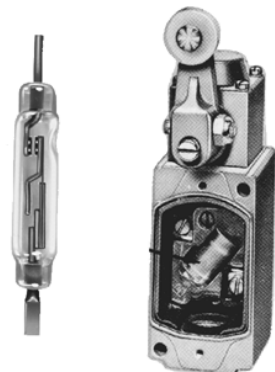


### 802R

#### 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 identified 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

<b>Enclosure Rating</b>	NEMA 13
<b>Approvals</b>	UL Listed and CSA Certified
<b>Ambient Temperature [C (F)]</b>	-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

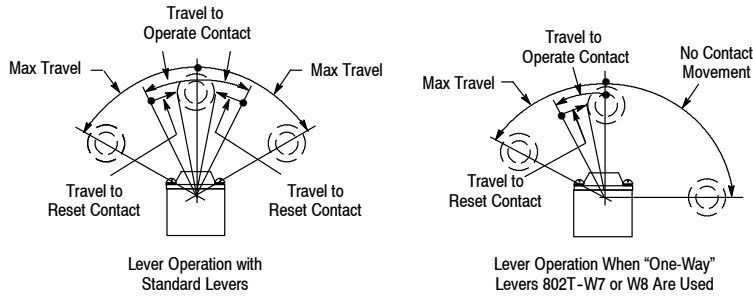
Lever Type • Spring Return page 5-36  
 Lever Type • Maintained ... page 5-37  
 Contact  
 Push Type • Spring Return . page 5-38  
 Wobble Stick and . . . . . page 5-39  
 Cat Whisker • Spring Return  
 Modifications and . . . . . page 5-39  
 Accessories

## Limit Switches

# 802R Lever Type • Spring Return

## Sealed Contact Switches

### Range of Operation



802R-AF Without Lever



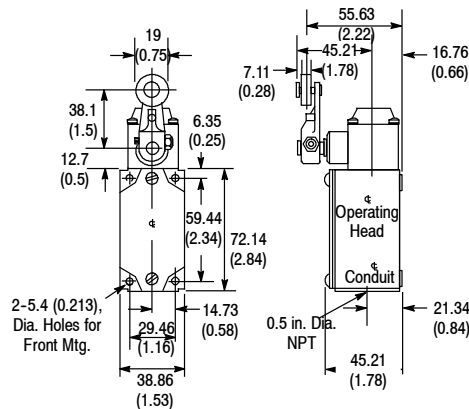
802R-ALFW5

### 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.	<b>802R-AF</b>
					N.C.	802R-AC
Clockwise	0.51 N.m (4.5 lb•in)	7°	53°	3.5°	N.O.	802R-HF
					N.C.	802R-HC
Counterclockwise	0.51 N.m (4.5 lb•in)	7°	50°	3.5°	N.O.	802R-H1F
					N.C.	802R-H1C
Clockwise Lever cannot move counterclockwise	0.45 N.m (4 lb•in)	20°	91°	11°	N.O.	802R-H2F
					N.C.	802R-H2C
Counterclockwise Lever cannot move clockwise	0.45 N.m (4 lb•in)	20°	91°	11°	N.O.	802R-L1F
					N.C.	802R-L1C
Clockwise or Counterclockwise	0.09 N•m (0.78 lb•in)	22°	43°	12°	N.O.	802R-L2F
					N.C.	802R-L2C
Clockwise Lever cannot be moved counterclockwise	0.09 N•m (0.78 lb•in)	22°	43°	12°	N.O.	802R-ALFW5 ①
					N.C.	802R-ALCW5 ①
Counterclockwise Lever cannot be moved clockwise	0.09 N•m (0.78 lb•in)	22°	43°	12°	N.O.	802R-AL1FW5 ①
					N.C.	802R-AL1CW5 ①
Counterclockwise Lever cannot be moved clockwise	0.09 N•m (0.78 lb•in)	22°	43°	12°	N.O.	802R-AL2FW5 ①
					N.C.	802R-AL2CW5 ①

① 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.

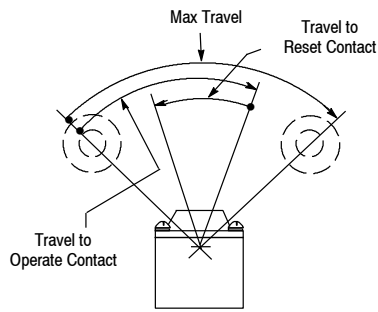
**Levers**—See page 5-130 for a complete listing of operating levers.

**Modifications and Accessories**—See page 5-39.

# 802R Lever Type • Maintained Contact

## Sealed Contact Switches

### Range of Operation



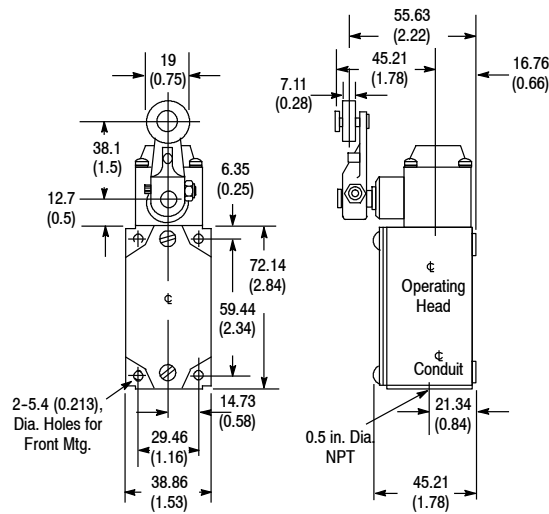
Switch Without Lever

### Product Selection

Lever Movement	Torque to Operate (Max)	Travel to Operate Contact (Max)	Max Travel	Travel to Reset Contact (Max)	Contact Type	Cat. No.
Clockwise or Counterclockwise	0.25 N•m (2.25 lb•in)	70° ①	84° ①	35°	N.O.	802R-AMF
					N.C.	802R-AMC

① 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.

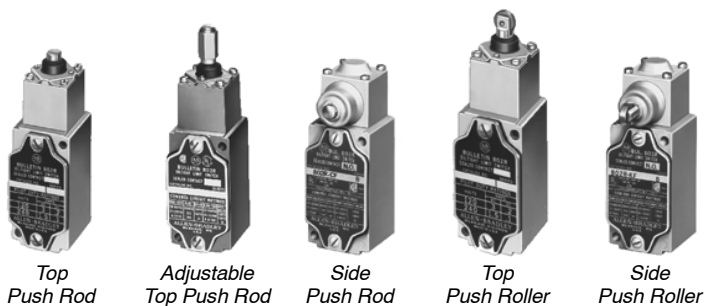
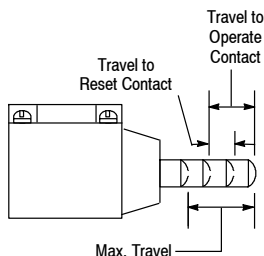
**Modifications and Accessories**—See page 5-39.

# Limit Switches

## 802R Push Type • Spring Return

### Sealed Contact Switches

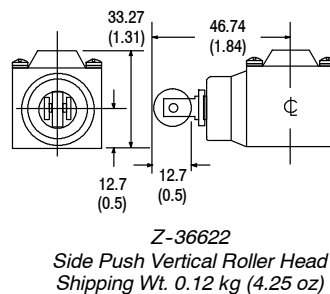
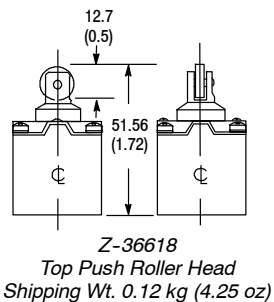
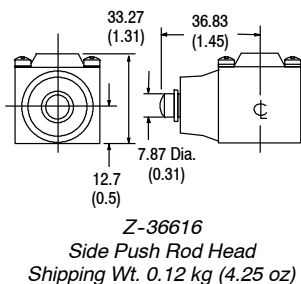
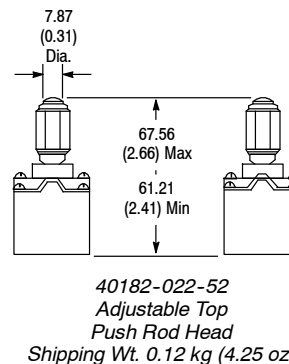
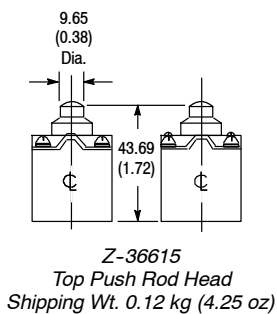
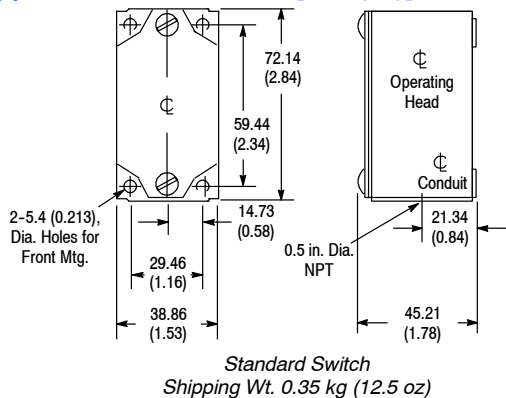
#### Range of Operation



#### 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
Adjustable Top Push Rod					N.C.	802R-BC
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
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.C.	802R-DC
					N.O.	802R-KF
Side Push Horizontal 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.C.	802R-KC
					N.O.	802R-K1F
					N.C.	802R-K1C

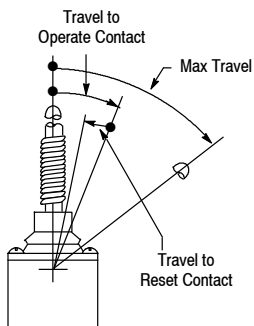
#### Approximate Dimensions [mm (in.)]



#### Modifications and Accessories—See page 5-39.

# 802R Wobble Stick and Cat Whisker • Spring Return Sealed Contact Switches

## Range of Operation ①



Wire Wobble Stick



Cat Whisker

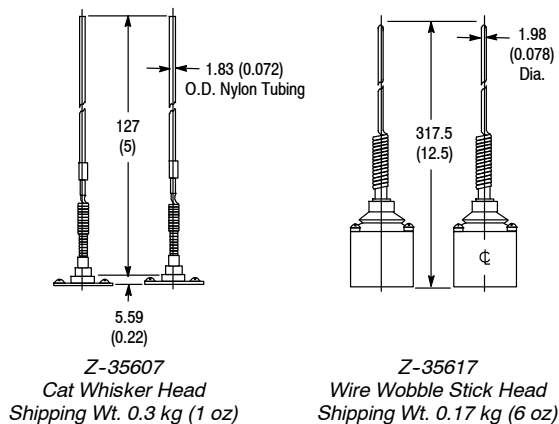
## Product Selection

Operator Type	Torque to Operate (Max.)	Travel to Operate Contact (Max.)	Max Travel ①	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 ②
					N.C.	802R-WS1C ②
Wire Cat Whisker	0.06 N•m (8 oz•in)	25°	25°	14°	N.O.	802R-CWF ②
					N.C.	802R-CWC ②

① 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.

② Ambient temperature -18°C...54°C (0°F...130°F).

## Approximate Dimensions [mm (in.)]



## 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-DFZ.

## 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.