

IP 67  
ACCORDING TO  
EN 60529:1991+A1:2001  
IEC 60029:2001

UL US  
E 187490

RoHS  
compliant

Pb  
lead-free

## SPECIFICATIONS

**CONTACT RATING:** Dependent upon contact material See page 17.

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

**CONTACT RESISTANCE:** 10 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:** -30°C to 85°C.

## MATERIALS

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

**ACTUATOR:** Brass, chrome plated with internal, O-ring seal standard.

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

**SWITCH SUPPORT RETAINER:** Stainless steel.

**CONTACT / TERMINALS:** Copper alloy, with Silver or gold plated.  
(See Page 6)

## HOW TO ORDER

MODEL NO.	ACTUATOR	BUSHING	TERMINATIONS	TERMINAL MATERIAL	SEAL	RoHS SOLDERING
<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;"> <p>Model NO.</p> <p><b>1AS1</b> SP On-None-On</p> <p><b>1AS2</b> SP On-None-Mom.</p> <p><b>1AS3</b> SP On-Off-On</p> <p><b>1AS4</b> SP Mom.-Off-Mom.</p> <p><b>1AS5</b> SP On-Off -Mom.</p> <p><b>1AD1</b> DP On-None-On</p> <p><b>1AD2</b> DP On-None-Mom.</p> <p><b>1AD3</b> DP On-Off-On</p> <p><b>1AD4</b> DP Mom.-Off-Mom.</p> <p><b>1AD5</b> DP On-Off-Mom.</p> <p><b>1AD6</b> DP On-On-On</p> <p><b>1AD7</b> DP Mom.-On-Mom.</p> <p><b>1AD8</b> DP On-On-Mom.</p> <p><b>1A31</b> 3P On-None-On</p> <p><b>1A32</b> 3P On-None-Mom.</p> <p><b>1A33</b> 3P On-Off-On</p> <p><b>1A34</b> 3P Mom.-Off-Mom.</p> <p><b>1A35</b> 3P On-Off-Mom.</p> </div> <div style="width: 15%;"> <p>Actuator</p> <p><b>T1</b> 12.70 high</p> <p><b>T2</b> 7.62 high</p> <p><b>TA</b> Plastic, anti-static, black 12.70 high</p> <p><b>TB</b> Plastic, anti-static, black 7.62 high</p> <p><b>TC</b> Plastic, anti-static, silver 12.70 high</p> </div> <div style="width: 15%;"> <p>Bushing</p> <p><b>B1</b> 8.89 high</p> <p><b>B4</b> 6.10 high</p> </div> <div style="width: 15%;"> <p>Terminations</p> <p><b>M1</b> Solder Lug</p> <p><b>M2</b> PC thru-hole</p> <p><b>M51</b> 18.70 high, wire wrap</p> <p><b>M52</b> 24.20 high, wire wrap</p> <p><b>M53</b> 10.55 high, wire wrap</p> <p><b>M54</b> 26.97 high, 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>VS2</b> 11.68 high, V-bracket</p> <p><b>V2N</b> 11.68 high, snap-in V-bracket</p> <p><b>VS3</b> 16.00 high, V-bracket</p> </div> <div style="width: 15%;"> <p>Terminal material</p> <p><b>Q</b> Gold flash over silver</p> <p><b>R</b> Gold</p> <p><b>G</b> Gold, pure-tin</p> <p><b>S</b> Gold flash over silver, pure-tin</p> <p><b>C</b> Gold over silver</p> <p><b>K</b> Gold over silver, pure-tin</p> </div> <div style="width: 15%;"> <p>Seal</p> <p><b>E</b> EPOXY (std)</p> </div> <div style="width: 15%;"> <p>RoHS soldering</p> <p><input type="checkbox"/> RoHS Compliant</p> <p><b>S</b> RoHS &amp; Lead Free</p> <p><b>F</b> Halogen Free+RoHS</p> </div> </div>						

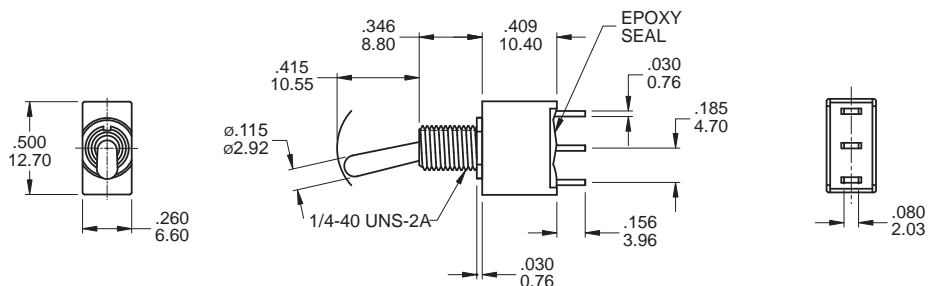
## SWITCH FUNCTION

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	Q11A11	1AS1	ON	NONE	ON		N/A	
	Q11A12	1AS2	ON	NONE	MOM			
	Q11A13	1AS3	ON	OFF	ON			
	Q11A14	1AS4	MOM	OFF	MOM			
	Q11A15	1AS5	ON	OFF	MOM			
DP	Q11A21	1AD1	ON	NONE	ON		N/A	
	Q11A22	1AD2	ON	NONE	MOM			
	Q11A23	1AD3	ON	OFF	ON			
	Q11A24	1AD4	MOM	OFF	MOM			
	Q11A25	1AD5	ON	OFF	MOM			
	▲ Q11A27	1AD7	MOM	ON	MOM			
	▲ Q11A28	1AD8	ON	ON	MOM			
	3P	Q11A31	1A31	ON	NONE			
Q11A32		1A32	ON	NONE	MOM			
Q11A33		1A33	ON	OFF	ON			
Q11A34		1A34	MOM	OFF	MOM			
Q11A35		1A35	ON	OFF	MOM			

MOM=MOMENTARY

▲ Please check the availability in advance before order

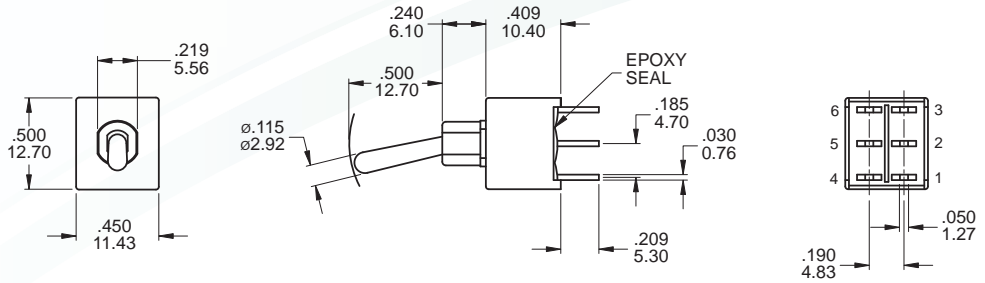
## POLE OPTIONS



SPDT

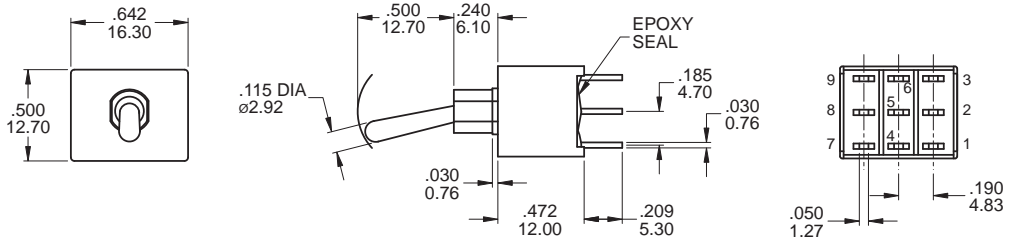
Part No. Shown : 1AS1T1B1M1QE





**DPDT**

Part No. Shown : 1AD1T1B4M2QE



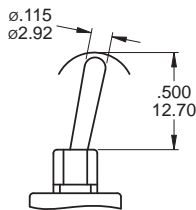
**3PDT**

Part No. Shown : 1A31T1B4M2QE

## ACTUATOR OPTIONS

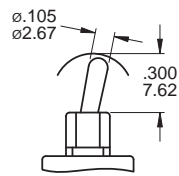
Actuator shown with standard B4 Bushing,  
Subtract .085 (2.15) for B1 bushing.

**T1**



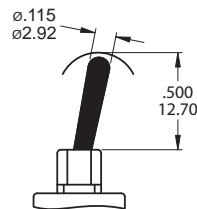
Standard with  
M1, M2 terminations.

**T2**



Standard with  
M6, M7, VS2-3 terminations.

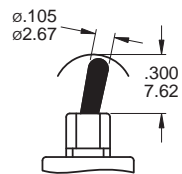
**TA**



**ESD**

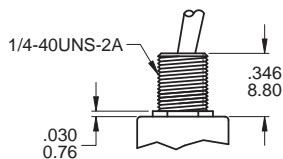
PLASTIC ACTUATOR  
(TC anti-static , silver)

**TB**



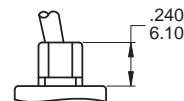
## BUSHING OPTIONS

**B1**



Std for M1

**B4**

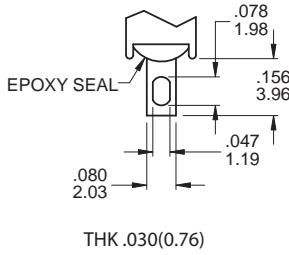


Std for M2, M6, M7, VS termination

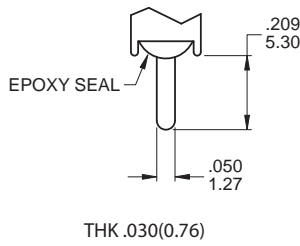


## TERMINATION OPTIONS

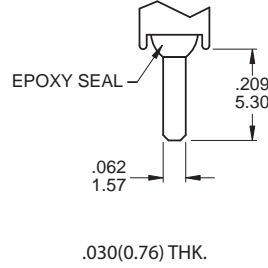
### M1 Solder lug



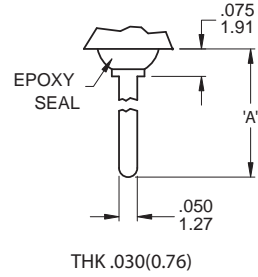
### M2 PC Thru-hole



### M3 Quick connect



### M5 Wire Wrap

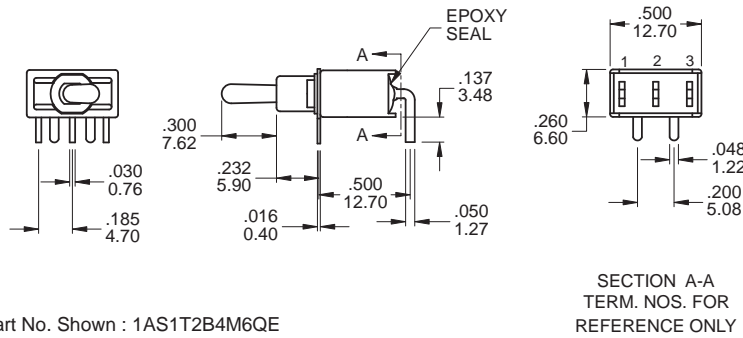


## OTHER TERMINATION OPTIONS

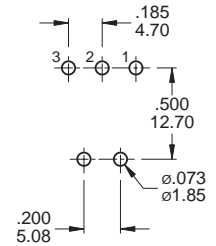
- M6** RIGHT ANGLE P.C. MOUNT
- M7** RIGHT ANGLE P.C. MOUNT
- VS2** VERTICAL BRACKET P.C. MOUNT
- VS3** VERTICAL BRACKET P.C. MOUNT

OPTION CODE	DIM. 'A'
M5-1	.736 ( 18.70 )
M5-2	.953 ( 24.20 )
M5-3	.415 ( 10.55 )
M5-4	1.062 ( 26.97 )

### M6

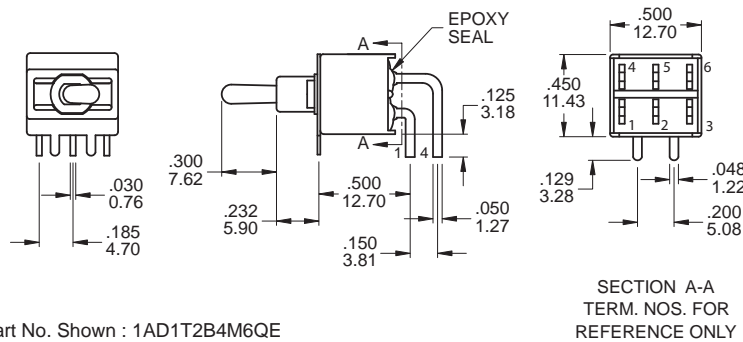


#### P.C. MOUNTING

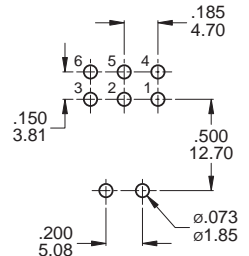


### SPDT

### M6

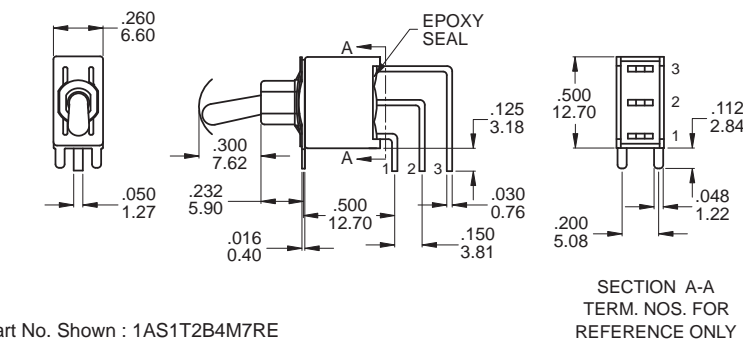
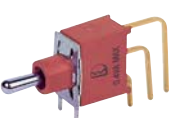


#### P.C. MOUNTING

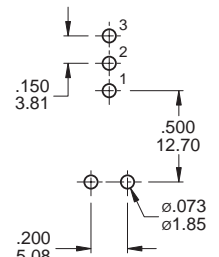


### DPDT

### M7

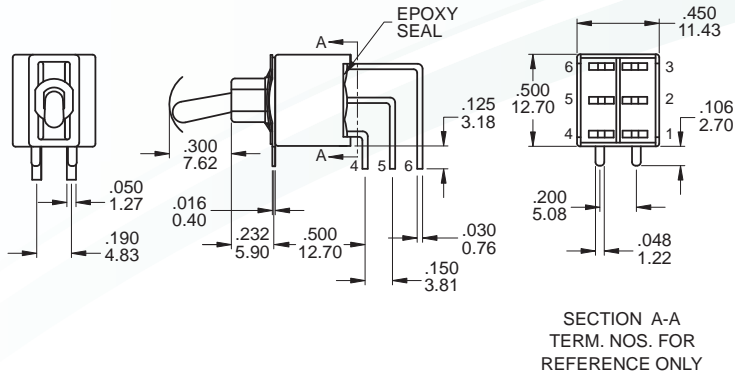


#### P.C. MOUNTING

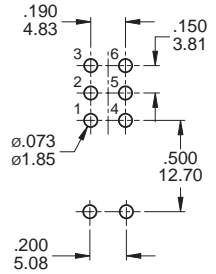


### SPDT

## M7



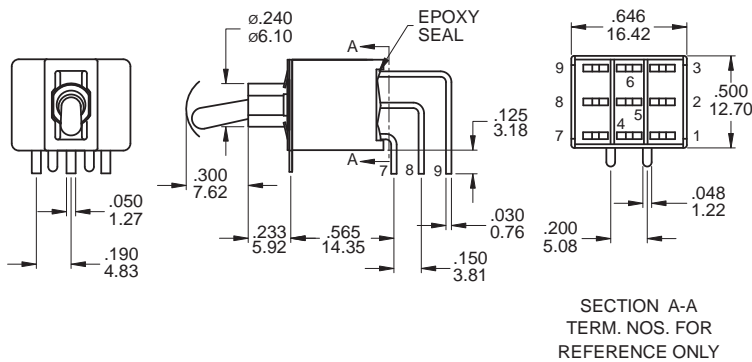
### P.C. MOUNTING



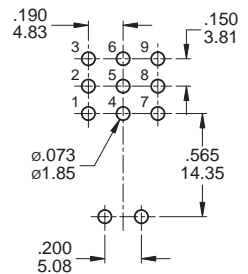
## DPDT

Part No. Shown : 1AD1T2B4M7RE

## M7



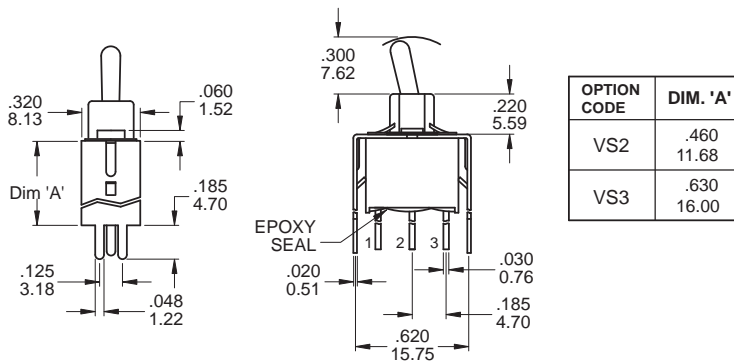
### P.C. MOUNTING



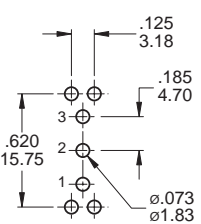
## 3PDT

Part No. Shown : 1A31T2B4M7QE

## VS2 - VS3



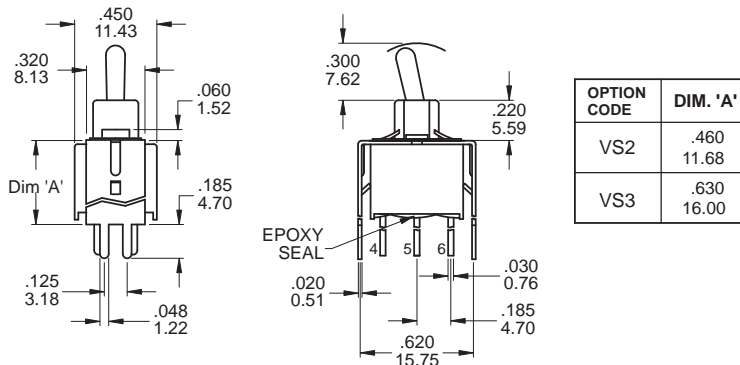
### P.C. MOUNTING



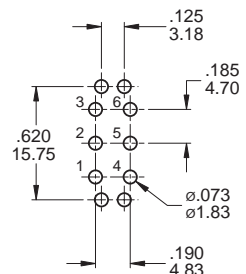
## SPDT

Part No. Shown : 1AS1T2B4VS2QE

## VS2 - VS3



### P.C. MOUNTING



## DPDT

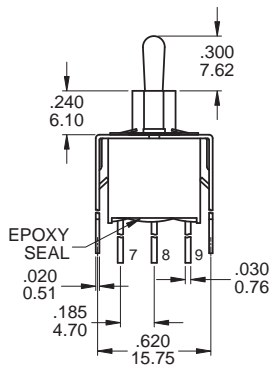
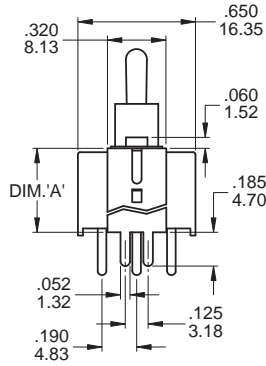
Part No. Shown : 1AD1T2B4VS2QE

## VS2 - VS3

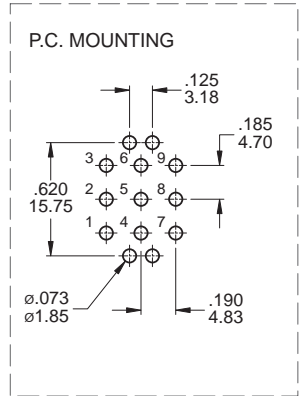


### 3PDT

Part No. Shown : 1A31T2B4VS2QE

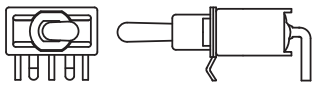


OPTION CODE	DIM. 'A'
VS2	.460 11.68
VS3	.630 16.00

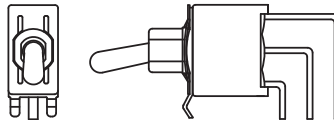


## SNAP-IN TERMINATION OPTIONS

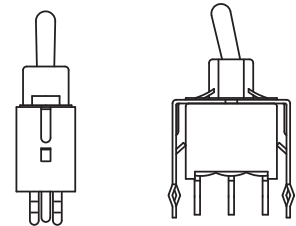
### M6N



### M7N

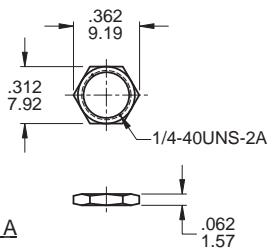


### V2N



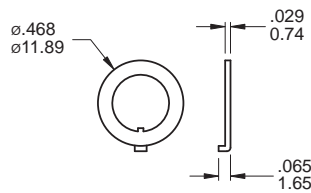
## HARDWARE

### 1/4 NUT



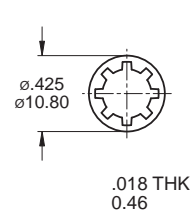
MNU-1M01A

### LOCKING RING



MNU-1M02

### LOCK WASHER



MNU-1M03

## CONTACT MATERIAL OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Q = Gold flash over silver	5 Amps with resistant load @ 120VAC or 28VDC 2 Amps with resistant load @ 250VAC
S		S = Gold flash over 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: Max 5 sec. (PCB is 1.6mm in thickness)