

# 7000 Series Miniature Rocker & Lever Handle Switches

## Features/Benefits

- Multi-pole and multi-position
- Wide variety of actuator and termination options
- Epoxy terminal-seal compatible with bottom wash cleaning
- RoHS compliant

## Typical Applications

- Telecommunications
- Instrumentation
- Medical equipment



## Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material: 5 AMPS @ 120 V AC or 28 V DC; 2 AMPS @ 250 V AC. See page G-20 for additional ratings.

ELECTRICAL LIFE: 7X01 and UX1 models: 100,000 make-and-break cycles at full load. All other models: 40,000 cycles.

CONTACT RESISTANCE: Below 10 m Ω typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10<sup>9</sup> Ω min.

DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C.

SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

**NOTE:** Any models supplied with S, P, R, Q, B or G contact material are RoHS compliant.

**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, flame retardant, heat stabilized, or diallyl phthalate (DAP) (UL 94V-0).

ACTUATOR: Nylon, black.

FRAME (FRONT MOUNT): Nylon, black.

FRAME (REAR MOUNT): Spring steel, black.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless steel.

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

END CONTACTS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See page G-20 for additional contact materials.

CENTER CONTACTS & ALL TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page G-20 for additional contact materials.

TERMINAL SEAL: Epoxy. Refer to Soldering and Cleaning in Technical Data Section

HARDWARE: Mounting nuts & screws: Brass. Lockwasher: Stainless steel. Standoff: Nylon standard.

## 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 G-4 through G-24. 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.

<p><b>Switch Function</b></p> <p><b>7101</b> SP On-None-On  <b>7103</b> SP On-Off-On  <b>7105</b> SP Mom.-Off-Mom.  <b>7107</b> SP On-Off-Mom.  <b>7108</b> SP On-None-Mom.  <b>7109</b> SP None-On-Mom.  <b>7201</b> DP On-None-On  <b>7203</b> DP On-Off-On  <b>7205</b> DP Mom.-Off-Mom.  <b>7207</b> DP On-Off-Mom.  <b>7208</b> DP On-None-Mom.  <b>7211</b> DP On-On-On  <b>7213</b> DP On-On-Mom.  <b>7215</b> DP Mom.-On-Mom.  <b>7301</b> 3P On-None-On  <b>7303</b> 3P On-Off-On  <b>7401</b> 4P On-None-On  <b>7405</b> 4P Mom.-Off-Mom.  <b>7411</b> 4P On-On-On</p> <p><b>Note:</b> UL models available, see pages G-5 and G-6.</p>	<p><b>Actuator</b></p> <p><b>J1</b> .531" long rocker  <b>J2</b> Lever  <b>J3</b> .906" long rocker  <b>J8</b> .699" long rocker  <b>J10</b> 1.318" long rocker  <b>J11</b> Rocker with frame  <b>J15</b> Rocker, snap-in  <b>J16</b> Rocker with frame, snap-in  <b>J19</b> Rocker with frame  <b>J21</b> Lever with frame  <b>J25</b> Lever, snap-in  <b>J26</b> Lever with frame, snap-in  <b>J37</b> Rocker with frame  <b>J50</b> Rocker  <b>J51</b> Rocker with frame  <b>J52</b> Rocker with frame for LED, snap-in  <b>J60</b> Lever  <b>J61</b> Lever with frame, snap-in  <b>J62</b> Lever with frame for LED, snap-in  <b>J90</b> Lever  <b>J91</b> Lever with frame, snap-in</p>	<p><b>Terminations</b></p> <p><b>A</b> Right angle, PC thru-hole  <b>AV2</b> Vertical right angle, PC thru-hole  <b>C</b> PC Thru-hole  <b>Z</b> Solder lug  <b>A3</b> Right angle, snap-in, PC thru-hole  <b>AV3</b> Vertical right angle, snap-in, PC thru-hole  <b>AW3</b> Right angle, extended, PC thru-hole  <b>V2</b> .555" high, V-bracket  <b>V3</b> .460" high, V-bracket  <b>V4</b> .630" high, V-bracket  <b>V5</b> Vertical right angle, PC thru-hole  <b>V6</b> .460" high, V-bracket  <b>V7</b> .630" high, V-bracket  <b>V8</b> .953" high, V-bracket  <b>V9</b> 1.150" high, V-bracket  <b>V31</b> .460" high, V-bracket, snap-in  <b>V51</b> Vertical right angle, snap-in  <b>V61</b> .460" high, V-bracket, snap-in  <b>W</b> .750" long, wire wrap  <b>W3</b> .425" long, wire wrap  <b>W5</b> 1.305" long, wire wrap  <b>Z3</b> Quick connect</p>	<p><b>Contact Material</b></p> <p><b>B</b> Gold  <b>P</b> Gold, matte tin  <b>Q</b> Silver  <b>S</b> Silver, matte-tin  <b>G</b> Gold over silver  <b>R</b> Gold over silver, matte-tin</p> <p><b>Seal</b></p> <p><b>E</b> Epoxy  <b>I</b> Epoxy potted base</p> <p><b>Actuator Color</b></p> <p><b>2</b> Black  <b>1</b> White  <b>3</b> Red</p> <p><b>Frame Color</b></p> <p><b>2</b> Black  <b>1</b> White  <b>NONE</b> No frame color required</p> <p><b>Metal Frame Color</b>  (J11, J19, J21 &amp; J37 Actuators)  <b>2</b> Black  <b>1</b> White</p>
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Dimensions are shown: Inches (mm)  
 Specifications and dimensions subject to change



# 7000 Series Miniature Rocker & Lever Handle Switches

## SWITCH FUNCTION

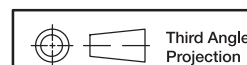
NO. POLES	MODEL NO.	UL** MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
			POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
SP	<b>7101</b>	<b>U11</b>	ON	NONE	ON	2-3	N/A	2-1	
	<b>7103</b>	<b>U13</b>	ON	OFF	ON		N/A		
	<b>7105</b>	<b>U15</b>	MOM.	OFF	MOM.		OPEN		
	<b>7107</b>	<b>U17</b>	ON	OFF	MOM.		N/A		
	<b>7108</b>	<b>U18</b>	ON	NONE	MOM.		N/A		
	<b>7109</b>	<b>U19</b>	NONE	ON	MOM.		N/A		
<b>SPDT</b> <p>Part number shown: 7101J1ZQE2</p>									
DP	<b>7201</b>	<b>U21</b>	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	<b>7203</b>	<b>U23</b>	ON	OFF	ON		N/A		
	<b>7205</b>	<b>U25</b>	MOM.	OFF	MOM.		OPEN		
	<b>7207</b>	<b>U27</b>	ON	OFF	MOM.		N/A		
	<b>7208</b>	<b>U28</b>	ON	NONE	MOM.		N/A		
	<b>7211*</b>	<b>U211*</b>	ON	ON	ON		2-3,5-4		
	<b>7213*</b>	<b>U213*</b>	ON	ON	MOM.		2-3,5-4		
	<b>7215*</b>	<b>U215*</b>	MOM.	ON	MOM.		2-3,5-4		
<b>DPDT</b> <p>Part number shown: 7201J1ZQE2</p>									

MOM. = Momentary

\* Wiring for 3-way switch, see Section N.

\*\* U11 through U413 model nos. with all options when ordered with G, Q, R or S contact material.

Rocker



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

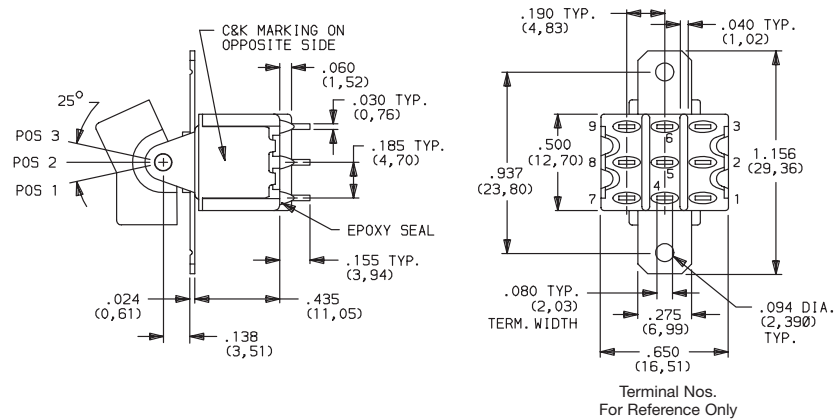
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# 7000 Series Miniature Rocker & Lever Handle Switches

## SWITCH FUNCTION

NO. POLES	MODEL NO.	UL** MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
			POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
3P	<b>7301</b>	<b>U31</b>	ON	NONE	ON	2-3-5-6,8-9	N/A	2-1,5-4,8-7	 3PDT
	<b>7303</b>	<b>U33</b>	ON	OFF	ON		OPEN		

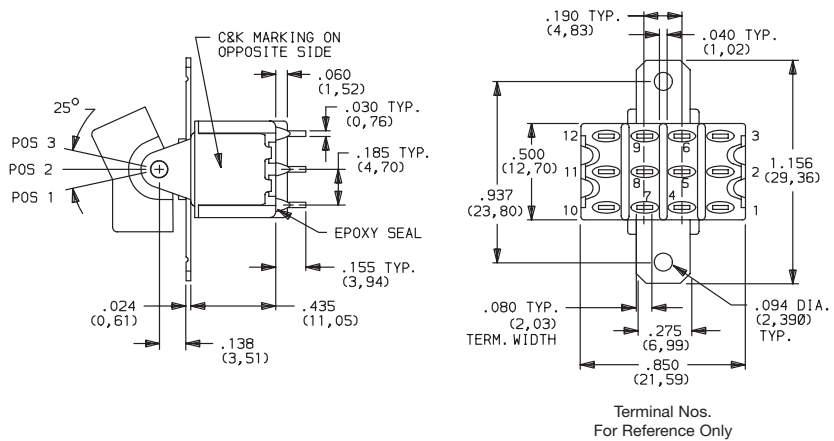
### 3PDT



Part number shown: 7301J1ZQE2

4P	<b>7401</b>	<b>U41</b>	ON	NONE	ON	2-3-5-6,8-9,11-12	N/A	2-1,5-4,8-7,11-10	 4PDT
	<b>7405</b>	<b>U45</b>	MOM.	OFF	MOM.		OPEN		
	<b>7411*</b>	<b>U411*</b>	ON	ON	ON		2-3-5-4,8-9,11-10		

### 4PDT



Part number shown: 7401J1ZQE2

MOM. = Momentary

\*\* U11 through U411 model nos. with all options when ordered with G, Q, R or S contact material.

\* Wiring for 3-way switch: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.



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



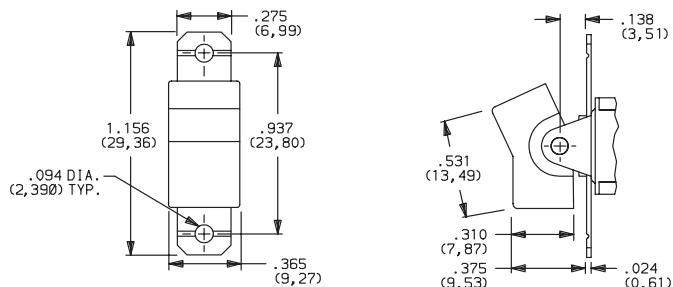
# 7000 Series Miniature Rocker & Lever Handle Switches

## ACTUATOR-PANEL REAR MOUNT

ACTUATOR COLOR

ACTUATOR

### J1 ROCKER



OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

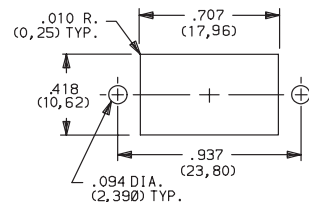
Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on all switches with panel mounting brackets. Actuators available separately, see page G-21 through G-22. Hardware is available see Technical Data section of this catalog.

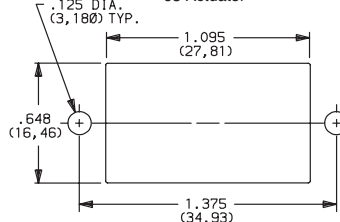
J1, J2, J3, J8 & J10 Actuators available with C, W-W5, Z or Z3 terminations.

### PANEL MOUNTING

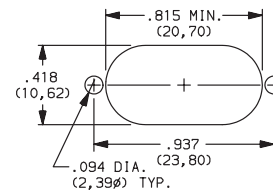
#### J1 & J2 Actuators



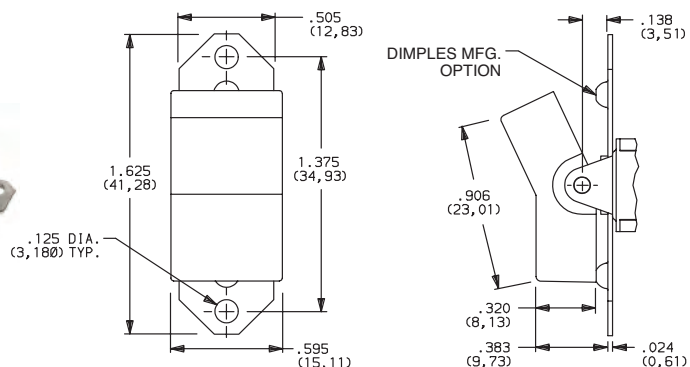
#### J3 Actuator



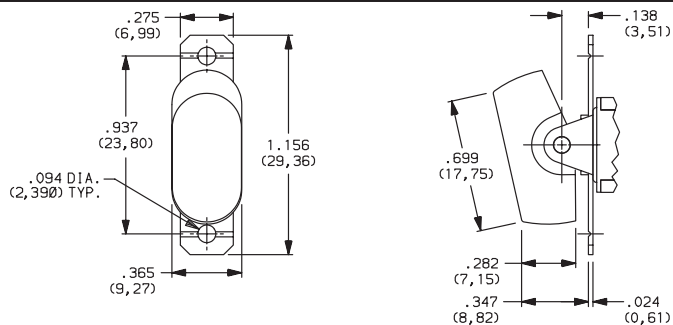
#### J8 Actuator



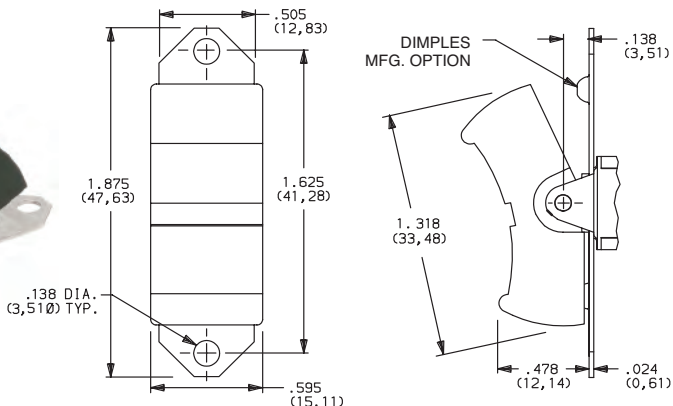
### J3 ROCKER



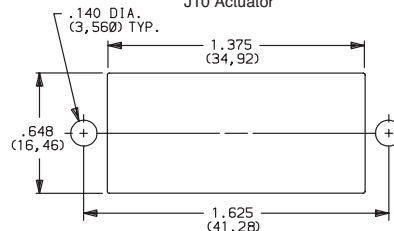
### J8 ROCKER



### J10 ROCKER



#### J10 Actuator



Rocker



G

C&K

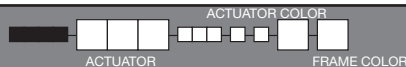
Third Angle Projection

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

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# 7000 Series Miniature Rocker & Lever Handle Switches

## ACTUATOR-SNAP-IN FRONT MOUNT



OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

OPTION CODE	FRAME COLOR
2	BLACK
NONE	No Frame Color (J15 or J25options)
1	WHITE

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

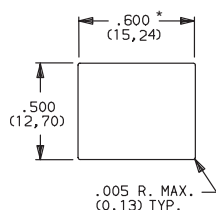
**NOTE:** Actuators & frames available separately, see pages G-21 through G-22. J15, J16, J25, J26, J50 & J51 Actuators available with 71XX, 72XX, U1XX & U2XX models and C, W-W5, Z and Z3 terminations.

### PANEL MOUNTING

J15, J16, J25 & J26 Actuators



J50 Actuator

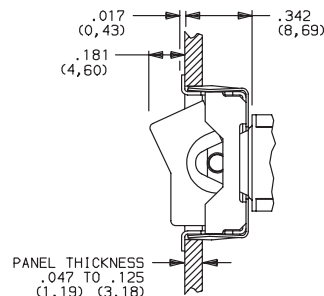


\* For J50: Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thk. panels.

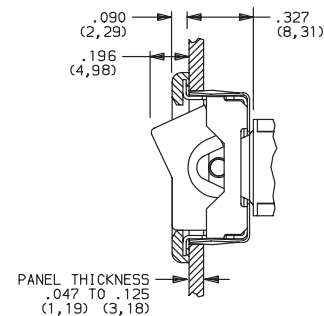
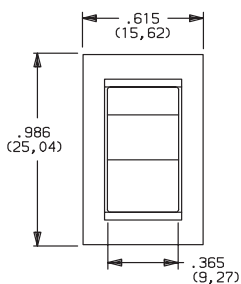
### J15 ROCKER, SNAP-IN



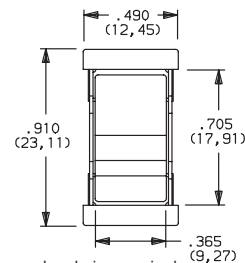
No frame color choice required



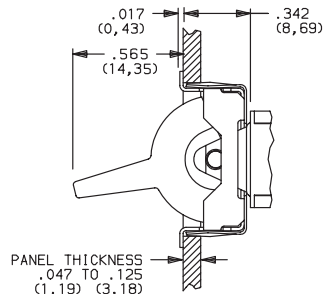
### J16 ROCKER WITH FRAME, SNAP-IN



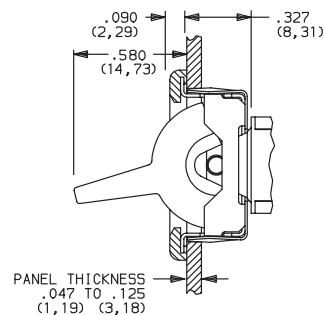
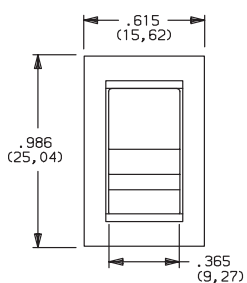
### J25 LEVER, SNAP-IN



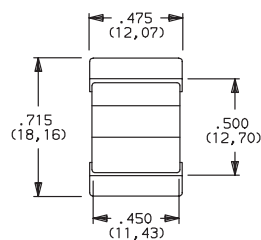
No frame color choice required



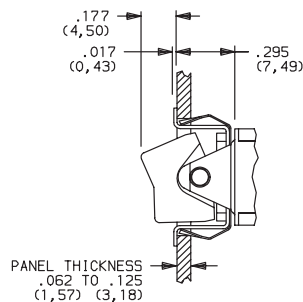
### J26 LEVER WITH FRAME, SNAP-IN



### J50 ROCKER, SNAP-IN



No frame color choice required

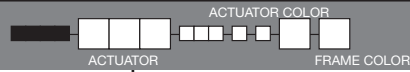


Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

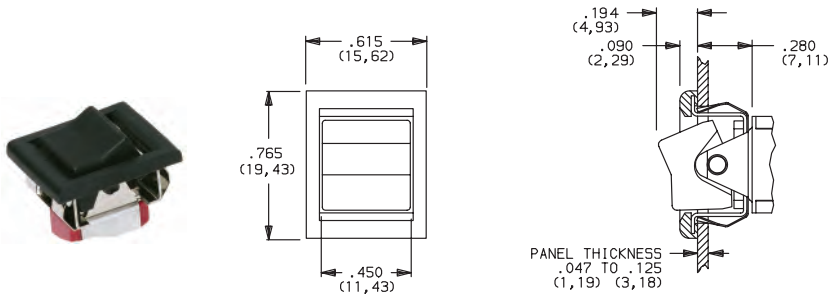


# 7000 Series Miniature Rocker & Lever Handle Switches

## ACTUATOR-SNAP-IN FRONT MOUNT



### J51 ROCKER WITH FRAME, SNAP-IN



OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

### J52 ROCKER WITH FRAME FOR LED, SNAP-IN



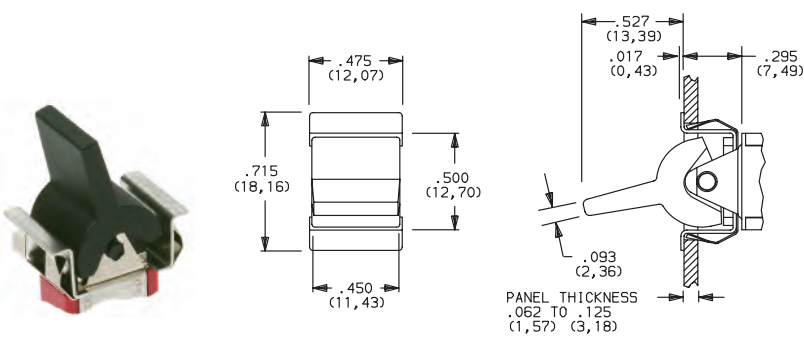
OPTION CODE	FRAME COLOR
2	BLACK
NONE	No Frame Color (J15 or J25 options)
1	WHITE

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

**NOTE:** Actuators & frames available separately, see pages G-21 through G-22. J51, J52, J60 & J61 Actuators available with 71XX, 72XX, U1XX & U2XX models and C, W-W5, Z and Z3 terminations.

LED not included.  
For LED information, see page G-24.

### J60 LEVER, SNAP-IN

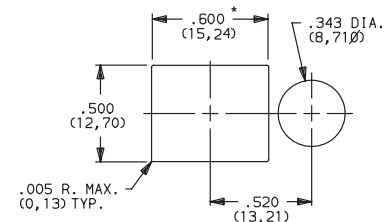


#### PANEL MOUNTING

J51, J60 & J61 Actuators



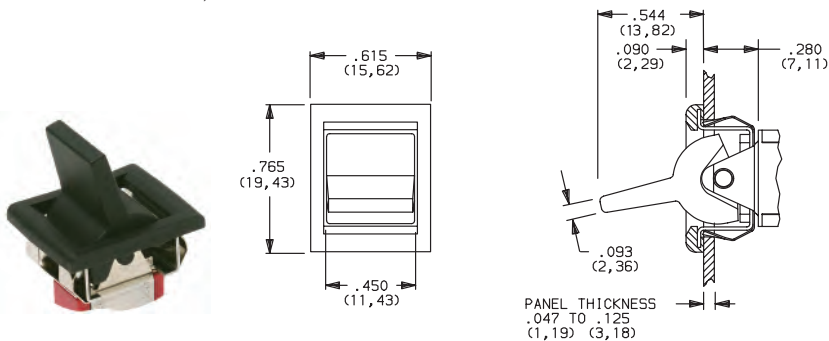
J52 Actuator



For J51, J52: Increase this dimension to .620/.625 (15,75/15,88) for .060/.125(1,52/3,18) thk. panels.

No frame color choice required

### J61 LEVER WITH FRAME, SNAP-IN



Rocker



G

**C&K**



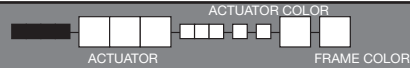
Third Angle Projection

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

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# 7000 Series Miniature Rocker & Lever Handle Switches

## ACTUATOR-SNAP-IN FRONT MOUNT



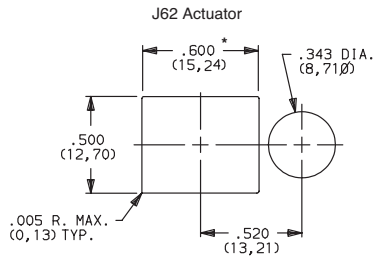
OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

OPTION CODE	FRAME COLOR
2	BLACK
NONE	No Frame Color (J90 options)
1	WHITE

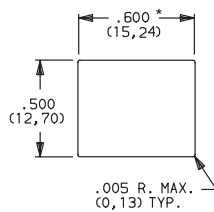
Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Actuators & frames available separately, see pages G-21 through G-22. J62, J90 & J91 Actuators available with 71XX, 72XX, U1XX & U2XX models and C, W-W5, Z & Z3 terminations.

### PANEL MOUNTING

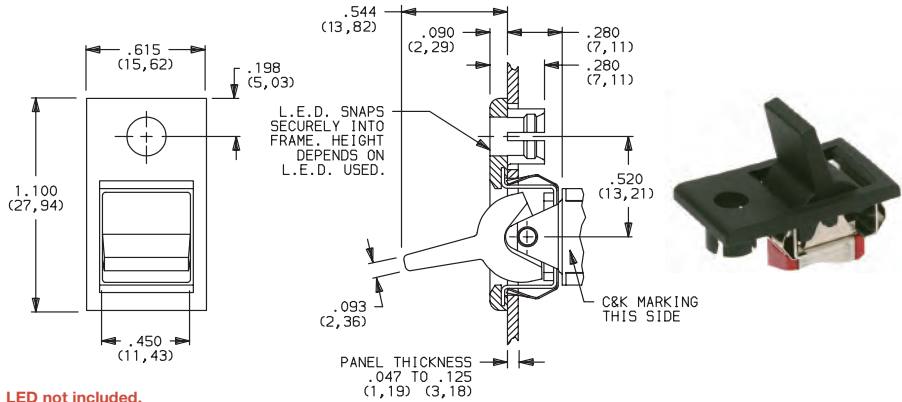


### J90, J91 & J93 Actuators

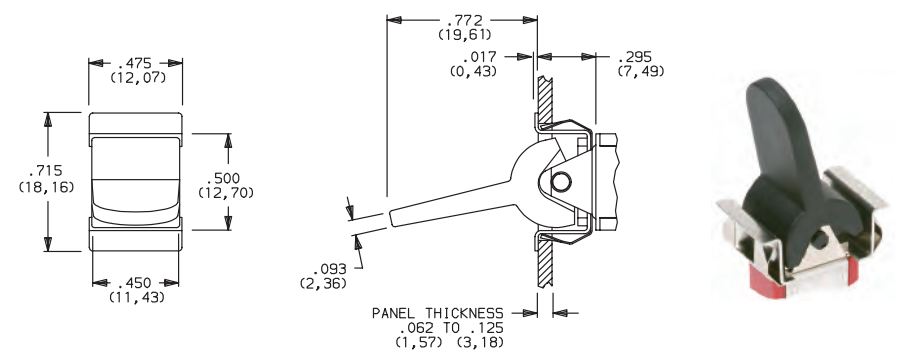


\* For J90: Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thk. panels.  
For J91: Increase this dimension to .620/.625 (15,75/15,88) for .060/.125 (1,52/3,18) thk. panels.

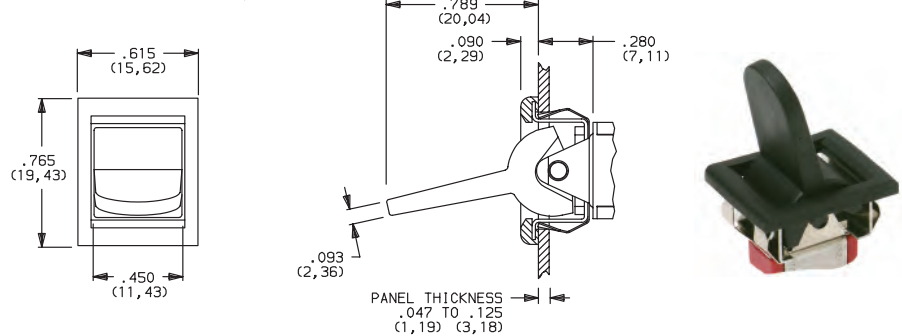
### J62 LEVER WITH FRAME FOR LED, SNAP-IN



### J90 LEVER, SNAP-IN

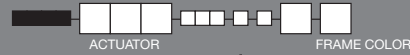


### J91 LEVER WITH FRAME, SNAP-IN

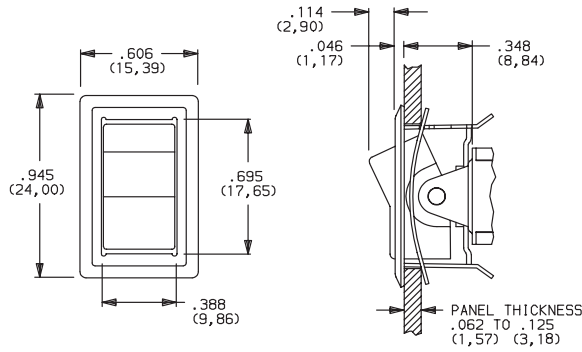


# 7000 Series Miniature Rocker & Lever Handle Switches

## ACTUATOR-REAR MOUNT



**J11** ROCKER WITH FRAME



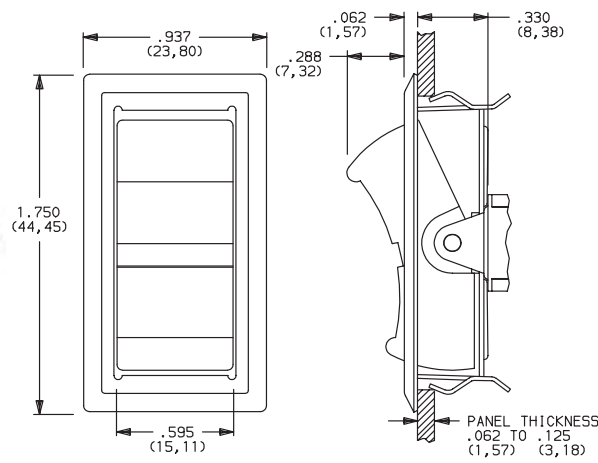
OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

OPTION CODE	FRAME COLOR
2	BLACK
1	WHITE

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

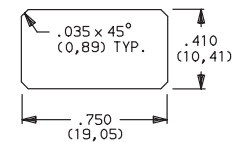
**NOTE:** Actuators & frames available separately, see pages G-21 through G-22. J11, J19, J21 & J37 Actuators available with C, W-W5, Z & Z3 terminations.

**J19** ROCKER WITH FRAME

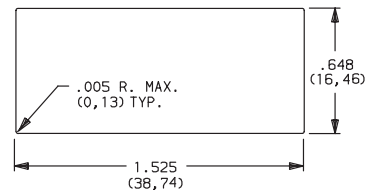


### PANEL MOUNTING

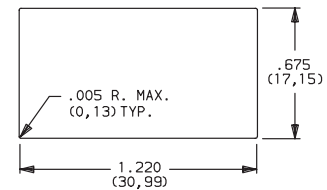
#### J11 & J21 Actuators



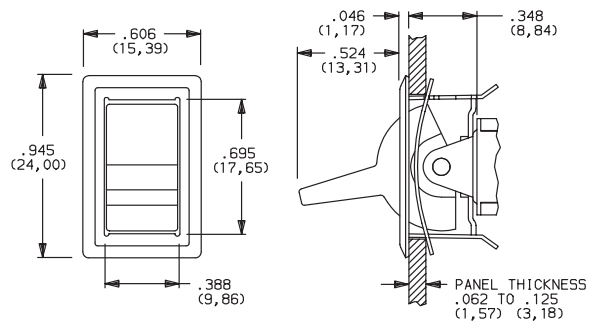
#### J19 Actuator



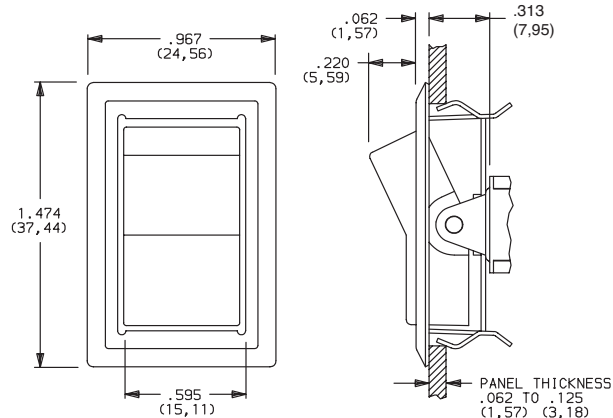
#### J37 Actuator



**J21** LEVER WITH FRAME



**J37** ROCKER WITH FRAME



Third Angle Projection

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

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Rocker



G

**C&K**



# 7000 Series Miniature Rocker & Lever Handle Switches

ACTUATOR-PC MOUNT



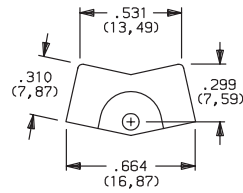
OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

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

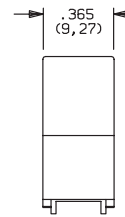
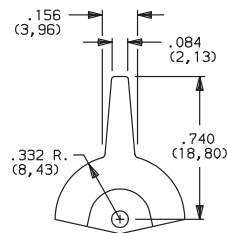
**NOTE:** Some permissible actuator/termination combinations may lack clearance between actuator and PC board, and care must be exercised to accommodate this condition.

Actuators available separately, see page G-21 through G-22. J1, J2 & J8 actuators available with A, A3, AV2, AV3, AW3 & V2 terminations. J3 actuators available with AV2, AV3 & V2-V61 terminations. J50 actuators available with A (DP, 3P models only), A3 (DP, 3P models only), AV2, AV3, AW3 (DP, 3P models only) & V2-V61 terminations.

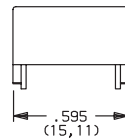
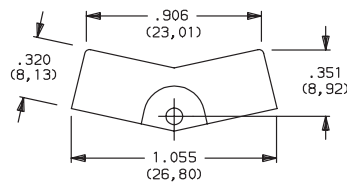
## J1 ROCKER



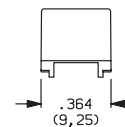
## J2 LEVER



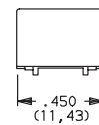
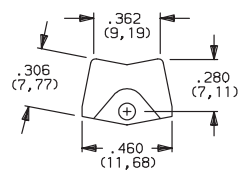
## J3 ROCKER



## J8 ROCKER



## J50 ROCKER



Rocker



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



# 7000 Series Miniature Rocker & Lever Handle Switches

## ACTUATOR-PC MOUNT



### J60 LEVER



OPTION CODE	ACTUATOR COLOR
2	BLACK
1	WHITE
3	RED

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

**NOTE:** Some permissible actuator/termination combinations may lack clearance between actuator and PC board, and care must be exercised to accommodate this condition.

### J90 LEVER

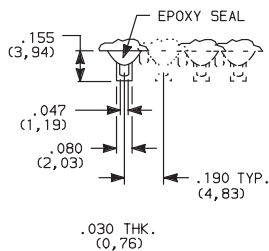


Actuators available separately, see page G-21 through G-22. J60 & J90 actuators available with A (DP, 3P models only), A3 (DP, 3P models only), AV2, AV3, AW3 (DP, 3P models only) & V2-V61 terminations.

## TERMINATIONS



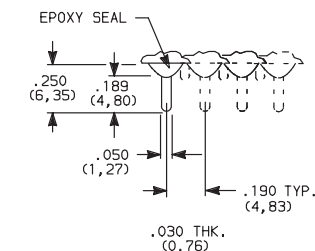
### Z SOLDER LUG



### SPDT thru 4PDT

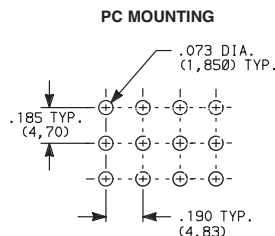
Not available with P, R or S contact materials. Available actuators, see pages G-7 through G-13.

### C PC THRU-HOLE

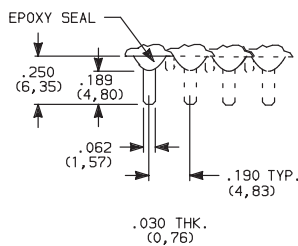


### SPDT thru 4PDT

**NOTE:** Available actuators, see pages G-7 through G-13.



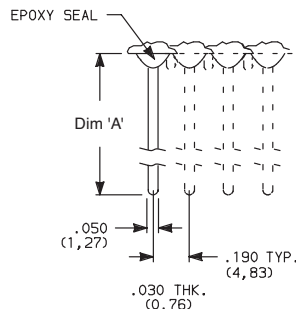
### Z3 QUICK CONNECT



### SPDT thru 4PDT

Not available with P, R or S contact materials. Available actuators, see pages G-7 through G-13. Mating quick connector available; order part number 530100000, page G-22.

### W, W3, W5 WIRE WRAP



OPTION CODE	DIM 'A'
W	.750 (19,05)
W3	.425 (10,80)
W5	1.305 (33,15)

### SPDT thru 4PDT

**NOTE:** Available actuators, see pages G-7 through G-13.



Third Angle Projection

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

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Rocker



G

**C&K**

# 7000 Series Miniature Rocker & Lever Handle Switches

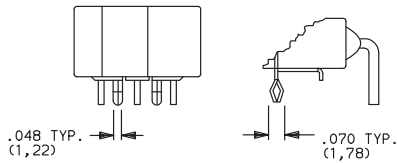
## TERMINATIONS

### A RIGHT ANGLE, PC THRU-HOLE

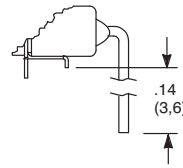


**7101J1ABE2**  
Horizontal Actuation  
**SPDT**

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



### AW3 RIGHT ANGLE, EXTENDED, PC THRU-HOLE



### PC MOUNTING



Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.

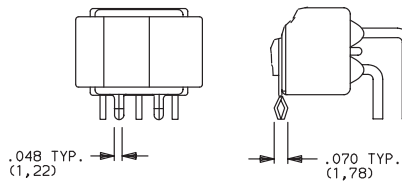
**NOTE:** PC pattern must clear switch support leg.

### A RIGHT ANGLE, PC THRU-HOLE

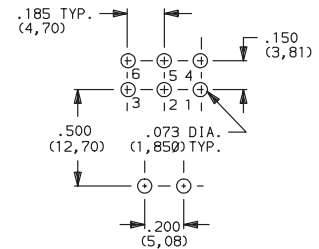


**7201J1ABE2**  
Horizontal Actuation  
**DPDT**

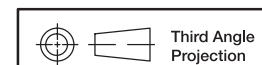
### A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE



### PC MOUNTING



Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.



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



# 7000 Series Miniature Rocker & Lever Handle Switches

## TERMINATIONS

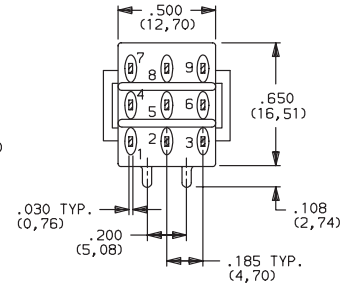
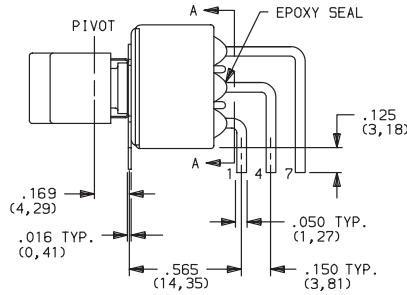
**A** RIGHT ANGLE, PC THRU-HOLE



**7301J1ABE2**  
Horizontal Actuation  
**3PDT**



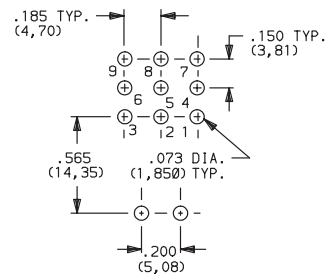
Actuator Shown In Pos. 1



SECTION A-A

Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.

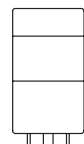
### PC MOUNTING



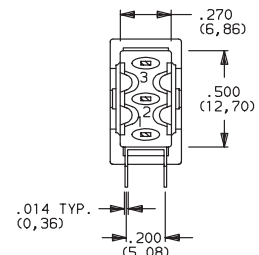
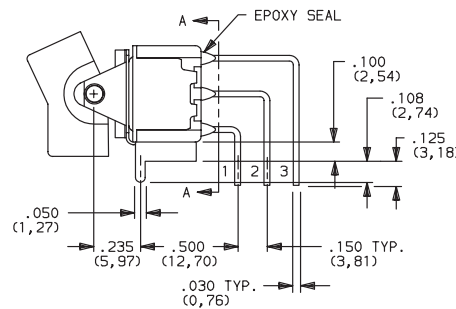
**AV2** VERTICAL RIGHT ANGLE, PC THRU-HOLE,  
.150" PITCH



**7101J1AV2BE2**  
Vertical Actuation  
**SPDT**

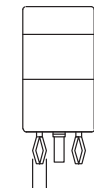


Actuator Shown In Pos. 1

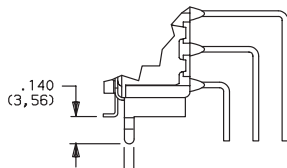


SECTION A-A

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

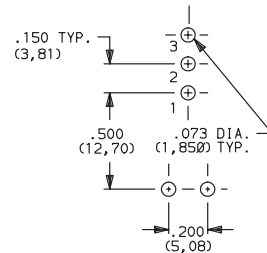


.070 TYP.  
(1,78)



.048 TYP.  
(1,22)

### PC MOUNTING



Rocker

Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.



Third Angle  
Projection

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

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G

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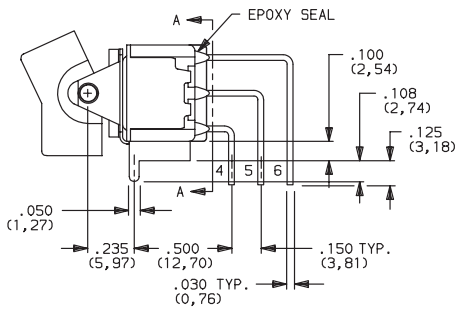
# 7000 Series Miniature Rocker & Lever Handle Switches

## TERMINATIONS

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

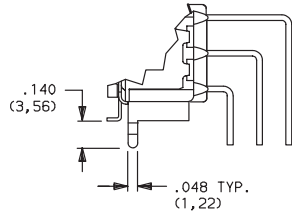


Actuator Shown In Pos. 1

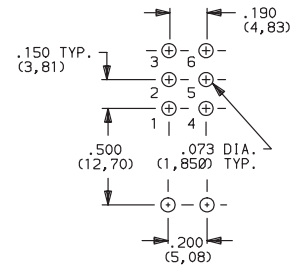


**7201J1AV2BE2**  
Vertical Actuation  
**DPDT**

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

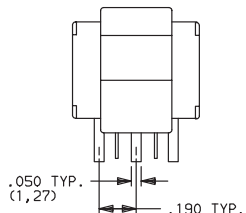


### PC MOUNTING

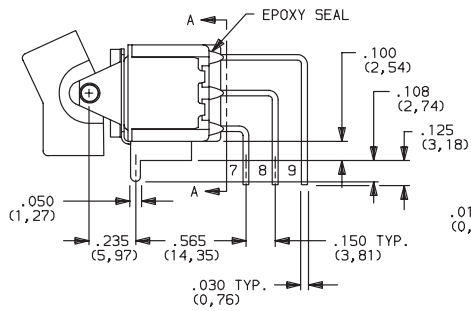


Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.

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

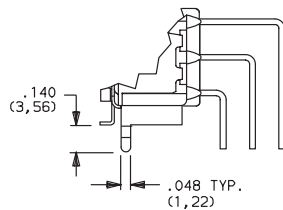


Actuator Shown In Pos. 1

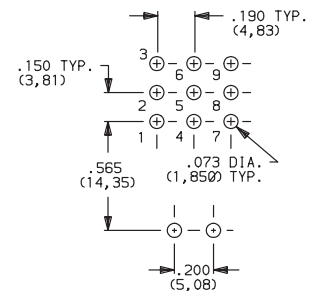


**7301J1AV2BE2**  
Vertical Actuation  
**3PDT**

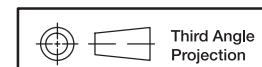
**AV3** VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE,  
.150" PITCH



### PC MOUNTING



Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.



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

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# 7000 Series Miniature Rocker & Lever Handle Switches

## TERMINATIONS

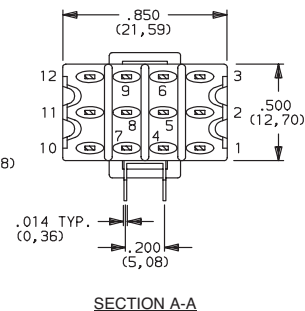
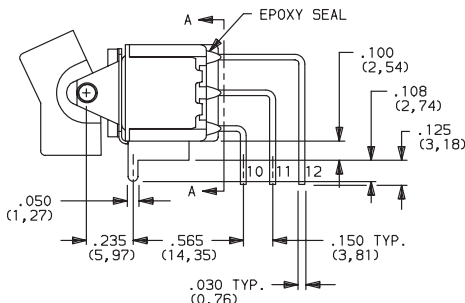
**AV2** VERTICAL RIGHT ANGLE, PC THRU-HOLE,  
.150" PITCH



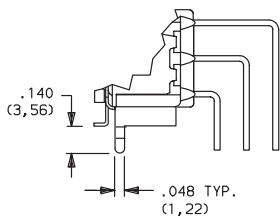
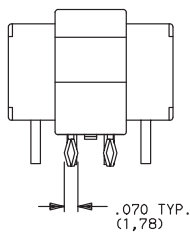
**7401J1AV2BE2**  
Vertical Actuation  
**4PDT**



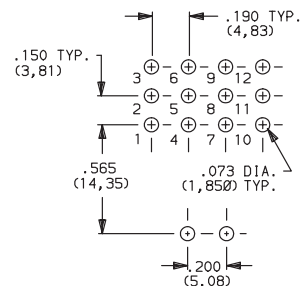
Actuator Shown In Pos. 1



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



### PC MOUNTING

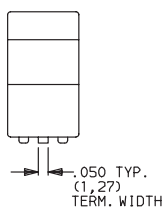


Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.

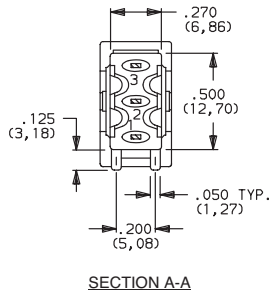
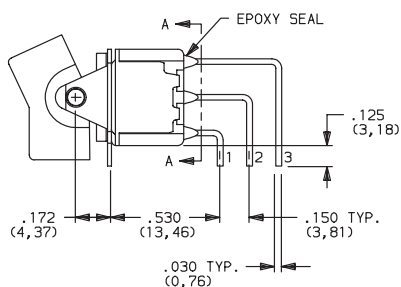
**V5** VERTICAL RIGHT ANGLE, PC THRU-HOLE,  
.150" PITCH



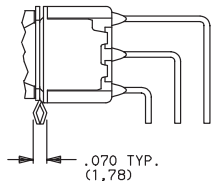
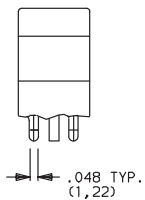
**7101J1V5BE2**  
Vertical Actuation  
**SPDT**



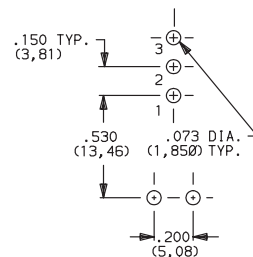
Actuator Shown In Pos. 1



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



### PC MOUNTING



Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.

Rocker



G

**C&K**



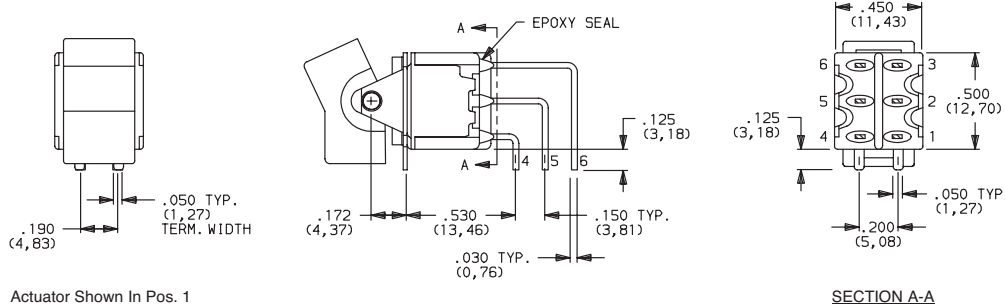
Third Angle  
Projection

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

# 7000 Series Miniature Rocker & Lever Handle Switches

## TERMINATIONS

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

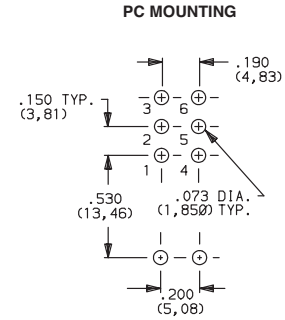
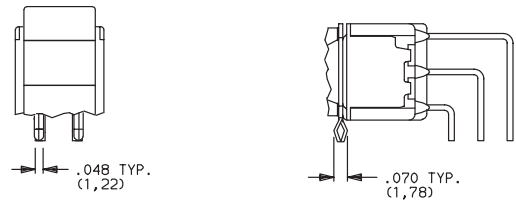


Actuator Shown In Pos. 1



**7201J1V5BE2**  
Vertical Actuation  
DPDT

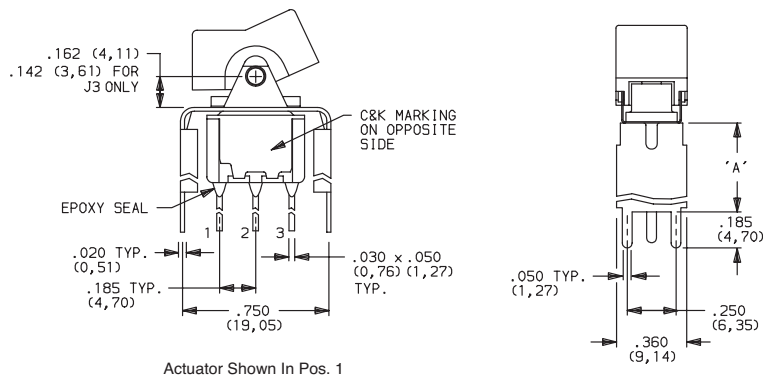
**V51** VERTICAL RIGHT ANGLE, SNAP-IN,  
PC THRU-HOLE, .150" PITCH



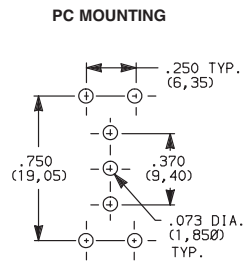
Not available with I seal option. Available actuators, see pages G-6 and G-12.  
Terminal bend radii and lead-in manufacturing option.

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

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



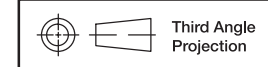
Actuator Shown In Pos. 1



**7101J1\_BE2**  
SPDT

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

Not available with I seal option.  
Available actuators, see pages G-6 and G-12.



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

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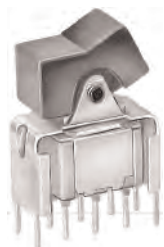


# 7000 Series Miniature Rocker & Lever Handle Switches

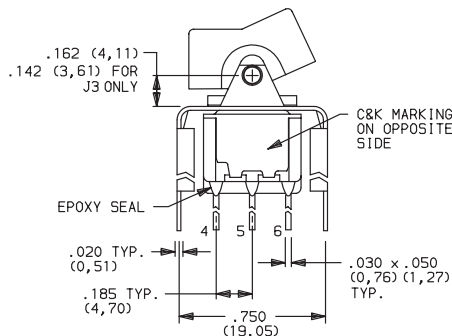
## TERMINATIONS

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

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

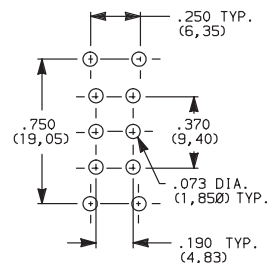


7201J1\_BE2  
DPDT



Actuator Shown In Pos. 1

### PC MOUNTING



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

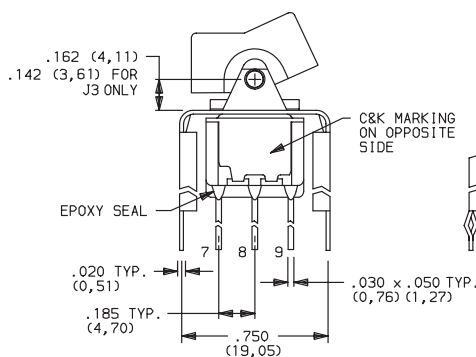
Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

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

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

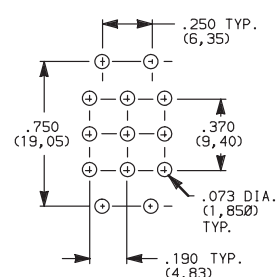


7301J1\_BE2  
3PDT



Actuator Shown In Pos. 1

### PC MOUNTING



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

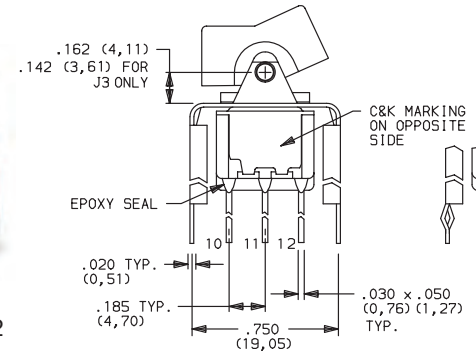
Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

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

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

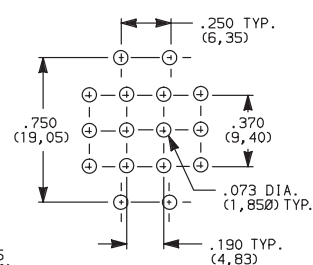


7401J1\_BE2  
4PDT



Actuator Shown In Pos. 1

### PC MOUNTING



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

Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

Rocker



G

**C&K**



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

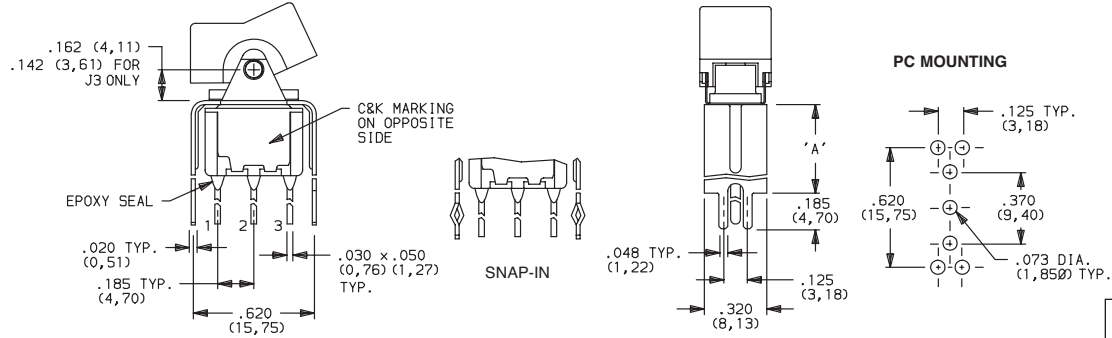


# 7000 Series Miniature Rocker & Lever Handle Switches

## TERMINATIONS

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

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



7101J1\_BE2  
SPDT

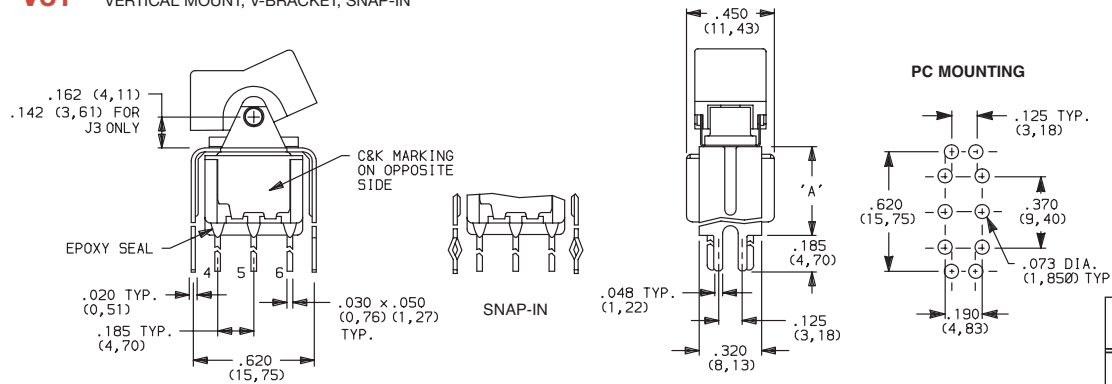
OPTION CODE	DIM 'A'
<b>V3, V31</b>	.460 (11,68)
<b>V4</b>	.630 (16,00)
<b>V9</b>	1.150 (29,21)

Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

Actuator Shown In Pos. 1

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

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



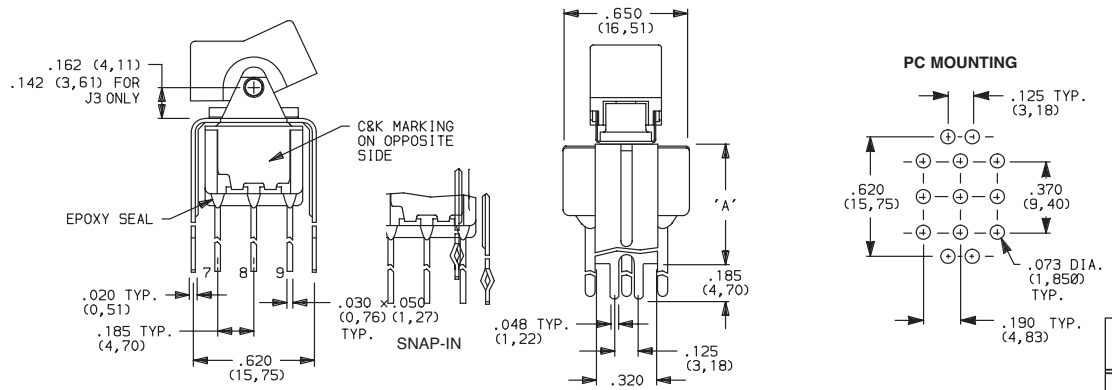
7201J1\_BE2  
DPDT

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

Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

Actuator Shown In Pos. 1

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



7301J1\_BE2  
3PDT

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

Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

Actuator Shown In Pos. 1



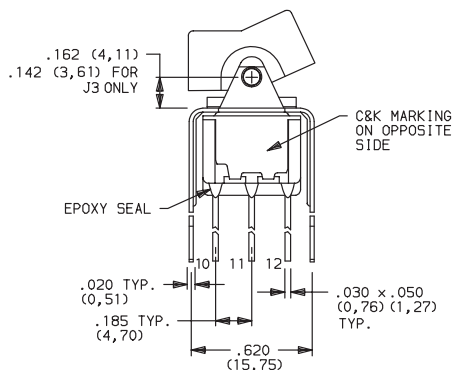
# 7000 Series Miniature Rocker & Lever Handle Switches

## TERMINATIONS

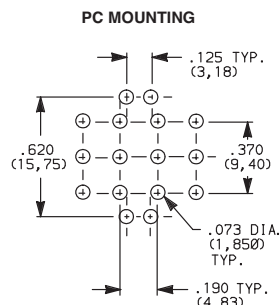
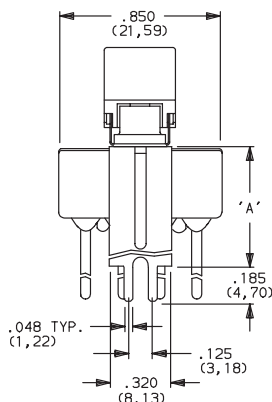
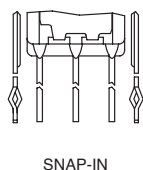
**V4, V9** VERTICAL MOUNT, V-BRACKET



7401J1\_BE2  
4PDT



Actuator Shown In Pos. 1



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

Not available with I seal option.  
Available actuators, see pages G-6 and G-12.

## CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
<b>B</b>	GOLD <sup>1</sup>	GOLD <sup>1</sup>	LOW LEVEL/ DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
<b>P</b>		MATTE-TIN <sup>6</sup>		
<b>Q</b>	SILVER <sup>4,5</sup>	SILVER <sup>5</sup>	POWER	5 AMPS @ 120 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
<b>S</b>		MATTE-TIN <sup>6</sup>		
<b>G</b>	GOLD OVER SILVER <sup>2,3</sup>	GOLD <sup>3</sup>	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 VA MAX @ 20 V AC OR DC MAX OR 5 AMPS @ 120 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
<b>R</b>		MATTE-TIN <sup>6</sup>		

\* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

- CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
- END CONTACTS: Coin silver, with gold plate over nickel plate.
- CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.
- END CONTACTS: Coin silver, silver plated.
- CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.
- TERMINALS: Copper alloy, with matte-tin over nickel plate.

U11-U415 model numbers with all options when ordered with G, Q, S & R contact material.

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

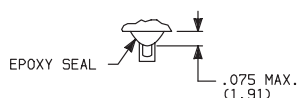
Q contact material standard with C, Z & Z3 terminations.

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

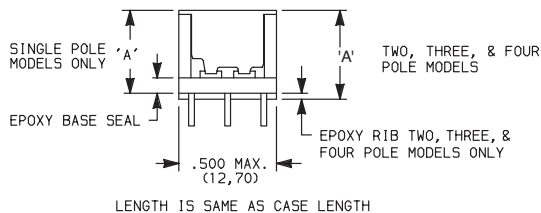
**NOTE:** Any models supplied with Q, B, G S, P & R contact material are RoHS compliant.

## SEAL

**E** EPOXY SEAL



**I** EPOXY POTTED BASE



Available with C, W through W5, Z & Z3 terminations.

NO. POLES	DIM 'A'
SP	.410 (10,41)
DP	.440 (11,18)
3P	.505 (12,83)
4P	.505 (12,83)



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

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Rocker



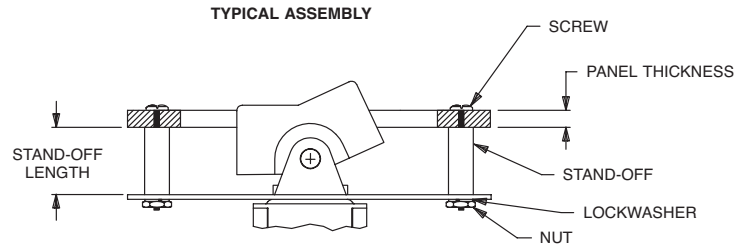
G

**C&K**

# 7000 Series Miniature Rocker & Lever Handle Switches

## AVAILABLE HARDWARE

Panel mounting hardware for rocker and lever handle switches is available separately. Mounting hardware consists of two screws, two nuts, two standoffs and two lockwashers per switch, and is available for panel thicknesses of 1/16, 3/32 and 1/8 inch. See part numbers below.



Qty	Part Number	Description
2	761103000	Standoffs
2	764100000	Mounting screws
2	764200000	Lock washers
2	764300000	Hex nuts

### J1 & J2 actuators

PART NO.	PANEL THK.	STANDOFF LENGTH
761103000	1/8 IN. (3,18)	.233 (5,92)

### J3 actuators

PART NO.	PANEL THK.	STANDOFF LENGTH
770603000	1/8 IN. (3,18)	.233 (5,92)

### J10 actuators

PART NO.	PANEL THK.	STANDOFF LENGTH
770703000	1/8 IN. (3,18)	.233 (5,92)

### MATERIAL

Screws, nuts, lockwashers: Stainless steel. Standoffs: Nylon, standard.

#### J1, J11, J15 & J16 Actuators



**PART NO.**  
**776A01000** WHITE  
**776A02263** BLACK  
**776A03000** RED

Material: Nylon  
 Finish: Matte

#### J2, J21, J25 & J26 Actuators



**PART NO.**  
**426D01000** WHITE  
**426D02263** BLACK  
**426D03000** RED

Material: Nylon  
 Finish: Matte

#### J3 & J37 Actuators



**PART NO.**  
**431D01000** WHITE  
**431D02263** BLACK  
**431D03000** RED

Material: Nylon  
 Finish: Matte

#### J50, J51 & J52 Actuators



**PART NO.**  
**775A01000** WHITE  
**775A02263** BLACK  
**775A03000** RED

Material: Nylon  
 Finish: Matte

#### J60, J61 & J62 Actuators



**PART NO.**  
**598101000** WHITE  
**613802263** BLACK  
**598103000** RED

Material: Nylon  
 Finish: Matte

#### J8 Actuator



**PART NO.**  
**488701000** WHITE  
**488702263** BLACK  
**488703000** RED

Material: Nylon  
 Finish: Matte



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



# 7000 Series Miniature Rocker & Lever Handle Switches

## AVAILABLE HARDWARE

J90 & J91 Actuators



PART NO.  
**598001000** WHITE  
**598002263** BLACK  
**598003000** RED  
 Material: Nylon  
 Finish: Matte

J10 & J19 Actuators



PART NO.  
**769501000** WHITE  
**769502263** BLACK  
**769503000** RED  
 Material: Nylon  
 Finish: Matte

Fits Z3 Termination female connector



PART NO.  
**530100000**  
 Available in loose pieces.

Frame for J11 & J21 Actuators



PART NO.  
**764500746** BLACK ENAMEL  
**764500747** WHITE ENAMEL  
**764601106** RETAINING SPRING  
 Material: Spring Steel

Frame for J16 & J26 Actuators



PART NO.  
**459101000** WHITE  
**459102000** BLACK  
**459103000** RED  
 Material: Nylon  
 Finish: Matte

Frame for J51, J61 & J91 Actuators



PART NO.  
**615601000** WHITE  
**615602263** BLACK  
**615603000** RED  
 Material: Nylon  
 Finish: Matte

Frame for J19 Actuator



PART NO.  
**781000746** BLACK ENAMEL  
**781000747** WHITE ENAMEL  
 Material: Spring Steel

Frame for J37 Actuator



PART NO.  
**445400746** BLACK ENAMEL  
**445400747** WHITE ENAMEL  
 Material: Spring Steel

Frame for J52 & J62 Actuators



PART NO.  
**613301000** WHITE  
**613302263** BLACK  
**613303000** RED  
 Material: Nylon  
 Finish: Matte

Rocker



G



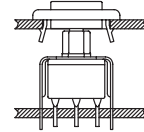
Dimensions are shown: Inches (mm)  
 Specifications and dimensions subject to change

# 7000 Series Miniature Rocker & Lever Handle Switches

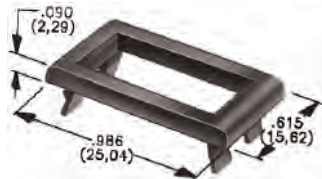
## AVAILABLE HARDWARE

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



J1 & J2 Actuators



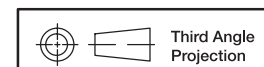
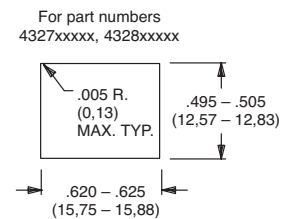
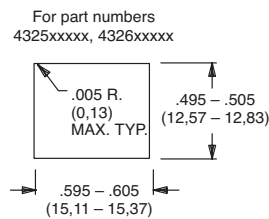
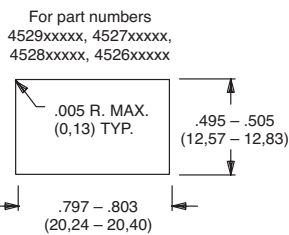
.047" (1,19) PANEL THK.	.062" (1,57) PANEL THK.	.090" (2,29) PANEL THK.	.125" (3,18) PANEL THK.
PART NO. <b>452902263</b>	PART NO. <b>452702263</b>	PART NO. <b>452802263</b>	PART NO. <b>452602263</b> BLACK

J50, J60 & J90 Actuators



.047" (1,19) PANEL THK.	.062" (1,57) PANEL THK.	.090" (2,29) PANEL THK.	.125" (3,18) PANEL THK.
PART NO. <b>432502263</b>	PART NO. <b>432602263</b>	PART NO. <b>432702263</b>	PART NO. <b>432802263</b> BLACK

### PANEL MOUNTING



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

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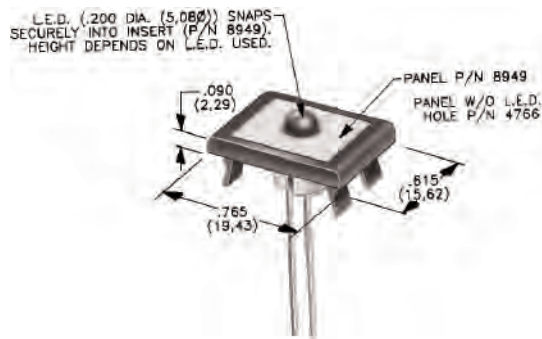
# 7000 Series Miniature Rocker & Lever Handle Switches

## AVAILABLE HARDWARE

### Panel Inserts

Will fit Separate Snap-in frames for J50, J60 & J90 actuators

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



**PANEL INSERT WITH HOLE FOR LED**

**PART NO.**  
**894902000**

**BLANK PANEL INSERT WITHOUT HOLE FOR LED**

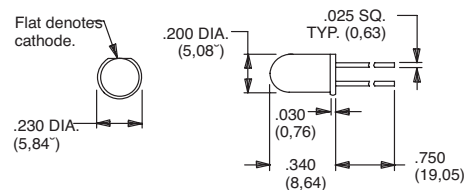
**PART NO.**  
**476602000 BLACK**

**NOTE:** Special colors, custom markings available, consult Customer Service Center.

### LED INFORMATION

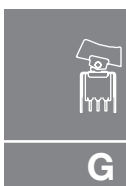
**Process Information:** Soldering to LED leads must be completed within 5 seconds at 500° F (260°C) maximum.

LEDs are not supplied with J52, J62 options. LED snaps into switch frame surrounding actuator and is wired externally.



Suggested LED for J52 & J62 options.  
Dimensions for reference only.

Rocker



Third Angle  
Projection

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