

SPECIFICATIONS

CONTACT RATING: 3A @120 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) **TS** - **4** - **S** **E** **B** **Q** - **E** - **A5** - **T3** - **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 Vertical bracket	2 black
TS-4A	SP on-off-on	T 5.33	F key-way 5.59	D wire wrap	A5S Vertical bracket (snap-in)	3 red
TS-4H	SP (on)-off-(on)	U 7.37	Non-thread			5 yellow
TS-4I	SP on-off-(on)	For Bushing G/G1/J/J1	E1 flat 5.59	Contact Material		6 green
TS-5	DP on-none-on	V 10.41	F1 key-way 5.59	Q silver plated	Actuator Cap/ Rubber hood Sealing	7 blue
TS-5B	DP on-none-(on)	X 5.59	1/4-40 uns thread	R gold plated	Actuator Cap	
TS-5A	DP on-off-on	Locking Lever	G flat 7.87	G gold over silver	T3 9.40 (for actuator S/V/X)	RoHS code
TS-5H	DP (on)-off-(on)	LK Round top	J key-way 6.60	K tin plated	Rubber Hood	H = RoHS Compliant
TS-5I	DP on-off-(on)	LK1 Flat top	Non-thread	Epoxy seal	E1 for bushing G/J	
TS-5C	DP on-on-on		G1 flat 7.87	(none) none seal	E7 for bushing E/F	
			J1 key-way 6.60	E epoxy seal		
			None			
			The actuator LK/LK1 No requirement to choose the bushing, unless the non-thd LKN / LK1N			

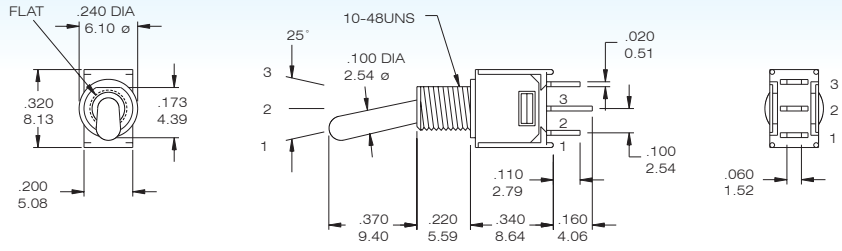
(B) **TS** - **6** - **T** **E1** **Q** - **E** - **S** - **T3** - **5** -

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	Cap color
TS-6I	TS-8I	SP on-off-(on)	For Bushing G/G1/J/J1	E1 (std.) flat 5.59	Epoxy seal	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		5 yellow
TS-7H	TS-9H	DP (on)-off-(on)		J key-way 6.60	Bracket type	6 green
TS-7I	TS-9I	DP on-off-(on)		Non-thread	(none) std. Straight	7 blue
TS-7C	TS-9C	DP on-on-on		G1 flat 7.87	S Snap-in type	
	TS-82	SP on-none-on		J1 key-way 6.60		RoHS code
	TS-82B	SP on-none-(on)				H = RoHS Compliant
	TS-82A	SP on-off-on				
	TS-82H	SP (on)-off-(on)				
	TS-82I	SP on-off-(on)				

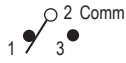
SPDT



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



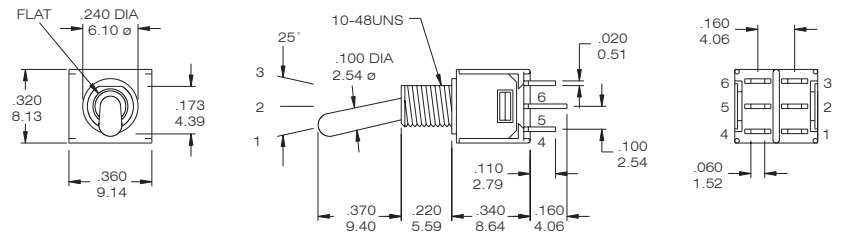
TS-4 - SEBQ



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



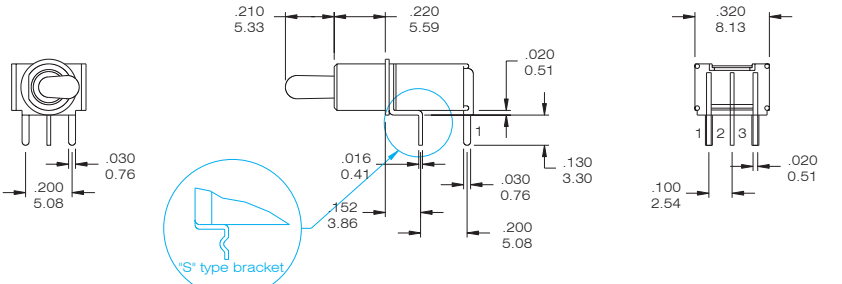
TS-5 - SEBQ



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



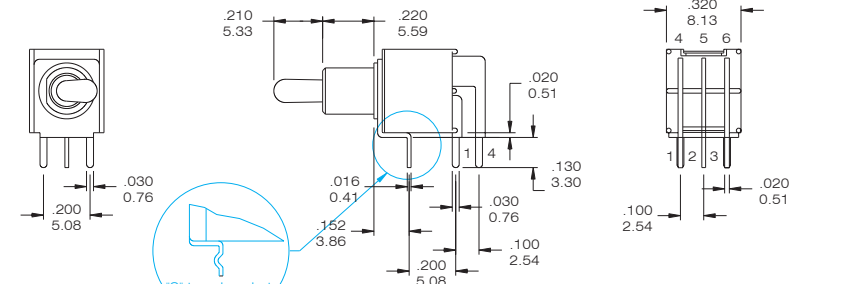
TS-6 - TE1Q / TS-6-TE1Q-S



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



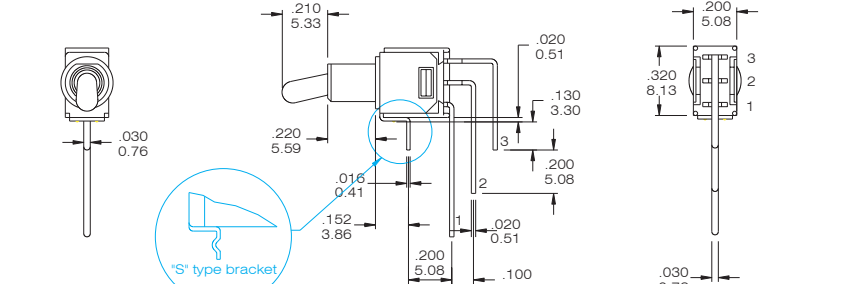
TS-7 - TE1Q / TS-7-TE1Q-S



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



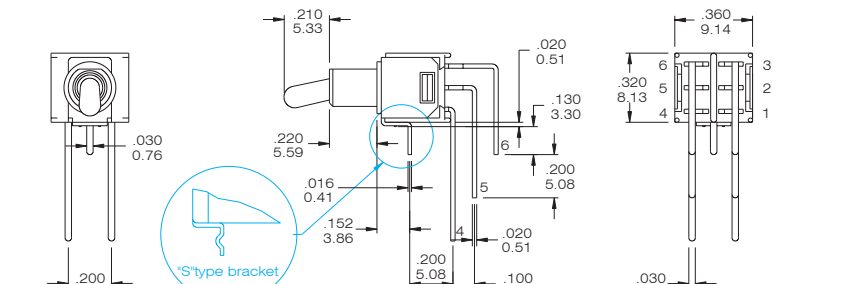
TS-8 - TE1Q / TS-8-TE1Q-S



DPDT



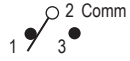
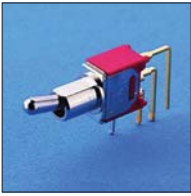
Model No.	Switching position		
TS-9	ON	none	ON
TS-9A	ON	OFF	ON
TS-9B	ON	None	(ON)
TS-9H	(ON)	OFF	(ON)
TS-9I	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
TS-9C	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



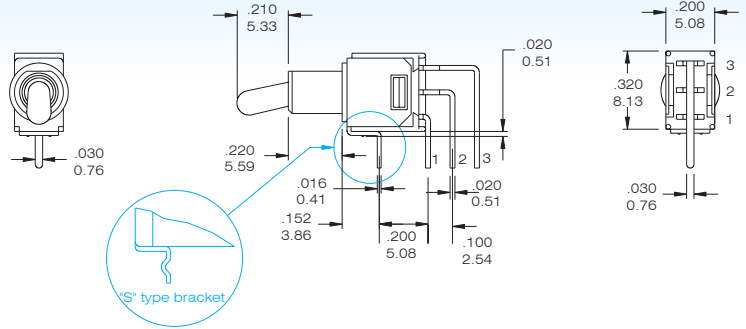
TS-9 - TE1Q / TS-9-TE1Q-S



SPDT



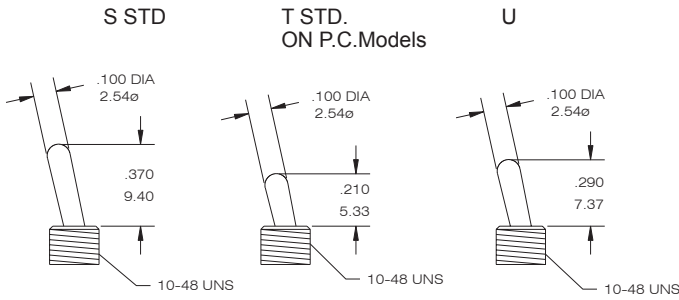
Model No.	Switching position		
TS-82	ON	none	ON
TS-82A	ON	OFF	ON
TS-82B	ON	None	(ON)
TS-82H	(ON)	OFF	(ON)
TS-82I	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1



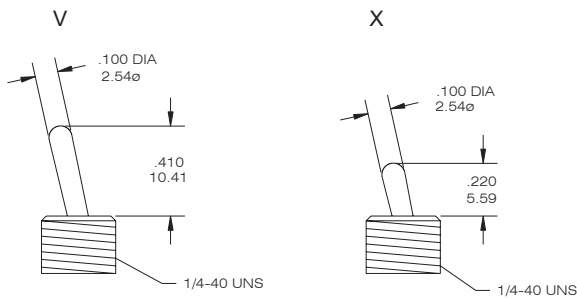
TS-82- TE1Q / TS-82-TE1Q-S

Actuator Option

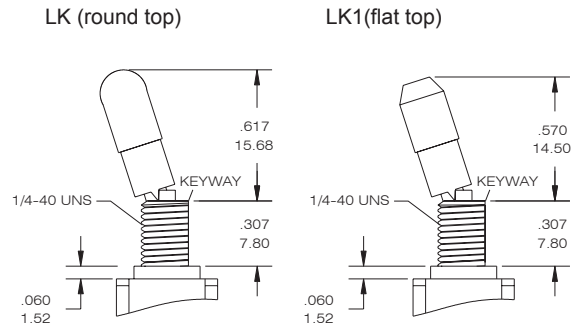
only applied for the bushing (E/E1/F/F1)



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



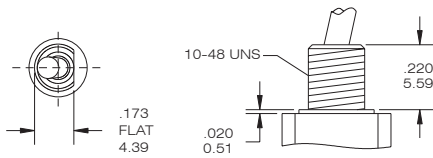
Locking Lever



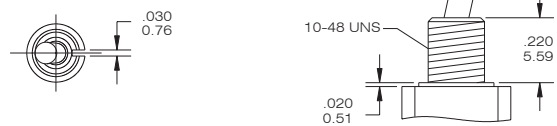
Bushing Option Code not required unless non-thread ordered, choose the bushing code "N" -- LKN / LK1N

Bushing Option

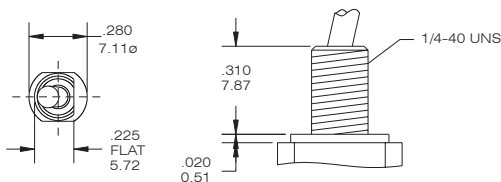
E THD. STD.
E1 NON THD. STD. ON P.C.Model



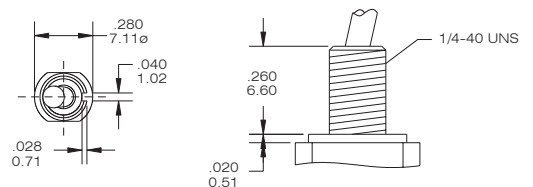
F THD
F1 NON THD



G THD
G1 NON THD

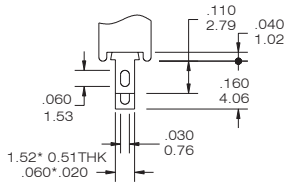


J THD
J1 NON THD

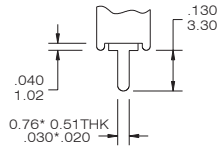


TERMINAL OPTION (ONLY FOR THE TS-4 / TS-5)

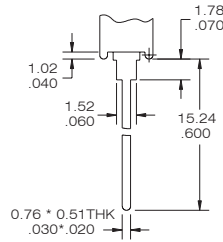
B Solder Lug(STD)



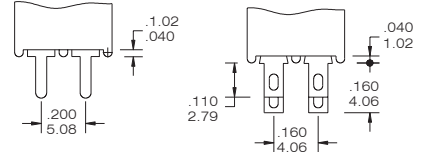
C PRINTED CIRCUIT



D Wire Wrap



DPDT



CONTACT MATERIAL OPTIONS

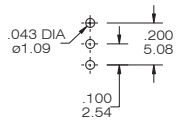
CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	3 A @ 120V AC or 28 V DC; 1.5 A @ 250 VAC
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20 V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 3 A @ 120V 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

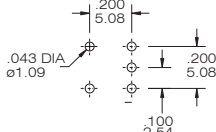
P.C.B MOUNTING DIMENSION

PANEL MOUNTING DIMENSION

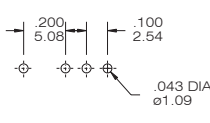
TS-4 (PC terminal)



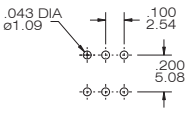
TS-6



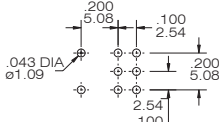
TS-8



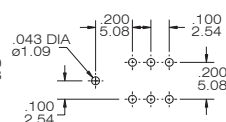
TS-5(PC terminal)



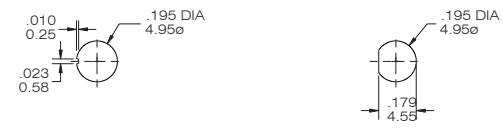
TS-7



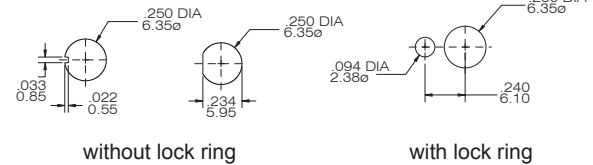
TS-9



10-48 BUSHING



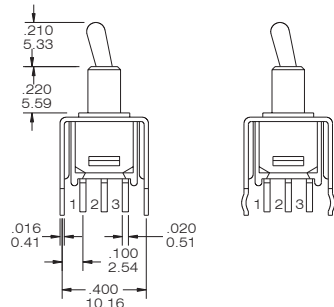
1/4 IN. BUSHING



VERTICAL SUPPORT BRACKET OPTION

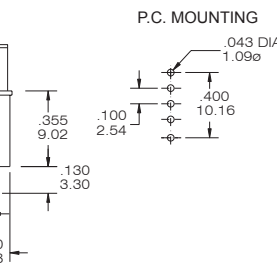
only for the TS-4/TS-5. If you need the vertical support bracket, please build the terminal option - "C" code

A5/ A5S

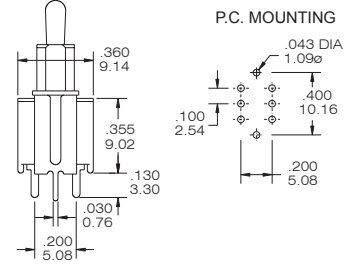


A5 STD.

A5S Snap-in



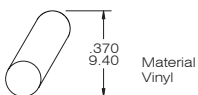
TS-4-TE1CQ-A5



TS-5-TE1CQ-A5

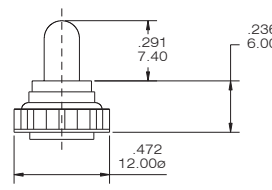
Toggle Cap Option

T3 for actuator "S" only

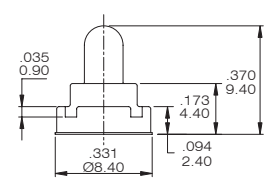


code	color	code	color
1	white	5	yellow
2	black	6	green
3	red	7	blue

Rubber Hood Sealing



E1 for bushing G/J (1/4 - 40UNS)



E7 for bushing E/F (10-48UNS special code)