

- Wide variety of applications from consumer electronics to commercial
- Standard epoxy sealed terminations
- Gold contacts available for low power applications
- Available support brackets for greater stability
- Up to four poles with seven functions available
- Anti-rotation feature on flat toggles
- High torque bushing prevents separation from frame during installation
- Wide variety of terminal options



**SPECIFICATIONS**

**cUL** us - E222871

Electrical Ratings	5A @ 120VAC, 28VDC; 2A @ 250VAC See Contact Options
Electrical Life	50,000 cycles typical
Contact Resistance	< 20 mΩ max initial @ 2-4VDC, 100mA
Dielectric Strength	1500Vrms min
Insulation Resistance	> 100MΩ min
Operating Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C




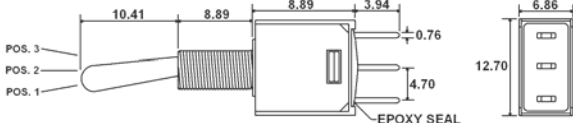



**MATERIALS ←RoHS COMPLIANT**


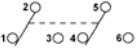

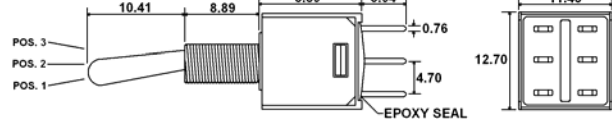



Actuator	Brass, Chrome Plated
Housing	DAP – Diallyl Phthalate
Cover	Stainless Steel
Bushing	Brass, Nickel Plated
Bracket	Brass, Tin Plated
Contacts	Phosphor Bronze, Silver Plated
Terminals	Brass, Silver Plated


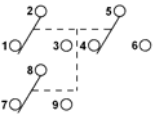

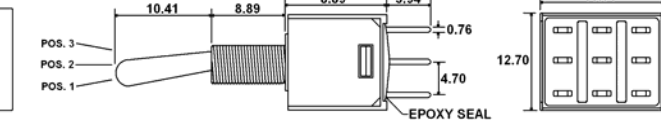



**TOGGLE SWITCH ORDERING INFORMATION**


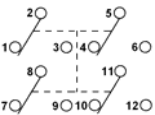

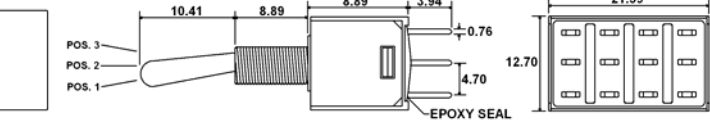



Series:	ANT	2	3	T	M	B	Q	E
<b>ANT</b>								
<b>Number of Poles:</b>								
1 = SPDT								
2 = DPDT								
3 = 3PDT								
4 = 4PDT								
<b>Switch Function:</b>								
1 = ON-NONE-ON								
2 = ON-NONE-(ON)								
3 = ON-OFF-ON								
4 = (ON)-OFF-(ON)								
5 = ON-OFF-(ON)								
6 = ON-ON-ON <b>** See Three Way Wiring Section for Details</b>								
<b>Actuator:</b>								
T = 5.08mm, Std								
S = 10.41mm, Std								
X = 13.97mm, Std								
V = 16.26mm, Std								
W = 21.34mm, Std								
Y = 6.35mm, Flat Toggle <b>**only available with AR1/AR2/AN1/AN2 bushings</b>								
F = 12.30mm, Flat Toggle <b>**only available with AR1/AR2/AN1/AN2 bushings</b>								
G = 21.00mm, Flat Toggle <b>**only available with AR1/AR2/AN1/AN2 bushings</b>								
K = 13.50mm, Flat Toggle <b>**only available with AR1/AR2/AN1/AN2 bushings</b>								
Z = 12.37mm, Large Toggle <b>**only available with BZ/BZR bushings</b>								
Z1 = 17.45mm, Large Toggle <b>**only available with BZ/BZR bushings</b>								
LK = 14.73mm, Locking Toggle, Round Top <b>**only available with K/K1 bushings</b>								
LK1 = 14.73mm, Locking Toggle, Flat Top <b>**only available with K/K1 bushings</b>								
P(color) = 21.34mm, Plastic <b>**See color choices in Actuator Option section</b>								
PX = 26.30mm, Plastic, Flat Toggle <b>**only available with BZ/BZR bushings</b>								
<b>Bushing:</b>								
E / E1 = 8.89mm, ¼-40NS / Non-Threaded, Keyway								
F / F1 = 7.10mm, ¼-40NS / Non-Threaded, Keyway								
J = 8.89mm, ¼-40NS, Flat								
W = 8.89mm, M6P-0.75 (Metric), Keyway								
H = 8.00mm, High Torque, ¼-40NS, Keyway								
G = 7.52mm, High Torque, ¼-40NS, Flat								
AR1 / AR2 = 7.55mm, Anti-Rotation, ¼-40NS / Non-Threaded, Keyway								
AN1 / AN2 = 7.55mm, Anti-Rotation, ¼-40NS / Non-Threaded, Flat								
BZ = 11.38mm, 15/32 -32NS, Keyway								
BZR = 11.38mm, 15/32 -32NS, Keyway, with support insert								
L = 7.55mm, ¼-40NS, Flat, Splash proof								
K / K1 = 8.00mm, ¼-40NS / Non-Threaded, Keyway								
<b>**See Actuator Option section for bushing availability with various actuators</b>								
<b>Terminals:</b>								
B = Solder Lug, C = PC Pin <b>**Wire wrap terminals available in various lengths, contact factory</b>								
D = Quick Connect								
H = Horizontal Mount, Right Angle PC Pin; <i>HS = Snap-in</i>								
V = Vertical Mount, Right Angle PC Pin; <i>VS = Snap-in</i>								
S20 or S25 = PC Pin with Support Bracket; <i>V20 or V25= Snap-in Support Bracket</i>								
S35 or S40 = PC Pin with Support Bracket; <i>V35 or V40 = Snap-in Support Bracket</i>								
<b>Contacts:</b>								
Q = Silver Plated								
R = Gold Plated								
G = Gold over Silver Plated								
<b>Epoxy Seal:</b> E = Epoxy Seal								
<b>Actuator Cover:</b>								
Blank = No Cover								
S = for S, T, X, V, & W actuators								
E = for E, F, J, & G bushings								
Z = for BZ & BZR bushings								
<b>Actuator Cover Colors:</b>								
1 = White								
2 = Black								
3 = Red								
<b>** Color choices only available with S toggle cover</b>								

**SWITCH FUNCTION**

 <b>SPDT</b> 	Function	Toggle Position			 
					
	1	ON	NONE	ON	
	2	ON	NONE	(ON)	
	3	ON	OFF	ON	
	4	(ON)	OFF	(ON)	
5	ON	OFF	(ON)		
Terminals	2-3	---	2-1		

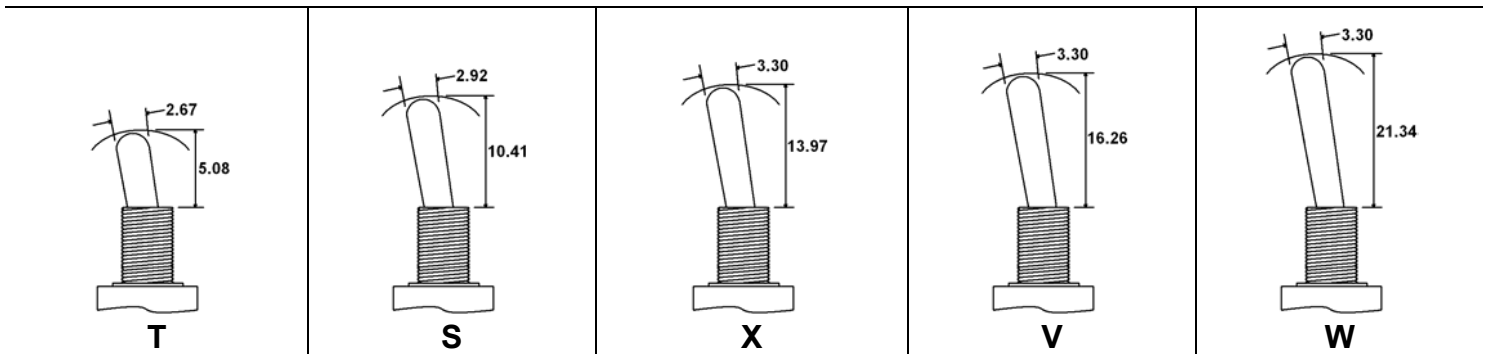
 <b>DPDT</b> 	Function	Toggle Position			 
					
	1	ON	NONE	ON	
	2	ON	NONE	(ON)	
	3	ON	OFF	ON	
	4	(ON)	OFF	(ON)	
5	ON	OFF	(ON)		
Terminals	2-3 5-6	---	2-1 5-4		
6	ON	ON	ON		
Terminals	2-3 5-6	2-3 5-4	2-1 5-4		

 <b>3PDT</b> 	Function	Toggle Position			 
					
	1	ON	NONE	ON	
	2	ON	NONE	(ON)	
	3	ON	OFF	ON	
	4	(ON)	OFF	(ON)	
5	ON	OFF	(ON)		
Terminals	2-3 5-6 8-9	---	2-1 5-4 8-7		

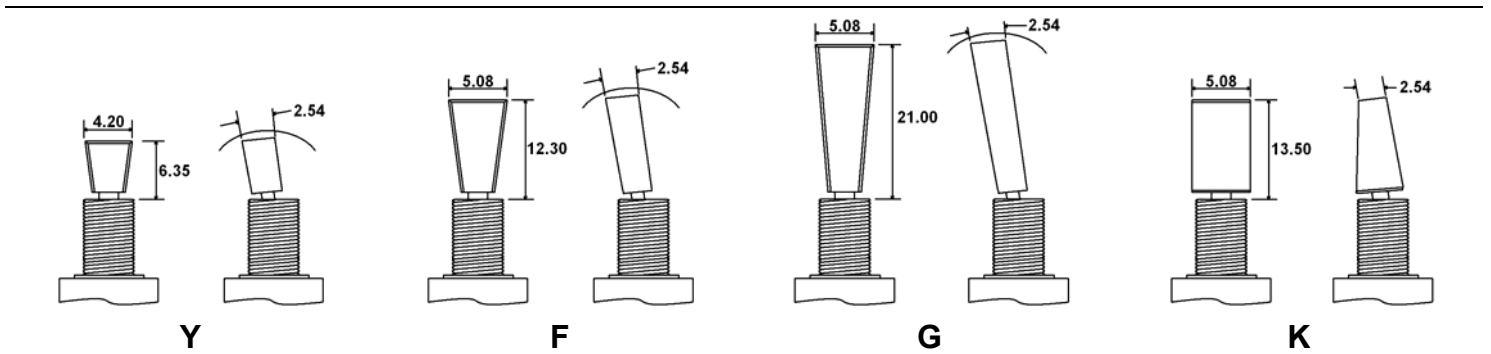
 <b>4PDT</b> 	Function	Toggle Position			 
					
	1	ON	NONE	ON	
	2	ON	NONE	(ON)	
	3	ON	OFF	ON	
	4	(ON)	OFF	(ON)	
5	ON	OFF	(ON)		
Terminals	2-3 5-6 8-9 11-12	---	2-1 5-4 8-7 11-10		
6	ON	ON	ON		
Terminals	2-3 5-6 8-9 11-12	2-3 5-4 8-9 11-10	2-1 5-4 8-7 11-10		

## ACTUATOR OPTIONS

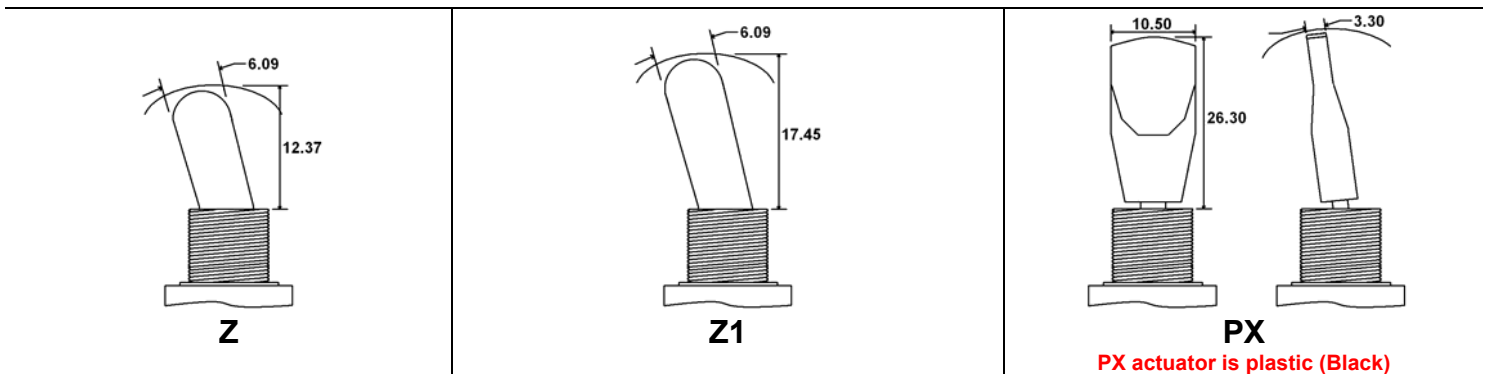
\*\* Actuator lengths shown with E bushing, subtract 1.78mm for F/F1 bushing, subtract 0.51mm for M bushing



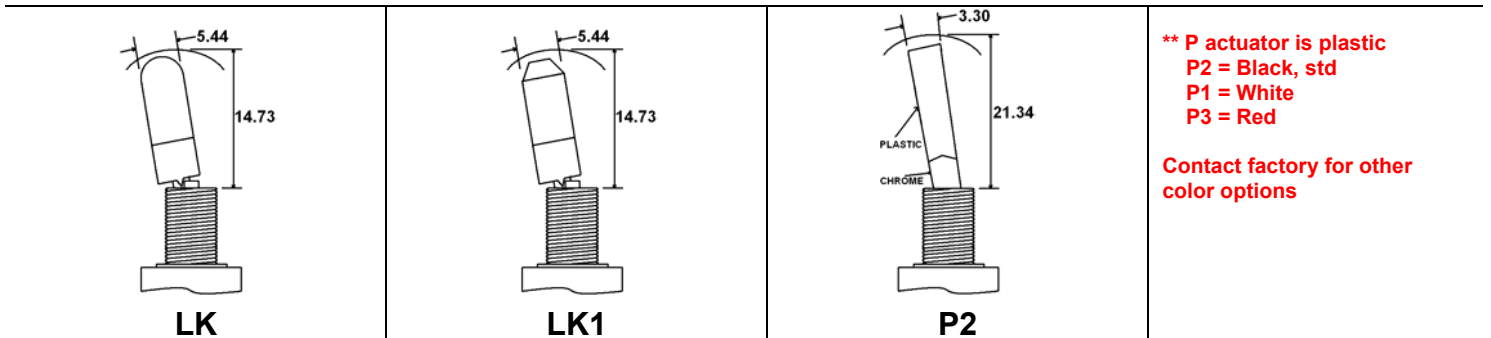
\*\* Only available with AR1/AR2 & AN1/AN2 bushings.



\*\* Only available with BZ & BZR bushings.



\*\* LK & LK1 only available with K & K1 bushings. LK & LK1 are not available with momentary functions



**BUSHING OPTIONS**

<p><b>E (Threaded)</b> <b>E1 (Non-Threaded)</b></p>	<p><b>F (Threaded)</b> <b>F1 (Non-Threaded)</b></p>	<p><b>J (Threaded)</b></p>	<p><b>H (Threaded)</b> <b>High Torque</b></p>	<p><b>G (Threaded)</b> <b>High Torque</b></p>	<p><b>W (Threaded)</b> <b>Metric</b></p>
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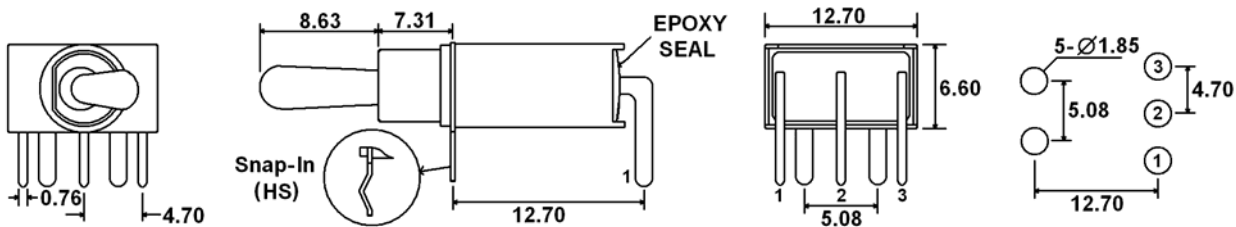
<p><b>AR1 (Threaded)</b> <b>AR2 (Non-Threaded)</b> <b>Anti-Rotation</b></p>	<p><b>AN1 (Threaded)</b> <b>AN2 (Non-Threaded)</b> <b>Anti-Rotation</b></p>	<p><b>BZ (Threaded)</b></p>	<p><b>BZR (Threaded)</b> <b>Impact Resistant</b></p>	<p><b>K (Threaded)</b> <b>K1 (Non-Threaded)</b></p>	
<p><b>** If selecting F, G, or K actuator, one of these bushings must be selected</b></p>			<p><b>** Only used with Z, Z1, &amp; PX actuators</b></p>		<p><b>**Only used with LK &amp; LK1 actuators</b></p>

**PANEL MOUNTING**

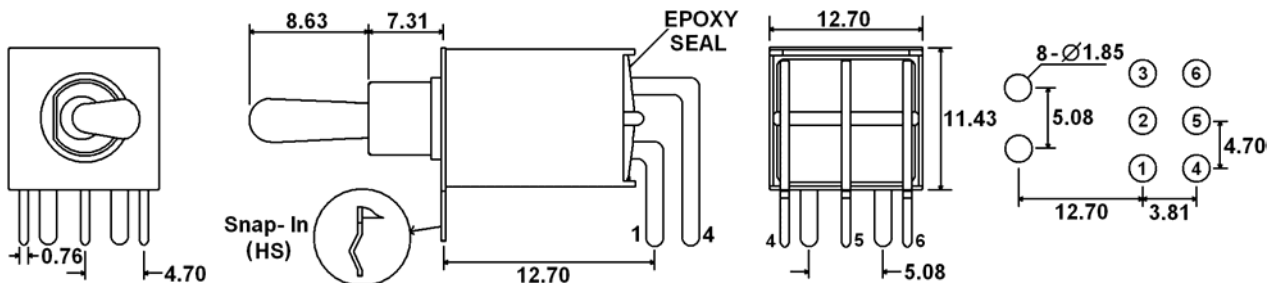
<p><b>L (Threaded)</b> <b>Splash Proof</b></p> <p><b>** Not available with Z, Z1, &amp; PX actuators</b></p>	<p><b>1/4" - 40 Bushings</b></p>	<p><b>Metric Bushing</b></p>	<p><b>15/32" Bushings</b></p>
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**TERMINAL OPTIONS**

<p><b>B (Single Pole)</b></p>	<p><b>B (Double Pole)</b></p>	<p><b>B (3 Pole)</b></p>	<p><b>B (4 Pole)</b></p>
<p><b>C (Single Pole)</b></p>	<p><b>C (Double Pole)</b></p>	<p><b>C (3 Pole)</b></p>	<p><b>C (4 Pole)</b></p>
<p><b>D (Single Pole)</b></p>	<p><b>D (Double Pole)</b></p>	<p><b>D (3 Pole)</b></p>	<p><b>D (4 Pole)</b></p>

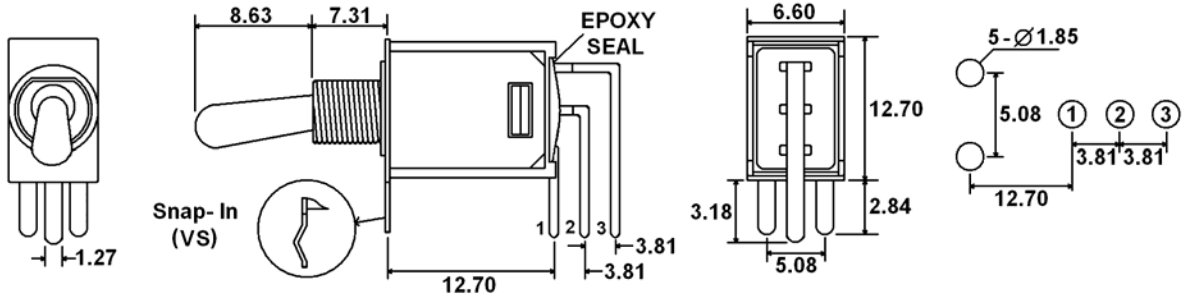


**H (HS – Snap-in) = Horizontal Mount, Right Angle PC Pins (Single Pole)**

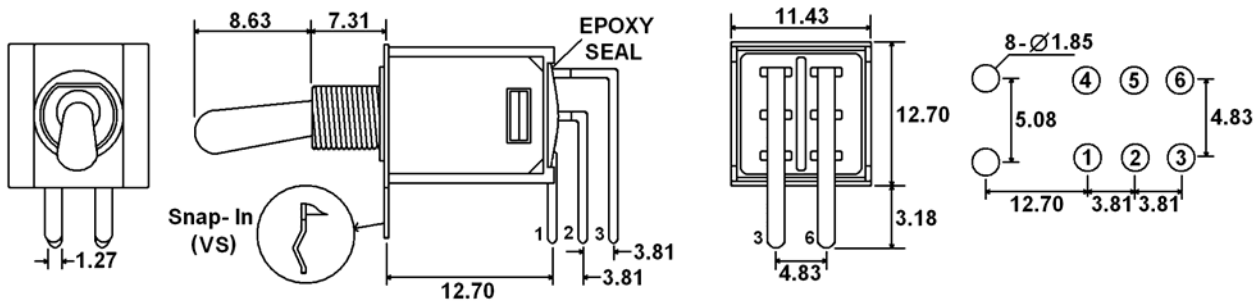


**H (HS – Snap-in) = Horizontal Mount, Right Angle PC Pins (Double Pole)**

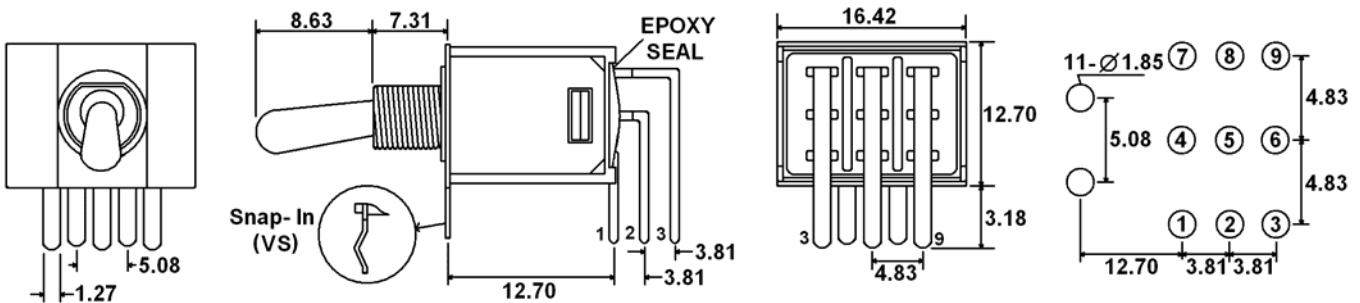
**TERMINAL OPTIONS**



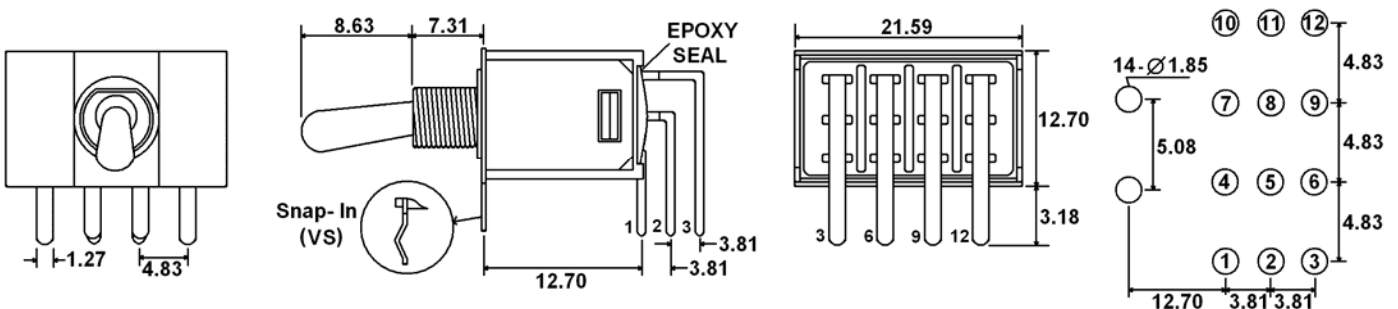
**V (VS – Snap-in) = Vertical Mount, Right Angle PC Pins (Single Pole)**



**V (VS – Snap-in) = Vertical Mount, Right Angle PC Pins (Double Pole)**



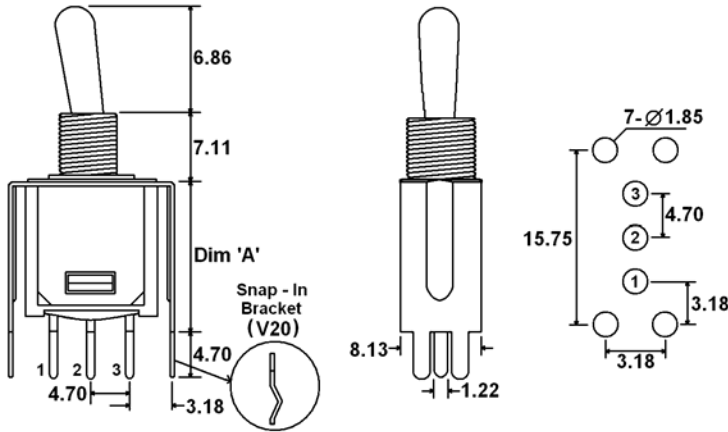
**V (VS – Snap-in) = Vertical Mount, Right Angle PC Pins (Three Pole)**



**V (VS – Snap-in) = Vertical Mount, Right Angle PC Pins (Four Pole)**

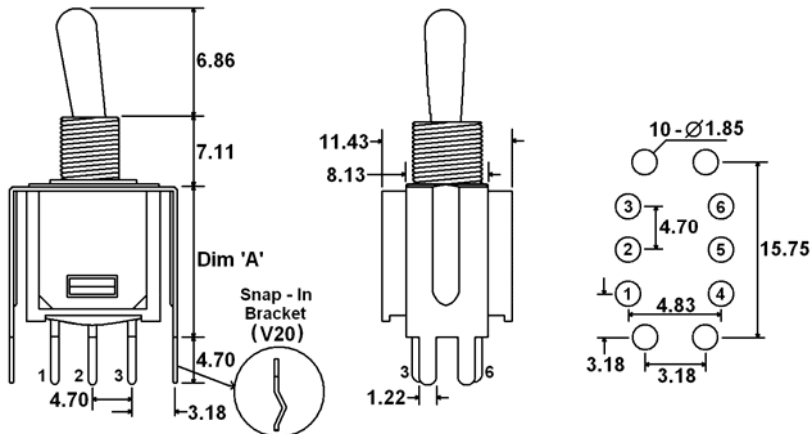


**TERMINAL OPTIONS**



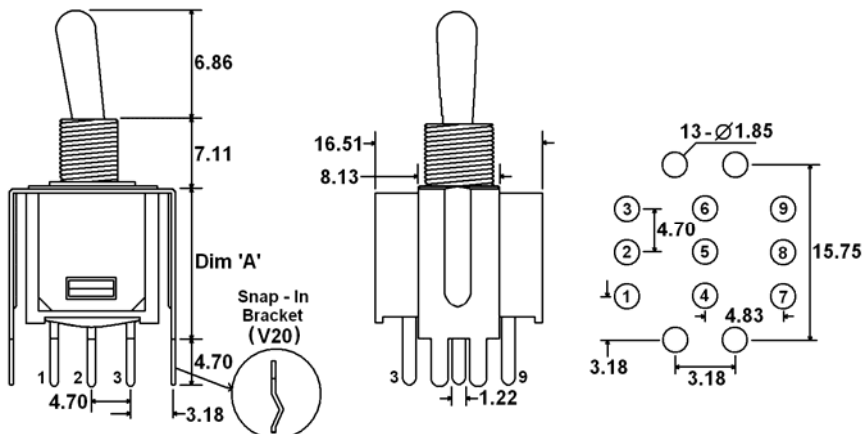
Terminal Option	"A" Dimension
S20-V20	11.68
S25-V25	16.00

**S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Single Pole)**



Terminal Option	"A" Dimension
S20-V20	11.68
S25-V25	16.00

**S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Double Pole)**

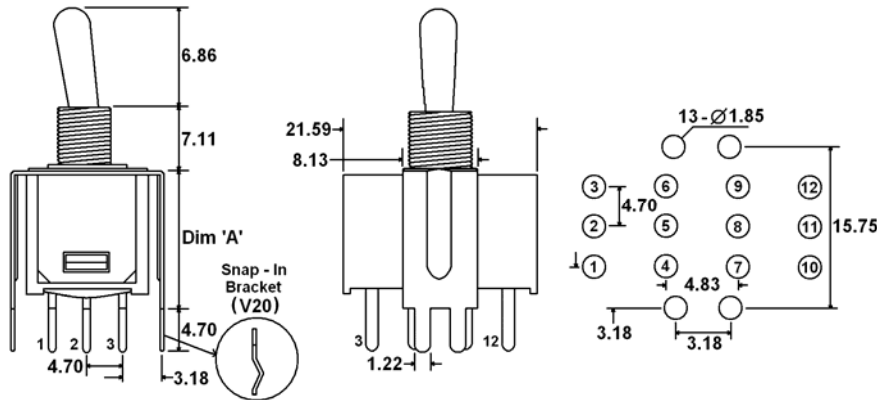


Terminal Option	"A" Dimension
S20-V20	11.68
S25-V25	16.00

**S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Three Pole)**

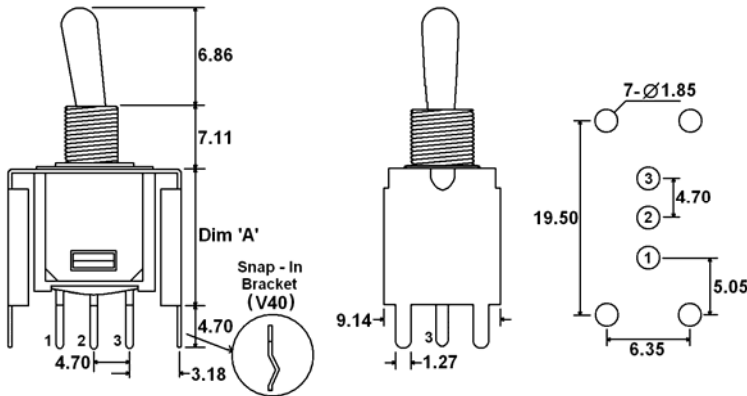


**TERMINAL OPTIONS**



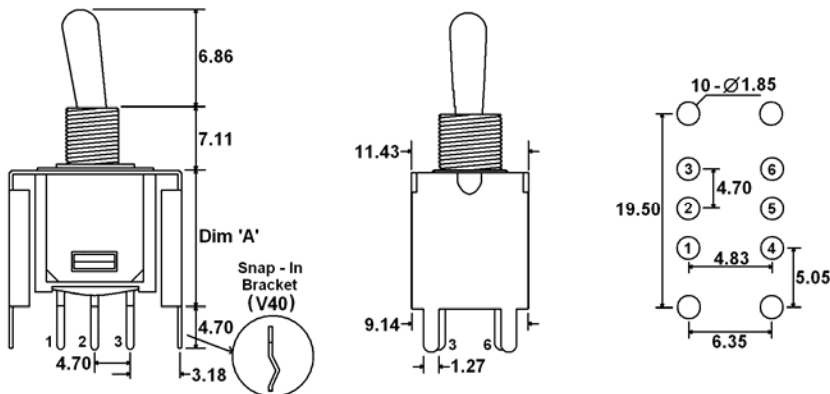
Terminal Option	"A" Dimension
S20-V20	11.68
S25-V25	16.00

**S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Four Pole)**



Terminal Option	"A" Dimension
S35-V35	11.68
S40-V40	16.00

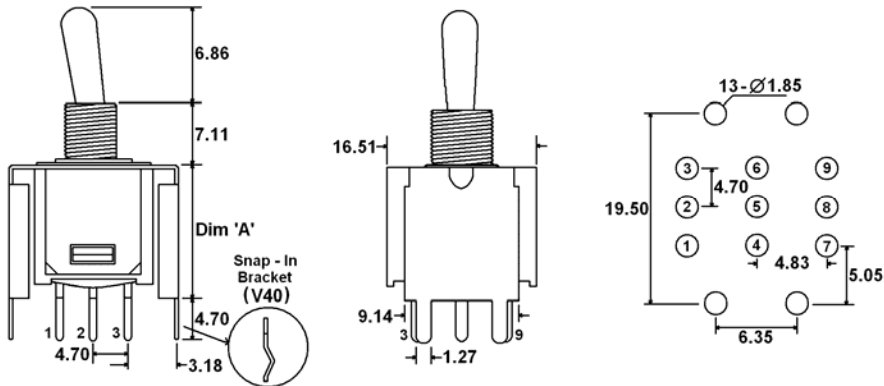
**S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Single Pole)**



Terminal Option	"A" Dimension
S35-V35	11.68
S40-V40	16.00

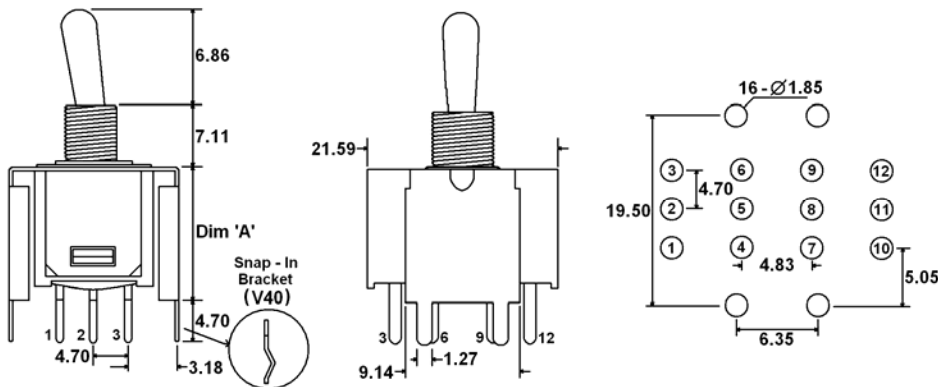
**S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Double Pole)**

## TERMINAL OPTIONS



Terminal Option	"A" Dimension
S35-V35	11.68
S40-V40	16.00

### S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Three Pole)



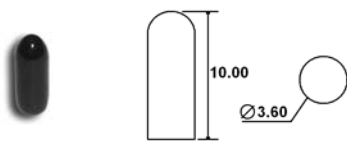
Terminal Option	"A" Dimension
S35-V35	11.68
S40-V40	16.00

### S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Four Pole)

## CONTACT OPTIONS

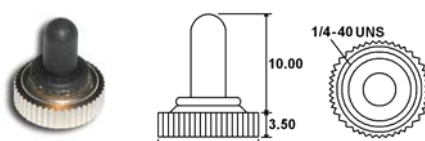
Designator	Contact Material	Terminal Material	Electrical Ratings
Q	Silver Plating	Silver Plating	5A @ 120VAC, 28VDC; 2A @ 250VAC
R	Gold over Nickel Plating	Gold over Nickel Plating	.4 VA max @ 20VAC or VDC max
G	Gold over Silver Plating	Gold over Silver Plating	.4 VA max @ 20VAC or VDC max or 5A @ 120VAC, 28VDC; 2A @ 250VAC

## CAP OPTIONS



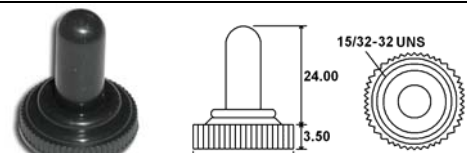
**RUBBER TOGGLE COVER**  
**S\_**

\*\* For use with S, T, X, V, & W actuators  
1 = White, 2 = Black, 3 = Red



**SEALED BOOT**  
**E**

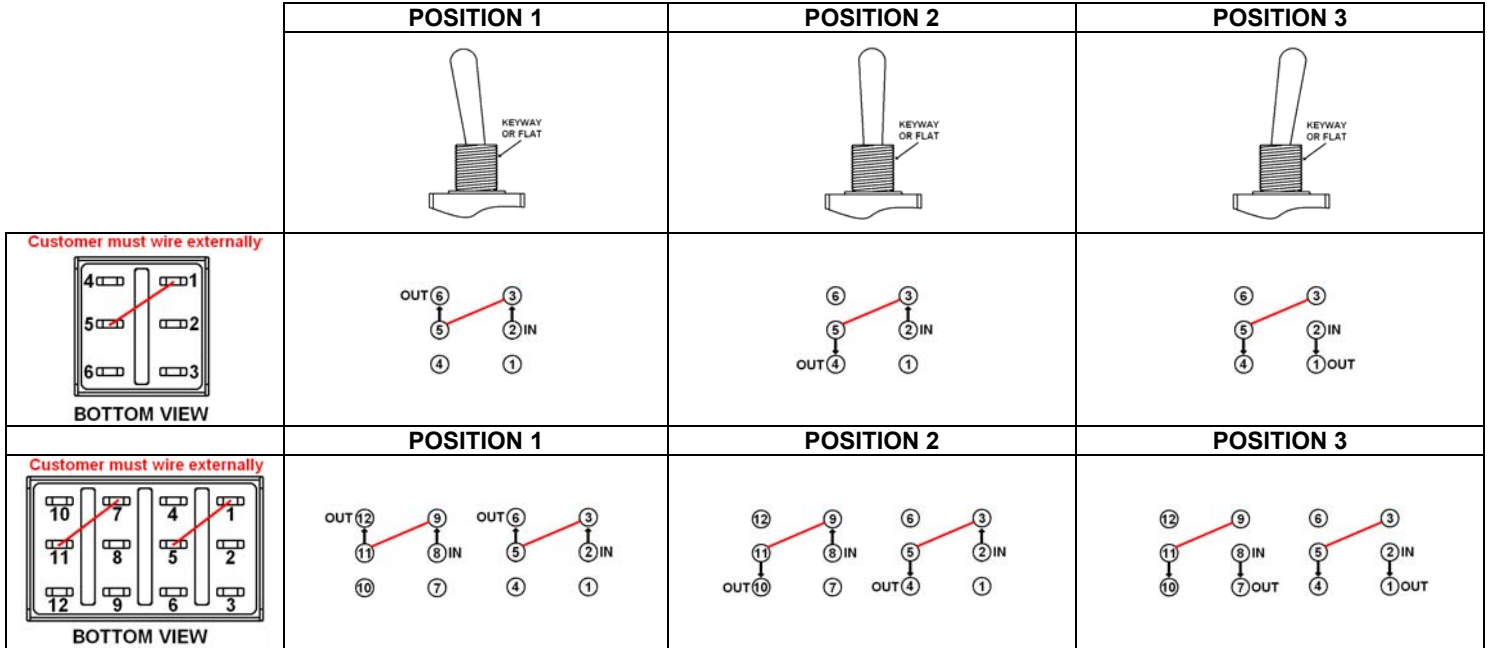
\*\* For use with E, F, J, & G bushings only.  
Black color standard.



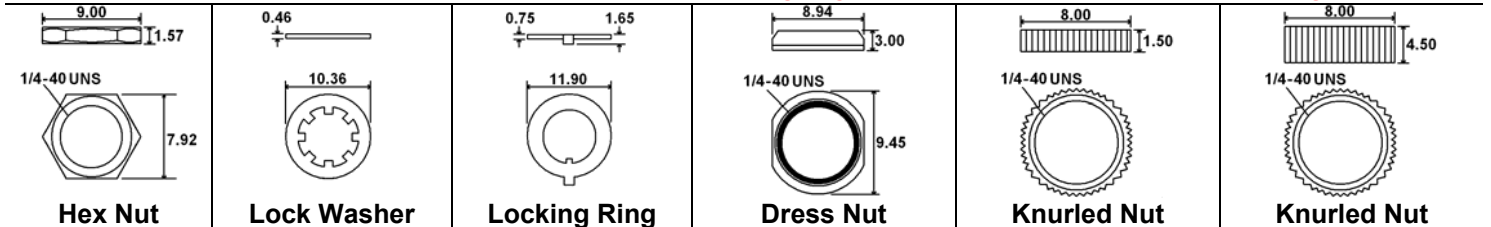
**SEALED BOOT**  
**Z**

\*\* For use with BZ & BZR bushings only. Black color standard.

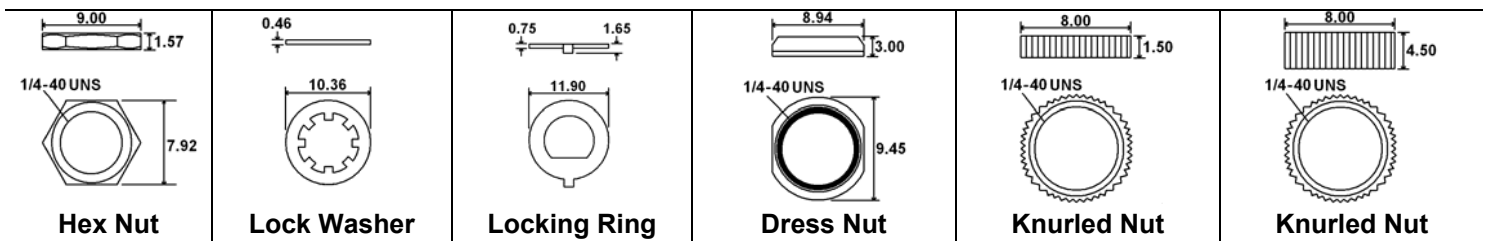
**THREE WAY WIRING DIAGRAM**



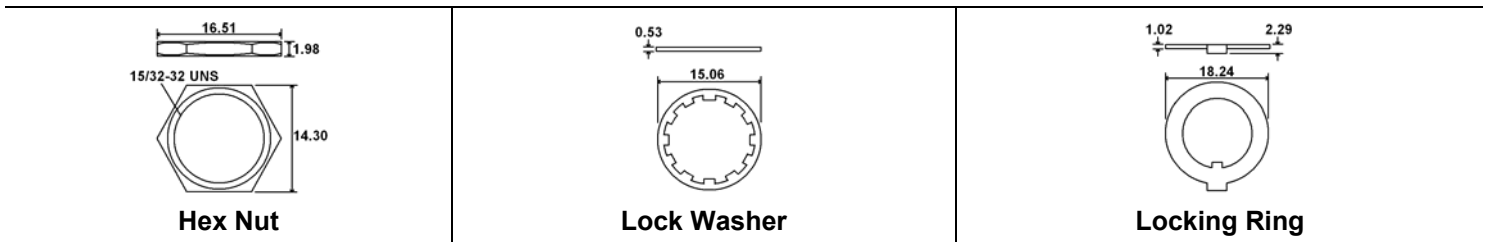
**HARDWARE** \*\*Two hex nuts, one lock washer, & one locking ring supplied standard with threaded bushings



\*\*For use with E, F, M, AR1, L, & K bushings



\*\*For use with J, G, & AN1 bushings



\*\*For use with BZ & BZR bushings