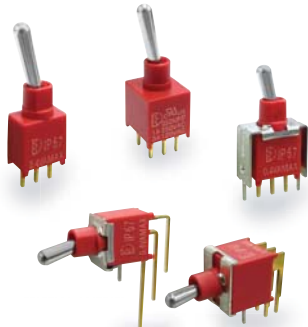


# 2A Series

Sealed Sub-Miniature Toggle Switches

2A  
Toggle Switches



IP 67  
ACCORDING TO  
EN 60529:1991+A1:2001  
IEC 60529:2001

UL US  
E 187490

RoHS  
compliant

Pb  
lead-free

## SPECIFICATIONS

**CONTACT RATING:** Dependent upon contact material See Page 34.

**MECHANICAL LIFE:** 30,000 make-and-break cycles.

**CONTACT RESISTANCE:** 20 mΩ max. initial @ 2-4VDC  
100mA for both silver and gold plated contacts.

**INSULATION RESISTANCE:** 1,000 MΩ min.

**DIELECTRIC STRENGTH:** 1,000 Vrms min. @sea level.

**OPERATING TEMPERATURE:** -40°C to 85°C.

## MATERIALS

**CASE & BUSHING:** Glass filled nylon 6/6, flame retardant,  
heat stabilized (UL94v-0).

**ACTUATOR:** Brass, chrome plated, internal O-ring seal.  
Standard for all actuators.

**SWITCH SUPPORT:** Brass, tin plated.

**CONTACT / TERMINALS:** Copper alloy with Silver or gold plated.  
(See Page 34)

## HOW TO ORDER

MODEL NO.	ACTUATOR	BUSHING	TERMINATIONS	TERMINAL PLATING	SEAL	RoHS SOLDERING
<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p>Model NO.</p> <p><b>2AS1</b> SP On-None-On</p> <p><b>2AS2</b> SP On-None-Mom.</p> <p><b>2AS3</b> SP On-Off -On</p> <p><b>2AS4</b> SP Mom.-Off-Mom.</p> <p><b>2AS5</b> SP On-Off-Mom.</p> <p><b>2AS6</b> SP Off-None-On</p> <p><b>2AD1</b> DP On-None-On</p> <p><b>2AD2</b> DP On-None-Mom.</p> <p><b>2AD3</b> DP On-Off-On</p> </div> <div style="width: 20%;"> <p>Actuator</p> <p><b>T1</b> 10.16 high</p> <p><b>T2</b> 6.10 high</p> <p><b>T3</b> 8.13 high</p> <p><b>T4</b> 13.97 high</p> <p><b>TA</b> Plastic, Black</p> <p>10.16 high</p> <p><b>TB</b> Plastic, Black</p> <p>6.10 high</p> </div> <div style="width: 20%;"> <p>Bushing</p> <p><b>A1</b> SP 4.65 high</p> <p><b>A2</b> DP 4.50 high</p> <p><b>A3</b> SP 5.00 high</p> </div> <div style="width: 20%;"> <p>Terminations</p> <p><b>M2</b> PC thru-hole</p> <p><b>M5</b> Wire wrap</p> <p><b>M6</b> Right angle, PC thru-hole</p> <p><b>M6N</b> Right angle, snap-in, PC thru-hole</p> <p><b>M7</b> Vertical right angle, PC thru-hole</p> <p><b>M7N</b> Vertical right angle, snap-in, PC thru-hole</p> <p><b>VS2</b> 9.30 high V-bracket</p> <p><b>V2N</b> 9.30 high Snap-in V-bracket</p> </div> <div style="width: 20%;"> <p>Terminal plating</p> <p><b>Q</b> Gold flash over silver</p> <p><b>R</b> Gold</p> <p><b>C</b> Gold over silver</p> </div> <div style="width: 20%;"> <p>Seal</p> <p><b>E</b> EPOXY (std)</p> </div> <div style="width: 20%;"> <p>RoHS soldering</p> <p><b>S</b> RoHS &amp; Lead Free</p> </div> </div>						
				* 2AS6 model type not applicable to M6/M6N/M7/M7N terminations		

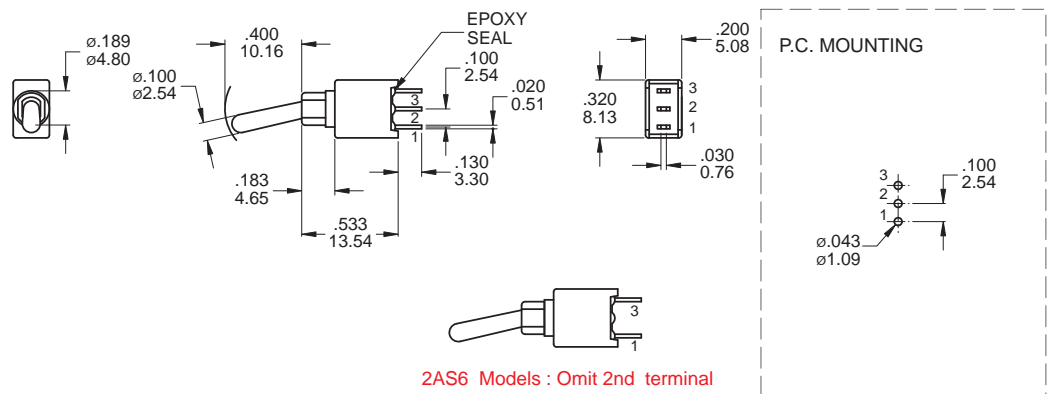
## SWITCH FUNCTION

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	Q22A11	2AS1	ON	NONE	ON	2-3	N/A	2-1
	Q22A12	2AS2	ON	NONE	MOM			
	Q22A13	2AS3	ON	OFF	ON		OPEN	
	Q22A14	2AS4	MOM	OFF	MOM			
	Q22A15	2AS5	ON	OFF	MOM			
	Q22A16	2AS6	OFF	NONE	ON	OPEN	N/A	3-1
DP	Q22A21	2AD1	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4
	Q22A22	2AD2	ON	NONE	MOM			
	Q22A23	2AD3	ON	OFF	ON			

MOM=MOMENTARY

## POLE OPTIONS

M2

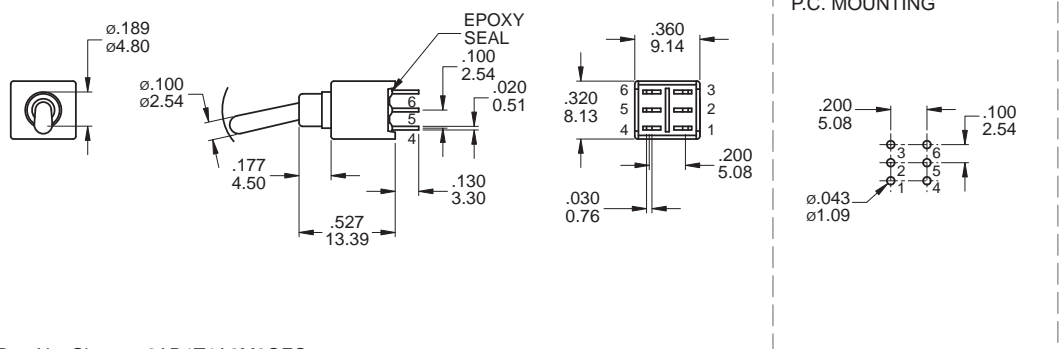


2AS6 Models : Omit 2nd terminal

SPDT

Part No. Shown : 2AS1T1A1M2RES

M2



DPDT

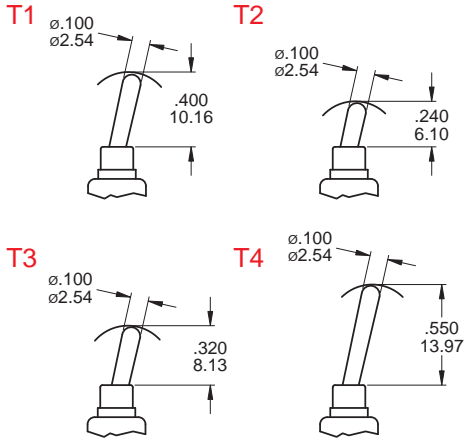
Part No. Shown : 2AD1T1A2M2QES



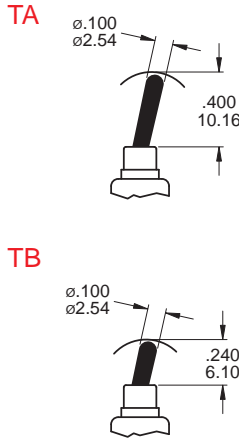
# 2A Series

Sealed Sub-Miniature Toggle Switches

## ACTUATOR OPTIONS

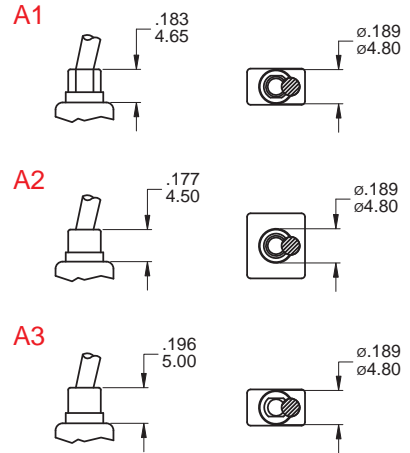


Actuator shown with A1 Bushing, sub .020 (0.50) for A3 Bushing.



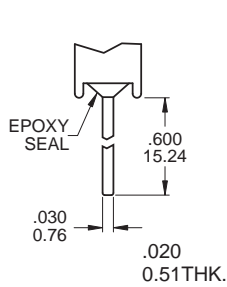
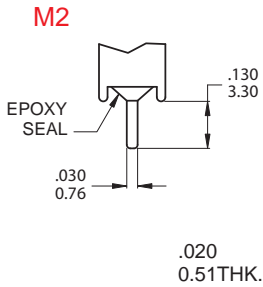
PLASTIC ACTUATOR

## BUSHING OPTIONS



A1, A3 FOR SPDT / A2 FOR DPDT

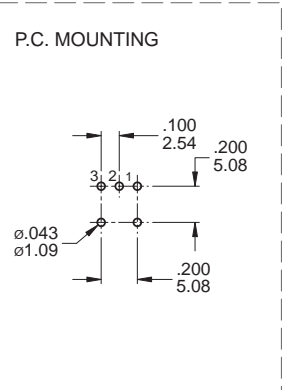
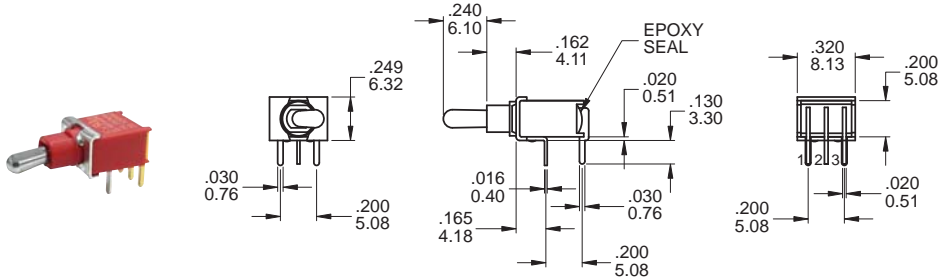
## TERMINATION OPTIONS



## OTHER TERMINATION OPTIONS

- M6** Right angle P.C. Mount
- M6N** Right angle P.C. Mount  
Snap-in bracket
- M7** Vertical right angle P.C. Mount
- M7N** Vertical right angle P.C. Mount  
Snap-in bracket
- VS2** Vertical bracket P.C. Mount

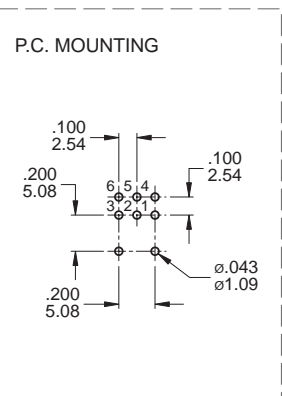
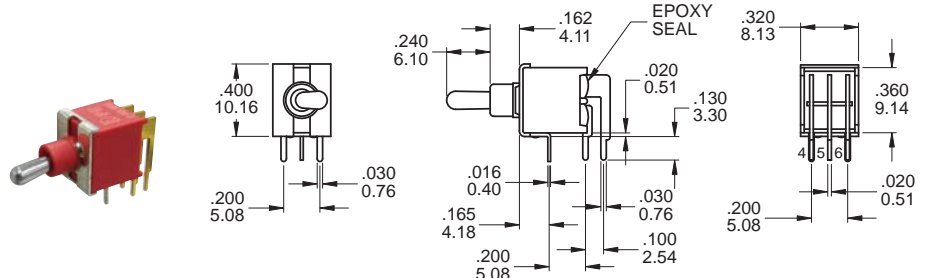
### M6



### SPDT

Part No. Shown : 2AS1T2A1M6QES

### M6

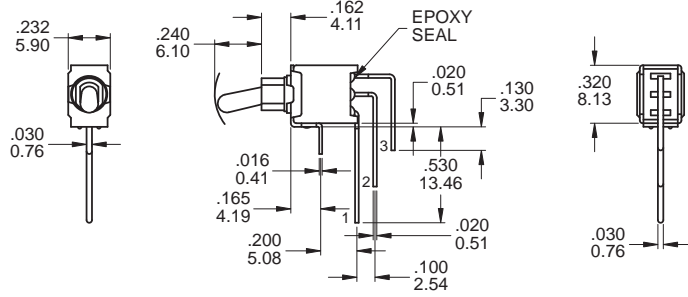


### DPDT

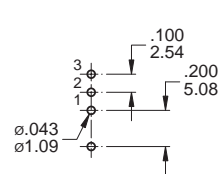
Part No. Shown : 2AD1T2A2M6RES

2A  
Toggle Switches

### M7



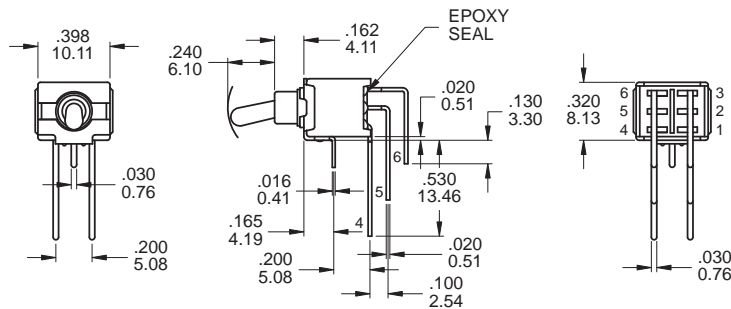
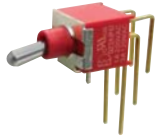
#### P.C. MOUNTING



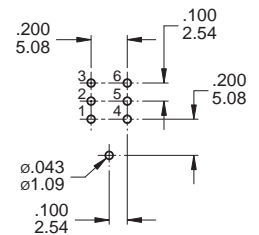
### SPDT

Part No. Shown : 2AS1T2A1M7RES

### M7



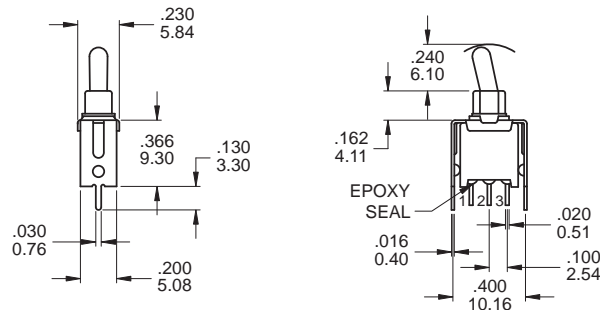
#### P.C. MOUNTING



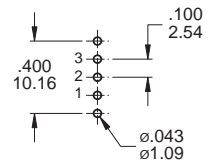
### DPDT

Part No. Shown : 2AD1T2A2M7QES

### VS2



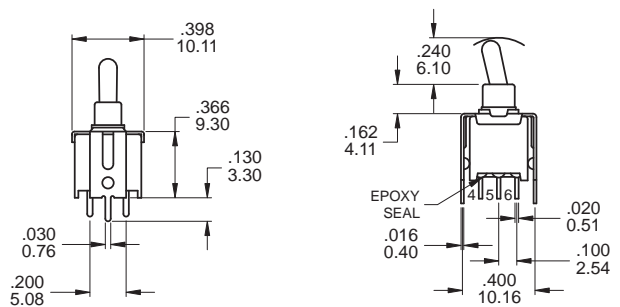
#### P.C. MOUNTING



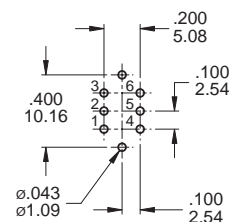
### SPDT

Part No. Shown : 2AS1T2A1VS2RES

### VS2



#### P.C. MOUNTING



### DPDT

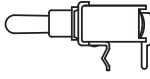
Part No. Shown : 2AD1T2A2VS2QES

# 2A Series

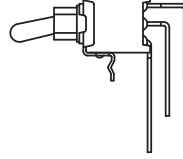
Sealed Sub-Miniature Toggle Switches

## SNAP-IN TERMINATION OPTIONS

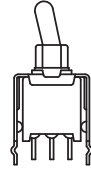
M6N



M7N



V2N



## CONTACT MATERIAL OPTIONS

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

## 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: 270 ± 5°C

Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)

2A  
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