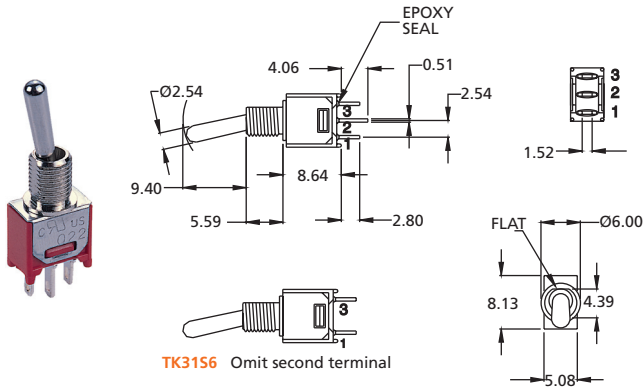


# Toggle Switches

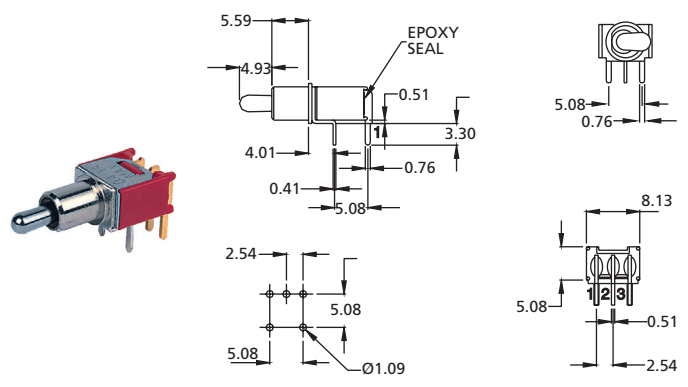
## Sub-Miniature SPDT Toggle Switches

## TK31 Series

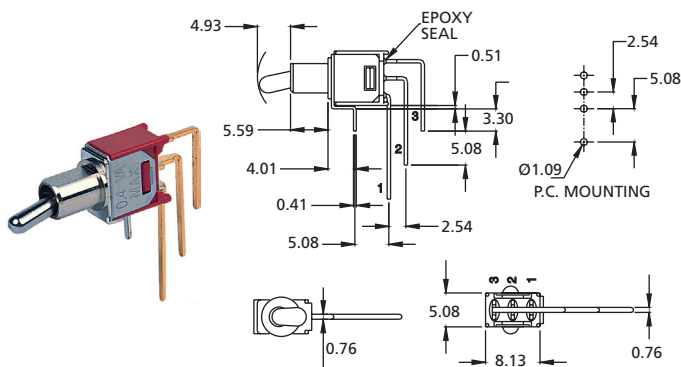
Toggle Switches



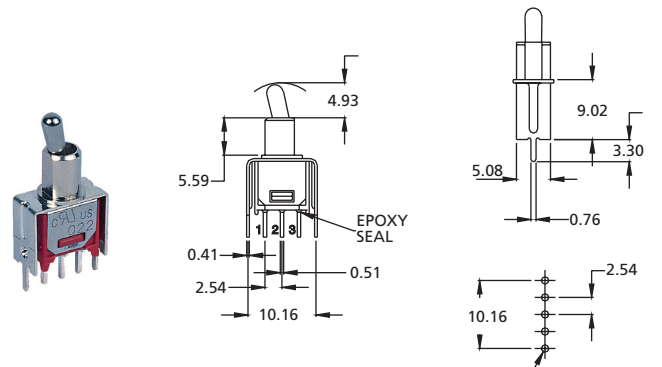
**TK31S1A1B1T1\_\_ Solder Lug**



**TK31S1A2B2T6\_\_ THT Right Angle**



**TK31S1A2B2T7\_\_ THT Vertical Right Angle**



**TK31S1A2B2VS2\_\_ V-Bracket**

No. Poles	Model No.	Switch Function			Connected Terminals / Schematic		
		Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
SP	TK31S1	ON	NONE	ON	2-3	N/A	2-1
SP	TK31S2	ON	NONE	MOM	2(COM) 1 3	OPEN	2(COM) 1 3
SP	TK31S3	ON	OFF	ON			
SP	TK31S4	MOM	OFF	MOM			
SP	TK31S5	ON	OFF	MOM			
SP	TK31S6	OFF	NONE	ON	OPEN	N/A	3-1

### How to order:

TK31

#### 1 POLES & SWITCH FUNCTION:

- S1 SP ON-NONE-ON
- S2 SP ON-NONE-MOM
- S3 SP ON-OFF-ON
- S4 SP MOM-OFF-MOM
- S5 SP ON-OFF-MOM
- S6 SP OFF-NONE-ON

#### 2 ACTUATOR (See page A11):

- A1 Height = 9.40 mm
- A2 Height = 5.33 mm
- A3 Height = 7.37 mm
- A4 Height = 10.41 mm
- A5 Height = 5.59 mm

#### 3 BUSHING (See page A11):

- B1 Height = 5.59 mm, flat (thd)
- B2 Height = 5.59 mm, flat (non-thd)
- B3 Height = 5.59 mm, keyway (thd)
- B4 Height = 5.59 mm, keyway (non-thd)
- B5 Height = 7.87 mm, flat (thd)
- B6 Height = 7.87 mm, flat (non-thd)
- B7 Height = 6.60 mm, keyway (thd)
- B8 Height = 6.60 mm, keyway (non-thd)

#### 4 TERMINALS(See page A11):

- T1 Solder Lug

#### T2 PC Thru Hole

- T5 Wire Wrap
- T6 PC Thru Hole, Right Angle
- T6N PC Thru Hole, Right Angle, Snap-in
- T7 PC Thru Hole, Vertical Right Angle
- T7N PC Thru Hole, Vertical Right Angle, Snap-in

#### VS2 V-Bracket

- V2N Snap-in V-Bracket
- V3 V-Bracket
- V3N Snap-in V-Bracket

#### 5 CONTACT MATERIAL:

- AG Silver
- AU Gold
- UT Gold, Tin-Lead
- GT Silver, Tin-Lead
- UG Gold over Silver
- UGT Gold over Silver, Tin-Lead

#### 6 SEAL:

- E Epoxy (Standard)
- N No Epoxy

#### 7 ROHS & LEAD FREE:

- blank RoHS Compliant (Standard)
- V RoHS Compliant & Lead Free

### General Specifications:

#### MATERIALS

- » Movable Contact & Fixed Terminals:  
AG, GT, UG & UGT: Silver plated over copper alloy  
AU & UT: Gold over nickel plated over copper alloy

#### MECHANICAL

- » Operating Temperature: -30°C to +85°C
- » Mechanical Life: 30,000 cycles

#### CONTACT RATING

- » AG, GT, UG & UGT: 3A120VAC/28VDC  
1A250VAC
- » AU & UT: 0.4VA max. 20V max. (AC/DC)

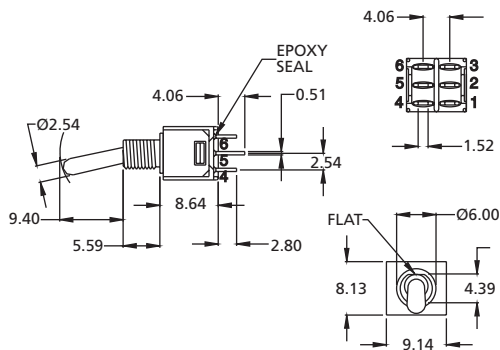
#### ELECTRICAL

- » Contact Resistance: 10mΩ max. initial @ 2-4VDC  
100mA for silver & gold plated contacts
- » Insulation Resistance: 1,000MΩ min.

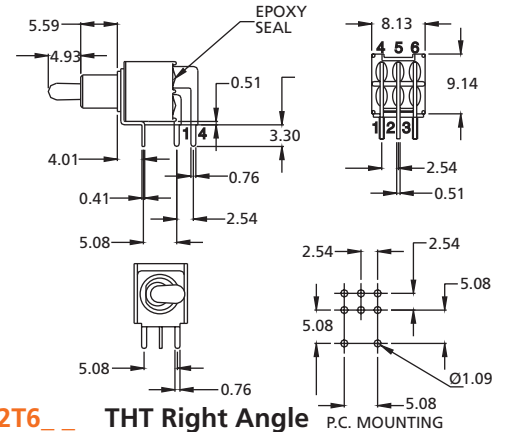
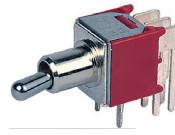
# Toggle Switches

## Sub-Miniature DPDT Toggle Switches

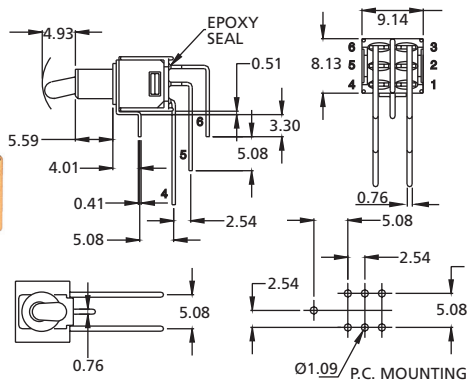
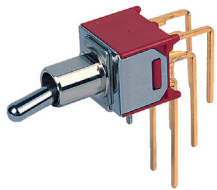
## TK32 Series



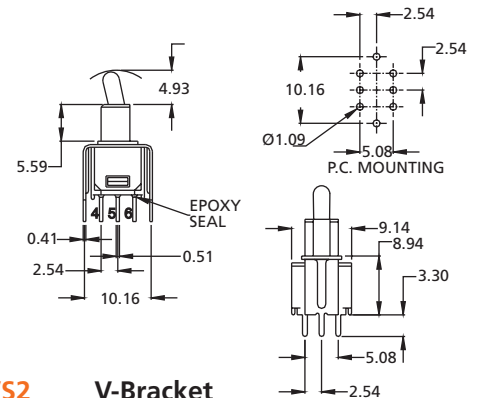
**TK32D1A1B1T1** Solder Lug



**TK32D1A2B2T6** THT Right Angle



**TK32D1A2B2T7** THT Vertical Right Angle



**TK32D1A2B2VS2** V-Bracket

No. Poles	Model No.	Switch Function			Connected Terminals / Schematic		
		Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
DP	TK32D1	ON	NONE	ON	2-3, 5-6	N/A	2-1, 5-4
DP	TK32D2	ON	NONE	MOM		OPEN	
DP	TK32D3	ON	OFF	ON			

### How to order:

TK32 1 2 3 4 5 6 7

#### 1 POLES & SWITCH FUNCTION:

- D1 DP ON-NONE-ON
- D2 DP ON-NONE-MOM
- D3 DP ON-OFF-ON

#### 2 ACTUATOR (See page A11):

- A1 Height = 9.40 mm
- A2 Height = 5.33 mm
- A3 Height = 7.37 mm
- A4 Height = 10.41 mm
- A5 Height = 5.59 mm

#### 3 BUSHING (See page A11):

- B1 Height = 5.59 mm, flat (thd)
- B2 Height = 5.59 mm, flat (non-thd)
- B3 Height = 5.59 mm, keyway (thd)
- B4 Height = 5.59 mm, keyway (non-thd)
- B5 Height = 7.87 mm, flat (thd)
- B6 Height = 7.87 mm, flat (non-thd)
- B7 Height = 6.60 mm, keyway (thd)
- B8 Height = 6.60 mm, keyway (non-thd)

#### 4 TERMINALS(See page A11):

- T1 Solder Lug
- T2 PC Thru Hole
- T5 Wire Wrap

- T6 PC Thru Hole, Right Angle
- T6N PC Thru Hole, Right Angle, Snap-in
- T7 PC Thru Hole, Vertical Right Angle
- T7N PC Thru Hole, Vertical Right Angle, Snap-in

- VS2 V-Bracket
- V2N Snap-in V-Bracket
- VS3 V-Bracket
- V3N Snap-in V-Bracket

#### 5 CONTACT MATERIAL:

- AG Silver
- AU Gold
- UT Gold, Tin-Lead
- GT Silver, Tin-Lead
- UG Gold over Silver
- UGT Gold over Silver, Tin-Lead

#### 6 SEAL:

- E Epoxy (Standard)
- N No Epoxy

#### 7 ROHS & LEAD FREE:

- blank RoHS Compliant (Standard)
- V RoHS Compliant & Lead Free

### General Specifications:

#### MATERIALS

- » Movable Contact & Fixed Terminals:  
AG, GT, UG & UGT: Silver plated over copper alloy  
AU & UT: Gold over nickel plated over copper alloy

#### MECHANICAL

- » Operating Temperature: -30°C to +85°C
- » Mechanical Life: 30,000 cycles

#### CONTACT RATING

- » AG, GT, UG & UGT: 3A120VAC/28VDC  
1A250VAC
- » AU & UT: 0.4VA max. 20V max. (AC/DC)

#### ELECTRICAL

- » Contact Resistance: 10mΩ max. initial @ 2-4VDC  
100mA for silver & gold plated contacts
- » Insulation Resistance: 1,000MΩ min.

# Toggle Switches

## Additional Informations for TK31 & 32 Series

### ACTUATOR OPTIONS

<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>
Actuators A1, A2 & A3 shown with B1 to B4 bushing, subtract 2.29mm for B5 bushing, subtract 1.02 for B7 bushing.			Actuators A4 & A5 shown with B5 & B6 bushing, add 2.29mm for B1 to B3 bushing, add 1.27mm for B7 bushing.	

### BUSHING OPTIONS

<b>B1 (THD) &amp; B2 (NON-THD)</b>		<b>B3 (THD) &amp; B4 (NON-THD)</b>	
<b>B5 (THD) &amp; B6 (NON-THD)</b>		<b>B7 (THD) &amp; B8 (NON-THD)</b>	

### TERMINAL OPTIONS

<b>T1 (Single Pole, 0.51 thick)</b>	<b>T1 (Double Pole, 0.51 thick)</b>	<b>T2 (Single Pole, 0.51 thick)</b>	<b>T2 (Double Pole, 0.51 thick)</b>
<b>T6N</b>	<b>T7N</b>	<b>V2N</b>	<b>V3N</b>

### PANEL MOUNTING

10-48 Bushing without locking ring	10-48 Bushing with locking ring	1/4 In. Bushing without locking ring	1/4 In. Bushing with locking ring

### HARDWARE

Ring	Locking Ring 0.46mm thick