

## SPECIFICATIONS

CONTACT RATING: 3A @125 VAC or 28 VDC (Q Contact)  
 ELECTRICAL LIFE:30,000 make-and-break cycles at full load  
 CONTACT RESISTANCE: 20 mΩ max. initial @2-4 VDC,100 mA  
 INSULATION RESISTANCE: 1,000 MΩ min.  
 DIELECTRIC STRENGTH: 1,500 V RMS @ sea level.  
 OPERATING TEMPERATURE: -30°C to +85°C

## MATERIALS

CASE - diallyl phthalate ( DAP )  
 TOGGLE HANDLE - Copper alloy , chrome plated  
 BUSHING - Copper alloy , nickel plated  
 HOUSING - Stainless Steel  
 CONTACT AND TERMINAL - Copper alloy , silver plated  
 SWITCH SUPPORT - Copper alloy , tin-plated

How do you build the switches you need!!

The TS-4 / TS-5 , please see the (A) ;

The TS-6/TS-7/TS-8/TS-9, please see the (B)

(A) **T S - 4 - S E B Q - E - A 5 - T 3 - 2 -**

Switch Function		Actuator	Bushing	Termination	Vertical support Bracket	Cap color
TS-4	SP on-none-on	For Bushing E/E1/F/F1	The 10-48 uns thread	B solder lug	(none)	1 white
TS-4B	SP on-none-(on)	S 9.40	E (std.) flat 5.59	C P.C	A5 straight type	2 black
TS-4A	SP on-off-on	T 5.33	F key-way 5.59	D wire wrap	A5S snap-in type	3 red
TS-4H	SP (on)-off-(on)	U 7.37	Non-thread		A6 straight type	5 yellow
TS-4I	SP on-off-(on)	For Bushing G/G1/J/J1	E1 flat 5.59	<b>Contact Material</b>	A6S snap-in type	6 green
TS-5	DP on-none-on	V 10.41	F1 key-way 5.59	Q silver plated		7 blue
TS-5B	DP on-none-(on)	X 5.59	1/4-40 uns thread	R gold plated	<b>Actuator Cap/ Rubber hood Sealing</b>	
TS-5A	DP on-off-on	<b>Locking Lever</b>	G flat 7.87	G gold over silver	<b>Actuator Cap</b>	<b>RoHS code</b>
TS-5H	DP (on)-off-(on)	LK Round top	J key-way 6.60	K tin plated	T3 9.40 (for actuator S/V/X)	H = RoHS Compliant
TS-5I	DP on-off-(on)	LK1 Flat top	Non-thread	<b>Epoxy seal</b>	<b>Rubber Hood</b>	
TS-5C	DP on-on-on		G1 flat 7.87	(none) none seal	E1 for bushing G/J	
			J1 key-way 6.60	E epoxy seal	E7 for bushing E/F	
			<b>None</b>			
			The actuator LK/LK1 No requirement to choose the bushing, unless the non-thd LKN / LK1N			

(B) **T S - 6 - T E 1 Q - E - S - T 3 - 5 -**

Horizon Right Angle	Vertical Right Angle	Switches Function	Actuator	Bushing	Contact Material	Actuator Cap
TS-6	TS-8	SP on-none-on	For Bushing E/E1/F/F1	The 10-48 uns thread	Q silver plated	(none)
TS-6B	TS-8B	SP on-none-(on)	S 9.40	E flat 5.59	R gold plated	T3 9.40 (actuator S/V/X)
TS-6A	TS-8A	SP on-off-on	T 5.33	F key-way 5.59	G gold over silver	
TS-6H	TS-8H	SP (on)-off-(on)	U 7.37	Non-thread	K gold / tin	<b>Cap color</b>
TS-6I	TS-8I	SP on-off-(on)	For Bushing G/G1/J/J1	E1 (std.) flat 5.59	<b>Epoxy seal</b>	1 white
TS-7	TS-9	DP on-none-on	V 10.41	F1 key-way 5.59	(none) none seal	2 black
TS-7B	TS-9B	DP on-none-(on)	X 5.59	1/4-40 uns thread	E epoxy seal	3 red
TS-7A	TS-9A	DP on-off-on		G flat 7.87	<b>Bracket type</b>	5 yellow
TS-7H	TS-9H	DP (on)-off-(on)		J key-way 6.60	(none) std. Straight	6 green
TS-7I	TS-9I	DP on-off-(on)		Non-thread	S Snap-in type	7 blue
TS-7C	TS-9C	DP on-on-on		G1 flat 7.87		<b>RoHS code</b>
	TS-82	SP on-none-on		J1 key-way 6.60		H = RoHS Compliant
	TS-82B	SP on-none-(on)				
	TS-82A	SP on-off-on				
	TS-82H	SP (on)-off-(on)				
	TS-82I	SP on-off-(on)				



# TS40-T

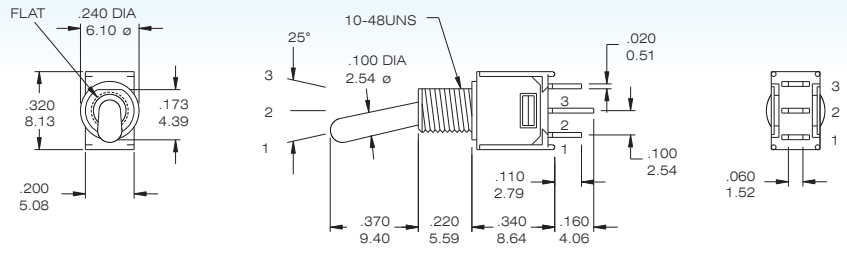
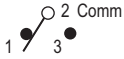
# Sub-miniature Toggle Switches



## SPDT



Model No.	Switching position		
TS-4	ON	none	ON
TS-4A	ON	OFF	ON
TS-4B	ON	None	(ON)
TS-4H	(ON)	OFF	(ON)
TS-4I	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1

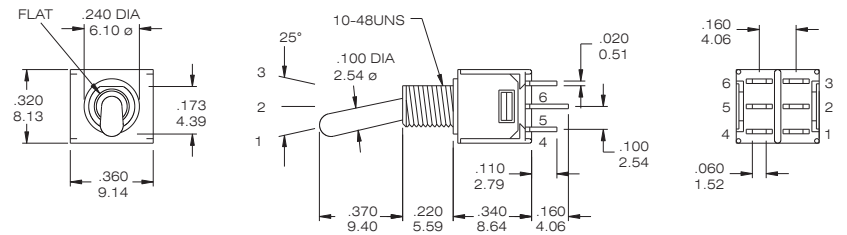


TS-4 - SEBQ

## DPDT



Model No.	Switching position		
TS-5	ON	none	ON
TS-5A	ON	OFF	ON
TS-5B	ON	None	(ON)
TS-5H	(ON)	OFF	(ON)
TS-5I	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
TS-5C	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4

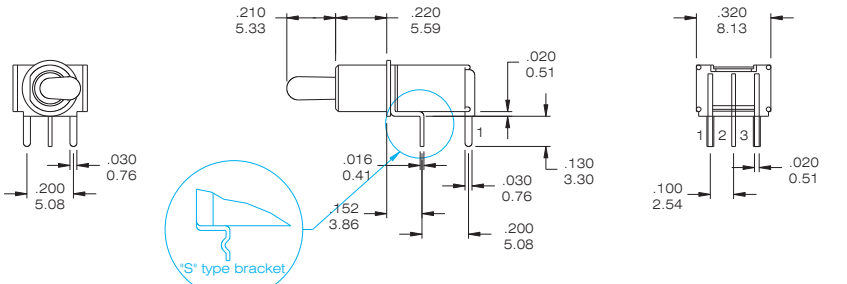
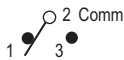


TS-5 - SEBQ

## SPDT



Model No.	Switching position		
TS-6	ON	none	ON
TS-6A	ON	OFF	ON
TS-6B	ON	None	(ON)
TS-6H	(ON)	OFF	(ON)
TS-6I	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1

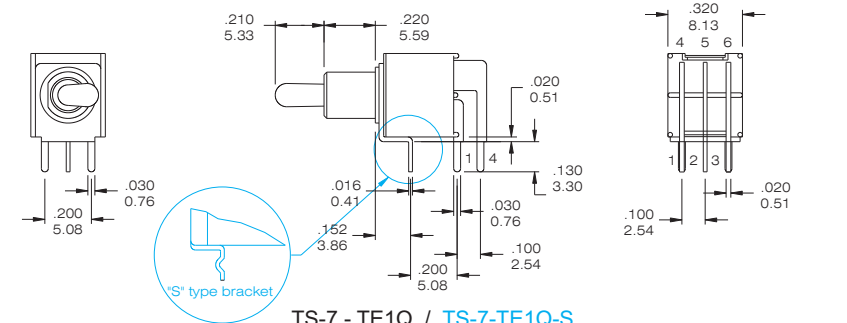
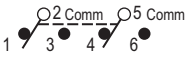


TS-6 - TE1Q / TS-6-TE1Q-S

## DPDT



Model No.	Switching position		
TS-7	ON	none	ON
TS-7A	ON	OFF	ON
TS-7B	ON	None	(ON)
TS-7H	(ON)	OFF	(ON)
TS-7I	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
TS-7C	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4

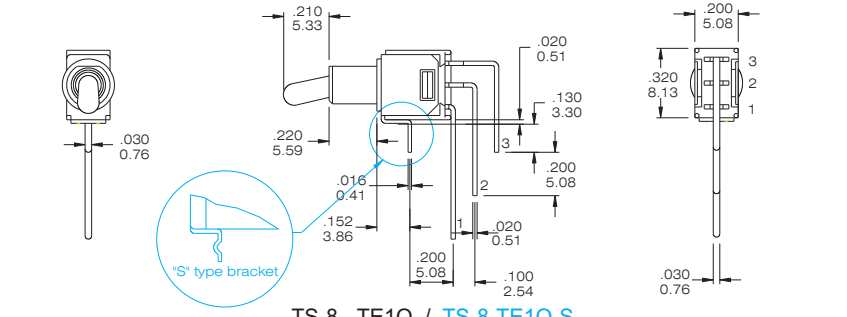


TS-7 - TE1Q / TS-7-TE1Q-S

## SPDT



Model No.	Switching position		
TS-8	ON	none	ON
TS-8A	ON	OFF	ON
TS-8B	ON	None	(ON)
TS-8H	(ON)	OFF	(ON)
TS-8I	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1

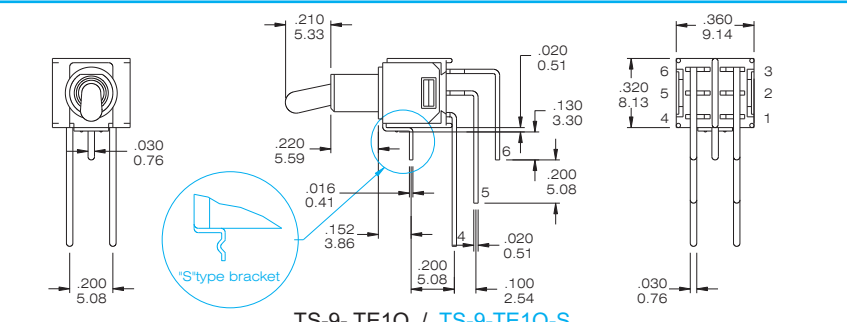


TS-8 - TE1Q / TS-8-TE1Q-S

## DPDT



Model No.	Switching position		
TS-9	ON	none	ON
TS-9A	ON	OFF	ON
TS-9B	ON	None	(ON)
TS-9H	(ON)	OFF	(ON)
TS-9I	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
TS-9C	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



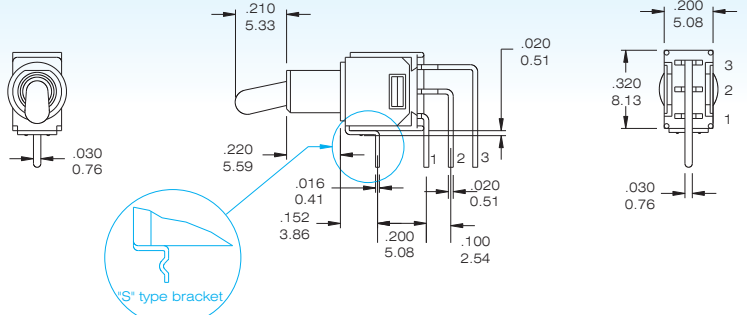
TS-9 - TE1Q / TS-9-TE1Q-S



### SPDT



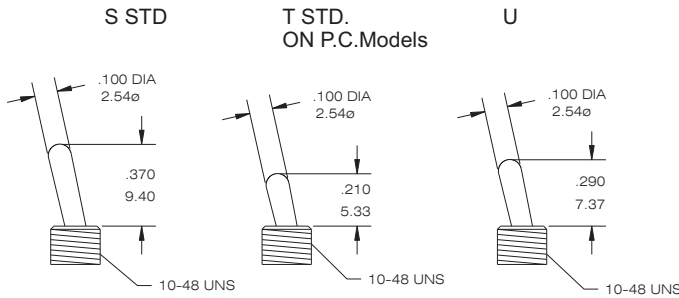
Model No.	Switching position		
TS-82	ON	none	ON
TS-82A	ON	OFF	ON
TS-82B	ON	None	(ON)
TS-82H	(ON)	OFF	(ON)
TS-82I	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1



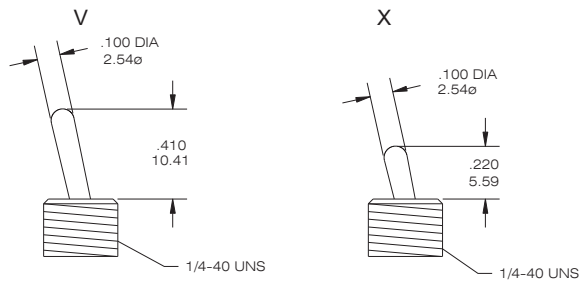
TS-82- TE1Q / TS-82-TE1Q-S

## Actuator Option

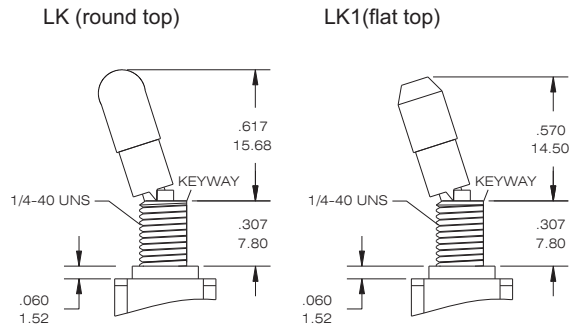
only applied for the bushing (E/E1/F/F1)



only applied for the bushing (G/G1/J/J1)



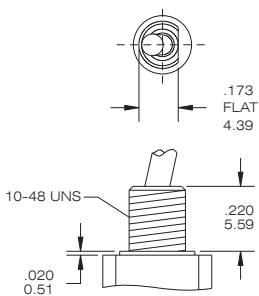
### Locking Lever



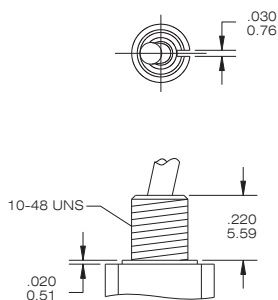
Bushing Option Code not required unless non-thread ordered, choose the bushing code "N" -- LKN / LK1N

## Bushing Option

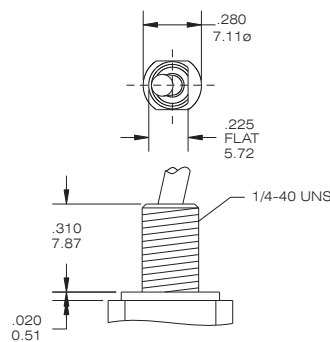
E THD. STD.  
E1 NON THD.  
(STD. ON P.C.Model)



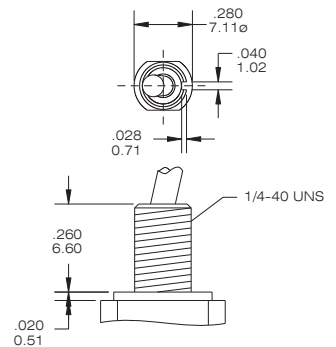
F THD  
F1 NON THD



G THD  
G1 NON THD

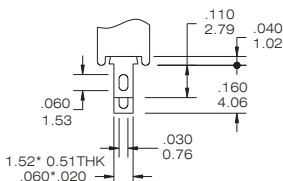


J THD  
J1 NON THD

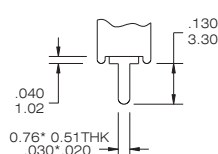


## TERMINAL OPTION ( ONLY FOR THE TS-4 / TS-5 )

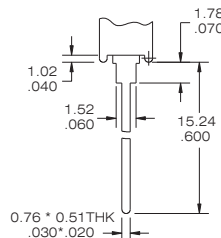
B Solder Lug(STD)



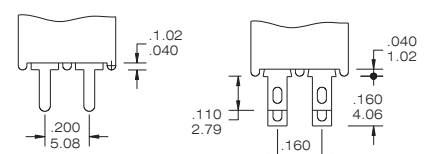
C PRINTED CIRCUIT



D Wire Wrap



DPDT



INDEX  
TOGGLE  
ROCKER  
SLIDE  
PUSH BUTTON  
DIP  
TACT



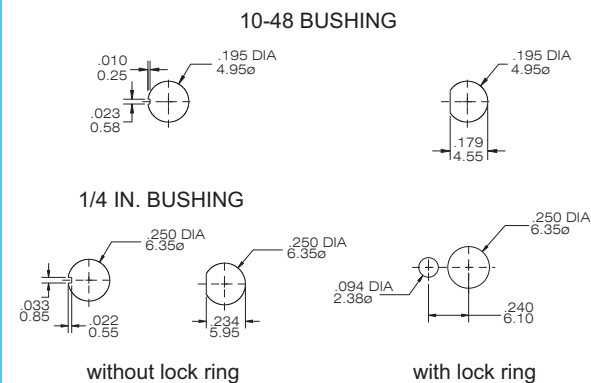
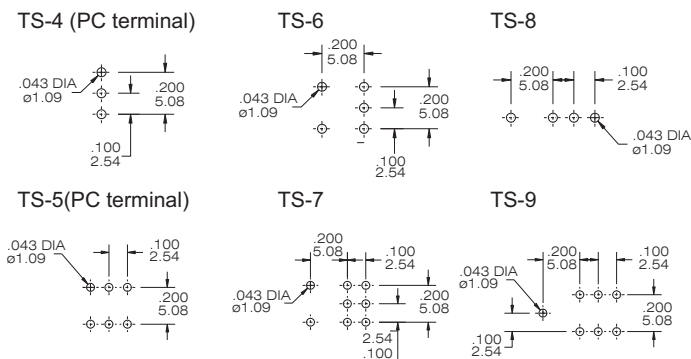
## CONTACT MATERIAL OPTIONS

CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	3 A @ 125V AC or 28 V DC; 1.5 A @ 250 VAC
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20 V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 3 A @ 125V AC or 28 V DC; 1.5 A @ 250 VAC
K	Gold plated over nickel plated	Tin over nickel plated	0.4VA MAX @ 20 V AC or DC MAX

\* THE K option is only for some special item. Please inquire first when you need the "K" option

### P.C.B MOUNTING DIMENSION

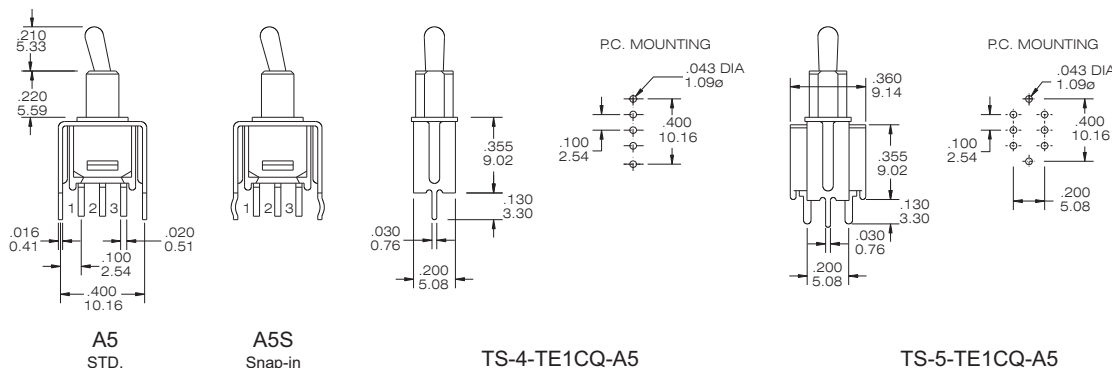
### PANEL MOUNTING DIMENSION



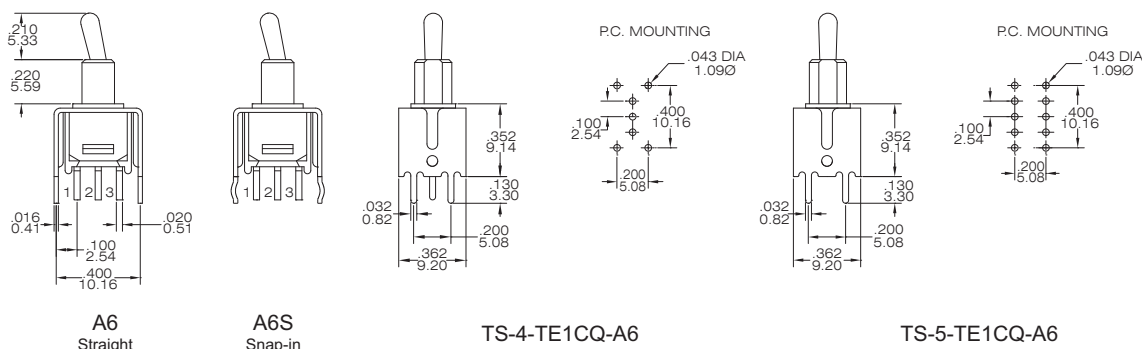
### VERTICAL SUPPORT BRACKET OPTION

only for the TS-4/TS-5. If you need the vertical support bracket, please build the terminal option - "C" code

#### A5/ A5S

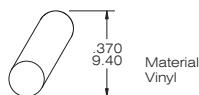


#### A6/ A6S



### Toggle Cap Option

T3 for actuator "S" only



code	color	code	color
1	white	5	yellow
2	black	6	green
3	red	7	blue

### Rubber Hood Sealing

