

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 ①	Approx. 10,000,000 operations ①	Approx. 10,000,000 operations ②
Electrical Life	Approx. 200,000 operations (3 A 250 V AC, resistive load) ①	Approx. 500,000 operations (15 A 250 V AC, resistive load) ①	Approx. 500,000 operations (10 A 250 V AC, resistive load) ②
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

① Life expectancy has been calculated at an operating temperature of 5...35°C (41...95°F) and an operating humidity of 40...70%.

② 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

- Compact page 5-88
- Precision page 5-97
- Small Precision page 5-105

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

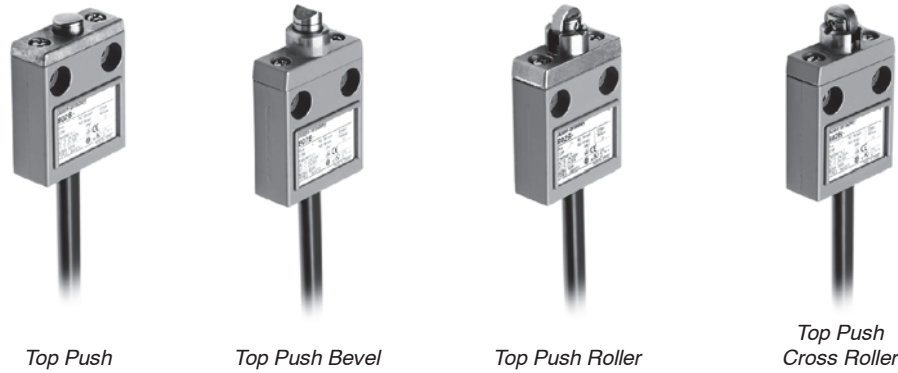
NEMA Rating Designation	Rated Voltage	A		Continuous Current	Volt	Amps
		Make	Break			
B300	120V AC	30	3	5	3,600	360
	240V AC	15	1.5			
AC LED Versions						
B150	120V AC	30	3	5	3,600	360
Leakage Current for LED Models						
	Voltage	Leakage Current		Resistance		
AC LED	125	1.7 mA		68 kΩ		
DC LED	30			15 kΩ		

Precision

Rated Voltage	Non-Inductive Resistive Load	Inductive Load			Inrush Current		UL/CSA Approved Ratings		
		Inductive	Motor Load		N/O	N/C	Rated Voltage	Current	Horsepower
N/O	N/C								
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					
480V AC	10A	1.5 A	0.75 A	1.5 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		NEMA Rating Designation	UL/CSA Approved Ratings					
		Inductive	Motor Load		N/O	N/C	Rated Voltage		A		Continuous Current	Volt	Amps	
			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											



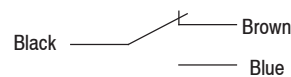
Product Selection

Head Type	Force to Operate	Travel to Operate	Max Travel	Travel to Reset	Output Type	Cat. No.		
						Pre-leaded	Quick-Disconnect ¹	
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	
					AC LED		802B-CSABXSXC3	802B-CSABXSXR4
					DC LED		802B-CSDBXSXC3	802B-CSDBXSRL4
					Low Voltage/Current		802B-CSDBXSXC3	802B-CSDBXSRL4
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-CSAB1XSXC3	—
					DC LED		802B-CSDB1XSXC3	—
					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	
					AC LED		802B-CSADXSXC3	802B-CSADXSXR4
					DC LED		802B-CSDDXSXC3	802B-CSDDXSRL4
					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	
					AC LED		802B-CSAD1XSXC3	802B-CSAD1XSXR4
					DC LED		802B-CSDD1XSXC3	802B-CSDD1XSRL4
					Low Voltage/Current		802B-CSDD1XSXC3	802B-CSDD1XSRL4

Wiring

Pre-leaded Models

COM	NO	NC	Ground
Black	Blue	Brown	Green/Yellow



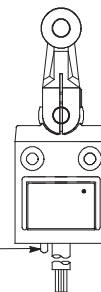
Quick-Disconnect Models

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

¹ 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 ia on a 6 in. pigtail.

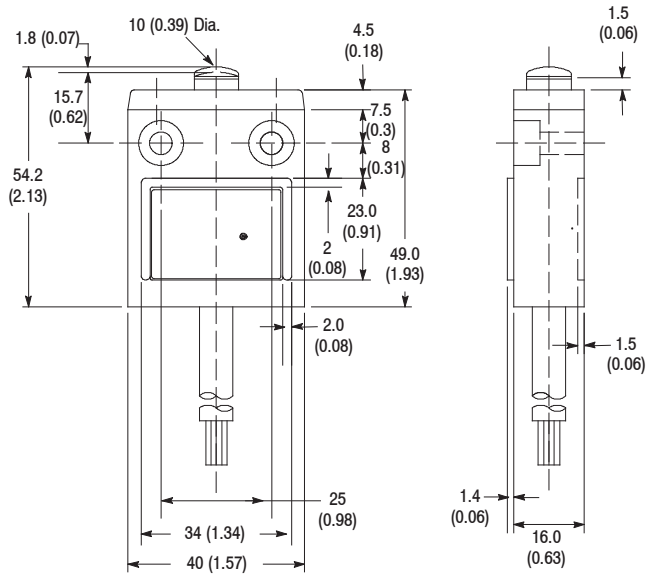
An appropriate female connector with cable is available in Connection Systems.
 4-pin micro DC = (889D-F4AC-2) on page 8-16
 4-pin micro DC = (889R-F4AEA-2) on page 8-28

All compact models are available with LED.

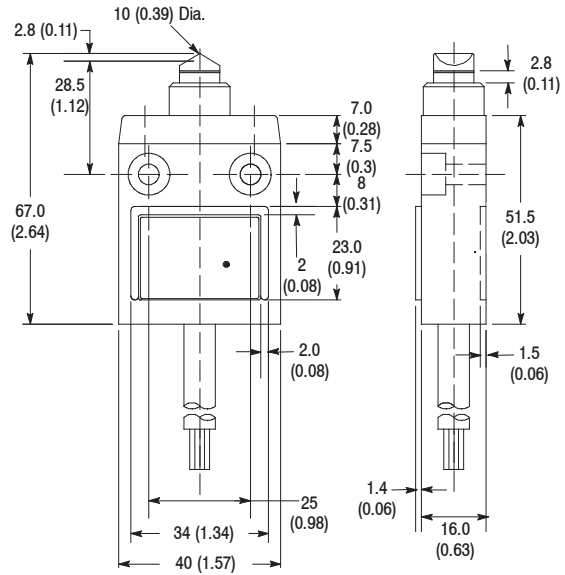


802B Compact
Small Metal Body

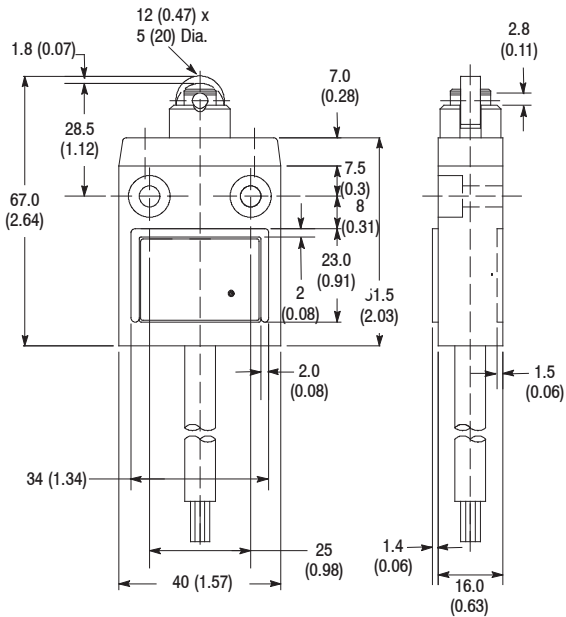
Approximate Dimensions [mm (in.)]



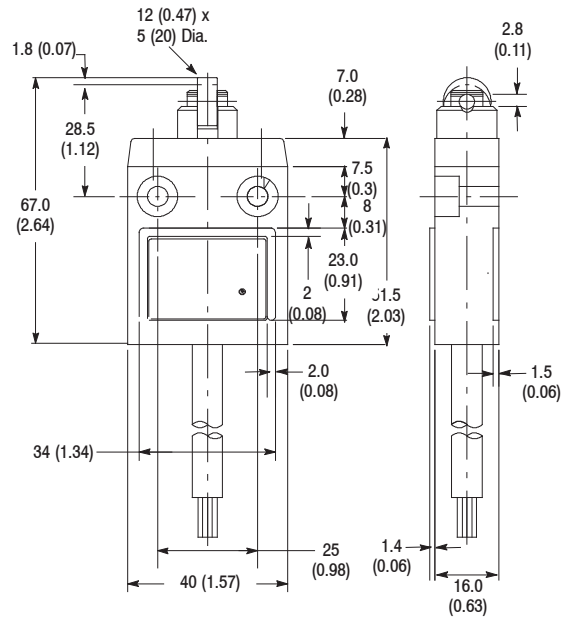
Top Push



Top Push Bevel



Top Push Roller



Top Push Cross Roller