

2M Series

Sub-Miniature Toggle Switches



SPECIFICATIONS

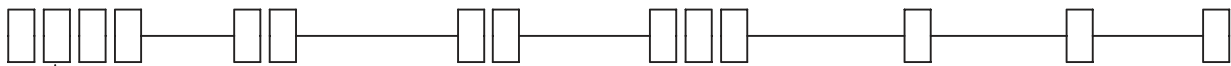
CONTACT RATING: Dependent upon contact material.
MECHANICAL LIFE: 30,000 make-and-break cycles.
CONTACT RESISTANCE: 20mΩ max. initial @ 2-4VDC
 100mA for both silver and gold plated contacts.
INSULATION RESISTANCE: 1,000MΩ min.
DIELECTRIC STRENGTH: 1,000 V RMS@sea level.
OPERATING TEMPERATURE: -30°C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



MODEL NO.

2MS1 SP On-None-On
2MS2 SP On-None-Mom
2MS3 SP On-Off-On
2MS4 SP Mom-Off-Mom
2MS5 SP On-Off-Mom
2MS6 SP Off-None-On
2MD1 DP On-None-On
2MD2 DP On-None-Mom
2MD3 DP On-Off-On

ACTUATOR

T1 9.40 high
T2 5.33 high
T3 7.37 high
T4 10.41 high
T5 5.59 high
TL1 Locking lever
 16.00 high
TL2 Locking lever
 16.26 high

BUSHING

B1 5.59 high,flat(thd)
B2 5.59 high,flat(non-thd)
B3 5.59 high,keyway(thd)
B4 5.59 high,keyway(non-thd)
B5 7.87 high,flat(thd)
B6 7.87 high,flat(non-thd)
B7 6.60 high,keyway(thd)
B8 6.60 high,keyway(non-thd)
B25 8.00 high,keyway, locking lever(thd)

TERMINATIONS

M1 Solder Lug
M2 PC thru-hole
M5 Wire wrap
M6 Right angle, PC thru-hole
M6N Right angle, snap-in, PC thru-hole
M7 Vertical right angle, PC thru-hole
M7N Vertical right angle,snap-in, PC thru-hole
VS2 V-bracket
V2N Snap-in V-bracket
VS3 V-bracket
V3N Snap-in V-bracket

CONTACT MATERIAL

Q Silver
R Gold
G Gold, pure-tin
S Silver, pure-tin
C Gold over silver
K Gold over silver, pure-tin

SEAL

E EPOXY (std)
N NO EPOXY

ROHS

SOLDERING
 Rohs Compliant
 Rohs & Lead Free

SWITCH FUNCTION

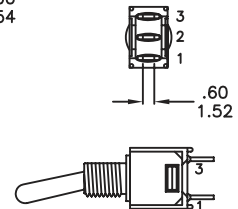
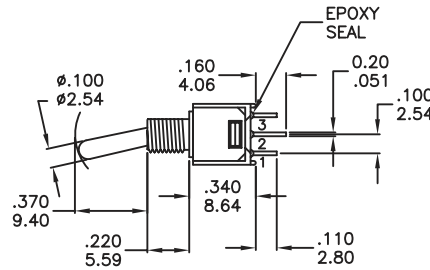
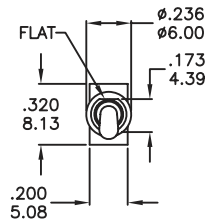
NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
SP	Q2211	2MS1	ON	NONE	ON	2-3	N/A	2-1
	Q2212	2MS2	ON	NONE	MOM			
	Q2213	2MS3	ON	OFF	ON		OPEN	
	Q2214	2MS4	MOM	OFF	MOM			
	Q2215	2MS5	ON	OFF	MOM	OPEN	N/A	3-1
	Q2216	2MS6	OFF	NONE	ON			
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=MOMENTARY

POLE OPTIONS



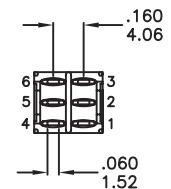
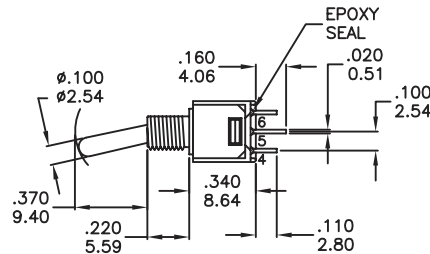
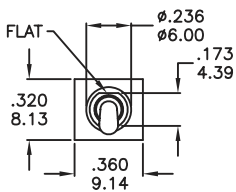
SPDT



Part No. Shown : 2MS1T1B1M1QE

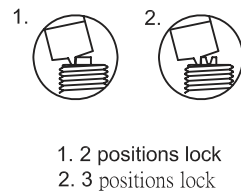
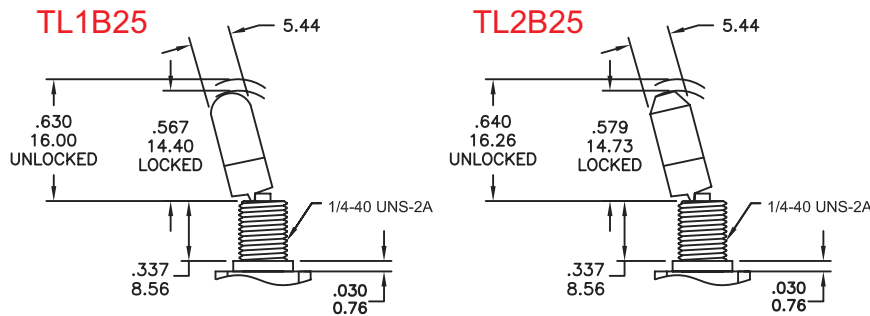
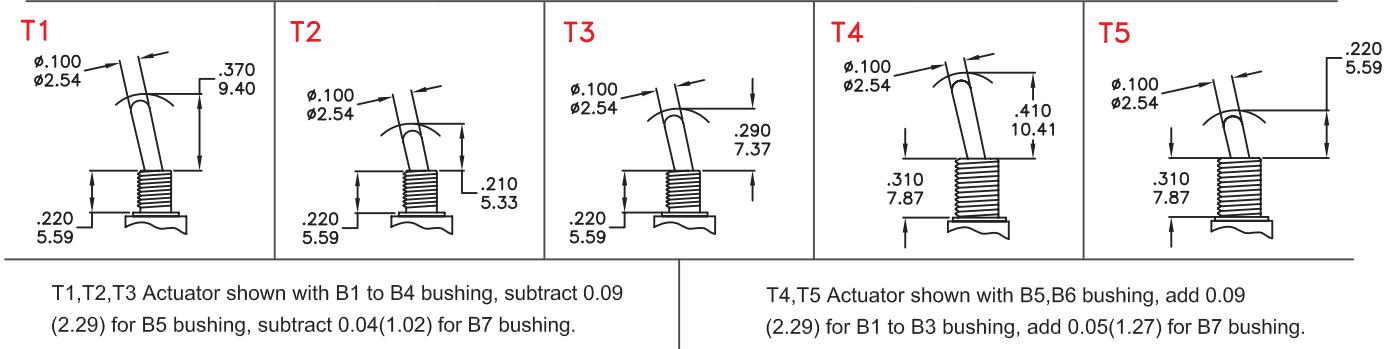


DPDT

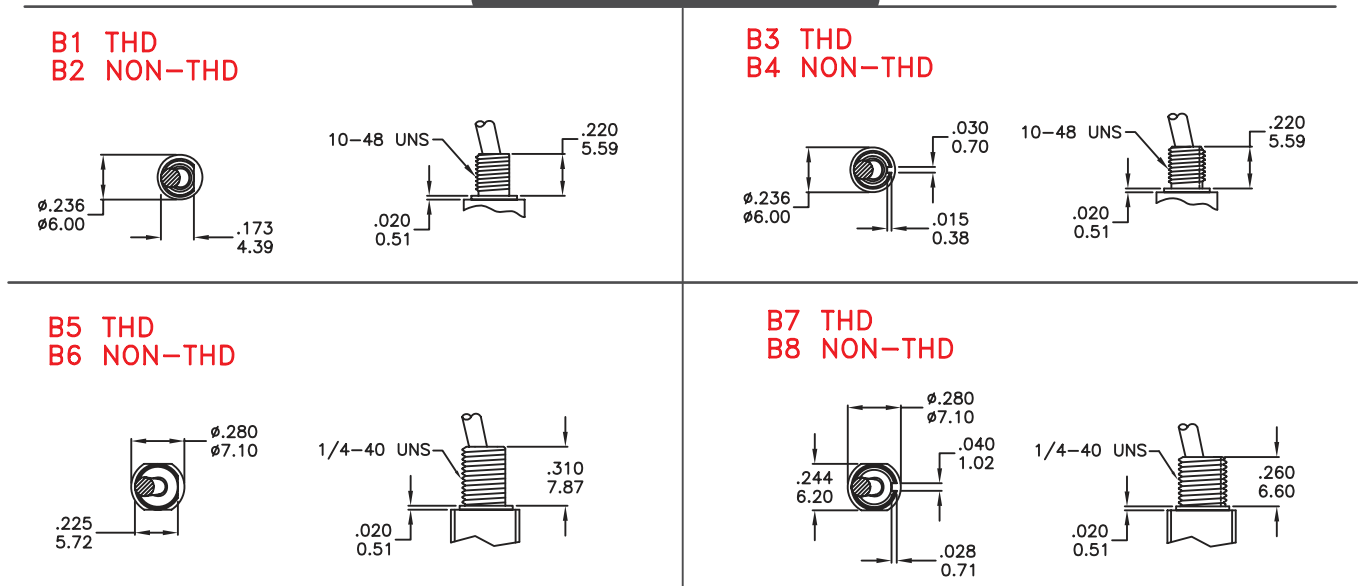


Part No. Shown : 2MD1T1B1M1RE

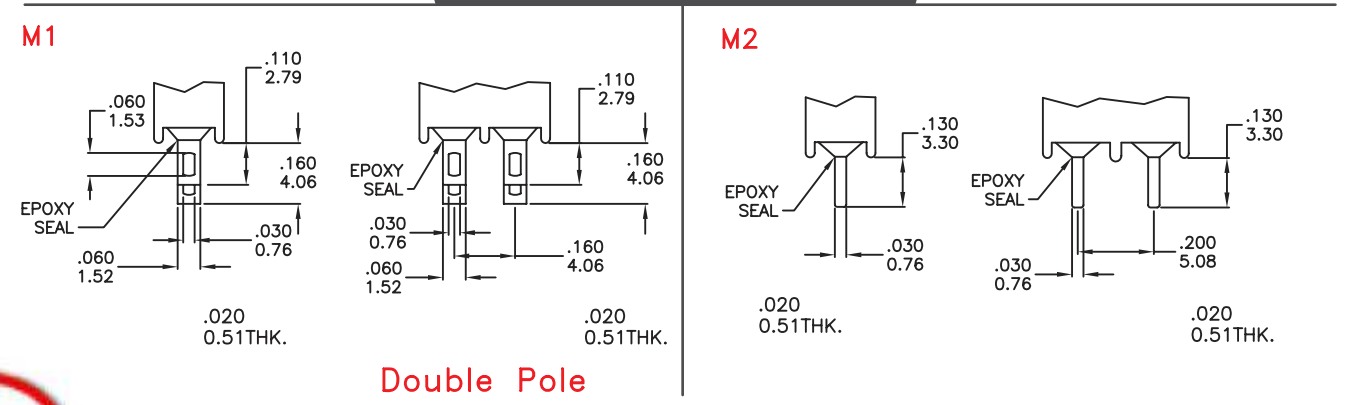
ACTUATOR FUNCTIONS



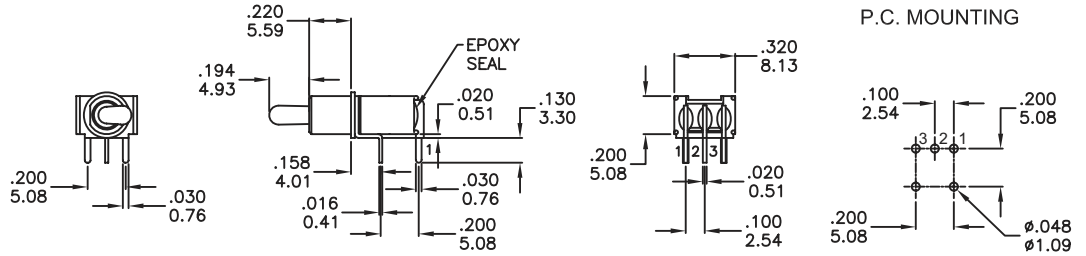
BUSHING OPTIONS



TERMINATION OPTIONS



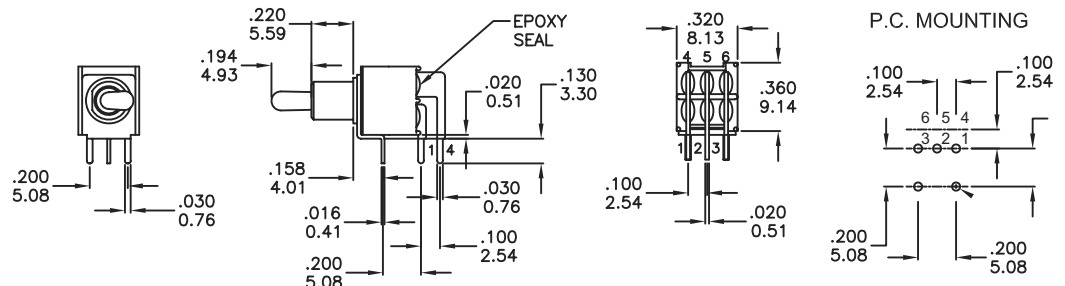
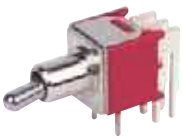
M6



SPDT

Part No. Shown : 2MS1T2B2M6RE

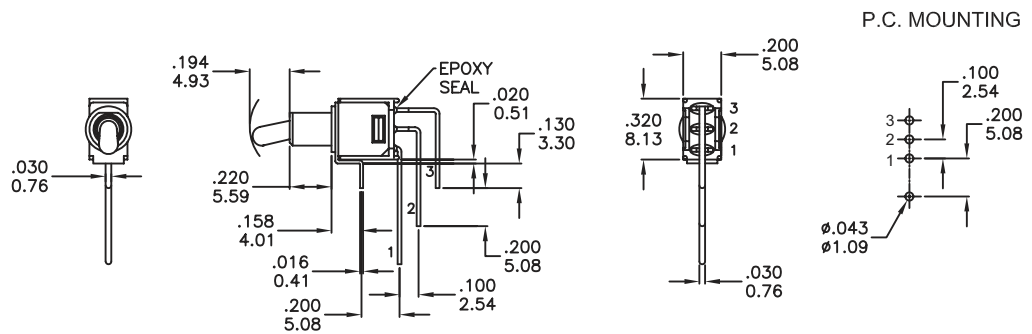
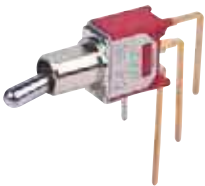
M6



DPDT

Part No. Shown : 2MD1T2B2M6QE

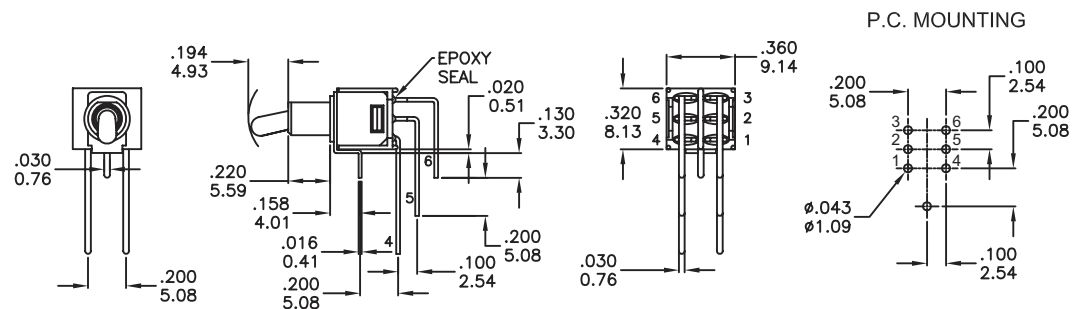
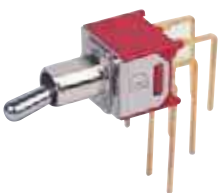
M7



SPDT

Part No. Shown : 2MS1T2B2M7RE

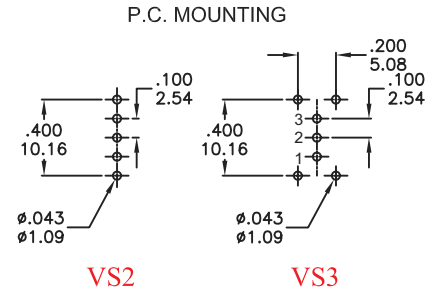
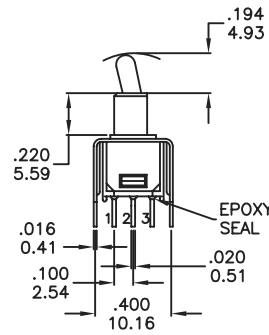
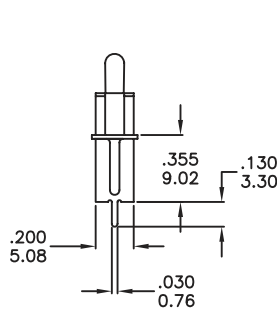
M7



DPDT

Part No. Shown : 2MD1T2B2M7RE

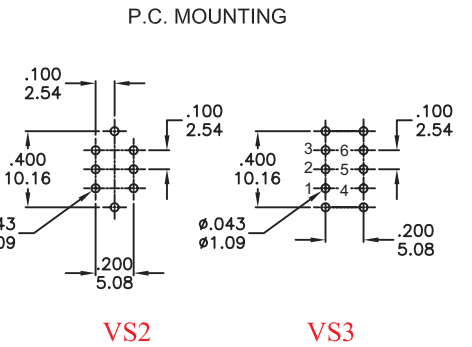
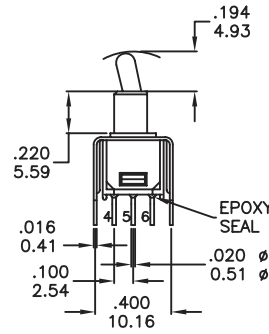
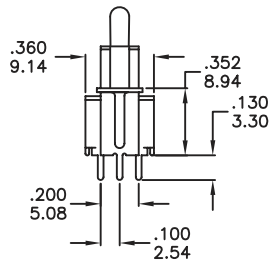
VS2 - VS3



SPDT

Part No. Shown : 2MS1T2B2VS2QE

VS2 - VS3

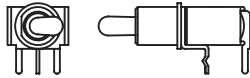


DPDT

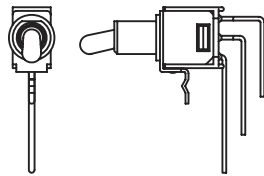
Part No. Shown : 2MD1T2B2VS2QE

SNAP-IN TERMINATION OPTIONS

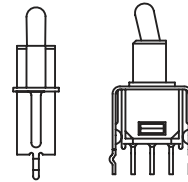
M6N



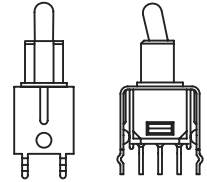
M7N



V2N

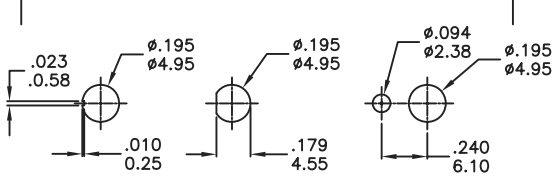


V3N



PANEL MOUNTING

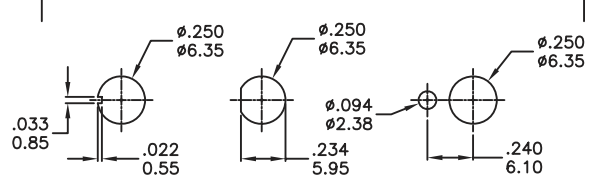
10-48 BUSHING



Without locking ring

With std. locking ring

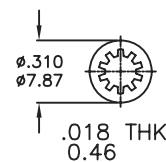
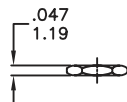
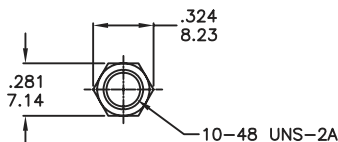
1/4 IN. BUSHING



Without locking ring

With std. locking ring

HARDWARE



Locking Ring

CONTACT MATERIAL OPTIONS

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

