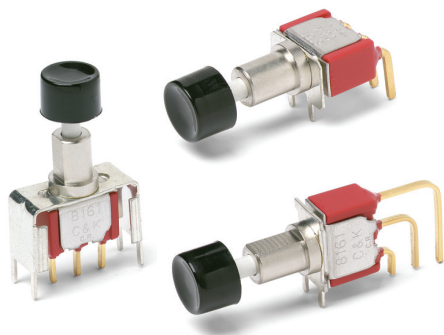




8060 Series

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.

<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>			
Switch Function 8161 SPDT On-On 8168 SPDT On-Mom. 8261 DPDT On-On		Bushing H .300" high, flat, hi torque H9 .300" high, flat, hi torque NONE No bushing choice required Y3 7.6mm, keyway	
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		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	

8060 Series Alternate Action and Momentary Pushbutton Switches

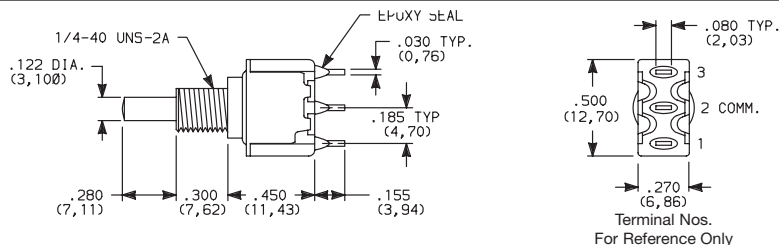


A
Pushbutton

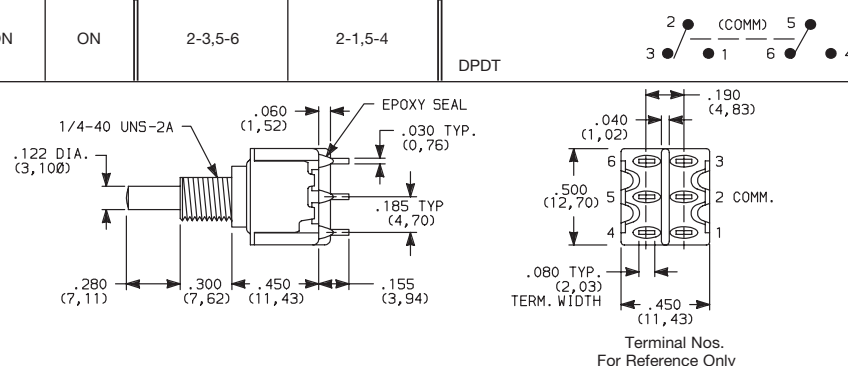
SWITCH FUNCTION

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	

SPDT



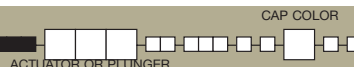
DPDT



MOM. = Momentary

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

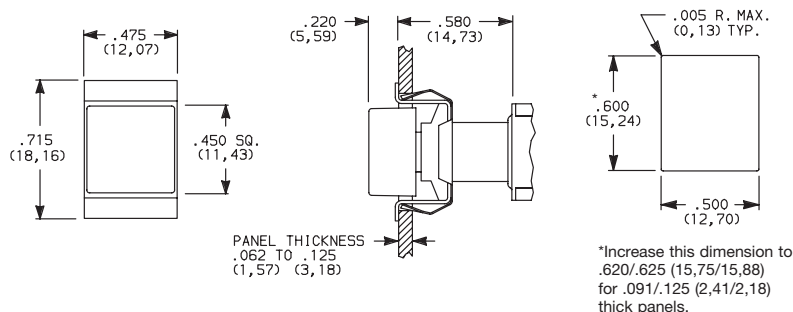
ACTUATOR—SNAP-IN FRONT MOUNT



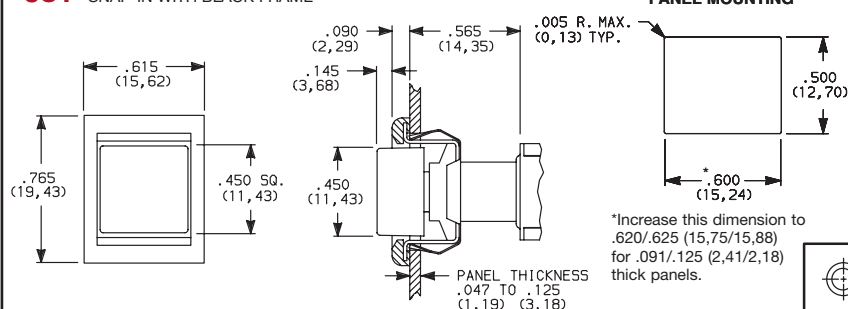
OPTION CODE	CAP COLOR
2	BLACK
1	WHITE
3	RED
4	ORANGE
5	YELLOW
9	GRAY

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



J81 SNAP-IN WITH BLACK FRAME



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

C&K

29 Aug 18



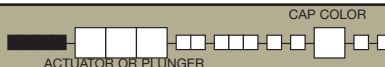
A

Pushbutton

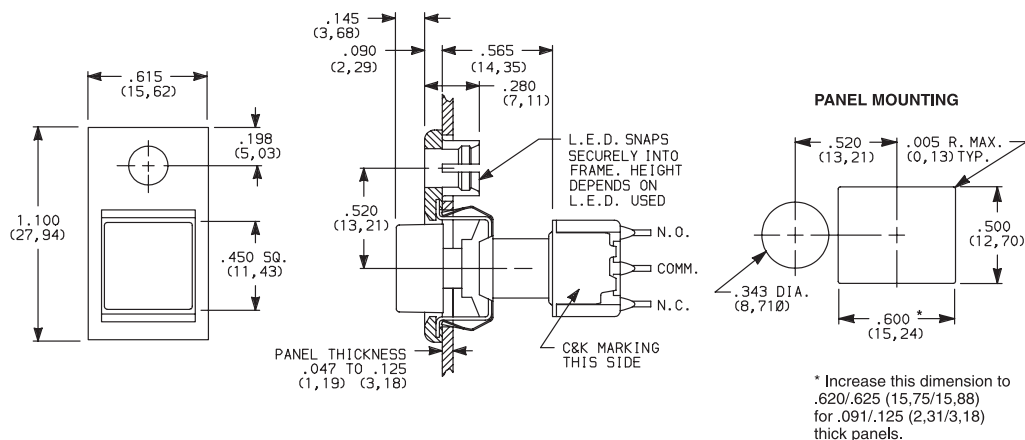
8060 Series

Alternate Action and Momentary Pushbutton Switches

ACTUATOR—SNAP-IN FRONT MOUNT



J82 SNAP-IN WITH BLACK FRAME FOR LED



Available with C, W, Z or Z3 terminations.

LED not included.

For LED information, see page A-61.

NOTE: Caps & frames available separately, see pages A-60 and A-61.

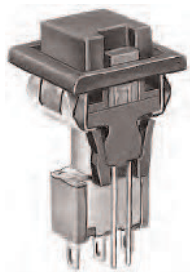
Other colors available, consult Customer Service Center.

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

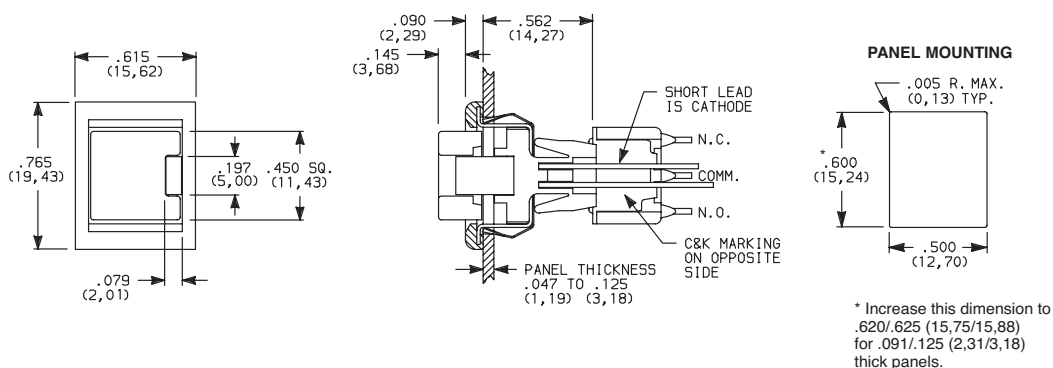
ACTUATOR—SNAP-IN FRONT MOUNT



J86 SNAP-IN WITH BLACK FRAME AND LED



8161J86ZQE223
SPDT



Available with C, W, Z or Z3 terminations and SPDT models only.

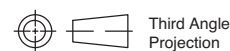
NOTE: Caps & frames available separately, see pages A-60 and A-61.

Other colors available, consult Customer Service Center.

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

OPTION CODE	LED COLOR
3	RED

For LED information, see page A-61.



Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change



29 Aug 18

8060 Series Alternate Action and Momentary Pushbutton Switches



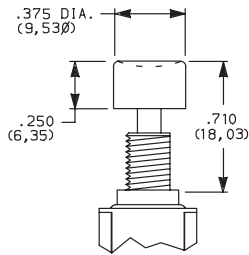
A

Pushbutton

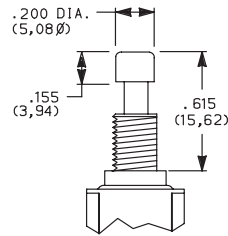
PLUNGER



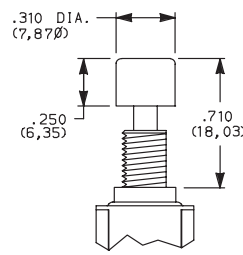
S PLUNGER WITH CAP P/N 7527



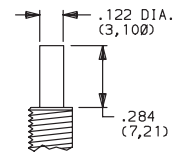
S1 PLUNGER WITH CAP P/N 7089



S2 PLUNGER WITH CAP P/N 8018

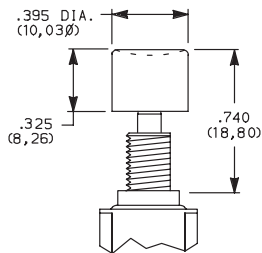


S, S1, S2 plunger dimensions.

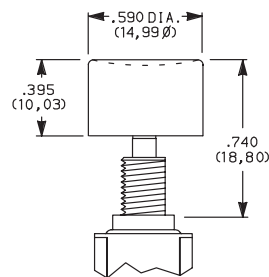


Plunger material: Glass filled nylon or glass filled polyester (UL 94V-0).

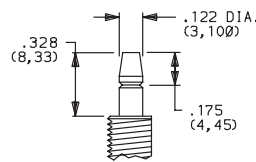
L PLUNGER WITH CAP P/N 8941



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

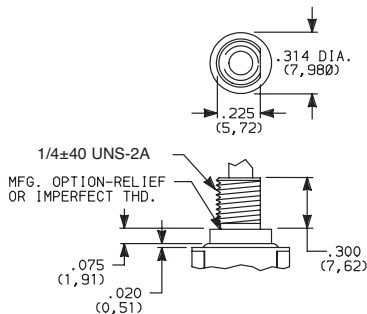
H9 .300" HIGH UNTHREADED, FLAT

NONE

NO BUSHING CHOICE REQUIRED (JXX ACTUATORS)

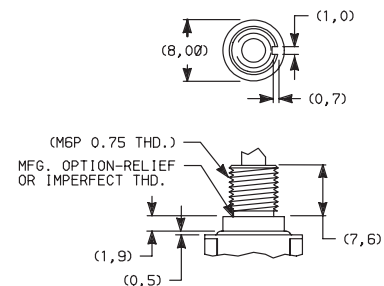
Y3

7.6mm THREADED, KEYWAY



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.

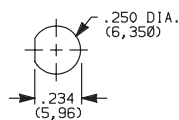


Withstands 12 in./lbs. of torque with no distortion.

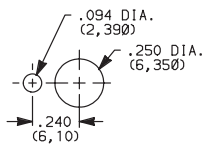
NOTE: When selecting bushing option, plunger selection must also be made, see above. No bushing option choice required when any JXX actuator option is selected.

PANEL MOUNTING

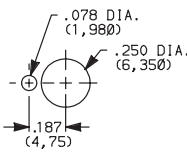
1/4 IN. BUSHING



Without Locking Ring

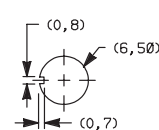


With Standard Locking Ring

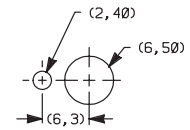


With Small Locking Ring

METRIC BUSHING



Without Locking Ring



With Locking Ring

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

C&K

29 Aug 18



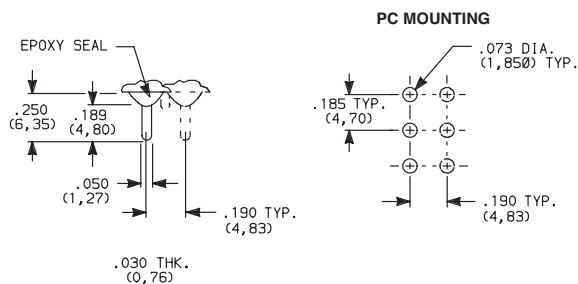
8060 Series

Alternate Action and Momentary Pushbutton Switches

TERMINATIONS

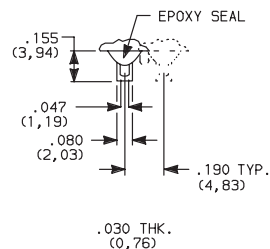


C PC THRU-HOLE



SPDT and DPDT

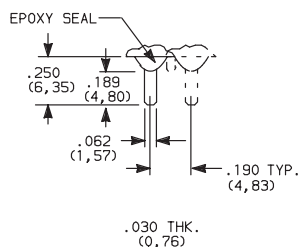
Z SOLDER LUG



SPDT and DPDT

Not available with P, S or R contact material.

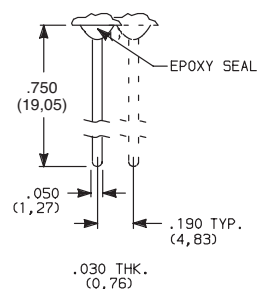
Z3 QUICK CONNECT



SPDT and DPDT

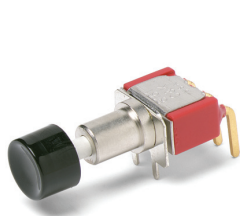
Not available with P, S or R contact material.
Mating quick connector available;
order part number 530100000, page A-61.

W WIRE WRAP

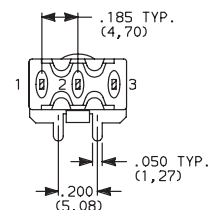
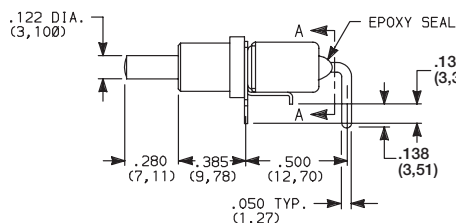
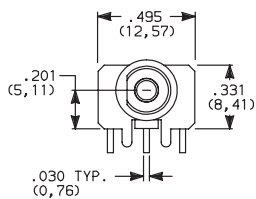


SPDT and DPDT

A RIGHT ANGLE, PC THRU-HOLE

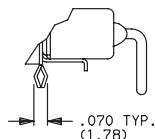
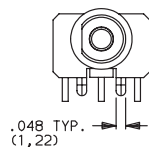


8161SH9ABE2
SPDT

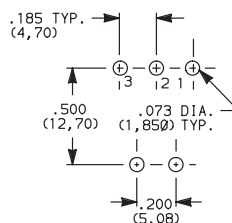


SECTION A-A

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



PC MOUNTING



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

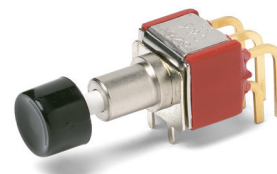
NOTE: PC pattern must clear switch support leg.



Third Angle
Projection

Pushbutton

SECTION A-A

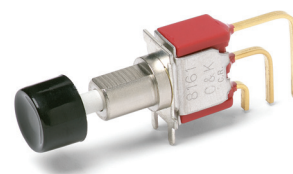
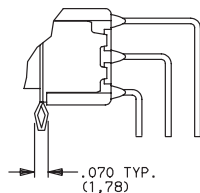


.070 TYP.
(1.78)

Technical drawing of a three-hole punch plate. The drawing shows a rectangular plate with three circular holes arranged vertically. The dimensions are as follows:

- Overall width: .270 (6,86)
- Overall height: .500 (12,70)
- Distance between centers of the three holes: .200 (5,08)
- Radius of each hole: .050 TYP. (1,27)
- Labels 1, 2, and 3 are placed to the left of the holes, indicating different sections or features.

SECTION A-A

8161SH9AV2BE2
SPDT

Technical drawing of a shaft with a keyway. The shaft has a diameter of $\varnothing 1.850$ (DIA. .073 TYP.). The keyway is located in the center of the shaft, with a width of $.200$ (5.08). The keyway depth is $.150$ (3.81) TYP. The shaft has a total length of $.500$ (12.70). The keyway is shown in cross-section with a key. The key has a width of $.200$ (5.08) and a height of $.150$ (3.81) TYP. The key is seated in the keyway, with a clearance of $.073$ (DIA. .073 TYP.) between the key and the shaft.



Third Angle Projection

C&K

www.ckswitches.com

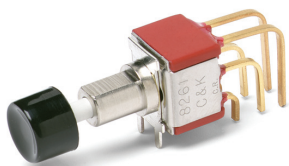


8060 Series Alternate Action and Momentary Pushbutton Switches

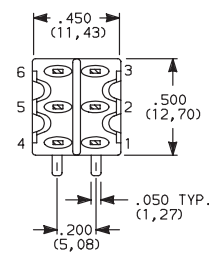
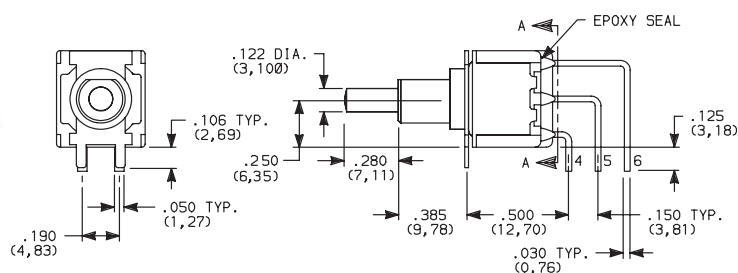
TERMINATIONS



AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH

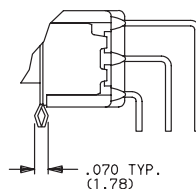
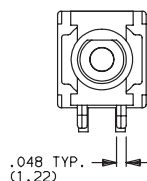


8261SH9AV2BE2
DPDT

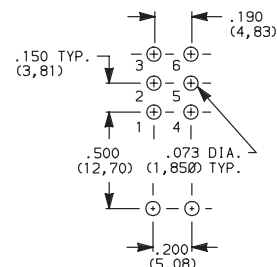


SECTION A-A

AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH



PC MOUNTING



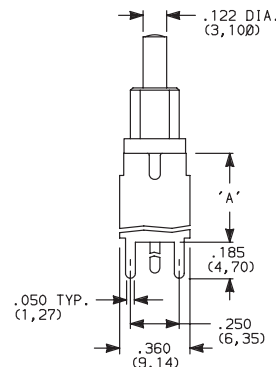
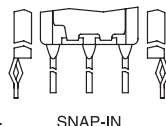
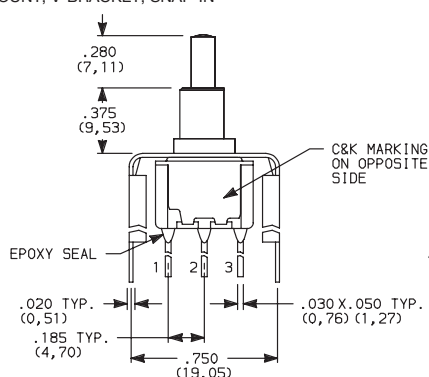
Not available with I seal.
Terminal bend radii and lead-in manufacturing option.

V6 VERTICAL MOUNT, V-BRACKET

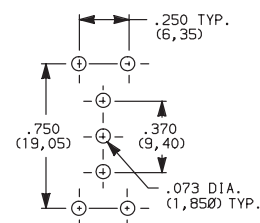
V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



8161SH9_BE2
SPDT



PC MOUNTING

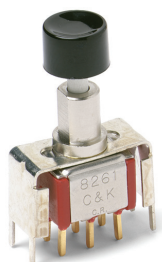


OPTION CODE	DIM 'A'
V21	.555 (14,10)
V6	.460 (11,68)

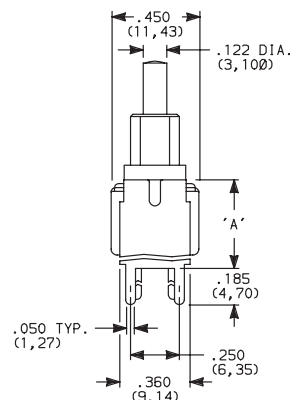
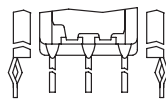
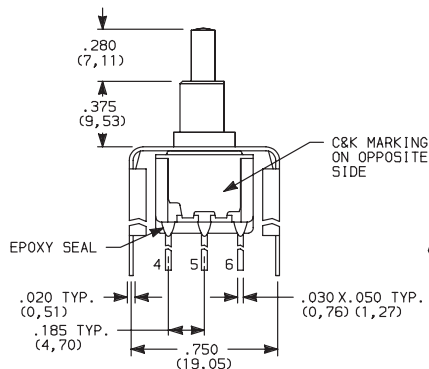
Not available with I seal.

V6 VERTICAL MOUNT, V-BRACKET

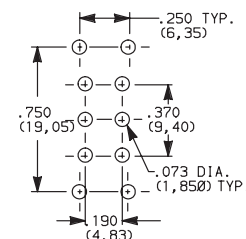
V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



8261SH9_BE2
DPDT



PC MOUNTING



OPTION CODE	DIM 'A'
V21	.555 (14,10)
V6	.460 (11,68)

Not available with I seal.



Third Angle
Projection

8060 Series Alternate Action and Momentary Pushbutton Switches

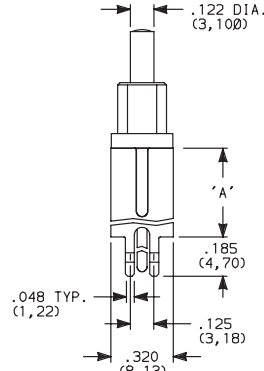
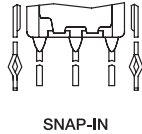
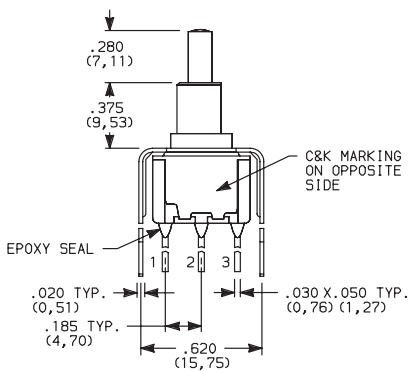


A
Pushbutton

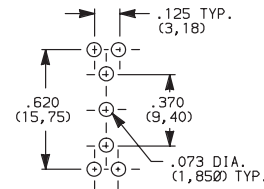
TERMINATIONS

V3, V4 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



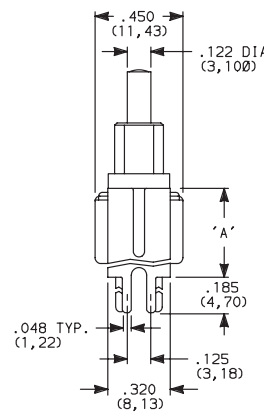
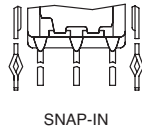
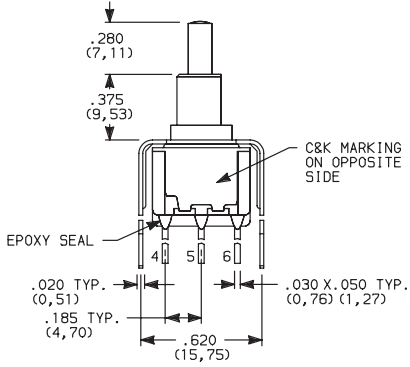
8161SH9_BE2
SPDT

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

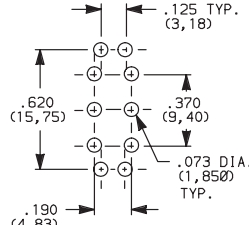
Not available with I seal.

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.

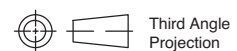
All models **C&K** with all options when ordered with S, R, G, or Q contact material.

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.

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



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

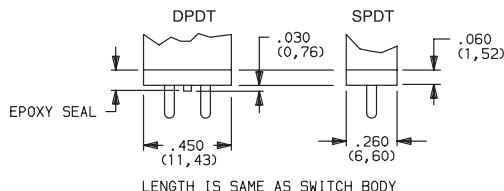
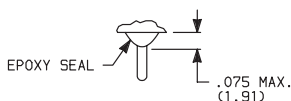
C&K

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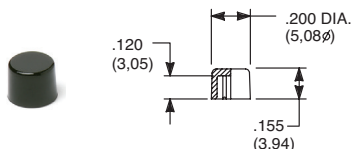


8060 Series

Alternate Action and Momentary Pushbutton Switches

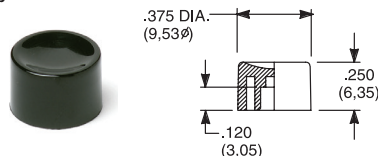
SEAL           **E** EPOXY SEAL**I** EPOXY POTTED BASE**NOTE:** Available with C, W, Z, Z3 terminations only.

AVAILABLE HARDWARE

Cap**PART NO.**

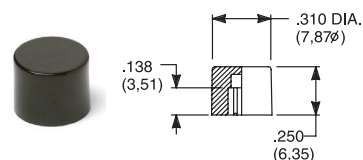
708901000 WHITE
708902000 BLACK
708903000 RED
708904000 ORANGE
708905000 YELLOW
708909000 GRAY

Material: Nylon
 Finish: Gloss

Cap**PART NO.**

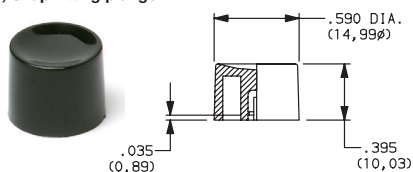
752701000 WHITE
752702000 BLACK
752703000 RED
752704000 ORANGE
752705000 YELLOW
752709000 GRAY

Material: Nylon
 Finish: Gloss

Cap**PART NO.**

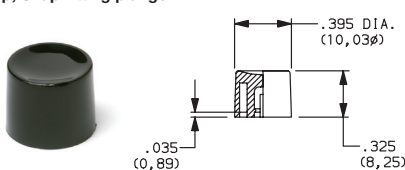
801801000 WHITE
801802000 BLACK
801803000 RED
801804000 ORANGE
801805000 YELLOW
801809000 GRAY

Material: Nylon
 Finish: Gloss

Cap, Snap-fitting plunger**PART NO.**

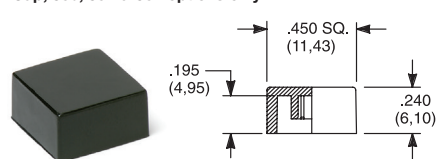
452D01000 WHITE
452D02000 BLACK
452D03000 RED
452D04000 ORANGE
452D05000 YELLOW
452D09000 GRAY

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.**

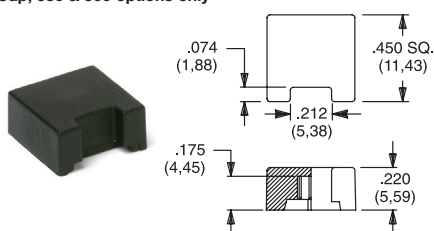
484601000 WHITE
484602000 BLACK
484603000 RED
484604000 ORANGE
484605000 YELLOW
484609000 GRAY

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.**

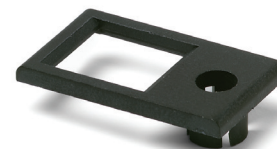
459701000
459702000
459703000
459704000
459705000
459709000

Material: Nylon
 Finish: 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

8060 Series Alternate Action and Momentary Pushbutton Switches

AVAILABLE HARDWARE

Fits Z3 Termination
female connector

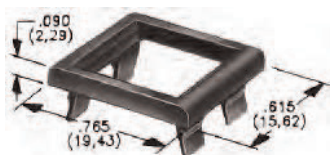
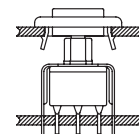
PART NO.
530100000

Available in loose pieces.



Frames snap into panel opening and are independent from switch mounting. Accurate positioning of the PC mounted switch relative to the panel opening is necessary to provide proper clearance between actuator and frame. Available in two basic styles and four panel thicknesses .047-.125 in. Material: Nylon. Finish: Matte.

TYPICAL APPLICATION

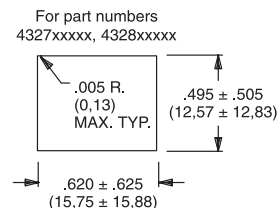
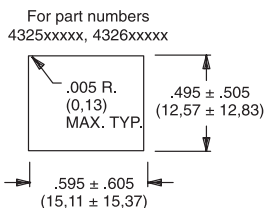


.090" (2,29) PANEL THK. .125" (3,18) PANEL THK.

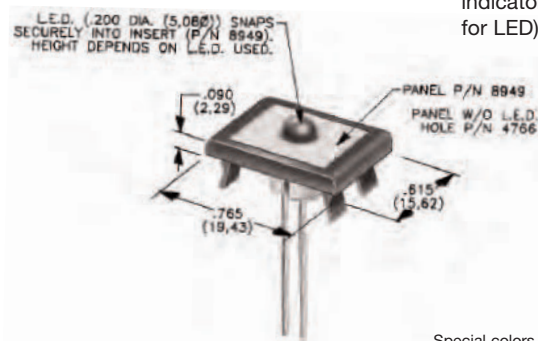
PART NO.
432702263

PART NO.
432802263 BLACK

PANEL MOUNTING



Panel Inserts



Above frames (part nos. 432XXXXXX) are also available with insert which accepts LED for indicator light assembly. Order insert separately from frame. Blank insert panel (without hole for LED) also available. **LED not included.**

PANEL INSERT
WITH HOLE FOR LED

PART NO.
894902000

BLANK PANEL INSERT
WITHOUT HOLE FOR LED

PART NO.
476602000 BLACK

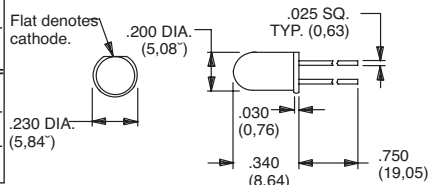
Special colors, custom markings available, consult Customer Service Center.

LED INFORMATION

SWITCHES WITH LED SUPPLIED: J86 OPTION:

Rectangular LEDs are supplied on 8060 Series pushbutton switches with J86 option. These LEDs are factory installed and are not replaceable. The following specifications apply:

OPTION CODE	COLOR	TYP. INTENSITY	TYP. FORWARD VOLTAGE	TYP. FORWARD CURRENT	MAX RATINGS AT 25°C AMBIENT TEMPERATURE		
					FORWARD VOLTAGE	CONTINUOUS FORWARD CURRENT	POWER DISSIPATION
6	Green	1.0 mcd	2.1 V	20 mA	2.5 V	50 mA	125 mW
3	Red*	0.5 mcd		10 mA		30 mA	75 mW
5	Yellow	4.0 mcd		20 mA		50 mA	125 mW



Process Information: Soldering to LED leads must be completed within 5 seconds at 500°F (260°C) maximum.

Caution: Circuit elements must limit forward current of LED to 50mA max. continuous.

* Extra-bright red LED available (typ. intensity 4.5 mcd), consult Customer Service Center.

LEDs are not supplied with J82 & J84 options. LED snaps into switch frame surrounding actuator and is wired externally.

Suggested LED for J82 & J84 options.
Dimensions for reference only.



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



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