

UL® models available, see page D-48.

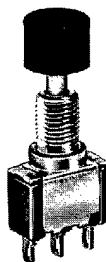
Easy Build-A-Switch:

Below is a complete listing of available options for 8060 SERIES ALTERNATE ACTION AND MOMENTARY PUSHBUTTON SWITCHES. Build-A-Switch allows you to mix and match options to create the switch you need—simply select desired option from each category. Switches with standard options are shown on page D-48; all available options are shown and described on pages D-48 thru D-56. When building a part number, some ordering format boxes may not be filled. Dashes, hyphens or spaces in the part number are not significant, and are shown for clarity only. Complete HOW TO ORDER information is at the end of this section, page D-56. Hardware and accessories are available separately, see catalog section H. All models have epoxy terminal seal, and are compatible with 'bottom-wash' PC board cleaning methods.

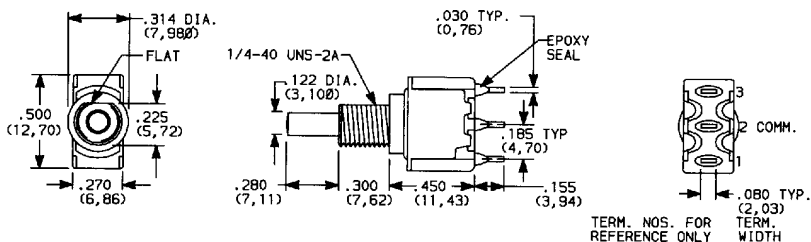
SWITCH FUNCTION	ACTUATOR OR PLUNGER	BUSHING	TERMINATIONS	CONTACT MATERIAL	SEAL	CAP COLOR	FRAME COLOR	LED COLOR
				Silver	Epoxy	Black	Black	Red
8161 8168 8261	J80 J81 J82 J86 J96 L L1 S S1 S2	(NONE) H H9 Y3	A A3 AV1 AV2 AV3 AV4 AV5 AW AW1 AW3 AW4 AW5 C V2 V3 V4 V6 V7 V8 V9 V21 V31 V41 V61 V71 V81 V91	W W1 W3 W4 W5 Z Z3	B G K L M Q	1 2 3 4 5 6 7 8 9	(NONE) 1 2 3 4 5 6 7 8 9	(NONE) 3 5 6

SWITCHES WITH STANDARD OPTIONS

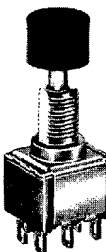
SPDT



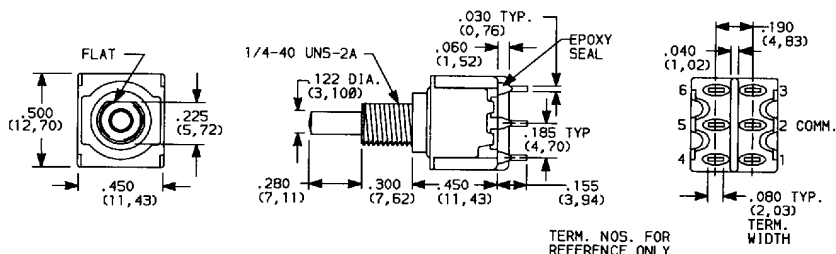
U.S. PATENT NO. 4,095,070



DPDT



U.S. PATENT NO. 4,095,070



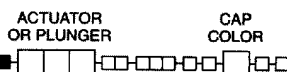
SWITCH FUNCTION

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

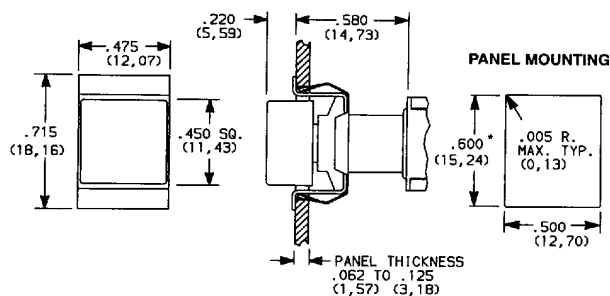
MOM. = MOMENTARY

† All models with all options when ordered with G, L, M or Q contact material. See AGENCY APPROVALS, page VIII.

ACTUATORS—SNAP-IN FRONT MOUNT



J80



CAP COLOR

OPTION CODE	CAP COLORS	OPTION CODE	CAP COLORS
1	WHITE	6	GREEN
2	BLACK (std.)	7	BLUE
3	RED	8	BROWN
4	ORANGE	9	GRAY
5	YELLOW		

Select cap color from chart. Place option code in appropriate box of ordering format. Cap finish: matte. Custom actuator markings and legends available, consult factory.

Available with Z, C, Z3, or W-W5 terminations.

No frame color choice required.

C&K COMPONENTS, INC.

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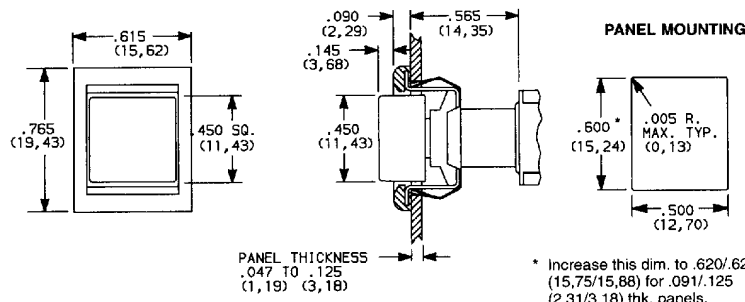
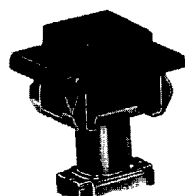
D-48

D 94E 1760885 0004211 100

ACTUATORS—SNAP-IN FRONT MOUNT



J81 WITH FRAME



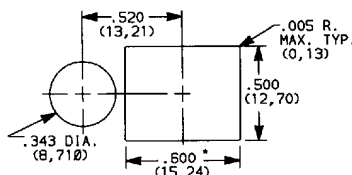
CAP AND FRAME COLORS

OPTION CODE	CAP AND FRAME COLORS
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

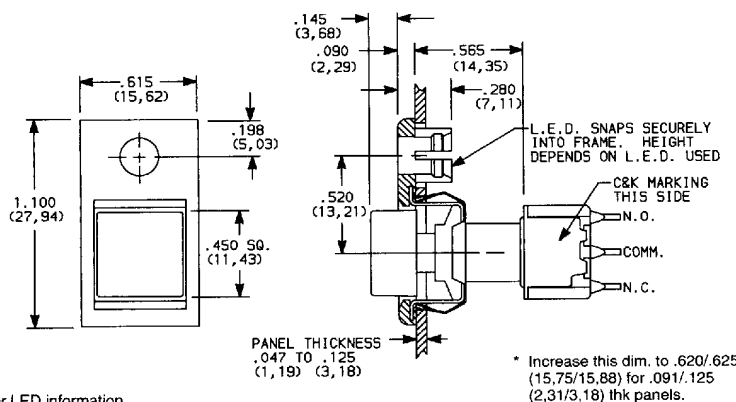
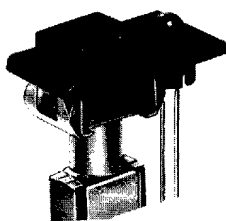
Select cap and frame colors from chart. Place option codes in appropriate boxes of ordering format. Cap and frame finish: matte. Custom actuator markings and legends available, consult factory. Caps and frames are available separately, see catalog section H.

Available with Z, C, Z3, or W-W5 terminations.

PANEL MOUNTING

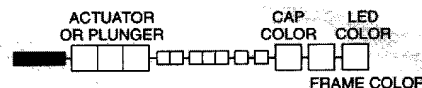


J82 WITH FRAME FOR LED

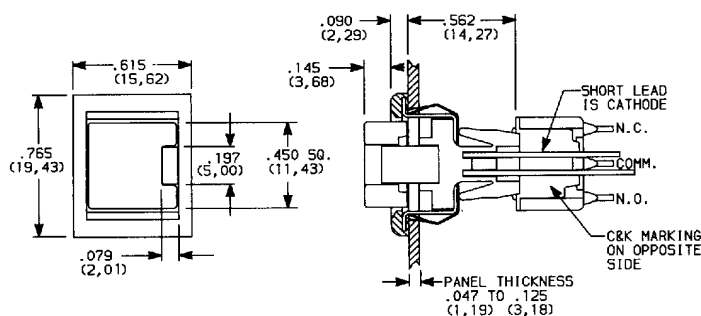
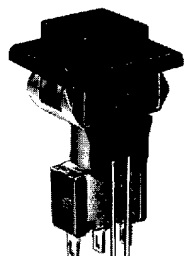


U.S. Patent No. 4,004,120
LED not included. See page IX for LED information.

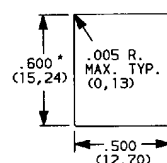
ACTUATORS—SNAP-IN FRONT MOUNT



J86 WITH BUILT-IN LED



PANEL MOUNTING



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

CAP AND FRAME COLORS

OPTION CODE	CAP AND FRAME COLORS
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

LED COLOR

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

Select cap, frame and LED colors from charts. Place option codes in appropriate boxes of ordering format. Cap and frame finish: matte. Custom actuator legends and markings available, consult factory. Cap and frame available separately, see catalog section H.

Available with Z, C, Z3 or W-W5 terminations and SPDT models only.

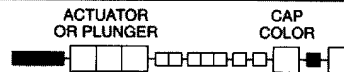
See page IX for LED information.



8060 Series

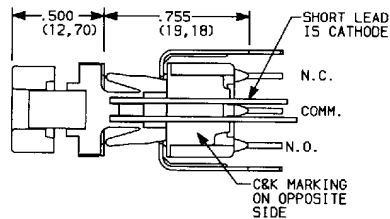
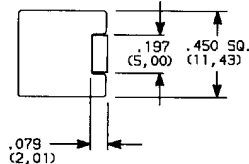
Alternate Action and Momentary Pushbutton Switches

ACTUATORS—P.C. MOUNT

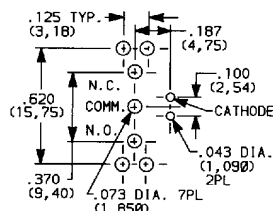


LED COLOR

J96 WITH BUILT-IN LED



P.C. MOUNTING



CAP COLOR

OPTION CODE	CAP COLOR
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

LED COLOR

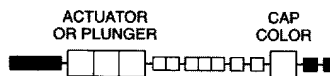
OPTION CODE	LED COLOR
3	RED (std.)
5	YELLOW
6	GREEN

Select cap and LED colors from charts. Place option codes in appropriate boxes of ordering format. Cap finish: matte. Custom actuator legends and markings available, consult factory. Cap available separately, see catalog section H.

Avail. with V3 termination and SPDT model only.

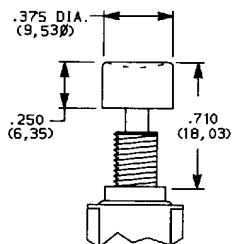
See page IX for LED information.

PLUNGER

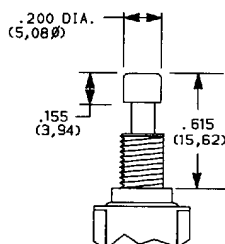


When selecting plunger & cap option, bushing selection must also be made, see next page.

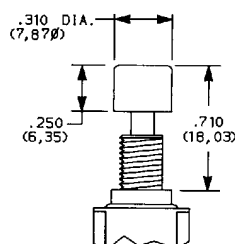
S (STD.)



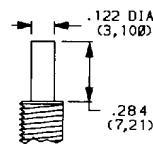
S1



S2



S,S1,S2 PLUNGER DIMS.



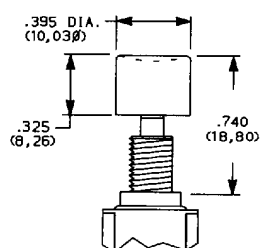
S, S1, S2 plunger material: Glass filled nylon or glass filled polyester (UL 94V-0).

CAP COLOR

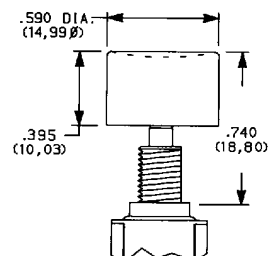
OPTION CODE	CAP COLOR
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

Select cap color from chart. Place option code in appropriate box of ordering format. Cap finish: gloss. Caps supplied not installed. Custom actuator legends and markings available, consult factory. Cap available separately, see catalog section H.

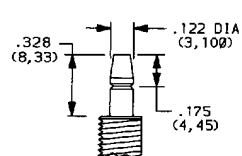
L SNAP-FITTING



L1 SNAP-FITTING



L, L1 PLUNGER DIMS.



L, L1 plunger material: Brass, chrome plated.



COMPONENTS, INC.

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D-50

D 94E 1760885 0004213 T83

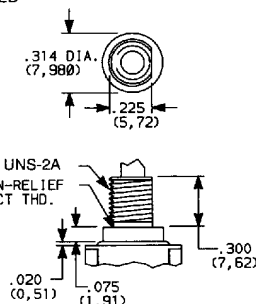
BUSHING

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.

(NONE)

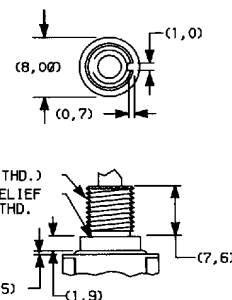
No bushing option choice required when any JXX actuator option is selected.

H
H9 UNTHREADED



H bushing standard with Z, C, Z3, or W-W5 terminations.
H9 bushing standard with A, A3, AW-AW5, AV1-AV5, V2-V91 terminations.

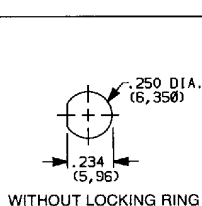
Y3 METRIC



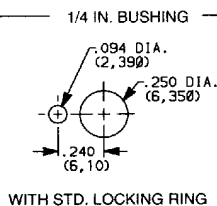
Withstands 12 in.-lbs. of torque with no distortion.

PANEL MOUNTING

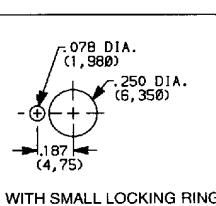
Hardware: Two mounting nuts, locking ring and lockwasher supplied standard with threaded bushings. Optional mounting nut and locking ring styles and finishes available, see Hardware, catalog section H.



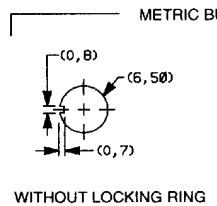
WITHOUT LOCKING RING



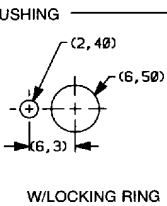
WITH STD. LOCKING RING



WITH SMALL LOCKING RING



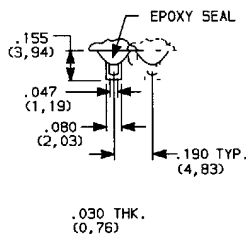
WITHOUT LOCKING RING



W/LOCKING RING

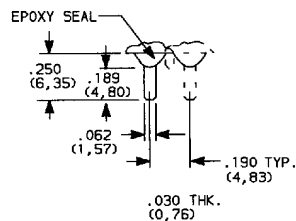
TERMINATIONS

Z (STD.)



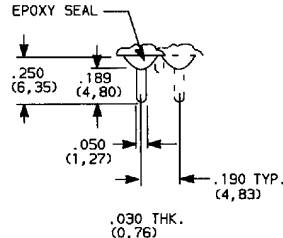
SPDT and DPDT
Q contact material std.
Not available with K, L, or M contact material.

Z3 QUICK CONNECT



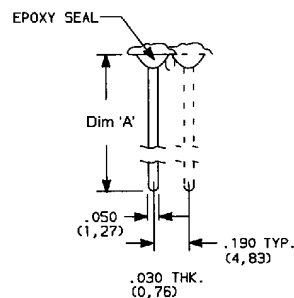
SPDT and DPDT
Q contact material std.
Not available with K, L, or M contact material.
Mating quick connector available; order part no. 530100000.

C



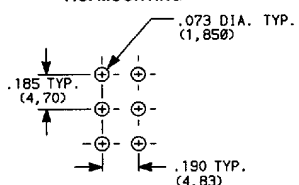
SPDT and DPDT
Q contact material std.

W-W1-W3-W4-W5 WIRE WRAP



SPDT and DPDT
B contact material std.

P.C. MOUNTING



Option	Dim 'A'
W	.750 (19,05)
W1	.964 (24,49)
W3	.425 (10,80)
W4	1.062 (26,97)
W5	1.305 (33,15)

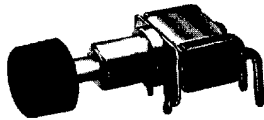
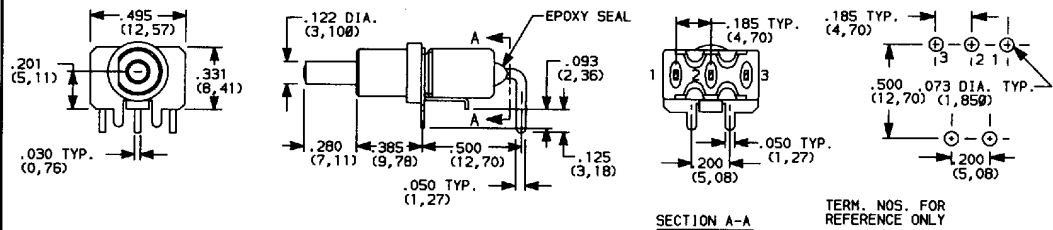


8060 Series

Alternate Action and Momentary Pushbutton Switches

TERMINATIONS

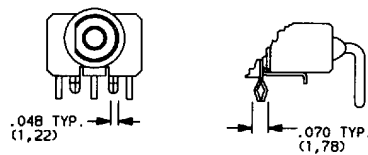
A



A

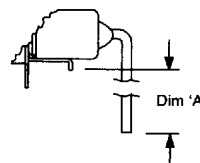
Part No. Shown: 8161SH9ABE2

A3 SNAP-IN



SNAP-IN DESIGN RETAINS SWITCH.

AW-AW1-AW3-AW4-AW5 EXTENDED

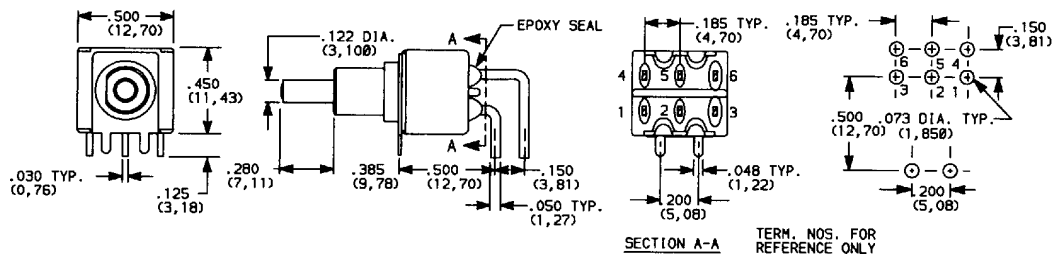


Option	Dim 'A'
AW	.44 (11,2)
AW1	.66 (16,8)
AW3	.14 (3,6)
AW4	.77 (19,6)
AW5	1.02 (25,9)

SPDT

Term. bend radii and lead-in mfg. option.
B contact material std.
Not available with I seal option.
Note: P.C. pattern must clear switch support leg.

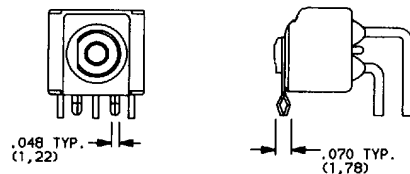
A



A

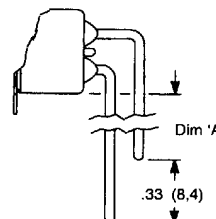
Part No. Shown: 8261SH9ABE2

A3 SNAP-IN



SNAP-IN DESIGN RETAINS SWITCH.

AW-AW1-AW4-AW5 EXTENDED



Option	Dim 'A'
AW	.19 (4,8)
AW1	.40 (10,2)
AW4	.50 (12,7)
AW5	.74 (18,8)

DPDT

Term. bend radii and lead-in mfg. option.
B contact material std.
Not available with I seal option.

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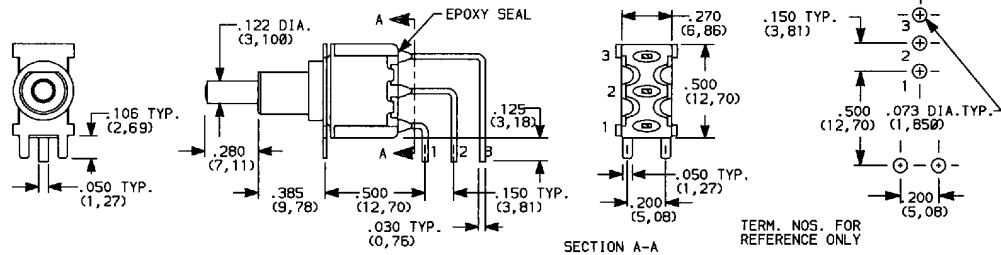
D-52

D 94E 1760885 0004215 856

TERMINATIONS

AV2

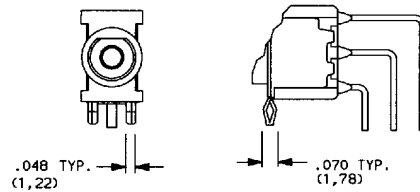
P.C. MOUNTING



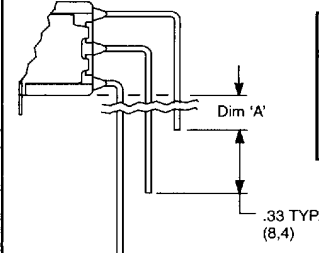
Part No. Shown: 8161SH9AV2BE2

AV3 SNAP-IN

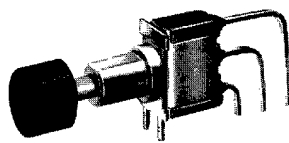
AV1-AV4-AV5 EXTENDED



SNAP-IN DESIGN RETAINS SWITCH.



Option	Dim 'A'
AV1	.15 (3,8)
AV4	.24 (6,1)
AV5	.48 (12,2)



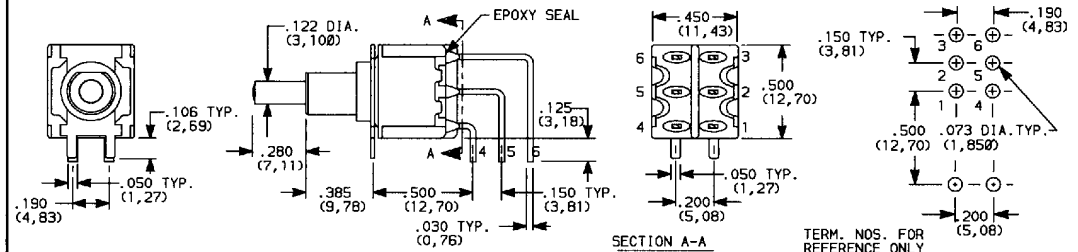
AV2

SPDT

Term. bend radii and lead-in mfg. option.
B contact material std.
Not available with I seal option.

AV2

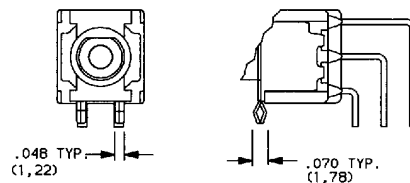
P.C. MOUNTING



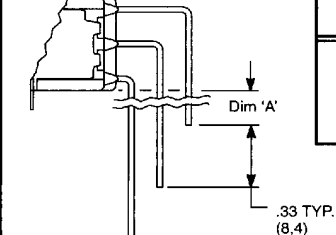
Part No. Shown: 8261SH9AV2BE2

AV3 SNAP-IN

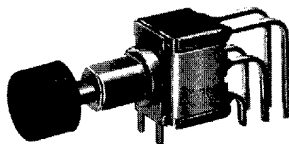
AV1-AV4-AV5 EXTENDED



SNAP-IN DESIGN RETAINS SWITCH.



Option	Dim 'A'
AV1	.15 (3,8)
AV4	.24 (6,1)
AV5	.48 (12,2)



AV2

DPDT

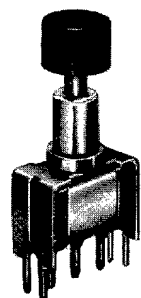
Term. bend radii and lead-in mfg. option.
B contact material std.
Not available with I seal option.



8060 Series

Alternate Action and Momentary Pushbutton Switches

TERMINATIONS

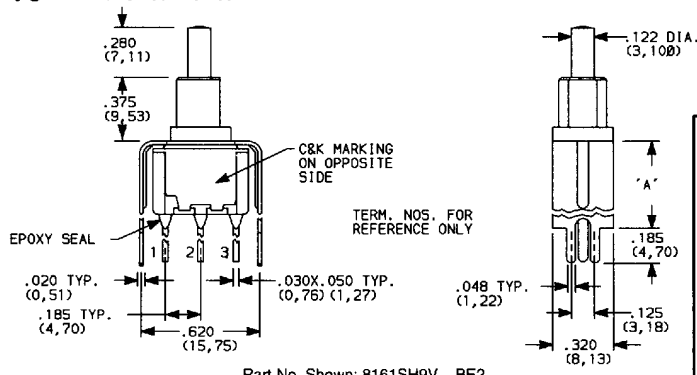


V3

SPDT

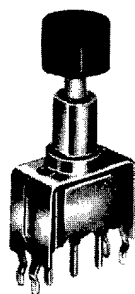
B contact material std.
Not available with I seal option.

V3-V4-V9 REPLACES V30-V40-V90

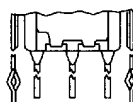


Part No. Shown: 8161SH9V_BE2

V31-V41-V91 SNAP-IN

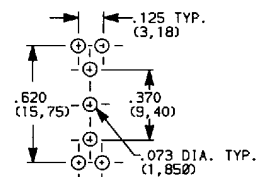


V31

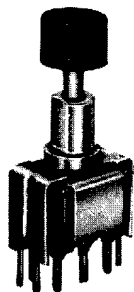


SNAP-IN DESIGN RETAINS SWITCH.

P.C. MOUNTING



Option	Dim 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9, V91	1.150 (29,21)

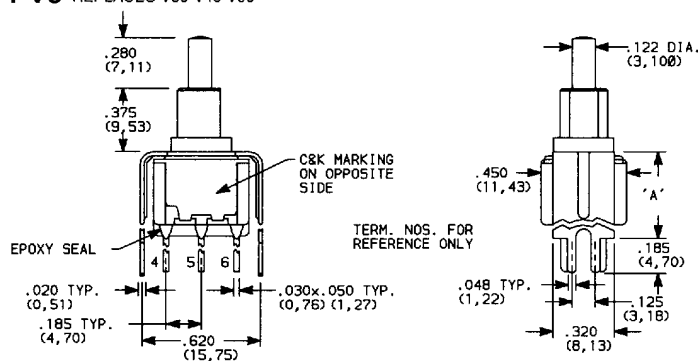


V3

DPDT

B contact material std.
Not available with I seal option.

V3-V4-V9 REPLACES V30-V40-V90

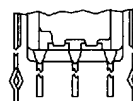


Part No. Shown: 8261SH9V_BE2

V31-V41-V91 SNAP-IN

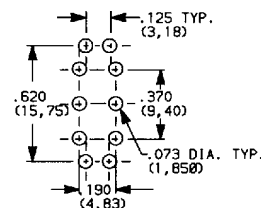


V31



SNAP-IN DESIGN RETAINS SWITCH.

P.C. MOUNTING



Option	Dim 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9, V91	1.150 (29,21)

C&K COMPONENTS, INC.

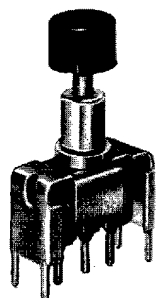
57 Stanley Avenue, Watertown, MA 02172-4802

Tel: (617) 926-6400, Fax: (617) 926-6846

D-54

D 94E 1760885 0004217 629

TERMINATIONS

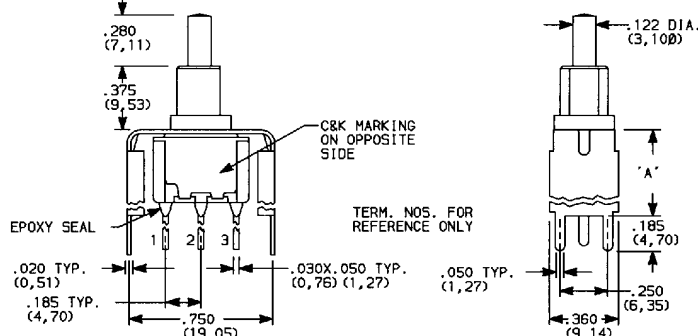


V6

SPDT

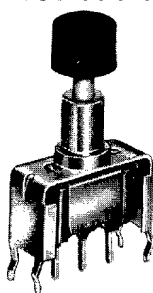
B contact material std.
Not available with I seal option.

V2-V6-V7-V8 REPLACES V20-V60-V70-V80

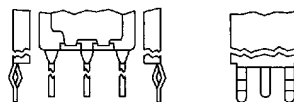


Part No. Shown: 8161SH9V__BE2

V21-V61-V71-V81 SNAP-IN

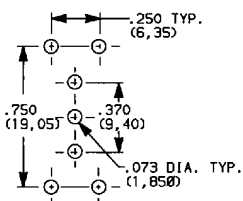


V61

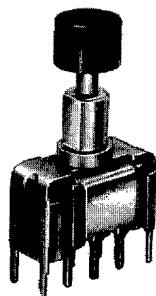


SNAP-IN DESIGN RETAINS SWITCH.

P.C. MOUNTING



Option	Dim 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)

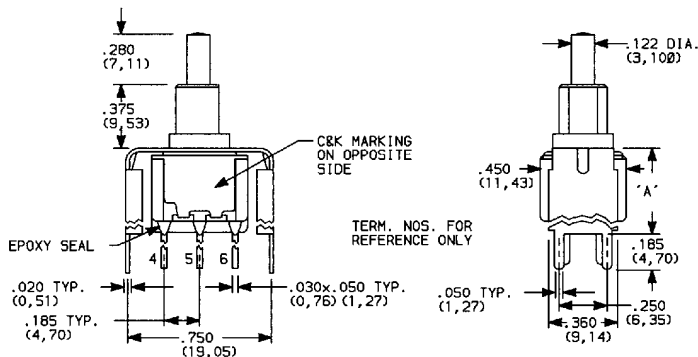


V6

DPDT

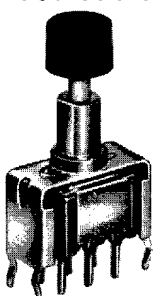
B contact material std.
Not available with I seal option.

V2-V6-V7-V8 REPLACES V20-V60-V70-V80

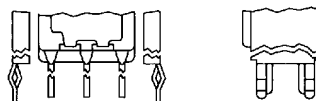


Part No. Shown: 8261SH9V__BE2

V21-V61-V71-V81 SNAP-IN

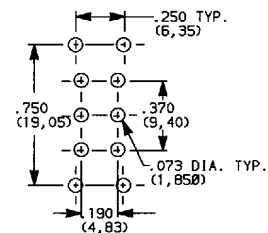


V61



SNAP-IN DESIGN RETAINS SWITCH.

P.C. MOUNTING



Option	Dim 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



8060 Series

Alternate Action and Momentary Pushbutton Switches

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.
K		TIN-LEAD ⁶		
Q	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 X.

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.

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

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

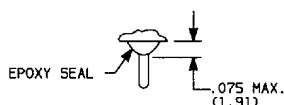
K, L, M contact materials not available with Z, Z3 terminations.

All models with all options when ordered with G, L, M or Q contact material. See pages D-48 and VIII.

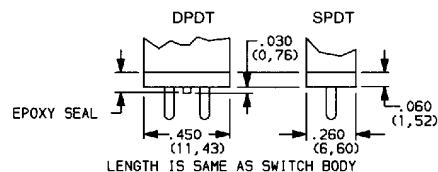
D

SEAL

E (STD.)



I



Available with Z, C, Z3, W-W5 terminations only.

HOW TO ORDER

All available 8060 SERIES ALTERNATE ACTION AND MOMENTARY PUSHBUTTON SWITCH options are listed on page D-47, and are described on pages D-48 thru D-56. Switches with standard options are shown on page D-48. When selecting options and building a part number, some ordering format boxes may not be filled. Dashes, hyphens or spaces in the part number are not significant and are shown for clarity only.

All models have epoxy terminal seal and are compatible with 'bottom-wash' PC board cleaning methods. models available, see page D-48. Actuator caps, hardware and accessories are available separately, see catalog section H.

SPECIFICATIONS

CONTACT RATING:

6 AMPS @ 120 V AC or 28 V DC; 3 AMPS @ 250 V AC (Q contact material).

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: 10⁹ 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 general specifications. Specifications available for specific and custom switches, consult factory.

MATERIALS

CASE: Glass filled nylon 6/6, flame retardant, heat stabilized, or diallyl phthalate (DAP) (UL 94V-0).

PLUNGER: S, S1, S2 Options: Glass filled nylon or glass filled polyester (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: Coin silver, silver plated (Q contact material).

CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated (Q contact material).

TERMINAL SEAL: Epoxy

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

C&K COMPONENTS, INC.

57 Stanley Avenue, Watertown, MA 02172-4802

Tel: (617) 926-6400, Fax: (617) 926-6846

D-56

D 94E 1760885 0004219 4T1

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

C&K Switches:

[8161LHAV2QE2](#) [8261SH9V3BE2](#)