



A

Pushbutton

# 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: 10<sup>9</sup>Ω 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

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## SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS. 1	POS. 2	POS. 1	POS. 2	
		C&K marking this side		C&K marking this side		
SP	<b>8161</b> <b>8168</b>	ON	ON	2-3	2-1	
		ON	MOM.	2-3	2-1	
<b>SPDT</b> <p>Part number shown: 8161SHZQE</p>						
DP	<b>8261</b>	ON	ON	2-3,5-6	2-1,5-4	
		ON	ON	2-3,5-6	2-1,5-4	
<b>DPDT</b> <p>Part number shown: 8261SHZQE</p>						

MOM. = Momentary

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

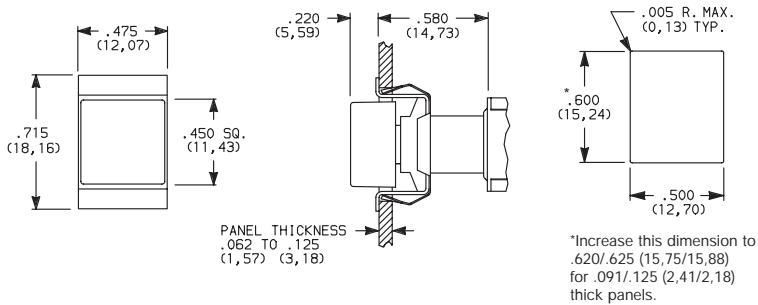
## ACTUATOR—SNAP-IN FRONT MOUNT

ACTUATOR OR PLUNGER

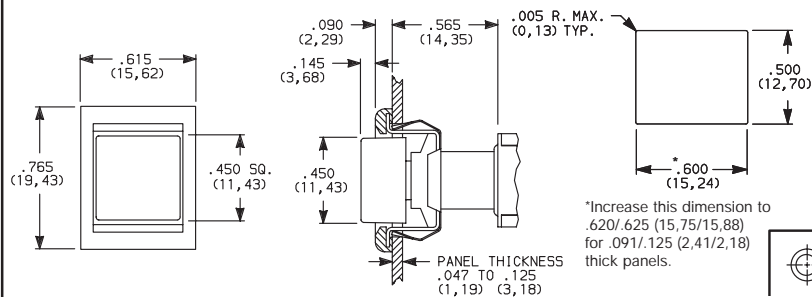
OPTION CODE	CAP COLOR
<b>2</b>	BLACK
<b>1</b>	WHITE
<b>3</b>	RED
<b>4</b>	ORANGE
<b>5</b>	YELLOW
<b>9</b>	GRAY

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



### J81 SNAP-IN WITH BLACK FRAME



Third Angle Projection

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





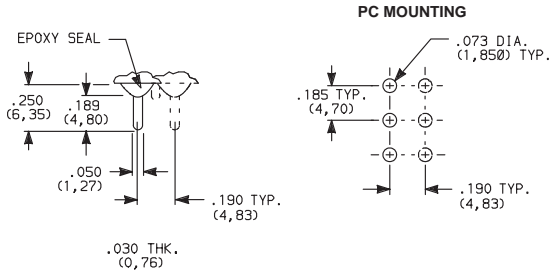
# 8060 Series Alternate Action and Momentary Pushbutton Switches

## TERMINATIONS

Pushbutton

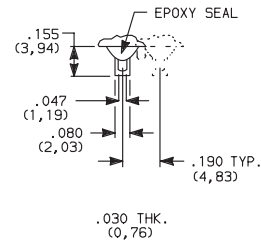
A

### C PC THRU-HOLE



### SPDT and DPDT

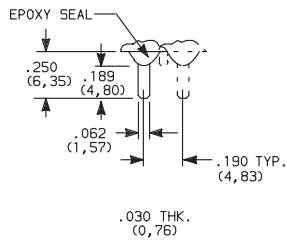
### Z SOLDER LUG



### SPDT and DPDT

Not available with P, S or R contact material.

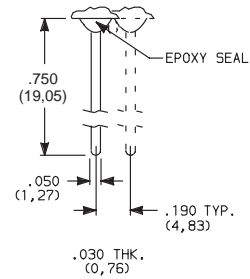
### Z3 QUICK CONNECT



### SPDT and DPDT

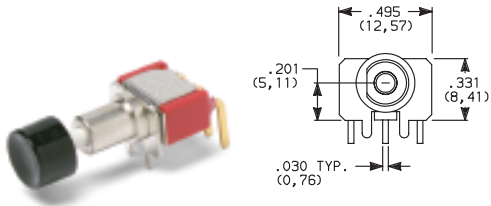
Not available with P, S or R contact material.  
Mating quick connector available:  
order part number 530100000, page A-61.

### W WIRE WRAP

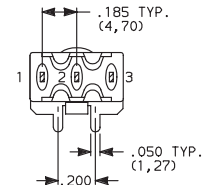
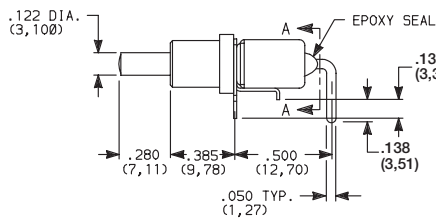
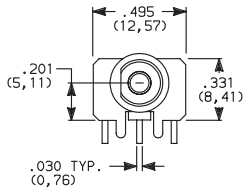


### SPDT and DPDT

### A RIGHT ANGLE, PC THRU-HOLE

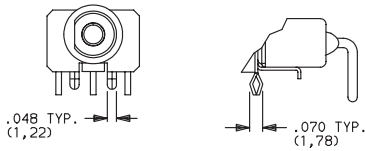


8161SH9ABE2  
SPDT



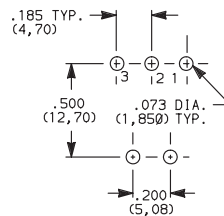
SECTION A-A

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



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

### PC MOUNTING



NOTE: PC pattern must clear switch support leg.



Third Angle  
Projection

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



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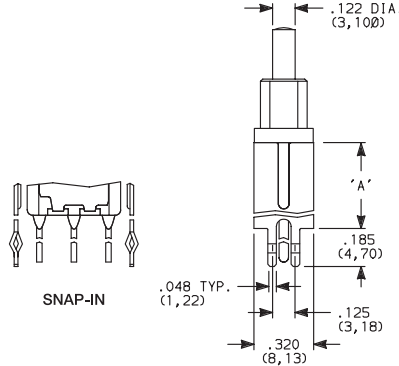
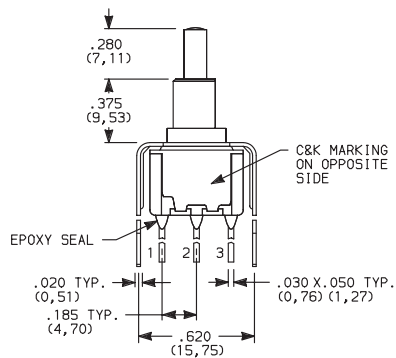
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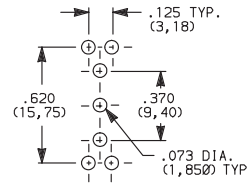
## TERMINATIONS

**V3, V4** VERTICAL MOUNT, V-BRACKET

**V31** VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



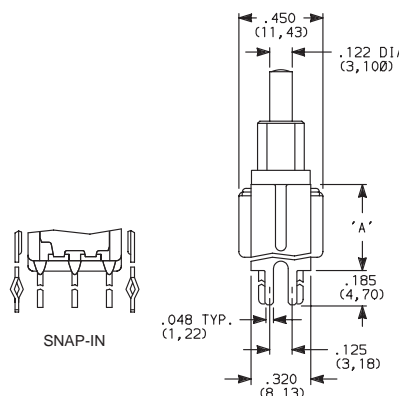
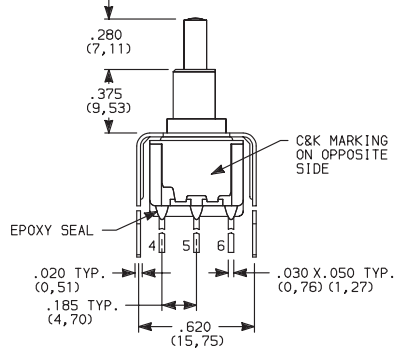
8161SH9\_\_BE2  
SPDT

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

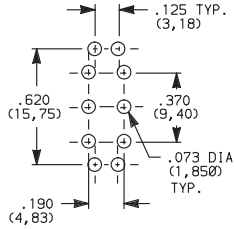
Not available with I seal.

**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 <sup>1</sup>	GOLD <sup>1</sup>	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
P		MATTE-TIN <sup>6</sup>		
Q	SILVER <sup>4,5</sup>	SILVER <sup>5</sup>	POWER	6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC.
S		MATTE-TIN <sup>6</sup>		
G	GOLD OVER SILVER <sup>2,3</sup>	GOLD <sup>3</sup>	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 <sup>6</sup>		

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

<sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.

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

<sup>4</sup> END CONTACTS: Coin silver, silver plated.

<sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

<sup>6</sup> 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



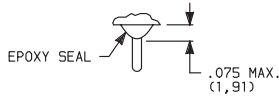


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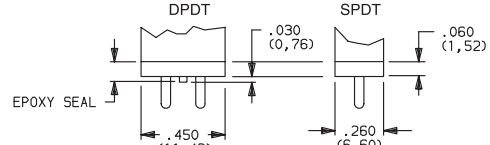
Pushbutton  
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SEAL

**E** EPOXY SEAL



**I** EPOXY POTTED BASE

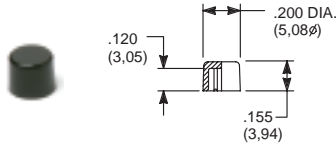


LENGTH IS SAME AS SWITCH BODY

NOTE: Available with C, W, Z, Z3 terminations only.

## AVAILABLE HARDWARE

Cap

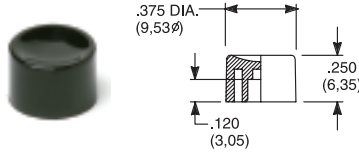


PART NO.

- 708901000 WHITE
- 708902000 BLACK
- 708903000 RED
- 708904000 ORANGE
- 708905000 YELLOW
- 708909000 GRAY

Material: Nylon  
Finish: Gloss

Cap

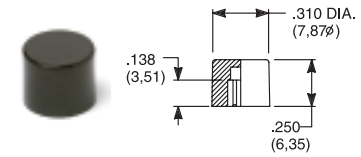


PART NO.

- 752701000 WHITE
- 752702000 BLACK
- 752703000 RED
- 752704000 ORANGE
- 752705000 YELLOW
- 752709000 GRAY

Material: Nylon  
Finish: Gloss

Cap

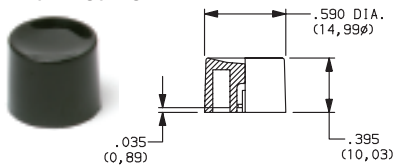


PART NO.

- 801801000 WHITE
- 801802000 BLACK
- 801803000 RED
- 801804000 ORANGE
- 801805000 YELLOW
- 801809000 GRAY

Material: Nylon  
Finish: Gloss

Cap, Snap-fitting plunger

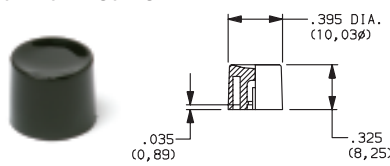


PART NO.

- 894001000 WHITE
- 894002000 BLACK
- 894003000 RED
- 894004000 ORANGE
- 894005000 YELLOW
- 894009000 GRAY

Material: Nylon  
Finish: Gloss

Cap, Snap-fitting plunger

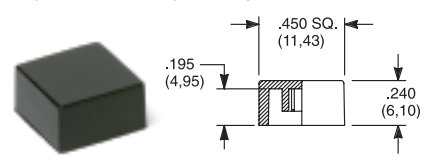


PART NO.

- 894101000 WHITE
- 894102000 BLACK
- 894103000 RED
- 894104000 ORANGE
- 894105000 YELLOW
- 894109000 GRAY

Material: Nylon  
Finish: Gloss

Cap, J80, J81 & J82 options only



PART NO.

- 484601000 WHITE
- 484602000 BLACK
- 484603000 RED
- 484604000 ORANGE
- 484605000 YELLOW
- 484609000 GRAY

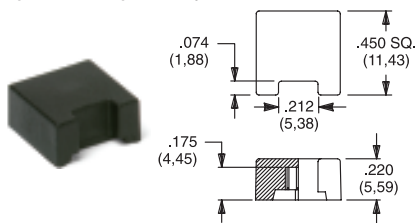
Material: Nylon  
Finish: Gloss

PART NO.

- 798201000 WHITE
- 798202263 BLACK
- 798203000 RED
- 798204000 ORANGE
- 798205000 YELLOW
- 798209000 GRAY

Material: Nylon  
Finish: Matte

Cap, J86 & J96 options only



PART NO.

- 459701000
- 459702000
- 459703000
- 459704000
- 459705000
- 459709000

Material: Nylon  
Finish: Gloss

PART NO.

- 476801000 WHITE
- 476802000 BLACK
- 476803000 RED
- 476804000 ORANGE
- 476805000 YELLOW
- 476809000 GRAY

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

