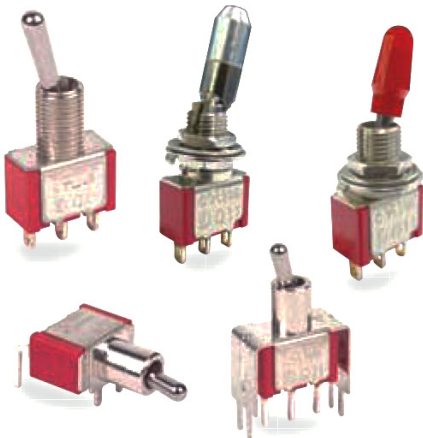


Minature Toggle Switches



RoHS
Compliant



Specifications:

Mechanical Life	: 40,000 make-and-break cycles
Contact Resistance	: 10mΩ max. initial @ 2-4V DC 100mA for both silver and gold plated contacts
Insulation Resistance	: 1,000MΩ min.
Dielectric Strength	: 1,000V rms min. @ sea level
Operating Temperature	: -30°C to +85°C

Materials:

Case	: Diallyl phthalate (DAP)
Actuator	: Brass,chrome plated
Bushing	: Brass, nickel plated
Housing	: Stainless steel
Switch Support	: Brass, tin plated
Contact / Terminals	: Brass, Silver or gold plated

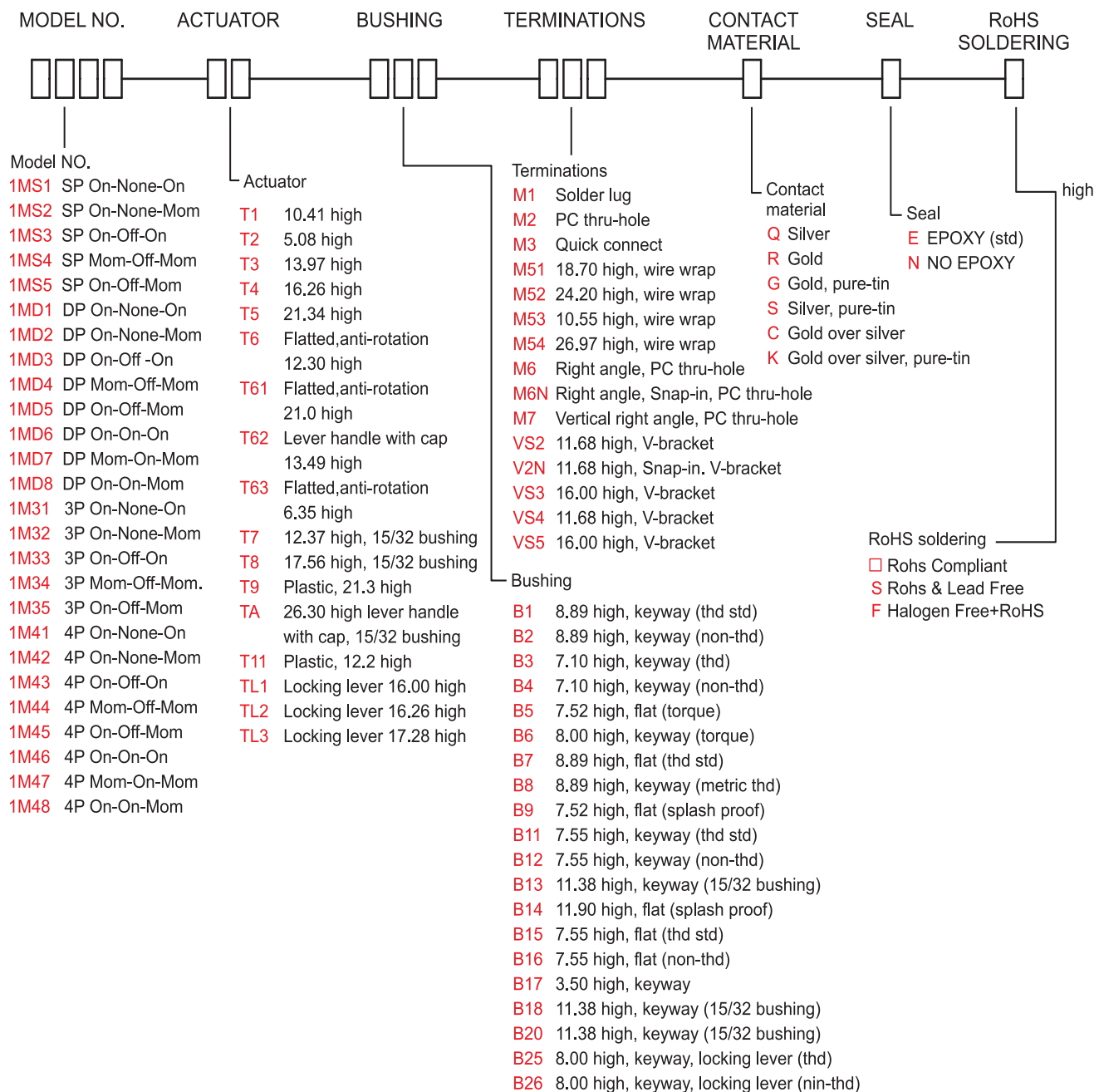


20/03/14 V1.0

Minature Toggle Switches

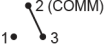
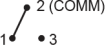
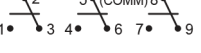
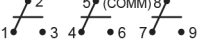
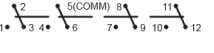
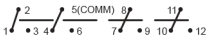


How to Order:



Minature Toggle Switches

Switch Function:

No. Poles	UL/CSA Model No.	Model No.	Switch Function			Connected Terminals / Schematic		
			Pos.1	Pos.2	Pos.3	Pos.1	Pos.2	Pos.3
								
SP	Q1111	1MS1	ON	NONE	ON	2-3 	N/A	2-1 
	Q1112	1MS2	ON	NONE	MOM		OPEN	
	Q1113	1MS3	ON	OFF	ON			
	Q1114	1MS4	MOM	OFF	MOM			
	Q1115	1MS5	ON	OFF	MOM			
DP	Q1121	1MD1	ON	NONE	ON	2-3, 5-6 	N/A	2-1, 5-4 
	Q1122	1MD2	ON	NONE	MOM		OPEN	
	Q1123	1MD3	ON	OFF	ON			
	Q1124	1MD4	MOM	OFF	MOM			
	Q1125	1MD5	ON	OFF	MOM	2-3, 5-6	2-3, 5-4	2-1, 5-4
	Q1126	1MD6	ON	ON	ON			
	* Q1127	1MD7	MOM	ON	MOM			
	* Q1128	1MD8	ON	ON	MOM			
3P	Q1131	1M31	ON	NONE	ON	2-3, 5-6, 8-9 	N/A	2-1, 5-4, 8-7 
	Q1132	1M32	ON	NONE	MOM		OPEN	
	Q1133	1M33	ON	OFF	ON			
	Q1134	1M34	MOM	OFF	MOM			
	Q1135	1M35	ON	OFF	MOM			
4P	Q1141	1M41	ON	NONE	ON	2-3, 5-6, 8-9, 11-12 	N/A	2-1, 5-4, 8-7, 11-10 
	Q1142	1M42	ON	NONE	MOM		OPEN	
	Q1143	1M43	ON	OFF	ON			
	Q1144	1M44	MOM	OFF	MOM			
	Q1145	1M45	ON	OFF	MOM	2-3, 5-6, 8-9, 11-12	2-3, 5-4, 8-9, 11-10	2-1, 5-4, 8-7, 11-10
	Q1146	1M46	ON	ON	ON			
	* Q1147	1M47	MOM	ON	MOM			
	* Q1148	1M48	ON	ON	MOM			

MOM = Momentary

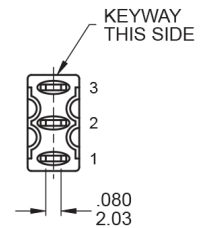
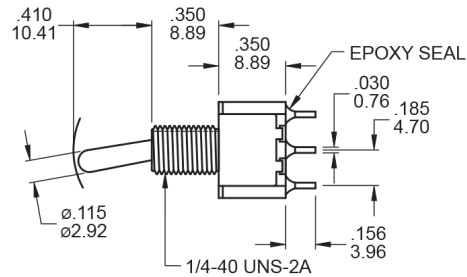
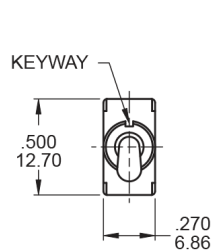
* Please check the availability in advance before order

Minature Toggle Switches

Pole Options:



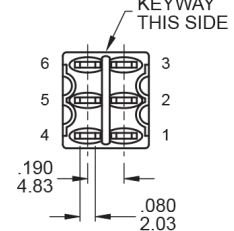
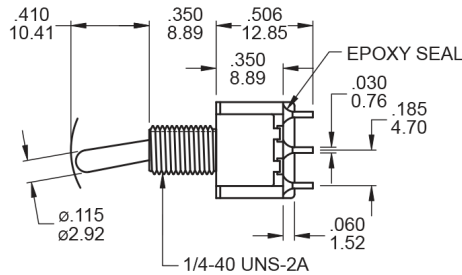
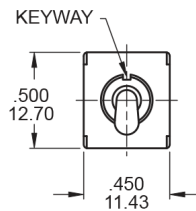
SPDT



Part No. Shown : 1MS1T1B1M1QE



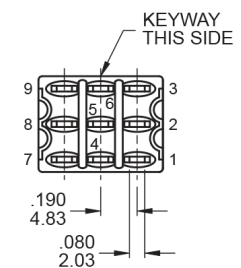
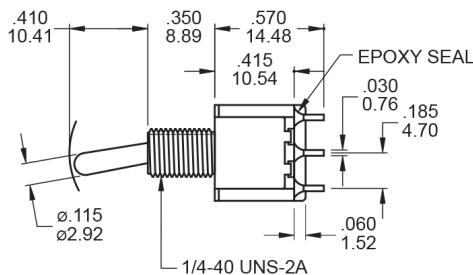
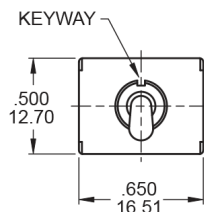
DPDT



Part No. Shown : 1MD1T1B1M1QE



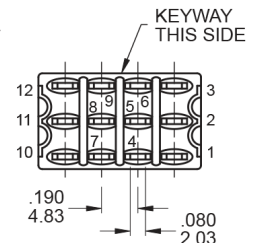
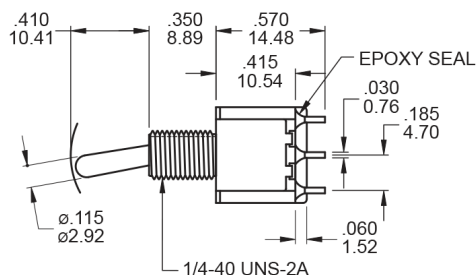
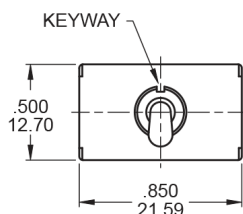
3PDT



Part No. Shown : 1M31T1B1M1QE



4PDT



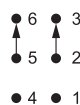
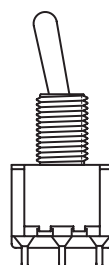
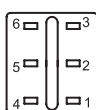
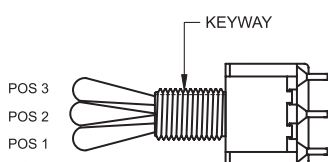
Part No. Shown : 1M41T1B1M1QE

Minature Toggle Switches

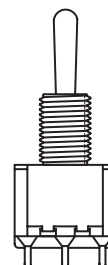
3-Way Switch:

SINGLE POLE, 3 POSITION

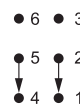
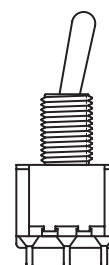
Model No.	POS 1	POS 2	POS 3
1MD6	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



POS. 1



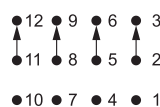
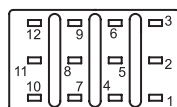
POS. 2



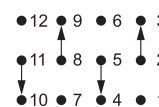
POS. 3

DOUBLE POLE, 3 POSITION

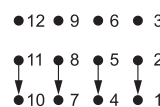
Model No.	POS 1	POS 2	POS 3
1M46	ON	ON	ON
Term. Comm.	2-3,5-6 8-9,11-12	2-3,5-4 8-9,11-10	2-1,5-4 8-7,11-10



POS. 1



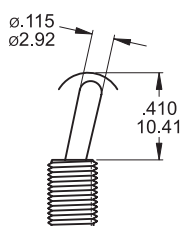
POS. 2



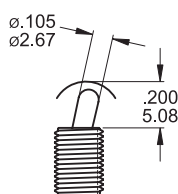
POS. 3

Actuator Options:

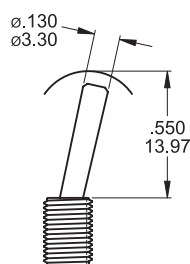
T1 STD



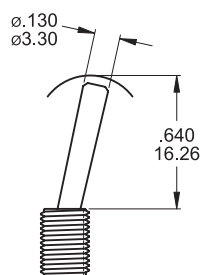
T2



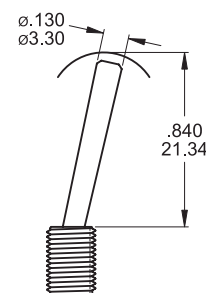
T3



T4



T5



Note: T1 ~ T5 Actuator shown with standard B1 Bushing:

Add .070 (1.78) for B3 Bushing;

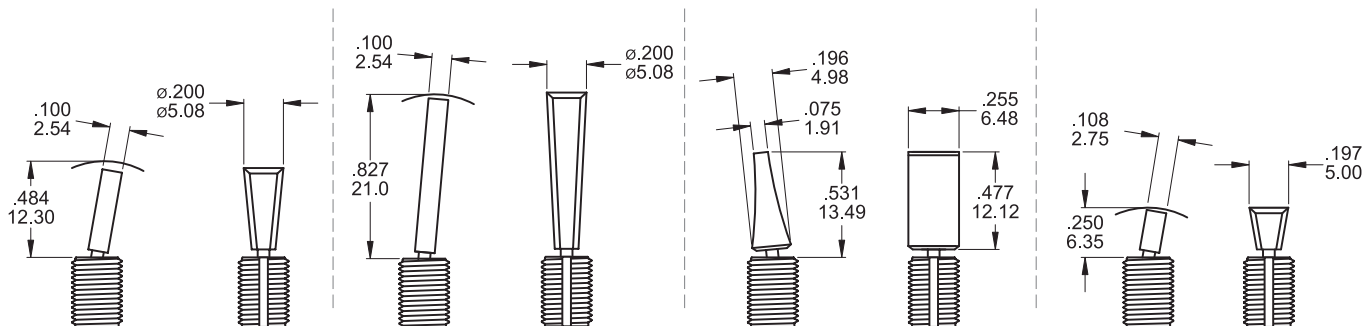
Subtract .02 (0.51) for B6 Bushing;

Std for M1 , M2 Terminal sub .016 (0.4) for M6 , M7 , VSX

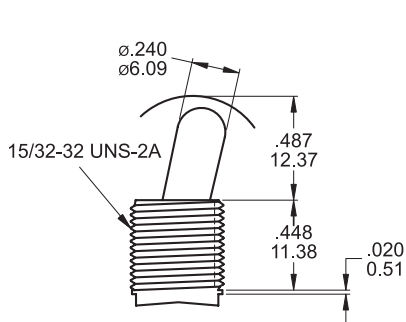
Minature Toggle Switches

T6
T61
T62
T63

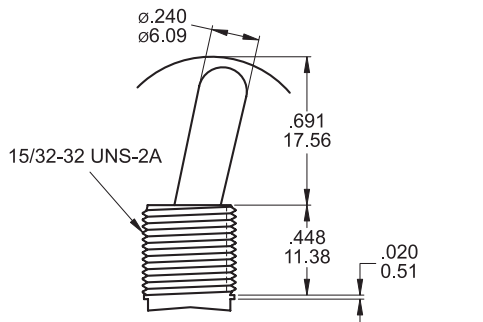
Flatted with Antirotation



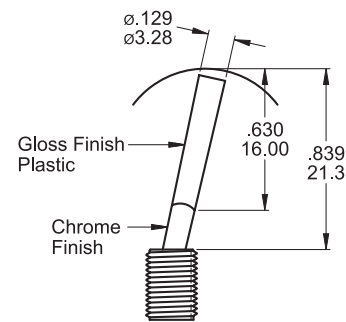
Note T6,T6-1,T6-2 ,T63 use with B11, B12, B15, B16 bushing only.

T7
T8
T9


Use with B13 bushing
Use with B18,B20 the lever is antirotation
and the size of lever is 13.00mm



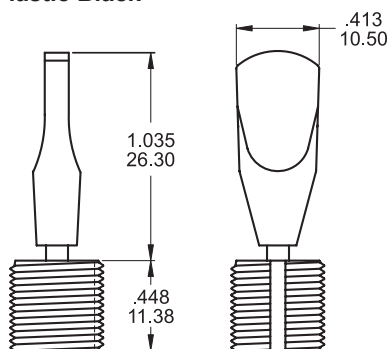
Use with B13 bushing
Use with B18,B20 the lever is antirotation
and the size of lever is 18.00mm



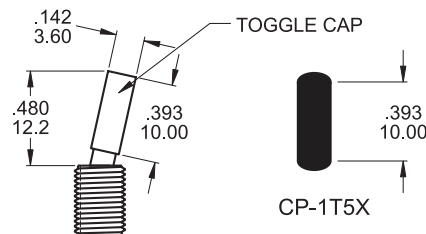
B1 / B2 bushing std
with black and red color only (std.)

TA
T11

Plastic Black



Use with B18 bushing only



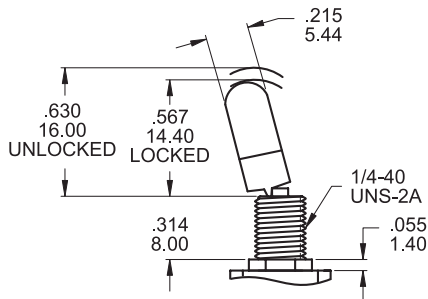
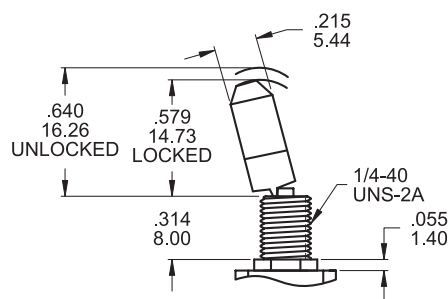
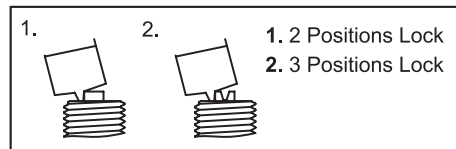
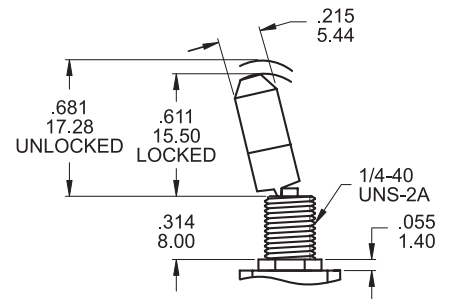
Note T11Actuator shown with standand B1 Bushing ;
Add .07 (1.78) for B3 Bushing ;
Subtract .02 (0.51) for B6 Bushing.
Std for M1.M2 Terminal sub .016 (0.40) for M6.M7.VSX

Plastic No.Colour :

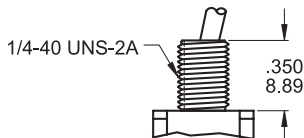
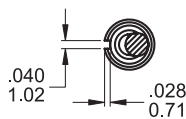
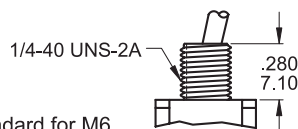
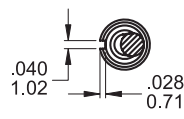
ITEM NO	COLOR
1	White
2	Black (Std)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

T62 , TA , T9 , T11
Actuator Only

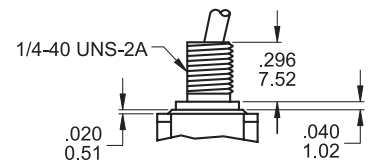
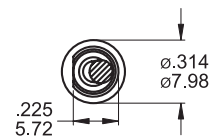
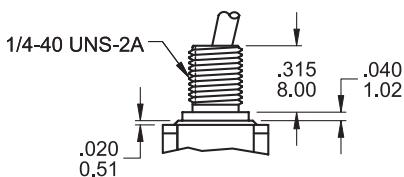
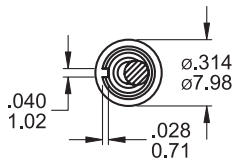
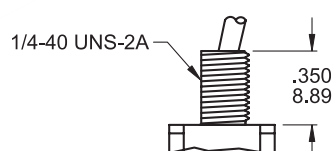
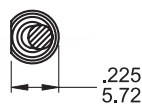
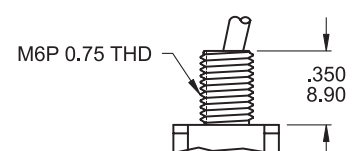
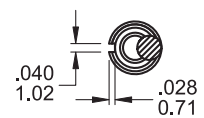
Minature Toggle Switches

TL1B25

TL2B25

TL3B25


Bushing Options:

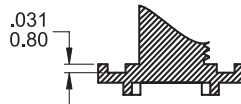
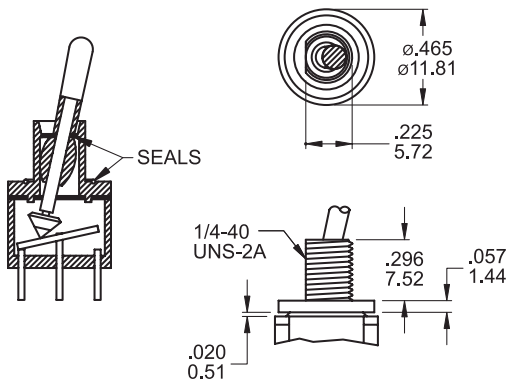
**B1 THD STD
B2 NON-THD**

**B3 THD
B4 NON-THD**


B4 is standard for M6, M7 and VS2~5 termination options.

B5 HIGH TORQUE

B6 HIGH TORQUE

B7 THD STD

B8 METRIC THD


Minature Toggle Switches

B9 SPLASH PROOF

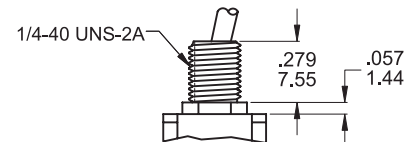
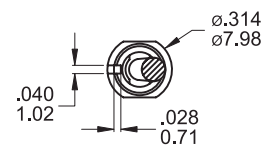


CP-1TEB



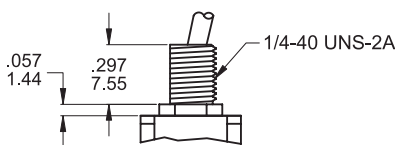
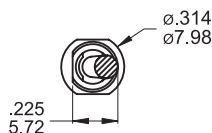
O-Ring
supplied with B9 bushing

B11 THD STD B12 NON-THD



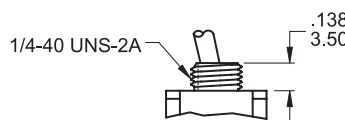
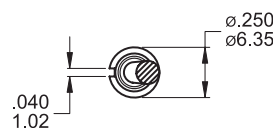
Use with T6 actuators only

B15 THD STD B16 NON-THD

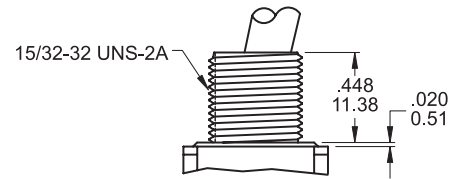
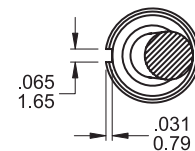


Use with T6 actuators only

B17

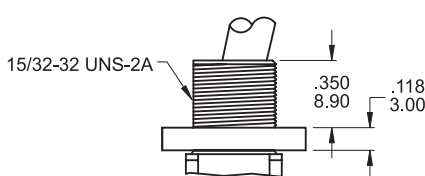
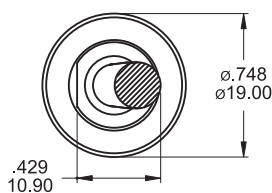


B13



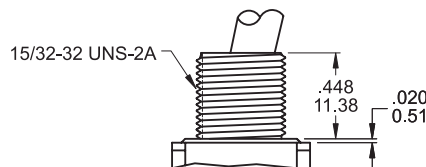
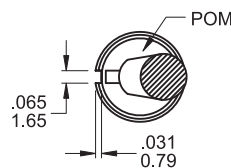
Use with T7,T8 actuators only
B13 Bear strength from top of actuator
up to 10kg aside up to 15kg

B14 SPLASH PROOF



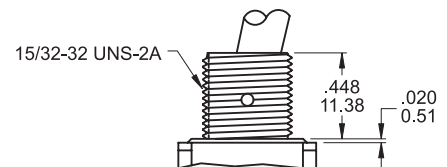
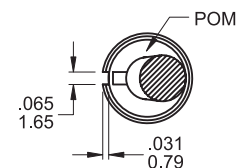
Use with T7 , T8 actuators only

B18



Use with T7,T8 and TA actuators only
with Plastic (POM) Insert

B20



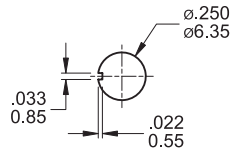
Use with T7,T8 and TA actuators only
with Plastic (POM) Insert

B18 , B20 Bear strength from top of actuator up to 20kg aside up to 15kg

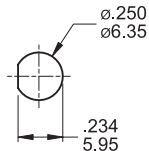
Minature Toggle Switches

Panel Mounting:

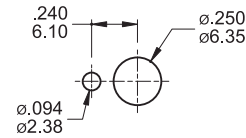
1/4" Bushing



Without locking ring (Keyway)

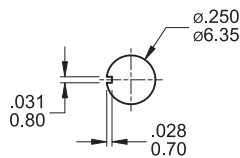


Without locking ring (Flat)

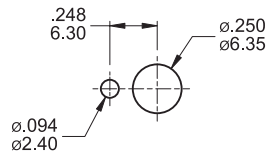


With standard locking ring.

Metric Bushing

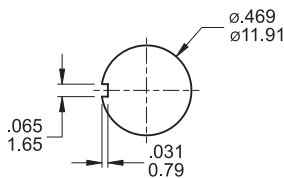


Without locking ring (Keyway)

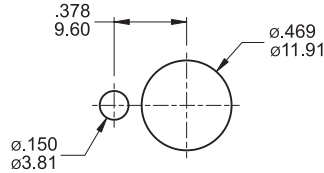


With standard locking ring.

15/32 Bushing

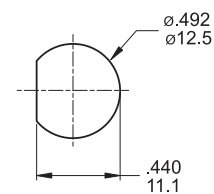


Without locking ring (Keyway)



With standard locking ring.

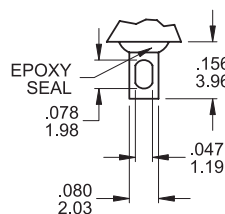
Splash Proof Bushing



Without locking ring (Flat)

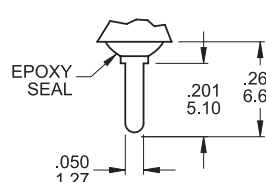
Termination Options:

M1 Solder lug



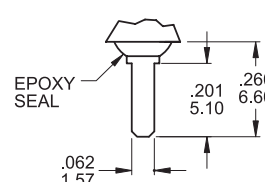
.030(0.76) THK.

M2 PC Thru-hole



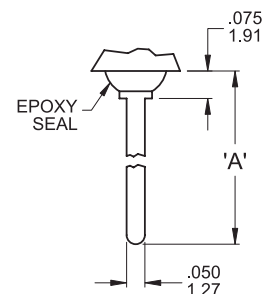
.030(0.76) THK.

M3 Quick connect



.030(0.76) THK.

M5 Wire Wrap



.030(0.76) THK.

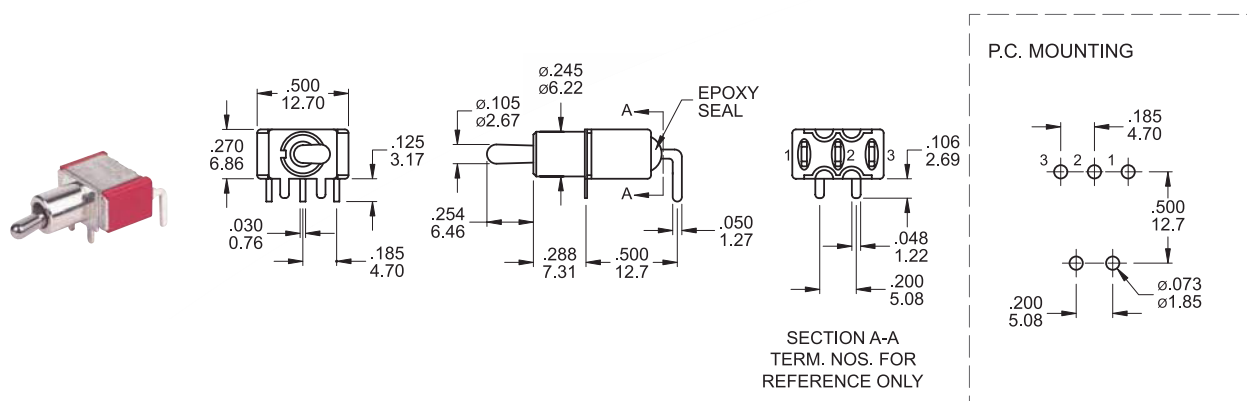
Minature Toggle Switches

Option Code	Dim. A
M5-1	0.736 (18.7)
M5-2	0.953 (24.20)
M5-3	0.415 (10.55)
M5-4	1.062 (26.97)

Other Termination Options:

- M6** Right Angle P.C. Mount
- M7** Right Angle P.C. Mount
- VS2** Vertical Bracket P.C. Mount
- VS3** Vertical Bracket P.C. Mount
- VS5** Vertical Bracket P.C. Mount

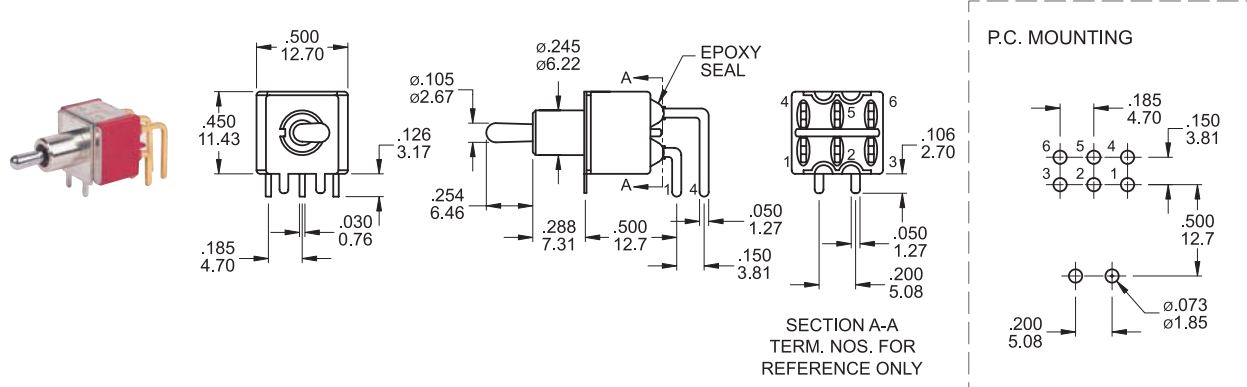
M6



SPDT

Part No. Shown : 1MS1T2B4M6QE

M6

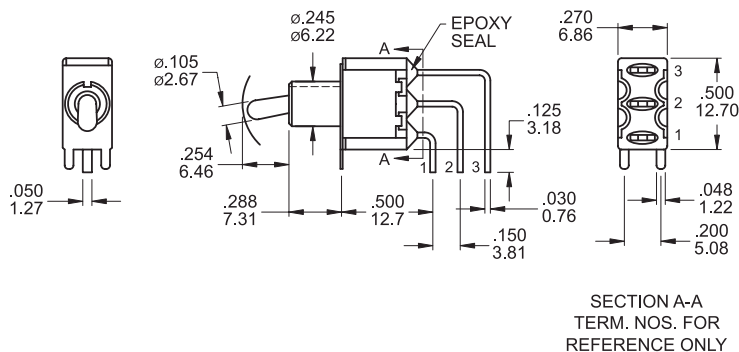


DPDT

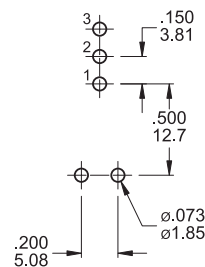
Part No. Shown : 1MD1T2B4M6RE

Minature Toggle Switches

M7



P.C. MOUNTING

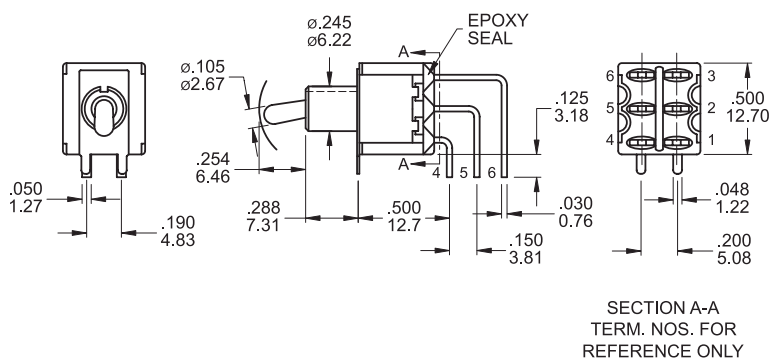


SECTION A-A
TERM. NOS. FOR
REFERENCE ONLY

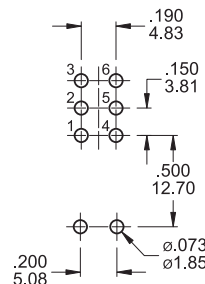
SPDT

Part No. Shown : 1MS1T2B4M7QE

M7



P.C. MOUNTING

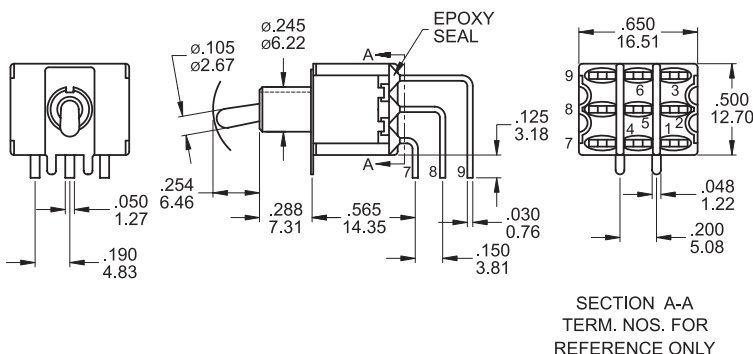


SECTION A-A
TERM. NOS. FOR
REFERENCE ONLY

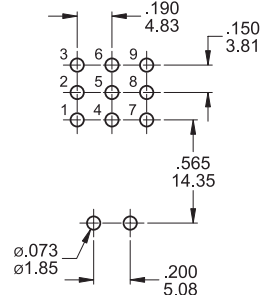
DPDT

Part No. Shown : 1MD1T2B4M7QE

M7



P.C. MOUNTING



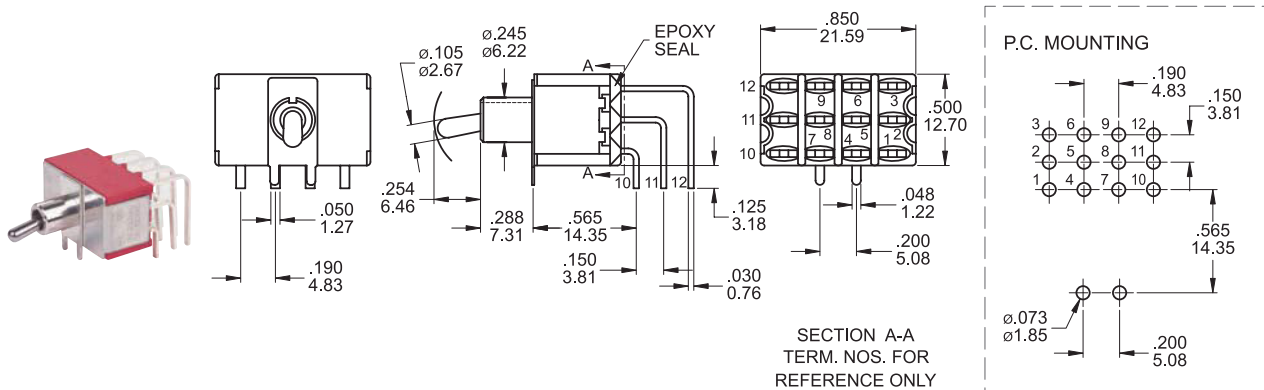
SECTION A-A
TERM. NOS. FOR
REFERENCE ONLY

3PDT

Part No. Shown : 1M31T2B4M7QE

Minature Toggle Switches

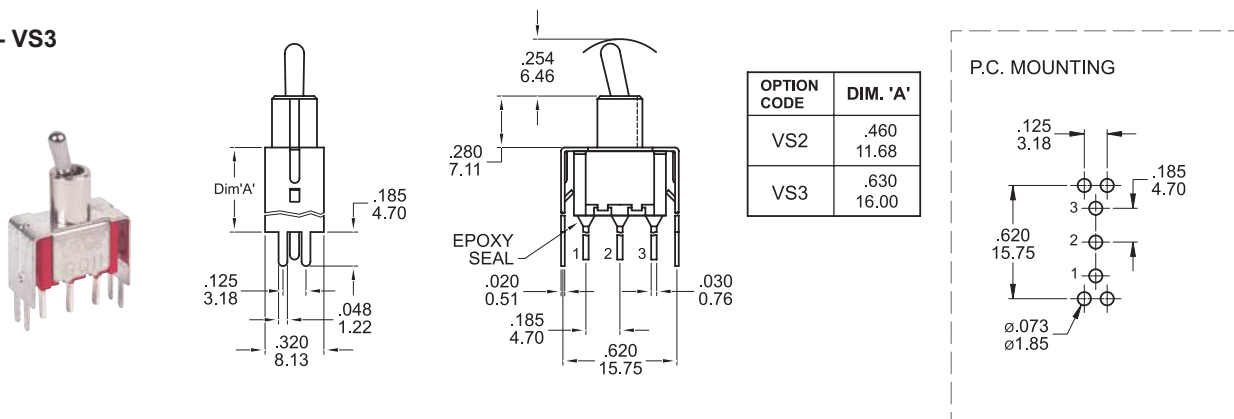
M7



4PDT

Part No. Shown : 1M41T2B4M7QE

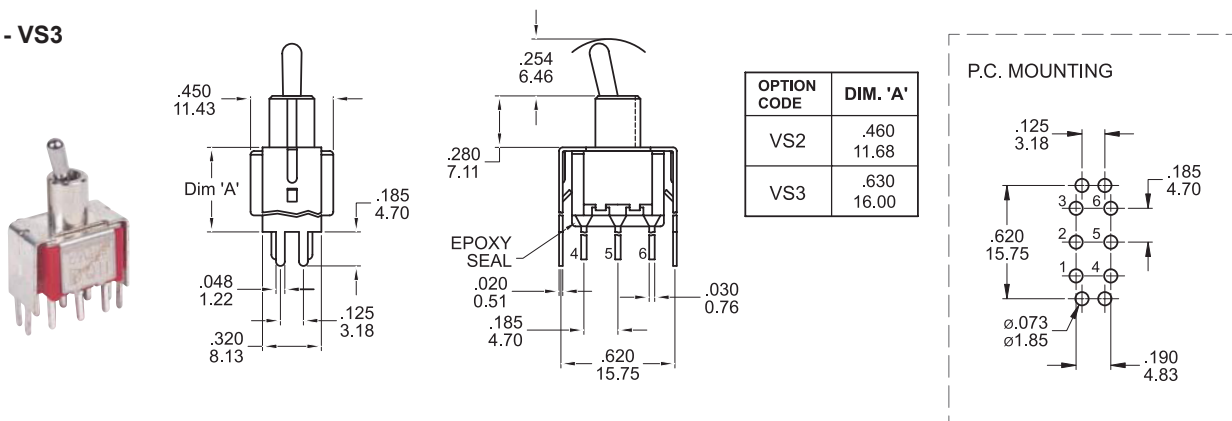
VS2 - VS3



SPDT

Part No. Shown : 1MS1T2B4VS2QE

VS2 - VS3

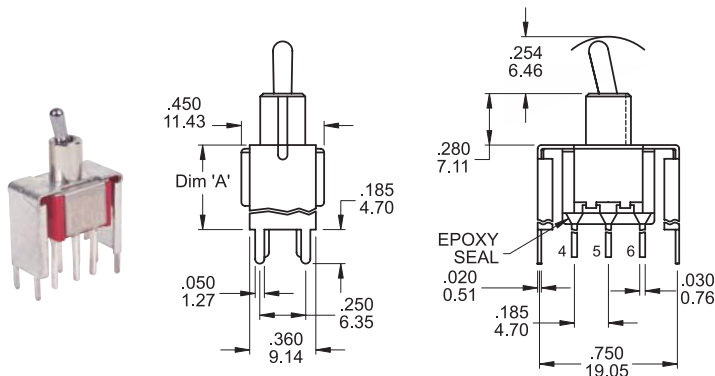


DPDT

Part No. Shown : 1MD1T2B4VS3QE

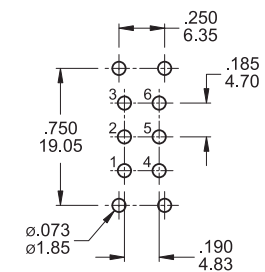
Minature Toggle Switches

VS5



OPTION CODE	DIM. 'A'
VS4	.460 11.68
VS5	.630 16.00

P.C. MOUNTING

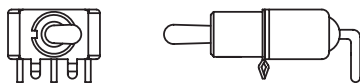


DPDT

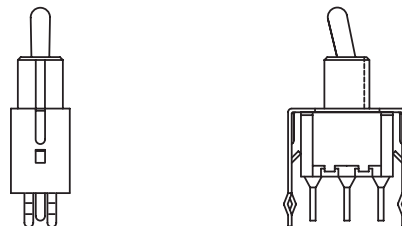
Part No. Shown : 1MD1T2B4VS5QE

Snap-In Termination Options:

M6N

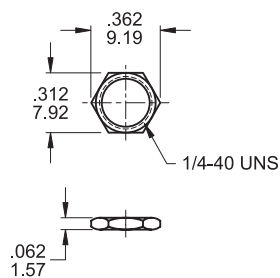


V2N



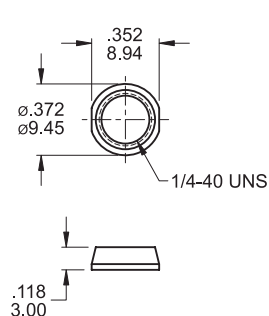
Hardware:

1/4 Nuts HDW2

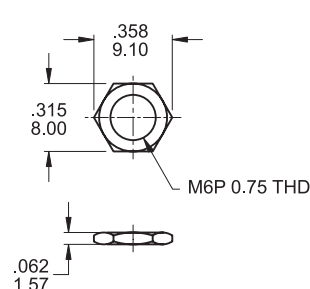


Supplied standard with
B1, B3, B5, B6 and B9 options

Dress Nut HDW3

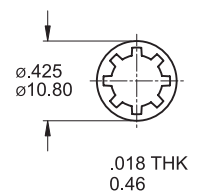


Metric Nut HDW6



Supplied standard with
B8 metric bushing

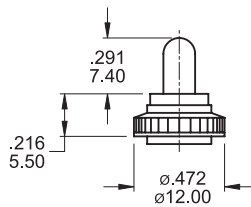
Lock Washer
HDW11



Supplied standard with
B1 / B3 bushing

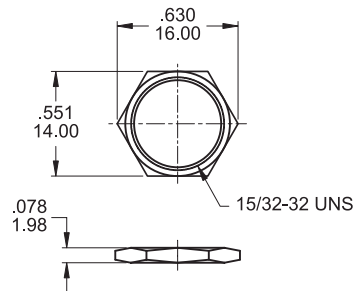
Minature Toggle Switches

Optional Rubber Hood Sealing



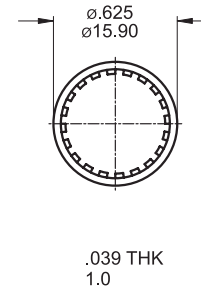
K1=Metric
E1=Inch (Std.)
for actuator T1, T2 and
B1, B3, B5, B6 Bushing only

15/32 Nuts HDW4



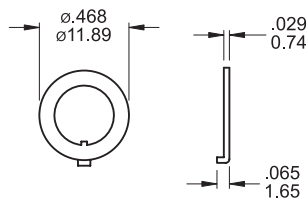
Supplied standard with B13 bushing

Lock Washer HDW12



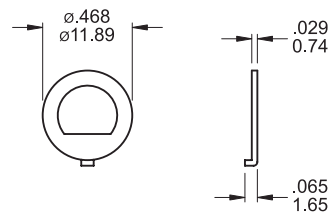
Supplied standard with B13 bushing

HDW15



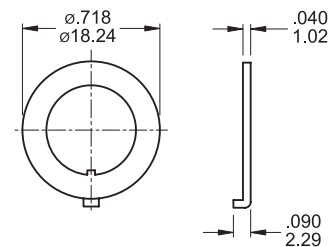
Locking ring supplied standard

HDW16



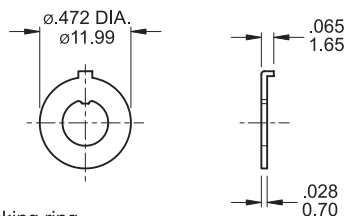
Locking ring
supplied with B5 bushing

HDW17



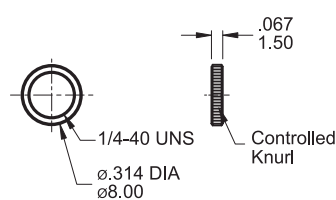
Locking ring
supplied with B13,B18,B20 bushing

HDW18



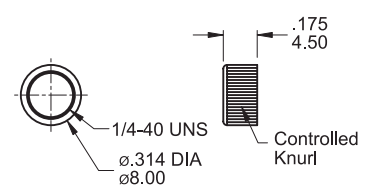
Locking ring
supplied with B8 bushing

HDW19



NU-1M18

HDW20



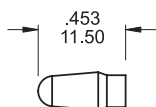
NU-1M24

Minature Toggle Switches



Optional Toggle Cap:

CP-T1XX



Use with T1

CAP Colour :

Item No	Colour
1	White
2	Black (Std)
3	Red
5	Yellow
6	Green
7	Blue
9	Gray

Contact Material Options:

	Contact Plating	Terminal Plating	Ratings
Q	Silver	Q = Silver	5 Amps with resistant load @ 120VAC or 28VDC 2 Amps with resistant load @ 250VAC
S		S = Silver,pure - tin	
C	Gold over Silver	C = Gold over silver	
K		K = Gold over silver,pure - tin	
R	Gold	R = Gold	0.4 Volt - Amps (VA) max. @ 20V max. (AC or DC)
G		G = Gold,pure - tin	

Soldering Processes:

Manual Soldering: Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.

Wave Soldering: Recommended Soldering Temperature: 260 ± 5°C Duration of Solder Immersion: Max 5 sec.
(PCB is 1.6mm in thickness)

