

SPECIFICATIONS

CONTACT RATING: 5A @125 VAC or 28 VDC (Q contact)
ELECTRICAL LIFE:50,000 make-and-break cycles at full load
CONTACT RESISTANCE: 10 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

How do you build the switches you need!!

The straight type , please see the (A) ;

The right angle P.C terminals, please see the (B)

(A) T 8 0 1 3 - S E C Q - E - S 2 0 - T 1 - 2 - -

Table (A) detailing specifications for straight type switches, including columns for Switch Function, Actuator, Bushing, Termination, Vertical support Bracket, and Cap color.

(B) T 8 0 1 9 L - T N Q - E - S - T 2 - 2 -

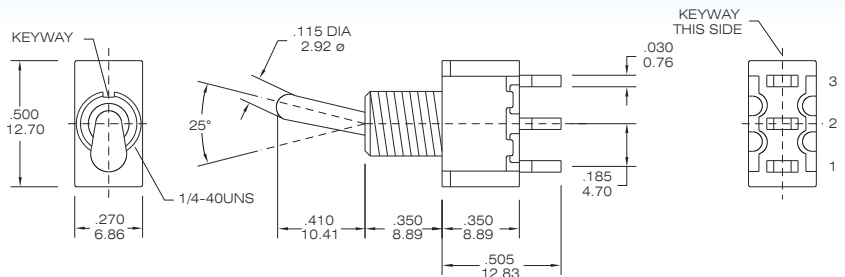
Table (B) detailing specifications for right angle P.C terminals switches, including columns for Horizon Right Angle, Vertical Right Angle, Switches Function, Actuator, Bushing, Contact Material, Actuator Cap, and Cap color.



SPDT



| Model No. | Switching position | | |
|-------------|--------------------|------|------|
| | | | |
| T8013 | ON | none | ON |
| T8013A | ON | none | (ON) |
| T8014 | ON | OFF | ON |
| T8014A | (ON) | OFF | (ON) |
| T8014B | ON | OFF | (ON) |
| Term. Comm. | 2-3 | open | 2-1 |

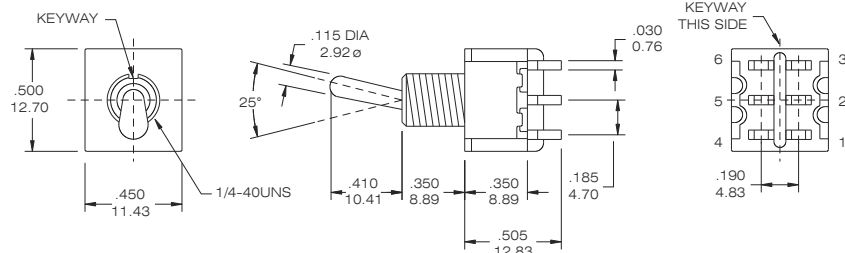


T8013 - SEBQ

DPDT



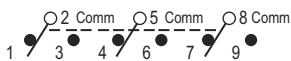
| Model No. | Switching position | | |
|-----------------------|--------------------|---------|---------|
| | | | |
| T8011 | ON | none | ON |
| T8011A | ON | none | (ON) |
| T8012 | ON | OFF | ON |
| T8012A | (ON) | OFF | (ON) |
| T8012B | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 | open | 2-1,5-4 |
| 3 way switches (SP3T) | | | |
| T812 | ON | ON | ON |
| T812A | (ON) | ON | (ON) |
| T812B | ON | ON | (ON) |
| Term. Comm. | 2-3,5-6 | 2-3,5-4 | 2-1,5-4 |



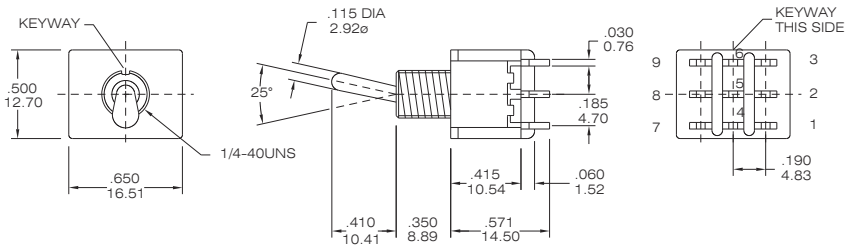
T8011 - SEBQ

Please see page A18 to know more about T812 (3-way Switches)

3PDT



| Model No. | Switching position | | |
|-------------|--------------------|------|----------------|
| | | | |
| T8301 | ON | none | ON |
| T8303 | ON | none | (ON) |
| T8305 | ON | OFF | ON |
| T8307 | (ON) | OFF | (ON) |
| T8309 | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 8-9 | open | 2-1,5-4 8-7 |

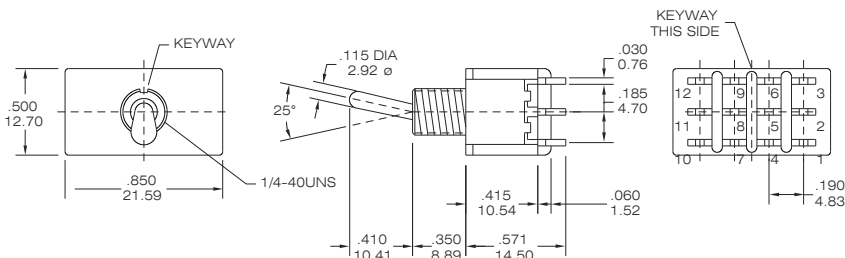


T8301- SEBQ

4PDT



| Model No. | Switching position | | |
|-----------------------|----------------------|----------------------|----------------------|
| | | | |
| T8401 | ON | none | ON |
| T8403 | ON | none | (ON) |
| T8405 | ON | OFF | ON |
| T8407 | (ON) | OFF | (ON) |
| T8409 | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 8-9,11-12 | open | 2-1,5-4 8-7,11-10 |
| 3 way switches (DP3T) | | | |
| T845 | ON | ON | ON |
| T847 | (ON) | ON | (ON) |
| T849 | ON | ON | (ON) |
| Term. Comm. | 2-3,5-6 8-9,11-12 | 2-3,5-4 8-9,11-10 | 2-1,5-4 8-7,11-10 |



T8401 - SEBQ

Please see page A18 to know more about T845 (3-way Switches)

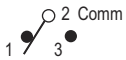


FEATURE

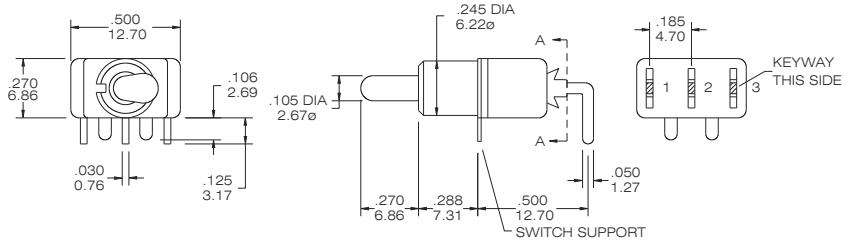
The T80-T series P.C.B Mounted Toggle Switches - Right Angle Type - are specially designed for P.C. Boards . Easy to mount and install securely with a vertical support rack . The toggle operates in the same direction as the print connectors . Customers' specifications of pitch are acceptable.

HORISON RIGHT ANGLE

SPDT



| Model No. | Switching position | | |
|-------------|--------------------|------|------|
| | | | |
| T8019 | ON | none | ON |
| T8019A | ON | none | (ON) |
| T8020 | ON | OFF | ON |
| T8020A | (ON) | OFF | (ON) |
| T8020B | ON | OFF | (ON) |
| Term. Comm. | 2-3 | open | 2-1 |

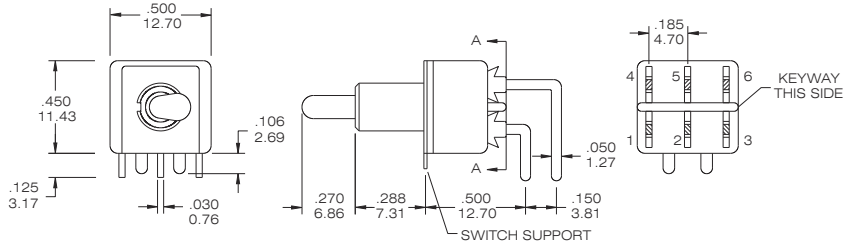


T8019 - TNQ

DPDT



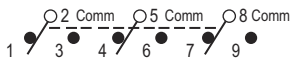
| Model No. | Switching position | | |
|-----------------------|--------------------|---------|---------|
| | | | |
| T8021 | ON | none | ON |
| T8021A | ON | none | (ON) |
| T8022 | ON | OFF | ON |
| T8022A | (ON) | OFF | (ON) |
| T8022B | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 | open | 2-1,5-4 |
| 3 way switches (SP3T) | | | |
| T822 | ON | ON | ON |
| T822A | (ON) | ON | (ON) |
| T822B | ON | ON | (ON) |
| Term. Comm. | 2-3,5-6 | 2-3,5-4 | 2-1,5-4 |



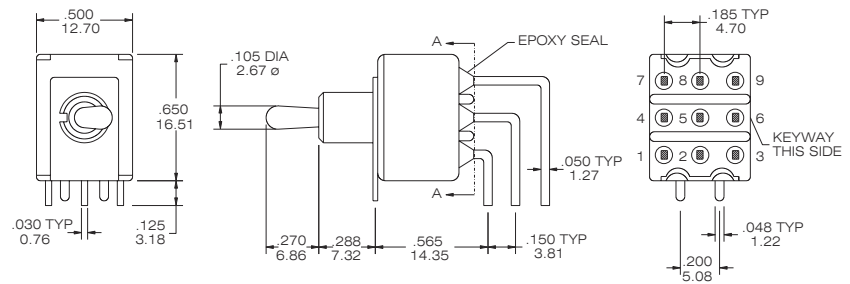
T8021 - TNQ

Please see page A18 to know more about T822 (3-way Switches)

3PDT



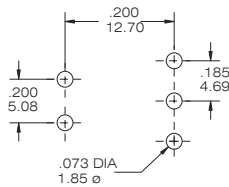
| Model No. | Switching position | | |
|-------------|--------------------|------|---------|
| | | | |
| T8301P(A) | ON | none | ON |
| T8303P(A) | ON | none | (ON) |
| T8305P(A) | ON | OFF | ON |
| T8307P(A) | (ON) | OFF | (ON) |
| T8309P(A) | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 | open | 2-1,5-4 |
| | 8-9 | | 8-7 |



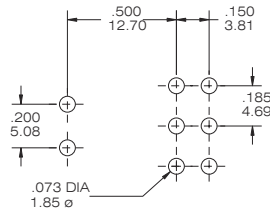
T8301P(A)- TNQ

P.C.B MOUNTING DIMENSIONS

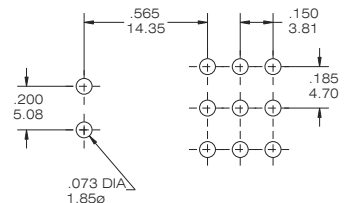
FOR T8019-T8020B



FOR T8021-T8022B



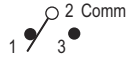
FOR T8301P(A)-T8309P(A)



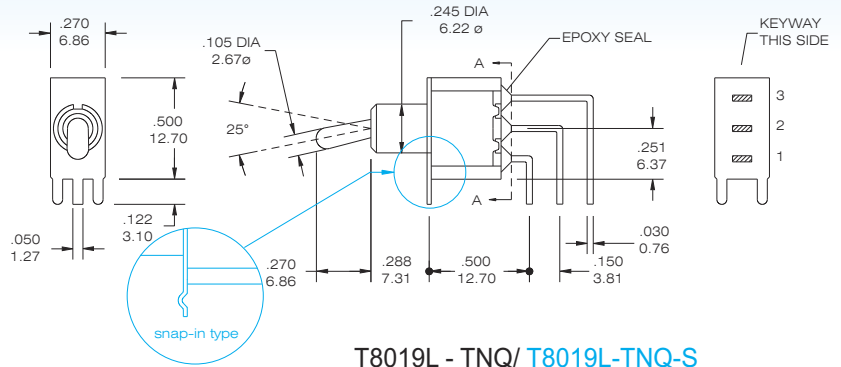


VERTICAL RIGHT ANGLE

SPDT



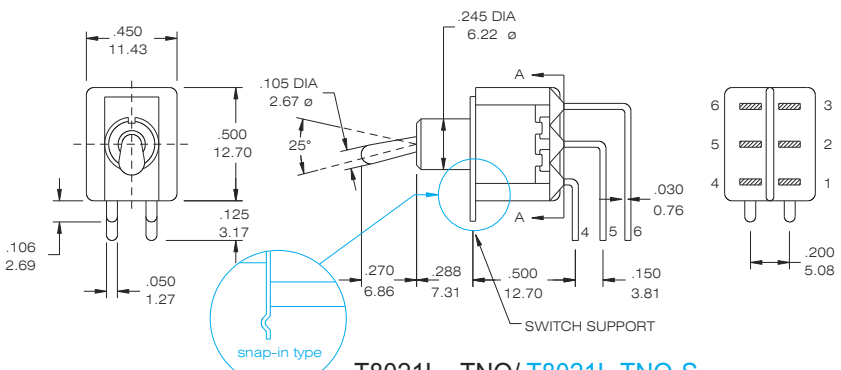
| Model No. | Switching position | | |
|-------------|--------------------|------|------|
| | | | |
| T8019L | ON | none | ON |
| T8019LA | ON | none | (ON) |
| T8020L | ON | OFF | ON |
| T8020LA | (ON) | OFF | (ON) |
| T8020LB | ON | OFF | (ON) |
| Term. Comm. | 2-3 | open | 2-1 |



DPDT

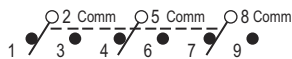


| Model No. | Switching position | | |
|-----------------------|--------------------|---------|---------|
| | | | |
| T8021L | ON | none | ON |
| T8021LA | ON | none | (ON) |
| T8022L | ON | OFF | ON |
| T8022LA | (ON) | OFF | (ON) |
| T8022LB | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 | open | 2-1,5-4 |
| 3 way switches (SP3T) | | | |
| T822L | ON | ON | ON |
| T822LA | (ON) | ON | (ON) |
| T822LB | ON | ON | (ON) |
| Term. Comm. | 2-3,5-6 | 2-3,5-4 | 2-1,5-4 |

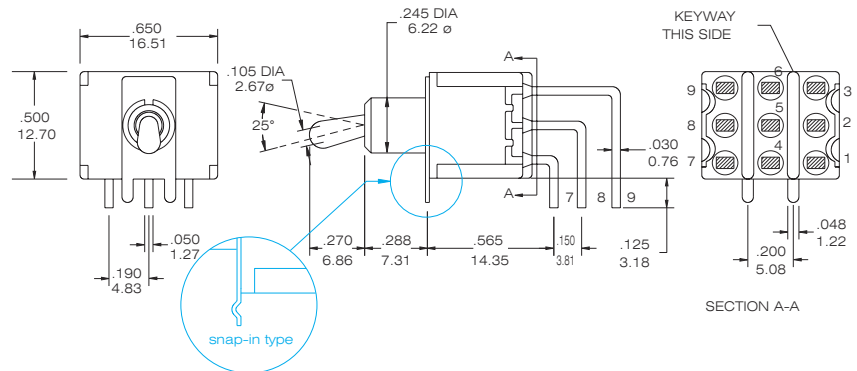


Please see page A18 to know more about T822L (3-way Switches)

3PDT



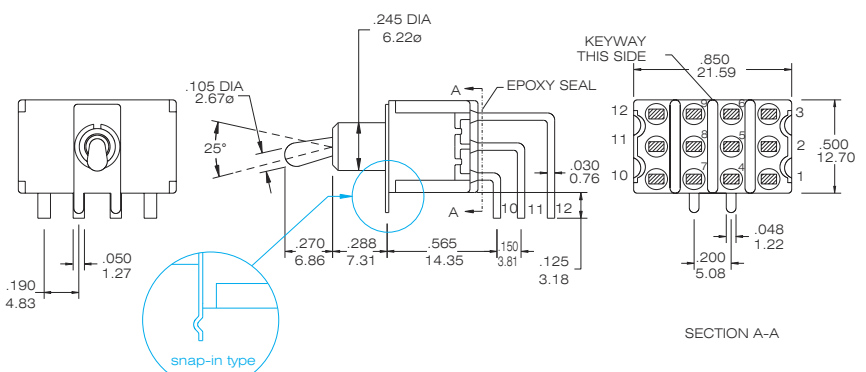
| Model No. | Switching position | | |
|-------------|--------------------|------|----------------|
| | | | |
| T8301P | ON | none | ON |
| T8303P | ON | none | (ON) |
| T8305P | ON | OFF | ON |
| T8307P | (ON) | OFF | (ON) |
| T8309P | ON | OFF | (ON) |
| Term. Comm. | 2-3,5-6 8-9 | open | 2-1,5-4 8-7 |



4PDT



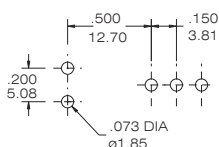
| Model No. | Switching position | | |
|-----------------------|----------------------|----------------------|----------------------|
| | | | |
| T8401P | ON | none | ON |
| T8403P | ON | none | (ON) |
| T8405P | ON | OFF | ON |
| T8407P | (ON) | OFF | (ON) |
| T8409P | ON | OFF | (ON) |
| Term. Comm. | 2,3,5,6 8-9,11-12 | open | 2-1,5,4 8-7,11-10 |
| 3 way switches (DP3T) | | | |
| T845P | ON | ON | ON |
| T847P | (ON) | ON | (ON) |
| T849P | ON | ON | (ON) |
| Term. Comm. | 2-3,5,6 8-9,11-12 | 2-3,5,4 8-9,11-10 | 2-1,5,4 8-7,11-10 |



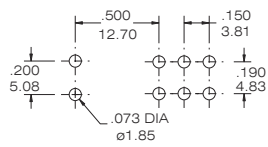
Please see page A18 to know more about T845P (3-way Switches)

P.C.B MOUNTING DIMENSIONS

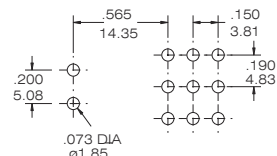
FOR T8019L-T8020LB



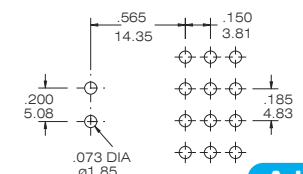
FOR T8021L-T8022LB



FOR T8301P-T8309P



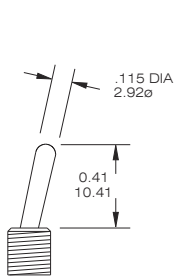
FOR T8401P-T8409P



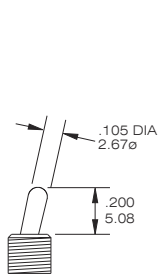


Actuator Option

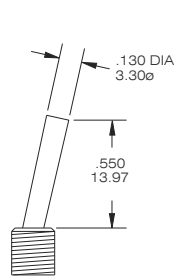
S (STD)



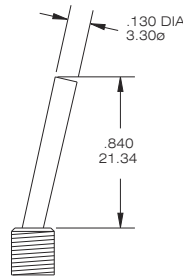
T (STD)



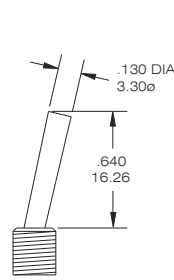
X LONG



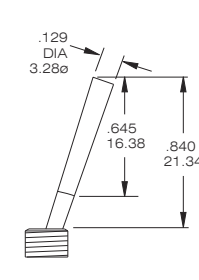
W LONG



V LONG



Y PLASTIC



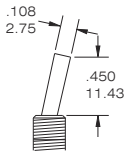
| Y HANDLE COLOR NO. | COLOR |
|--------------------|-------------|
| 1 | White |
| 2 | Black(std.) |
| 3 | Red |

the height of actuator is with bushing "E". It will be difference with other bushing option

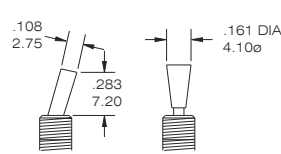
Now the available color is "2". If you need the others, please inquire first.

Flatted Actuator (ONLY APPLY "H""H1""H2" BUSHING)

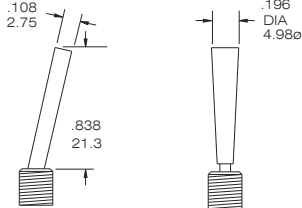
U (standard)



U1 (short)

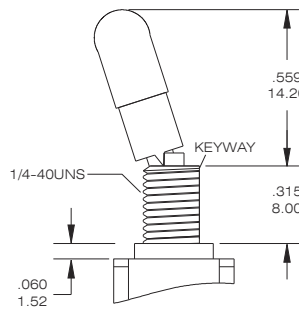


U2 (long)

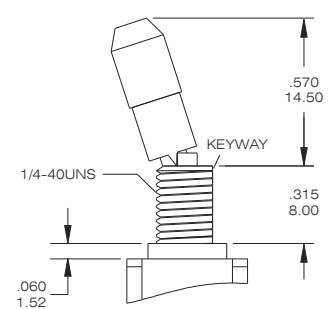


Locking Lever

LK (round top)



LK1 (flat top)

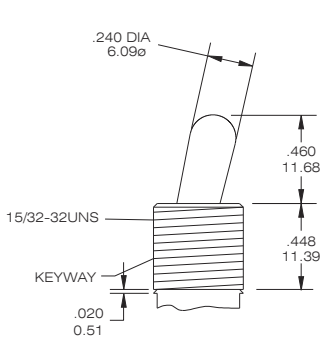


Bushing Option Code not required unless

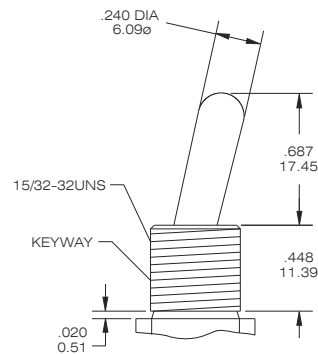
(1) " L " splashproof bushing ordered --LKL / LK1L

(2) non-thread ordered,choose the bushing code "N" -- LKN / LK1N

Z LARGE TOGGLE
Z4 ANTIROTATION

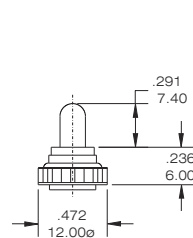


Z1 LARGE TOGGLE
Z3 ANTIROTATION

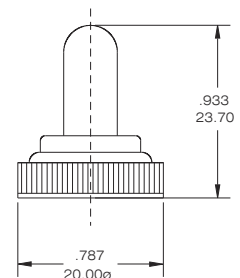


Bushing Option Code not required unless " L " splashproof bushing ordered.

Rubber Hood Sealing



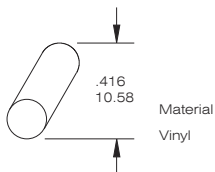
K1=METRIC
E1=INCH
E1-L=INCH **NEW**



E2 for the large toggle
(15/32-32UNS)

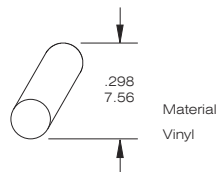
Toggle Cap Option

T1 for actuator "S" only



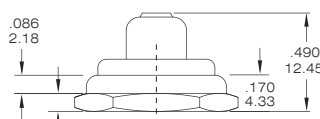
Material Vinyl

T2 for actuator "T"

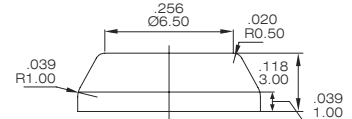


Material Vinyl

| code | color | code | color | code | color | code | color |
|------|-------------|------|--------|------|-------|------|-------|
| 0 | transparent | 1 | white | 2 | black | 3 | red |
| 4 | orange | 5 | yellow | 6 | green | 7 | blue |



E3 for the large toggle
(15/32-32UNS)

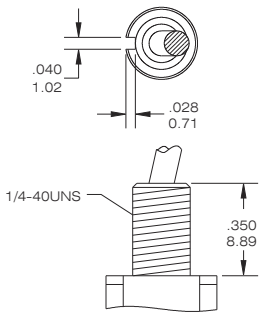


E6 O RING

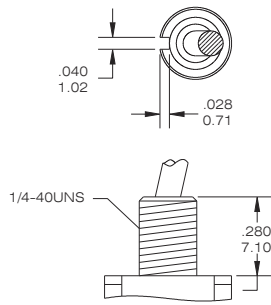


Bushing Option

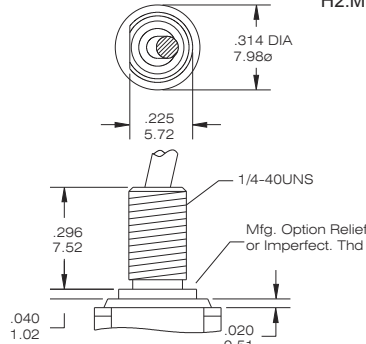
**E THD STD. TYPE
M NON-THD**



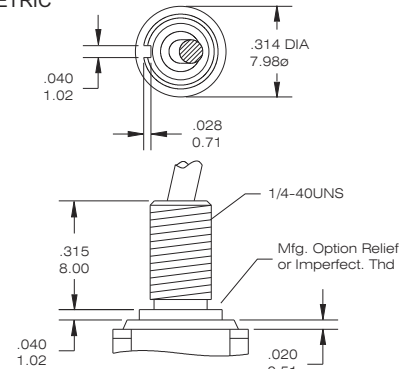
**F THD.
N NON-THD**



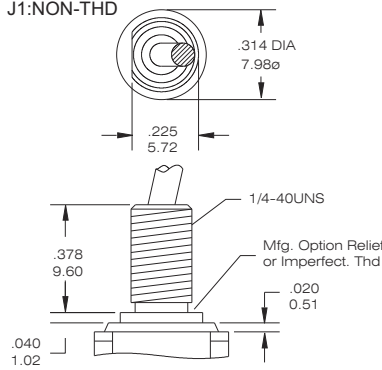
**HIGH TORQUE
G: THD STD. TYPE
G1: NON-THD**



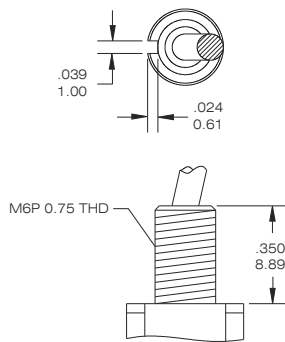
**HIGH TORQUE
H: THD STD. TYPE
H1: NON-THD
H2: METRIC**



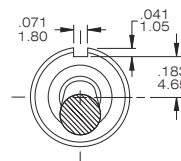
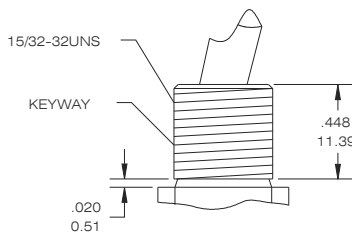
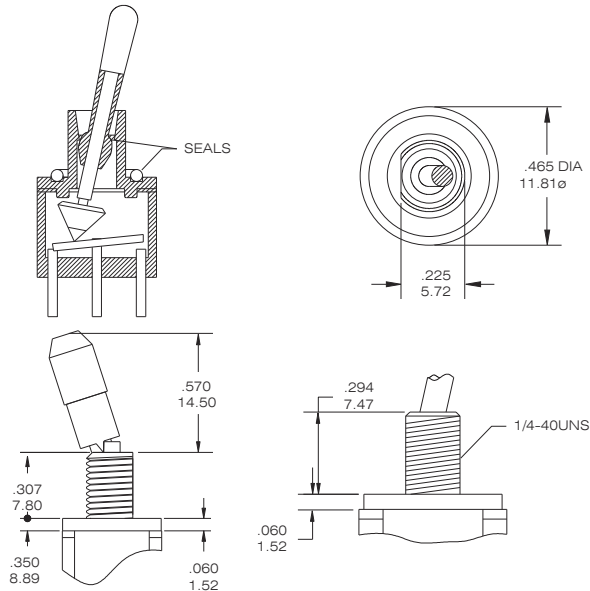
**LONG
J: THD STD. TYPE
J1: NON-THD**



K METRIC



Splash water proof Solution L SPLASH-PROOF



Panel Mounting

1/4 IN. BUSHING

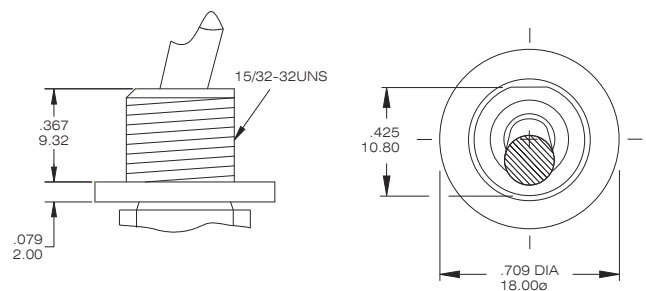
without lock ring

with lock ring

METRIC BUSHING

15/32 IN. BUSHING

W SPLASH-PROOF



INDEX

TOGGLE

ROCKER

SLIDE

PUSH BUTTON / MICRO

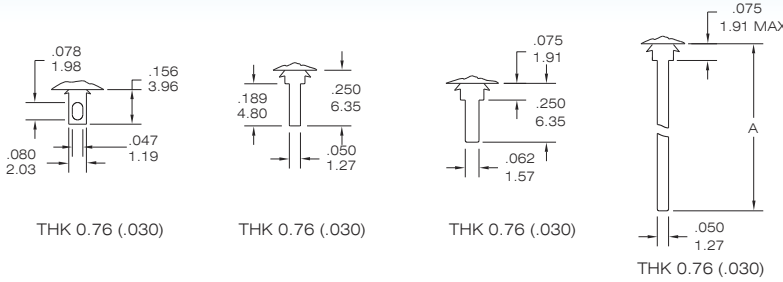
DIP / ROTARY

KEY / TACT

TERMINAL OPTION (ONLY FOR THE STRAIGHT TYPE T8013~T8401)

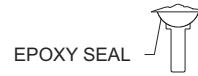
TERMINAL SEAL OPTION

B SOLDER LUG C PRINTED CIRCUIT D QUICK CONNECT WIREWRAP



| CODE | "A"dimension |
|------|--------------|
| D1 | .750 (19.05) |
| D3 | .425 (10.8) |

E TERMINAL SEAL



CONTACT MATERIAL OPTIONS

| CODE | CONTACT MATERIAL | TERMINAL MATERIAL | RATING |
|------|--------------------------------|--------------------------------|--|
| Q | Silver plated | Silver plated | 5 A @ 125 V AC or 28 V DC; 3 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 5 A @ 125V AC or 28 VDC; 3 A @ 250 VAC |
| K | Gold plated over nickel plated | Tin over nickel plated | 0.4VA MAX @ 20 V AC or DC MAX |

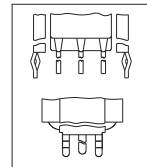
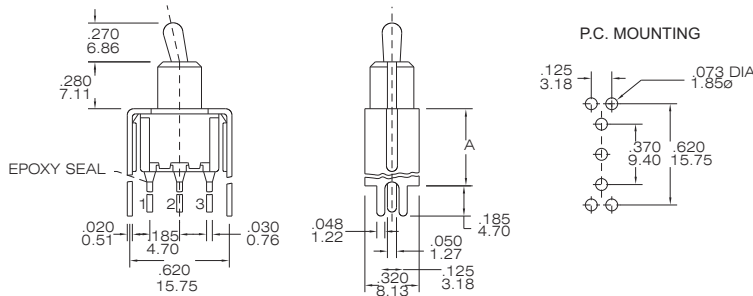
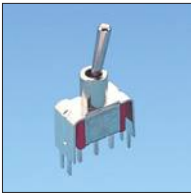
* The K option is only for some special item. Please inquire first when you need the "K" option

VERTICAL SUPPORT BRACKET OPTION

(only apply the straight type terminal -page A12. Please build the terminal option "c" code)

SPDT

S20/S25/V20/V25



SNAP-IN
V20/ V25

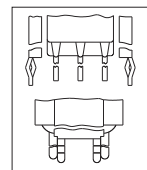
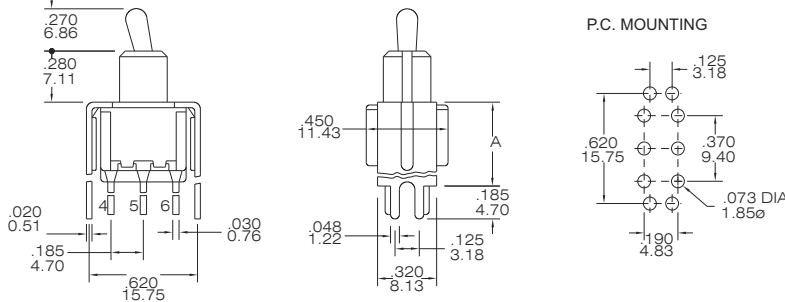
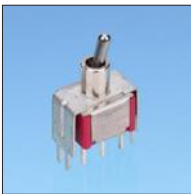
| CODE | "A"dimension |
|---------|--------------|
| S20/V20 | .460 (11.68) |
| S25/V25 | .630 (16.00) |

V20/V25 : the snap-in type

T8013 - TNCQ-S20(S25)

DPDT

S20/S25/V20/V25



SNAP-IN
V20/ V25

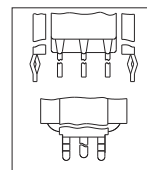
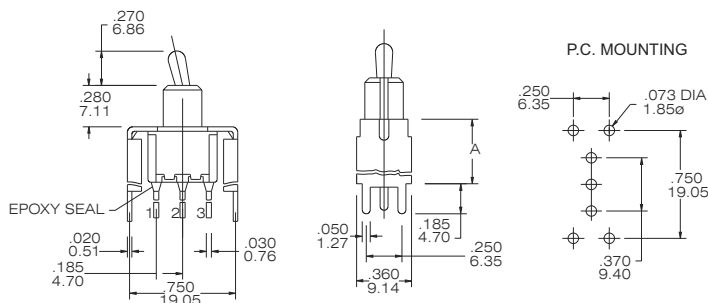
| CODE | "A"dimension |
|---------|--------------|
| S20/V20 | .460 (11.68) |
| S25/V25 | .630 (16.00) |

V20/V25 : the snap-in type

T8011 - TNCQ-S20(S25)

SPDT

S35/S40/V35/V40



SNAP-IN
V35/ V40

| CODE | "A"dimension |
|---------|--------------|
| S35/V35 | .460 (11.68) |
| S40/V40 | .630 (16.00) |

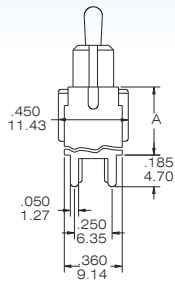
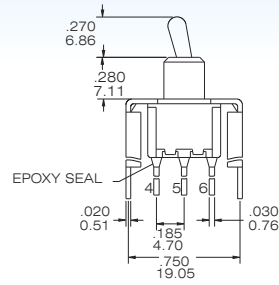
V35/V40 : the snap-in type

T8013 - TNCQ-S35(S40)

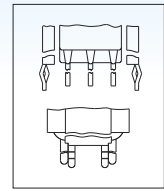
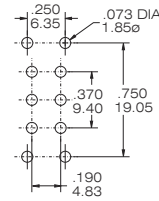
S35 / S40/ V35/V40



DPDT



P.C. MOUNTING



SNAP-IN
V35/ V40

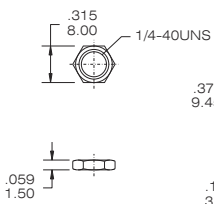
| CODE | "A" dimension |
|----------------------------|---------------|
| S35/V35 | .460 (11.68) |
| S40/V40 | .630 (16.00) |
| V35/V40 : the snap-in type | |

T8011 - TNCQ-S35(S40)

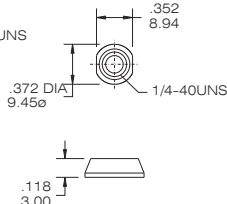
The hardware of T80-T TOGGLE SWITCHES

NUT

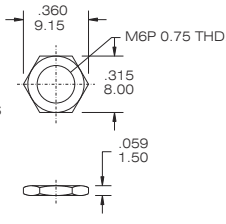
STD.



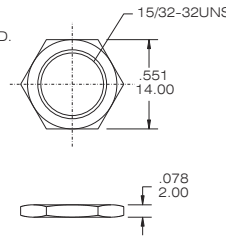
DRESS NUT



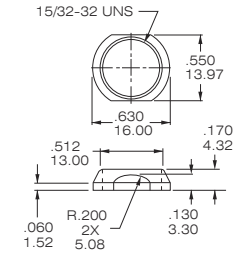
METRIC NUT



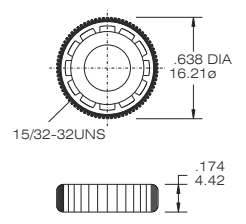
STD. FOR Z Z1



DRESS NUT FOR Z Z1

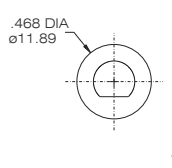
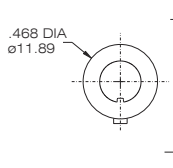


KNURLED NUT

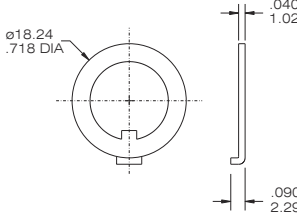


LOCKING RING

STD

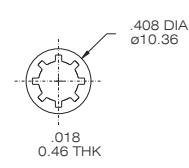


STD. FOR Z Z1

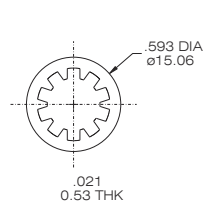


LOCK WASHER

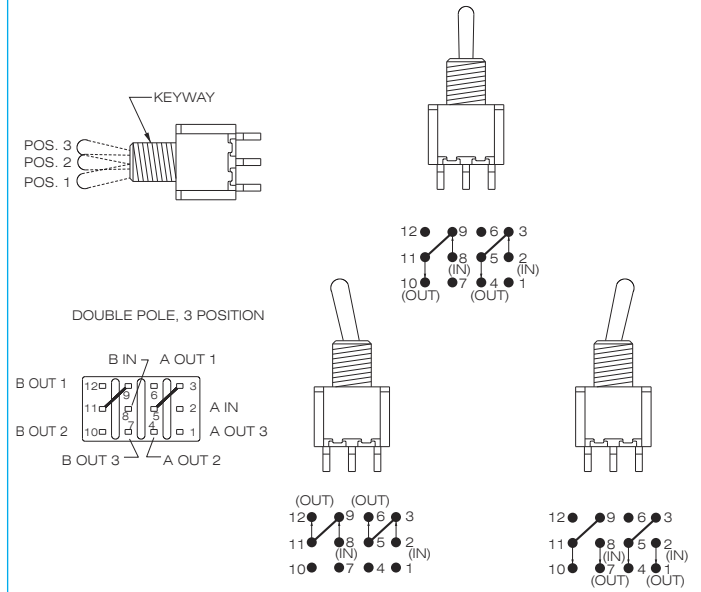
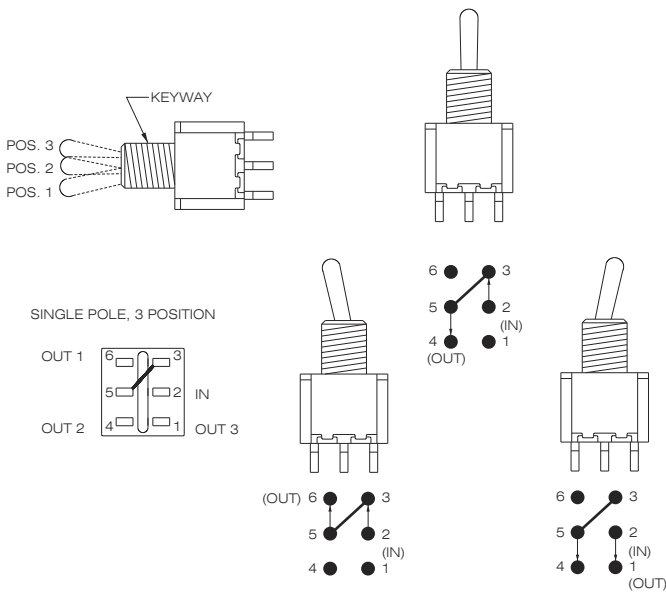
STD.



STD. FOR Z Z1



The information of 3-way toggle switches



SP3T

DP3T