

C&K 8020 Series Snap-acting Momentary Pushbutton Switches

Features/Benefits

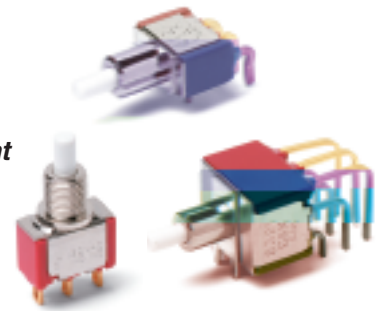
- **Positive tactile feel**
- **Multi-positions available**
- **Wide variety of termination options**
- **Epoxy terminal seal compatible with bottom wash cleaning**
- **RoHS compliant models available**



Models Available

Typical Applications

- **Instrumentation**
- **Computer peripherals**
- **Telecommunications equipment**



A

Pushbutton

Specifications

CONTACT RATING: B contact material (8X25 Models): 0.4 VA max. @ 20 V AC or DC maximum. G contact material (8X21, U8X1 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-41 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: 1,000 Vrms min. @ sea level.

OPERATING TEMPERATURE: 8X2X MODELS: -30°C to 75°C. U8X1 MODELS: -30°C to 65°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: Any models supplied with B, P, R, 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: Glass filled nylon or glass filled polyester (PBT) (UL 94V-0).

CAP & FRAME: Nylon, black, standard.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass or steel, matte-tin plated.

N.O. & N.C. CONTACTS: 8X21, U8X1 MODELS: G contact material: Coin silver, with gold plate over nickel plate. See page A-41 for additional contact materials.

8X25 MODELS: B contact material: Copper alloy, with gold plate over nickel plate. See page A-41 for additional contact materials.

COMMON CONTACT & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

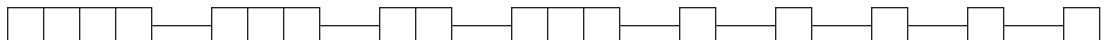
TERMINAL SEAL: Epoxy. Refer to soldering and cleaning

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-28 thru A-43. 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

- 8121** SPDT On-Mom. 1 Amp
- 8125** SPDT On-Mom. 0.4VA
- 8221** DPDT On-Mom. 1 Amp
- 8225** DPDT On-Mom. 0.4VA
- 8321** 3PDT On-Mom. 1 Amp
- 8325** 3PDT On-Mom. 0.4VA
- 8421** 4PDT On-Mom. 1 Amp
- 8425** 4PDT On-Mom. 0.4VA

Note: UL/CSA models available, see page A-28 and A-29.

Actuator or Plunger

- S** Plunger
- NONE** Snap-in
- J80** Snap-in
- J81** Snap-in w/frame
- J82** Snap-in w/frame for LED
- J83** Snap-in w/frame & flush cap
- J84** Snap-in w/frame for LED, flush cap
- J85** Snap-in w/frame & LED
- J95** PC w/V-bracket & LED
- L** Plunger
- M** Snap-fitting plunger

Bushing

- D9** .280" high, keyway
- H** .250" high, flat
- NONE** No bushing choice required
- D** .280" high, keyway
- D2** .288" high, flat
- D3** .180" high
- D8** .288" high, flat
- H9** .250" high, flat, hi torque
- Y** .350" high, keyway
- Y3** 6.35mm high, keyway, hi torque
- Y4** .378" high, flat, hi torque
- Y9** .350" high, keyway

Contact Material

- B** Gold
- K** Gold, tin-lead
- P** Gold, 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
- NONE** Models without caps
- 1** White
- 3** Red
- 4** Orange
- 5** Yellow
- 6** Green
- 7** Blue
- 9** Gray

Frame Color

- 2** Black
- NONE** Models without frame
- 1** White
- 3** Red
- 5** Yellow
- 6** Green
- 9** Gray

LED Color

- 3** Red
- NONE** Models without LED
- 5** Yellow
- 6** Green

Terminations

- A** Right angle, PC thru-hole
- AV2** Vertical right angle, PC thru-hole
- C** PC Thru-hole
- Z** Solder lug
- A2** Right angle, PC thru-hole
- A3** Right angle, snap-in, PC thru-hole
- A4** Right angle, PC thru-hole, reversed terminals
- A6** Right angle, PC thru-hole
- AV** Vertical right angle, PC thru-hole
- AV1** Vertical right angle, PC thru-hole
- AV3** Vertical right angle, snap-in, PC thru-hole
- R** Right angle with PCB
- R2** Right angle with PCB, reversed terminals
- 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
- V31** .460" high, snap-in V-bracket
- V61** .460" high, snap-in V-bracket
- W** .750" long, wire wrap
- W1** .964" long, wire wrap
- W3** .425" long, wire wrap
- W4** 1.062" long, wire wrap
- Z3** Quick connect



ITT



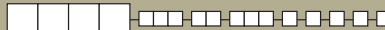
C&K 8020 Series

Snap-acting Momentary Pushbutton Switches

A

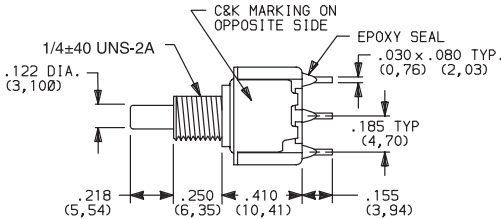
Pushbutton

SWITCH FUNCTION



NO. POLES	MODEL NO.	UL/CSA* MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
			POS. 1	POS. 2	POS. 1	POS. 2	
							
			C&K marking on opposite side		C&K marking on opposite side		
SP	8121	U811	ON	MOM.	1-3	1-2	
	8125		ON	MOM.			
SPDT							

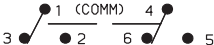
SPDT



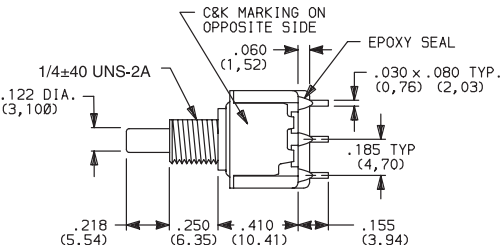
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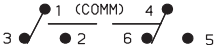
Terminal Nos.
For Reference Only

DP	8221	U821	ON	MOM.	1-3,4-6	1-2,4-5	
	8225		ON	MOM.			
DPDT							

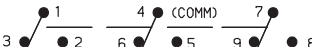
DPDT



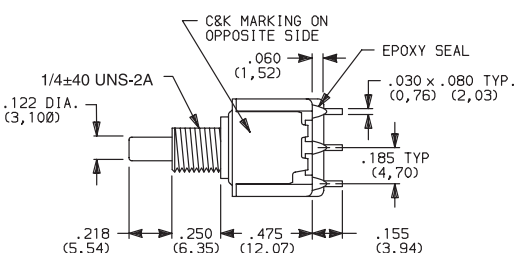
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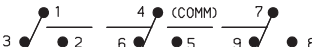
Terminal Nos.
For Reference Only

3P	8321	U831	ON	MOM.	1-3,4-6,7-9	1-2,4-5,7-8	
	8325		ON	MOM.			
3PDT							

3PDT



Part number shown: 8321SHZGE



Terminal Nos.
For Reference Only

MOM. = Momentary

*U811 thru U841 model numbers with all options (except R, R2 terminations) when ordered with G, L or R contact material.

8X25 models must be ordered with B, K or P contact material.

8X21 and U8X1 models must be ordered with G, L or R contact material.



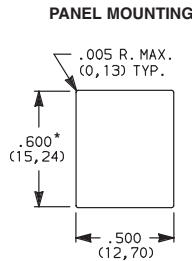
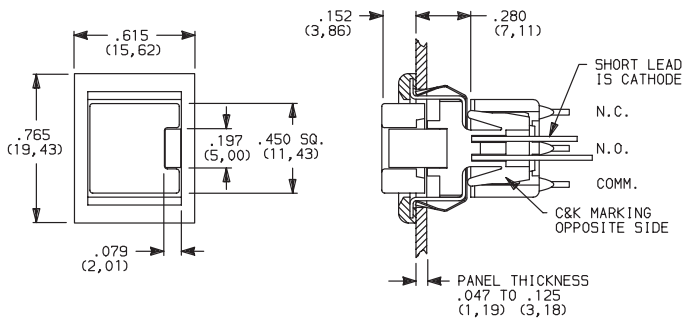
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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ACTUATOR—SNAP-IN FRONT MOUNT

J85 SNAP-IN WITH FRAME AND LED



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



8121J85ZGE223
SPST

Available with C, W-W4, Z or Z3 terminations and SPDT models only. For LED information see page A-43.

NOTE: Caps & frames available separately, see pages A-42 and A-43.

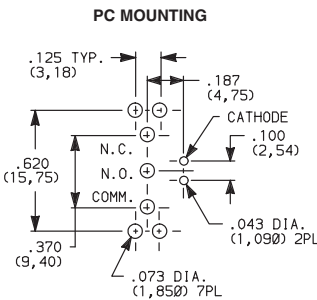
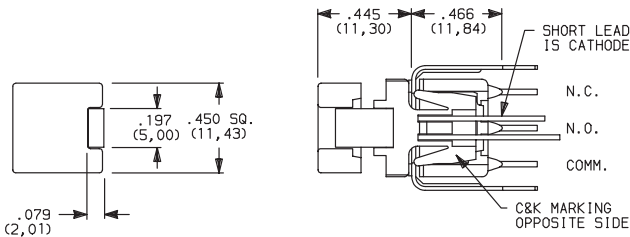
OPTION CODE	CAP AND FRAME COLOR
2	BLACK
1	WHITE
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
9	GRAY

OPTION CODE	LED COLOR
3	RED
5	YELLOW
6	GREEN

For LED information see page A-43.

ACTUATOR—PC MOUNT

J95 PC WITH V-BRACKET AND LED



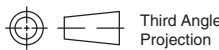
8121J95V3GE23
SPST

OPTION CODE	CAP AND FRAME COLOR
2	BLACK
1	WHITE
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
9	GRAY

OPTION CODE	LED COLOR
3	RED
5	YELLOW
6	GREEN

For LED information see page A-43.

NOTE: Caps available separately, see page A-42. Available with V3 terminations and SPDT models only.



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



C&K 8020 Series

Snap-acting Momentary Pushbutton Switches

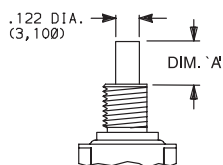
PLUNGER

ACTUATOR OR PLUNGER

A

Pushbutton

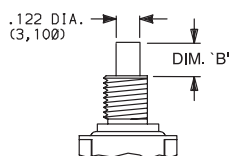
S PLUNGER



NONE NO PLUNGER CHOICE REQUIRED
(JXX ACTUATORS)

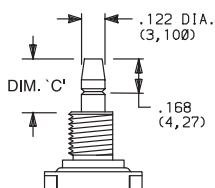
AVAILABLE BUSHINGS	DIM. 'A' FOR C, W-W4, Z & Z3 TERMINATIONS	DIM. 'A' FOR A, A2, A3, A4, A6, AV-A3, R & R2 TERMINATIONS	DIM. 'A' FOR V3-V61 TERMINATIONS
D, D9	.244 (6,20)	.228 (5,79)	.224 (5,69)
H, H9	.218 (5,54)	.202 (5,13)	.198 (5,03)
Y, Y9	.203 (5,16)	.187 (4,75)	.183 (4,65)
Y3	(5,54)	(5,13)	(5,03)
Y4	.185 (4,70)	.169 (4,29)	.165 (4,19)
D2, D8	N/A	.232 (5,89)	.228 (5,79)
D3	N/A	.162 (4,11)	.158 (4,01)

L PLUNGER



AVAILABLE BUSHINGS	DIM. 'B' FOR C, W-W4, Z & Z3 TERMINATIONS	DIM. 'B' FOR A, A2, A3, A4, A6, AV-A3, R & R2 TERMINATIONS	DIM. 'B' FOR V3-V61 TERMINATIONS
Y, Y9	.178 (4,52)	.162 (4,11)	.158 (4,01)
Y4	.090 (2,29)	.074 (1,88)	.070 (1,78)

M SNAP-FITTING PLUNGER



AVAILABLE BUSHINGS	DIM. 'C' FOR C, W-W4, Z & Z3 TERMINATIONS	DIM. 'C' FOR A, A2, A3, A4, A6, AV-A3, R & R2 TERMINATIONS	DIM. 'C' FOR V3-V61 TERMINATIONS
D, D9	.297 (7,54)	.281 (7,14)	.277 (7,04)
H, H9	.267 (6,78)	.251 (6,38)	.247 (6,27)
Y, Y9	.259 (6,58)	.243 (6,17)	.239 (6,07)
Y3	(6,78)	(6,37)	(6,27)
Y4	.259 (6,58)	.243 (6,17)	.239 (6,07)
D2, D8	N/A	.273 (6,93)	.269 (6,83)
D3	N/A	.361 (9,17)	.357 (9,07)

N/A = NOT AVAILABLE

NOTE: When selecting plunger option, bushing selection must also be made, see next page. No plunger option is required when any JXX actuator option is selected. Additional plunger lengths are available on SPDT and DPDT models, consult Customer Service Center. Not all plunger lengths sufficient for use with caps, see page A-42.

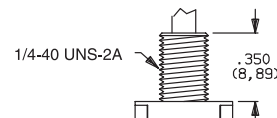
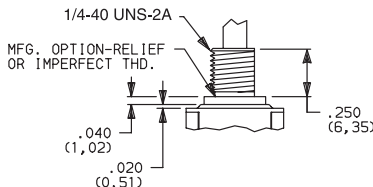
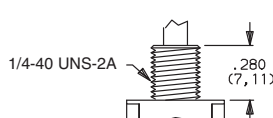
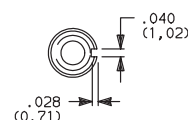
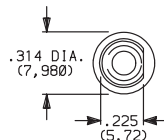
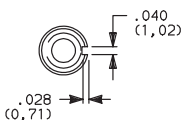
BUSHING

NONE NO BUSHING
CHOICE REQUIRED
(JXX ACTUATORS)

D .280" HIGH THREADED, KEYWAY
D9 .280" HIGH UNTHREADED,
KEYWAY

H .250" HIGH THREADED, FLAT
H9 .250" HIGH UNTHREADED, FLAT

Y .350" HIGH THREADED, KEYWAY
Y9 .350" HIGH UNTHREADED, KEYWAY



D9 bushing standard with A-A6,
R, R2 AV-AV3 terminations.

H bushing standard with C, W-W4, Z or Z3 terminations.
H, H9 bushings not available on single pole models with
A3-A6, R, R2 terminations.

**Will withstand 12 in./lbs. of torque with
no distortion.**

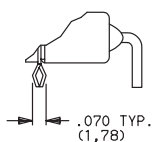
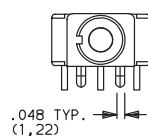


Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

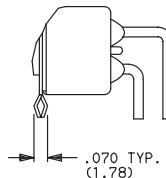
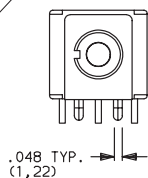
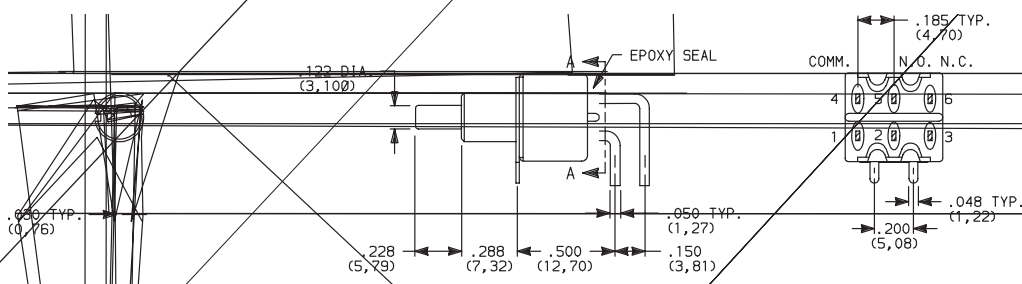
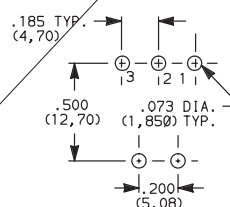


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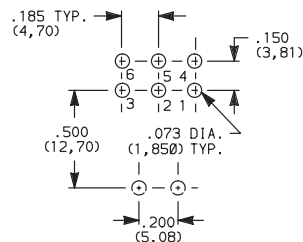
TERMINATIONS



PC MOUNTING



PC MOUNTING

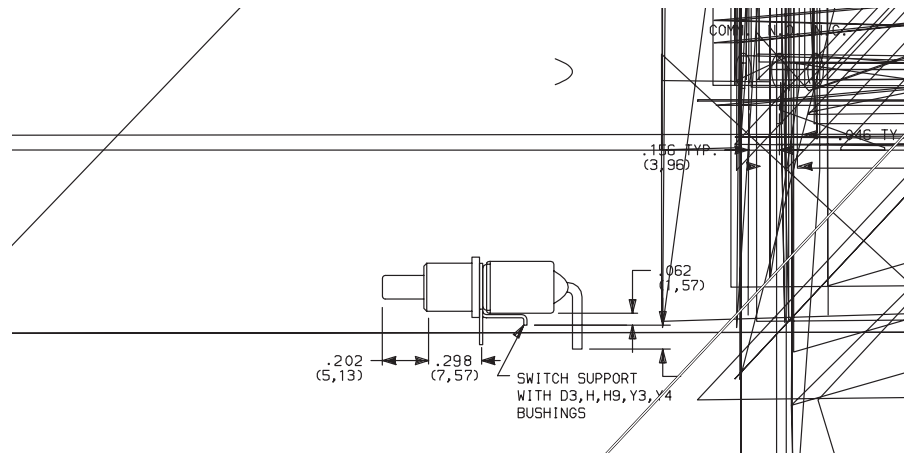
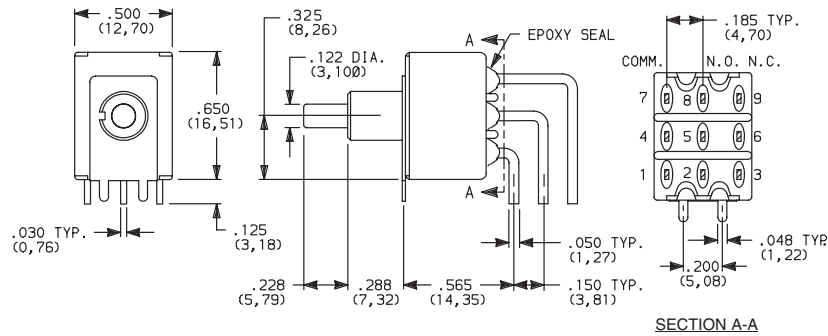


Third Angle
Projection

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

C&K 8020 Series Snap-acting Momentary Pushbutton Switches

TERMINATIONS

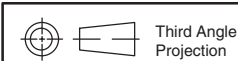
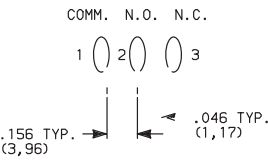


Third Angle
Projection

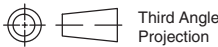
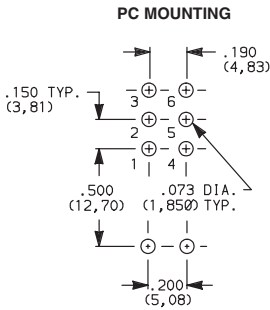
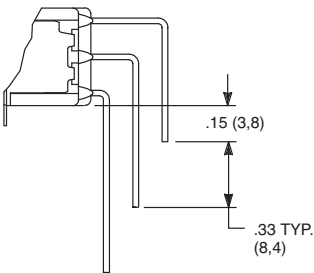
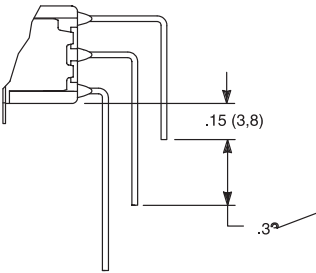
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Specifications and dimensions subject to change

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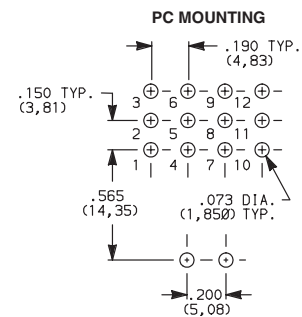
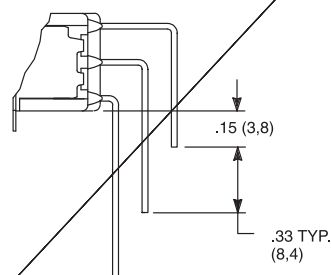
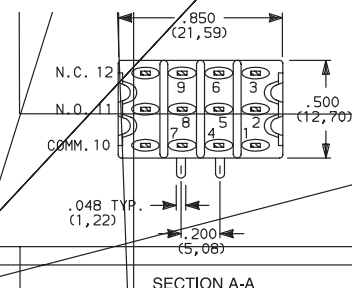
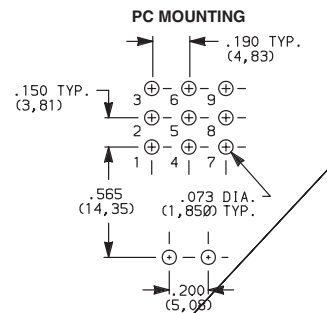
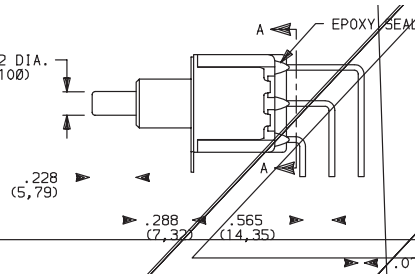
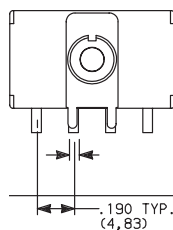
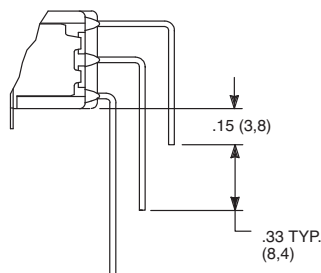
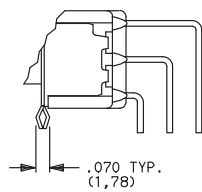
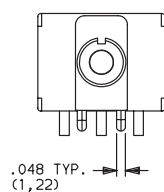


Third Angle
Projection

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

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TERMINATIONS



Third Angle
Projection

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

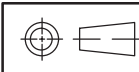
C&K 8
Snap-a

w/t

.122 DIA.
(3,100)

Dirn 'A'

.048 T
(1,22)



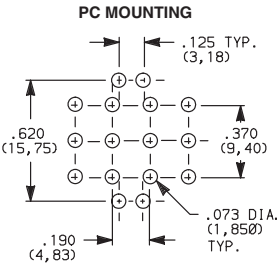
Third Angle
Projection

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

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C&K 8020 Series Snap-acting Momentary Pushbutton Switches

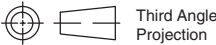
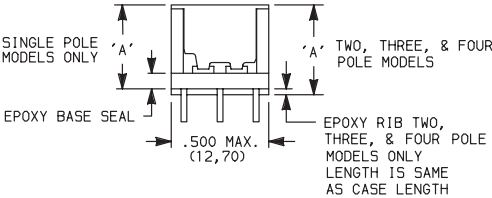
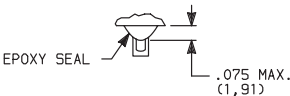
TERMINATIONS



CONTACT MATERIAL



SEALV4



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

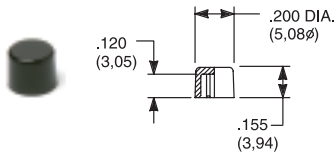


C&K 8020 Series

Snap-acting Momentary Pushbutton Switches

AVAILABLE HARDWARE

Cap

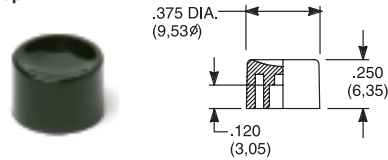


PART NO.

708901000	WHITE
708902000	BLACK
708903000	RED
708904000	ORANGE
708905000	YELLOW
708906000	GREEN
708907000	BLUE
708909000	GRAY

Material: Nylon
Finish: Gloss

Cap

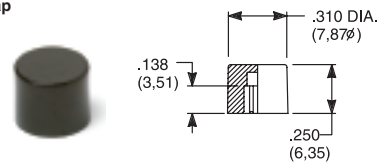


PART NO.

752701000	WHITE
752702000	BLACK
752703000	RED
752704000	ORANGE
752705000	YELLOW
752706000	GREEN
752707000	BLUE
752709000	GRAY

Material: Nylon
Finish: Gloss

Cap

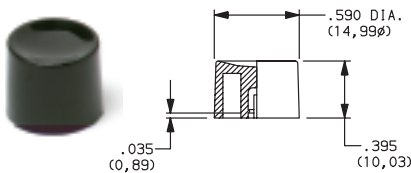


PART NO.

801801000	WHITE
801802000	BLACK
801803000	RED
801804000	ORANGE
801805000	YELLOW
801806000	GREEN
801807000	BLUE
801809000	GRAY

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

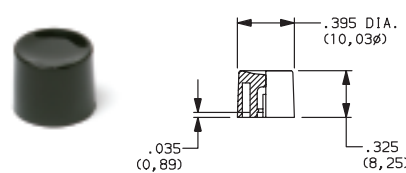


PART NO.

894001000	WHITE
894002000	BLACK
894003000	RED
894004000	ORANGE
894005000	YELLOW
894006000	GREEN
894007000	BLUE
894009000	GRAY

Material: Nylon
Finish: Gloss

Cap, Snap-fitting plunger

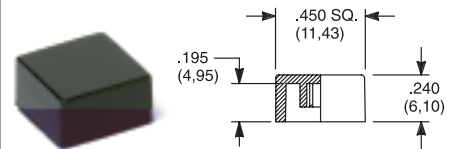


PART NO.

894101000	WHITE
894102000	BLACK
894103000	RED
894104000	ORANGE
894105000	YELLOW
894106000	GREEN
894107000	BLUE
894109000	GRAY

Material: Nylon
Finish: Gloss

Cap, J80, J81, J82, J83 & J84 options only



PART NO.

484601000	WHITE
484602000	BLACK
484603000	RED
484604000	ORANGE
484605000	YELLOW
484606000	GREEN
484607000	BLUE
484609000	GRAY

Material: Nylon
Finish: Gloss

PART NO.

798201000	WHITE
798202263	BLACK
798203000	RED
798204000	ORANGE
798205000	YELLOW
798206000	GREEN
798207000	BLUE
798209000	GRAY

Material: Nylon
Finish: Matte

Frame



PART NO.

615601000	WHITE
615602263	BLACK
615603000	RED
615605000	YELLOW
615606000	GREEN
615609000	GRAY

Material: Nylon
Finish: Matte

Frame

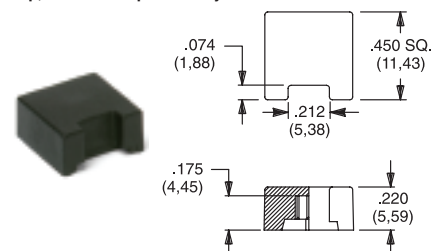


PART NO.

613301000	WHITE
613302263	BLACK
613303000	RED
613305000	YELLOW
613306000	GREEN
613309000	GRAY

Material: Nylon
Finish: Matte

Cap, J85 & J95 options only



PART NO.

459701000	WHITE
459702000	BLACK
459703000	RED
459704000	ORANGE
459705000	YELLOW
459706000	GREEN
459707000	BLUE
459709000	GRAY

Material: Nylon
Finish: Gloss

PART NO.

459701000	WHITE
459702000	BLACK
459703000	RED
459704000	ORANGE
459705000	YELLOW
459706000	GREEN
459707000	BLUE
459709000	GRAY

Material: Nylon
Finish: Matte

Fits Z3 Termination female connector



PART NO.

530100000

Available in loose pieces.

NOTE: Additional nuts, locking rings and lockwashers available separately, see section "Technical Data and Additional Hardware".

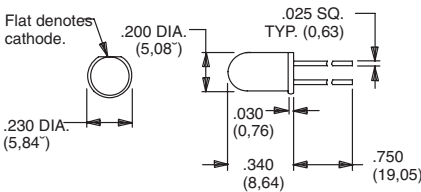
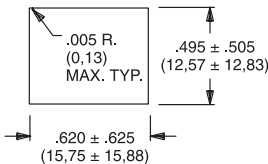
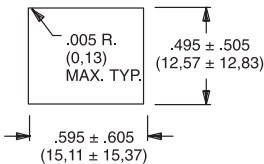
Other cap & frame colors available, consult Customer Service Center.



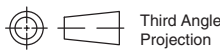
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

C&K 8020 Series Snap-acting Momentary Pushbutton Switches

AVAILABLE HARDWARE



Suggested LED for J82 & J84 options.
Dimensions for reference only.



Third Angle
Projection

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