# **Toggle Switches Miniature**



### RoHS Compliant



#### **Specifications**

Contact Rating : Dependent upon content material Mechanical Life : 40,000 make and break cycles

 $\begin{array}{ll} \text{Max. Contact Resistance} & : 10 \text{m}\Omega \\ \text{Initial Voltage} & : 2 \text{ to 4V DC} \end{array}$ 

Current : 10mA for both silver and gold plated contacts Min. Insulation Resistance :  $1,000M\Omega$ 

Dielectric Strength : 1,000Vrms at sea level
Operating Temperature : -30°C to +85°C

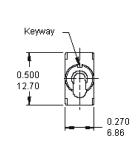
**Materials** 

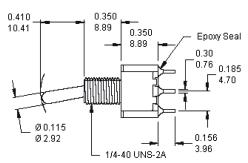
Case : Diallyl phthalate (DAP) (UL94v-0).

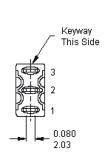
Actuator : Brass, chrome plated.
Bushing : Brass, nickel plated.
Housing : Stainless steel.
Switch Support : Brass, tin plated.
Terminal/Contact : Silver or gold plated.

### Pole Options SPDT



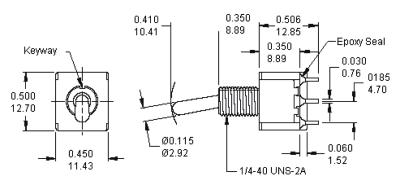


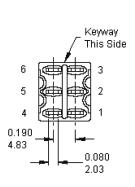




#### **DPDT**







Dimensions: Inches (Millimetres)



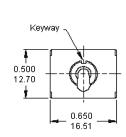
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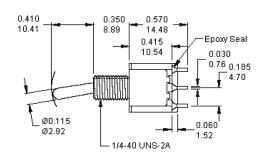


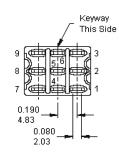
#### **Pole Options**

3PDT



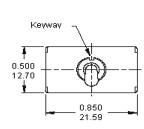


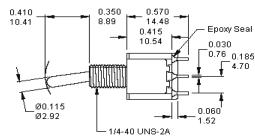


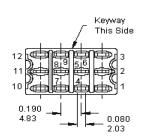


Pole Options
4PDT









Dimensions: Inches (Millimetres)

#### **Soldering Process**

Manual soldering : Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds

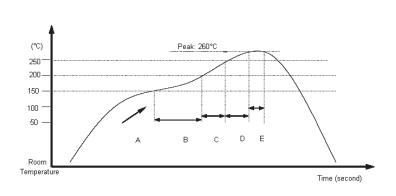
while applying solder

Wave soldering

Recommended soldering temperature :260 ±5°C.

Duration of solder immersion : 5 ±1 seconds (PCB is 1.6mm in thickness).

Temperature Profile			
Zone Room Temperature (°C) Time (second		Time (seconds)	
Pre-heat (A)	150°C	Min. 120	
Soak (B)	180°C to 200°C	Min. 150	
Peak (C)	200°C to 235°C	Min. 30	
Peak (D)	235°C to 260°C	Min. 40	
Peak (E)	260°C	Max. 10	





## Toggle Switches Miniature



#### **Switch Function**

			Switch Function		Connected Terminals/Schematic			
Number of	UL/CSA	Model	Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
Poles	Model Numbers	Number	À		4	h.	•	**
	Q1111	1MS1		None	ON	24- 2	NI/A	
	Q1112	1MS2	On	None	MOM	2 to 3	N/A	2 to 1
SP	Q1113	1MS3			ON	• 2(COMM)		• 2(COMM)
	Q1114	1MS4	MOM	Off	MOM	1. \\3	Open	1. \\3
	Q1115	1MS5			MOM	14 43		
	Q1121	1MD1	02	None	ON		N/A	
	Q1122	1MD2	On	None	MOM	2 to 3, 5 to 8	IN/A	2 to 1, 5 to 4
	Q1123	1MD3			ON			-3/00 <b>&gt;</b>
DP	Q1124	1MD4	MOM	Off	MOM	2COMM5 1. 3 4. 6	Open	2(COMM)5, 14 • 3     44 • 6
DF	Q1125	1MD5	On		MOM			
	Q1126	1MD6	Oli		On			
	Q1127	1MD7	MOM	On	MOM	2 to 3, 5 to 6	2 to 3, 5 to 4	2 to 1, 5 to 4
	Q1128	1MD8			MOM			
3P	Q1131	1M31	On	None	On	2 to 3, 5 to 6, 8 to 9	N/A	2 to 1, 5 to 4, 8 to 7
4P	Q1141	1M41		140110	On	2 to 3, 5 to 6, 8 to 9, 11 to 12	IWA	2 to 1, 5 to 4, 8 to 7, 11 to 10

#### **Part Number Table**

Description	Part Number
Switch, PCB, SPDT, VERT	1MS1T2B4V2RE
Switch, PCB, SPDT, VERT	1MS3T2B4V2RE
Switch, PCB, SPDT, VERT	1MS2T2B4V2RE
Switch, PCB, SPDT, VERT	1MS4T2B4V2RE
Switch, PCB, SPDT, VERT	1MS5T2B4V2RE
Switch, PCB, DPDT, VERT	1MD1T2B4V3RE
Switch, PCB, SPDT, HORIZ	1MS1T2B4M6RE
Switch, PCB, SPDT, HORIZ	1MS3T2B4M6RE
Switch, PCB, SPDT, HORIZ	1MS4T2B4M6RE
Switch, PCB, DPDT, HORIZ	1MD1T2B4M6RE
Switch, PCB, DPDT, HORIZ	1MD3T2B4M6RE
Switch, PCB, SPDT, HORIZ	1MS1T2B4M7RE
Switch, PCB, SPDT, HORIZ	1MS3T2B4M7RE

Description	Part Number
Switch, PCB, DPDT, HORIZ	1MD1T2B4M7RE
Switch, SPDT	1MS1T1B5M1QE
Switch, SPDT	1MS3T1B5M1QE
Switch, DPDT	1MD1T1B5M1QE
Switch, DPDT	1MD3T1B5M1QE
Switch, SPDT	1MS1T1B1M1QE
Switch, SPDT	1MS1T1B1M1RE
Switch, SPDT	1MS3T1B1M1QE
Switch, SPDT	1MS3T1B1M1RE
Switch, SPDT	1MS4T1B1M1QE
Switch, SPDT	1MS4T1B1M1RE
Switch, SPDT	1MS5T1B1M1QE
Switch, SPDT	1MS5T1B1M1RE



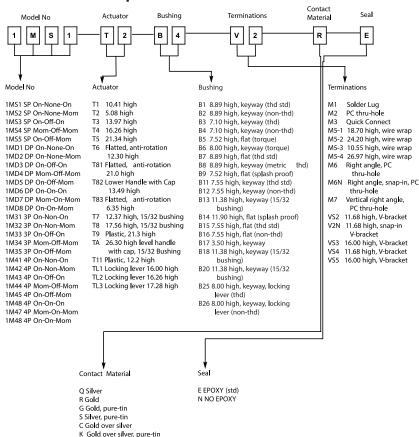
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Description	Part Number
Switch, SPDT	1MS2T1B1M1QE
Switch, SPDT	1MS2T1B1M1RE
Switch, DPDT	1MD1T1B1M1QE
Switch, DPDT	1MD1T1B1M1RE
Switch, DPDT	1MD3T1B1M1QE
Switch, DPDT	1MD3T1B1M1RE
Switch, DPDT	1MD4T1B1M1QE
Switch, DPDT	1MD4T1B1M1RE
Switch, DPDT	1MD5T1B1M1QE
Switch, DPDT	1MD5T1B1M1RE
Switch, 3PDT	1M31T1B1M1QE

Description	Part Number
Switch, 4PDT	1M41T1B1M1QE
Switch, SPDT	1MS1T6B11M1QE
Switch, SPDT	1MS3T6B11M1QE
Switch, SPDT	1MS4T6B11M1QE
Switch, SPDT	1MS5T6B11M1QE
Switch, SPDT	1MS2T6B11M1QE
Switch, DPDT	1MD1T6B11M1QE
Switch, DPDT	1MD3T6B11M1QE
Switch, 3PDT	1M31T6B11M1QE
Switch, 4PDT	1M41T6B11M1QE

#### **Part Number Explanation**



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