

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 |
|---------------------------------|--|--|--|
| Approvals | 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 ❶ | Approx. 10,000,000 operations ❶ | Approx. 10,000,000 operations ❷ |
| Electrical Life | Approx. 200,000 operations (3A 250V AC, resistive load) ❶ | Approx. 500,000 operations (15A 250V AC, resistive load) ❶ | Approx. 500,000 operations (10A 250V AC, resistive load) ❷ |
| Operating Speed | | | |
| Top Push | 0.1mm to 0.5m per second | 0.01mm to 0.5m per second | 0.05mm to 0.5m per second |
| Side Rotary | 1mm to 1m per second | | |
| Lever Type | | 0.02mm to 0.5m 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 | -10°C to 70°C (14°F to 158°F) with no icing | -10°C to 80°C (14°F to 176°F) with no icing | -10°C to 80°C (14°F to 176°F) 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 |

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

❷ 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 R5–89
- Precision page R5–98
- Small Precision page R5–106

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 | 5A | 3A | 1.3A | 2.5A | 10A max | 20A max | | |
| 250V AC | 5A | 2A | 0.8A | 1.5A | | | | |
| 8V DC | 5A | 5A | 3A | 3A | | | | |
| 14V DC | 5A | 4A | 3A | 3A | | | | |
| 30V DC | 4A | 3A | 3A | 3A | | | | |
| 125V DC | 0.4A | 0.4A | 0.05A | 0.05A | | | | |
| 250V DC | 0.2A | 0.2A | 0.03A | 0.03A | | | | |
| AC LED Models | | | | | | | | |
| 125V AC | 5A | 3A | 2.5A | 1.3A | | | | |
| 125V DC | 0.4A | 0.4A | 0.05A | 0.05A | | | | |
| DC LED Models | | | | | | | | |
| 30V DC | 4A | 3A | 3A | 3A | | | | |
| Low Current Models | | | | | | | | |
| 125V AC | 0.1A | — | | | | | | |
| 8V DC | 0.1A | | | | | | | |
| 14V DC | 0.1A | | | | | | | |
| 30V DC | 0.1A | | | | | | | |

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

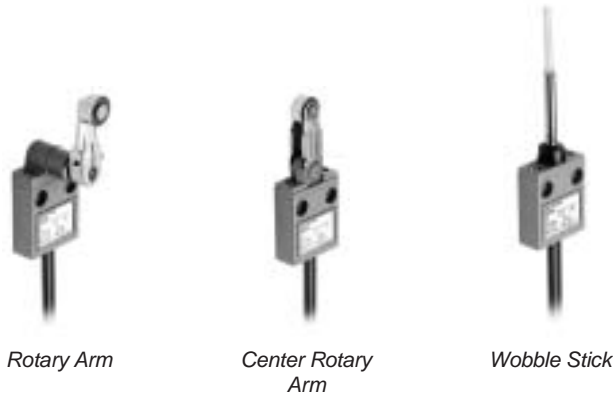
| Rated Voltage | Non-Inductive Resistive Load | Inductive Load | | | Inrush Current | | UL/CSA Approved Ratings | | |
|---------------|------------------------------|----------------|------------|------|----------------|---------|-------------------------|---------|------------------|
| | | Inductive | Motor Load | | N/O | N/C | Rated Voltage | Current | Horsepower |
| N/O | N/C | | | | | | | | |
| 125V AC | 15A | 15A | 2.5A | 5A | 15A max | 30A max | 120V AC | 15A | 1/8 HP 1/4 HP |
| 250V AC | 15A | 2.5A | 1.5A | 3A | | | | | |
| 480V AC | 10A | 1.5A | 0.75A | 1.5A | | | | | |
| 125V DC | 0.5A | 0.5A | 0.05A | | | | 125V DC | 0.5A | — |
| 250V DC | 0.25A | 0.25A | 0.03A | | | | 250V DC | 0.25A | |

Small Precision

| Rated Voltage | Non-Inductive Resistive Load | Inductive Load | | | Inrush Current | | UL/CSA Approved Ratings | | | | | | |
|---------------|------------------------------|----------------|------------|-----|----------------|---------|-------------------------|---------------|------|-------|--------------------|-------|------|
| | | Inductive | Motor Load | | N/O | N/C | NEMA Rating Designation | Rated Voltage | A | | Continuous Current | Volt | Amps |
| | | | N/O | N/C | | | | | Make | Break | | | |
| 125V AC | 10A | 10A | 2.5A | 5A | 15A max | 30A max | A300 | 120V AC | 60 | 6 | 10 | 7,200 | 720 |
| 250V AC | 10A | 10A | 1.5A | 3A | | | | 240V AC | 30 | 3 | | | |
| 8V DC | 10A | 6A | 2.5A | 5A | | | | | | | | | |
| 14V DC | 10A | 6A | 2.5A | 5A | | | | | | | | | |
| 30V DC | 6A | 5A | 2.5A | 5A | | | | | | | | | |
| 125V DC | 0.5A | 0.05A | 0.05A | | | | | | | | | | |
| 250V DC | 0.25A | 0.03A | 0.03A | | | | | | | | | | |

802B Compact

Small Metal Body



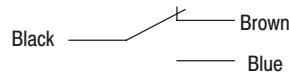
Product Selection

| Head Type | Torque to Operate | Travel to Operate | Max Travel | Travel to Reset | Output Type | Catalog Number | |
|-------------------|-------------------------|-------------------|------------------------|------------------------|---------------------|-----------------|-------------------|
| | | | | | | Preleaded | Quick-Disconnect❶ |
| Rotary Arm | 0.216N·m (2lb in) | 25° | 70° | 3° | Standard | 802B-CSAAXSXC3 | 802B-CSAAXSXD4 |
| | | | | | AC LED | | 802B-CSAAXSLC3 |
| | | | | | DC LED | 802B-CSDAXSLC3 | 802B-CSAAXSLR4 |
| | | | | | Low Voltage/Current | 802B-CSDAXSXC3 | 802B-CSDAXSLD4 |
| Center Rotary Arm | 0.216N·m (2lb in) | 10 ±3° | 65° | 4° | Standard | 802B-CSAA2XSXC3 | — |
| | | | | | AC LED | | 802B-CSAA2XSLC3 |
| | | | | | DC LED | 802B-CSDA2XSLC3 | — |
| | | | | | Low Voltage/Current | 802B-CSDA2XSXC3 | — |
| Wobble Stick | 0.118N·m (1.04lb in) | 15° | 18° (Nominal Value) | 11° (Nominal Value) | Standard | 802B-CSACXSXC3 | 802B-CSACXSXD4 |
| | | | | | AC LED | | 802B-CSACXSLC3 |
| | | | | | DC LED | 802B-CSDCXSLC3 | — |
| | | | | | Low Voltage/Current | 802B-CSDCXSXC3 | — |

Wiring

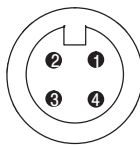
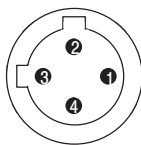
Preleaded Models

| COM | NO | NC | G |
|-------|------|-------|--------------|
| Black | Blue | Brown | Green/Yellow |

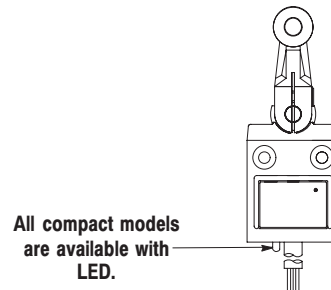


Quick-Disconnect Models

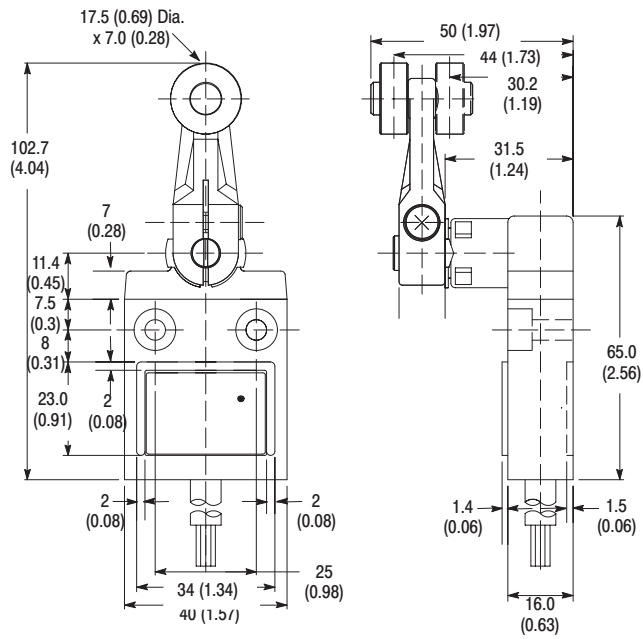
| AC QD Pin-out: | DC QD Pin-out: |
|----------------|----------------|
| Pin 1 = Common | Pin 1 = N/O |
| Pin 2 = N/O | Pin 2 = Common |
| Pin 3 = N/C | Pin 3 = Grnd. |
| Pin 4 = Grnd. | Pin 4 = N/C |



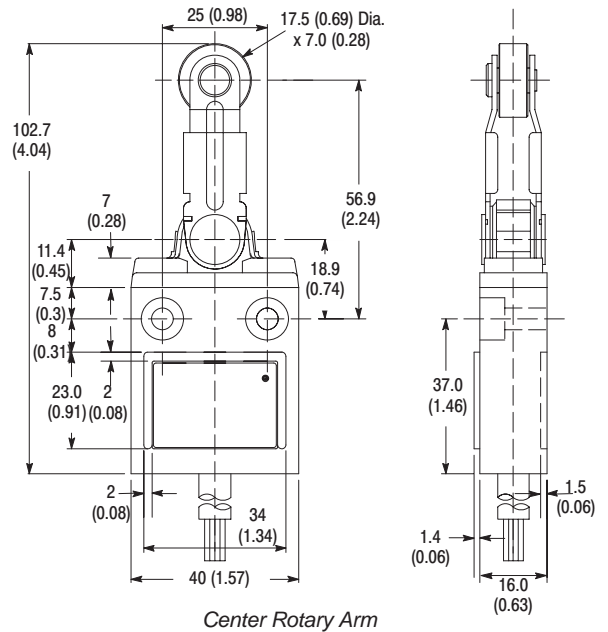
❶ For quick-disconnect versions the last two digits indicate connector type:
 802B-xxxxxxD4 Indicates a 4-pin DC micro style connector
 802B-xxxxxxR4 Indicates a 4-pin AC micro style connector



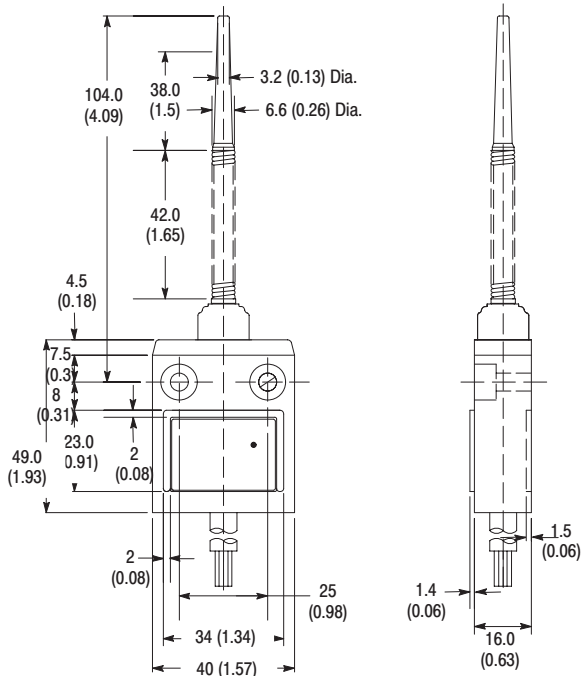
Dimensions—mm (inches)



Rotary Arm



Center Rotary Arm



Wobble Stick

802B Compact

Small Metal Body



Top Push



Top Push Bevel



Top Push Roller



Top Push
Cross Roller

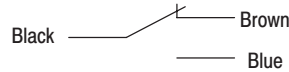
Product Selection

| Head Type | Force to Operate | Travel to Operate | Max Travel | Travel to Reset | Output Type | Catlog Number | |
|-----------------------|--------------------|--------------------|------------------|--------------------|---------------------|-----------------|-------------------------------|
| | | | | | | Preleaded | Quick-Disconnect [Ⓞ] |
| Top Push | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSABXSXC3 | 802B-CSABXSXD4 |
| | | | | | | | 802B-CSABXSXR4 |
| | | | | | AC LED | 802B-CSABXSLC3 | 802B-CSABXSLR4 |
| | | | | | DC LED | 802B-CSDBXSLC3 | 802B-CSDBXSLD4 |
| | | | | | Low Voltage/Current | 802B-CSDBXSXC3 | — |
| Top Push Bevel | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSAB1XSXC3 | — |
| | | | | | | | — |
| | | | | | AC LED | 802B-CSAB1XSLC3 | — |
| | | | | | DC LED | 802B-CSDB1XSLC3 | — |
| | | | | | Low Voltage/Current | 802B-CSDB1XSXC3 | — |
| Top Push Roller | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSADXSXC3 | 802B-CSADXSXD4 |
| | | | | | | | 802B-CSADXSXR4 |
| | | | | | AC LED | 802B-CSADXSLC3 | 802B-CSADXSLR4 |
| | | | | | DC LED | 802B-CSDDXSLC3 | 802B-CSDDXSLD4 |
| | | | | | Low Voltage/Current | 802B-CSDDXSXC3 | — |
| Top Push Cross Roller | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSAD1XSXC3 | 802B-CSAD1XSXD4 |
| | | | | | | | 802B-CSAD1XSXR4 |
| | | | | | AC LED | 802B-CSAD1XSLC3 | 802B-CSAD1XSLR4 |
| | | | | | DC LED | 802B-CSDD1XSLC3 | 802B-CSDD1XSLD4 |
| | | | | | Low Voltage/Current | 802B-CSDD1XSXC3 | — |

Wiring

Preleaded Models

| COM | NO | NC | G |
|-------|------|-------|--------------|
| Black | Blue | Brown | Green/Yellow |

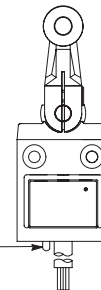


Quick-Disconnect Models

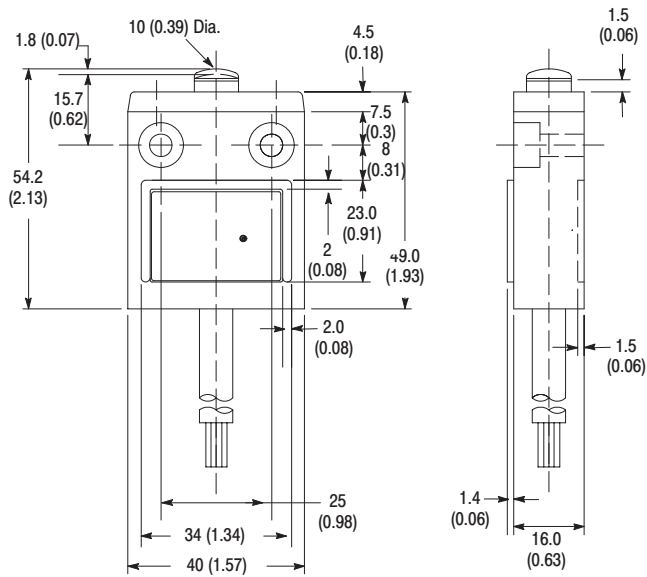
| AC QD Pin-out: | Male Receptacle | DC QD Pin-out: | Male Receptacle |
|----------------|-----------------|----------------|-----------------|
| Pin 1 = Common | | Pin 1 = N/O | |
| Pin 2 = N/O | | Pin 2 = Common | |
| Pin 3 = N/C | | Pin 3 = Grnd. | |
| Pin 4 = Grnd. | | Pin 4 = N/C | |

Ⓞ 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

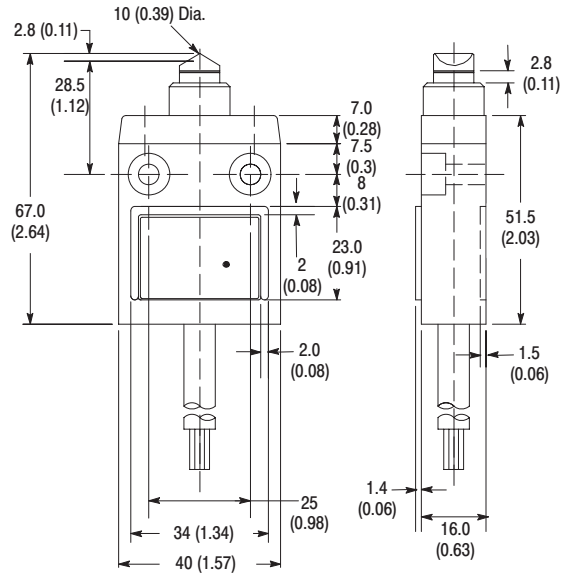
All compact models are available with LED.



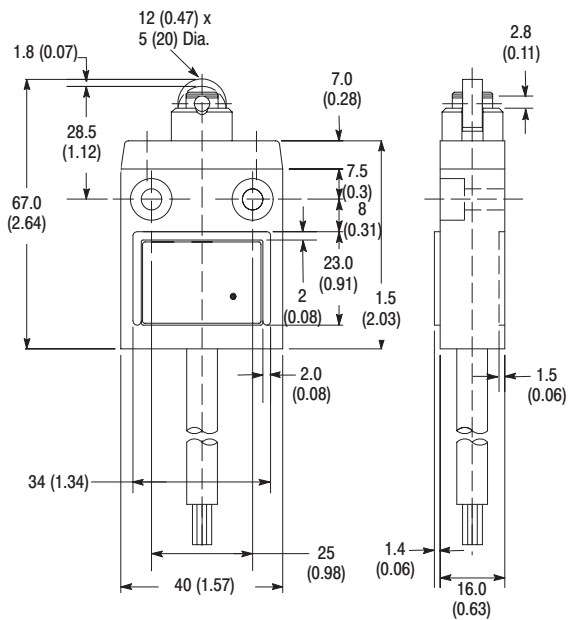
Dimensions—mm (inches)



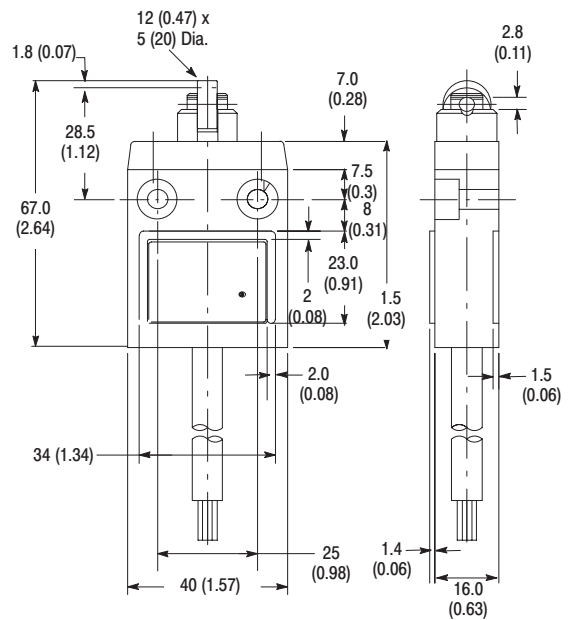
Top Push



Top Push Bevel



Top Push Roller



Top Push Cross Roller

Limit Switches

802B Compact
Small Metal Body



Top Push
Panel Mount



Top Push Roller
Panel Mount



Top Push Cross
Roller Panel Mount

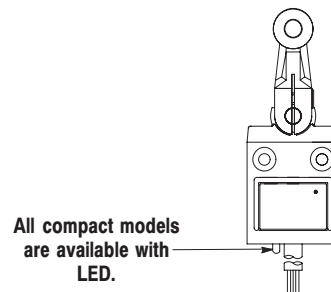
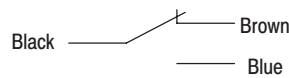
Product Selection

| Head Type | Force to Operate | Travel to Operate | Max Travel | Travel to Reset | Output Type | Catalog Number |
|-----------------------------------|--------------------|--------------------|------------------|--------------------|---------------------|------------------------|
| Top Push Panel Mount | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CPABXSXC3 |
| | | | | | AC LED | 802B-CPABXSLC3 |
| | | | | | DC LED | 802B-CPDBXSLC3 |
| | | | | | Low Voltage/Current | 802B-CPDBXSXC3 |
| Top Push Roller Panel Mount | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CPADXXC3 |
| | | | | | AC LED | 802B-CPADXSLC3 |
| | | | | | DC LED | 802B-CPDDXSLC3 |
| | | | | | Low Voltage/Current | 802B-CPDDXSXC3 |
| Top Push Cross Roller Panel Mount | 11.77N (2.65lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CPAD1XSXC3 |
| | | | | | AC LED | 802B-CPAD1XSLC3 |
| | | | | | DC LED | 802B-CPDD1XSLC3 |
| | | | | | Low Voltage/Current | 802B-CPDD1XSXC3 |

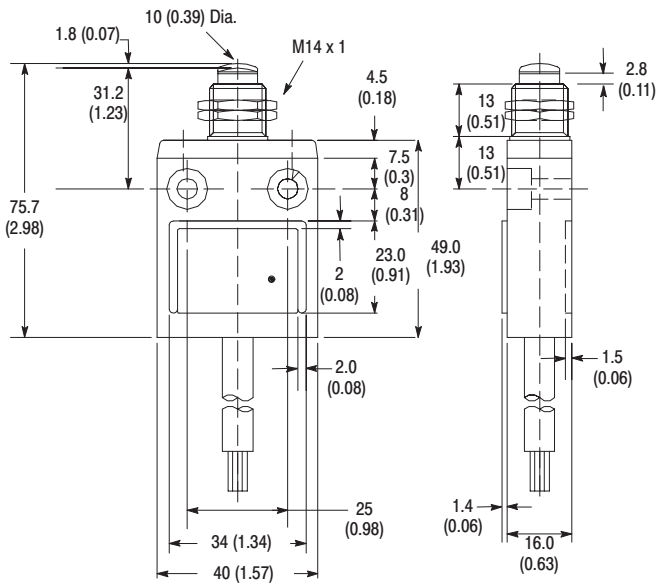
Wiring

Preleaded Models

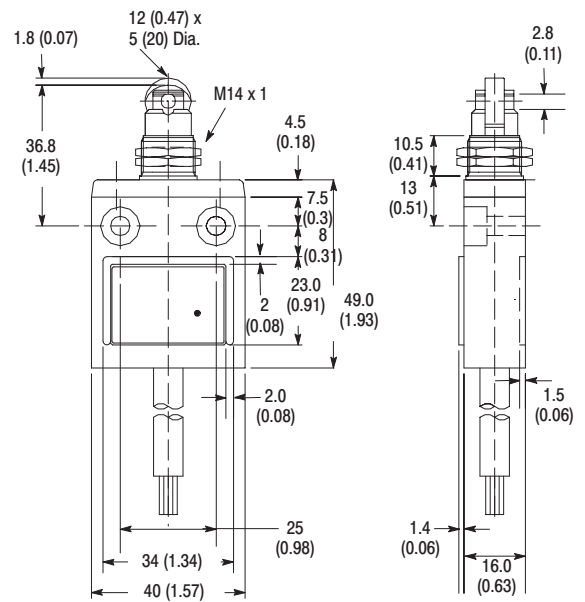
| COM | NO | NC | G |
|-------|------|-------|--------------|
| Black | Blue | Brown | Green/Yellow |



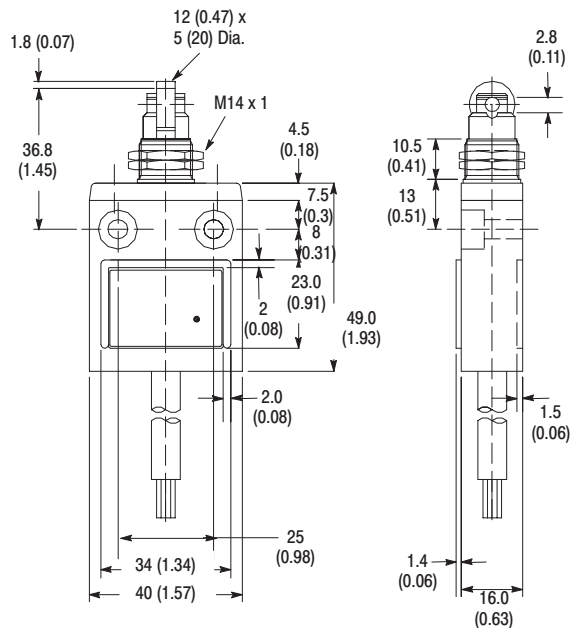
Dimensions—mm (inches)



Top Push Panel Mount



Top Push Roller Panel Mount



Top Push Cross Roller Panel Mount

802B Compact

Small Metal Body



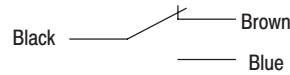
Product Selection

| Head Type | Force to Operate | Travel to Operate | Max Travel | Travel to Reset | Output Type | Catalog Number | |
|-----------------------------------|--------------------|--------------------|------------------|--------------------|---------------------|-----------------|-------------------------------|
| | | | | | | Preleaded | Quick-Disconnect [Ⓢ] |
| Top Push Booted Head | 17.65N (3.97lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSABBSXC3 | 802B-CSABBSXD4 |
| | | | | | AC LED | | 802B-CSABBSXR4 |
| | | | | | DC LED | | 802B-CSABBSLR4 |
| | | | | | Low Voltage/Current | | 802B-CSDBBSLD4 |
| Top Push Roller Booted Head | 17.65N (3.97lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSADBSXC3 | 802B-CSADBSXD4 |
| | | | | | AC LED | | 802B-CSADBSXR4 |
| | | | | | DC LED | | 802B-CSADBSLR4 |
| | | | | | Low Voltage/Current | | 802B-CSDDBSLD4 |
| Top Push Cross Roller Booted Head | 17.65N (3.97lb) | 1.8mm (0.071in) | 5mm (0.197in) | 0.2mm (0.008in) | Standard | 802B-CSAD1BSXC3 | 802B-CSAD1BSXD4 |
| | | | | | AC LED | | 802B-CSAD1BSXR4 |
| | | | | | DC LED | | 802B-CSAD1BSLR4 |
| | | | | | Low Voltage/Current | | 802B-CSDD1BSLD4 |

Wiring

Preleaded Models

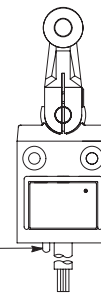
| COM | NO | NC | G |
|-------|------|-------|--------------|
| Black | Blue | Brown | Green/Yellow |



Quick-Disconnect Models

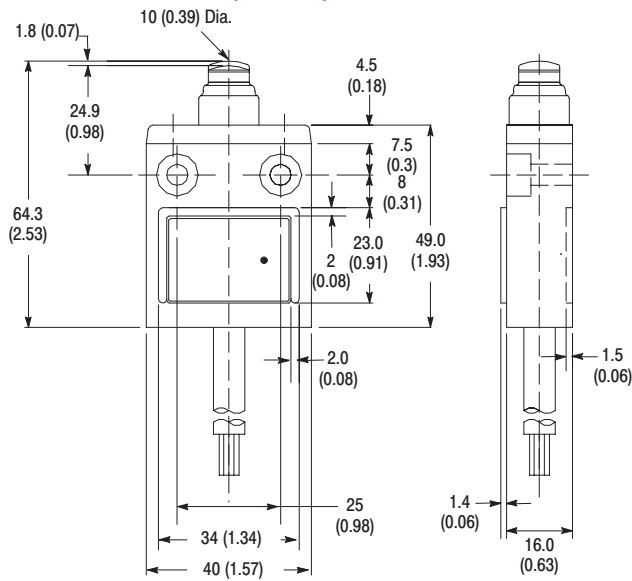
| AC QD Pin-out: | Male Receptacle | DC QD Pin-out: | Male Receptacle |
|----------------|-----------------|----------------|-----------------|
| Pin 1 = Common | | Pin 1 = N/O | |
| Pin 2 = N/O | | Pin 2 = Common | |
| Pin 3 = N/C | | Pin 3 = Grnd. | |
| Pin 4 = Grnd. | | Pin 4 = N/C | |

All compact models are available with LED.

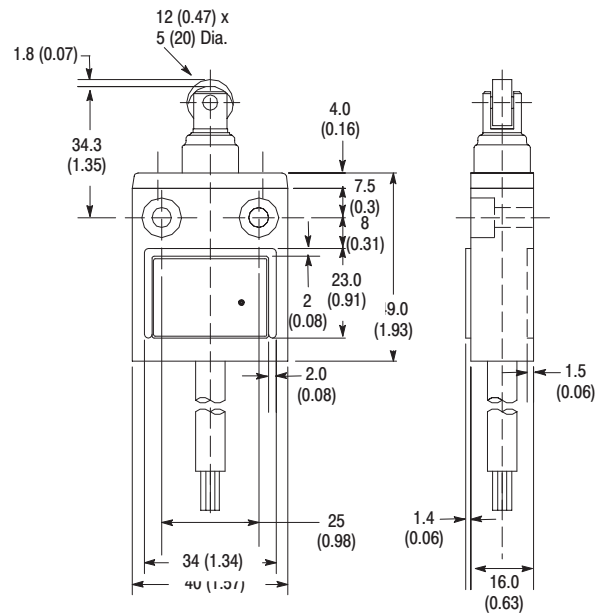


[Ⓢ] For quick-disconnect versions the last two digits indicate connector type:
 802B-xxxxxxD4 Indicates a 4-pin DC micro style connector
 802B-xxxxxxR4 Indicates a 4-pin AC micro style connector

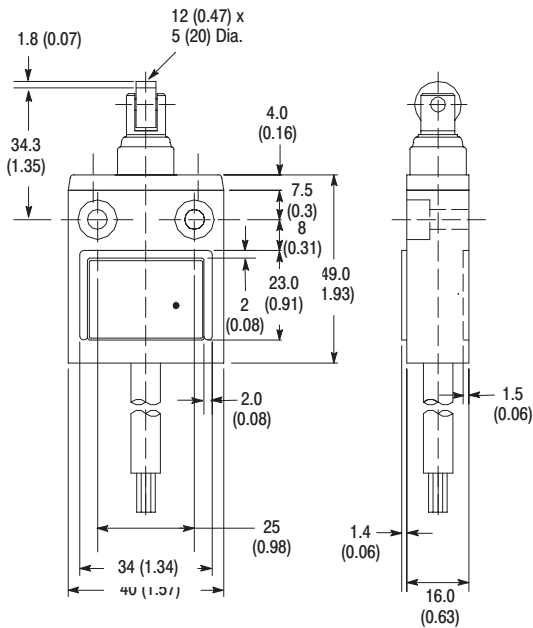
Dimensions—mm (inches)



Top Push Sealed Head



Top Push Roller Sealed Head



Top Push Cross Roller Sealed Head