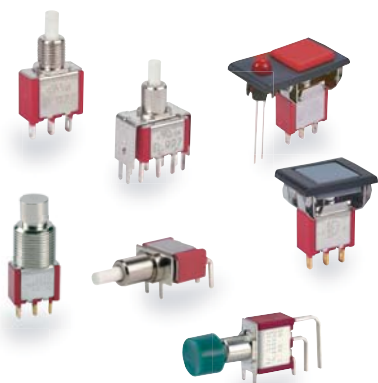


7M Series

Snap-Acting Pushbutton Switches



SPECIFICATIONS

CONTACT RATING: Dependent upon contact material
see page 106.

MECHANICAL LIFE: 50,000 make-and-break cycles.

CONTACT RESISTANCE: 20mΩ max. initial @ 2-4VDC
100mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000MΩ min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C.

MATERIALS

CASE: Diallyl phthalate(DAP) (UL94V-0).

PLUNGER: Glass filled Nylon or Glass filled polyester.(PBT)

BUSHING: Brass,nickel plated.

HOUSING: Stainless Steel.

CONTACT: Brass or Copper alloy, silver or gold plated.

※7MSL/7MDL with gold over silver for plating

(See Page 106)

HOW TO ORDER

MODEL NO.	ACTUATOR	BUSHING	FRAME COLOR	CAP COLOR	TERMINATIONS	TERMINAL PLATING	SEAL	RoHS SOLDERING	CAPS
See below									
Model NO. 7MS7 On-Mom 7MD7 On-Mom		Bushing B10 6.35 high,keyway (the std) B11 6.35 high,flat (the std) B20 6.35 high,keyway (non-thd) B21 6.35 high,flat (non-thd) AP1 Cap only AP2 Cap frame AP3 Cap only-(flat) AP4 Cap frame-(flat) AP5 Cap with frame for LED,snap-in AP6 Cap with frame for LED,snap-in-(flat)			Terminations M1 Solder Lug M2 PC thru-hole M5 Wire wrap M6 Right angle, PC thru-hole M6N Right angle, snap-in, PC thru-hole M7 Vertical right angle, PC thru-hole VS2 11.68 high, V-bracket V2N 11.68 high, snap-in V-bracket VS3 16.00 high, V-bracket VS4 11.68 high, V-bracket VS5 16.00 high, V-bracket	Terminal plating Q Silver R Gold G Gold,pure-tin S Silver,pure-tin C Gold over silver K Gold over silver,pure-tin	Seal E EPOXY (std) N NO EPOXY	RoHS soldering □ RoHS Compliant S RoHS & Lead Free	Caps C1 C2 C3 C4 C6 C7 KC
Model NO. 7MSL On-On 7MDL On-On	Actuator P1 5.54 high P1 7.11 high(for lock) PA 5.54 high (Metal material) PB 7.00 high (Metal material,15/32 bushing) PC 8.75 high (Metal material,B60 bushing only)	Bushing B60 7.62 high,keyway (the std) B61 7.62 high,flat (the std) B70 7.62 high,keyway (non-thd) B71 7.62 high,flat (non-thd) AP2 Cap frame AP5 Cap with frame for LED,snap-in							

Frame/Cap color

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

* Besides standard color,
other colors need to check stocks available.

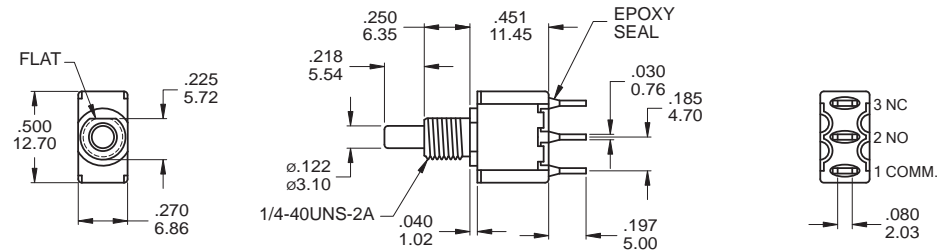
SWITCH FUNCTION

NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS / SCHEMATIC	
			POS.1	POS.2	POS.1	POS.2
SP	Q2717	7MS7	ON	MOM	1-3 	1-2
DP	Q2727	7MD7	ON	MOM	1-3,4-6 	1-2,4-5

MOM= MOMENTARY

POLE OPTIONS

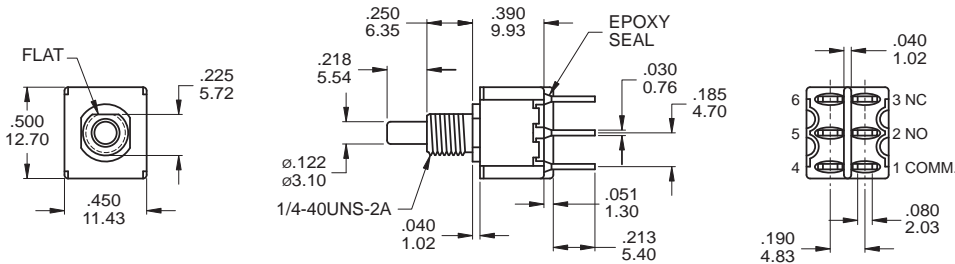
M1



SPDT

Part No. Shown : 7MS7P1B11M1QE

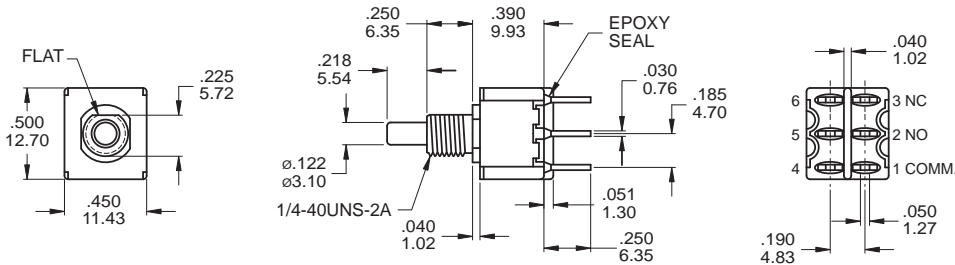
M1



DPDT

Part No. Shown : 7MD7P1B11M1QE

M2



DPDT

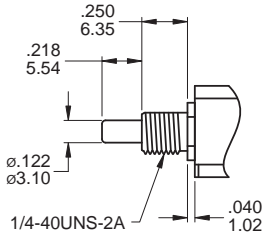
Part No. Shown : 7MD7P1B11M2RE

7M Series

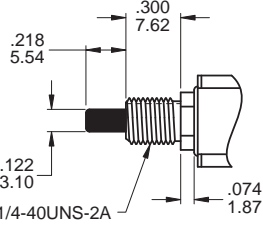
Snap-Acting Pushbutton Switches

ACTUATOR OPTIONS

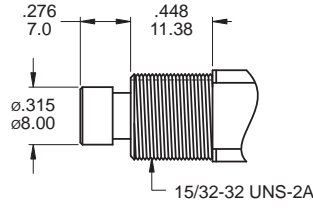
P1



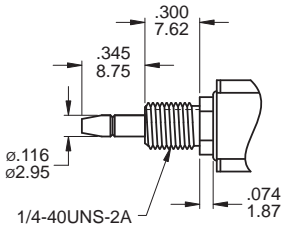
PAB60 handle, metal material



PBB13 handle, metal material



PCB60 handle, metal material



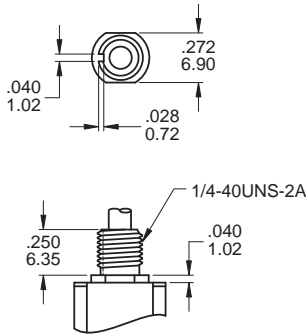
Use with B13 bushing only

Use with B60 bushing std

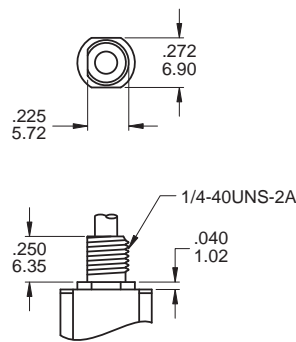
* PC Actuator only for KC Cap

BUSHING OPTIONS

B10 THD STD
B20 NON-THD

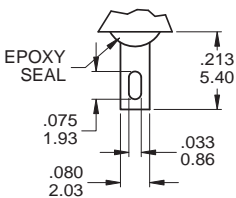


B11 THD STD
B21 NON-THD



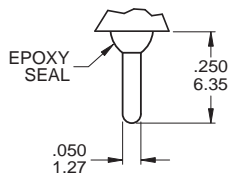
TERMINATION OPTIONS

M1 Solder lug



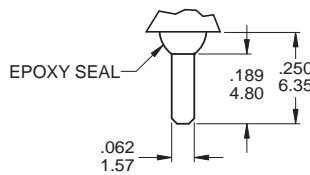
.030(0.76) THK.

M2 PC Thru-hole



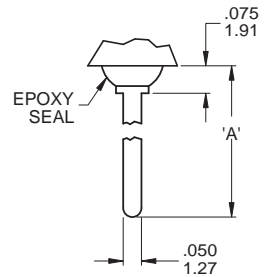
.030(0.76) THK.

M3 Quick connect



.030(0.76) THK.

M5 Wire Wrap



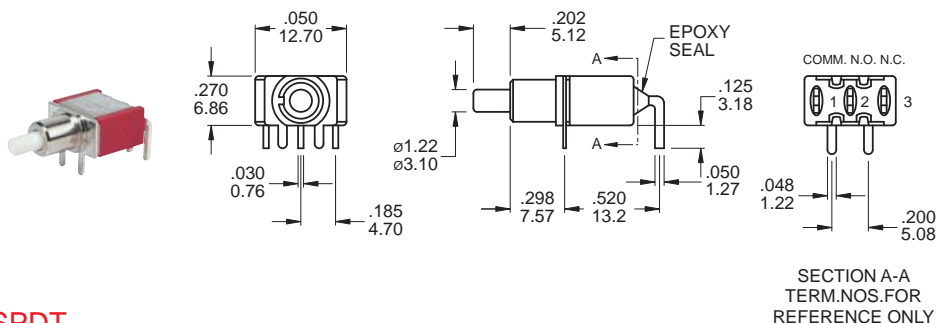
.030(0.76) THK.

OTHER TERMINATION OPTIONS

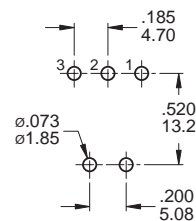
- M6** Right angle P.C. Mount
- M7** Right angle P.C. Mount
- VS2** Vertical bracket P.C. Mount
- VS3** Vertical bracket P.C. Mount
- VS4** Vertical bracket P.C. Mount
- VS5** Vertical bracket P.C. Mount

OPTION CODE	DIM. 'A'
M51	.750 (19.50)
M52	.964 (24.48)
M53	.426 (10.80)
M54	.650 (16.50)

M6



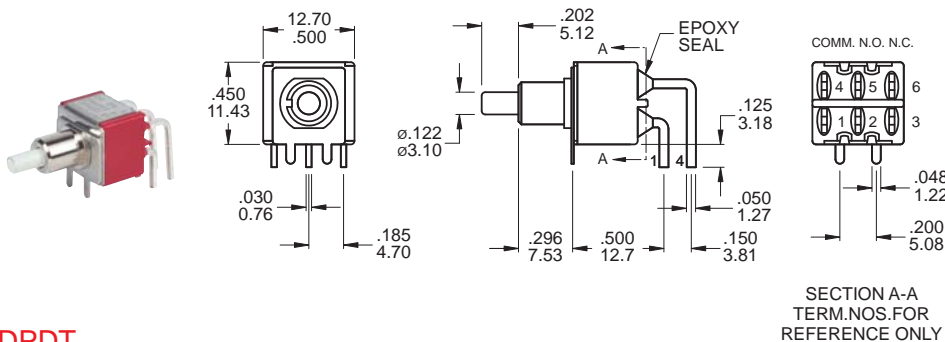
P.C. MOUNTING



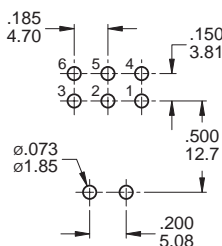
SPDT

Part No. Shown : 7MS7P1B20M6QE

M6



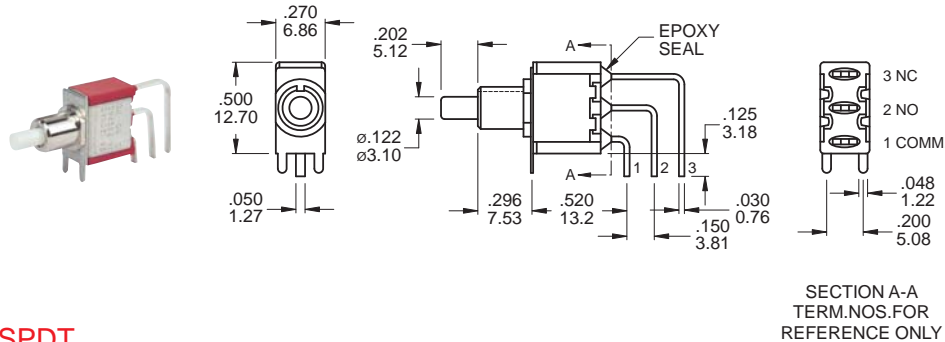
P.C. MOUNTING



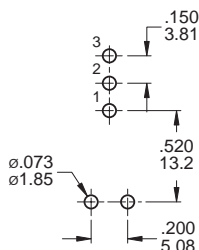
DPDT

Part No. Shown : 7MD7P1B20M6QE

M7



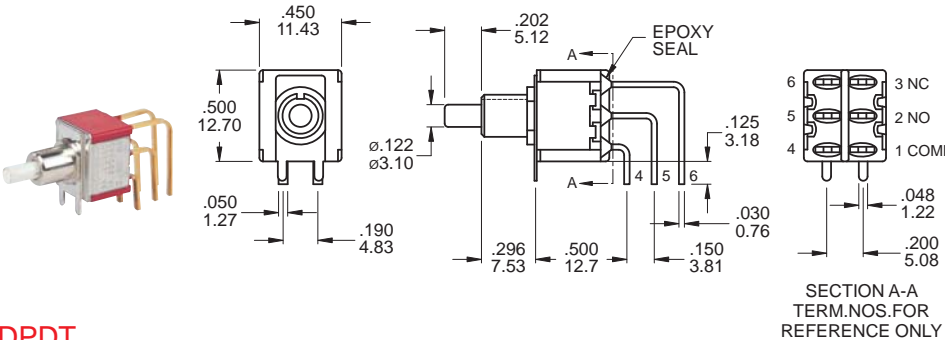
P.C. MOUNTING



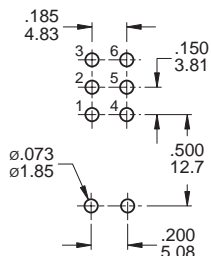
SPDT

Part No. Shown : 7MS7P1B20M7QE

M7



P.C. MOUNTING



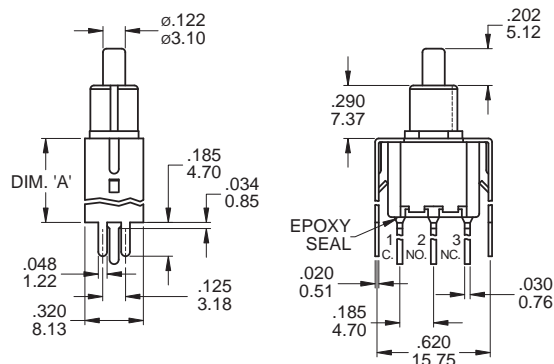
DPDT

Part No. Shown : 7MD7P1B20M7RE

7M Series

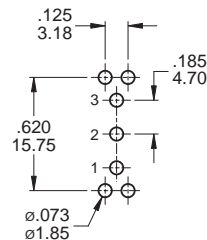
Snap-Acting Pushbutton Switches

VS2 - VS3



OPTION CODE	DIM. 'A'
VS2	.460 11.68
VS3	.630 16.00

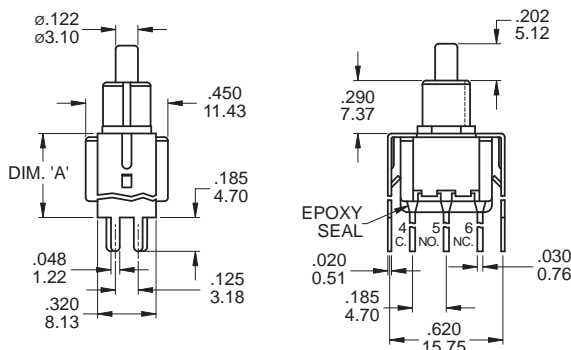
P.C. MOUNTING



SPDT

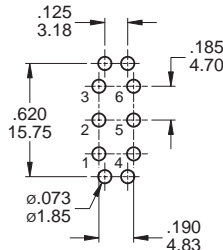
Part No. Shown : 7MS7P1B20VS2RE

VS2 - VS3



OPTION CODE	DIM. 'A'
VS2	.460 11.68
VS3	.630 16.00

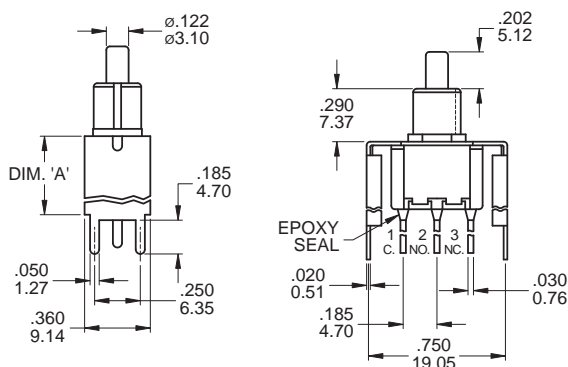
P.C. MOUNTING



DPDT

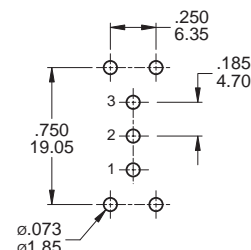
Part No. Shown : 7MD7P1B20VS2QE

VS4 - VS5



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

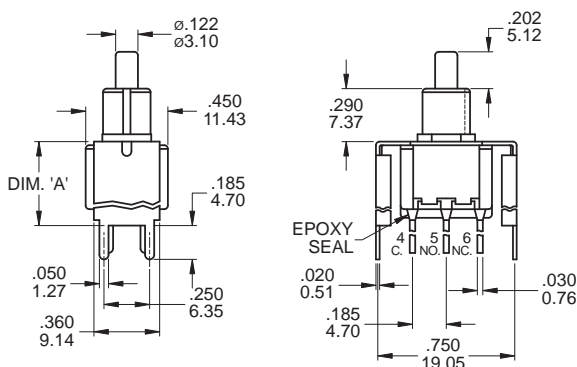
P.C. MOUNTING



SPDT

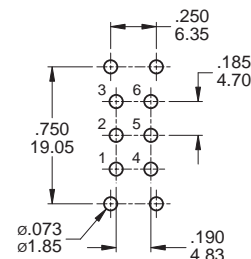
Part No. Shown : 7MS7P1B20VS4QE

VS4 - VS5



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

P.C. MOUNTING

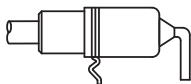


DPDT

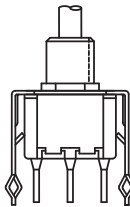
Part No. Shown : 7MD7P1B20VS4QE

SNAP-IN TERMINATION OPTIONS

M6N

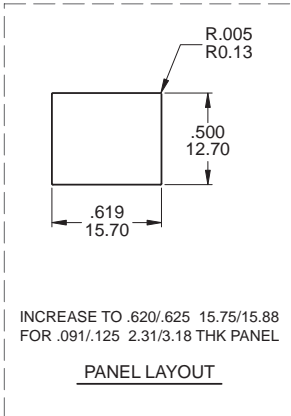
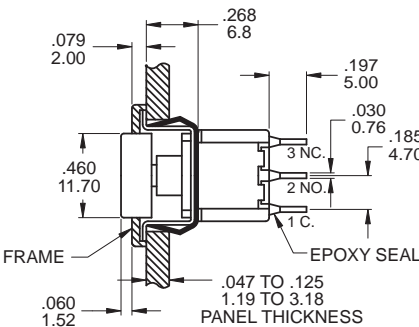
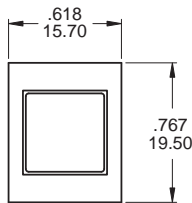


V2N



PANEL MOUNTING

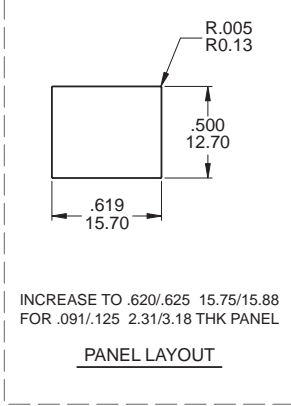
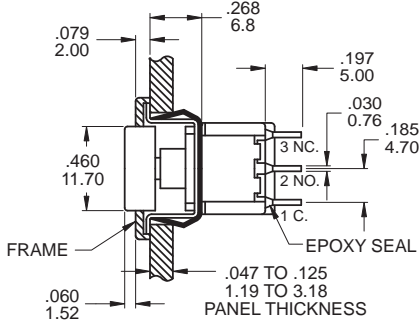
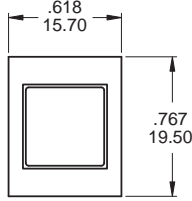
AP2 CAP & FRAME



SPDT

Part No. Shown : 7MS7AP223M1QE

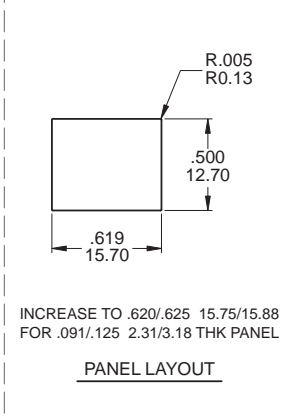
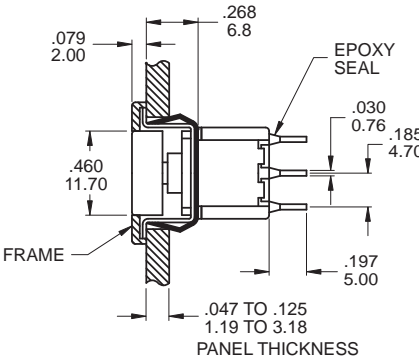
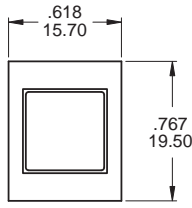
AP2 CAP & FRAME



DPDT

Part No. Shown : 7MD7AP223M1QE

AP4 CAP & FRAME



SPDT

Part No. Shown : 7MS7AP429M1RE



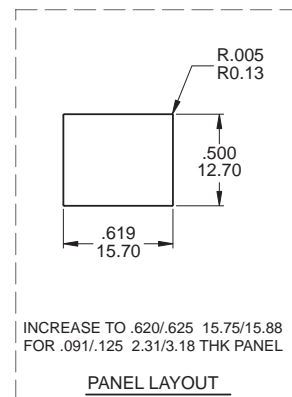
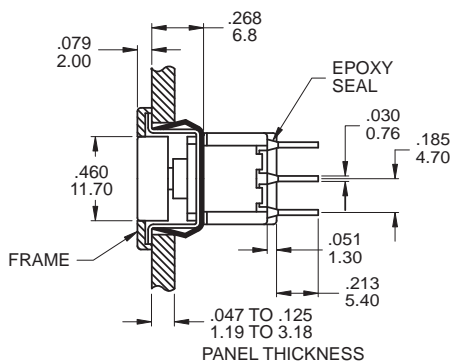
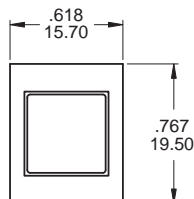
7M
Pushbutton Switches

7M Series

Snap-Acting Pushbutton Switches

PANEL MOUNTING

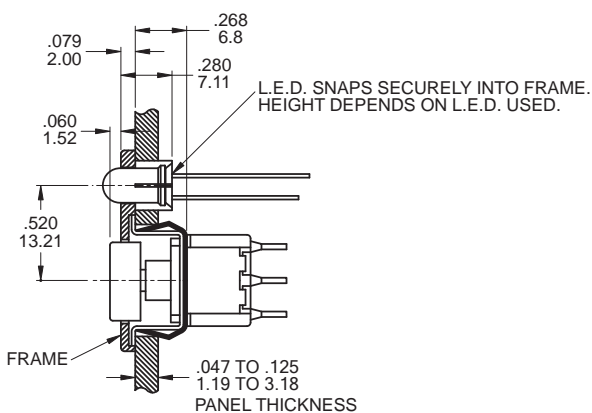
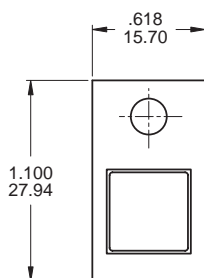
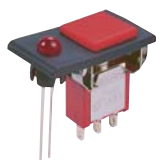
AP4 CAP & FRAME



DPDT

Part No. Shown : 7MD7AP423M1RE

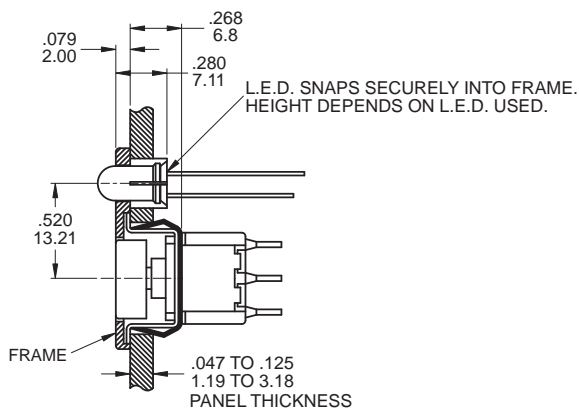
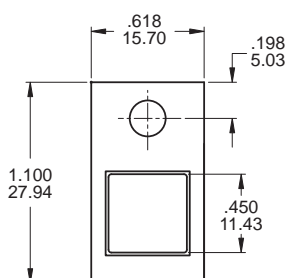
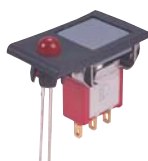
AP5 CAP & FRAME



SPDT

Part No. Shown : 7MS7AP523M1QE

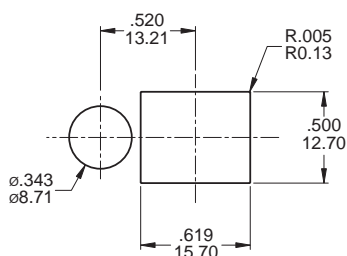
AP6 CAP & FRAME



DPDT

Part No. Shown : 7MS7AP629M1RE

FOR AP5/AP6



PANEL LAYOUT

CAP AND FRAME COLORS

OPTION CODE	COLOR
1	WHITE
2	BLACK(std)
3	RED

* Besides standard color, other colors need to check stocks available.

LED COLORS

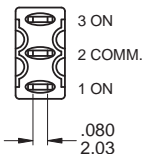
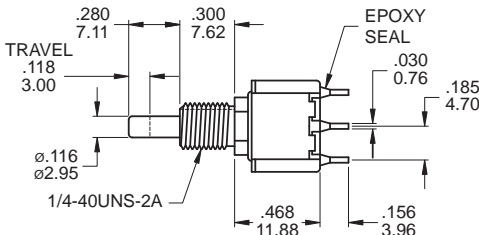
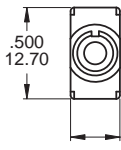
OPTION CODE	COLOR
3	RED(std)
4	ORANGE
6	GREEN

SWITCH FUNCTION

NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS / SCHEMATIC	
			POS.1	POS.2	POS.1	POS.2
SP	Q27	7MSL	ON	ON	1-2 	2-3
DP	Q27	7MDL	ON	ON	1-2,4-5 	2-3,5-6

MOM=MOMENTARY

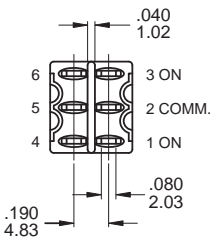
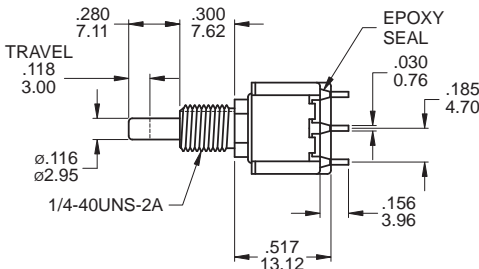
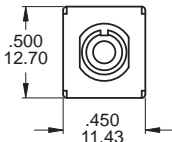
POLE OPTIONS



7M(Lock)
Pushbutton Switches

SPDT

Part No. Shown : 7MSLP1B60M1QE

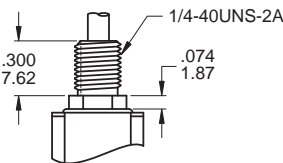
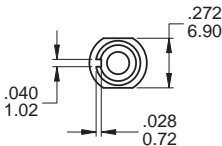


DPDT

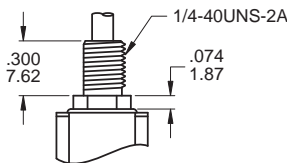
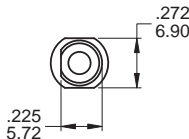
Part No. Shown : 7MDLP1B60M1QE

BUSHING OPTIONS

B60 THD STD
B70 NON-THD



B61 THD STD
B71 NON-THD

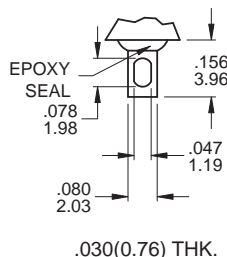


7M Series

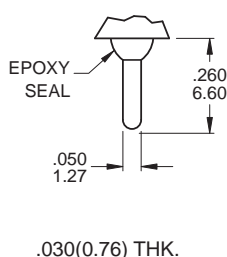
Snap-Acting Pushbutton Switches

TERMINATION OPTIONS

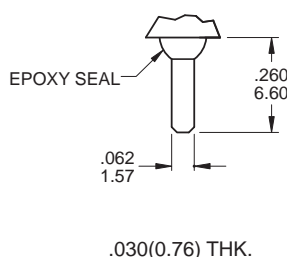
M1 Solder lug



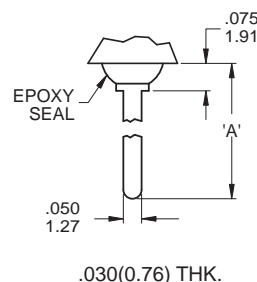
M2 PC Thru-hole



M3 Quick connect



M5 Wire Wrap



OTHER TERMINATION OPTIONS

M6 Right angle P.C. Mount

M7 Right angle P.C. Mount

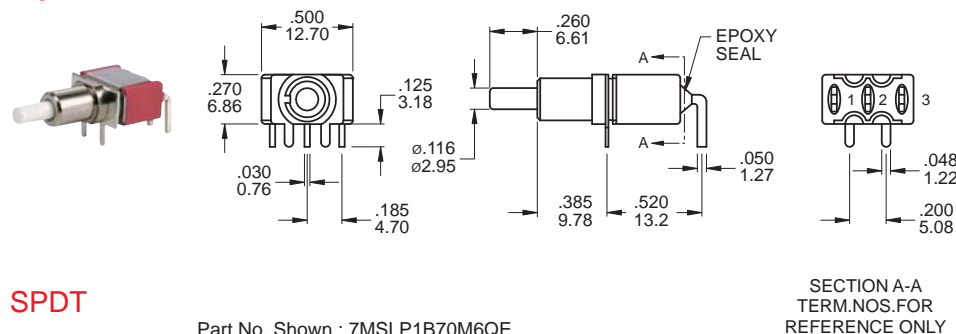
VS2 Vertical bracket P.C. Mount

VS3 Vertical bracket P.C. Mount

OPTION CODE	DIM. 'A'
M51	.750 (19.50)
M52	.964 (24.48)
M53	.426 (10.80)
M54	.650 (16.50)

TERMINATION OPTIONS

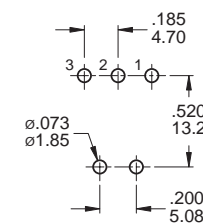
M6



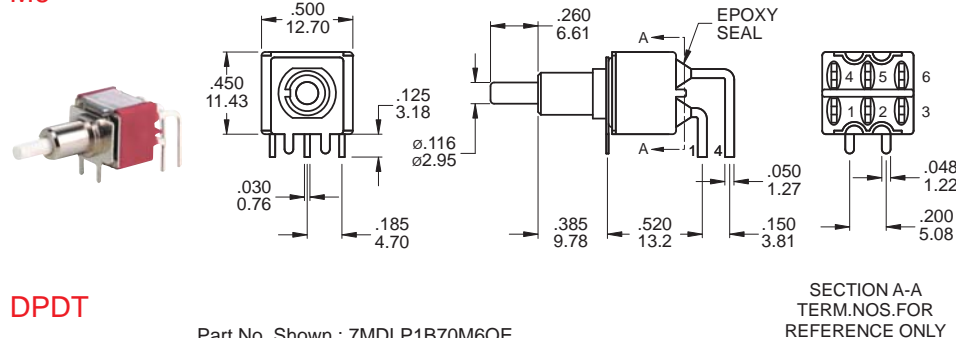
SPDT

Part No. Shown : 7MSLP1B70M6QE

P.C. MOUNTING



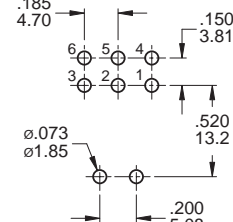
M6



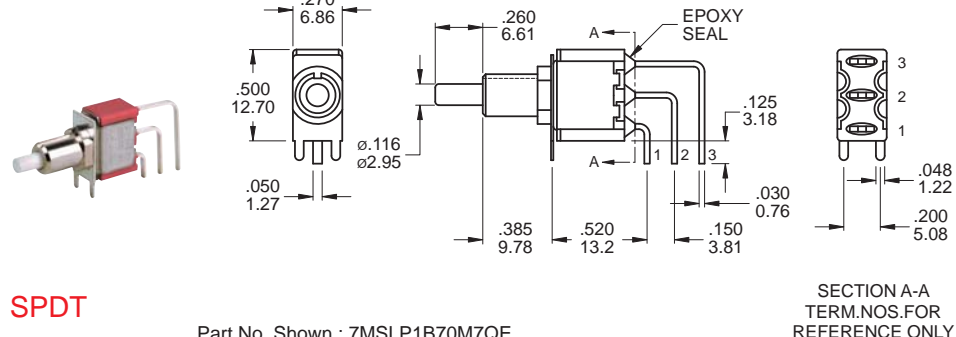
DPDT

Part No. Shown : 7MDLP1B70M6QE

P.C. MOUNTING



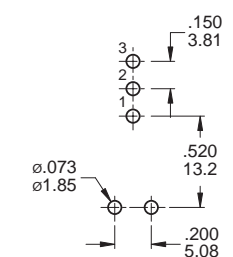
M7



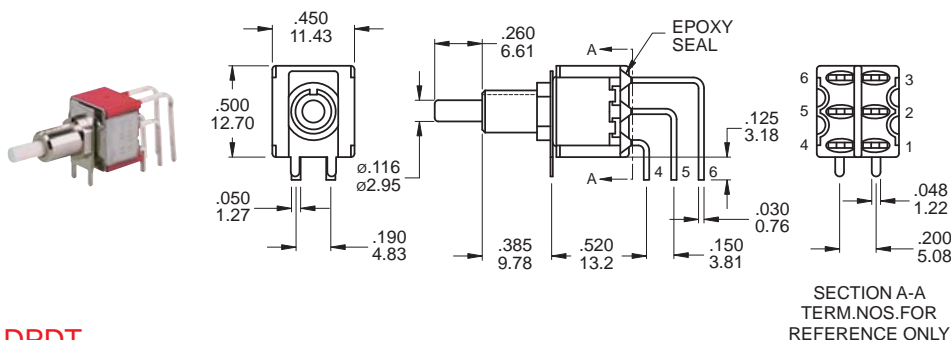
SPDT

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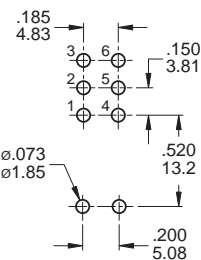
P.C. MOUNTING



M7



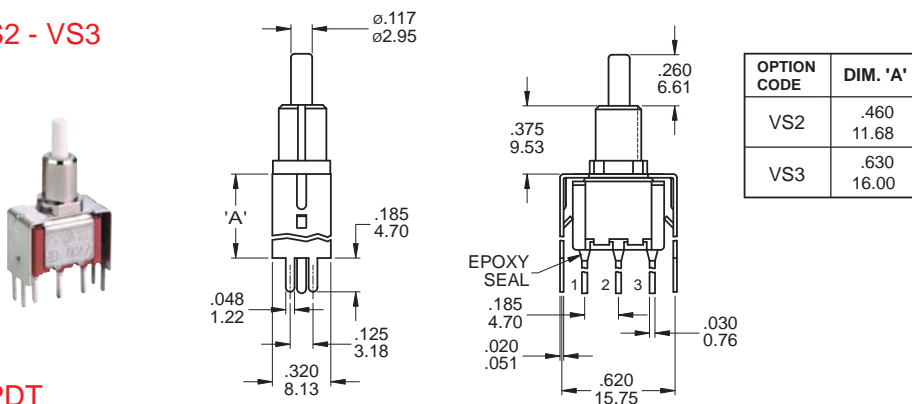
P.C. MOUNTING



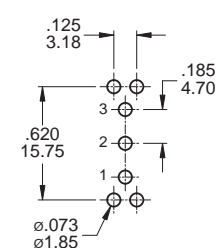
DPDT

Part No. Shown : 7MDLP1B70M7QE

VS2 - VS3



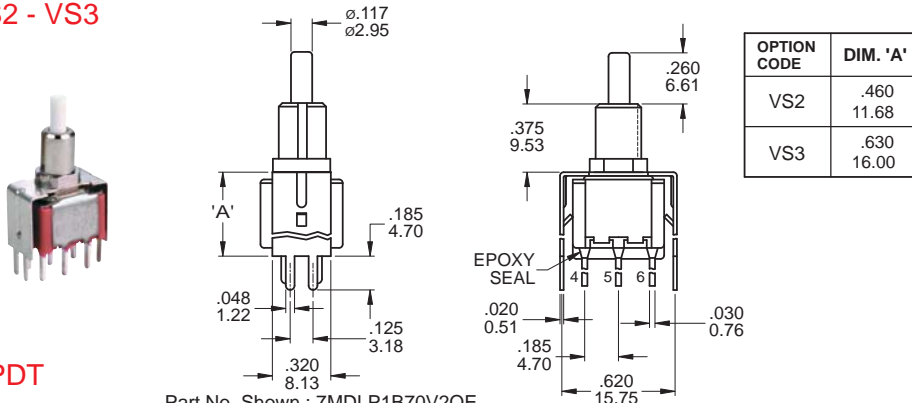
P.C. MOUNTING



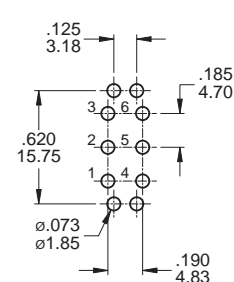
SPDT

Part No. Shown : 7MSLP1B70V2QE

VS2 - VS3



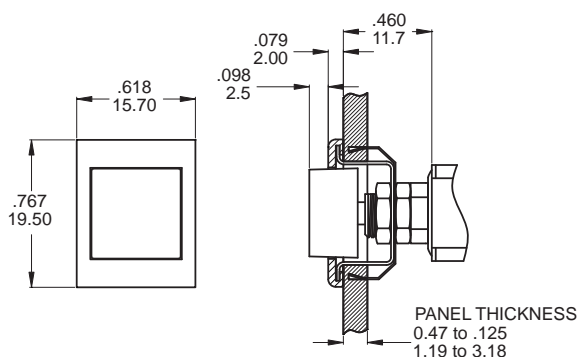
P.C. MOUNTING



DPDT

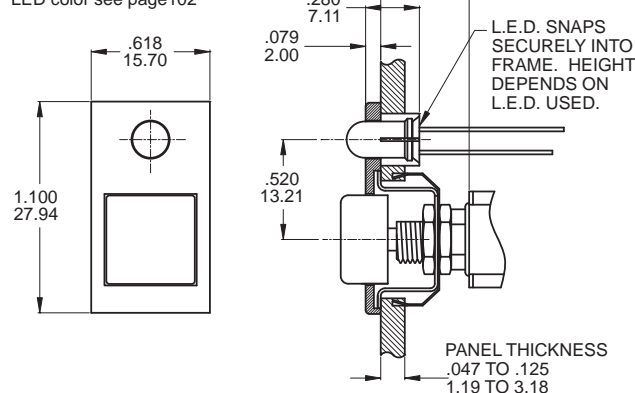
Part No. Shown : 7MDLP1B70V2QE

AP2 CAP & FRAME



AP5 CAP & FRAME

LED color see page102



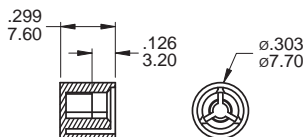
7M Series

Snap-Acting Pushbutton Switches

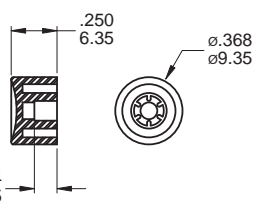
CAP OPTIONS

For 7M,7A Series Only, Cap Standard Clors: White, Black, Green, Red

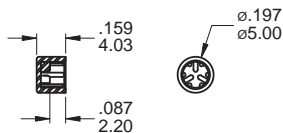
C1



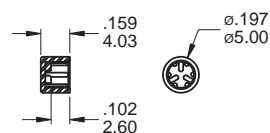
C2



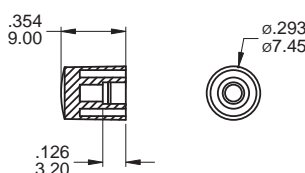
C3



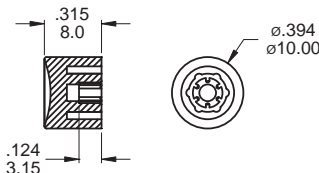
C4



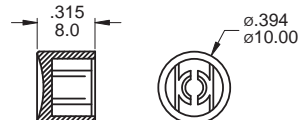
C6



C7

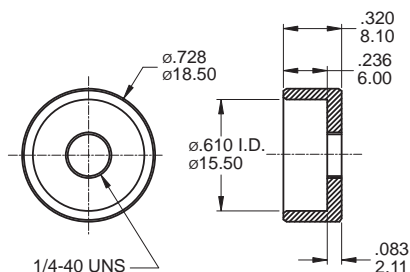


KC for PC actuator only



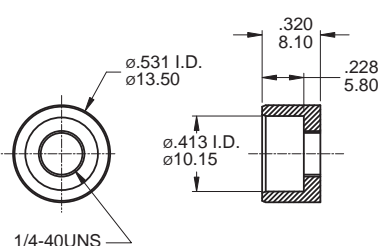
DRESS NUTS

HDW21



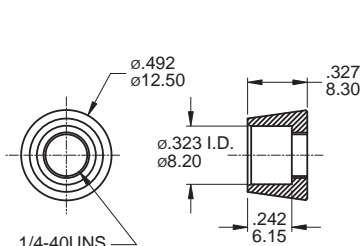
MNU-1M19

HDW22 for C2 Cap



MNU-1M20

HDW23 for C1 Cap



MNU-1M21

CONTACT MATERIAL OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Q = Silver	3 Amps with resistant load @ 120VAC or 28VDC 1 Amps with resistant load @ 250VAC
S	※ 7MSL/7MDL with gold over silver for plating	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)