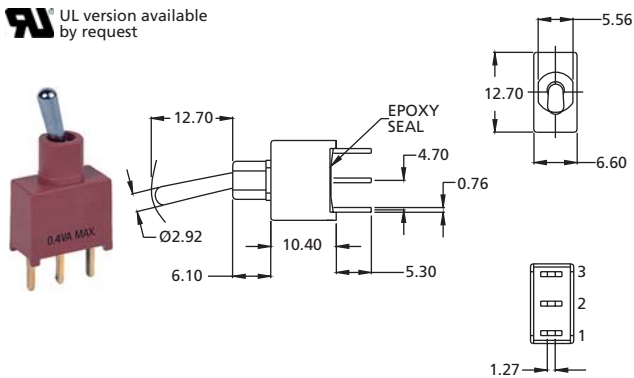


Toggle Switches


Sealed Miniature SPDT Toggle Switches

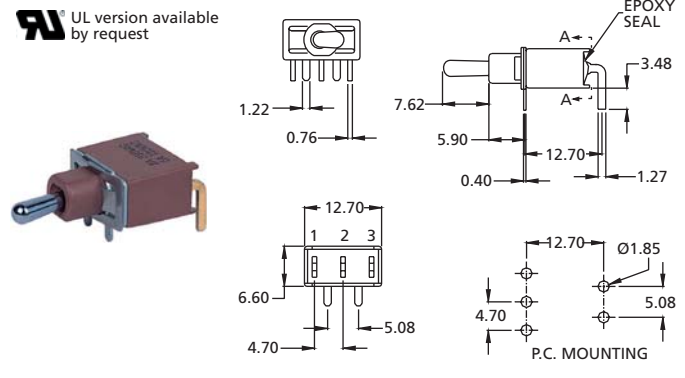
TK21 Series

 UL version available by request




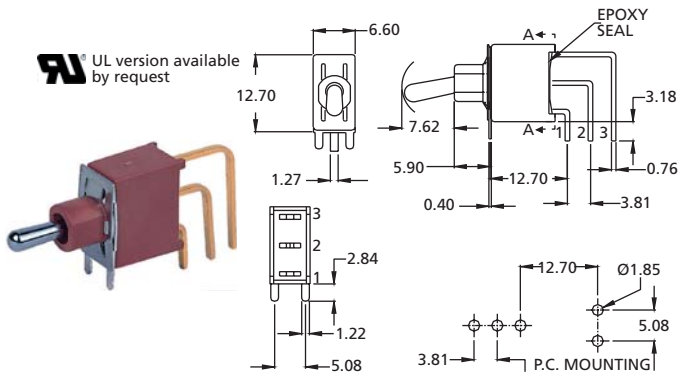
TK21S1A1B4T2_E THT Straight

 UL version available by request




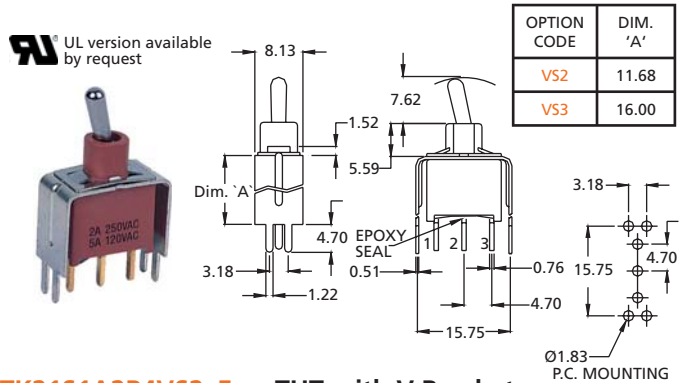
TK21S1A2B4T6_E THT Right Angle

 UL version available by request



TK21S1A2B4T7_E THT Vertical Right Angle

 UL version available by request



TK21S1A2B4VS2_E THT with V-Bracket

No. Poles	Model No.	Switch Function			Connected Terminals / Schematic		
		Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
SP	TK21S1	ON	NONE	ON	2-3	N/A	2-1
SP	TK21S2	ON	NONE	MOM	2(COMM) 1-3	OPEN	2(COMM) 1-3
SP	TK21S3	ON	OFF	ON			
SP	TK21S4	MOM	OFF	MOM			
SP	TK21S5	ON	OFF	MOM			

How to order:

TK21

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

2 ACTUATOR (Details see page A08):

- A1 Height=12.70 mm
- A2 Height=7.62 mm
- AA Height=12.70 mm, plastic, anti-static, black
- AB Height=7.62 mm, plastic, anti-static, black
- AC Height=12.70 mm, plastic, anti-static, silver

3 BUSHING (Details see page A08):

- B1 Height = 8.80 mm
- B4 Height = 6.10 mm

4 TERMINALS (Details see page A08):

- T1 Solder Lug
- T2 PC Thru Hole
- T51 Wire Wrap, Height = 18.70 mm
- T52 Wire Wrap, Height = 24.20 mm

T53

- Wire Wrap, Height = 10.55 mm
- T54 Wire Wrap, Height = 26.97 mm
- T6 PC Thru Hole, Right Angle
- T6N PC Thru Hole, Right Angle, Snap-in
- T7 PC Thru Hole, Vertical Right Angle
- VS2 V-Bracket, Height = 11.68 mm
- V2N Snap-in V-Bracket, Height = 11.68 mm
- VS3 V-Bracket, Height = 16.00 mm

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 EPOXY:

- E Epoxy (Standard)

7 ROHS & LEADFREE:

- blank RoHS compliant (Standard)
- V RoHS compliant & Leadfree

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
- » Degree of Protection: IP67

CONTACT RATING

- » AG, GT, UG & UGT: 5A120VAC/28VDC
2A250VAC
- » AU & UT: 0.4VA max. 20V max. (AC/DC)

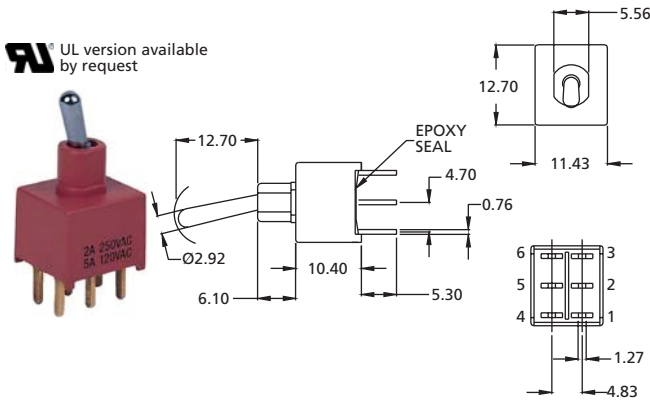
ELECTRICAL

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

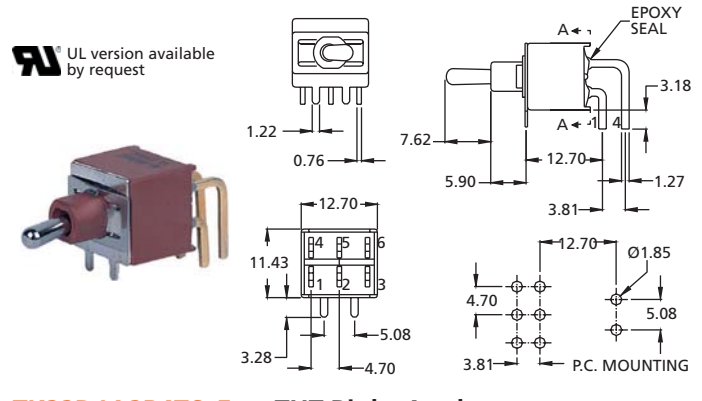
Toggle Switches

Sealed Miniature DPDT Toggle Switches

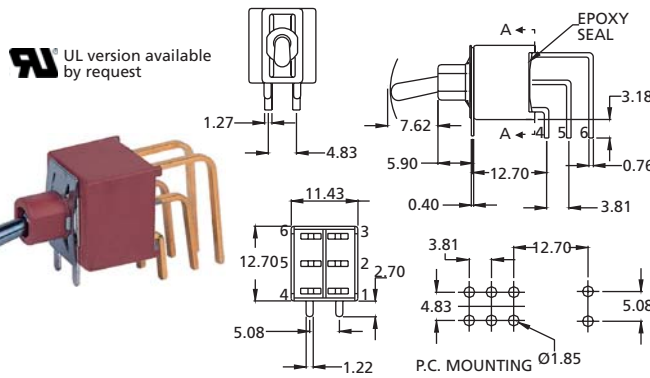
TK22 Series



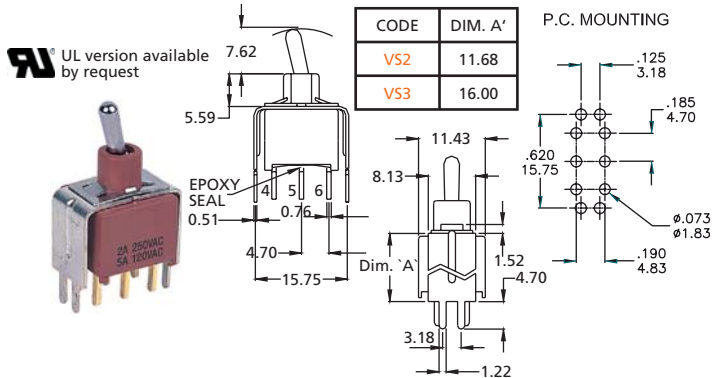
TK22D1A1B4T2_E THT Straight



TK22D1A2B4T6_E THT Right Angle



TK22D1A2B4T7_E THT Vertical Right Angle



TK22D1A2B4VS2_E THT with V-Bracket

No. Poles	Model No.	Switch Function			Connected Terminals / Schematic		
		Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
DP	TK22D1	ON	NONE	ON	2-3, 5-6	N/A	2-1, 5-4
DP	TK22D2	ON	NONE	MOM		N/A	2-1, 5-4
DP	TK22D3	ON	OFF	ON			
DP	TK22D4	MOM	OFF	MOM	OPEN	N/A	2-1, 5-4
DP	TK22D5	ON	OFF	MOM			

No. Poles	Model No.	Switch Function			Connected Terminals / Schematic		
		Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
DP	TK22D6	ON	ON	ON	2-3, 5-6	2-3, 5-4	2-1, 5-4
DP	TK22D7	MOM	ON	MOM			
DP	TK22D8	ON	ON	MOM			

How to order:



1 POLES & SWITCH FUNCTION:

- D1 DP ON-NONE-ON
- D2 DP ON-NONE-MOM
- D3 DP ON-OFF-ON
- D4 DP MOM-OFF-MOM
- D5 DP ON-OFF-MOM
- D6 DP ON-ON-ON
- D7 DP MOM-ON-MOM
- D8 DP ON-ON-MOM

2 ACTUATOR (Details see page A08):

- A1 Height=12.70 mm
- A2 Height=7.62 mm
- AA Height=12.70 mm, plastic, anti-static, black
- AB Height=7.62 mm, plastic, anti-static, black
- AC Height=12.70 mm, plastic, anti-static, silver

3 BUSHING (Details see page A08):

- B1 Height = 8.80 mm
- B4 Height = 6.10 mm

4 TERMINALS (Details see page A08):

- T1 Solder Lug
- T2 PC Thru Hole

- T51 Wire Wrap, Height = 18.70 mm
- T52 Wire Wrap, Height = 24.20 mm
- T53 Wire Wrap, Height = 10.55 mm
- T54 Wire Wrap, Height = 26.97 mm
- T6 PC Thru Hole, Right Angle
- T6N PC Thru Hole, Right Angle, Snap-in
- T7 PC Thru Hole, Vertical Right Angle
- VS2 V-Bracket, Height = 11.68 mm
- V2N Snap-in V-Bracket, Height = 11.68 mm
- VS3 V-Bracket, Height = 16.00 mm

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 EPOXY:

- E Epoxy (Standard)

7 ROHS & LEADFREE:

- blank RoHS compliant (Standard)
- V RoHS compliant & Leadfree

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

» Degree of Protection: IP67

CONTACT RATING

» AG, GT, UG & UGT: 5A120VAC/28VDC

2A250VAC

» AU & UT: 0.4VA max. 20V max. (AC/DC)

ELECTRICAL

» Contact Resistance: 10mΩ max. initial @ 2-4VDC

100mA for silver & gold plated contacts

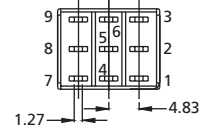
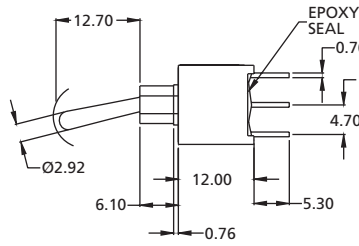
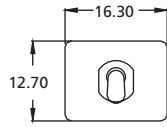
» Insulation Resistance: 1,000MΩ min.

Toggle Switches

Sealed Miniature 3PDT Toggle Switches

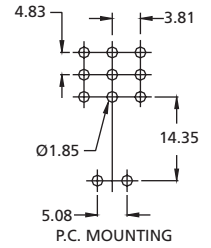
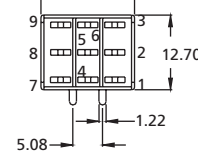
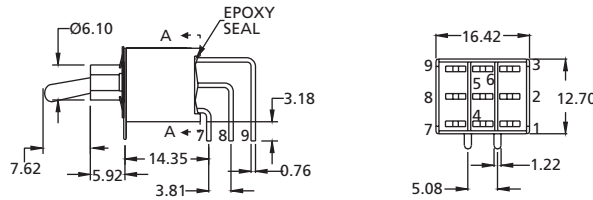
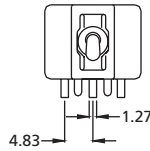
TK23 Series

UL version available by request



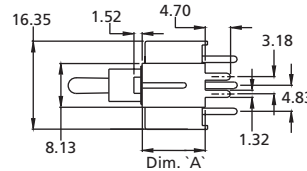
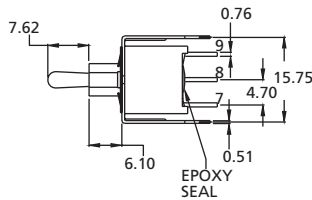
TK23T1A1B4T2_E THT Straight

UL version available by request

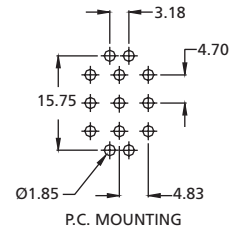


TK23T1A2B4T7_E THT Vertical Right Angle

UL version available by request



CODE	DIM. A'
VS2	11.68
VS3	16.00



TK23T1A2B4VS2_E THT with V-Bracket

No. Poles	Model No.	Switch Function			Connected Terminals / Schematic		
		Position 1	Position 2	Position 3	Position 1	Position 2	Position 3
3P	TK23T1	ON	NONE	ON	2-3	N/A	2-1
3P	TK23T2	ON	NONE	MOM			
3P	TK23T3	ON	OFF	ON		OPEN	
3P	TK23T4	MOM	OFF	MOM			
3P	TK23T5	ON	OFF	MOM			

How to order:

TK23 1 2 3 4 5 6 7

- 1 POLES & SWITCH FUNCTION:**
T1 3P ON-NONE-ON
T2 3P ON-NONE-MOM
T3 3P ON-OFF-ON
T4 3P MOM-OFF-MOM
T5 3P ON-OFF-MOM

- 2 ACTUATOR (Details see page A08):**
A1 Height=12.70 mm
A2 Height=7.62 mm
AA Height=12.70 mm, plastic, anti-static, black
AB Height=7.62 mm, plastic, anti-static, black
AC Height=12.70 mm, plastic, anti-static, silver

- 3 BUSHING (Details see page A08):**
B1 Height = 8.80 mm
B4 Height = 6.10 mm

- 4 TERMINALS (Details see page A08):**
T1 Solder Lug
T2 PC Thru Hole
T51 Wire Wrap, Height = 18.70 mm
T52 Wire Wrap, Height = 24.20 mm

- T53** Wire Wrap, Height = 10.55 mm
T54 Wire Wrap, Height = 26.97 mm
T6 PC Thru Hole, Right Angle
T6N PC Thru Hole, Right Angle, Snap-in
T7 PC Thru Hole, Vertical Right Angle
VS2 V-Bracket, Height = 11.68 mm
V2N Snap-in V-Bracket, Height = 11.68 mm
VS3 V-Bracket, Height = 16.00 mm

- 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 EPOXY:**
E Epoxy (Standard)

- 7 ROHS & LEADFREE:**
blank RoHS compliant (Standard)
V RoHS compliant & Leadfree

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

» Degree of Protection: IP67

CONTACT RATING

» **AG, GT, UG & UGT:** 5A120VAC/28VDC

2A250VAC

» **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 TK21, 22 & 23 Series

ACTUATOR OPTIONS

A1 Standard when order with T1 & T2 Terminations	A2 Standard with T6, T7, VS2 & VS3 Terminations	AA ESD Plastic Actuator	AB ESD Plastic Actuator

BUSHING OPTIONS

B1 Standard for T1 termination	B4 Standard for T2, T6, T7 & VS Terminations

TERMINAL OPTIONS

				<table border="1"> <thead> <tr> <th>CODE</th> <th>DIM. 'A'</th> </tr> </thead> <tbody> <tr> <td>T51</td> <td>18.70</td> </tr> <tr> <td>T52</td> <td>24.20</td> </tr> <tr> <td>T53</td> <td>10.55</td> </tr> <tr> <td>T54</td> <td>26.97</td> </tr> </tbody> </table>	CODE	DIM. 'A'	T51	18.70	T52	24.20	T53	10.55	T54	26.97
CODE	DIM. 'A'													
T51	18.70													
T52	24.20													
T53	10.55													
T54	26.97													
T1 Solder Lug	T2 THT	T3 Quick Connect	T5 Wire Wrap											

T6N	T7N	V2N

HARDWARE

NUT	LOCKING RING	LOCK WASHER