

# Toggle Switches

## Sub-Miniature

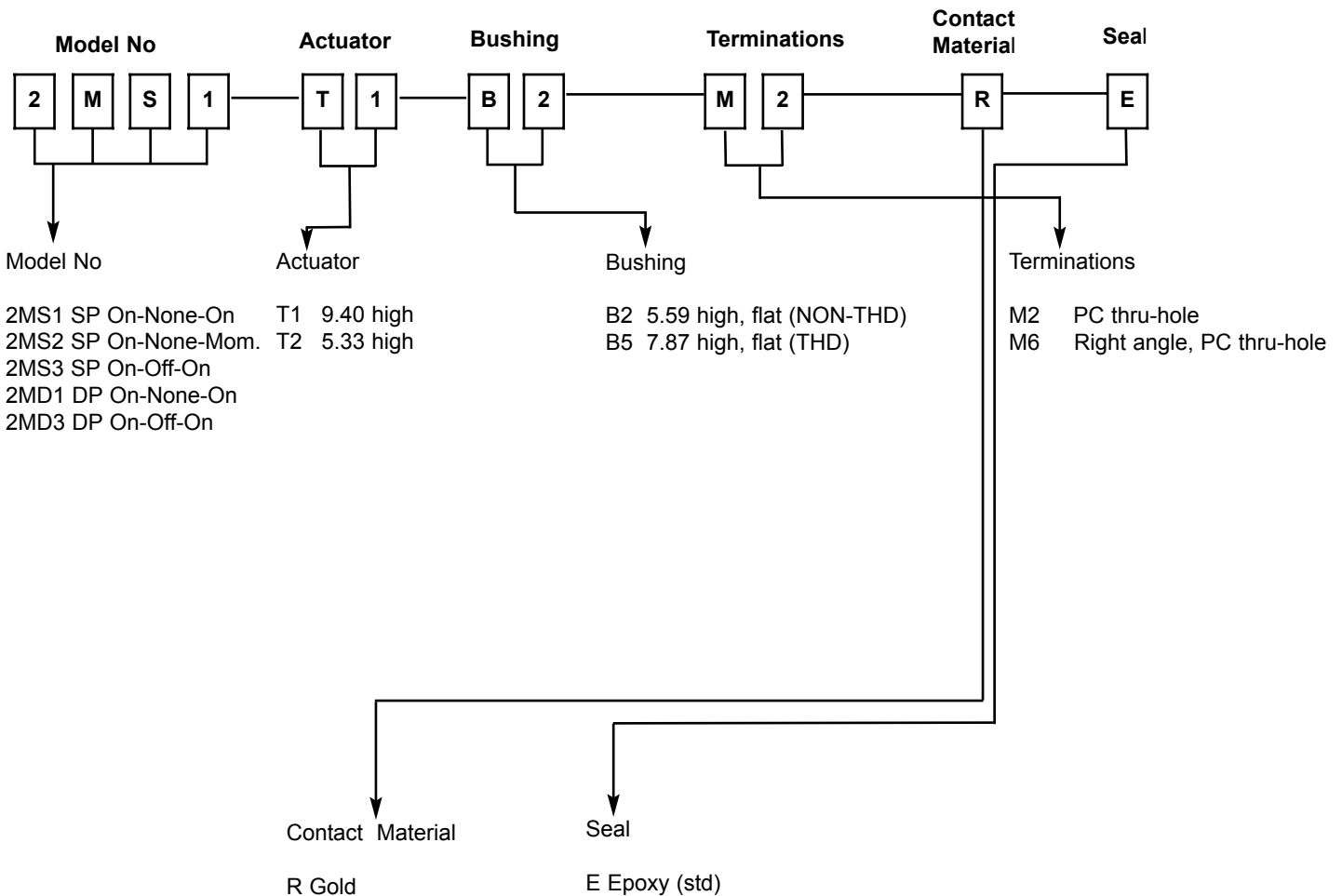


### Specifications:

Contact rating	: Dependent upon contact material.
Mechanical life	: 30,000 make and break cycles.
Maximum contact resistance	: 20 mΩ initial at 2-4 V dc 100 mA for both silver and gold plated contacts.
Minimum insulation resistance	: 1,000 MΩ.
Dielectric strength	: 1,000 V rms at sea level.
Operating temperature	: -30°C to 85°C.

### Materials:

Case	: Diallyl phthalate (DAP).
Actuator	: Brass, chrome plated.
Bushing	: Brass, nickel plated.
Housing	: Stainless steel.
Switch support	: Brass, tin plated.
Terminal / contact	: Silver or gold plated.



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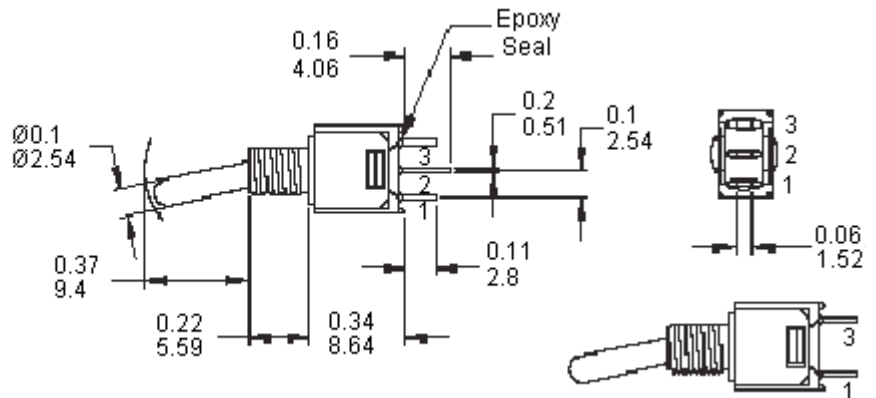
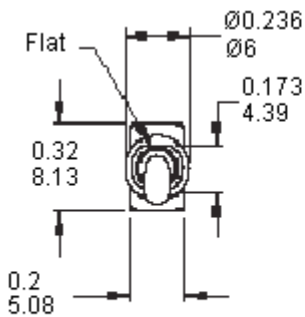
### Switch Function

Number of Poles	UL / CSA Model Number	Model Number	Switch Function			Connected Terminals / Schematic		
			Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
SP	Q2211	2MS1	On	None	ON	2 to 3	N/A	2 to 1
	Q2212	2MS2			MOM	2 (Comm)		2 (Comm)
	Q2213	2MS3			Off	1* 3		1* 3
DP	Q2221	2MD1	On	None	ON	2 to 3, 5 to 6	N/A	2 to 1, 5 to 4
	Q2223	2MD3			Off	1* 3 2 (Comm) 5* 6		1* 3 2 (Comm) 5* 6

MOM = Momentary

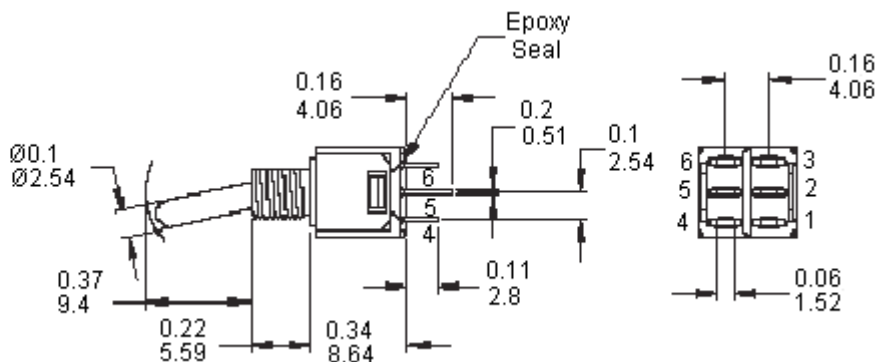
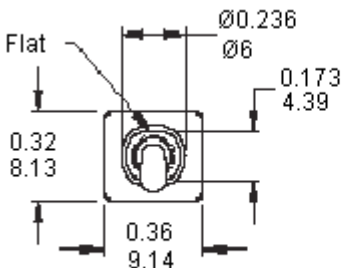
### Pole Options

#### SPDT



2MS6 Models : Omit 2nd terminal

#### DPDT

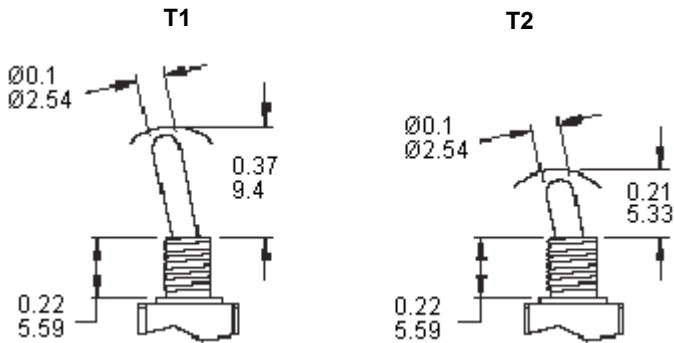


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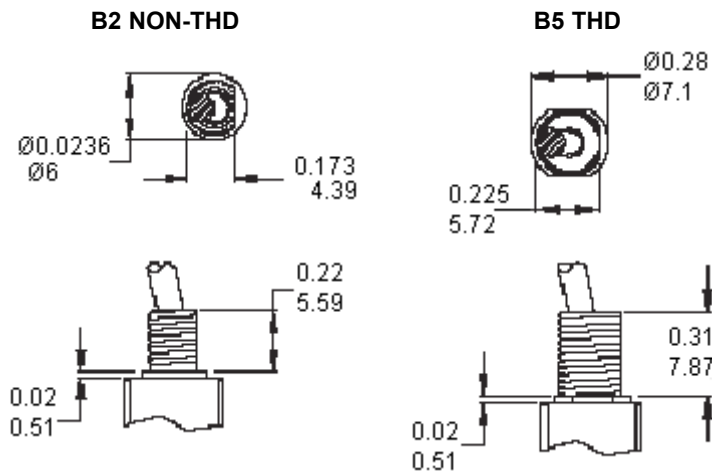


### Actuator Options

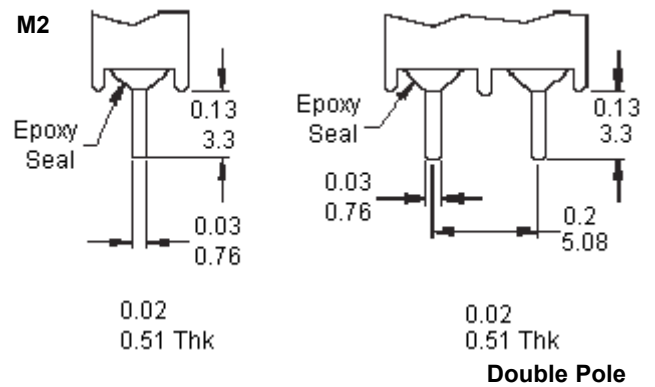


T1, T2, Actuator shown with B2 bushing, subtract 0.09 (2.29) for B5 bushing, subtract 0.04 (1.02) for B5 bushing, add 0.09 (2.29) Std for M2 terminal sub 0.016 (0.04) for M2 terminals sub. 016 (0.04) for M6.

### Bushing Options



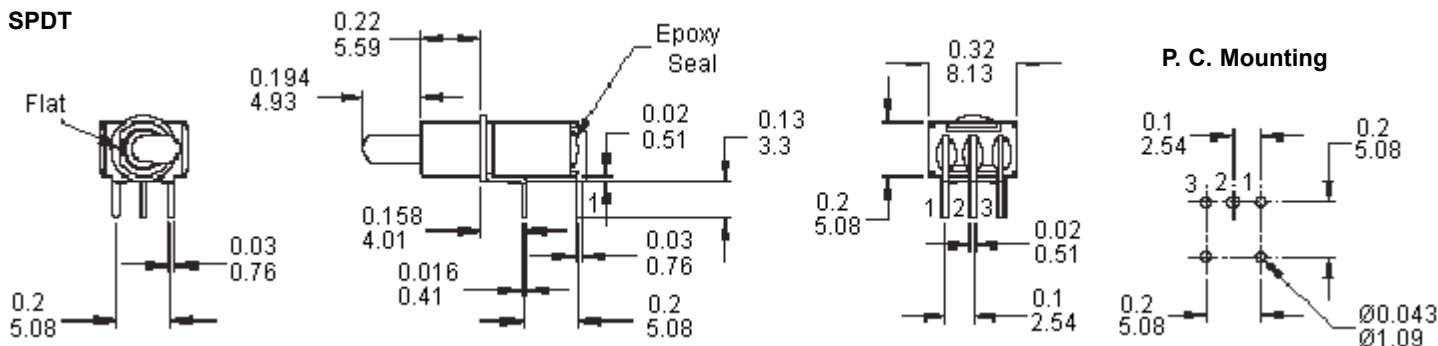
### Termination Options



### M6, SPDT



### SPDT



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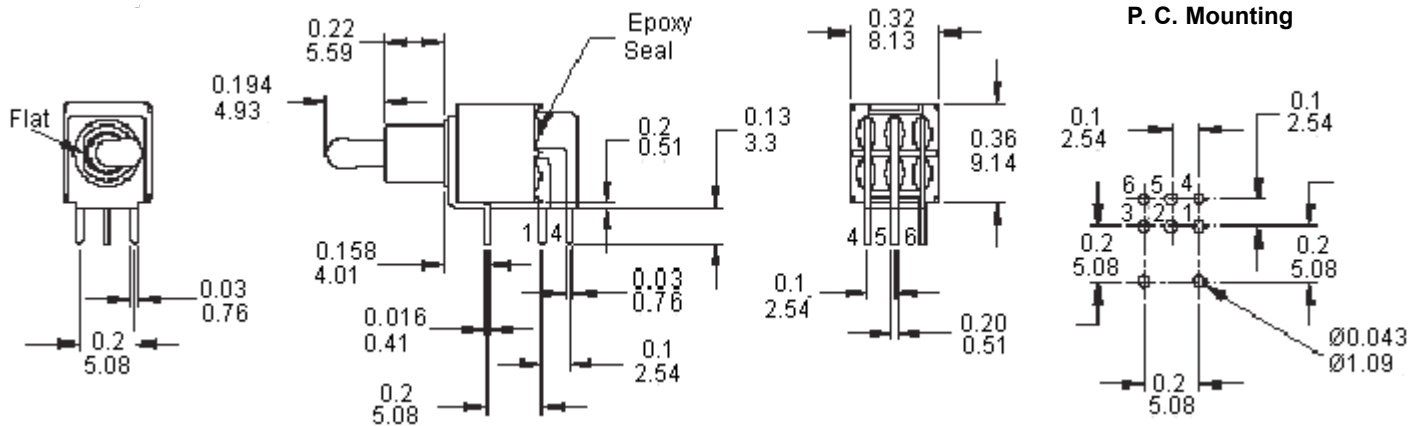
## Sub-Miniature



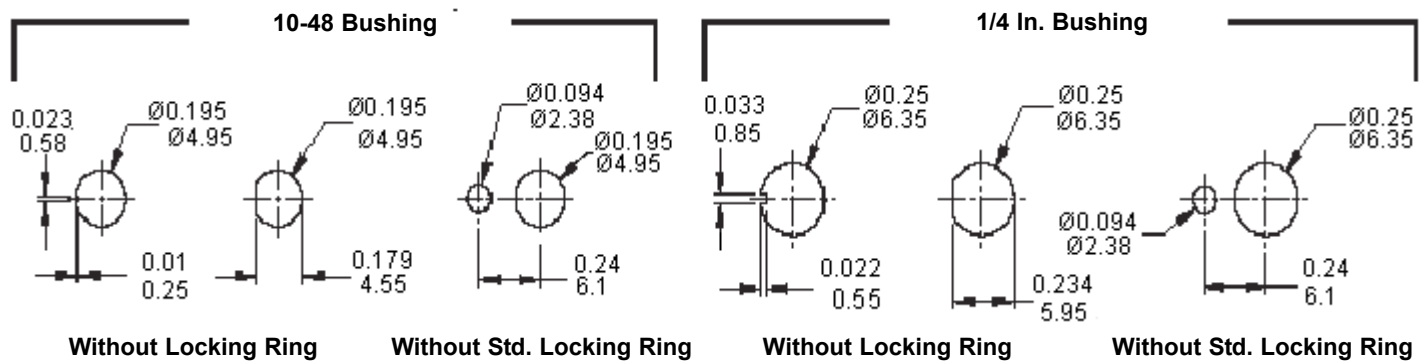
M6, DPDT



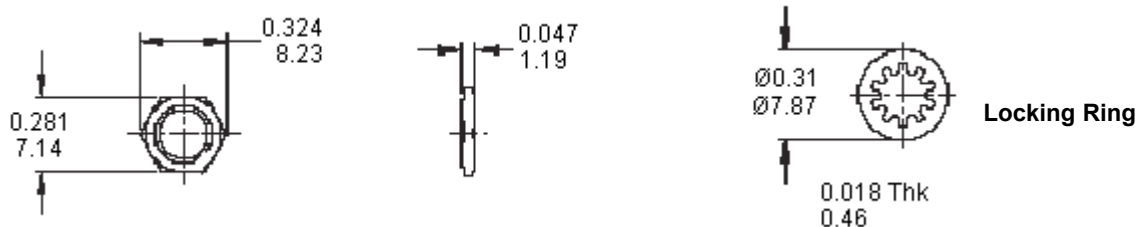
DPDT



Panel Mounting



Hardware



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### Contact Material Options

	Contact Plating	Terminal Plating	Ratings
R	Gold	R = Gold	0.4 Volt - Amperes (VA) maximum at 20 V maximum (AC or DC)

### Soldering Process:

- Manual soldering : Use soldering iron of 30 watts, controlled at 350°C approximately 5 s while applying solder.  
Wave soldering : Recommended soldering temperature : 260 ±5°C.  
: Duration of solder immersion : Maximum 5 s (PCB is 1.6 mm in thickness).

### Soldering : Vapour phase

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