



801-ASA11



801-ASC17



801-CMC21



801-FSC148



801-ASC141

## 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 10

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 11

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 12

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

### Figure 13

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

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

### Figure 14

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°.

# Limit Switches


## 801

### General Purpose

#### Contact Arrangements and Ratings



**A**



**B**


AC

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

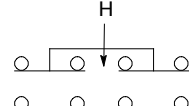
DC

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

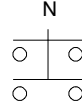
Light Duty




**C**



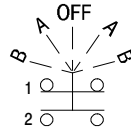
**H**



**N**

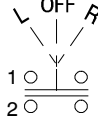


**O**



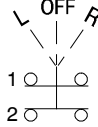
**D**

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



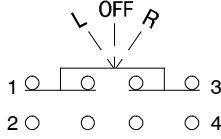
**F**

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

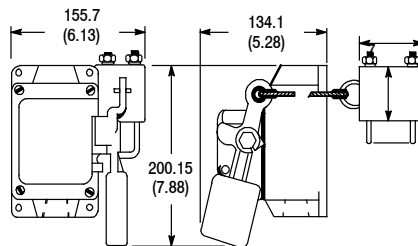
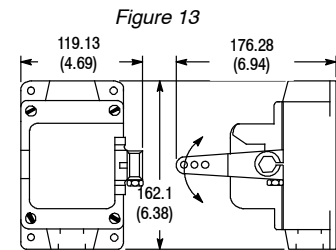
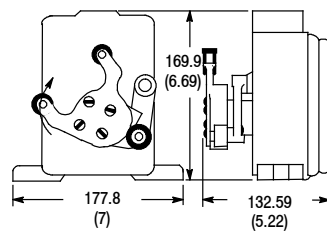
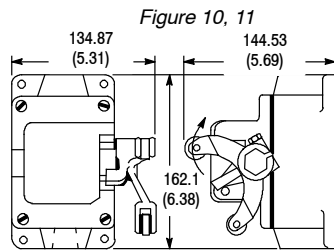
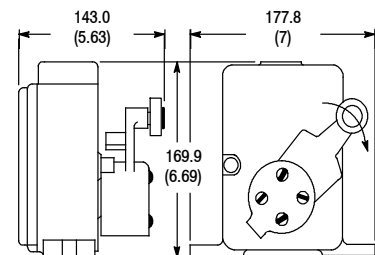
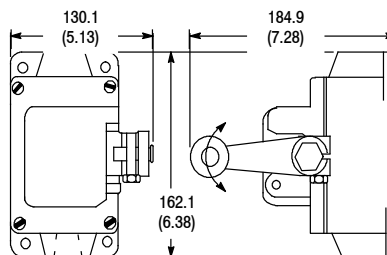
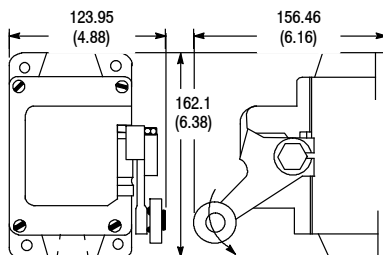
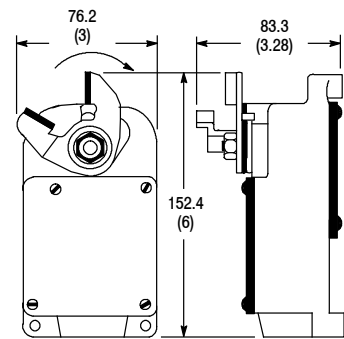
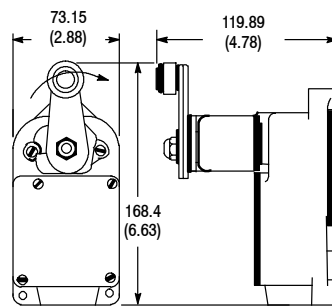
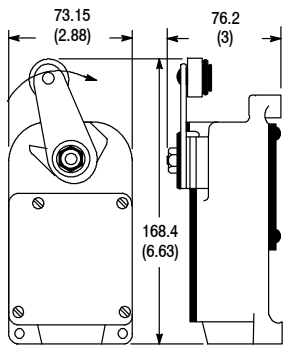
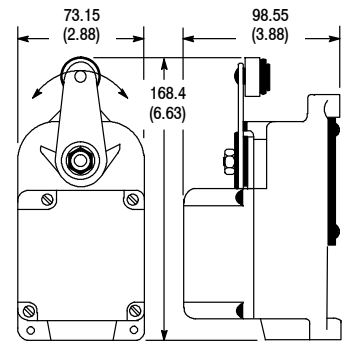
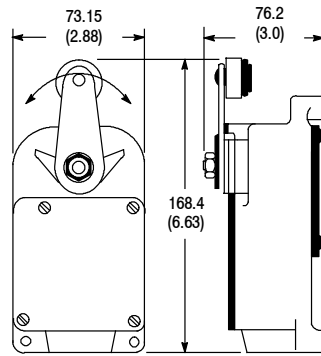
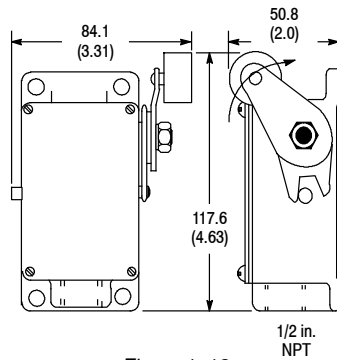
2.2A, 115V
1.1A, 230V
0.4A, 550V

Standard Duty

#### Ambient Temperature Range

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

Approximate Dimensions [mm (in.)]



## 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.	
<b>NEMA Type 1 Enclosure</b>								
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 2	A	15.58 N (3.5 lb)	8°	3°	801-ASA12	
			C	10.0 N (2.25 lb)	30°	25°	801-ASC17	
			D	10.0 N (2.25 lb)	See Figure 20 ❷	30°	See Figure 20 ❷	801-ASD17
			F	10.0 N (2.25 lb)		25°		30°
	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°	<b>801-ASC21</b>	
			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 (5.0 lb)	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		
	Figure 5	N	28.92 N (6.5 lb)	9°	44°	801-ASN25X		
C		22.25 N (5.0 lb)	25°	15°	801-ASC27			
Figure 6	C	17.8 N (4.0 lb)	25°	15°	801-ASC29			
	C	28.92 N (6.5 lb)	68°	12°	801-ASC218			
Ratchet Type Maintained	Figure 7	C	28.92 N (6.5 lb)	68°	12°	801-ASC220		
	Figure 8	C	22.25 N (5.0 lb)	68°	12°	801-ASC218		
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	
<b>NEMA Type 4 Enclosure (For Indoor Use)</b>								
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	
<b>NEMA Type 7 &amp; 9 Enclosure</b>								
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.