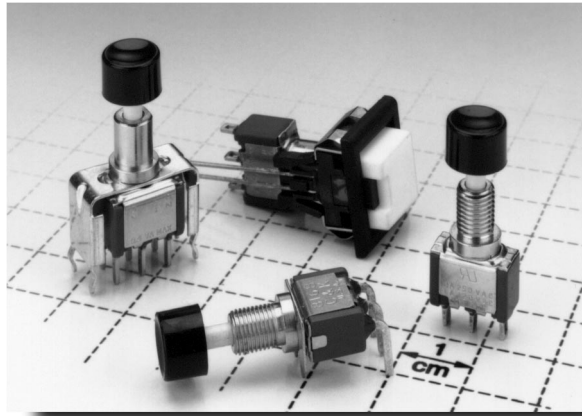


C&K 8060 Series

Alternate Action and Momentary Pushbutton Switches



Features/Benefits

- Long travel and latching options
- Available with illuminated LED
- Long life contact design

Typical Applications

- Instrumentation
- Computers and peripherals
- Telecommunications and networking equipment

Build-A-Switch

Our easy Build-A-Switch concept allows you to mix and match options to create the switch you need. Below is a complete listing of options shown in catalog. To order, simply select desired option from each category and place in the appropriate box. Switches with standard options are shown on pages B-47 and B-48. Available options are shown and described on pages B-48 thru B-55. 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.

Typical Example: 8 1 6 1 — S — — — H — — — Z — — — Q — E — 2 — — —

Switch Function

- 8161** (STD.) SPDT On-On
- 8168** (STD.) SPDT On-Mom.
- 8261** (STD.) DPDT On-On

Actuator or Plunger

- S** (STD.) Plunger with cap
- J80** Snap-in
- J81** Snap-in with frame
- J82** Snap-in with frame & LED
- J86** Snap-in with frame & LED
- J96** PC with V-bracket & LED
- L** Plunger with cap
- L1** Plunger with cap
- S1** Plunger with cap
- S2** Plunger with cap

Bushing

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

Terminations

- A** (STD.) Right angle, PC thru-hole
- AV2** (STD.) Vertical right angle, PC thru-hole
- C** (STD.) PC Thru-hole
- Z** (STD.) Solder lug
- A3** Right angle, snap-in, PC thru-hole
- AV3** Vertical right angle, snap-in, PC thru-hole
- AW** Right angle, extended, PC thru-hole
- V2** .555" high, V-bracket
- V3** .460" high, V-bracket
- V4** .630" high, V-bracket
- V6** .460" high, V-bracket
- V7** .630" high, V-bracket
- V8** .953" high, V-bracket
- V9** 1.150" high, V-bracket
- V21** .555" high, snap-in V-bracket
- V31** .460" high, snap-in V-bracket
- V61** .460" high, snap-in V-bracket
- W** .750" long, wire wrap
- W3** .425" long, wire wrap
- Z3** Quick connect

Contact Material

- B** (STD.) Gold
- Q** (STD.) Gold over silver
- G** Gold over silver
- K** Silver
- L** Gold over silver
- M** Gold over silver

Seal

- E** (STD.) Epoxy
- I** Epoxy potted base

Cap Color

- 2** (STD.) Black
- 1** White
- 3** Red

Frame Color

- 2** (STD.) Black
- 1** White
- 3** Red

LED Color

- 3** (STD.) Red
- NONE** Models without LED
- 5** Yellow
- 6** Green

C&K 8060 Series

Alternate Action and Momentary Pushbutton Switches

Specifications

CONTACT RATING: Q contact material: 6 AMPS @ 120 V AC or 28 V DC; 3 AMPS @ 250 V AC. See page B-55 for additional ratings.

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

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

INSULATION RESISTANCE: 10^9 ohms min.

DIELECTRIC STRENGTH: 1,000 V RMS 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: 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, tin plated.

END CONTACTS: Q contact material: Coin silver, silver plated. See page B-55 for additional contact materials.

CENTER CONTACT & ALL TERMINALS: Q contact material: Copper alloy, silver plated. See page B-55 for additional contact materials.

TERMINAL SEAL: Epoxy

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



B

Pushbutton

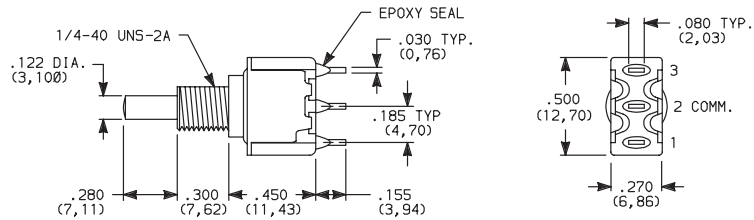
SWITCHES WITH STANDARD OPTIONS

PART NUMBER	FUNCTION	POS. 1	POS. 2
8161SHZQE2	SPDT	ON	ON
8168SHZQE2		ON	MOM.

MOM. = Momentary

NOTE: For PC termination, replace 'Z' with 'C'. For panel mounting information, see page B-51. For PC mounting information, see page B-51.

U.S. Patent No. 4,095,070

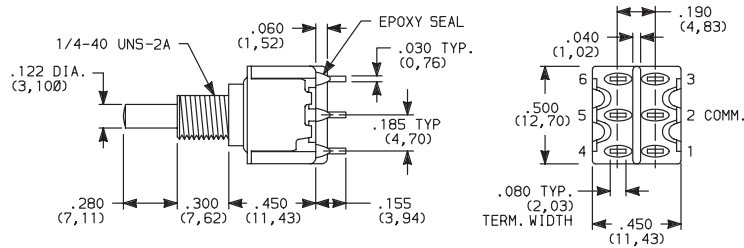


8161SHZQE2
SPDT

PART NUMBER	FUNCTION	POS. 1	POS. 2
8261SHZQE2	DPDT	ON	ON

NOTE: For PC termination, replace 'Z' with 'C'. For panel mounting information, see page B-51. For PC mounting information, see page B-51.

U.S. Patent No. 4,095,070

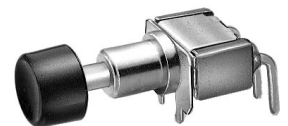
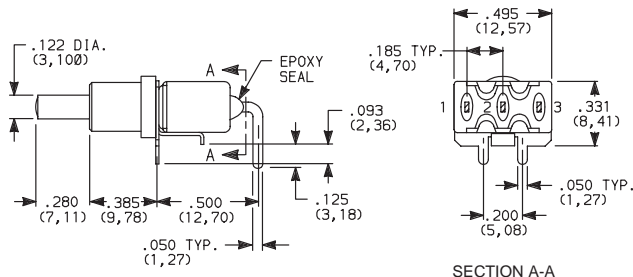


8261SHZQE2
DPDT

PART NUMBER	FUNCTION	POS. 1	POS. 2
8168SH9ABE2	SPDT	ON	MOM.

MOM. = Momentary

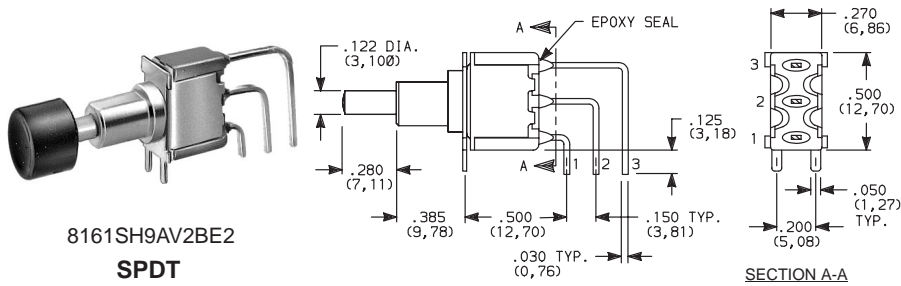
NOTE: For PC mounting information, see page B-52.



8168SH9ABE2
SPDT

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

SWITCHES WITH STANDARD OPTIONS



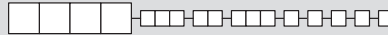
8161SH9AV2BE2
SPDT

PART NUMBER	FUNCTION	POS. 1	POS. 2
8161SH9AV2BE2	SPDT	ON	ON
8168SH9AV2BE2		ON	MOM.

MOM. = Momentary

NOTE: For PC mounting information, see page B-53.

SWITCH FUNCTION

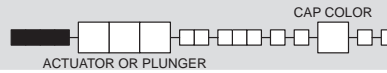


NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS. 1	POS. 2	POS. 1	POS. 2	
SP	8161 (STD.)	ON	ON	2-3	2-1	
	8168 (STD.)	ON	MOM.			
DP	8261 (STD.)	ON	ON	2-3-5-6	2-1-5-4	

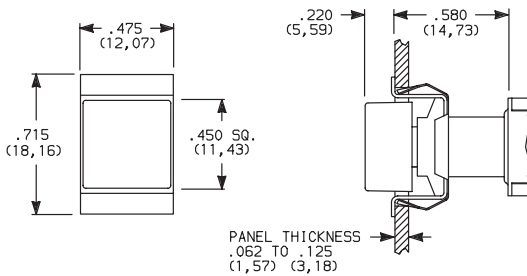
MOM. = Momentary

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

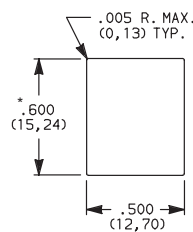
ACTUATOR—SNAP-IN FRONT MOUNT



J80 SNAP-IN



PANEL MOUNTING



* Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thick panels.

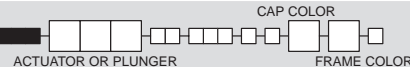
OPTION CODE	CAP COLOR
2	(STD.) BLACK
1	WHITE
3	RED

No frame color choice required.

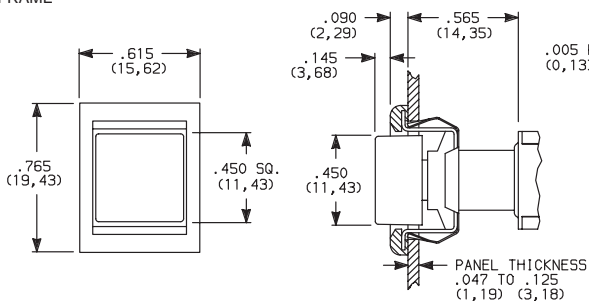
Cap Finish: matte. Other colors available, consult Customer Service Center.

NOTE: Available with C, W, W3, Z or Z3 terminations.

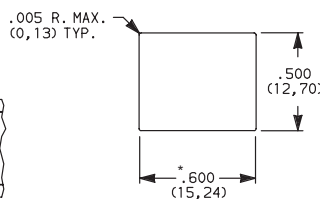
ACTUATOR—SNAP-IN FRONT MOUNT



J81 SNAP-IN WITH FRAME



PANEL MOUNTING



* Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thick panels.

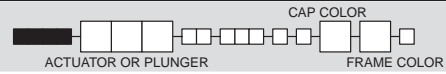
OPTION CODE	CAP AND FRAME COLOR
2	(STD.) BLACK
1	WHITE
3	RED

Cap and Frame Finish: matte. Other colors available, consult Customer Service Center.

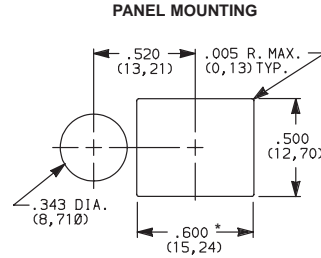
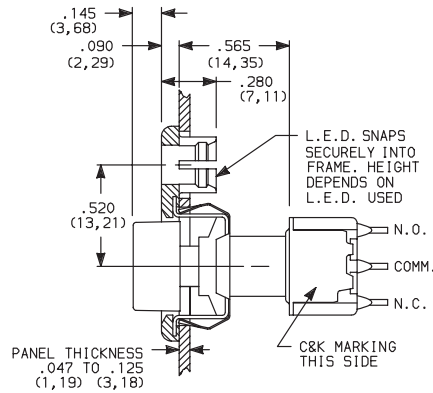
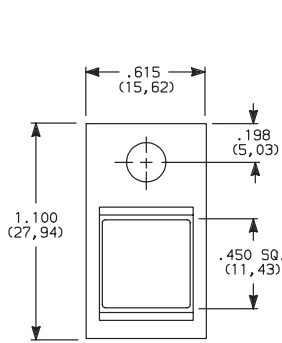
NOTE: Available with C, W, W3, Z or Z3 terminations.

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

ACTUATOR—SNAP-IN FRONT MOUNT



J82 SNAP-IN WITH FRAME AND LED



B

Pushbutton

LED not included.
For LED information, see page L-30.

* Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thick panels.

OPTION CODE	CAP AND FRAME COLOR
2	(STD.) BLACK
1	WHITE
3	RED

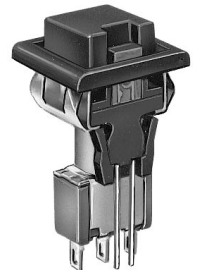
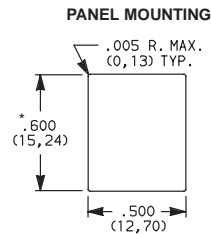
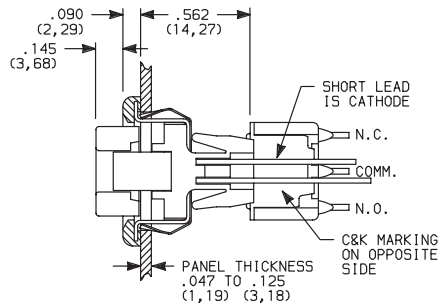
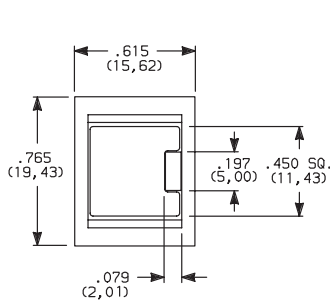
Cap and Frame Finish: matte. Other colors available, consult Customer Service Center.

NOTE: Available with C, W, W3, Z or Z3 terminations.

ACTUATOR—SNAP-IN FRONT MOUNT



J86 SNAP-IN WITH FRAME AND LED



For LED information, see page L-30.

* Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thick panels.

OPTION CODE	CAP AND FRAME COLOR
2	(STD.) BLACK
1	WHITE
3	RED

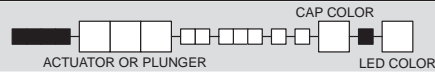
Cap and Frame Finish: matte. Other colors available, consult Customer Service Center.

NOTE: Available with C, W, W3, Z or Z3 terminations and SPDT models only.

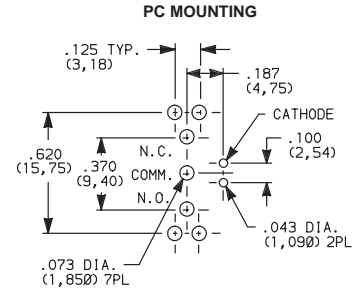
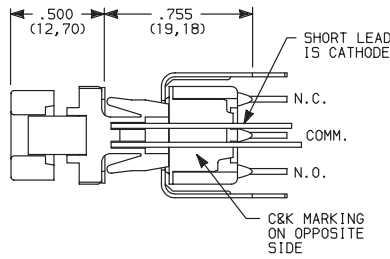
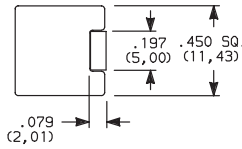
OPTION CODE	LED COLOR
3	(STD.) RED
5	YELLOW
6	GREEN

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

ACTUATOR—SNAP-IN FRONT MOUNT



J96 PC WITH V-BRACKET AND LED



For LED information, see page L-30.

OPTION CODE	CAP COLOR
2	(STD.) BLACK
1	WHITE
3	RED

Cap Finish: matte. Other colors available, consult Customer Service Center.

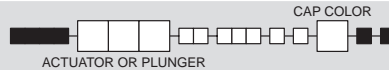
NOTE: Available with V3 termination and SPDT models only.

OPTION CODE	LED COLOR
3	(STD.) RED
5	YELLOW
6	GREEN

Pushbutton

B

PLUNGER

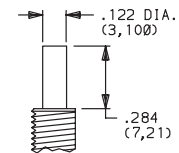
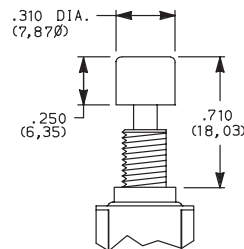
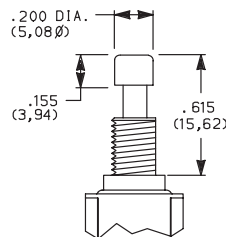
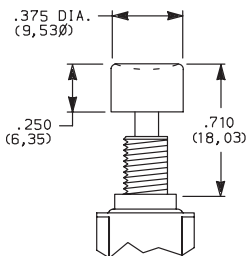


S (STD.) PLUNGER WITH CAP P/N 7527

S1 PLUNGER WITH CAP P/N 7089

S2 PLUNGER WITH CAP P/N 8018

S, S1, S2 plunger dimensions.

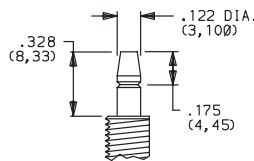
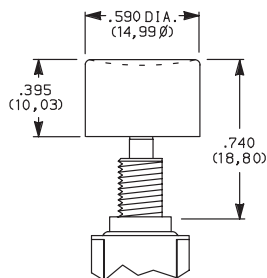
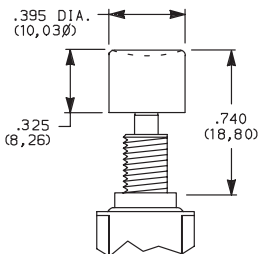


Plunger material: Glass filled nylon or glass filled polyester (UL 94V-0).

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	(STD.) BLACK
1	WHITE
3	RED

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 next page.

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

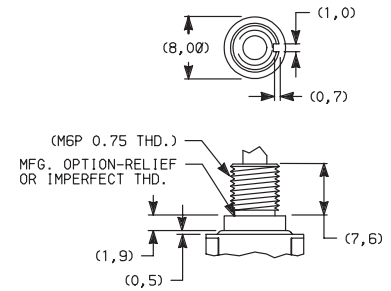
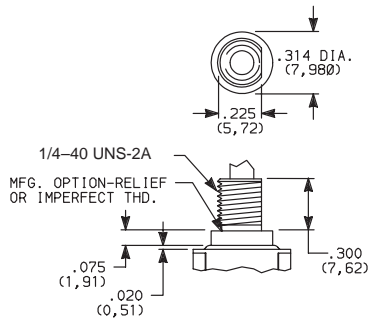
BUSHING

H (STD.) .300" HIGH THREADED, FLAT

H9 (STD.) .300" HIGH UNTHREADED, FLAT

NONE NO BUSHING CHOICE REQUIRED
(JXX ACTUATORS)

Y3 7.6mm THREADED, KEYWAY



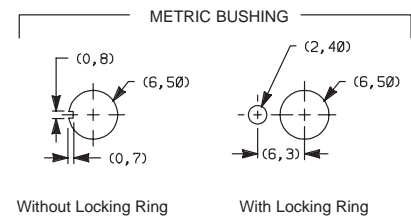
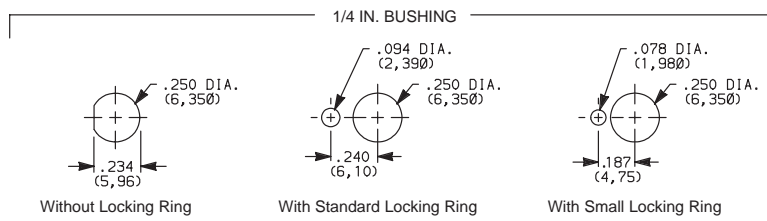
H bushing standard with C, W, W3, Z or Z3 terminations.
H9 bushing standard with A, A3, AV2, AV3, AW or V2-V61 terminations.

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 previous page. No bushing option choice required when any JXX actuator option is selected.

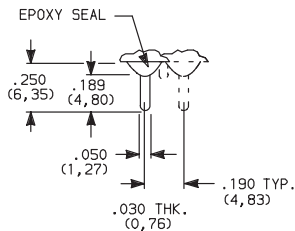
PANEL MOUNTING



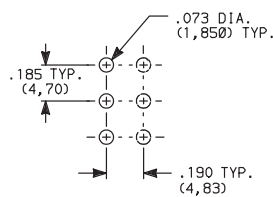
NOTE: Two mounting nuts, locking ring and lockwasher supplied standard with threaded bushings. Optional mounting nut and locking ring styles and finishes available, see section L.

TERMINATIONS

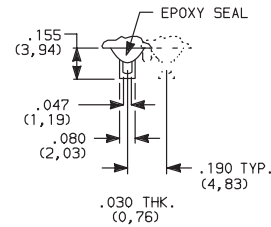
C (STD.) PC THRU-HOLE



PC MOUNTING



Z (STD.) SOLDER LUG

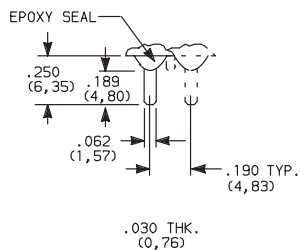


SPDT and DPDT

SPDT and DPDT

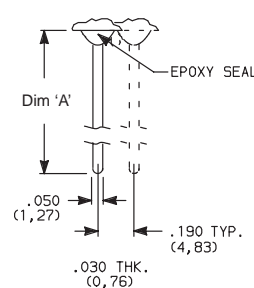
Not available with K, L or M contact material.

Z3 QUICK CONNECT



Not available with K, L or M contact material.
Mating quick connector available; order part number 530100000.

W, W3 WIRE WRAP



OPTION CODE	DIM 'A'
W	.750 (19,05)
W3	.425 (10,80)

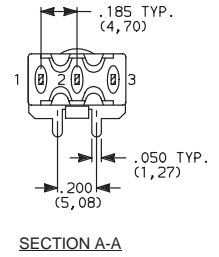
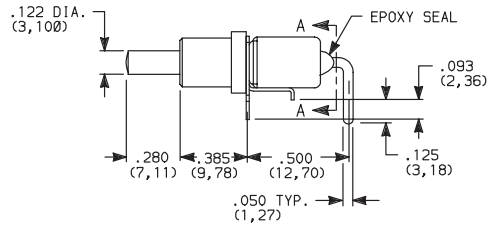
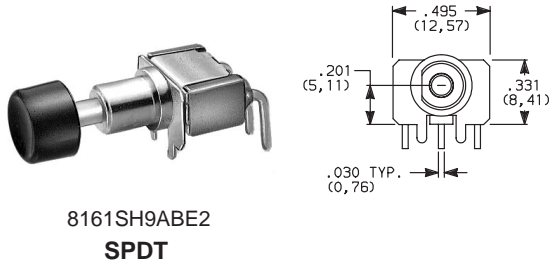
SPDT and DPDT

SPDT and DPDT

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

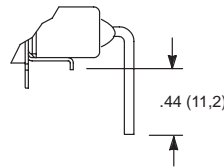
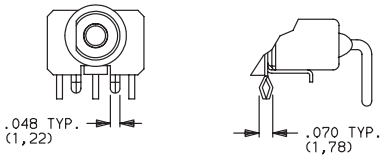
TERMINATIONS

A RIGHT ANGLE, PC THRU-HOLE

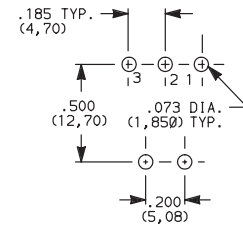


A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

AW RIGHT ANGLE, EXTENDED, PC THRU-HOLE



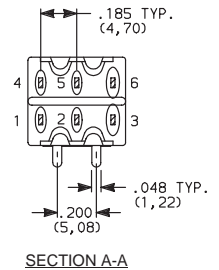
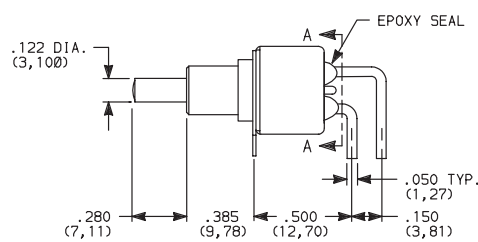
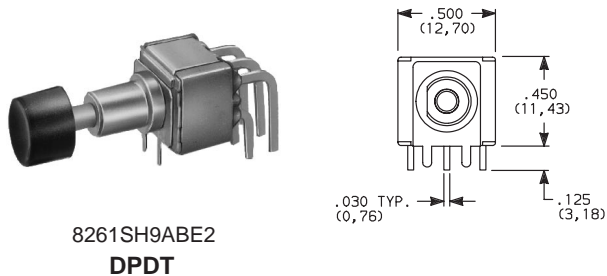
PC MOUNTING



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

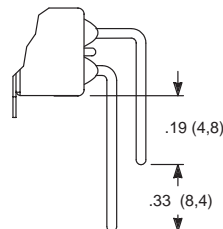
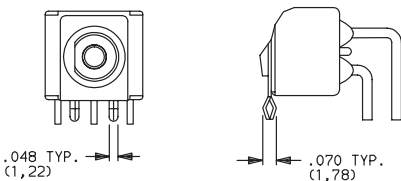
NOTE: PC pattern must clear switch support leg.

A RIGHT ANGLE, PC THRU-HOLE

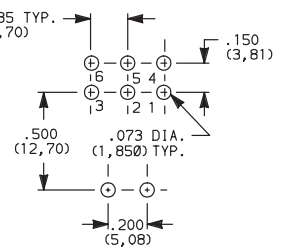


A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

AW RIGHT ANGLE, EXTENDED, PC THRU-HOLE



PC MOUNTING



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

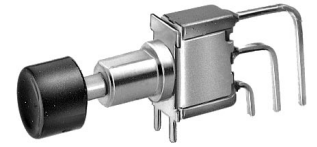
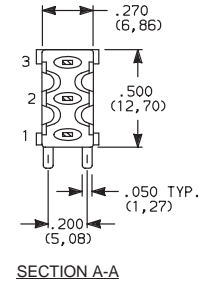
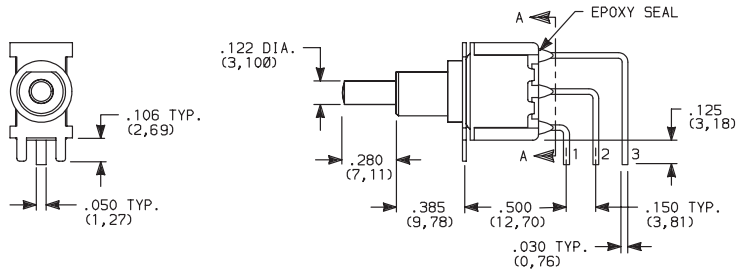
B

Pushbutton

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

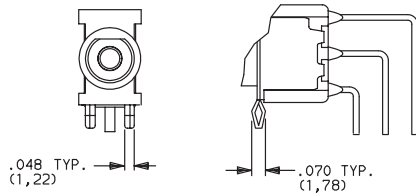
TERMINATIONS

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

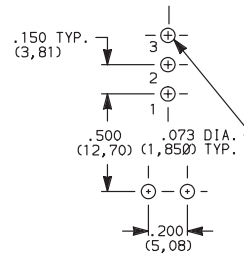


8161SH9AV2BE2
SPDT

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

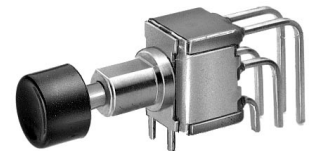
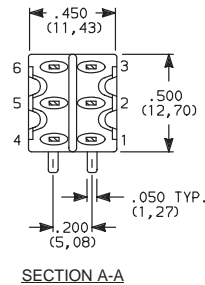
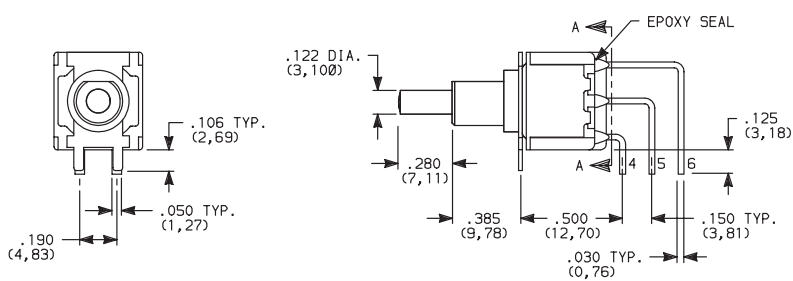


PC MOUNTING



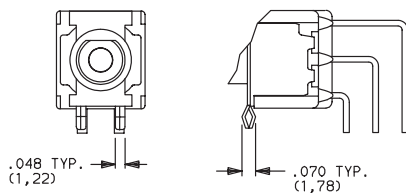
Not available with I seal.
Terminal bend radii and lead-in manufacturing option.

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

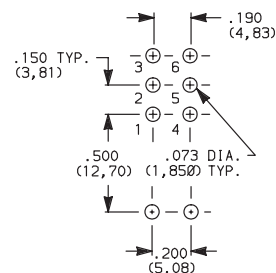


8261SH9AV2BE2
DPDT

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.

C&K 8060 Series

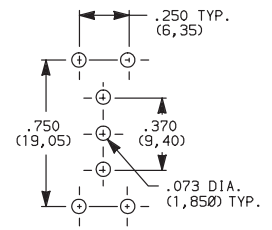
Alternate Action and Momentary Pushbutton Switches

TERMINATIONS

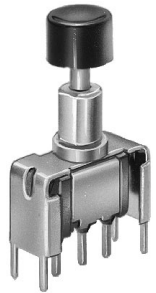
V2, V6, V7, V8 VERTICAL MOUNT, V-BRACKET

V21, V61 VERTICAL MOUNT, V-BRACKET, SNAP-IN

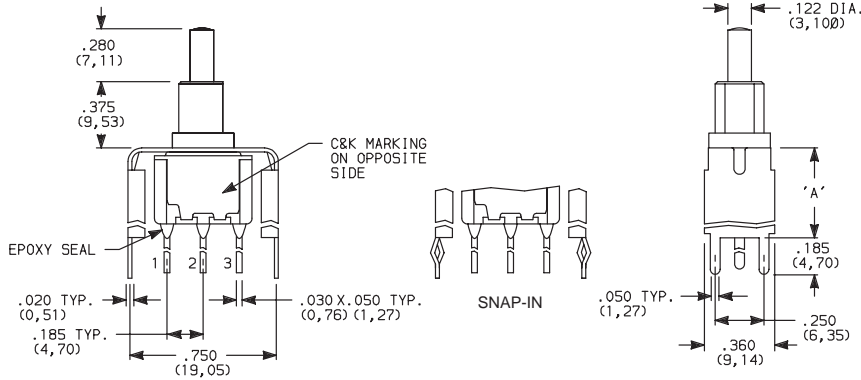
PC MOUNTING



OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7	.630 (16,00)
V8	.953 (24,21)



8161SH9_BE2
SPDT

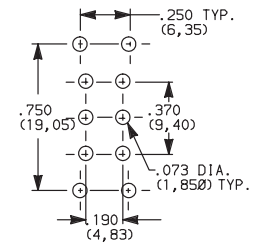


Not available with I seal.

V2, V6, V7, V8 VERTICAL MOUNT, V-BRACKET

V21, V61 VERTICAL MOUNT, V-BRACKET, SNAP-IN

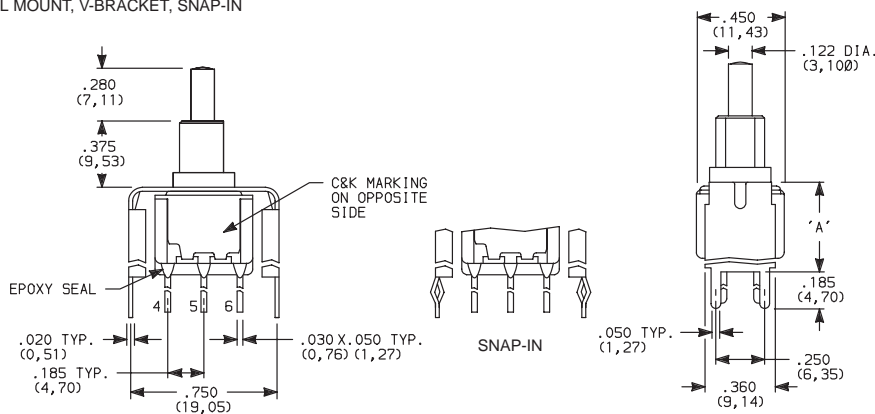
PC MOUNTING



OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7	.630 (16,00)
V8	.953 (24,21)



8261SH9_BE2
DPDT

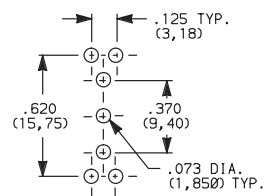


Not available with I seal.

V3, V4, V9 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN

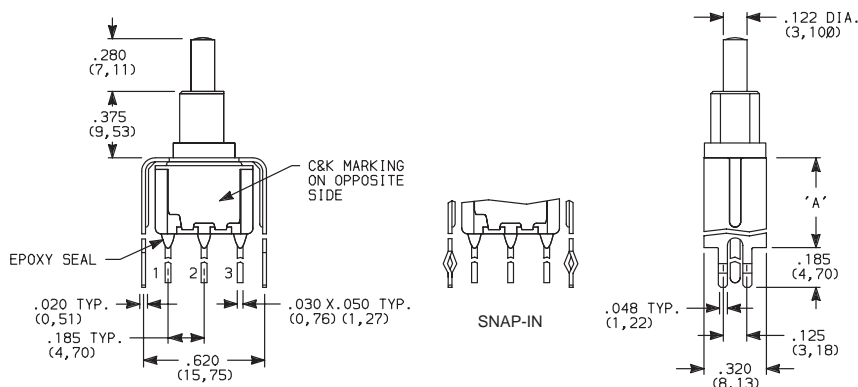
PC MOUNTING



OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4	.630 (16,00)
V9	1.150 (29,21)



8161SH9_BE2
SPDT

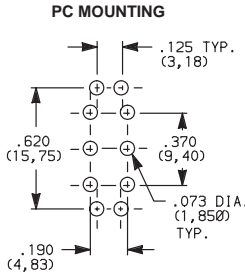
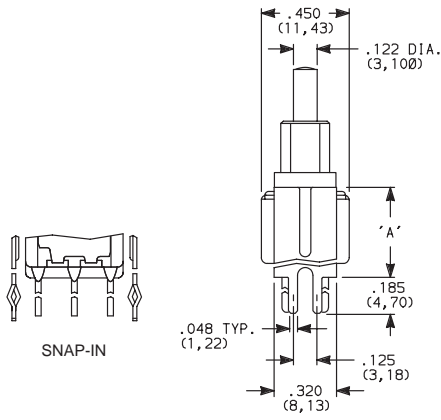
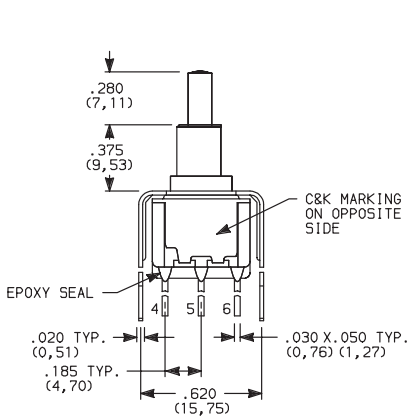


Not available with I seal.

C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

TERMINATIONS

V3, V4, V9 VERTICAL MOUNT, V-BRACKET
V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



8261SH9_BE2
DPDT

OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4	.630 (16,00)
V9	1.150 (29,21)

Not available with I seal.



CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B (STD.)	GOLD ¹	GOLD ¹	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
K		TIN-LEAD ⁶		
Q (STD.)	SILVER ^{4,5}	SILVER ⁵	POWER	6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC.
M		TIN-LEAD 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.
L		TIN-LEAD ⁶		

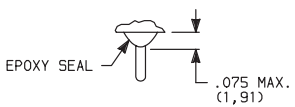
CONTACT MATERIAL/APPLICATION RECOMMENDATIONS—SEE CHART, PAGE L-31.

- 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 tin-lead alloy over nickel plate.

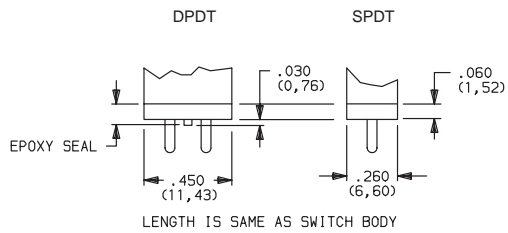
All models with all options when ordered with G, L, M or Q contact material.
 B contact material standard with all terminations except C, Z & Z3.
 Q contact material standard with C, Z & Z3 terminations.
 K, L & M contact materials not available with Z & Z3 terminations.

SEAL

E (STD.) EPOXY SEAL



I EPOXY POTTED BASE



NOTE: Available with C, W, W3, Z, Z3 terminations only.