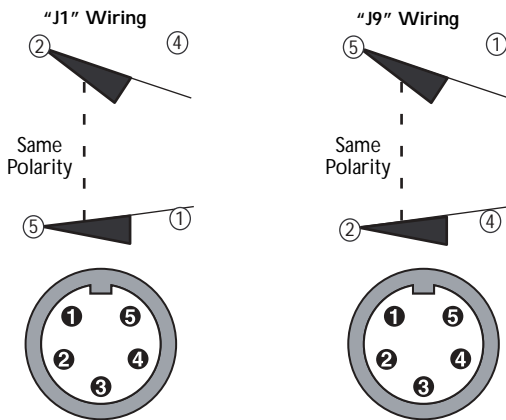
To order factory installed pre-wired type ST00W-A cable (5 conductor), add the suffix “Y” plus the number of feet required. The standard cable length is 1.52m (5ft). Extended cable lengths are available in multiples of 1.22m (4ft) only.

Example: To order a limit switch with a factory installed 1.52m (5ft) cable, the catalogue number would become **802T-APDY5**. To order a limit switch with a factory installed 2.44m (8ft) cable, the catalogue number would become **802T-APDY8**.

Mini Style Quick-Disconnect

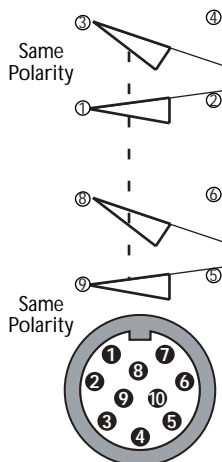
To order a Bulletin 802T pre-wired limit switch with a 5-pin (2 circuit) or 9-pin (4 circuit) mini connector, add the suffix “J1” or “J9” depending on desired wiring (“J9” wiring not available for 4 circuit models) to the catalogue number. **Example: 802T-APDJ1**

5-Pin Mini-Type Receptacle (2 circuit)



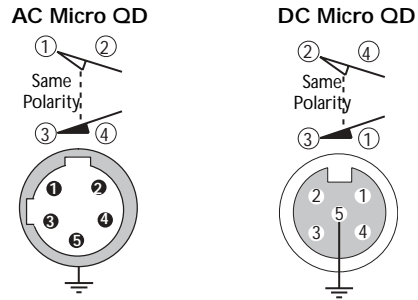
9-Pin Mini-Type Receptacle (4 circuit)

“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 catalogue number. To order a limit switch with a DC micro quick-disconnect, add the suffix “D5” to the catalogue number. **Example: 802T-APDR5 and 802T-APDD5.**



Levers

Type	Roller			Catalog Number
	Material	Dia.	Width	
 Non-Adj. Cast Lever 1.5in Radius Roller on Front	Nylon	0.75in	0.28in	802T-W1
	Nylon	0.75in	1in	802T-W1H
	Steel	0.75in	0.25in	802T-W1A
	Ball Bearing	0.75in	0.23in	802T-W1B