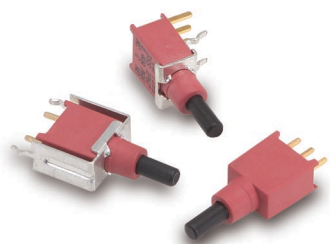
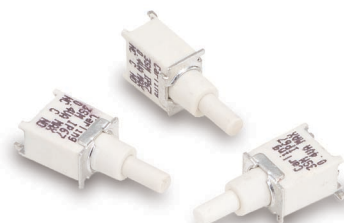




3S1-Series
Sub-Miniature
Pushbutton Switch



3SS-Series
Sealed Sub-Miniature
Pushbutton Switch



3SM-Series
Sealed Surface
Mount Sub-Miniature
Pushbutton Switch

Specifications

Contact Rating	refer to ordering scheme
Electrical Life	50,000 make & break cycles @ full load
Contact Resistance.	20 mΩ max. initial @ 2-4 VDC 100mA for both silver & gold plated contacts.
Insulation Resistance . . .	1000 MΩ min.
Dielectric Strength	1500 Volts RMS @ sea level
Operating Temperature . . .	-30°C to +85°C
Index of Protection	3SS & 3SM-Series: IP67
Solder Heat Resistance. . .	MIL-STD-202, Method 210
Actuator Travel	.25°

Materials

Case	UL 94-0 3S1-Series: Dially phthalate (DAP) 3SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized 3SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized
Plunger.	3S1-Series: Thermoplastic polyester, black 3SS-Series: Thermoplastic polyester (UL 94V-0), with internal o-ring seal 3SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized
Bushing	3S1-Series: Brass, nickel plated 3SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0) 3SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0)
Housing.	Stainless Steel
Switch Support	Brass, tin plated
Terminal Seal	Epoxy

3S1-Series Ordering Scheme

3S1	-	SP	9	-	B6	-	M7	-	R	E
1		2	3		4		5		6	7
Series		Poles	Circuit		Bushing		Termination		Contact	Seal

1 SERIES

3S1 Sub-Miniature Pushbutton Switch

2 POLES

SP single pole

3 CIRCUIT

() - momentary

8 ON (ON)
9 OFF (ON)

4 BUSHING

B5 10-48 Threaded
B6 Unthreaded "D"
B7 Unthreaded
B8 1/4-40 Threaded "D"
B9 Flush Bushing
B0 1/4" Unthreaded "D"

5 TERMINATION

M1 Solder Lug
M2 PCB
M6 PC Mount, 90° horizontal
M61 Snap-In, 90° horizontal
M7 PC Mount, 90° vertical
M71 Snap-In, 90° vertical
VS2 PC Mount, U bracket, .620 mounting x .460 high
VS1 Snap-In, U bracket

6 CONTACT

Material	Terminal Plating	Rating
G silver ¹	gold over silver ³	1A@125VAC or 28VDC
K gold ²	tin-lead ⁴	0.4VA max. @20V max (AC/DC)
P silver ¹	tin-lead ⁴	1A@125VAC or 28VDC
Q silver ¹	silver ¹	1A@125VAC or 28VDC
R gold ²	gold ²	0.4VA max. @20V max (AC/DC)

NOTE:

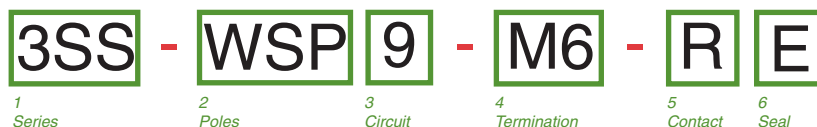
Tin-lead option available with PC type terminations only.

- Moveable contact & terminals: copper alloy, silver plate
- Moveable contact & terminals: copper alloy with gold plate over nickel plate
- Terminals: silver plated with outer layer in gold plating
- Outer terminals: copper alloy with tin-lead over nickel plate

7 EPOXY SEAL

E epoxy seal

3SS-Series Ordering Scheme



1 SERIES 3SS Sealed Sub-Miniature Pushbutton Switch		
2 POLES WSP single pole WDP double pole		
3 CIRCUIT () - momentary 8 ON (ON) 9 OFF (ON)		
4 TERMINATION M2 PCB M6 PC Mount, 90° horizontal M61 Snap-In, 90° horizontal M7 PC Mount, 90° vertical M71 Snap-In, 90° vertical VS2 PC Mount, U bracket VS21 Snap-In, U bracket		

5 CONTACT			
	<i>Material</i>	<i>Terminal Plating</i>	<i>Rating</i>
G	silver ¹	gold over silver ³	1A@125VAC or 28VDC IP67
K	gold ²	tin-lead ⁴	0.4VA max. @20V max (AC/DC) IP67
P	silver ¹	tin-lead ⁴	1A@125VAC or 28VDC IP67
R	gold ²	gold ²	0.4VA max. @20V max (AC/DC) IP67
NOTE: Tin-lead option available with PC type terminations only.			
1 Moveable contact & terminals: copper alloy, silver plate			
2 Moveable contact & terminals: copper alloy with gold plate over nickel plate			
3 Terminals: silver plate with outer layer in gold plating			
4 Outer terminals: copper alloy with tin-lead over nickel plate			
6 EPOXY SEAL E epoxy seal			

3SM-Series Ordering Scheme



1 SERIES 3SM Sealed Surface Mount Pushbutton Switch		
2 POLES SP single pole DP double pole		
3 CIRCUIT () - momentary 8 ON (ON) 9 OFF (ON)		
4 TERMINATION M6 Surface Mount, 90° flat M7 Surface Mount, 90° vertical S6 Surface Mount, 90° horizontal		

5 CONTACT			
	<i>Material</i>	<i>Terminal Plating</i>	<i>Rating</i>
G	silver ¹	gold over silver ³	1A@125VAC or 28VDC IP67
K	gold ²	tin-lead plated ⁴	0.4VA max. @20V max (AC/DC) IP67
P	silver ¹	tin-lead plated ⁴	1A@125VAC or 28VDC IP67
R	gold ²	gold plated ²	0.4VA max. @20V max (AC/DC) IP67
NOTE: Tin-lead option available with PC type terminations only.			
1 Moveable contact & terminals: copper alloy, silver plate			
2 Moveable contact & terminals: copper alloy with gold plate over nickel plate			
3 Terminals: silver plate with outer layer in gold plating			
4 Outer terminals: copper alloy with tin-lead over nickel plate			
6 EPOXY SEAL E epoxy seal			
7 PACKAGING Switches are bulk packed, unless T/R is specified at the end of the part number. T/R tape reel - 500 pieces per reel			

3S-Series Optional Cap

To order accessories assembled on a switch, specify the switch number followed by the accessory part number and the word "assembled".

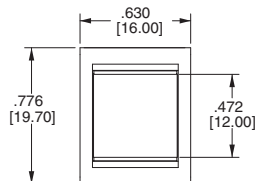
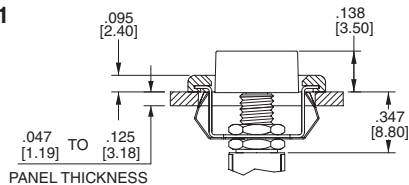
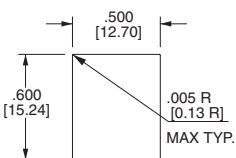
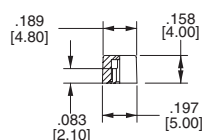
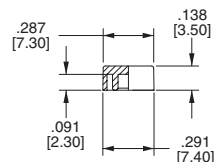
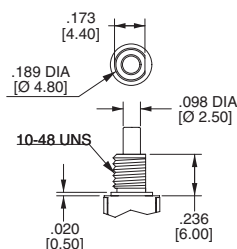
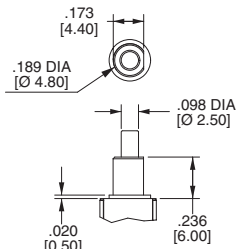
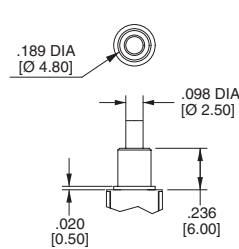
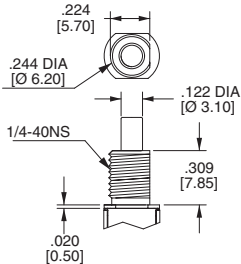
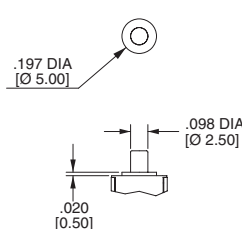
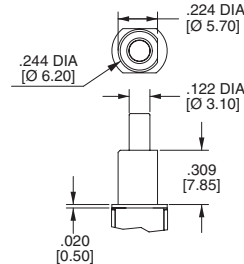
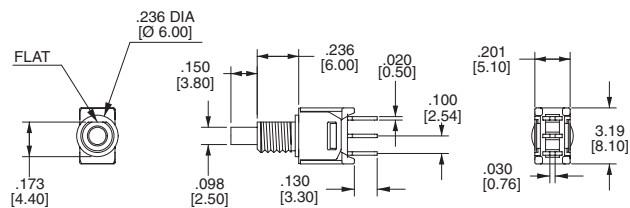
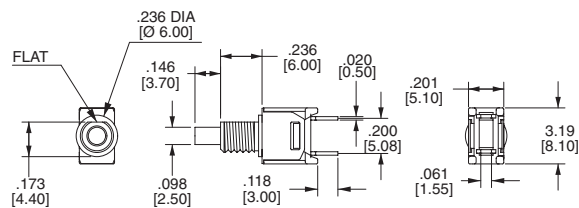
Ex: 3S1-SP9-B6-M7-RE-C23ASSEMBLED

To order accessories in bulk, specify the Series, followed by the accessory. Ex.) 3S1-C13



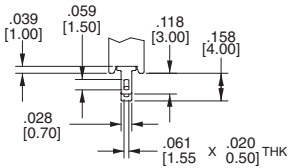
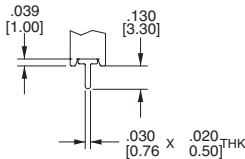
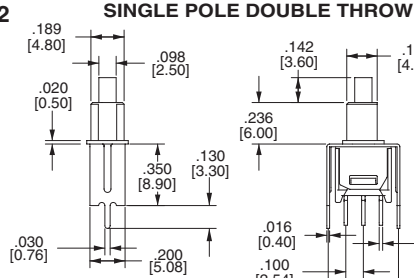
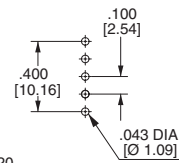
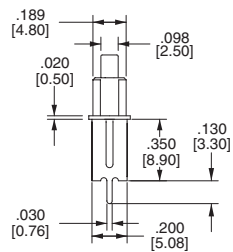
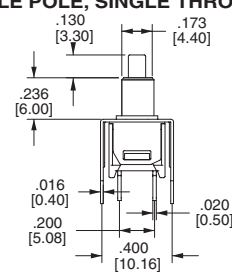
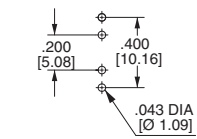
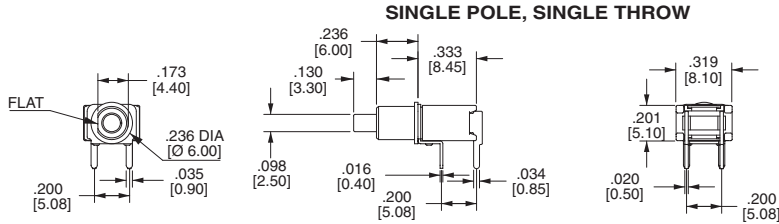
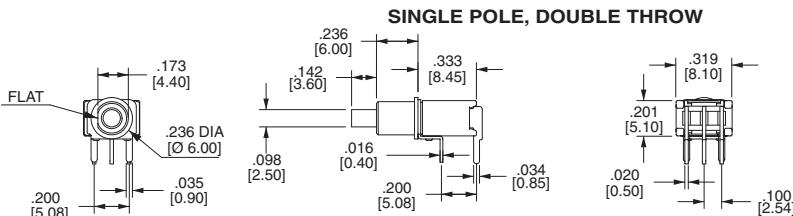
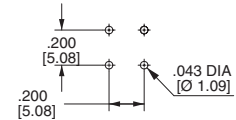
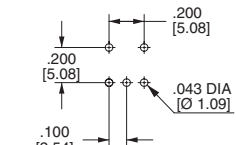
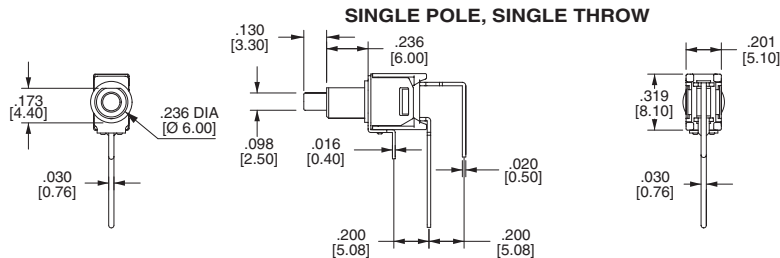
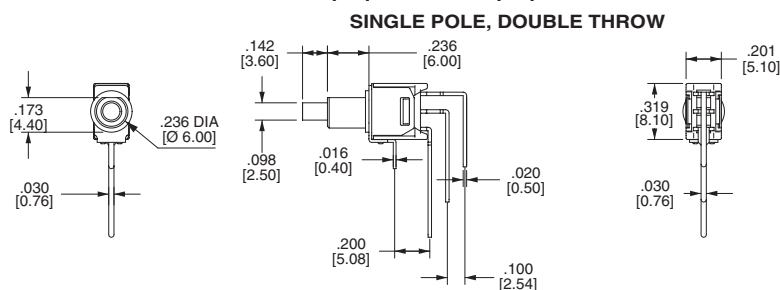
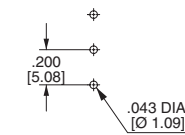
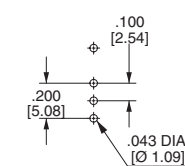
1 SERIES OR SWITCH CATALOG NUMBER 3S1, 3SS or 3SM	
2 CAP SIZE C1 10.6mm C2 7.6mm	

3 CAP COLOR¹			
1	white	5	yellow
2	black	6	green
3	red	7	blue
4	orange		
1 Black, white & red standard. Other colors available. Consult factory.			

3S1-Series Dimensional Specifications: in. [mm]
ACTUATOR
OP1

PANEL MOUNTING

CAP
C1

C2

BUSHING
B5

B6

B7

B8

B9

B0

TERMINATION
SP8
SINGLE POLE DOUBLE THROW

SP9
SINGLE POLE SINGLE THROW


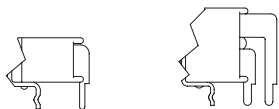
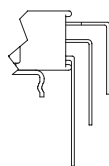
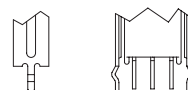
3S1-Series Dimensional Specifications: in. [mm]

TERMINATION

M1

M2

VS2

PC MOUNTING

VS2

SINGLE POLE, SINGLE THROW

PC MOUNTING

M6

SINGLE POLE, SINGLE THROW
PC MOUNTING

SINGLE POLE, DOUBLE THROW
PC MOUNTING

M7

SINGLE POLE, SINGLE THROW
PC MOUNTING

SINGLE POLE, DOUBLE THROW
PC MOUNTING


3SS-Series Dimensional Specifications: in. [mm]

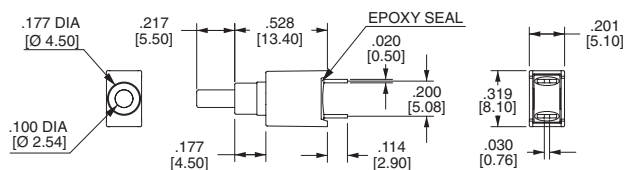
SNAP-IN TERMINATION

M61

M71

VS21


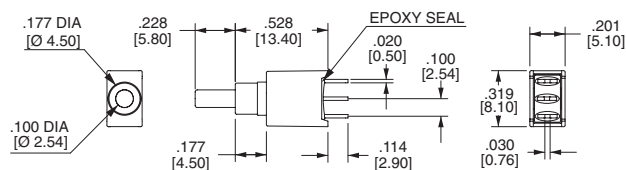
M61, M71, VS21 have the same P.C. mounting but with snap-in bracket.

TERMINATION

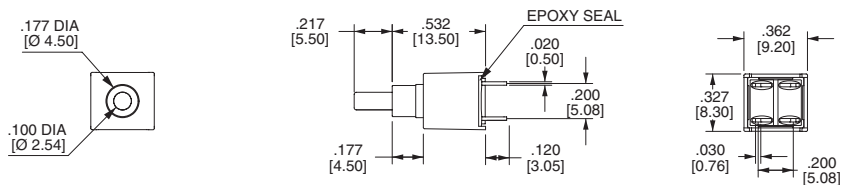
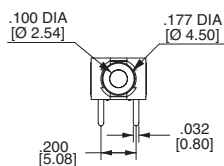
SINGLE POLE, SINGLE THROW



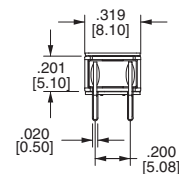
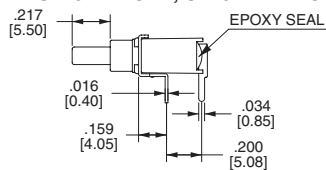
SINGLE POLE, DOUBLE THROW



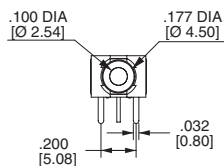
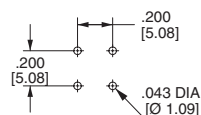
DOUBLE POLE, SINGLE THROW


M6


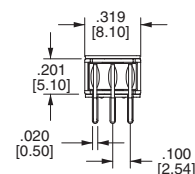
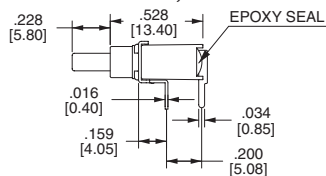
SINGLE POLE, SINGLE THROW



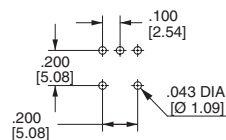
PC MOUNTING



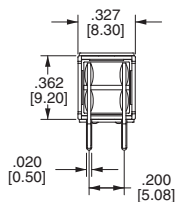
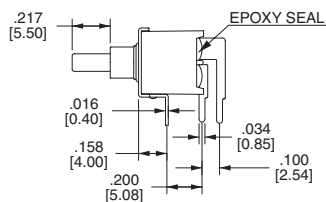
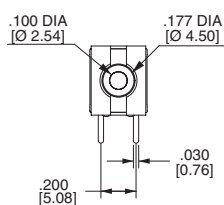
SINGLE POLE, DOUBLE THROW



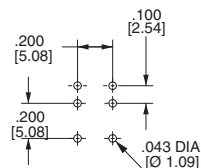
PC MOUNTING



DOUBLE POLE, SINGLE THROW



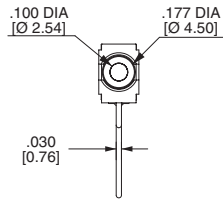
PC MOUNTING



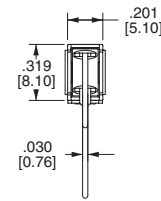
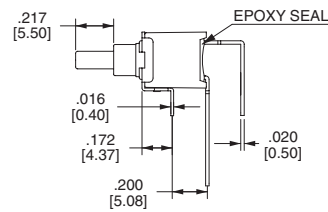
3SS-Series Dimensional Specifications: in. [mm]

TERMINATION

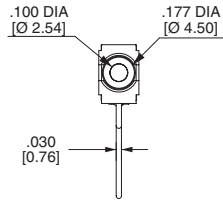
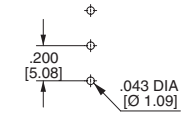
M7



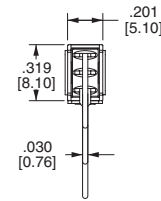
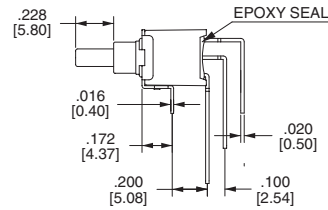
SINGLE POLE, SINGLE THROW



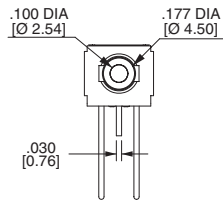
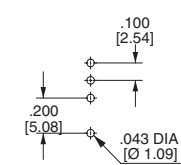
PC MOUNTING



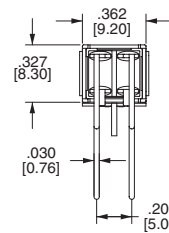
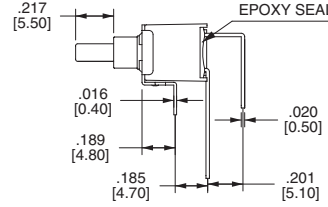
SINGLE POLE, DOUBLE THROW



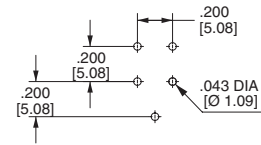
PC MOUNTING



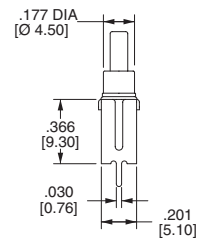
DOUBLE POLE, SINGLE THROW



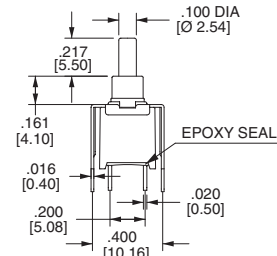
PC MOUNTING



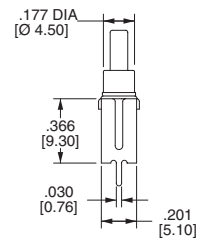
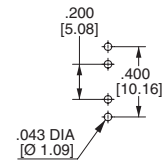
VS2



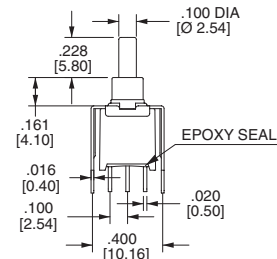
SINGLE POLE, SINGLE THROW



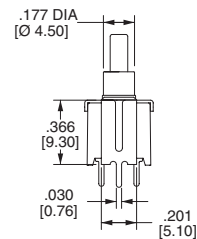
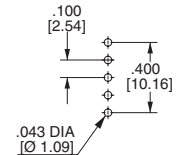
PC MOUNTING



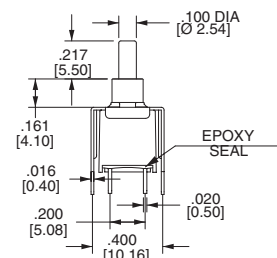
SINGLE POLE, DOUBLE THROW



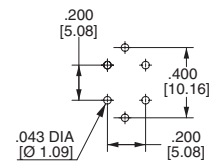
PC MOUNTING



DOUBLE POLE, SINGLE THROW

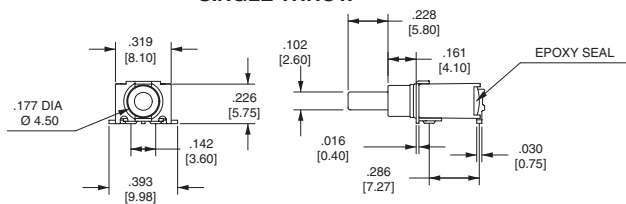
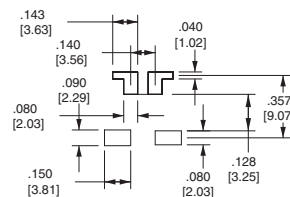
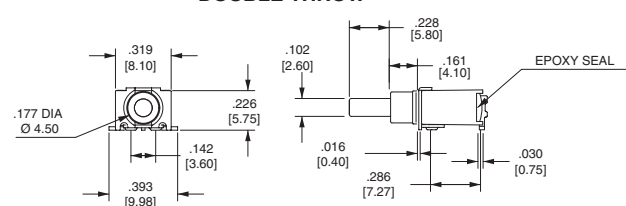
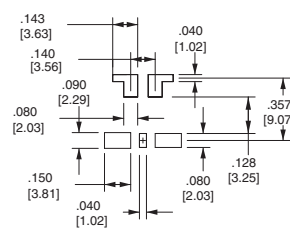
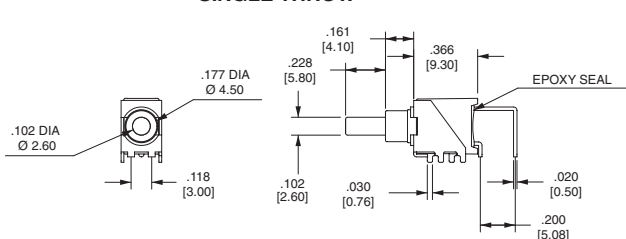
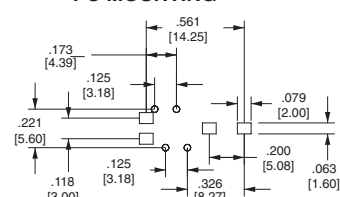
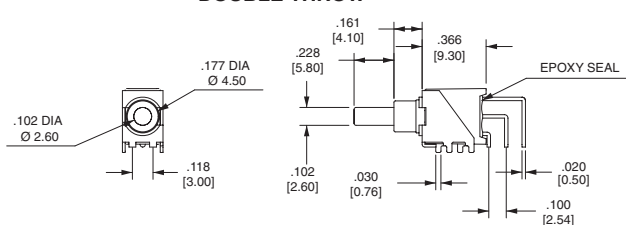
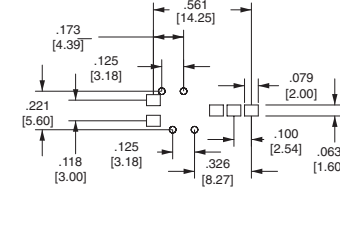
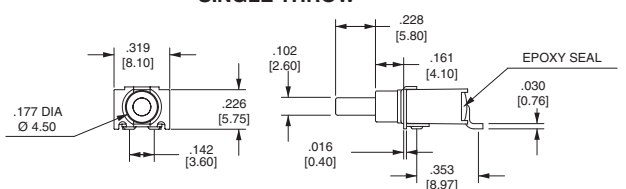
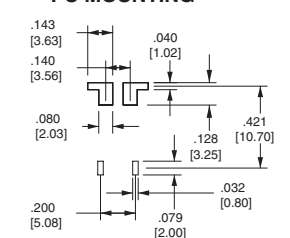
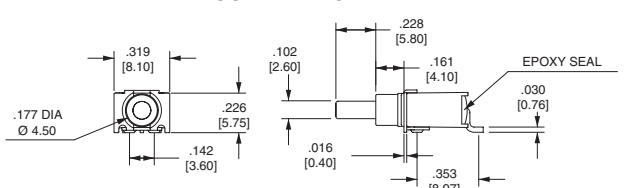
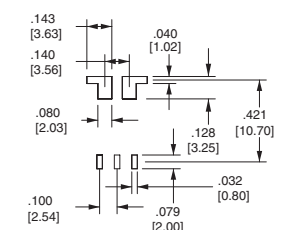


PC MOUNTING



3SM-Series Dimensional Specifications: in. [mm]

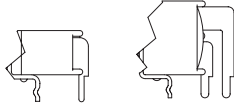
TERMINATION

M6
SINGLE THROW

PC MOUNTING

DOUBLE THROW

PC MOUNTING

M7
SINGLE THROW

PC MOUNTING

DOUBLE THROW

PC MOUNTING

S6
SINGLE THROW

PC MOUNTING

DOUBLE THROW

PC MOUNTING


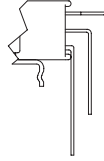
3SM-Series Dimensional Specifications: in. [mm]

SNAP-IN TERMINATION

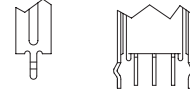
M61



M71

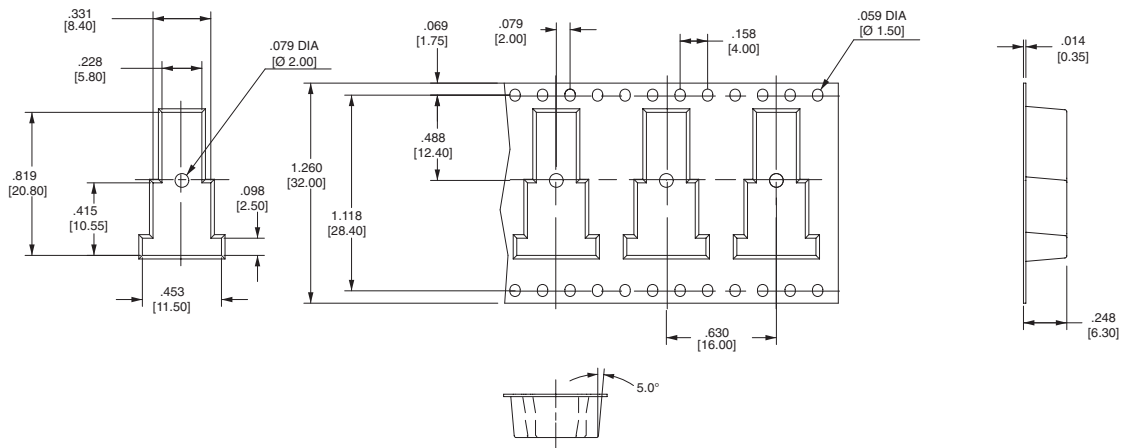


VS21



M61, M71, VS21 have the same P.C. mounting but with snap-in bracket.

REEL TAPING



FOR M6 ONLY