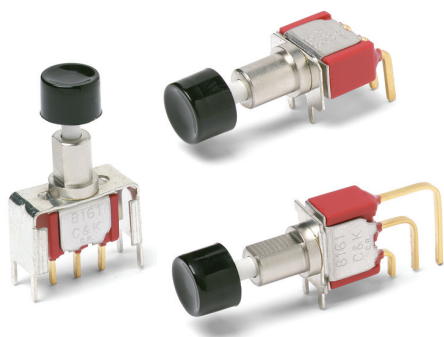


8060 Series

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: $10^9 \Omega$ 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.

The diagram shows a 16-pin DIP package with pins numbered 1 through 16. The pins are grouped into four functional categories, each with a corresponding label and a line pointing to the relevant pins:

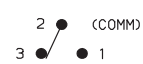
- Switch Function:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: 8161 SPDT On-On, 8168 SPDT On-Mom., 8261 DPDT On-On.
- Actuator or Plunger:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: S .710" high plunger 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:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: H .300" high, flat, hi torque, H9 .300" high, flat, hi torque, NONE No bushing choice required, Y3 7.6mm, keyway.
- Terminations:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: 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:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: B Gold, P Gold, matte-tin, Q Silver, S Silver, matte-tin, G Gold over silver, R Gold over silver, matte-tin.
- Seal:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: E Epoxy, I Epoxy potted base.
- Cap Color:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: 2 Black, 1 White, 3 Red, 4 Orange, 5 Yellow, 9 Gray.
- Frame Color:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: 2 Black.
- LED Color:** Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. This group includes sub-labels: 3 Red, NONE Models without LED.

8060 Series Alternate Action and Momentary Pushbutton Switches

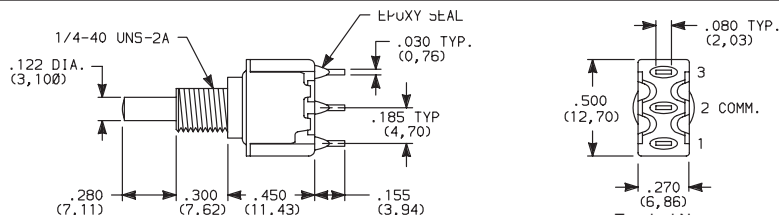


A
Pushbutton

SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS. 1	POS. 2	POS. 1	POS. 2	
						
		C&K marking this side		C&K marking this side		
SP	8161	ON	ON	2-3	2-1	
	8168	ON	MOM.	2-3	2-1	

SPDT



Part number shown: 8161SHZQE

Terminal Nos.
For Reference Only

DP

8261

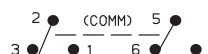
ON

ON

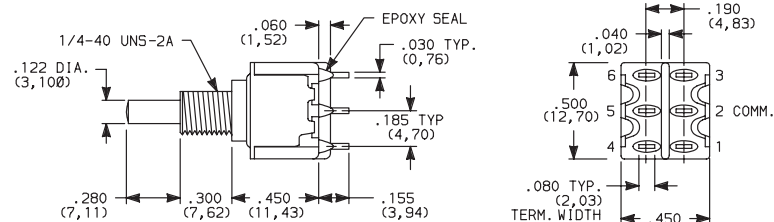
2-3,5-6

2-1,5-4

DPDT



DPDT



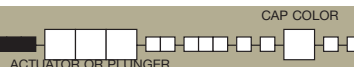
Part number shown: 8261SHZQE

Terminal Nos.
For Reference Only

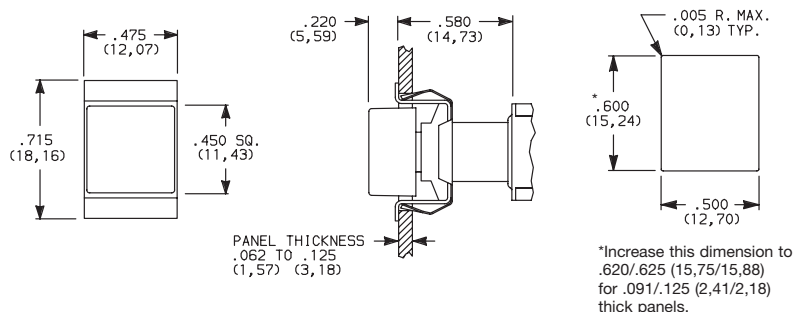
MOM. = Momentary

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

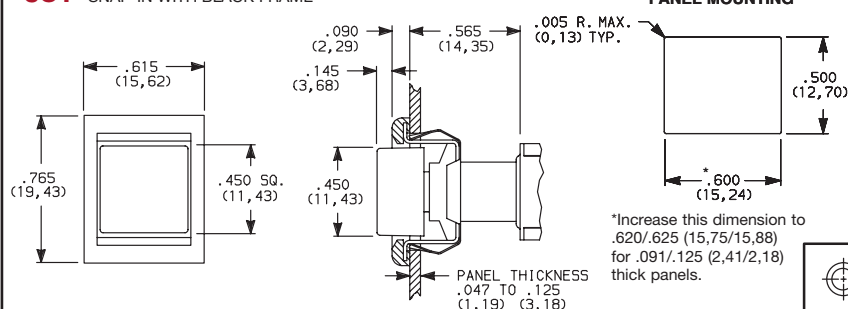
ACTUATOR—SNAP-IN FRONT MOUNT



J80 SNAP-IN



J81 SNAP-IN WITH BLACK FRAME



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

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.

C&K

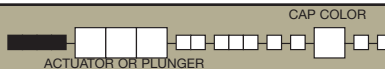
29 Aug 18



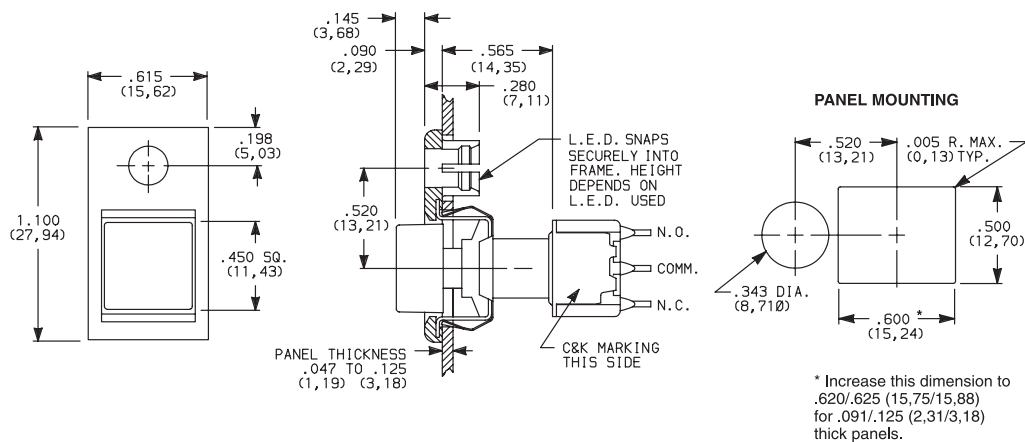
8060 Series

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.

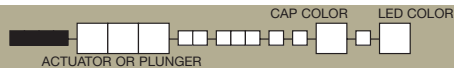
For LED information, see page A-61.

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

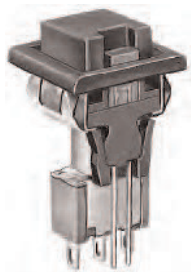
Other colors available, consult Customer Service Center.

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

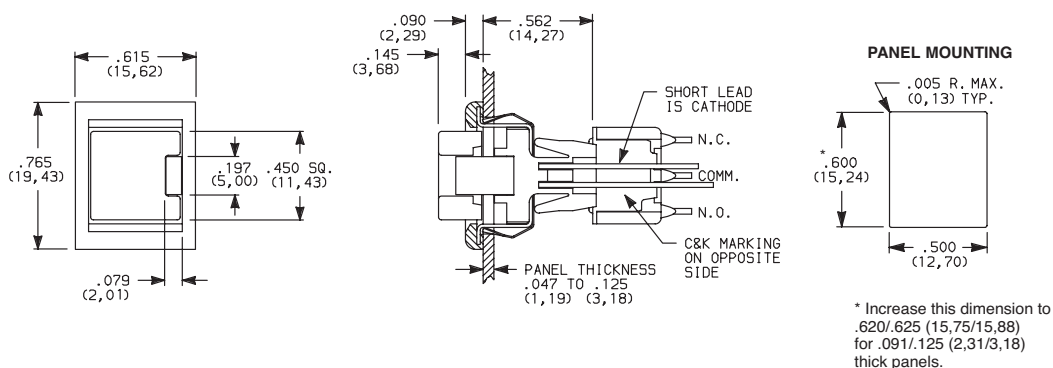
ACTUATOR—SNAP-IN FRONT MOUNT



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

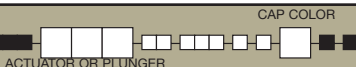
8060 Series Alternate Action and Momentary Pushbutton Switches



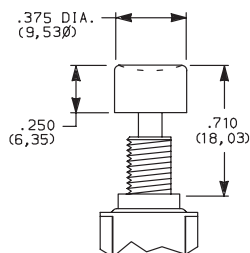
A

Pushbutton

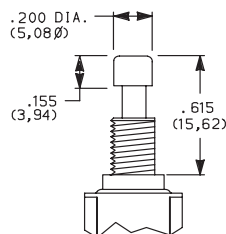
PLUNGER



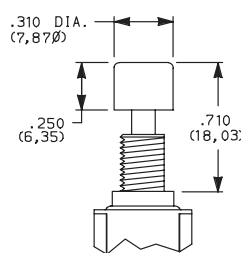
S PLUNGER WITH CAP P/N 7527



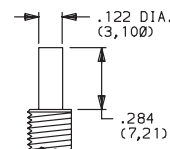
S1 PLUNGER WITH CAP P/N 7089



S2 PLUNGER WITH CAP P/N 8018

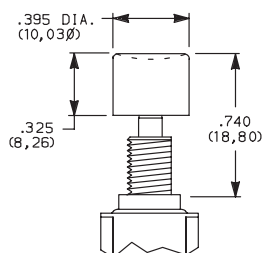


S, S1, S2 plunger dimensions.

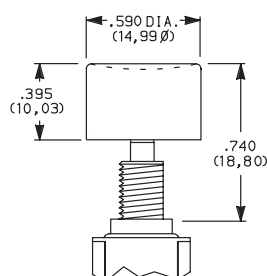


Plunger material: Glass filled nylon or glass filled polyester (UL 94V-0).

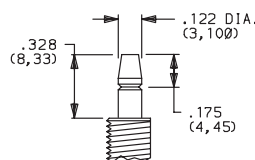
L PLUNGER WITH CAP P/N 8941



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

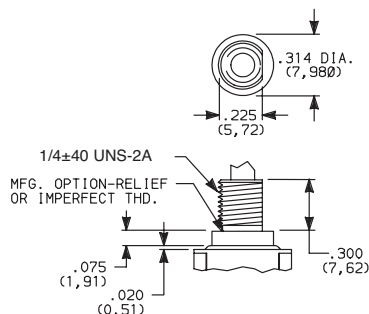
H9 .300" HIGH UNTHREADED, FLAT

NONE

NO BUSHING CHOICE REQUIRED (JXX ACTUATORS)

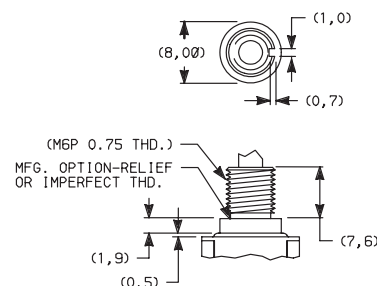
Y3

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.

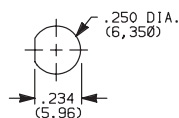


Withstands 12 in./lbs. of torque with no distortion.

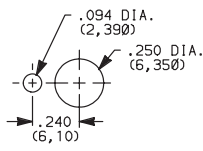
NOTE: When selecting bushing option, plunger selection must also be made, see above. No bushing option choice required when any JXX actuator option is selected.

PANEL MOUNTING

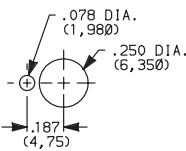
1/4 IN. BUSHING



Without Locking Ring

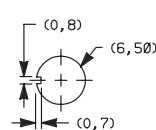


With Standard Locking Ring

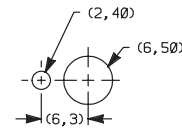


With Small Locking Ring

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



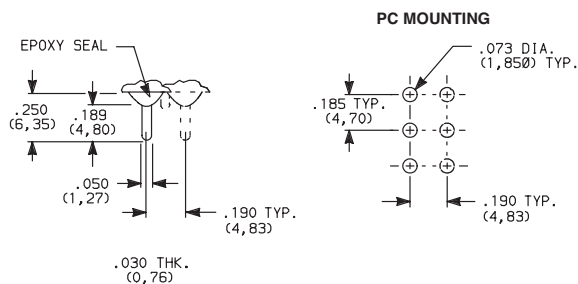
8060 Series

Alternate Action and Momentary Pushbutton Switches

TERMINATIONS

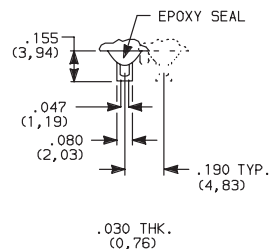


C PC THRU-HOLE



SPDT and DPDT

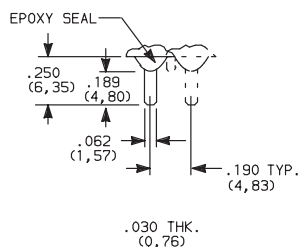
Z SOLDER LUG



SPDT and DPDT

Not available with P, S or R contact material.

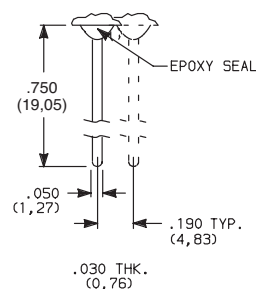
Z3 QUICK CONNECT



SPDT and DPDT

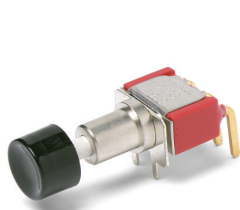
Not available with P, S or R contact material.
Mating quick connector available;
order part number 530100000, page A-61.

W WIRE WRAP

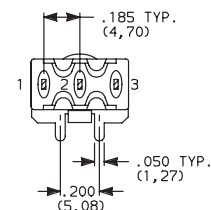
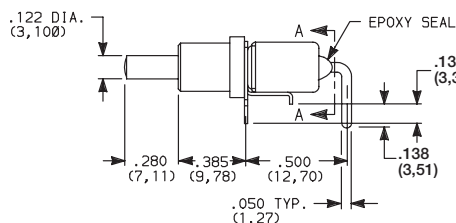
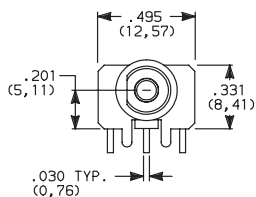


SPDT and DPDT

A RIGHT ANGLE, PC THRU-HOLE

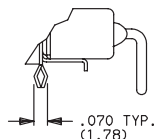
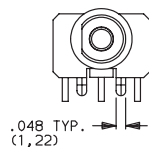


8161SH9ABE2
SPDT

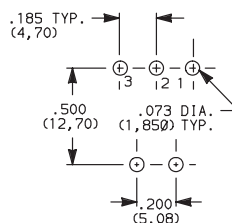


SECTION A-A

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



PC MOUNTING



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

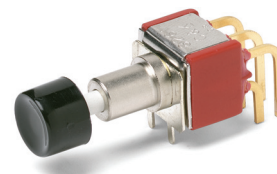
NOTE: PC pattern must clear switch support leg.



Third Angle
Projection

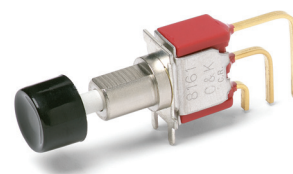
Pushbutton

SECTION A-A



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 hole centers (pitch): .200 (5,08)
- Radius of each hole: .050 TYP. (1,27)
- Three holes are labeled with the number 1, 2, and 3 from bottom to top.

8161SH9AV2BE2
SPDT

Third Angle Projection

C&K

www.ckswitches.com

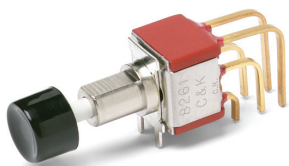


8060 Series Alternate Action and Momentary Pushbutton Switches

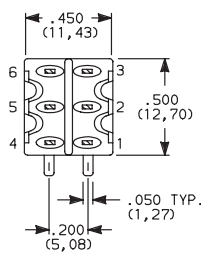
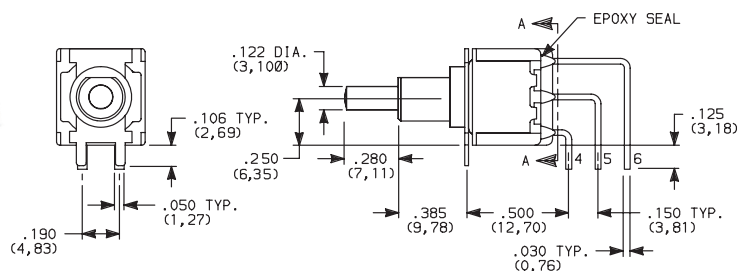
TERMINATIONS



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

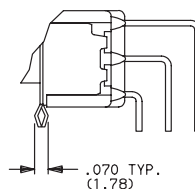
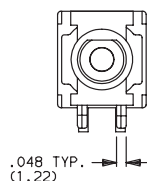


8261SH9AV2BE2
DPDT

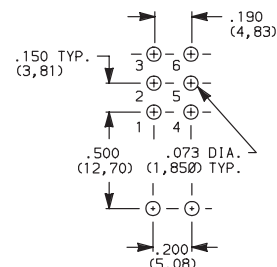


SECTION A-A

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



PC MOUNTING



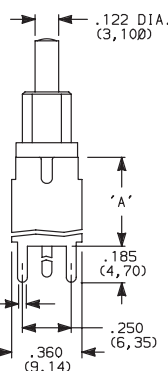
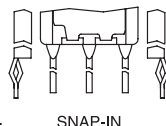
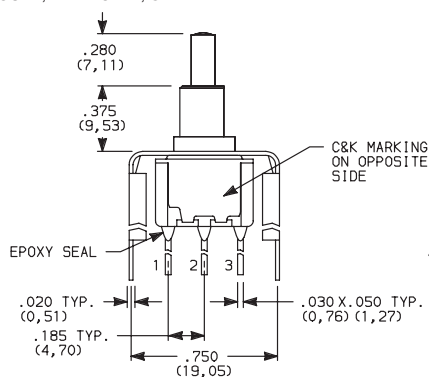
Not available with I seal.
Terminal bend radii and lead-in manufacturing option.

V6 VERTICAL MOUNT, V-BRACKET

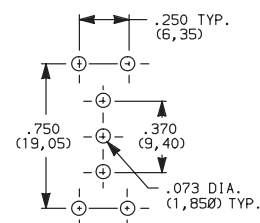
V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



8161SH9_BE2
SPDT



PC MOUNTING



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

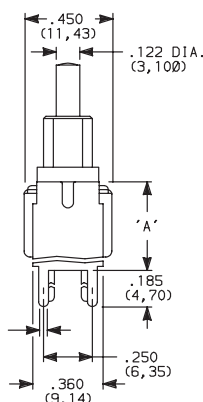
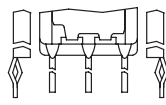
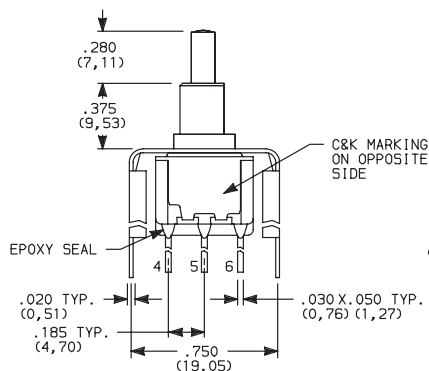
Not available with I seal.

V6 VERTICAL MOUNT, V-BRACKET

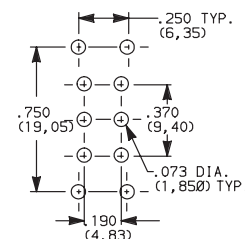
V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



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

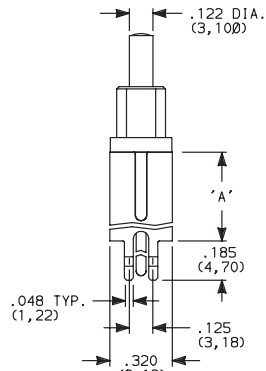
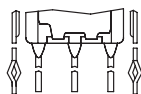
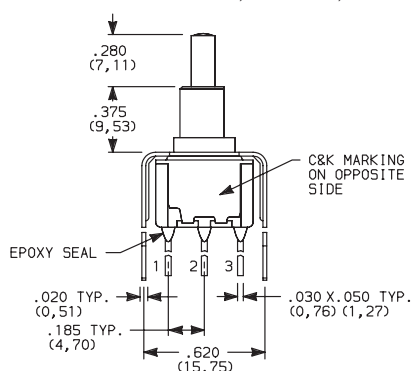


A
Pushbutton

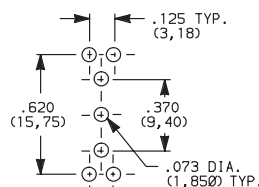
TERMINATIONS

V3, V4 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



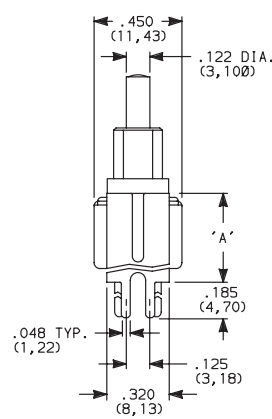
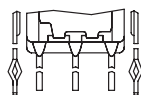
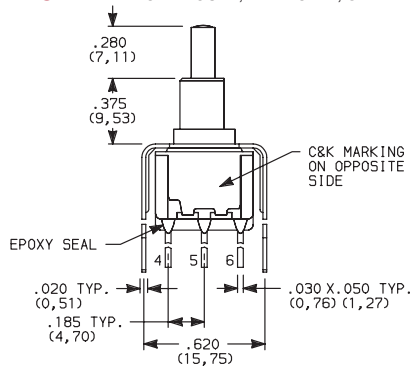
8161SH9_BE2
SPDT

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

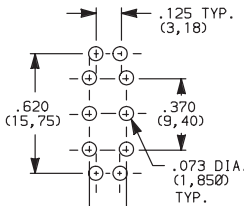
Not available with I seal.

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

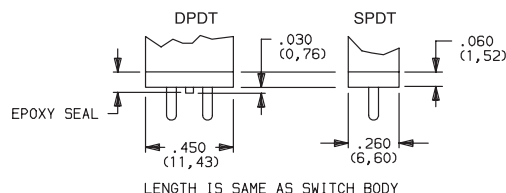
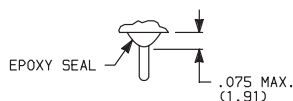
29 Aug 18



8060 Series

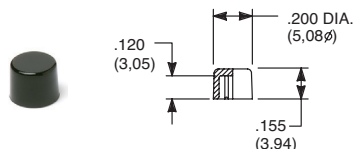
Alternate Action and Momentary Pushbutton Switches

SEAL

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

AVAILABLE HARDWARE

Cap

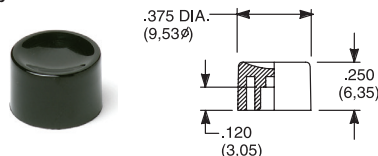


PART NO.

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

Material: Nylon
Finish: Gloss

Cap

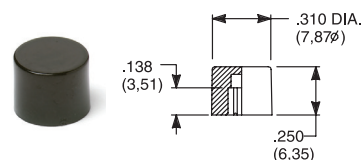


PART NO.

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

Material: Nylon
Finish: Gloss

Cap

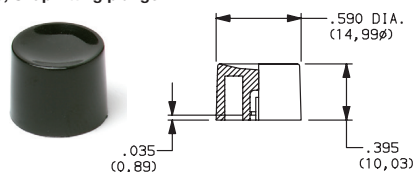


PART NO.

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

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

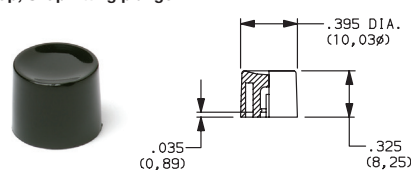


PART NO.

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

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

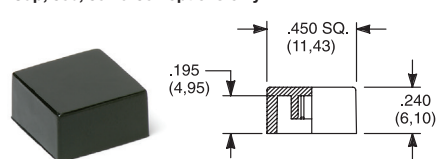


PART NO.

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

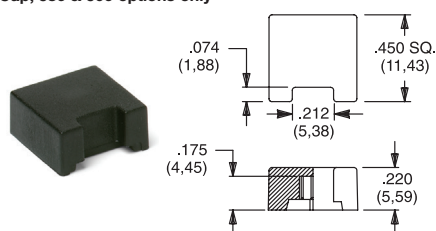
Material: Nylon
Finish: Gloss

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

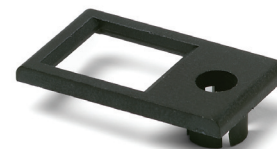


PART NO.

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

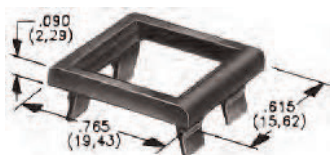
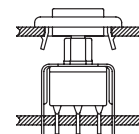
PART NO.
530100000

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

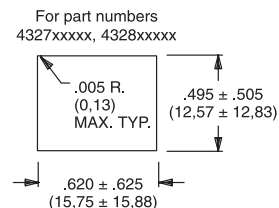
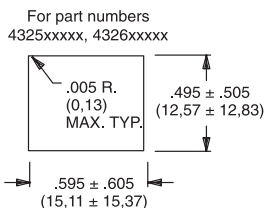


.090" (2,29) PANEL THK. .125" (3,18) PANEL THK.

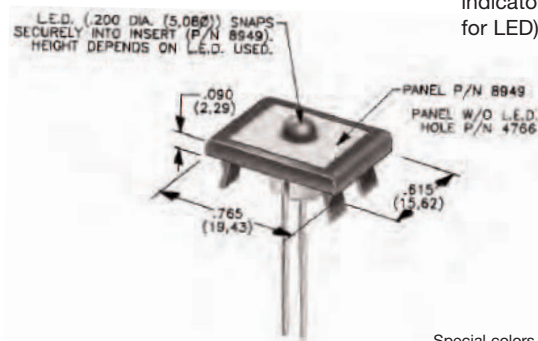
PART NO.
432702263

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

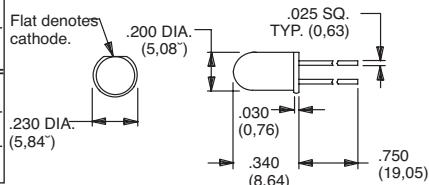
Special colors, custom markings available, consult Customer Service Center.

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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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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