

C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches

Features/Benefits

- Process sealed with disposable splashproof boot
- Long life contact design
- Snap-fitting plunger available

Typical Applications

- Instrumentation
- Telecommunications and networking equipment
- Computers and peripherals



A

Pushbutton



Models Available

Specifications

CONTACT RATING: B contact material (EX25 Models): 0.4 VA max. @ 20 V AC or DC max. G contact material (EX21 Models): 1 AMP @ 120 V AC or 28 V DC or 0.4 VA max. @ 20 V AC or DC max.
Note: Break-before-make contacts. Multi-pole contacts do not make and break simultaneously. See page A-20 for additional ratings.

ELECTRICAL LIFE: 60,000 make-and-break cycles at full load.

CONTACT RESISTANCE: Below 50 mΩ typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10⁹Ω min.

DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 75°C.

CAP INSTALLATION FORCE: 10 lbs. max. permissible.

SOLDERABILITY: Per MIL-STD-202F method 208D, or

EIA RS-186E method 9 (1 hour steam aging).

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 & BUSHING: Glass filled nylon 6/6, flame retardant (UL 94V-0).

PLUNGER: Glass filled nylon or glass filled polyester (PBT) (UL 94V-0).

SWITCH SUPPORT: Brass or steel, tin plated.

SWITCH SUPPORT RETAINER: Stainless steel.

N.O. & N.C. CONTACTS: EX25 MODELS: B contact material: Copper alloy, with gold plate over nickel plate. EX21 MODELS: G contact material: Coin silver, with gold plate over nickel plate. See above for additional contact materials.

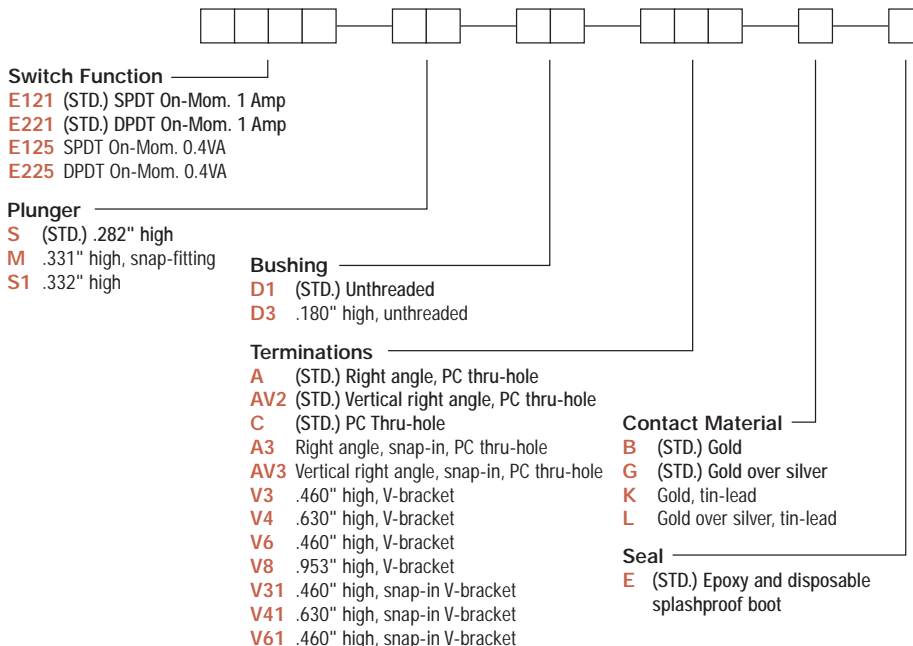
COMMON CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate. See above for additional contact materials.

TERMINAL SEAL: Epoxy.

DISPOSABLE BOOT: Vinyl splashproof boot supplied standard. Remove and discard only after soldering and cleaning processes are complete.

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-16 thru A-20. For additional options not shown in catalog, consult our Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.



C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches



Pushbutton

SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS. 1	POS. 2	POS. 1	POS. 2	
SP	E121 (STD.)	ON	MOM.	1-3	1-2	
	E125 (STD.)	ON	MOM.			
<p>SPDT</p> <p>Part number shown: E121SD1CBE</p> <p>Terminal Nos. For Reference Only</p>						
DP	E221	ON	MOM.	1-3,4-6	1-2,4-5	
	E225	ON	MOM.			
<p>DPDT</p> <p>Part number shown: E221SD1CBE</p> <p>Terminal Nos. For Reference Only</p>						

MOM. = Momentary

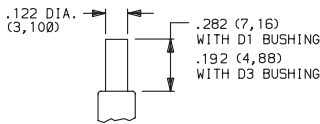
E121, E221 models with all options (except R) when ordered with G or L contact material.

EX25 models must be ordered with B or K contact material.

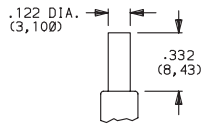
EX21 models must be ordered with G or L contact material.

PLUNGER

S (STD.) .282" HIGH

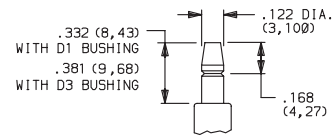


S1 .332" HIGH



Not Available with D1 bushing.

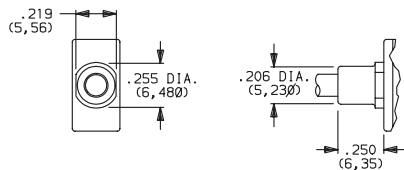
M .332" HIGH SNAP-FITTING



NOTE: Caps available for all plunger options, see page A-21.

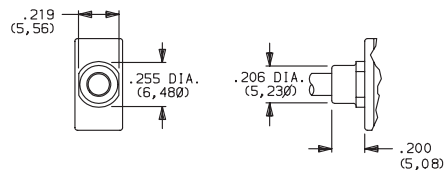
BUSHING

D1 (STD.) UNTHREADED

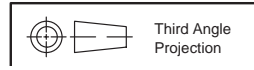


Not available with S1 actuator.

D3 .180" HIGH UNTHREADED



NOTE: Disposable splashproof vinyl over actuator and bushing supplied std., see page A-20.



Dimensions are shown: IN (mm)
Dimensions subject to change

C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches

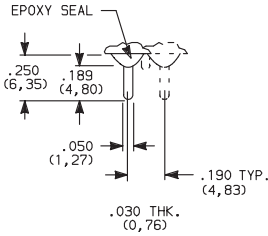
TERMINATIONS



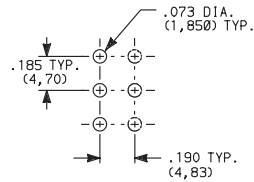
A

Pushbutton

C (STD.) PC THRU-HOLE

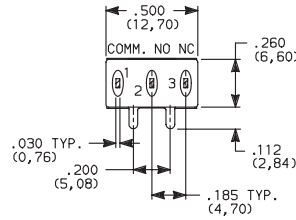
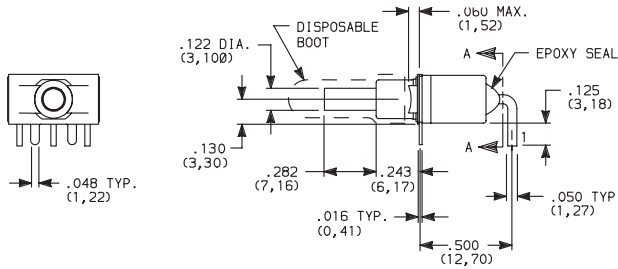


PC MOUNTING



SPDT and DPDT

A (STD.) RIGHT ANGLE, PC THRU-HOLE

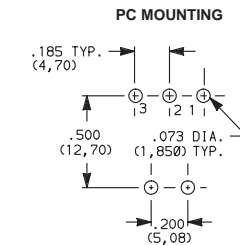


SECTION A-A



E121SD1AGE
SPDT

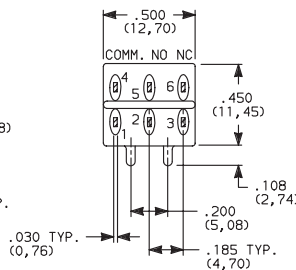
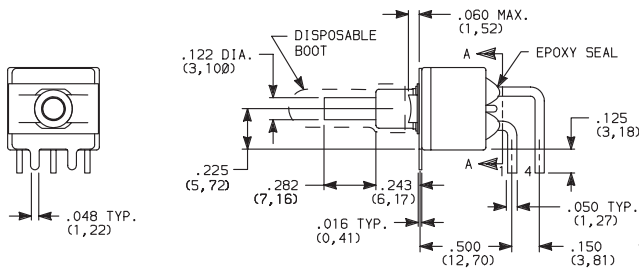
A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE



PC MOUNTING

NOTE: Terminal bend radii and lead-in manufacturing option.

A (STD.) RIGHT ANGLE, PC THRU-HOLE

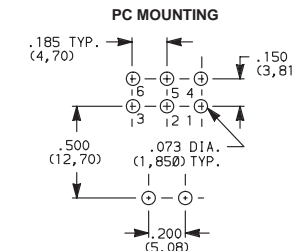


SECTION A-A



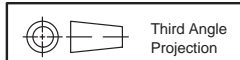
E221SD1AGE
DPDT

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



PC MOUNTING

NOTE: Terminal bend radii and lead-in manufacturing option.



Third Angle
Projection

C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches

TERMINATIONS

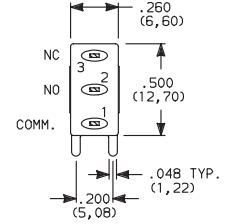
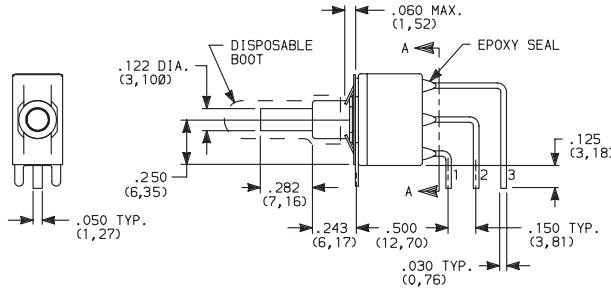


Pushbutton

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

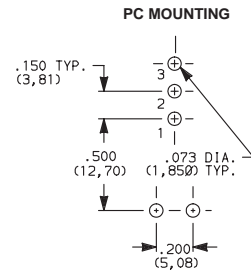
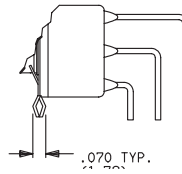
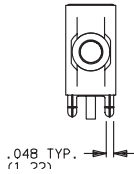


**E121SD1AV2GE
SPDT**



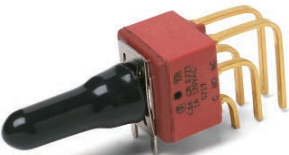
SECTION A-A

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

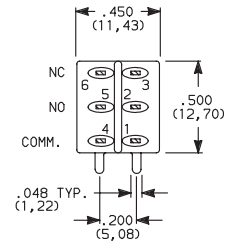
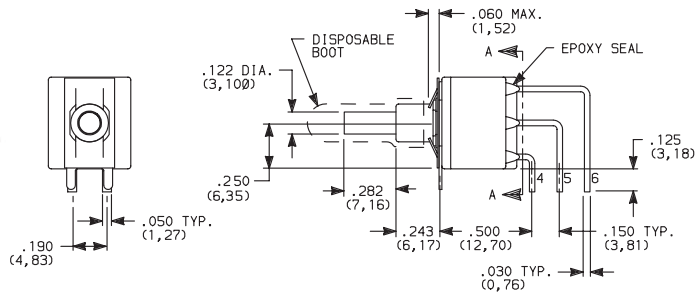


NOTE: Terminal bend radii and lead-in manufacturing option.

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

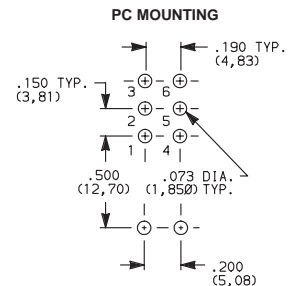
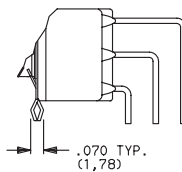
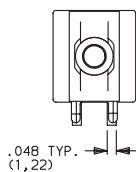


**E221SD1AV2GE
DPDT**

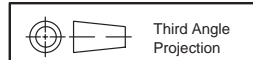


SECTION A-A

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



NOTE: Terminal bend radii and lead-in manufacturing option.



Dimensions are shown: IN (mm)
Dimensions subject to change

C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches


Pushbutton
A

TERMINATIONS

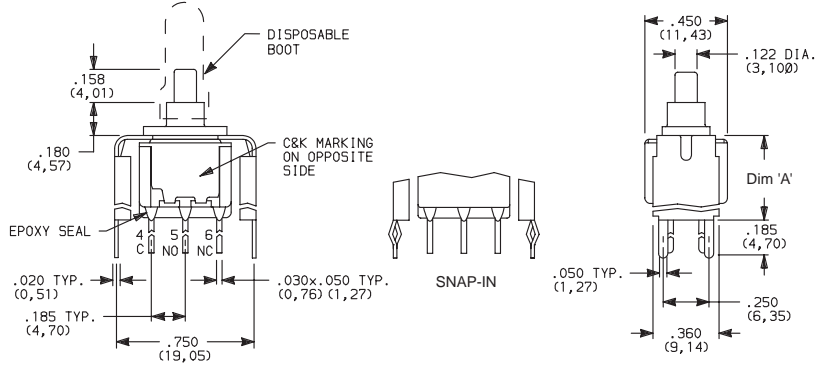
V6, V8 VERTICAL MOUNT, V-BRACKET

V61, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN

PC MOUNTING

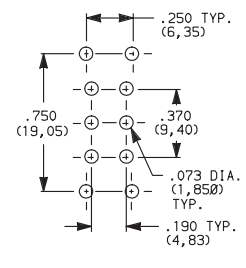


E221SD3V6GE DPDT



DISPOSABLE BOOT
C&K MARKING ON OPPOSITE SIDE
EPOXY SEAL
C NO NC
SNAP-IN
Dim 'A'

Dimensions (mm):
 .158 (4,01)
 .180 (4,57)
 .020 TYP. (0,51)
 .185 TYP. (4,70)
 .750 (19,05)
 .030x.050 TYP. (0,76) (1,27)
 .050 TYP. (1,27)
 .450 (11,43)
 .122 DIA. (3,100)
 .185 (4,70)
 .250 (6,35)
 .360 (9,14)



Dimensions (mm):
 .250 TYP. (6,35)
 .750 (19,05)
 .370 (9,40)
 .073 DIA. (1,850) TYP.
 .190 TYP. (4,83)


OPTION CODE	DIM 'A'
V6, V61	.460 (11,68)
V8, V81	.953 (24,21)

CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
			LOW LEVEL/DRY CIRCUIT	EX25 MODELS ONLY: 0.4 VA MAX. @ 20 V AC OR DC MAX.
B (STD.)	GOLD ¹	GOLD ¹	LOW LEVEL/DRY CIRCUIT	EX25 MODELS ONLY: 0.4 VA MAX. @ 20 V AC OR DC MAX.
K		TIN-LEAD ⁴		
G (STD.)	GOLD OVER SILVER ^{2,3}	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	EX21 MODELS ONLY: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 1 AMP @ 120 V AC OR 28 V DC.
L		TIN-LEAD ⁴		

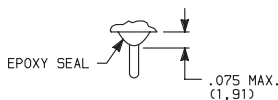
CONTACT MATERIAL/APPLICATION RECOMMENDATIONS—SEE SECTION N.

- CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
- N.O. AND N.C. CONTACTS: Coin silver, with gold plate over nickel plate.
- COMMON CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.
- TERMINALS: Copper alloy, with tin-lead alloy over nickel plate.

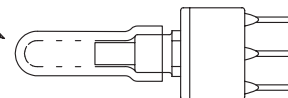
E121, E221 models  with all options (except R) when ordered with mandatory G or L contact material.
 B or K contact material must be ordered with EX25 models.
 G or L contact material must be ordered with EX21 models.

SEAL

E (STD.) EPOXY SEAL AND DISPOSABLE SPLASHPROOF BOOT



Disposable splashproof boot supplied standard. Remove and discard boot *only after* soldering and cleaning processes are complete.



C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches

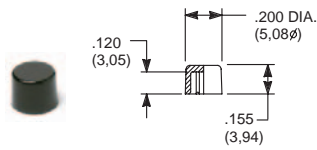
AVAILABLE HARDWARE



A

Pushbutton

Cap

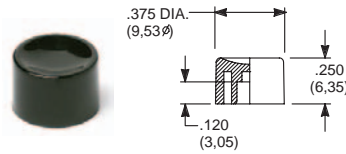


PART NO.

- 708901000 WHITE
- 708902000 BLACK
- 708903000 RED

Material: Nylon
Finish: Gloss

Cap

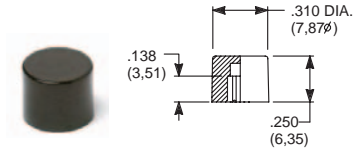


PART NO.

- 752701000 WHITE
- 752702000 BLACK
- 752703000 RED

Material: Nylon
Finish: Gloss

Cap

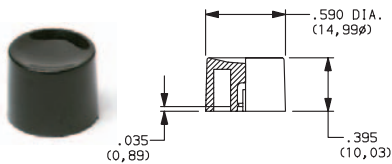


PART NO.

- 801801000 WHITE
- 801802000 BLACK
- 801803000 RED

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

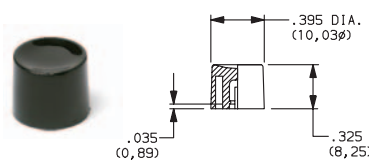


PART NO.

- 894001000 WHITE
- 894002000 BLACK
- 894003000 RED

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

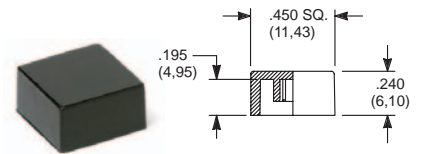


PART NO.

- 894101000 WHITE
- 894102000 BLACK
- 894103000 RED

Material: Nylon
Finish: Gloss

Cap



PART NO.

- 484601000 WHITE
- 484602000 BLACK
- 484603000 RED

Material: Nylon
Finish: Gloss

PART NO.

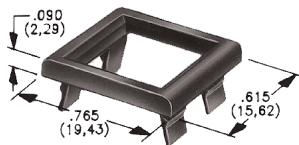
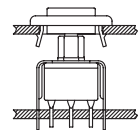
- 798201000 WHITE
- 798202263 BLACK
- 798203000 RED

Material: Nylon
Finish: Matte

NOTE: Other cap colors available, consult Customer Service Center.

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.

- PART NO.**
- 432501000
 - 432502263
 - 432503000

.062" (1,57) PANEL THK.

- PART NO.**
- 432601000
 - 432602263
 - 432603000

.090" (2,29) PANEL THK.

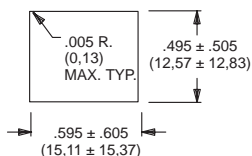
- PART NO.**
- 432701000
 - 432702263
 - 432703000

.125" (3,18) PANEL THK.

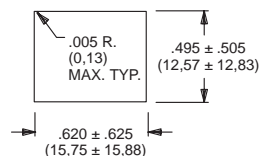
- PART NO.**
- 432801000 WHITE
 - 432802263 BLACK
 - 432803000 RED

PANEL MOUNTING

For part numbers
4325xxxxx, 4326xxxxx



For part numbers
4327xxxxx, 4328xxxxx



C&K E020 Series Sealed Snap-acting Momentary Pushbutton Switches

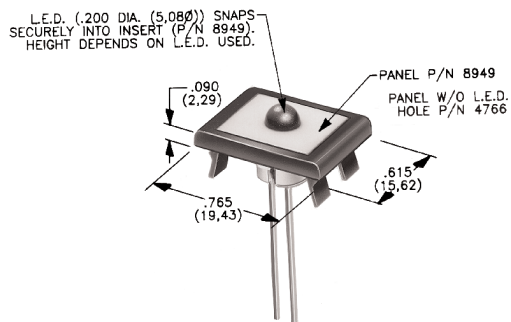
AVAILABLE HARDWARE

Panel Inserts

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

A

Pushbutton



PANEL INSERT WITH HOLE FOR LED

BLANK PANEL INSERT WITHOUT HOLE FOR LED

PART NO.

PART NO.

894901000
894902000
894903000

476601000 WHITE
476602000 BLACK
476603000 RED

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