



Pushbutton
A

8060 Series Alternate Action and Momentary Pushbutton Switches



Features/Benefits

- Long travel
- Available with LED
- Long life contact design
- Epoxy terminal seal compatible with bottom wash cleaning
- RoHS compliant models available

Typical Applications

- Instrumentation
- Computers and peripherals
- Telecommunications and networking equipment



Models Available

Specifications

CONTACT RATING: Q contact material: 6 AMPS @ 120 V AC or 28 V DC; 3 AMPS @ 250 V AC. See page A-59 for additional ratings.

ELECTRICAL LIFE: 50,000 make-and-break cycles at full load.

CONTACT RESISTANCE: Below 20 mΩ typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10⁹Ω min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 65°C

SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

CAP INSTALLATION FORCE: 10 lbs. maximum permissible.

NOTE: Any models supplied with P, R, S, Q, B or G contact material are RoHS compliant.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Materials

CASE: Glass filled nylon 6/6 or diallyl phthalate (DAP), flame retardant (UL 94V-0).

PLUNGER: S, S1, S2 Options: Glass filled nylon or glass filled polyester (PBT) (UL 94V-0). L, L1 Options: Brass, nickel plated.

CAP & FRAME: Nylon, black standard.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass or steel, matte-tin plated.

END CONTACTS: Q contact material: Coin silver, silver plated. See page A-59 for additional contact materials.

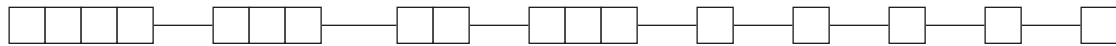
CENTER CONTACT & ALL TERMINALS: Q contact material: Copper alloy, silver plated. See page A-59 for additional contact materials.

TERMINAL SEAL: Epoxy. Refer to soldering and cleaning in Technical Data Chapter.

HARDWARE: Nut & Locking Ring: Brass, nickel plated; Lockwasher: Steel, nickel plated.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-53 thru A-61. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all "bottom-wash" PCB cleaning methods.



Switch Function

- 8161** SPDT On-On
- 8168** SPDT On-Mom.
- 8261** DPDT On-On

Actuator or Plunger

- S** .710" high plunger with .375" dia. cap
- J80** Snap-in
- J81** Snap-in with frame
- J82** Snap-in with frame for LED
- J86** Snap-in with frame & LED
- L** .740" high plunger with .395" dia. cap
- L1** .740" high plunger with .590" dia. cap
- S1** .615" high plunger with .200" dia. cap
- S2** .710" high plunger with .310" dia. cap

Bushing

- H** .300" high, flat, hi torque
- H9** .300" high, flat, hi torque
- NONE** No bushing choice required
- Y3** 7.6mm, keyway

Terminations

- A** Right angle, PC thru-hole
- AV2** Vertical right angle, PC thru-hole
- C** PC Thru-hole
- Z** Solder lug
- A3** Right angle, snap-in, PC thru-hole
- AV3** Vertical right angle, snap-in, PC thru-hole
- V3** .460" high, V-bracket
- V4** .630" high, V-bracket
- V6** .460" high, V-bracket
- V21** .555" high, snap-in V-bracket
- V31** .460" high, snap-in V-bracket
- W** .750" long, wire wrap
- Z3** Quick connect

Contact Material

- B** Gold
- P** Gold, matte-tin
- Q** Silver
- S** Silver, matte-tin
- G** Gold over silver
- R** Gold over silver, matte-tin

Seal

- E** Epoxy
- I** Epoxy potted base

Cap Color

- 2** Black
- 1** White
- 3** Red
- 4** Orange
- 5** Yellow
- 9** Gray

Frame Color

- 2** Black

LED Color

- 3** Red
- NONE** Models without LED



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

8060 Series Alternate Action and Momentary Pushbutton Switches



A

Pushbutton

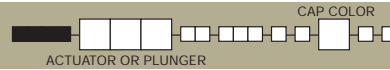
SWITCH FUNCTION

| NO. POLES | MODEL NO. | SWITCH FUNCTION | | CONNECTED TERMINALS | | SCHEMATIC |
|--------------------|-----------|-----------------|--------|---------------------|---------|-----------|
| | | POS. 1 | POS. 2 | POS. 1 | POS. 2 | |
| SP | 8161 | ON | ON | 2-3 | 2-1 | |
| | 8168 | ON | MOM. | 2-3 | 2-1 | |
| <p>SPDT</p> | | | | | | |
| DP | 8261 | ON | ON | 2-3-5-6 | 2-1-5-4 | |
| <p>DPDT</p> | | | | | | |

MOM. = Momentary

All models with all options when ordered with G, L, M or Q contact material.

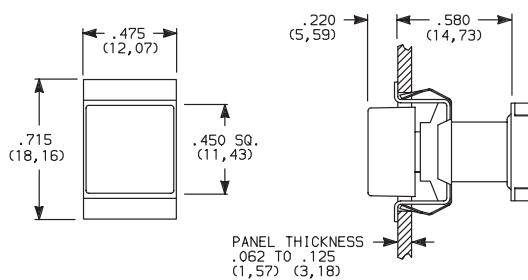
ACTUATOR—SNAP-IN FRONT MOUNT



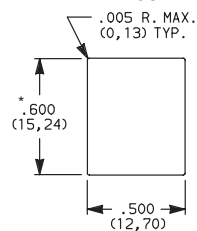
| OPTION CODE | CAP COLOR |
|-------------|-----------|
| 2 | BLACK |
| 1 | WHITE |
| 3 | RED |
| 4 | ORANGE |
| 5 | YELLOW |
| 9 | GRAY |

Cap Finish: matte.
Other colors available, consult Customer Service Center.
Available with C, W, Z or Z3 terminations.
NOTE: Caps & frames available separately, see pages A-60 and A-61.

J80 SNAP-IN



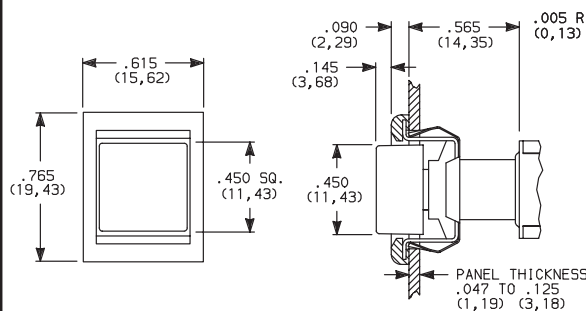
PANEL MOUNTING



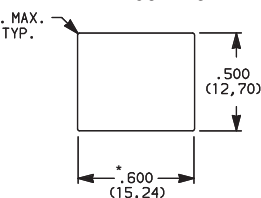
*Increase this dimension to .620/.625 (15.75/15.88) for .091/.125 (2.41/2.18) thick panels.



J81 SNAP-IN WITH BLACK FRAME



PANEL MOUNTING



*Increase this dimension to .620/.625 (15.75/15.88) for .091/.125 (2.41/2.18) thick panels.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



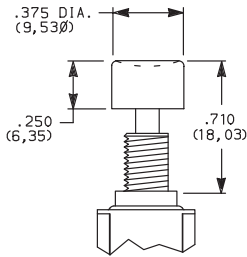
8060 Series Alternate Action and Momentary Pushbutton Switches



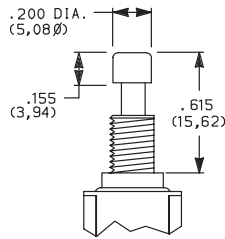
Pushbutton

PLUNGER

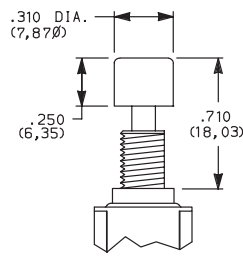
S PLUNGER WITH CAP P/N 7527



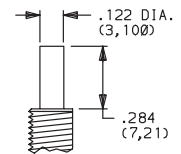
S1 PLUNGER WITH CAP P/N 7089



S2 PLUNGER WITH CAP P/N 8018

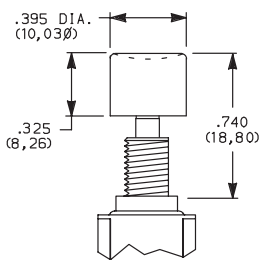


S, S1, S2 plunger dimensions.

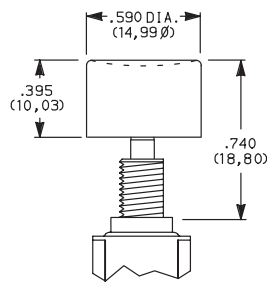


Plunger material: Glass filled nylon or glass filled polyester (UL 94V-0).

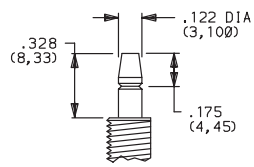
L PLUNGER WITH CAP P/N 8941



L1 PLUNGER WITH CAP P/N 8940



L, L1 plunger dimensions.



Plunger Material: Brass, chrome plated.

| OPTION CODE | CAP COLOR |
|-------------|-----------|
| 2 | BLACK |
| 1 | WHITE |
| 3 | RED |
| 4 | ORANGE |
| 5 | YELLOW |
| 9 | GRAY |

Cap Finish: gloss. Cap supplied not installed. Other colors available, consult Customer Service Center.

NOTE: When selecting plunger and cap option, bushing selection must also be made, see below.

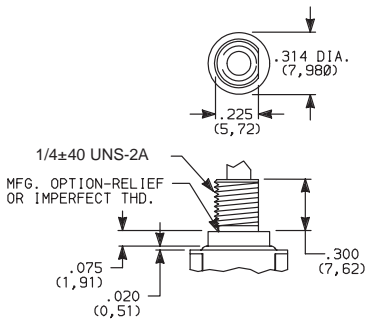
BUSHING

H .300" HIGH THREADED, FLAT

NONE NO BUSHING CHOICE REQUIRED (JXX ACTUATORS)

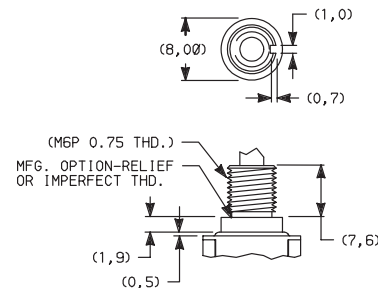
Y3 7.6mm THREADED, KEYWAY

H9 .300" HIGH UNTHREADED, FLAT



H bushing standard with C, W, Z or Z3 terminations. H9 bushing standard with A, A3, AV2, AV3, or V3-V31 terminations.

Withstands 12 in./lbs. of torque with no distortion.

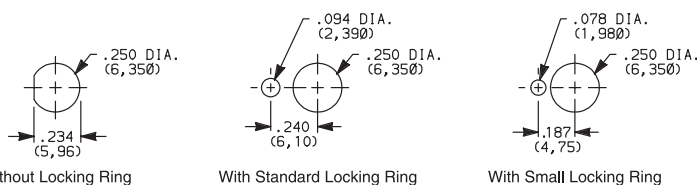


Withstands 12 in./lbs. of torque with no distortion.

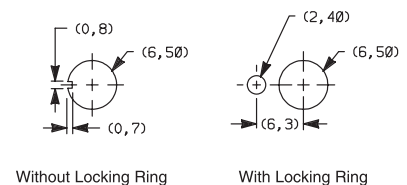
NOTE: When selecting bushing option, plunger selection must also be made, see above. No bushing option choice required when any JXX actuator option is selected.

PANEL MOUNTING

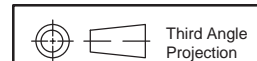
1/4 IN. BUSHING



METRIC BUSHING



NOTE. Two mounting nuts, locking ring and lockwasher supplied standard with threaded bushings. Optional mounting nut and locking ring styles and finishes available, see section "Technical Data and Additional Hardware".



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change





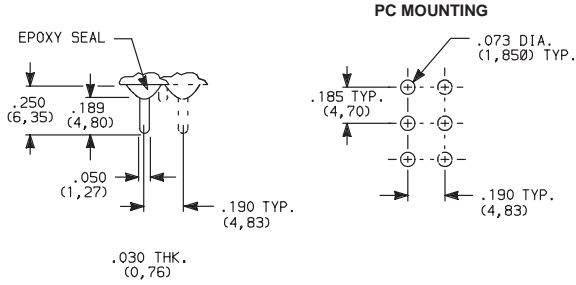
Pushbutton
A

8060 Series Alternate Action and Momentary Pushbutton Switches

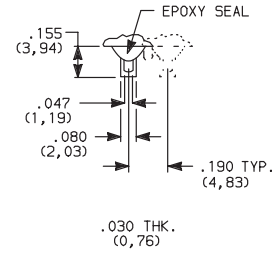
TERMINATIONS



C PC THRU-HOLE



Z SOLDER LUG

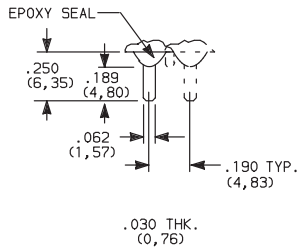


SPDT and DPDT

SPDT and DPDT

Not available with P, S or R contact material.

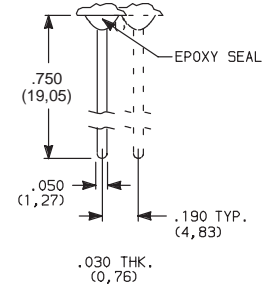
Z3 QUICK CONNECT



Not available with P, S or R contact material.
Mating quick connector available;
order part number 530100000, page A-61.

SPDT and DPDT

W WIRE WRAP

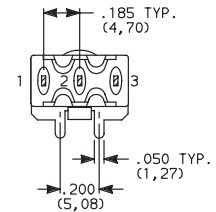
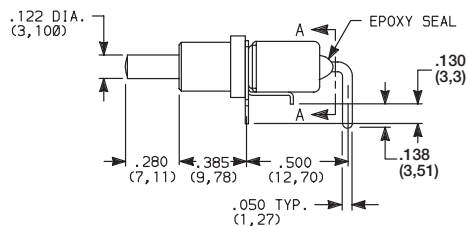
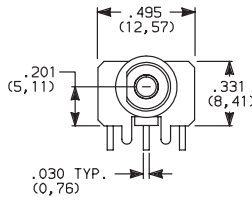


SPDT and DPDT

A RIGHT ANGLE, PC THRU-HOLE

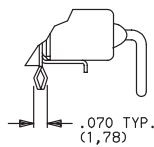
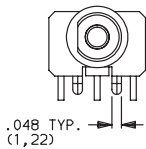


8161SH9ABE2
SPDT

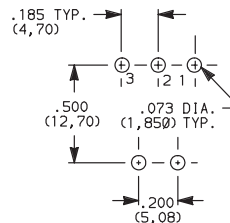


SECTION A-A

A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE



PC MOUNTING



Not available with I seal.
Terminal bend radii and lead-in manufacturing option.

NOTE: PC pattern must clear switch support leg.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



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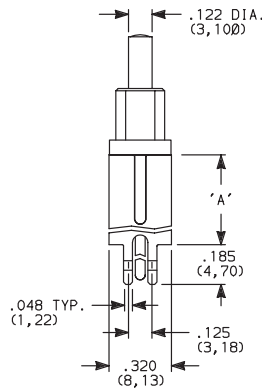
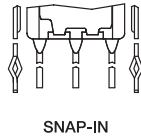
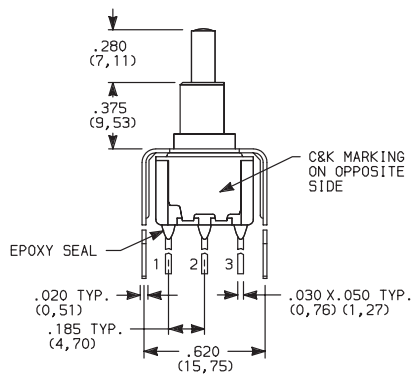
A

Pushbutton

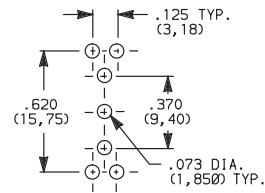
TERMINATIONS

V3, V4 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



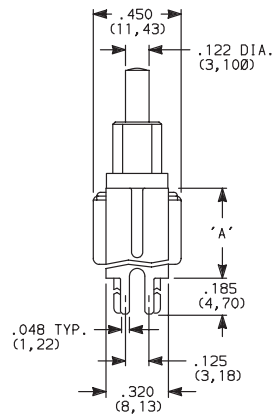
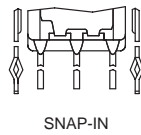
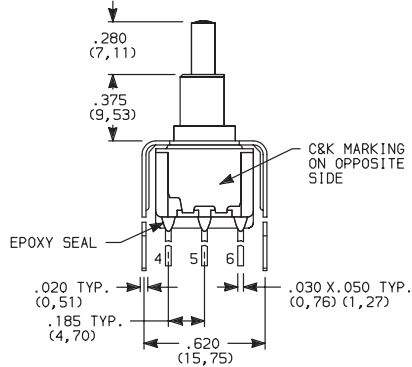
8161SH9_BE2
SPDT

| OPTION CODE | DIM 'A' |
|-------------|--------------|
| V3, V31 | .460 (11,68) |
| V4 | .630 (16,00) |

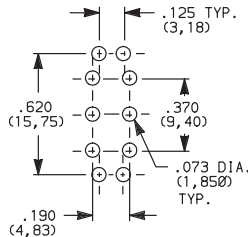
Not available with I seal.

V3, V4 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



8261SH9_BE2
DPDT

| OPTION CODE | DIM 'A' |
|-------------|--------------|
| V3, V31 | .460 (11,68) |
| V4 | .630 (16,00) |

Not available with I seal.

CONTACT MATERIAL

| OPTION CODE | CONTACT MATERIAL | TERMINAL PLATING | RATINGS | |
|-------------|---------------------------------|------------------------|--------------------------------|---|
| B | GOLD ¹ | GOLD ¹ | LOW LEVEL/DRY CIRCUIT | 0.4 VA MAX. @ 20 V AC OR DC MAX. |
| P | | MATTE-TIN ⁶ | | |
| Q | SILVER ^{4,5} | SILVER ⁵ | POWER | 6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC. |
| S | | MATTE-TIN ⁶ | | |
| G | GOLD OVER SILVER ^{2,3} | GOLD ³ | LOW LEVEL/DRY CIRCUIT OR POWER | 0.4 VA MAX @ 20 V AC OR DC MAX. OR 6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC. |
| R | | MATTE-TIN ⁶ | | |

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

¹ CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

² END CONTACTS: Coin silver, with gold plate over nickel plate.

³ CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

⁴ END CONTACTS: Coin silver, silver plated.

⁵ CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

⁶ TERMINALS: Copper alloy, with matte-tin over nickel plate.

NOTE: Any models supplied with P, S, R, Q, B or G contact material are RoHS compliant.

All models with all options when ordered with S, R, G, L, M or Q contact material.

B contact material standard with all terminations except C, Z & Z3.

Q contact material standard with C, Z & Z3 terminations.

P, S & R contact materials not available with Z & Z3 terminations.

K, L and M options represent Non RoHS tin lead product and are not recommended for new designs. For additional information please contact Customer Service.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



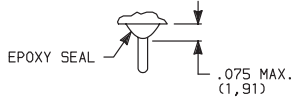


8060 Series Alternate Action and Momentary Pushbutton Switches

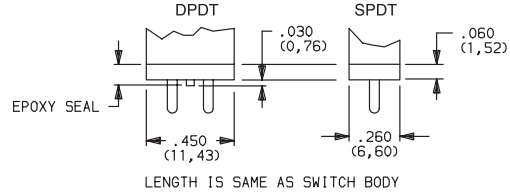
SEAL

Pushbutton
A

E EPOXY SEAL



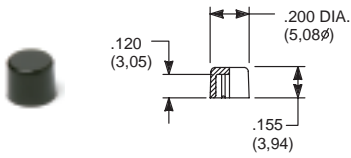
I EPOXY POTTED BASE



LENGTH IS SAME AS SWITCH BODY
NOTE: Available with C, W, Z, Z3 terminations only.

AVAILABLE HARDWARE

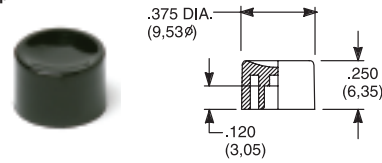
Cap



PART NO.
708901000 WHITE
708902000 BLACK
708903000 RED
708904000 ORANGE
708905000 YELLOW
708909000 GRAY

Material: Nylon
Finish: Gloss

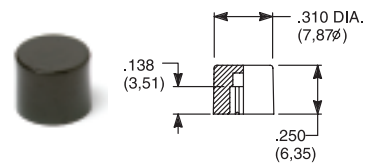
Cap



PART NO.
752701000 WHITE
752702000 BLACK
752703000 RED
752704000 ORANGE
752705000 YELLOW
752709000 GRAY

Material: Nylon
Finish: Gloss

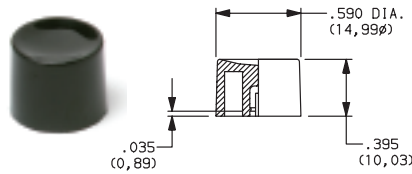
Cap



PART NO.
801801000 WHITE
801802000 BLACK
801803000 RED
801804000 ORANGE
801805000 YELLOW
801809000 GRAY

Material: Nylon
Finish: Gloss

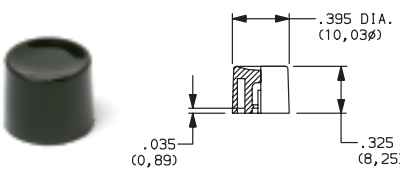
Cap, Snap-fitting plunger



PART NO.
894001000 WHITE
894002000 BLACK
894003000 RED
894004000 ORANGE
894005000 YELLOW
894009000 GRAY

Material: Nylon
Finish: Gloss

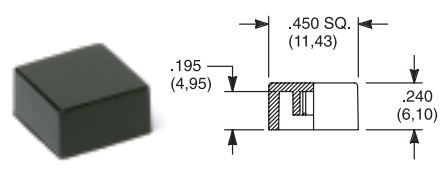
Cap, Snap-fitting plunger



PART NO.
894101000 WHITE
894102000 BLACK
894103000 RED
894104000 ORANGE
894105000 YELLOW
894109000 GRAY

Material: Nylon
Finish: Gloss

Cap, J80, J81 & J82 options only

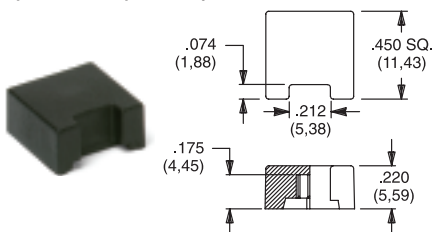


| | |
|-------------------------|-------------------------|
| PART NO. | PART NO. |
| 484601000 WHITE | 798201000 WHITE |
| 484602000 BLACK | 798202263 BLACK |
| 484603000 RED | 798203000 RED |
| 484604000 ORANGE | 798204000 ORANGE |
| 484605000 YELLOW | 798205000 YELLOW |
| 484609000 GRAY | 798209000 GRAY |

Material: Nylon
Finish: Gloss

Material: Nylon
Finish: Matte

Cap, J86 & J96 options only



| | |
|------------------|-------------------------|
| PART NO. | PART NO. |
| 459701000 | 476801000 WHITE |
| 459702000 | 476802000 BLACK |
| 459703000 | 476803000 RED |
| 459704000 | 476804000 ORANGE |
| 459705000 | 476805000 YELLOW |
| 459709000 | 476809000 GRAY |

Material: Nylon
Finish: Gloss

Material: Nylon
Finish: Matte

Frame



PART NO.
615602263 BLACK

Material: Nylon
Finish: Matte

Frame



PART NO.
613302263 BLACK

Material: Nylon
Finish: Matte

NOTE: Additional nuts, locking rings and lockwashers available separately, see section "Technical Data and Additional Hardware". Other cap & frame colors available, consult Customer Service Center.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

