

C&K 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



Specifications

CONTACT RATING: Q contact material: 6 AMPS @ 120 V AC or 28 V DC; 3 AMPS @ 250 V AC. See page A-57 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. For the latest information regarding RoHS compliance, please go to: www.ittcannon.com/rohs.

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-57 for additional contact materials.

CENTER CONTACT & ALL TERMINALS: Q contact material: Copper alloy, silver plated. See page A-57 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-51 thru A-59. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all “bottom-wash” PCB cleaning methods.

Switch Function

8161

SPDT On-On

8168

SPDT On-Mom.

8261

DPDT On-On

Actuator or Plunger

S

.710" high plunger with .375" dia. cap

J80

Snap-in

J81

Snap-in with frame

J82

Snap-in with frame for LED

J86

Snap-in with frame & LED

L

.740" high plunger with .395" dia. cap

L1

.740" high plunger with .590" dia. cap

S1

.615" high plunger with .200" dia. cap

S2

.710" high plunger with .310" dia. cap

Bushing

H

.300" high, flat, hi torque

H9

.300" high, flat, hi torque

NONE

No bushing choice required

Y3

7.6mm, keyway

Terminations

A

Right angle, PC thru-hole

AV2

Vertical right angle, PC thru-hole

C

PC Thru-hole

Z

Solder lug

A3

Right angle, snap-in, PC thru-hole

AV3

Vertical right angle, snap-in, PC thru-hole

V3

.460" high, V-bracket

V4

.630" high, V-bracket

V6

.460" high, V-bracket

V21

.555" high, snap-in V-bracket

V31

.460" high, snap-in V-bracket

W

.750" long, wire wrap

Z3

Quick connect

Contact Material

B

Gold

K

Gold, tin-lead

P

Gold, matte-tin

Q

Silver

M

Silver, tin-lead

S

Silver, matte-tin

G

Gold over silver

L

Gold over silver, tin-lead

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



ITT

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

A-50

www.ittcannon.com

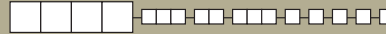
C&K 8060 Series Alternate Action and Momentary Pushbutton Switches



A

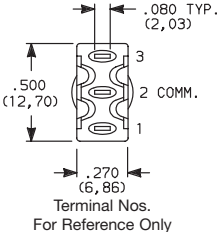
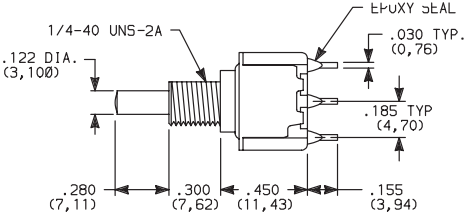
Pushbutton

SWITCH FUNCTION

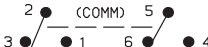


NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS. 1	POS. 2	POS. 1	POS. 2	
						
		C&K marking this side		C&K marking this side		
SP	8161 8168	ON ON	ON MOM.	2-3 2-3	2-1 2-1	SPDT 

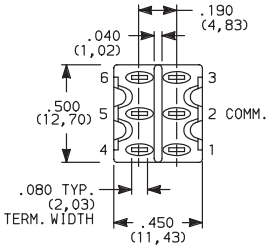
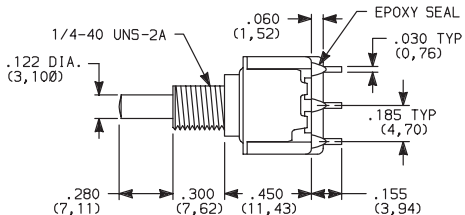
SPDT



Part number shown: 8161SHZQE

DP	8261	ON	ON	2-3,5-6	2-1,5-4	DPDT 
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DPDT

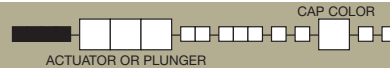


Part number shown: 8261SHZQE

MOM. = Momentary

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

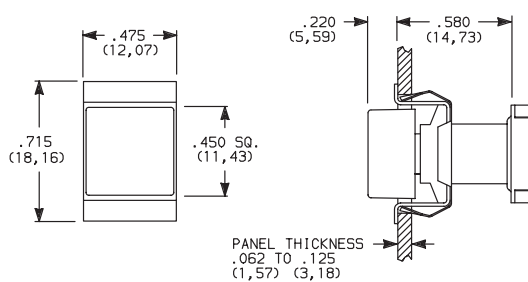
ACTUATOR—SNAP-IN FRONT MOUNT



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

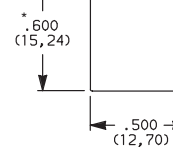
Cap Finish: matte.
Other colors available, consult Customer Service Center.
Available with C, W, Z or Z3 terminations.
NOTE: Caps & frames available separately, see pages A-58 and A-59.

J80 SNAP-IN



PANEL MOUNTING

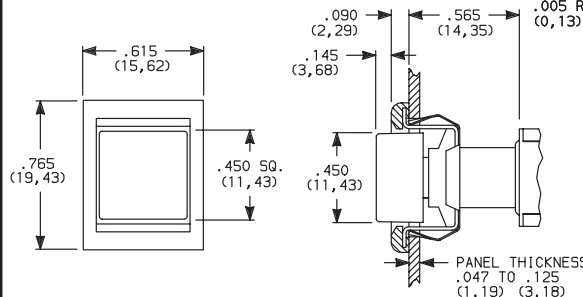
.005 R. MAX. (0, 13) TYP.



*Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,41/2,18) thick panels.

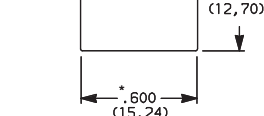


J81 SNAP-IN WITH BLACK FRAME



PANEL MOUNTING

.005 R. MAX. (0, 13) TYP.



*Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,41/2,18) thick panels.



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





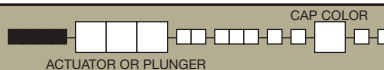
A

Pushbutton

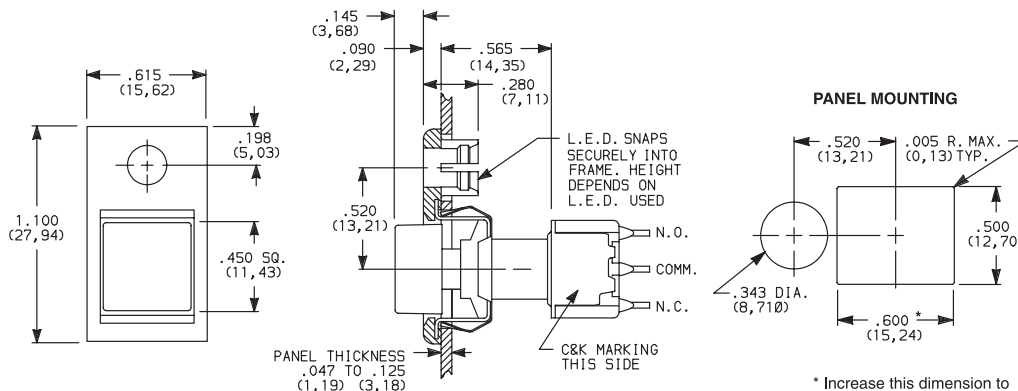
C&K 8060 Series

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.

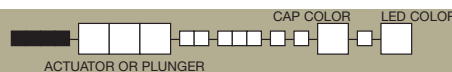
For LED information, see page A-59.

NOTE: Caps & frames available separately, see pages A-58 and A-59.

Other colors available, consult Customer Service Center.

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

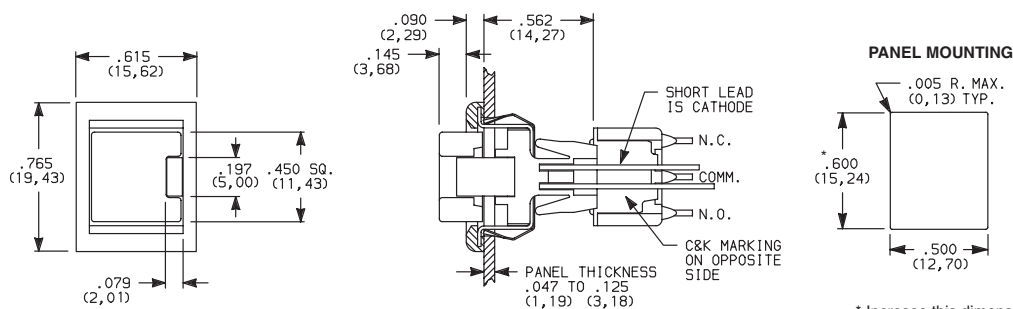
ACTUATOR—SNAP-IN FRONT MOUNT



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-58 and A-59.

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-59.



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

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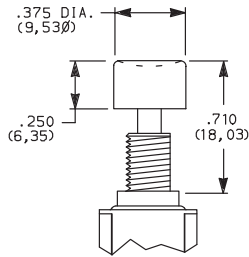
A

Pushbutton

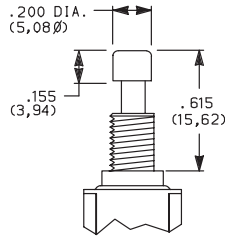
PLUNGER



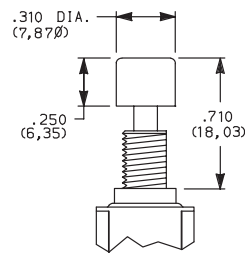
S PLUNGER WITH CAP P/N 7527



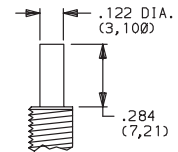
S1 PLUNGER WITH CAP P/N 7089



S2 PLUNGER WITH CAP P/N 8018

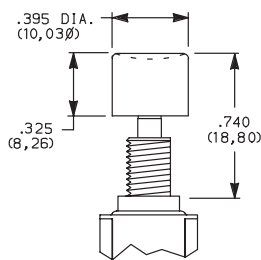


S, S1, S2 plunger dimensions.

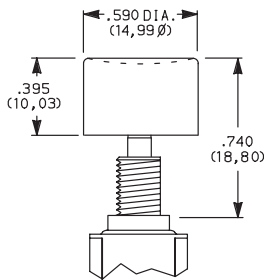


Plunger material: Glass filled nylon or glass filled polyester (UL 94V-0).

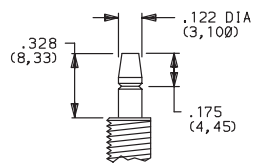
L PLUNGER WITH CAP P/N 8941



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

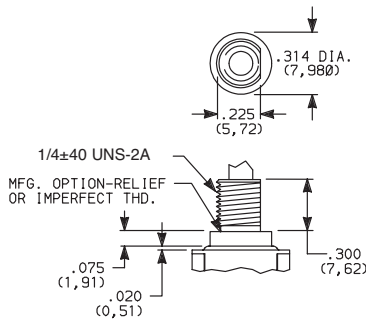


H .300" HIGH THREADED, FLAT

NONE NO BUSHING CHOICE REQUIRED (JXX ACTUATORS)

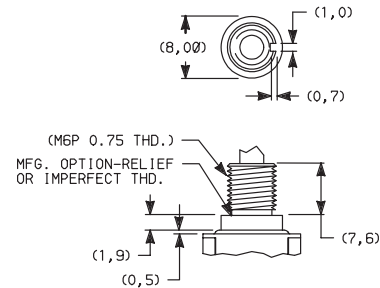
Y3 7.6mm THREADED, KEYWAY

H9 .300" HIGH UNTHREADED, FLAT



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

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

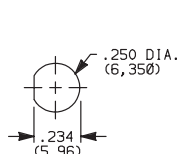


Withstands 12 in./lbs. of torque with no distortion.

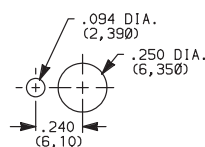
NOTE: When selecting bushing option, plunger selection must also be made, see above. No bushing option choice required when any JXX actuator option is selected.

PANEL MOUNTING

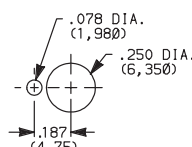
1/4 IN. BUSHING



Without Locking Ring

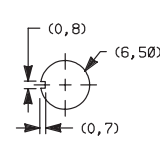


With Standard Locking Ring

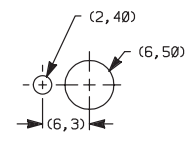


With Small Locking Ring

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



A

Pushbutton

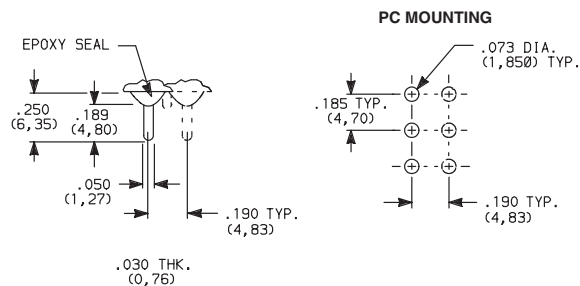
C&K 8060 Series

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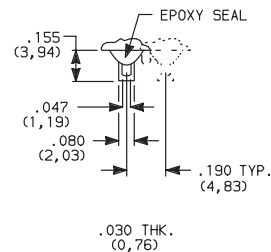
TERMINATIONS



C PC THRU-HOLE



Z SOLDER LUG

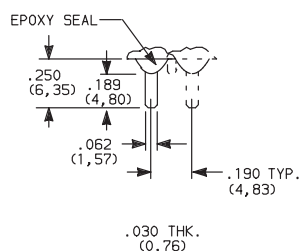


SPDT and DPDT

SPDT and DPDT

Not available with P, S, R, K, L, or M contact material.

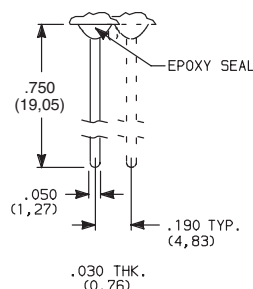
Z3 QUICK CONNECT



Not available with P, S, R, K, L, or M contact material. Mating quick connector available; order part number 530100000, page A-59.

SPDT and DPDT

W WIRE WRAP

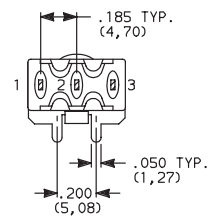
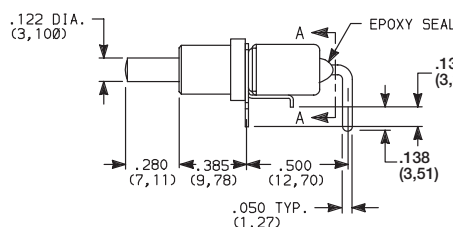
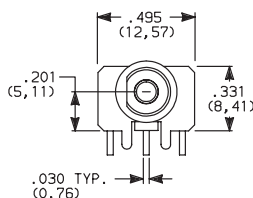


SPDT and DPDT

A RIGHT ANGLE, PC THRU-HOLE

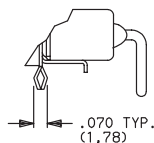
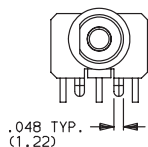


8161SH9ABE2
SPDT

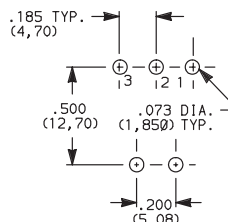


SECTION A-A

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



PC MOUNTING



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

NOTE: PC pattern must clear switch support leg.



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



Pushbutton

8261SH9ABE2
DPDT



A

Pushbutton

C&K 8060 Series

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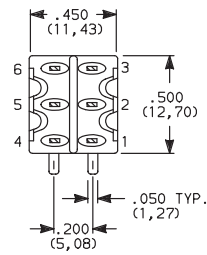
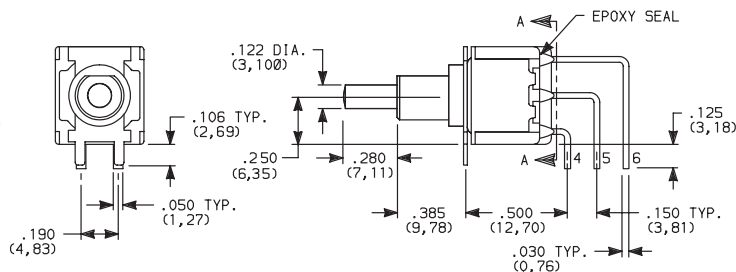
TERMINATIONS



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

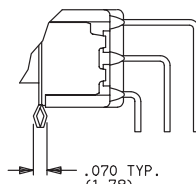
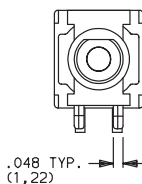


8261SH9AV2BE2
DPDT

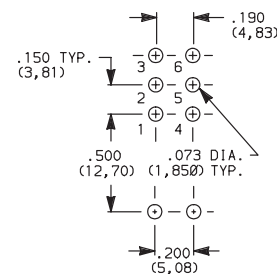


SECTION A-A

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



PC MOUNTING



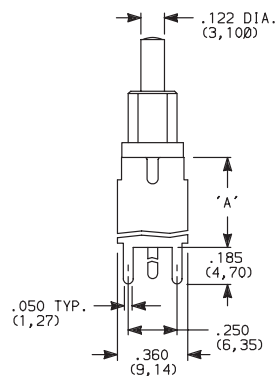
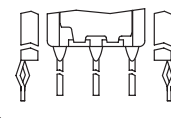
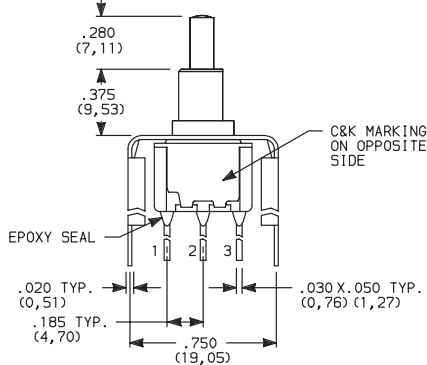
Not available with I seal.
Terminal bend radii and lead-in manufacturing option.

V6 VERTICAL MOUNT, V-BRACKET

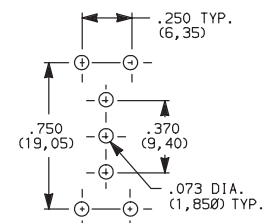
V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



8161SH9_BE2
SPDT



PC MOUNTING



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

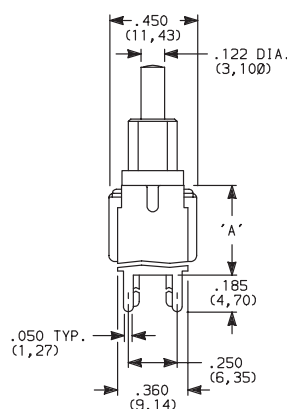
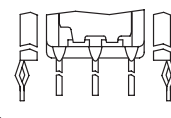
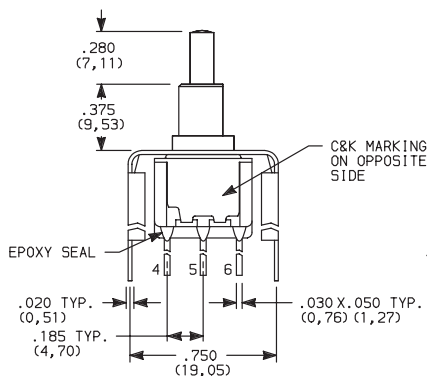
Not available with I seal.

V6 VERTICAL MOUNT, V-BRACKET

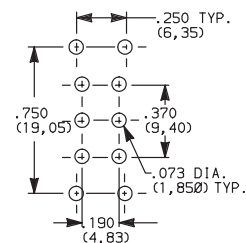
V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



8261SH9_BE2
DPDT



PC MOUNTING



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

Not available with I seal.



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

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A

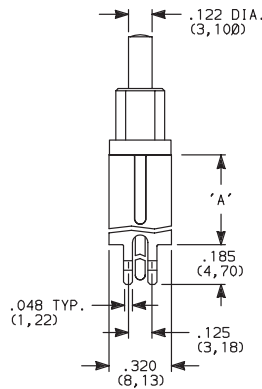
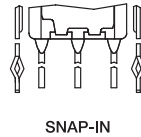
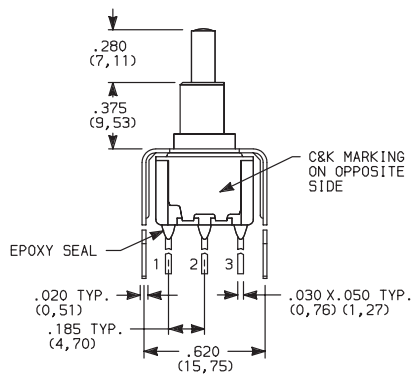
Pushbutton

TERMINATIONS

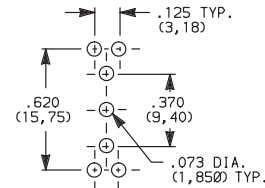


V3, V4 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



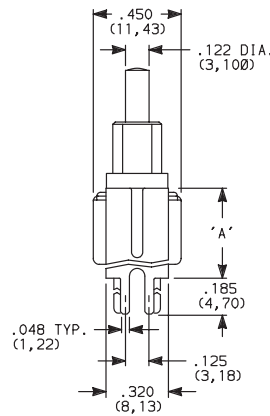
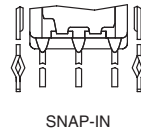
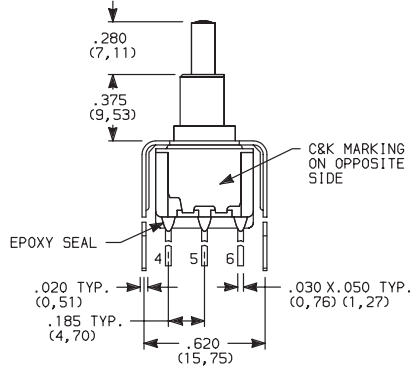
8161SH9_BE2
SPDT

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

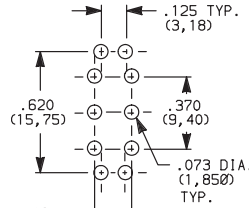
Not available with I seal.

V3, V4 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



8261SH9_BE2
DPDT

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

Not available with I seal.

CONTACT MATERIAL



OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B	YES	YES	GOLD ¹	GOLD ¹	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
K	NO	YES		TIN-LEAD ⁶		
P	YES	YES		MATTE-TIN ⁷		
Q	YES	YES	SILVER ^{4,5}	SILVER ⁵	POWER	6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC.
M	NO	YES		TIN-LEAD ⁶		
S	YES	YES		MATTE-TIN ⁷		
G	YES	YES	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	NO	YES		TIN-LEAD ⁶		
R	YES	YES		MATTE-TIN ⁷		

* 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 tin-lead alloy over nickel plate.

⁷ TERMINALS: Copper alloy, with matte-tin over nickel plate.

NOTE: Any models supplied with P, S, R, Q, B or G contact material are RoHS compliant. For the latest information regarding RoHS compliance, please go to: www.ittcannon.com/rohs.

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

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

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

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



Third Angle Projection

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change



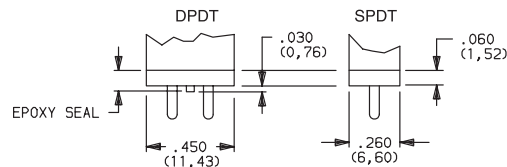
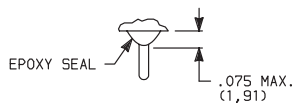


A

Pushbutton

C&K 8060 Series

Alternate Action and Momentary Pushbutton Switches

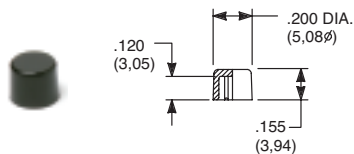
SEAL **E** EPOXY SEAL**I** EPOXY POTTED BASE

LENGTH IS SAME AS SWITCH BODY

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

AVAILABLE HARDWARE

Cap

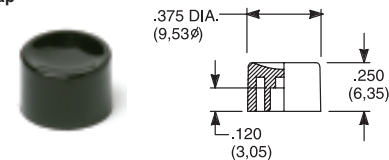


PART NO.

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

Material: Nylon
Finish: Gloss

Cap

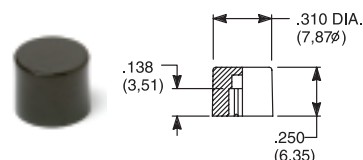


PART NO.

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

Material: Nylon
Finish: Gloss

Cap

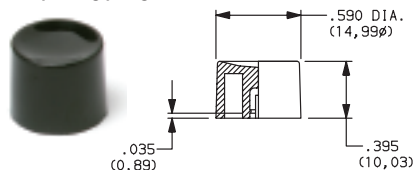


PART NO.

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

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

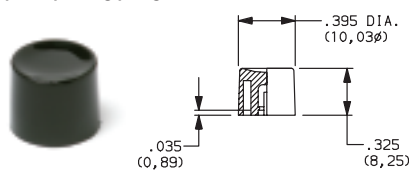


PART NO.

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

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

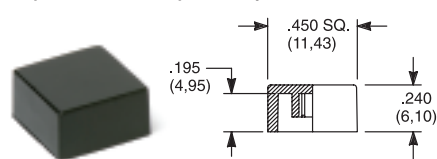


PART NO.

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

Material: Nylon
Finish: Gloss

Cap, J80, J81 & J82 options only



PART NO.

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

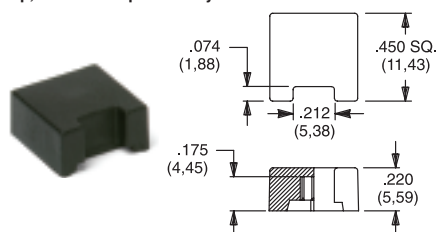
Material: Nylon
Finish: Gloss

PART NO.

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

Material: Nylon
Finish: Matte

Cap, J86 & J96 options only



PART NO.

459701000
459702000
459703000
459704000
459705000
459709000

Material: Nylon
Finish: Gloss

PART NO.

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

Material: Nylon
Finish: Matte

Frame



PART NO.

615602263 BLACK

Material: Nylon
Finish: Matte

Frame



PART NO.

613302263 BLACK

Material: Nylon
Finish: Matte

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



Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change



C&K 8060 Series Alternate Action and Momentary Pushbutton Switches

AVAILABLE HARDWARE

Fits Z3 Termination
female connector

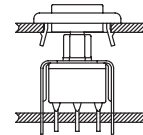
PART NO.
530100000

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



.047" (1,19) PANEL THK.

.062" (1,57) PANEL THK.

.090" (2,29) PANEL THK.

.125" (3,18) PANEL THK.

PART NO.
432502263

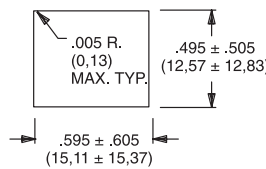
PART NO.
432602263

PART NO.
432702263

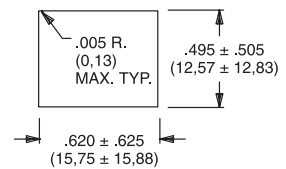
PART NO.
432802263 BLACK

PANEL MOUNTING

For part numbers
4325xxxxx, 4326xxxxx

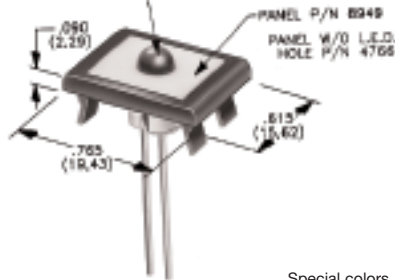


For part numbers
4327xxxxx, 4328xxxxx



Panel Inserts

LED: .200 DIA. (5,08) SNAPS
SECURELY INTO INSERT (P/N 8949).
HEIGHT DEPENDS ON LED USED.



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

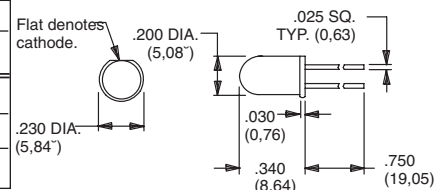
Special colors, custom markings available, consult Customer Service Center.

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



A

Pushbutton

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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