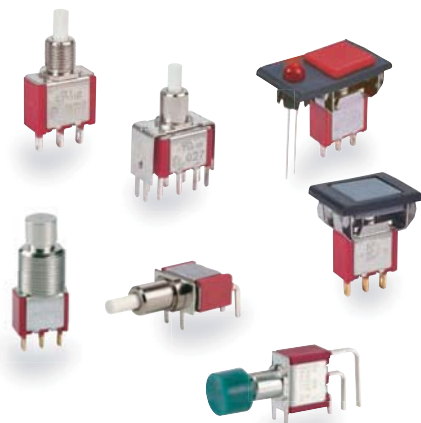




SPECIFICATIONS

CONTACT RATING: Dependent upon contact material see page 107.

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

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

INSULATION RESISTANCE: 1,000 MΩ 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.

BUSHING: Brass,nickel plated.

HOUSING: Stainless Steel.

CONTACT: Copper alloy, silver or gold plated. (See Page 107)

HOW TO ORDER



7M
Pushbutton Switches

MODEL NO.	ACTUATOR	BUSHING	FRAME COLOR	CAP COLOR	TERMINATIONS	CONTACT MATERIAL	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-(flar)			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	CONTACT MATERIAL 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 F Halogen Free+RoHS	CAPS C1 C2 C3 C4 C6 C7 KC
7MSL On-On 7MDL On-On	ACTUATOR P1 5.54 high PA 5.54 high (Metal material) PB 7.00 high,15/32 bushing PC 8.75 high (1/4-40 UNS-2A)	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)	FRAME COLOR See below	CAP COLOR See below					

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

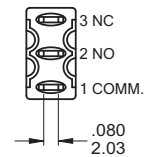
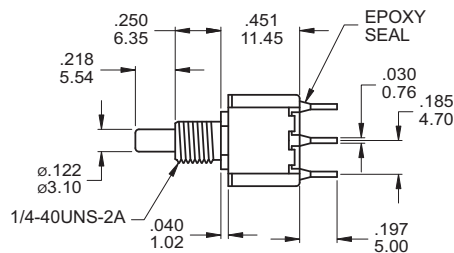
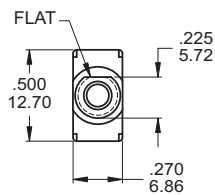
SWITCH FUNCTION

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 NC 3 • 1 (COMM) • 2 NO	1-2 NC 3 • 1 (COMM) • 2 NO
DP	Q2727	7MD7	ON	MOM	1-3,4-6 NC 3 • 1 (COMM) • 2 NO NC 6 • 4 • 5 NO	1-2,4-5 NC 3 • 1 (COMM) • 2 NO NC 6 • 4 • 5 NO

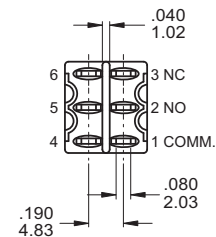
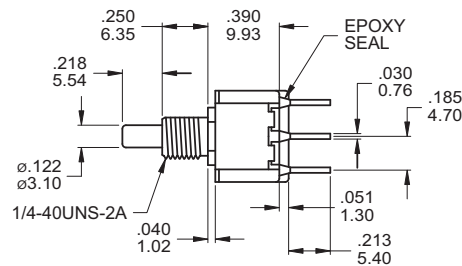
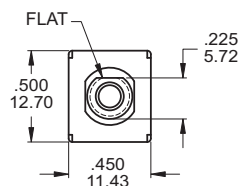
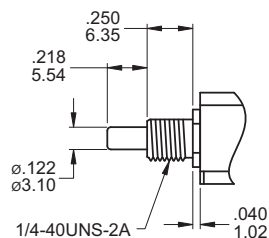
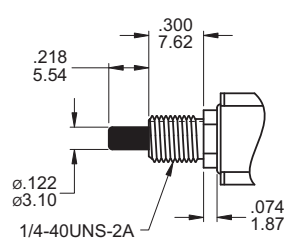
MOM=MOMENTARY

POLE OPTIONS**SPDT**

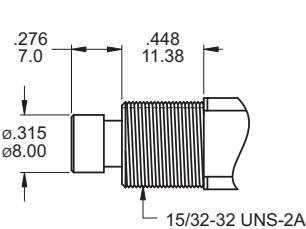
Part No. Shown : 7MS7P1B11M1QE

**DPDT**

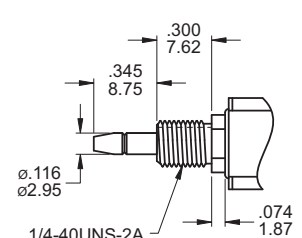
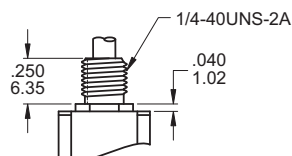
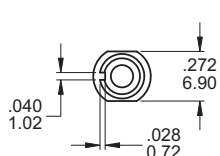
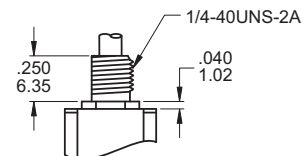
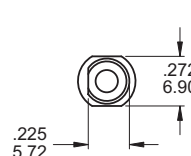
Part No. Shown : 7MD7P1B11M1QE

**ACTUATOR OPTIONS****P1****PA**

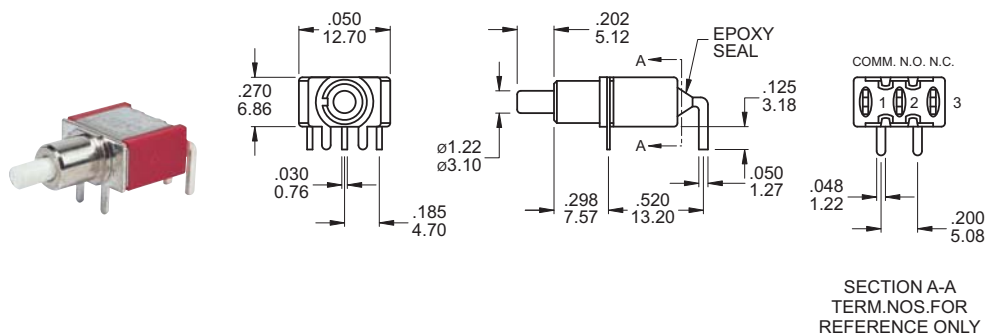
handle, metal material

PBB13

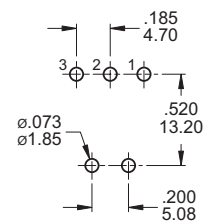
handle, metal material

PCB60handle, metal material
* PC Actuator only for KC Cap**BUSHING OPTIONS****B10 THD STD
B20 NON-THD****B11 THD STD
B21 NON-THD**

M6



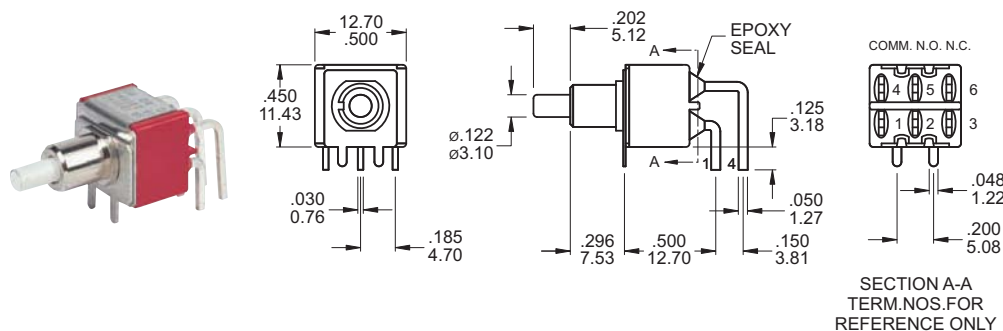
P.C. MOUNTING



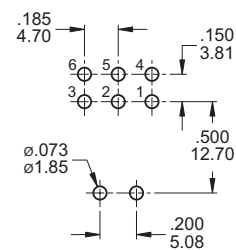
SPDT

Part No. Shown : 7MS7P1B20M6QE

M6



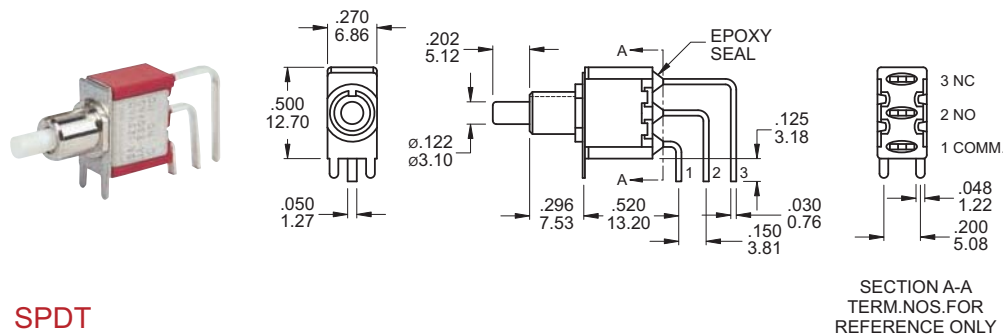
P.C. MOUNTING



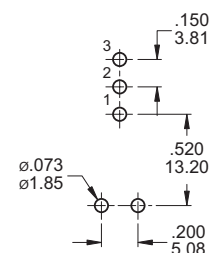
DPDT

Part No. Shown : 7MD7P1B20M6QE

M7



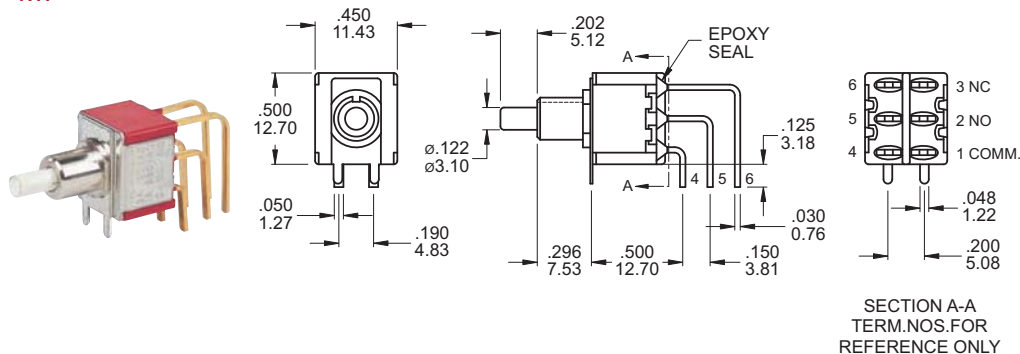
P.C. MOUNTING



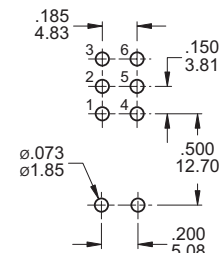
SPDT

Part No. Shown : 7MS7P1B20M7QE

M7



P.C. MOUNTING



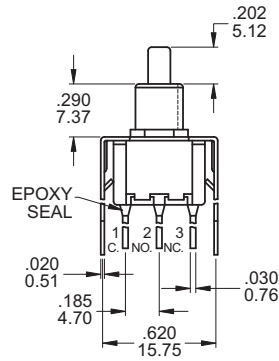
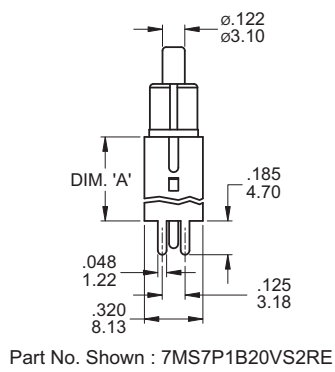
DPDT

Part No. Shown : 7MD7P1B20M7RE

VS2 - VS3

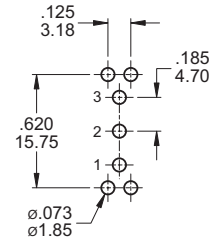


SPDT



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

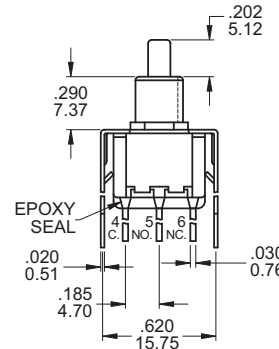
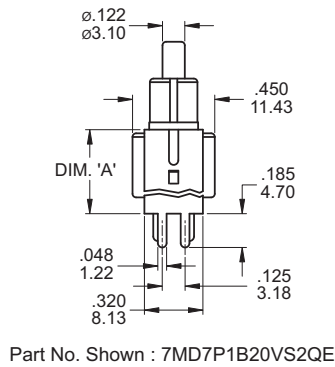
P.C. MOUNTING



VS2 - VS3

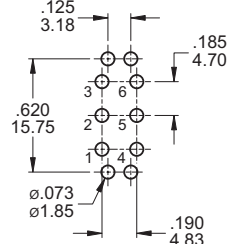


DPDT



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

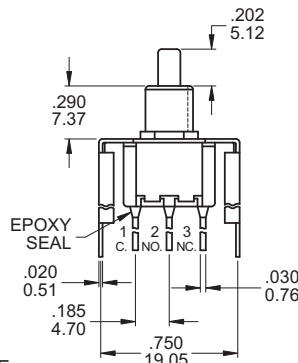
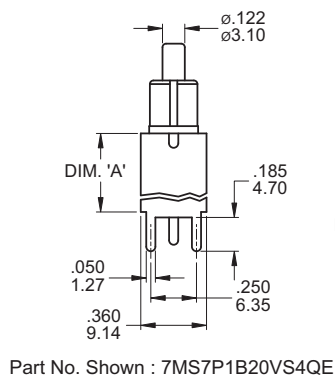
P.C. MOUNTING



VS4 - VS5

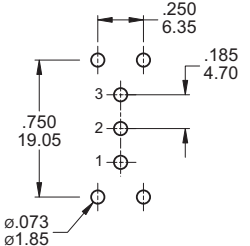


SPDT



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

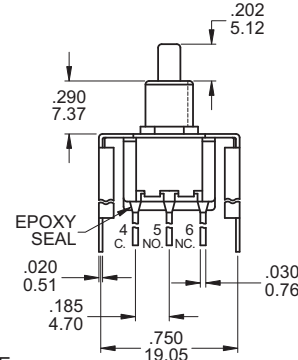
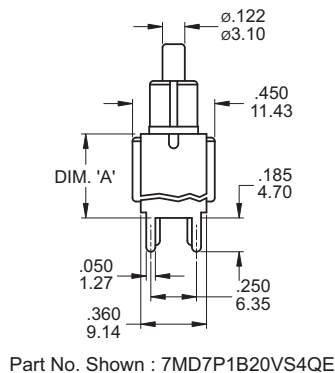
P.C. MOUNTING



VS4 - VS5

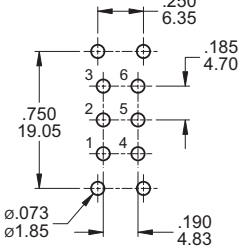


DPDT



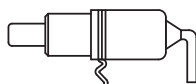
OPTION CODE	DIM. 'A'
VS4	.460 11.68
VS5	.630 16.00

P.C. MOUNTING

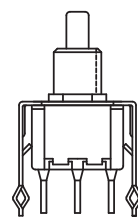


SNAP-IN TERMINATION OPTIONS

M6N

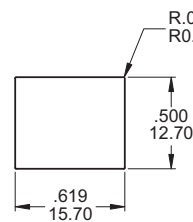
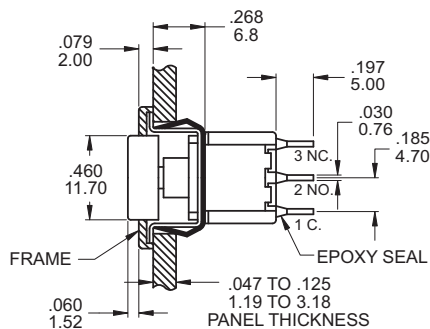
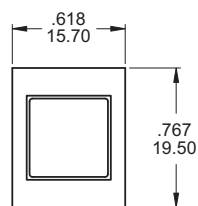


V2N



PANEL MOUNT

AP2 CAP & FRAME / AP1 CAP ONLY



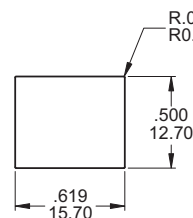
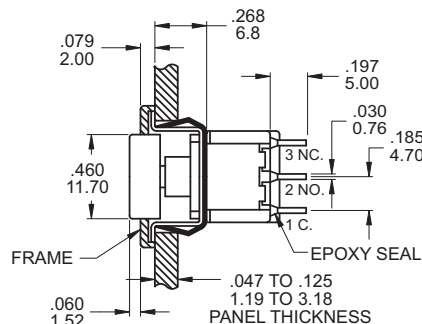
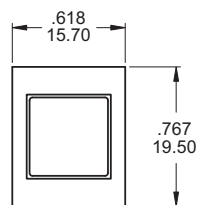
INCREASE TO .620/.625 15.75/15.88
FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

SPDT

Part No. Shown : 7MS7AP223M1QE

AP2 CAP & FRAME / AP1 CAP ONLY



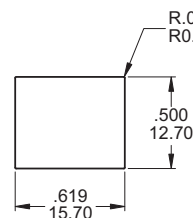
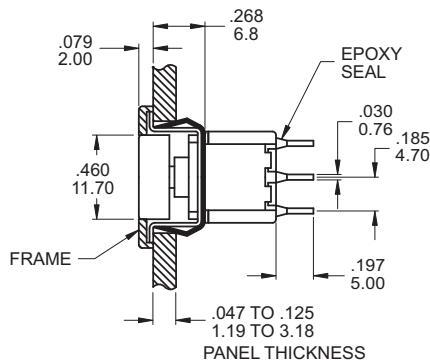
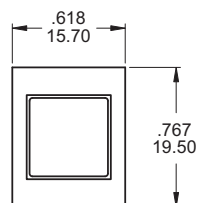
INCREASE TO .620/.625 15.75/15.88
FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

DPDT

Part No. Shown : 7MD7AP223M1QE

AP4 CAP & FRAME / AP3 CAP ONLY



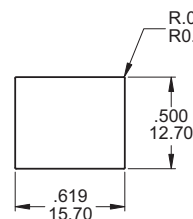
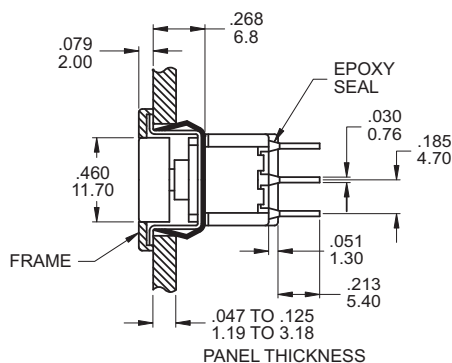
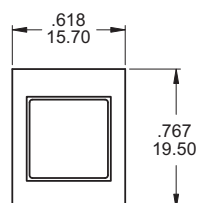
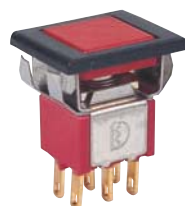
INCREASE TO .620/.625 15.75/15.88
FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

SPDT

Part No. Shown : 7MS7AP429M1RE

AP4 CAP & FRAME / AP3 CAP ONLY



INCREASE TO .620/.625 15.75/15.88
FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

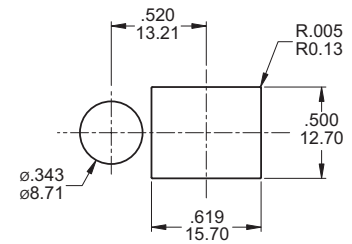
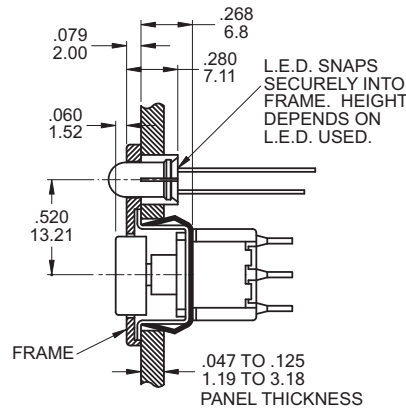
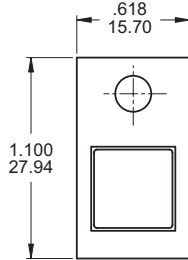
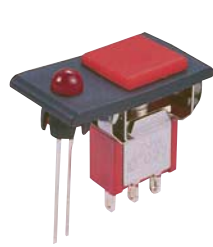
DPDT

Part No. Shown : 7MD7AP423M1RE



7M
Pushbutton Switches

AP5 CAP & FRAME



PANEL LAYOUT

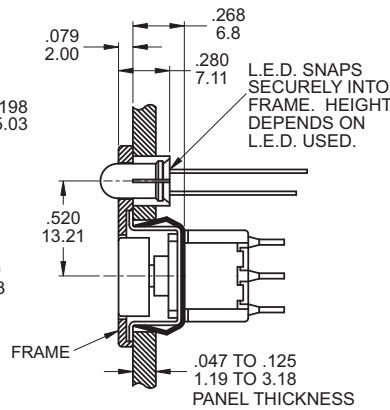
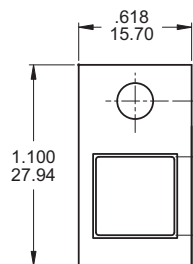
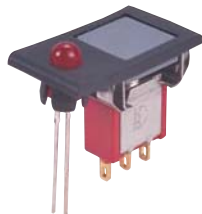
SPDT

Part No. Shown : 7MS7AP523M1QE

CAP AND FRAME COLORS

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

AP6 CAP & FRAME



LED COLORS

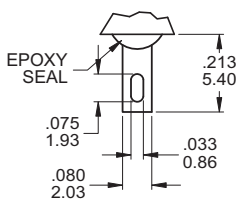
OPTION CODE	COLOR
3	RED(std)
4	ORANGE
6	GREEN

SPDT

Part No. Shown : 7MS7AP629M1RE

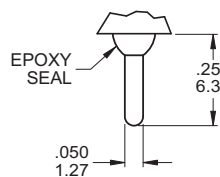
TERMINATION OPTIONS

M1 SOLDER LUG



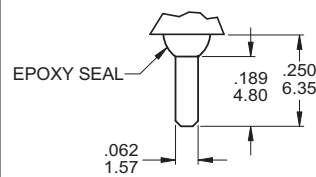
.030(0.76) THK.

M2 PC THRU-HOLE



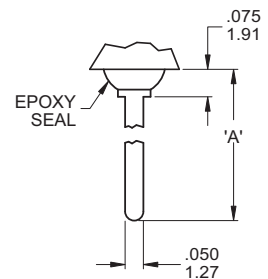
.030(0.76) THK.

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'
M5-1	.750 (19.50)
M5-2	.964 (24.48)
M5-3	.426 (10.80)
M5-4	.650 (16.50)



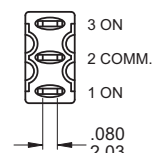
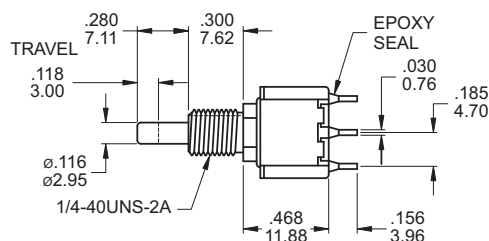
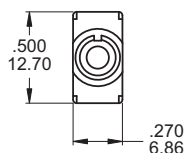
7M
Pushbutton Switches

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

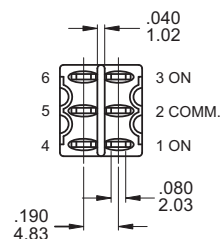
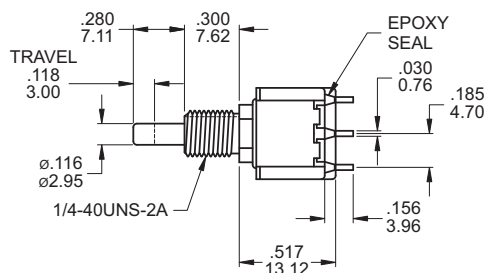
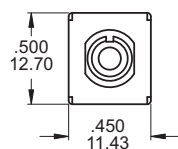
MOM=MOMENTARY

POLE OPTIONS



SPDT

Part No. Shown : 7MSLP1B60M1QE

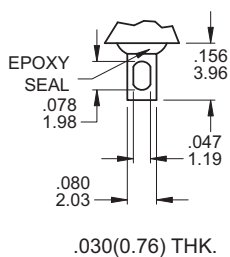


DPDT

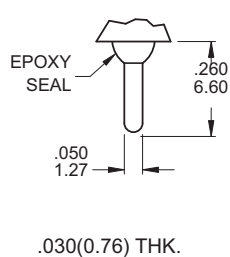
Part No. Shown : 7MDLP1B60M1QE

TERMINATION OPTIONS

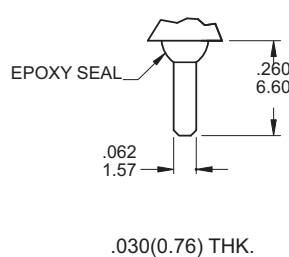
M1 SOLDER LUG



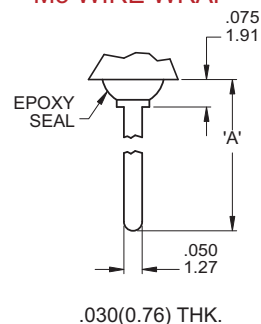
M2 PC THRU-HOLE



M3 QUICK CONNECT



M5 WIRE WRAP



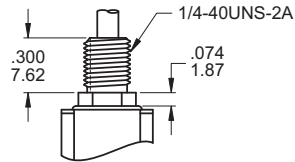
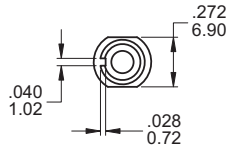
OTHER TERMINATION OPTIONS

- M6 RIGHT ANGLE P.C. MOUNT
- M7 RIGHT ANGLE P.C. MOUNT
- VS2 VERTICAL BRACKET P.C. MOUNT
- VS3 VERTICAL BRACKET P.C. MOUNT

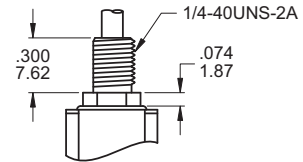
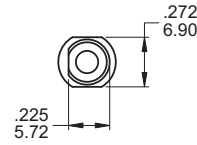
OPTION CODE	DIM. 'A'
M5-1	.750 (19.50)
M5-2	.964 (24.48)
M5-3	.426 (10.80)
M5-4	.650 (16.50)

BUSHING OPTIONS

B60 THD STD
B70 NON-THD

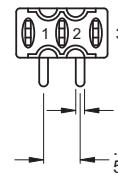
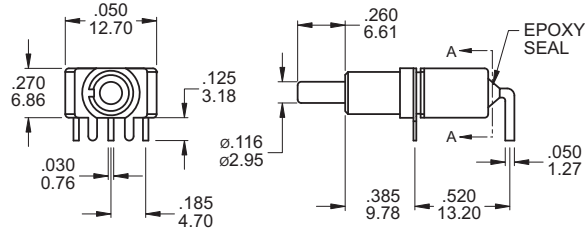


B61 THD STD
B71 NON-THD



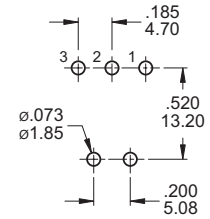
TERMINATION OPTIONS

M6



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

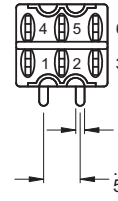
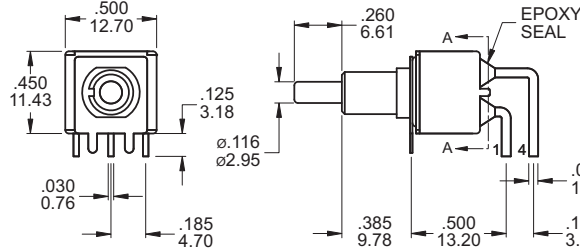
P.C. MOUNTING



SPDT

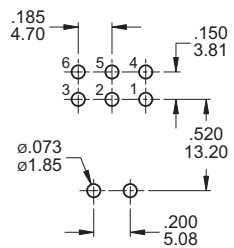
Part No. Shown : 7MS7P1B20M6QE

M6



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

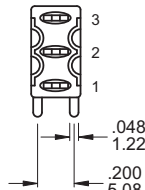
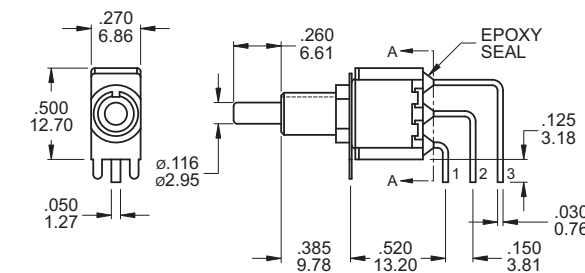
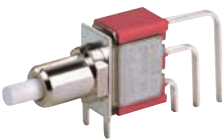
P.C. MOUNTING



DPDT

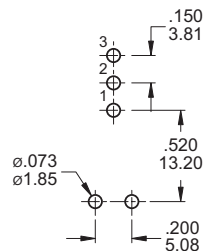
Part No. Shown : 7MD7P1B20M6QE

M7



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

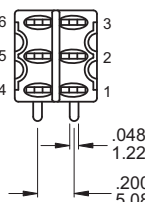
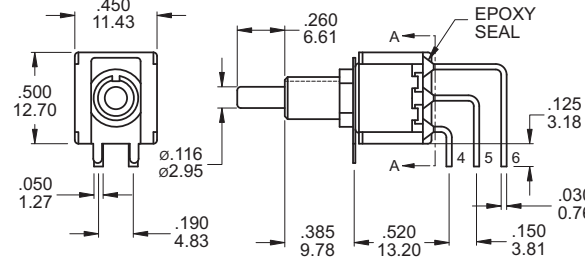
P.C. MOUNTING



SPDT

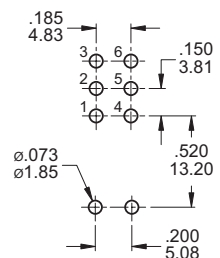
Part No. Shown : 7MS7P1B20M7QE

M7



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

P.C. MOUNTING



DPDT

Part No. Shown : 7MD7P1B20M7RE

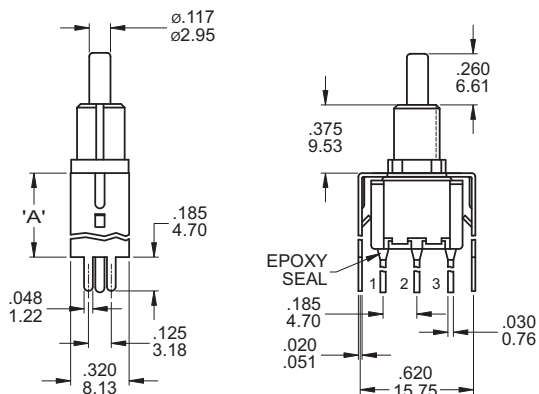


7M (Lock)
Pushbutton Switches

7M SERIES

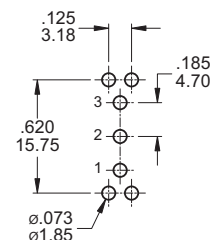
Snap-Acting Pushbutton Switches

VS2 - VS3



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

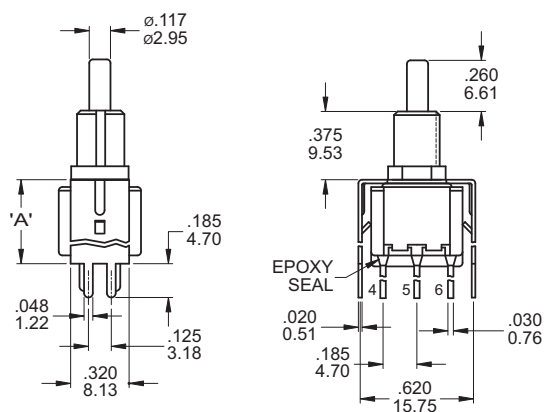
P.C. MOUNTING



SPDT

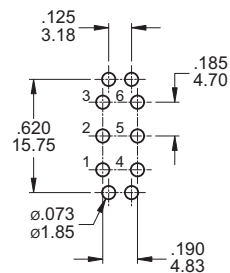
Part No. Shown : 7MSLP1B70V2QE

VS2 - VS3



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

P.C. MOUNTING

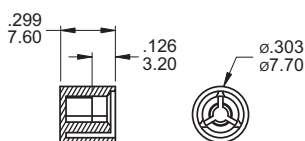


DPDT

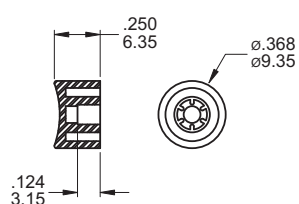
Part No. Shown : 7MDLP1B70V2QE

CAP OPTIONS

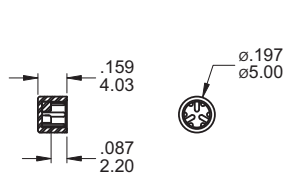
C1



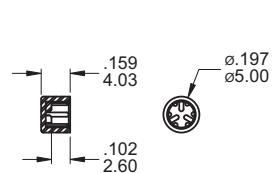
C2



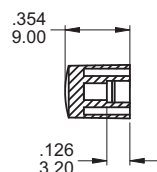
C3



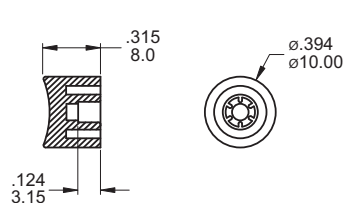
C4



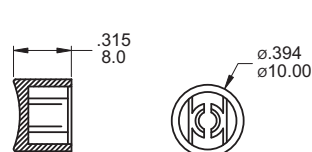
C6



C7

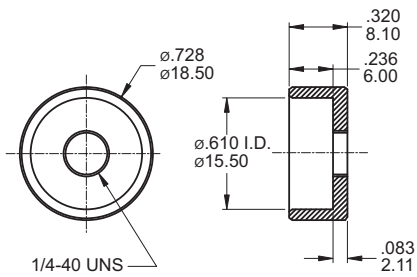
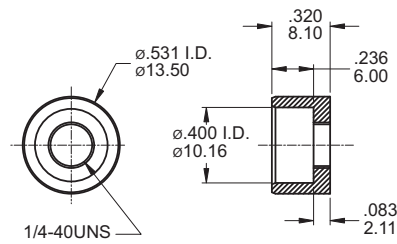


KC

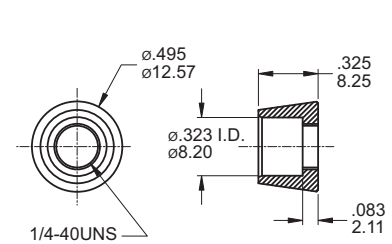


For 7M,7A Series ONLY

CAP Colors: White, Black, Green, Red

DRESS NUTS**HDW21****HDW22**

FOR CAP:C2

HDW23

FOR CAP:C1

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		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	

7M (Lock)
Pushbutton
Switches**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 : $260 \pm 5^\circ\text{C}$

Duration of Solder Immersion : Max 5 sec.

(PCB is 1.6mm in thickness)

SOLDERING : Vapor phase