

# Sealed Miniature Rocker and Lever Handle Switches

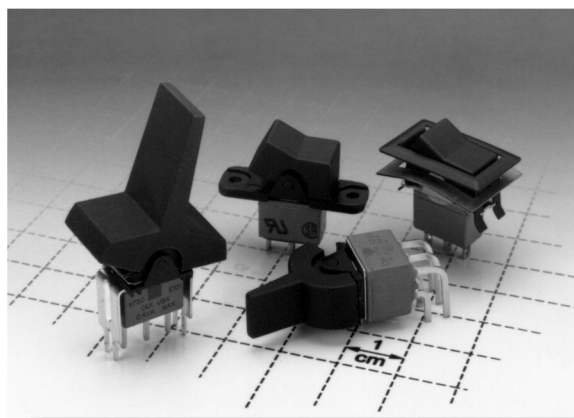


## Features/Benefits

- Sealed against solder and cleaning process contaminants
- ESD Resistance—all actuator options
- Rocker, case & bushing UL 94V-0

## Typical Applications

- Telecommunications
- Instrumentation
- Computers & peripherals



## Build-A-Switch

Our easy Build-A-Switch concept allows you to mix and match options to create the switch you need. Below is a complete listing of options shown in catalog. To order, simply select desired option from each category and place in the appropriate box. Switches with standard options are shown on pages F-24 and F-25. Available options are shown and described on pages F-25 thru F-35. For additional options not shown in catalog, consult Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.

Typical Example: E 1 0 1 — J 1 — Z — Q — E — 2 —  

### Switch Function

- E101** (STD.) SP On-None-On
- E201** (STD.) DP On-None-On
- E301** (STD.) 3P On-None-On
- E103** SP On-Off-On
- E105** SP Mom.-Off-Mom.
- E107** SP On-Off-Mom.
- E108** SP On-None-Mom.
- E203** DP On-Off-On
- E205** DP Mom.-Off-Mom.
- E207** DP On-Off-Mom.
- E208** DP On-None-Mom.
- E211** DP On-On-On
- E213** DP On-On-Mom.
- E215** DP Mom.-On-Mom.
- E303** 3P On-Off-On
- E305** 3P Mom.-Off-Mom.
- E307** 3P On-Off-Mom.
- E308** 3P On-None-Mom.

### Actuator

- J1** (STD.) Rocker
- J2** Lever
- J3** Rocker
- J8** Rocker
- J11** Rocker with frame
- J21** Lever with frame
- J50** Rocker
- J60** Lever
- J90** Lever

### Terminations

- A** (STD.) Right angle, PC thru-hole
- AV2** (STD.) Vertical right angle, PC thru-hole
- C** (STD.) PC Thru-hole
- Z** (STD.) Solder lug
- A3** Right angle, snap-in, PC thru-hole
- AV3** Vertical right angle, snap-in, PC thru-hole
- AW** Right angle, extended, PC thru-hole
- AW1** Right angle, extended, PC thru-hole
- AW3** Right angle, extended, PC thru-hole
- AW4** Right angle, extended, PC thru-hole
- V2** .555" high, V-bracket
- V3** .460" high, V-bracket
- V4** .630" high, V-bracket
- V5** Vertical right angle, PC thru-hole
- V6** .460" high, V-bracket
- V7** .630" high, V-bracket
- V8** .953" high, V-bracket
- V9** 1.150" high, V-bracket
- V21** .555" high, V-bracket, snap-in
- V31** .460" high, V-bracket, snap-in
- V41** .630" high, V-bracket, snap-in
- V51** Vertical right angle, snap-in
- V54** Vertical right angle, extended
- V55** Vertical right angle, extended
- V61** .460" high, V-bracket, snap-in
- V71** .630" high, V-bracket, snap-in
- V81** .953" high, V-bracket, snap-in
- V91** 1.150" high, V-bracket, snap-in
- W** .750" long, wire wrap
- W1** .964" long, wire wrap
- W3** .425" long, wire wrap
- W4** 1.062" long, wire wrap
- W5** 1.305" long, wire wrap
- Z3** Quick connect

### Contact Material

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

### Seal

- E** (STD.) Epoxy

### Actuator Color

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

### Frame Color

- 2** (STD.) Black
- NONE** No frame color required
- 1** White

### Metal Frame Color (J11, J21 Actuators)

- 2** (STD.) Black
- 1** White
- C** Bright chrome
- S** Satin chrome



Rocker

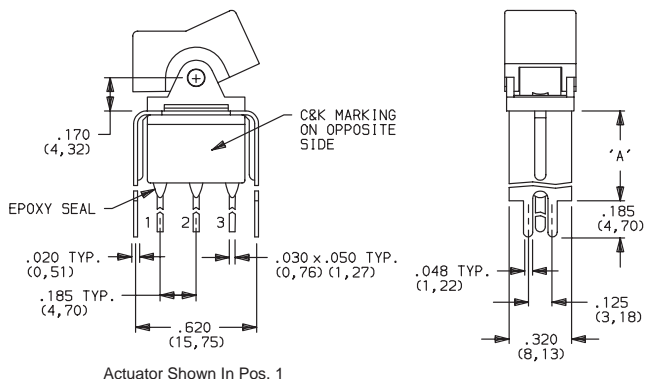


# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## SWITCHES WITH STANDARD OPTIONS

PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
<b>E101J1V3BE2</b>	SPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-34.

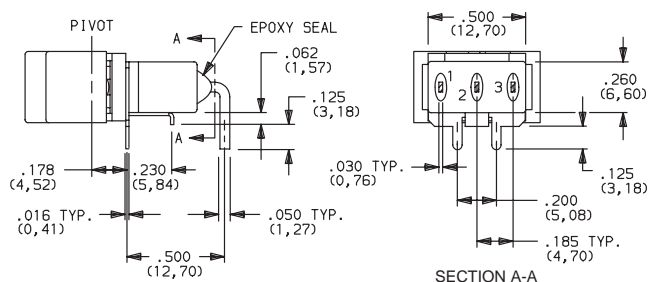


**E101J1V3BE2**  
**SPDT**

PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
<b>E101J1ABE2</b>	SPDT	ON	NONE	ON
<b>E103J1ABE2</b>		ON	OFF	ON
<b>E105J1ABE2</b>		MOM.	OFF	MOM.
<b>E107J1ABE2</b>		ON	OFF	MOM.

MOM. = Momentary

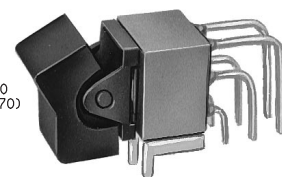
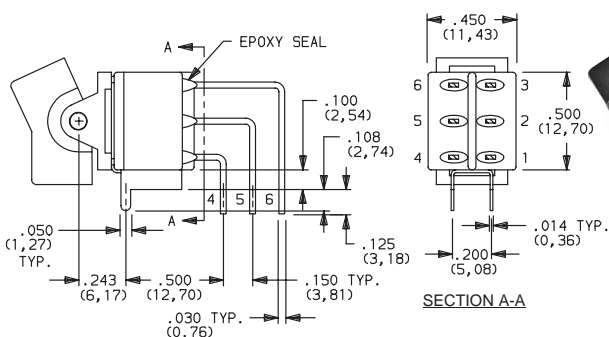
NOTE: For PC mounting information, see page F-29.



**E101J1ABE2**  
Horizontal Actuation  
**SPDT**

PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
<b>E201J1AV2QE2</b>	DPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-31.



**E201J1AV2BE2**  
Vertical Actuation  
**DPDT**

## SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
SP	<b>E101 (STD.)</b>	ON	NONE	ON				
	<b>E103</b>	ON	OFF	ON				
	<b>E105</b>	MOM.	OFF	MOM.	2-3	OPEN	2-1	
	<b>E107</b>	ON	OFF	MOM.				
	<b>E108</b>	ON	NONE	MOM.				

MOM. = Momentary

\*\* Wiring for 3-way switch, see page L-29.

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

# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
DP	<b>E201 (STD.)</b>	ON	NONE	ON	2-3,5-6	OPEN	2-1,5-4	
	<b>E203</b>	ON	OFF	ON				
	<b>E205</b>	MOM.	OFF	MOM.				
	<b>E207</b>	ON	OFF	MOM.				
	<b>E208</b>	ON	NONE	MOM.	2-3,5-6	2-3,5-4	2-1,5-4	
	<b>E211**</b>	ON	ON	ON				
	<b>E213**</b>	ON	ON	MOM.				
	<b>E215**</b>	MOM.	ON	MOM.				
3P	<b>E301 (STD.)</b>	ON	NONE	ON	2-3,5-6,8-9	OPEN	2-1,5-4,8-7	
	<b>E303</b>	ON	OFF	ON				
	<b>E305</b>	MOM.	OFF	MOM.				
	<b>E307</b>	ON	OFF	MOM.				
	<b>E308</b>	ON	NONE	MOM.				

MOM. = Momentary

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

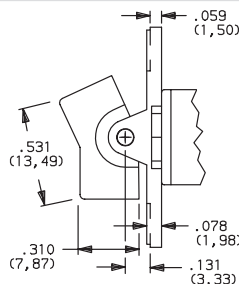
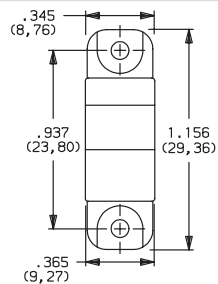
\*\* Wiring for 3-way switch, see page L-29.

## ACTUATOR—PANEL REAR MOUNT

ACTUATOR COLOR

ACTUATOR

### J1 (STD.) ROCKER

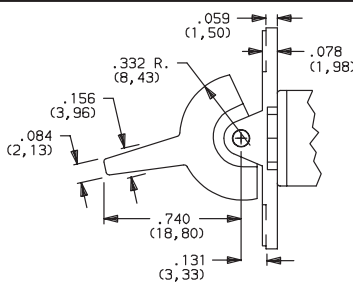
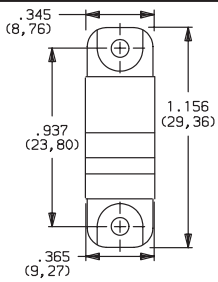


OPTION CODE	ACTUATOR COLOR
<b>2</b>	(STD.) BLACK
<b>1</b>	WHITE
<b>3</b>	RED

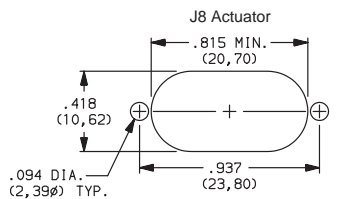
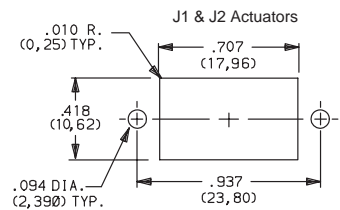
Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on switches with panel mounting bracket. Internal o-ring actuator seal standard. Actuators and hardware are available separately, see section L. J1, J2 & J8 actuators available with C, W-W5, Z or Z3 terminations.

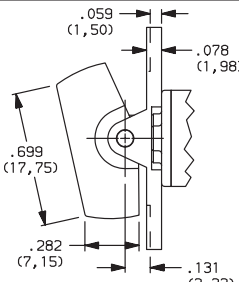
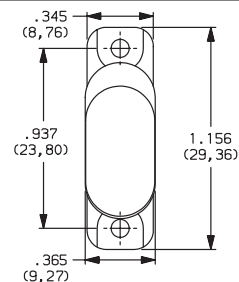
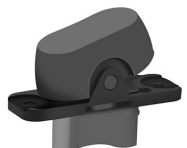
### J2 LEVER



### PANEL MOUNTING

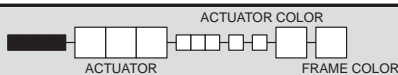


### J8 ROCKER



# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## ACTUATOR—REAR MOUNT



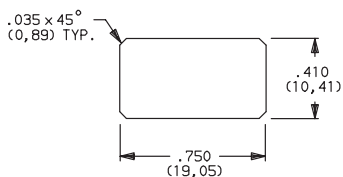
OPTION CODE	ACTUATOR COLOR
2	(STD.) BLACK
1	WHITE
3	RED

OPTION CODE	FRAME COLOR
2	(STD.) BLACK
1	WHITE
C	BRIGHT CHROME
S	SATIN CHROME

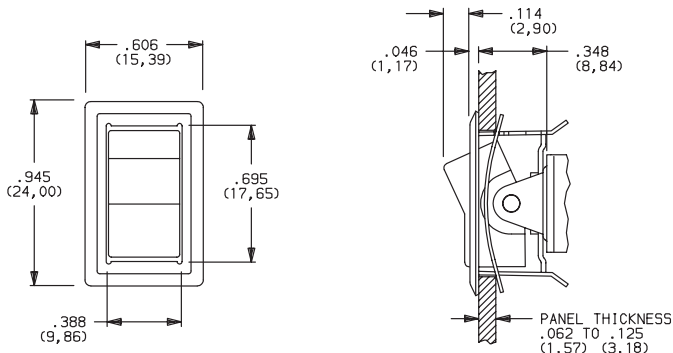
Actuator finish: Matte, frame finish: gloss. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Internal o-ring actuator seal standard. Frames are available separately, see section L. J11 & J21 actuators available with C, W-W5, Z & Z3 terminations.

### PANEL MOUNTING

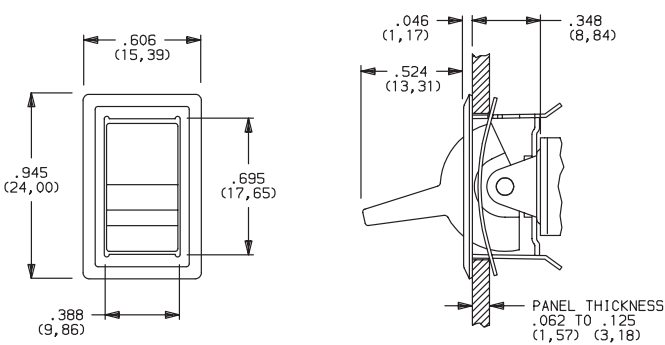


### J11 ROCKER WITH FRAME



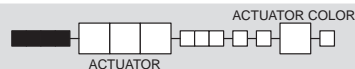
**NOTE:** This option has reduced anti-static capability.

### J21 LEVER WITH FRAME



**NOTE:** This option has reduced anti-static capability.

## ACTUATOR—PC MOUNT

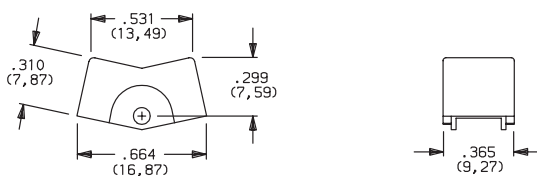


OPTION CODE	ACTUATOR COLOR
2	(STD.) BLACK
1	WHITE
3	RED

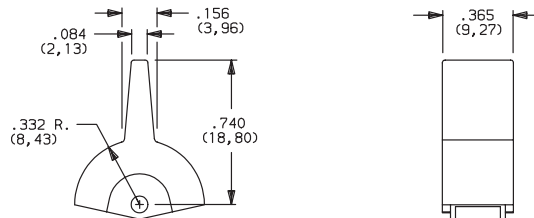
Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on switches with panel mounting bracket. Internal o-ring actuator seal standard. Actuators and hardware are available separately, see section L. J1, J2 & J8 actuators available with A, A3, AV2, AV3, V2-V91 & AW-AW4 terminations.

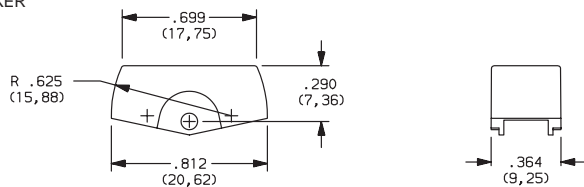
### J1 ROCKER



### J2 LEVER



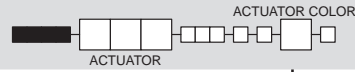
### J8 ROCKER



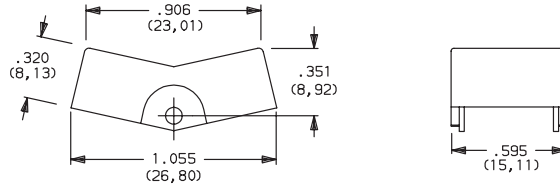
Rocker

# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

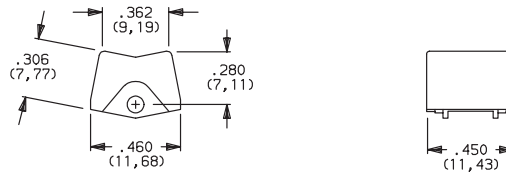
## ACTUATOR—PC MOUNT



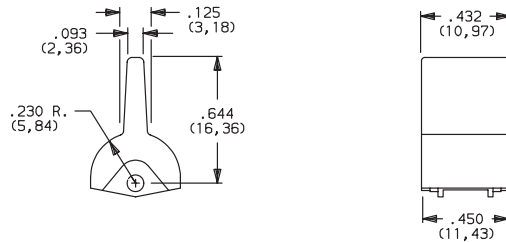
### J3 ROCKER



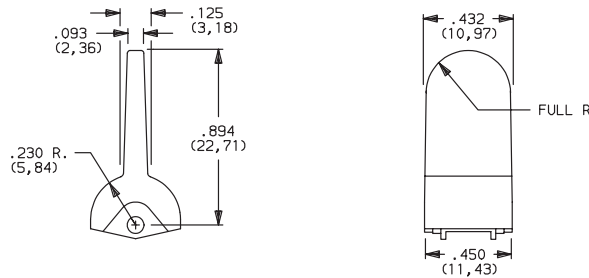
### J50 ROCKER



### J60 LEVER



### J90 LEVER



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

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on switches with panel mounting bracket. Internal o-ring actuator seal standard. Actuators and hardware are available separately, see section L.

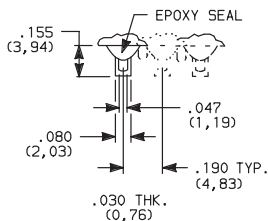
J3 actuators available with AV2, AV3 & V2-V91 terminations. Some permissible actuator/termination combinations may lack clearance between actuator and PC board, and care must be exercised to accommodate this condition.

J50, J60 & J90 actuators available with A, AV2, AV3 & AW-AW4 terminations.

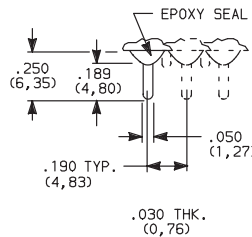
## TERMINATIONS



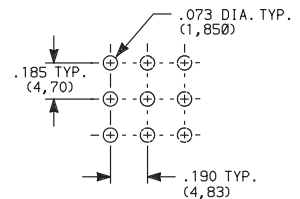
### Z (STD.) SOLDER LUG



### C (STD.) PC THRU-HOLE



### PC MOUNTING



SPDT thru 3PDT

Not available with K, L or M contact materials. Available actuators, see page F-26.

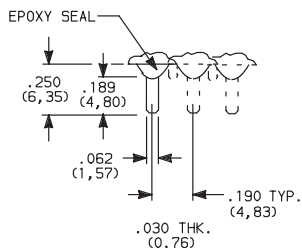
SPDT thru 3PDT

**NOTE:** Available actuators, see pages, F-27 and F-28.

# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## TERMINATIONS

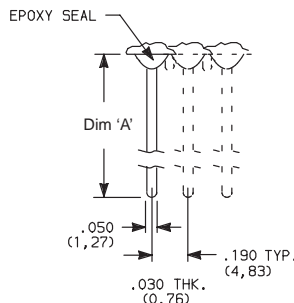
### Z3 QUICK CONNECT



Not available with K, L or M contact materials.  
Available actuators, see pages F-27 and F-28. Mating quick connector available; order part number 530100000.

### SPDT thru 3PDT

### W, W1, W3, W4, W5 WIRE WRAP

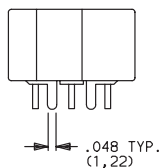


OPTION CODE	DIM 'A'
<b>W</b>	.750 (19,05)
<b>W1</b>	.964 (24,48)
<b>W3</b>	.425 (10,80)
<b>W4</b>	1.062 (26,97)
<b>W5</b>	1.305 (33,15)

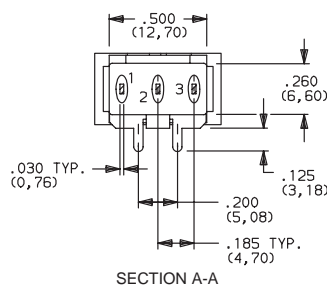
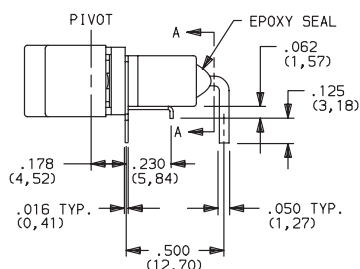
### SPDT thru 3PDT

NOTE: Available actuators, see pages F-27 and F-28.

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

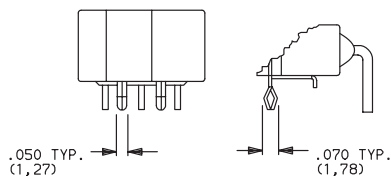


Actuator Shown In Pos. 1

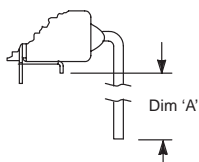


E101J1ABE2  
Horizontal Actuation  
SPDT

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

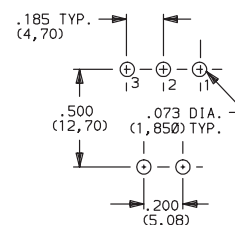


### AW, AW1, AW3, AW4 RIGHT ANGLE, EXTENDED, PC THRU-HOLE



OPTION CODE	DIM 'A'
<b>AW</b>	.44 (11,2)
<b>AW1</b>	.66 (16,8)
<b>AW3</b>	.14 (3,6)
<b>AW4</b>	.77 (19,6)

### PC MOUNTING



NOTE: PC mounting pattern must clear switch support leg.

NOTE: Not available with J3, J50, J60 and J90 actuators.  
Available actuators, see pages F-27 and F-28.  
Terminal bend radii and lead-in manufacturing option.



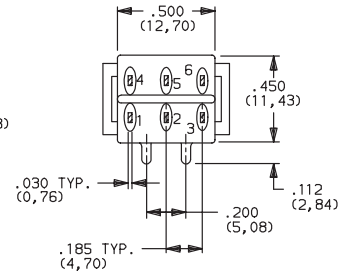
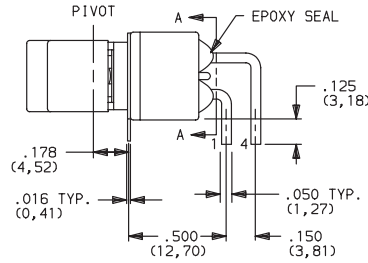
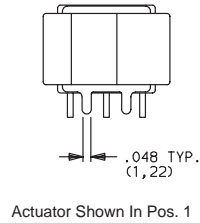
# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## TERMINATIONS

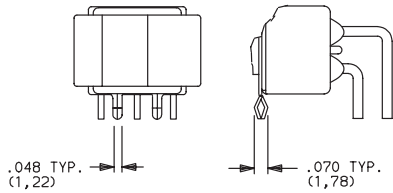
### A (STD.) RIGHT ANGLE, PC THRU-HOLE



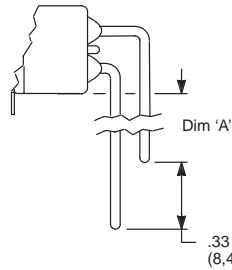
**E201J1ABE2**  
Horizontal Actuation  
**DPDT**



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

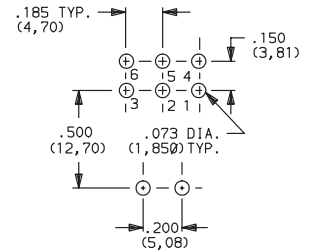


### AW, AW1, AW4, AW5 RIGHT ANGLE, EXTENDED, PC THRU-HOLE



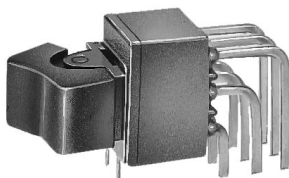
OPTION CODE	DIM 'A'
<b>AW</b>	.21 (5,3)
<b>AW1</b>	.42 (10,7)
<b>AW4</b>	.52 (13,2)
<b>AW5</b>	.76 (19,3)

### PC MOUNTING

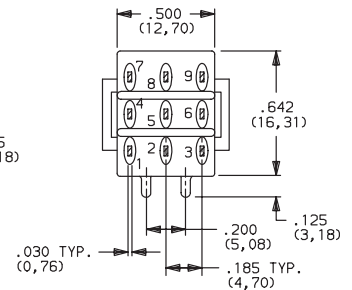
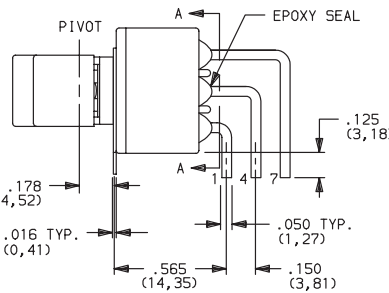
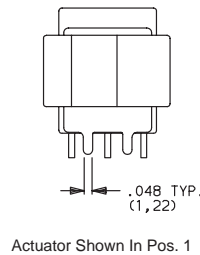


**NOTE: NOTE:** Not available with J3 actuator.  
Available actuators, see pages F-27 and F-28.  
Terminal bend radii and lead-in manufacturing option.

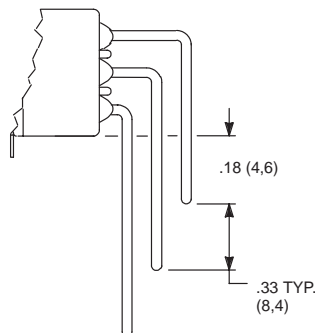
### A (STD.) RIGHT ANGLE, PC THRU-HOLE



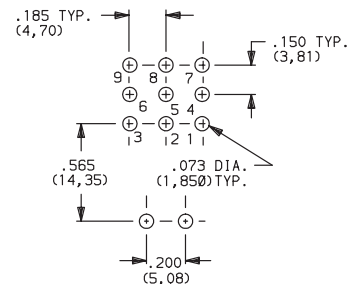
**E301J1ABE2**  
Horizontal Actuation  
**3PDT**



### AW4, AW5 RIGHT ANGLE, EXTENDED, PC THRU-HOLE



### PC MOUNTING



**NOTE:** Terminal bend radii and lead-in manufacturing option.  
Available actuators, see pages F-27 and F-28.



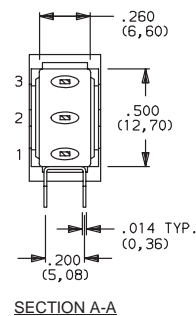
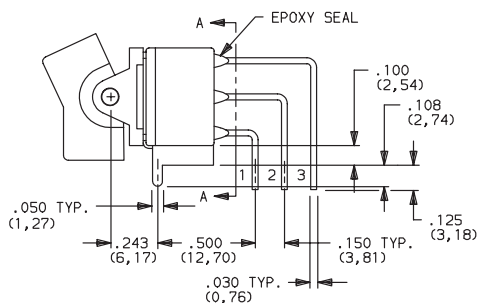
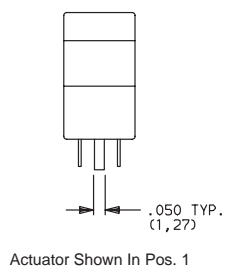
**Rocker**



# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

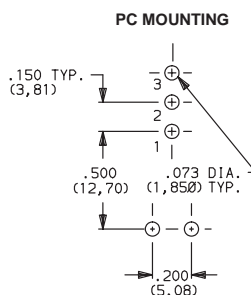
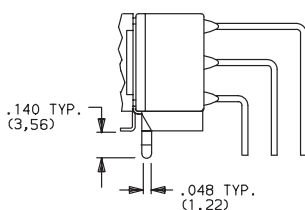
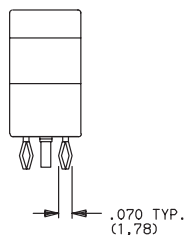
## TERMINATIONS

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



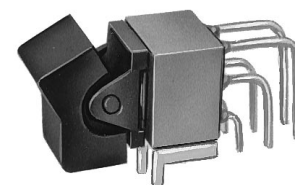
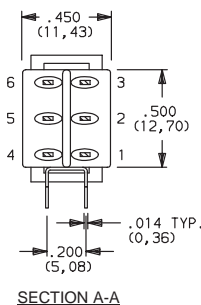
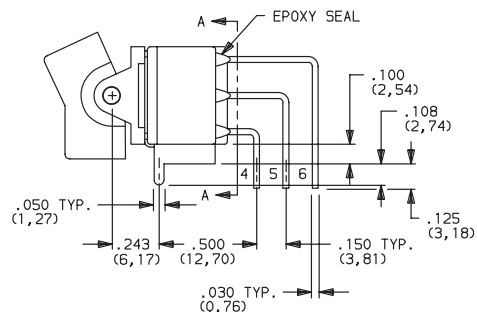
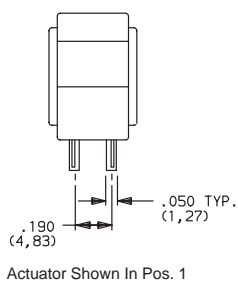
E101J1AV2BE2  
Vertical Actuation  
SPDT

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



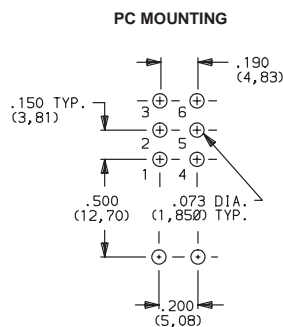
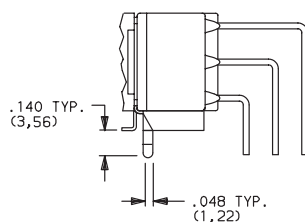
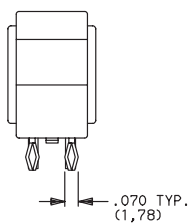
NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages F-27 and F-28.

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



E201J1AV2BE2  
Vertical Actuation  
DPDT

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



NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages F-27 and F-28.



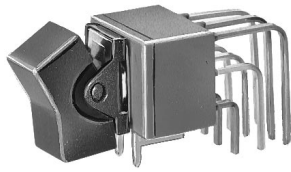
F

Rocker

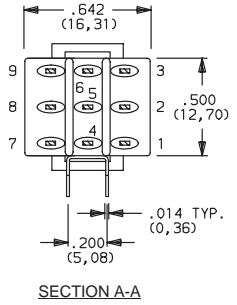
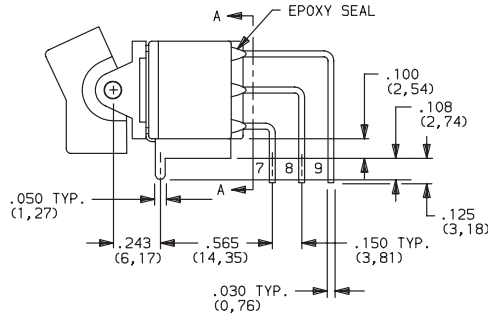
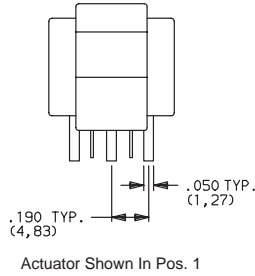
# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## TERMINATIONS

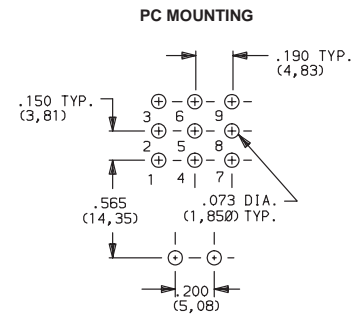
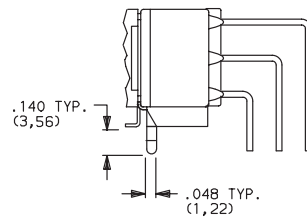
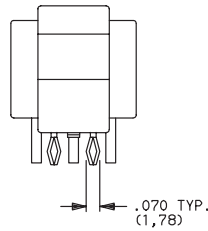
**AV2** (STD.) VERTICAL RIGHT ANGLE, PC THRU-HOLE,  
.150" PITCH



**E301J1AV2BE2**  
Vertical Actuation  
**3PDT**

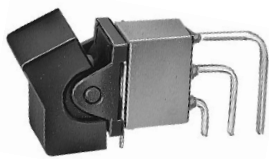


**AV3** VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE,  
.150" PITCH

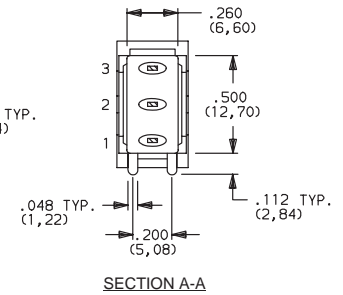
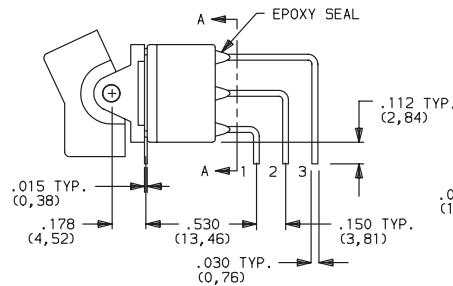
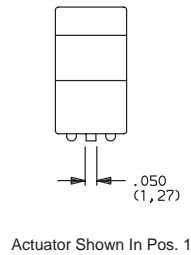


**NOTE:** Terminal bend radii and lead-in manufacturing option.  
Available actuators, see pages F-27 and F-28.

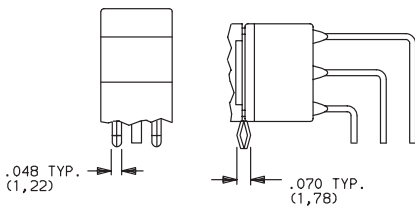
**V5** VERTICAL RIGHT ANGLE, PC THRU-HOLE,  
.150" PITCH



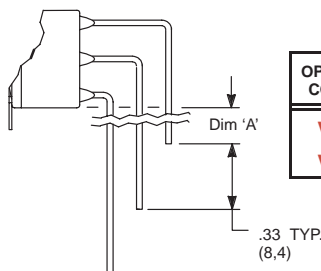
**E101J1V5BE2**  
Vertical Actuation  
**SPDT**



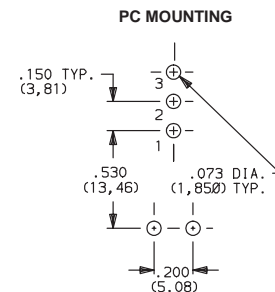
**V51** VERTICAL RIGHT ANGLE, SNAP-IN,  
PC THRU-HOLE, .150" PITCH



**V54, V55** VERTICAL RIGHT ANGLE, EXTENDED,  
PC THRU-HOLE, .150" PITCH



OPTION CODE	DIM 'A'
<b>V54</b>	.18 (4,6)
<b>V55</b>	.42 (10,7)

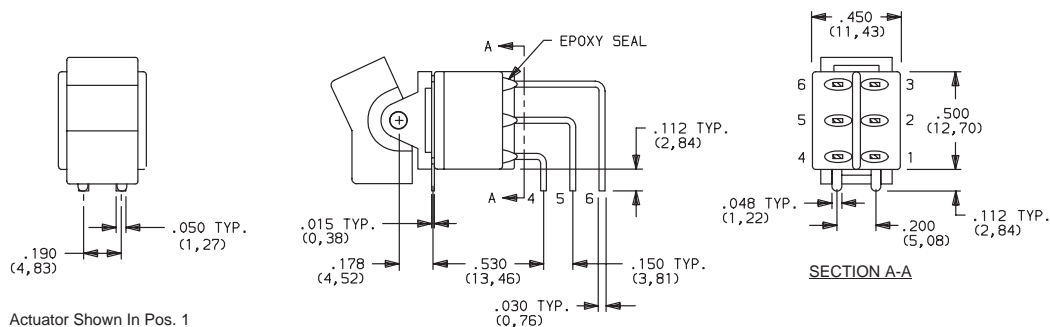


**NOTE:** Terminal bend radii and lead-in manufacturing option.  
Available actuators, see pages F-27 and F-28.

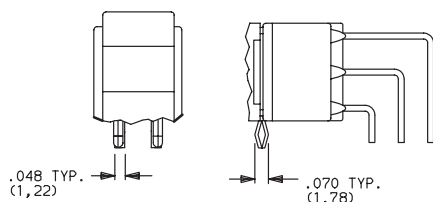
# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## TERMINATIONS

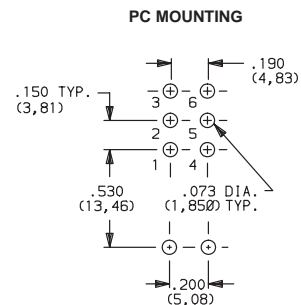
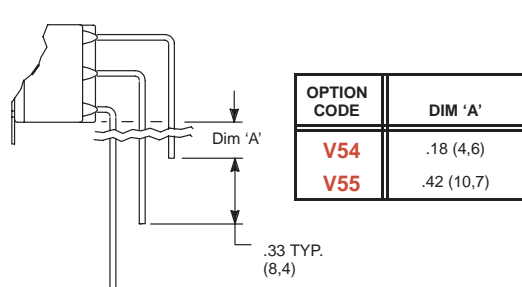
**V5** VERTICAL RIGHT ANGLE, PC THRU-HOLE,  
.150" PITCH



**V51** VERTICAL RIGHT ANGLE, SNAP-IN,  
PC THRU-HOLE, .150" PITCH



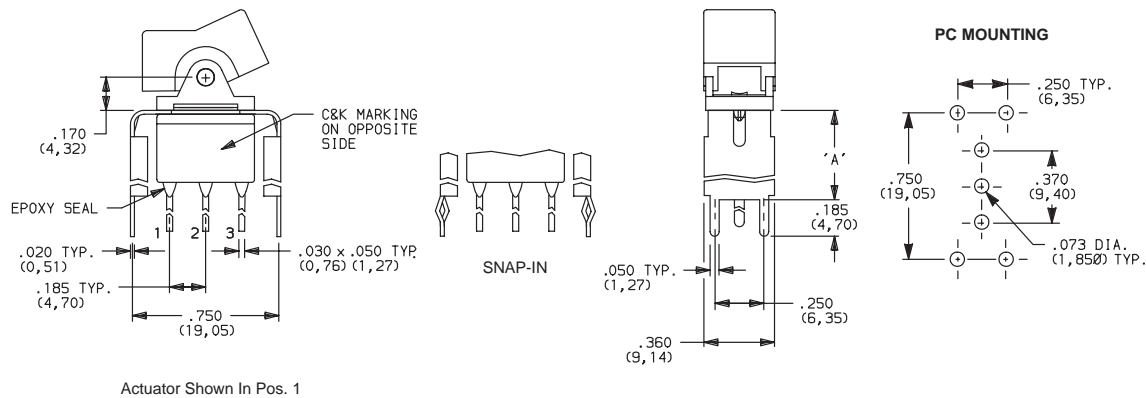
**V54, V55** VERTICAL RIGHT ANGLE, EXTENDED,  
PC THRU-HOLE, .150" PITCH



**NOTE:** Terminal bend radii and lead-in manufacturing option.  
Available actuators, see pages F-27 and F-28.

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

**V21, V61, V71, V81** VERTICAL MOUNT, V-BRACKET, SNAP-IN



OPTION CODE	DIM 'A'
<b>V2, V21</b>	.555 (14,10)
<b>V6, V61</b>	.460 (11,68)
<b>V7, V71</b>	.630 (16,00)
<b>V8, V81</b>	.953 (24,21)

**NOTE:** Available actuators, see pages F-27 and F-28.

# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

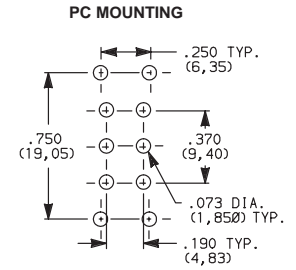
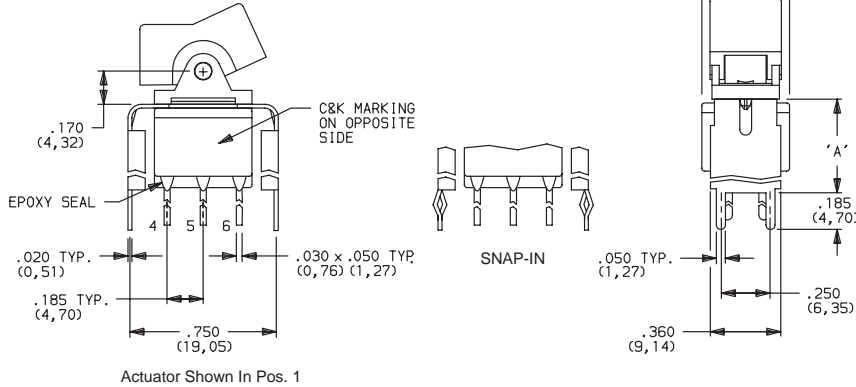
## TERMINATIONS

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

**V21, V61, V71, V81** VERTICAL MOUNT, V-BRACKET, SNAP-IN



E201J1\_\_BE2  
DPDT



OPTION CODE	DIM 'A'
<b>V2, V21</b>	.555 (14,10)
<b>V6, V61</b>	.460 (11,68)
<b>V7, V71</b>	.630 (16,00)
<b>V8, V81</b>	.953 (24,21)

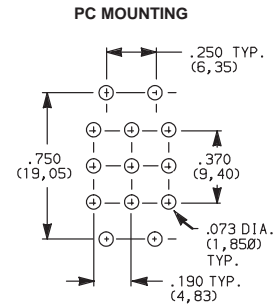
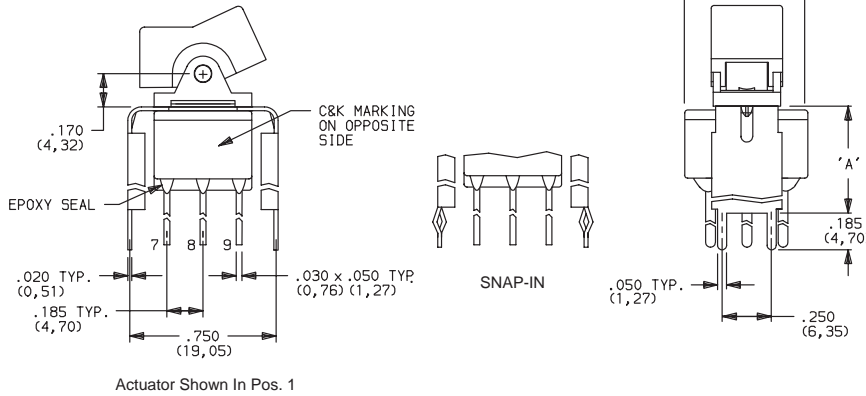
NOTE: Available actuators, see pages F-27 and F-28.

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

**V21, V71, V81** VERTICAL MOUNT, V-BRACKET, SNAP-IN



E301J1\_\_BE2  
3PDT



OPTION CODE	DIM 'A'
<b>V2, V21</b>	.555 (14,10)
<b>V7, V71</b>	.630 (16,00)
<b>V8, V81</b>	.953 (24,21)

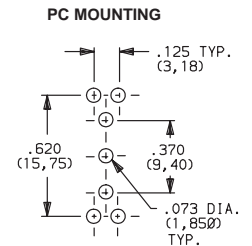
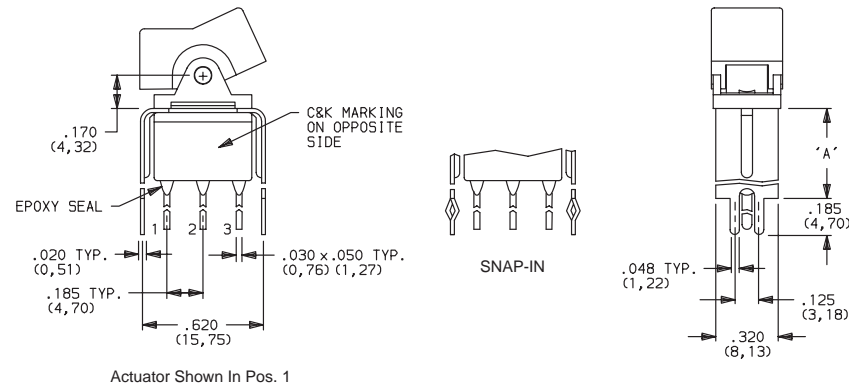
NOTE: Available actuators, see pages F-27 and F-28.

**V3, V4, V9** VERTICAL MOUNT, V-BRACKET

**V31, V41, V91** VERTICAL MOUNT, V-BRACKET, SNAP-IN



E101J1\_\_BE2  
SPDT



OPTION CODE	DIM 'A'
<b>V3, V31</b>	.460 (11,68)
<b>V4, V41</b>	.630 (16,00)
<b>V9, V91</b>	1.150 (29,21)

NOTE: Available actuators, see pages F-27 and F-28.



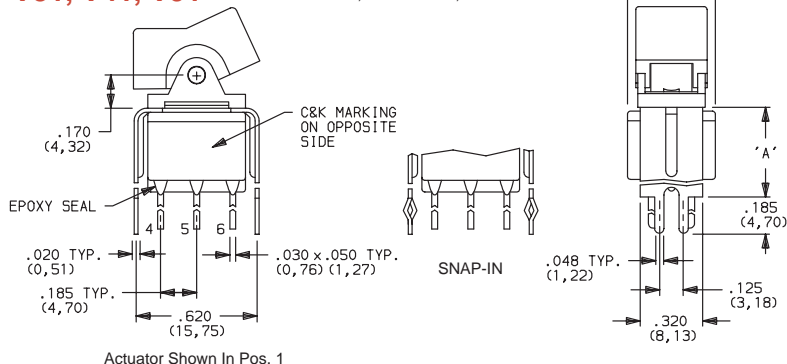
Rocker

# C&K E Series Sealed Miniature Rocker and Lever Handle Switches

## TERMINATIONS

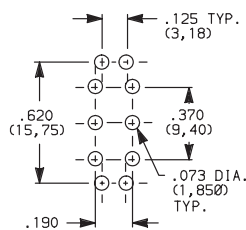
**V3, V4, V9** VERTICAL MOUNT, V-BRACKET

**V31, V41, V91** VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

PC MOUNTING



NOTE: Available actuators, see pages F-27 and F-28.

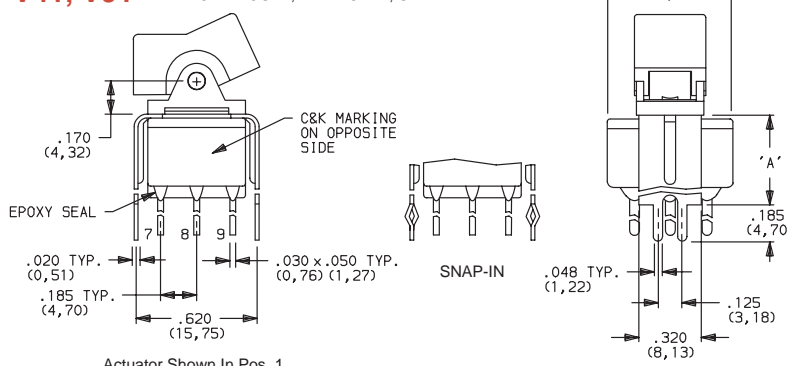


E201J1\_BE2  
DPDT

OPTION CODE	DIM 'A'
<b>V3, V31</b>	.460 (11,68)
<b>V4, V41</b>	.630 (16,00)
<b>V9, V91</b>	1.150 (29,21)

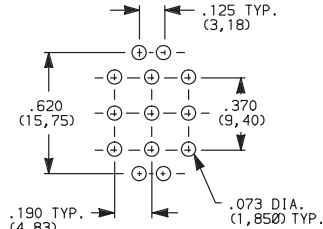
**V4, V9** VERTICAL MOUNT, V-BRACKET

**V41, V91** VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

PC MOUNTING



NOTE: Available actuators, see pages F-27 and F-28.



E301J1\_BE2  
3PDT

OPTION CODE	DIM 'A'
<b>V4, V41</b>	.630 (16,00)
<b>V9, V91</b>	1.150 (29,21)

## CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
<b>B (STD.)</b>	GOLD <sup>1</sup>	GOLD <sup>1</sup>	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
<b>K</b>		TIN-LEAD <sup>6</sup>		
<b>Q (STD.)</b>	SILVER <sup>4,5</sup>	SILVER <sup>5</sup>	POWER	E1XX & E2XX MODELS: 7.5 AMPS @ 125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. E3XX MODELS: 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
<b>M</b>		TIN-LEAD <sup>6</sup>		
<b>G</b>	GOLD OVER SILVER <sup>2,3</sup>	GOLD <sup>3</sup>	LOW LEVEL/DRY CIRCUIT OR POWER	E1XX AND E2XX MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 7.5 AMPS @ 125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. E3XX MODELS: 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
<b>L</b>		TIN-LEAD <sup>6</sup>		

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

<sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.

<sup>3</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>4</sup> END CONTACTS: Coin silver, silver plated.

<sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

<sup>6</sup> TERMINALS: Copper alloy, with tin-lead alloy over nickel plate.

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

B contact material standard with all terminations.

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

## SEAL

**E (STD.) EPOXY SEAL**

