



### SPECIFICATIONS

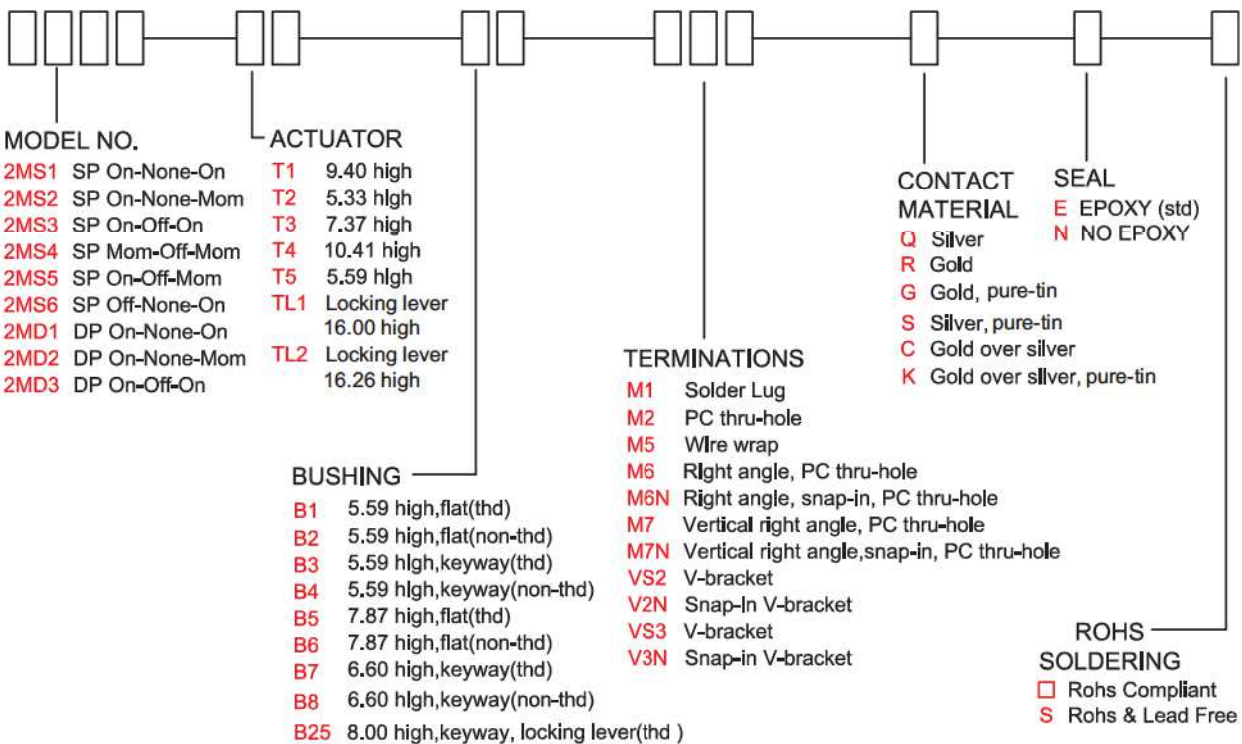
**CONTACT RATING:** Dependent upon contact material.  
**MECHANICAL LIFE:** 30,000 make-and-break cycles.  
**CONTACT RESISTANCE:** 20mΩ max. initial @ 2-4VDC  
 100mA for both silver and gold plated contacts.  
**INSULATION RESISTANCE:** 1,000MΩ min.  
**DIELECTRIC STRENGTH:** 1,000 V RMS@sea level.  
**OPERATING TEMPERATURE:** -30°C to 85°C.

### MATERIALS

**CASE** - Diallyl phthalate(DAP)( UL-94V-0 )  
**ACTUATOR** - Brass,chrome plated  
**BUSHING** - Brass,nickel plated  
**HOUSING** - Stainless Steel  
**SWITCH SUPPORT** - Brass,tin plated.  
**TERMINALS/CONTACT** - Brass, with Silver or gold plated. (See Page 31)

### HOW TO ORDER

MODEL NO.    ACTUATOR    BUSHING    TERMINATIONS    CONTACT MATERIAL    SEAL    ROHS SOLDERING



### SWITCH FUNCTION

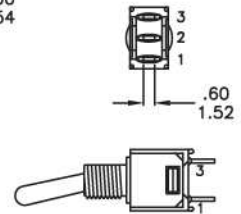
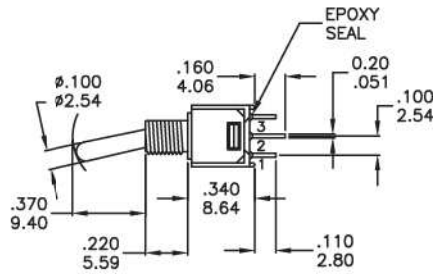
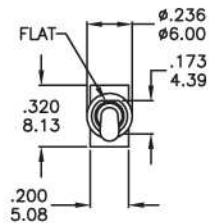
NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
SP	Q2211	2MS1	ON	NONE	ON	2-3	N/A	2-1
	Q2212	2MS2	ON	NONE	MOM			
	Q2213	2MS3	ON	OFF	ON		OPEN	
	Q2214	2MS4	MOM	OFF	MOM			
	Q2215	2MS5	ON	OFF	MOM			
	Q2216	2MS6	OFF	NONE	ON	OPEN	N/A	3-1
DP	Q2221	2MD1	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4
	Q2222	2MD2	ON	NONE	MOM			
	Q2223	2MD3	ON	OFF	ON		OPEN	
	Q2226	2MD6	ON	ON	ON			

MOM=MENTARY

### POLE OPTIONS



SPDT

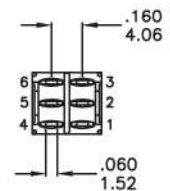
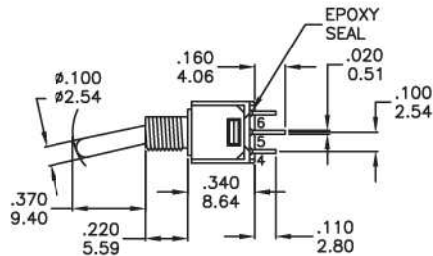
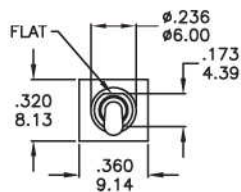


2MS6 Models : Omit 2nd terminal

Part No. Shown : 2MS1T1B1M1QE

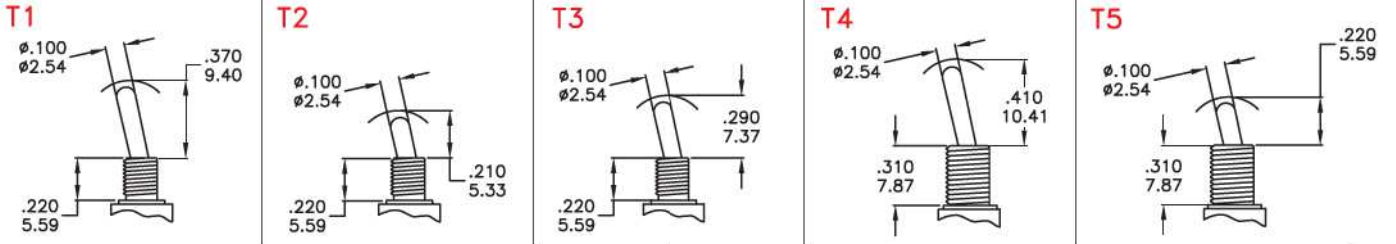


DPDT



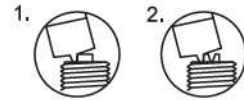
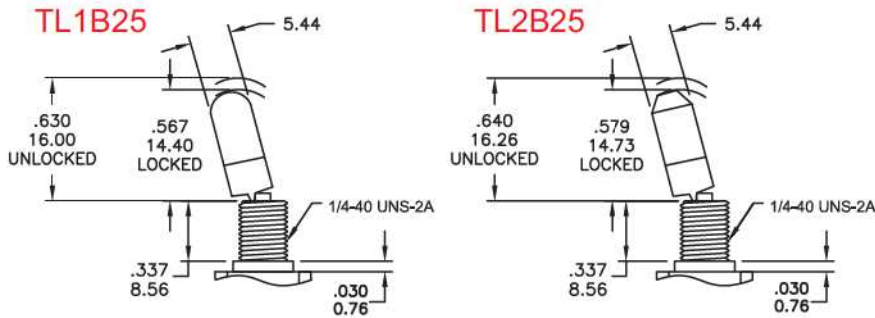
Part No. Shown : 2MD1T1B1M1RE

### ACTUATOR FUNCTIONS



T1,T2,T3 Actuator shown with B1 to B4 bushing, subtract 0.09 (2.29) for B5 bushing, subtract 0.04(1.02) for B7 bushing.

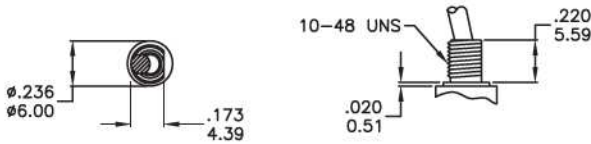
T4,T5 Actuator shown with B5,B6 bushing, add 0.09 (2.29) for B1 to B3 bushing, add 0.05(1.27) for B7 bushing.



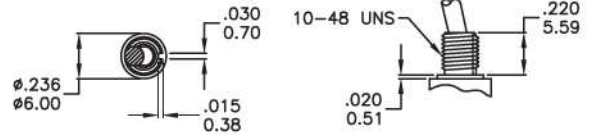
1. 2 positions lock  
 2. 3 positions lock

### BUSHING OPTIONS

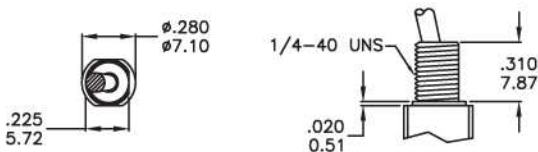
**B1 THD**  
**B2 NON-THD**



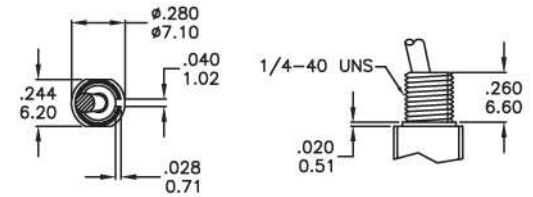
**B3 THD**  
**B4 NON-THD**



**B5 THD**  
**B6 NON-THD**

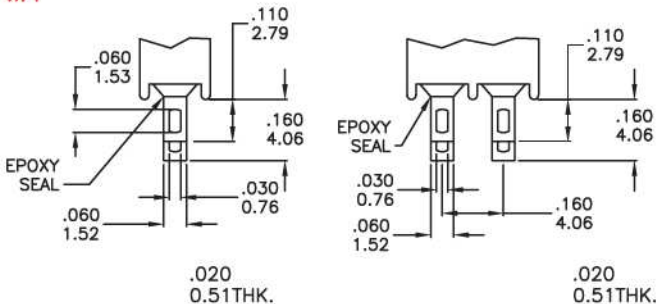


**B7 THD**  
**B8 NON-THD**

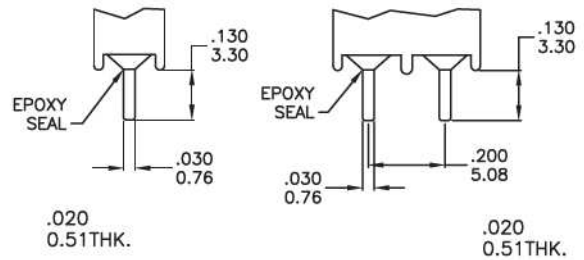


### TERMINATION OPTIONS

**M1**



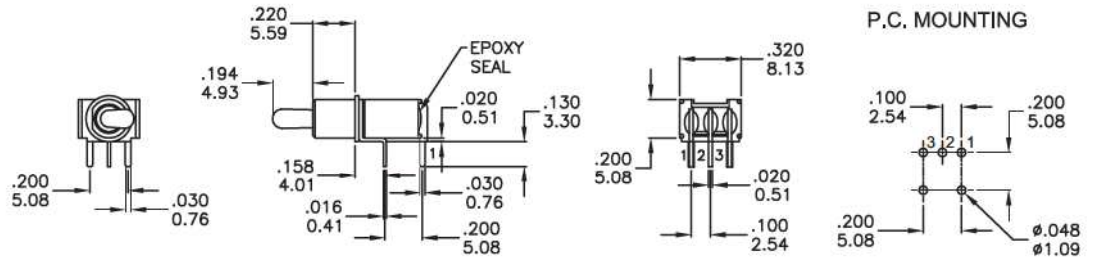
**M2**



**Double Pole**



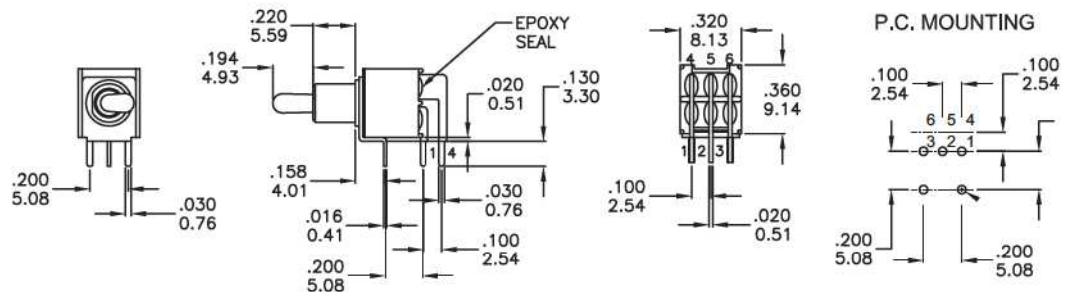
### M6



### SPDT

Part No. Shown : 2MS1T2B2M6RE

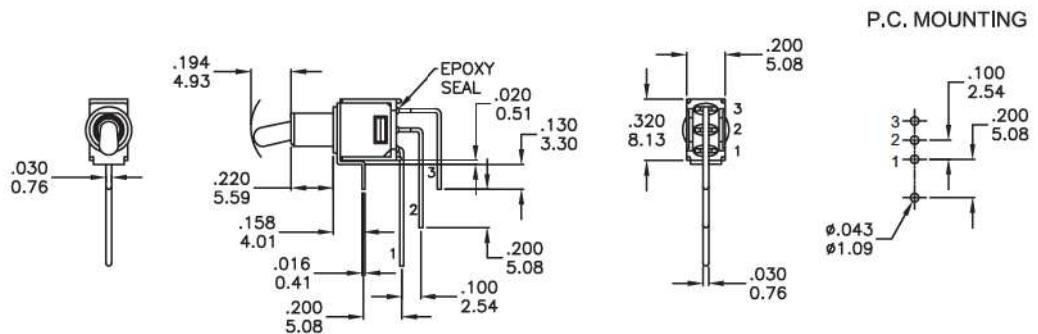
### M6



### DPDT

Part No. Shown : 2MD1T2B2M6QE

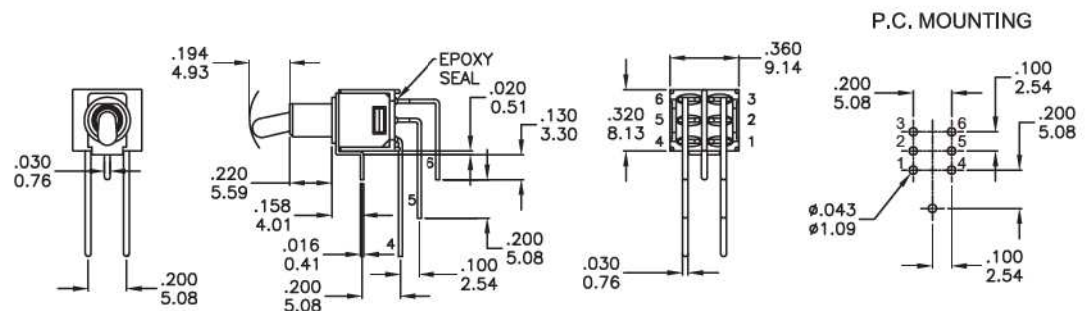
### M7



### SPDT

Part No. Shown : 2MS1T2B2M7RE

### M7



### DPDT

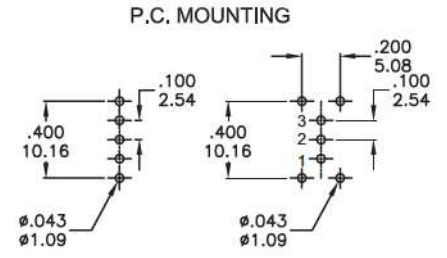
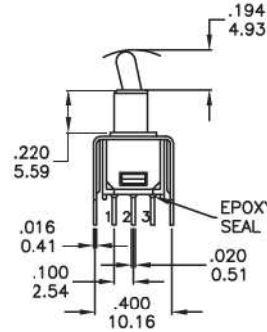
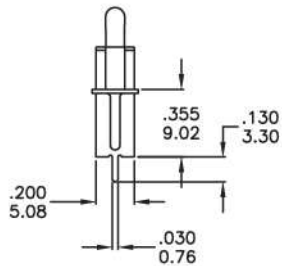
Part No. Shown : 2MD1T2B2M7RE

# 2M Series

## Sub-Miniature Toggle Switches

2M Sub-Miniature Toggle Switches

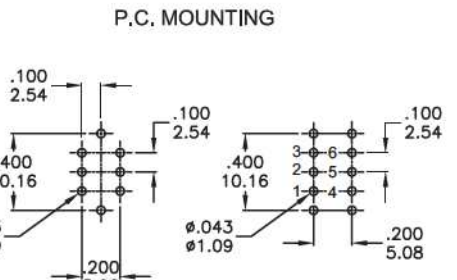
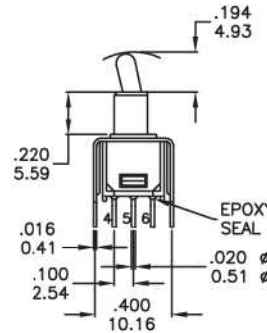
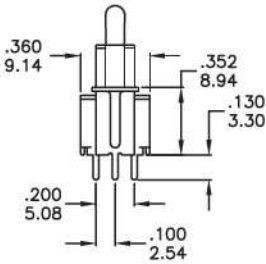
### VS2 - VS3



**SPDT**

Part No. Shown : 2MS1T2B2VS2QE

### VS2 - VS3

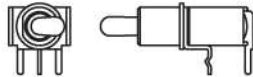


**DPDT**

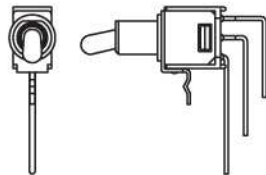
Part No. Shown : 2MD1T2B2VS2QE

### SNAP-IN TERMINATION OPTIONS

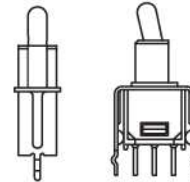
**M6N**



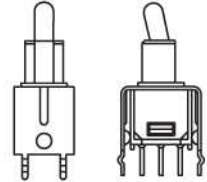
**M7N**



**V2N**

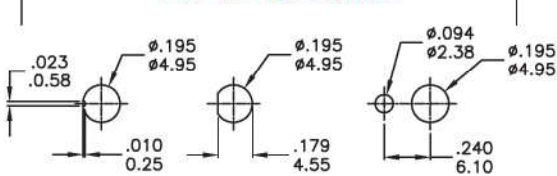


**V3N**



### PANEL MOUNTING

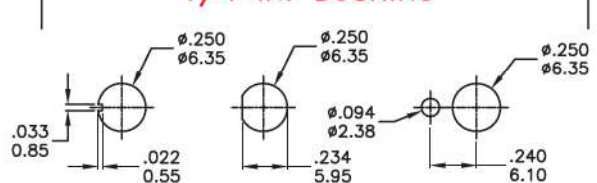
**10-48 BUSHING**



Without locking ring

With std. locking ring

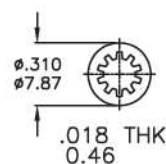
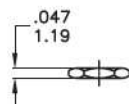
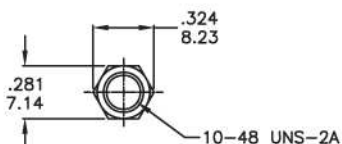
**1/4 IN. BUSHING**



Without locking ring

With std. locking ring

### HARDWARE



Locking Ring

### CONTACT MATERIAL OPTIONS

	CONTACT MATERIAL	TERMINAL PLATING	RATINGS
<b>Q</b>	<b>Silver</b>	<b>Q</b> = Silver	3 Amps with resistant load @ 120VAC or 28VDC 1 Amps with resistant load @ 250VAC
<b>S</b>		<b>S</b> = Silver,pure - tin	
<b>C</b>	<b>Gold over Silver</b>	<b>C</b> = Gold over silver	
<b>K</b>		<b>K</b> = Gold over silver,pure - tin	
<b>R</b>	<b>Gold</b>	<b>R</b> = Gold	0.4 Volt-Amps(VA)max. @ 20V max. (AC or DC)
<b>G</b>		<b>G</b> = Gold,pure - tin	



### SOLDERING PROCESSES

**MANUAL SOLDERING** : Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.

**WAVE SOLDERING** : Recommended Soldering Temperature:260±5°C  
Duration of Solder Immersion: 5 ±1 seconds  
(PCB is 1.6mm in thickness)

**SOLDERING** : Vapor phase

### Temperature Profile

Zone	Room temperature	Time ( Sec )
Pre-heat ( A )	150°C	Min 120s
Soak ( B )	180°C~200°C	Min 150s
Peak ( C )	200°C~235°C	Min 30s
Peak ( D )	235°C~260°C	Min 40s
Peak ( E )	260°C	Max 10s

