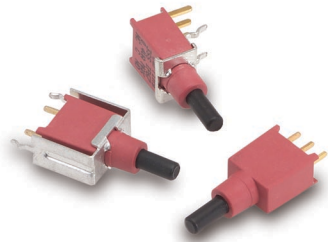
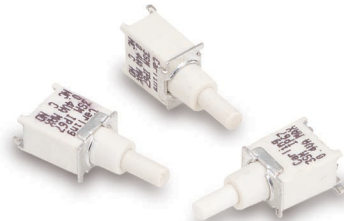


3S1-Series
Sub-Miniature
Pushbutton Switch



3SS-Series
Sealed Sub-Miniature
Pushbutton Switch



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

3S1-Series Ordering Scheme



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"

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

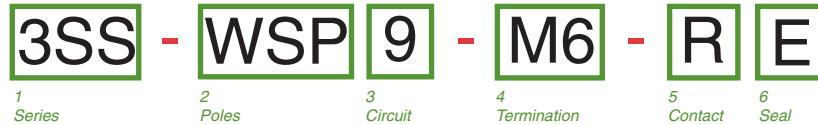
5 TERMINATION		
M1	Solder Lug	
M2	PCB	
M6	PC Mount, 90° horizontal	
M61	Snap-In, 90° horizontal	
M7	PC Mount, 90° vertical	
M71	Snap-In, 90° vertical	
VS2	PC Mount, U bracket, .620 mounting x .460 high	
VS21	Snap-In, U bracket	

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

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 plated with outer layer in gold plating
4 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 <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">8</td> <td style="width: 40%;">ON</td> <td style="width: 10%;"></td> <td style="width: 10%;">(ON)</td> <td style="width: 20%;"></td> </tr> <tr> <td>9</td> <td>OFF</td> <td></td> <td>(OFF)</td> <td></td> </tr> </table>	8	ON		(ON)		9	OFF		(OFF)					
8	ON		(ON)											
9	OFF		(OFF)											
4 TERMINATION <table style="width: 100%; border-collapse: collapse;"> <tr><td>M2</td><td>PCB</td></tr> <tr><td>M6</td><td>PC Mount, 90° horizontal</td></tr> <tr><td>M61</td><td>Snap-In, 90° horizontal</td></tr> <tr><td>M7</td><td>PC Mount, 90° vertical</td></tr> <tr><td>M71</td><td>Snap-In, 90° vertical</td></tr> <tr><td>VS2</td><td>PC Mount, U bracket</td></tr> <tr><td>VS21</td><td>Snap-In, U bracket</td></tr> </table>	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
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 <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="font-size: small;">Material</th> <th style="font-size: small;">Terminal Plating</th> <th style="font-size: small;">Rating</th> <th style="font-size: small;"></th> </tr> </thead> <tbody> <tr> <td>G silver¹</td> <td>gold over silver³</td> <td>1A@125VAC or 28VDC</td> <td>IP67</td> </tr> <tr> <td>K gold²</td> <td>tin-lead⁴</td> <td>0.4VA max. @20V max (AC/DC)</td> <td>IP67</td> </tr> <tr> <td>P silver¹</td> <td>tin-lead⁴</td> <td>1A@125VAC or 28VDC</td> <td>IP67</td> </tr> <tr> <td>R gold²</td> <td>gold²</td> <td>0.4VA max. @20V max (AC/DC)</td> <td>IP67</td> </tr> </tbody> </table> <p style="font-size: x-small;">NOTE: Tin-lead option available with PC type terminations only.</p> <ol style="list-style-type: none"> Moveable contact & terminals: copper alloy, silver plate Moveable contact & terminals: copper alloy with gold plate over nickel plate Terminals: silver plate with outer layer in gold plating Outer terminals: copper alloy with tin-lead over nickel plate 	Material	Terminal Plating	Rating		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
Material	Terminal Plating	Rating																		
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																	
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 <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">8</td> <td style="width: 40%;">ON</td> <td style="width: 10%;"></td> <td style="width: 10%;">(ON)</td> <td style="width: 20%;"></td> </tr> <tr> <td>9</td> <td>OFF</td> <td></td> <td>(OFF)</td> <td></td> </tr> </table>	8	ON		(ON)		9	OFF		(OFF)	
8	ON		(ON)							
9	OFF		(OFF)							
4 TERMINATION <table style="width: 100%; border-collapse: collapse;"> <tr><td>M6</td><td>Surface Mount, 90° flat</td></tr> <tr><td>M7</td><td>Surface Mount, 90° vertical</td></tr> <tr><td>S6</td><td>Surface Mount, 90° horizontal</td></tr> </table>	M6	Surface Mount, 90° flat	M7	Surface Mount, 90° vertical	S6	Surface Mount, 90° horizontal				
M6	Surface Mount, 90° flat									
M7	Surface Mount, 90° vertical									
S6	Surface Mount, 90° horizontal									

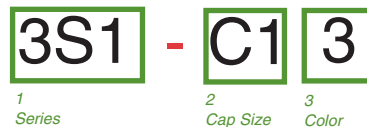
5 CONTACT <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="font-size: small;">Material</th> <th style="font-size: small;">Terminal Plating</th> <th style="font-size: small;">Rating</th> <th style="font-size: small;"></th> </tr> </thead> <tbody> <tr> <td>G silver¹</td> <td>gold over silver³</td> <td>1A@125VAC or 28VDC</td> <td>IP67</td> </tr> <tr> <td>K gold²</td> <td>tin-lead plated⁴</td> <td>0.4VA max. @20V max (AC/DC)</td> <td>IP67</td> </tr> <tr> <td>P silver¹</td> <td>tin-lead plated⁴</td> <td>1A@125VAC or 28VDC</td> <td>IP67</td> </tr> <tr> <td>R gold²</td> <td>gold plated²</td> <td>0.4VA max. @20V max (AC/DC)</td> <td>IP67</td> </tr> </tbody> </table> <p style="font-size: x-small;">NOTE: Tin-lead option available with PC type terminations only.</p> <ol style="list-style-type: none"> Moveable contact & terminals: copper alloy, silver plate Moveable contact & terminals: copper alloy with gold plate over nickel plate Terminals: silver plate with outer layer in gold plating Outer terminals: copper alloy with tin-lead over nickel plate 	Material	Terminal Plating	Rating		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
Material	Terminal Plating	Rating																		
G silver ¹	gold over silver ³	1A@125VAC or 28VDC	IP67																	
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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																	
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



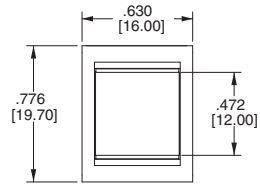
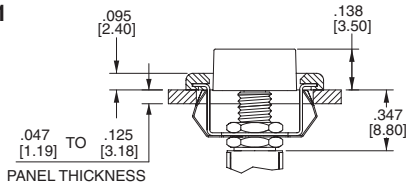
1 SERIES OR SWITCH CATALOG NUMBER 3S1, 3SS or 3SM		
2 CAP SIZE <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">C1 10.6mm</td> <td style="width: 50%;">C2 7.6mm</td> </tr> </table>	C1 10.6mm	C2 7.6mm
C1 10.6mm	C2 7.6mm	

3 CAP COLOR' <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">1 white</td> <td style="width: 50%;">5 yellow</td> </tr> <tr> <td>2 black</td> <td>6 green</td> </tr> <tr> <td>3 red</td> <td>7 blue</td> </tr> <tr> <td>4 orange</td> <td></td> </tr> </table>	1 white	5 yellow	2 black	6 green	3 red	7 blue	4 orange	
1 white	5 yellow							
2 black	6 green							
3 red	7 blue							
4 orange								
1 Black, white & red standard. Other colors available. Consult factory.								

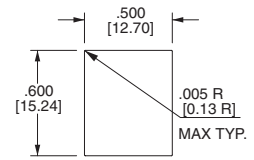
3S1-Series Dimensional Specifications: in. [mm]

ACTUATOR

OP1

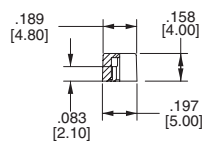


PANEL MOUNTING

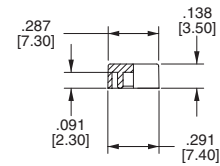


CAP

C1

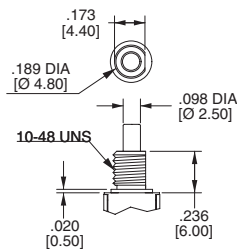


C2

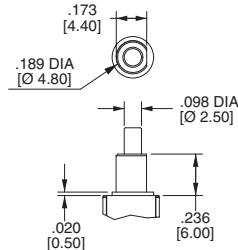


BUSHING

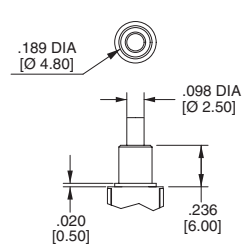
B5



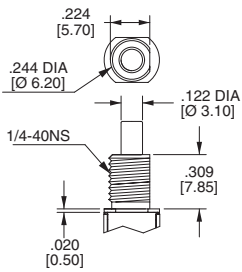
B6



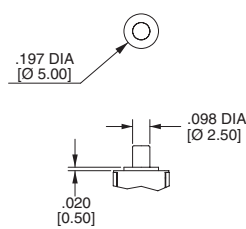
B7



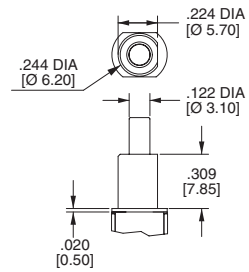
B8



B9



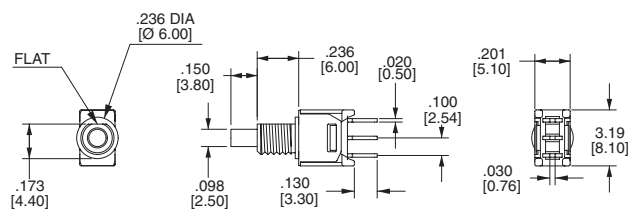
B0



TERMINATION

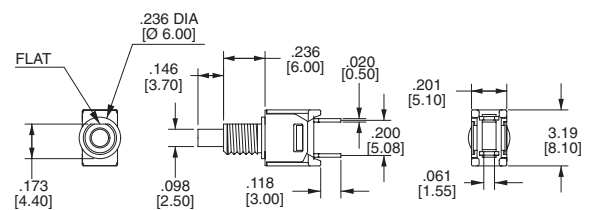
SP8

SINGLE POLE DOUBLE THROW



SP9

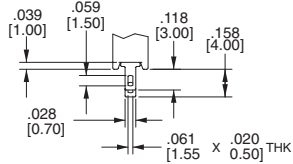
SINGLE POLE SINGLE THROW



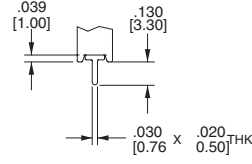
3S1-Series Dimensional Specifications: in. [mm]

TERMINATION

M1

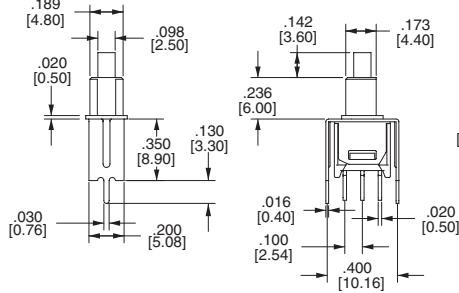


M2

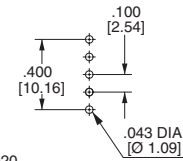


VS2

SINGLE POLE DOUBLE THROW

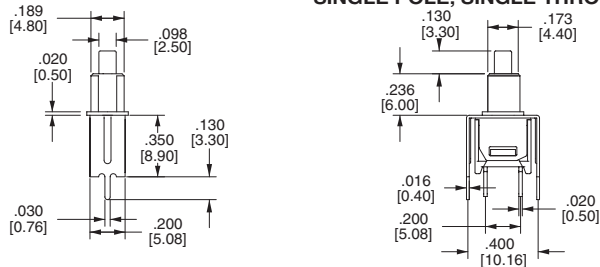


PC MOUNTING

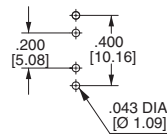


VS2

SINGLE POLE, SINGLE THROW

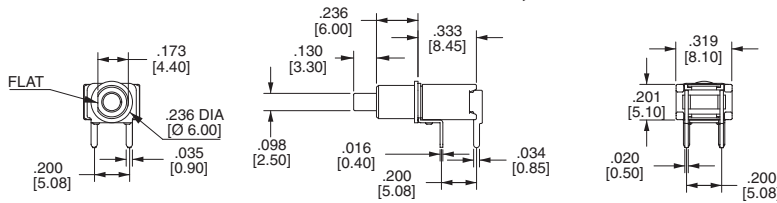


PC MOUNTING

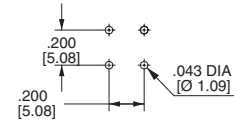


M6

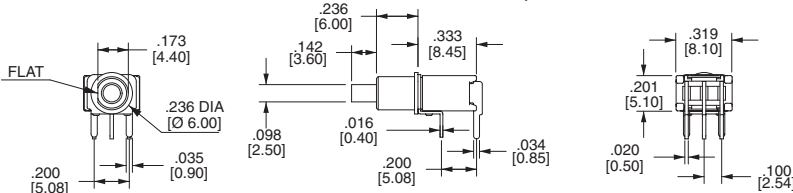
SINGLE POLE, SINGLE THROW



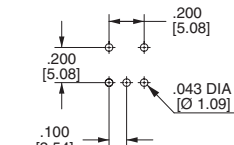
PC MOUNTING



SINGLE POLE, DOUBLE THROW

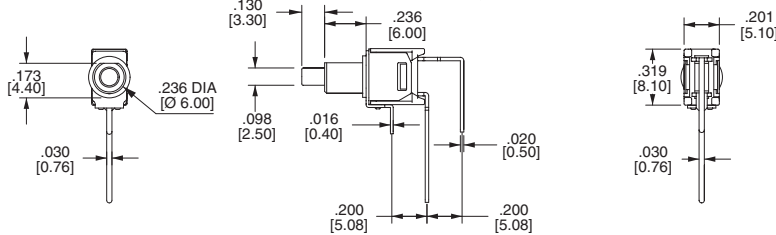


PC MOUNTING

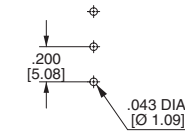


M7

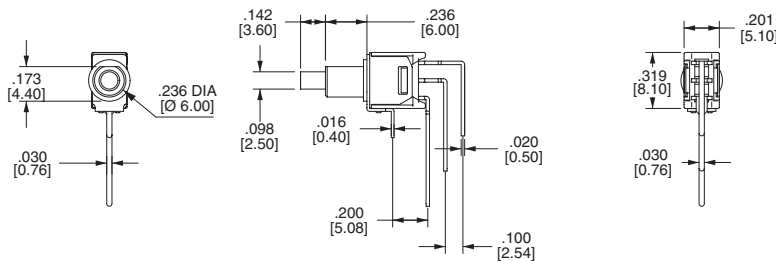
SINGLE POLE, SINGLE THROW



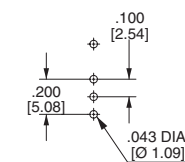
PC MOUNTING



SINGLE POLE, DOUBLE THROW



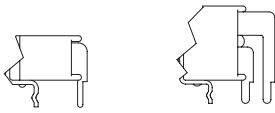
PC MOUNTING



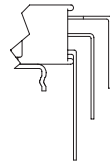
3SS-Series Dimensional Specifications: in. [mm]

SNAP-IN TERMINATION

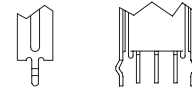
M61



M71



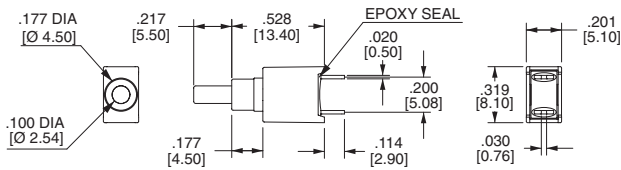
VS21



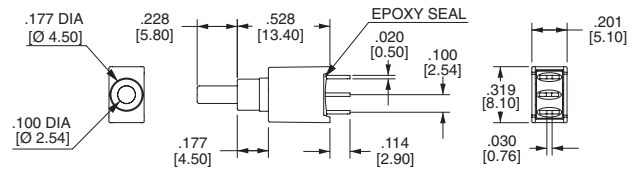
M61, M71, VS21 have the same P.C. mounting but with snap-in bracket.

TERMINATION

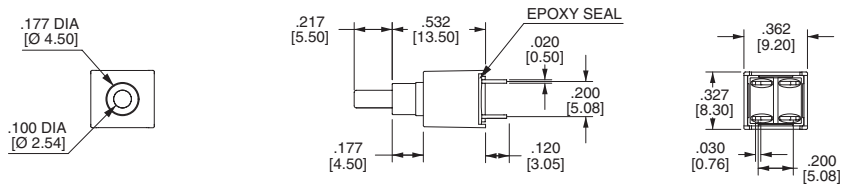
SINGLE POLE, SINGLE THROW



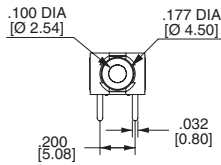
SINGLE POLE, DOUBLE THROW



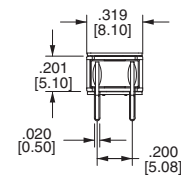
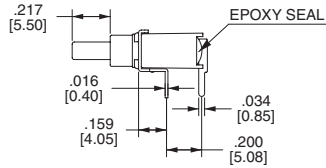
DOUBLE POLE, SINGLE THROW



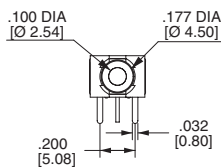
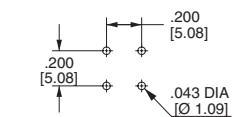
M6



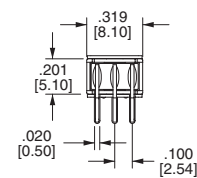
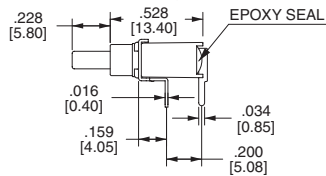
SINGLE POLE, SINGLE THROW



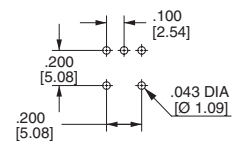
PC MOUNTING



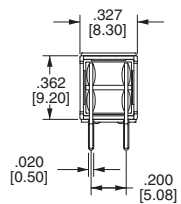
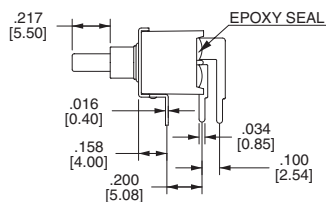
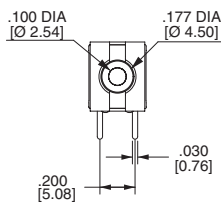
SINGLE POLE, DOUBLE THROW



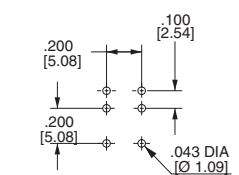
PC MOUNTING



DOUBLE POLE, SINGLE THROW



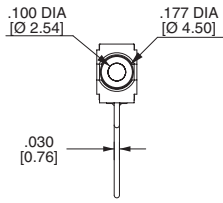
PC MOUNTING



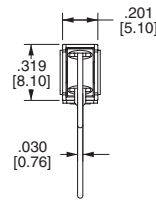
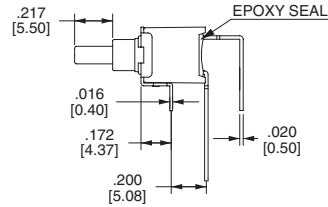
3SS-Series Dimensional Specifications: in. [mm]

TERMINATION

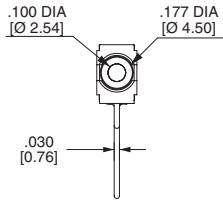
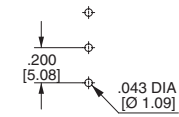
M7



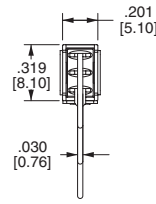
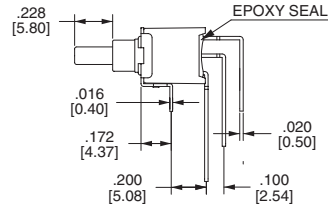
SINGLE POLE, SINGLE THROW



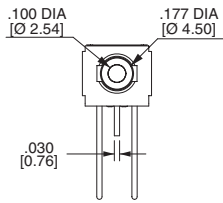
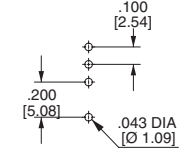
PC MOUNTING



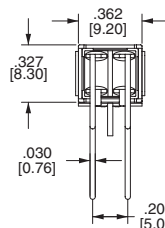
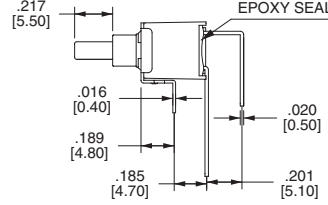
SINGLE POLE, DOUBLE THROW



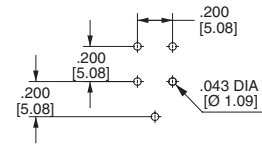
PC MOUNTING



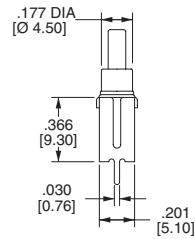
DOUBLE POLE, SINGLE THROW



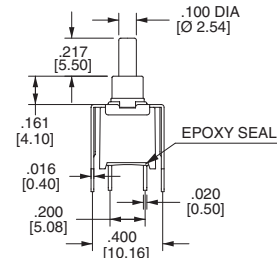
PC MOUNTING



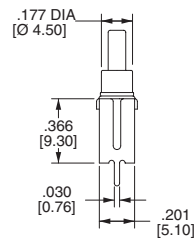
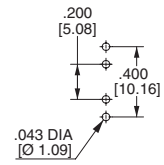
VS2



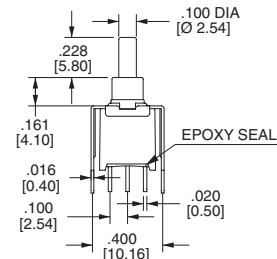
SINGLE POLE, SINGLE THROW



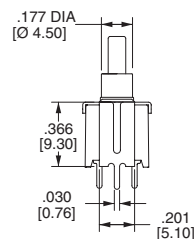
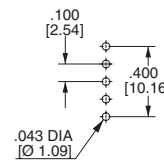
PC MOUNTING



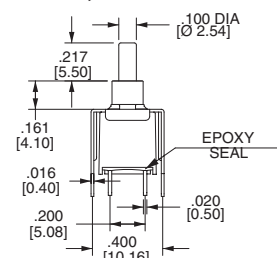
SINGLE POLE, DOUBLE THROW



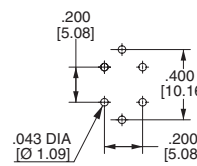
PC MOUNTING



DOUBLE POLE, SINGLE THROW

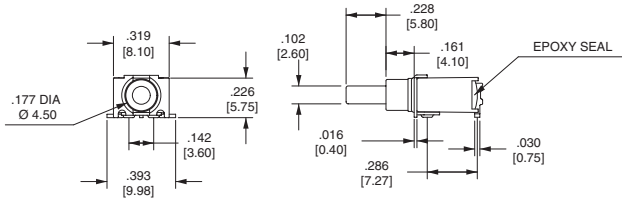
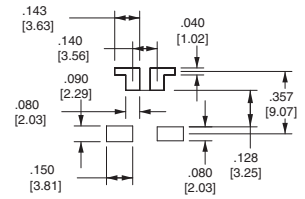
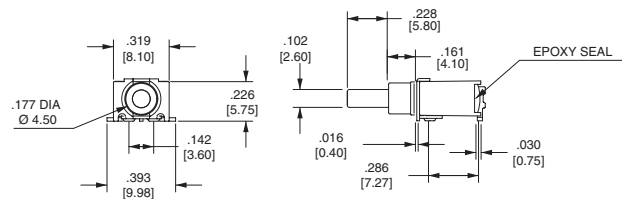
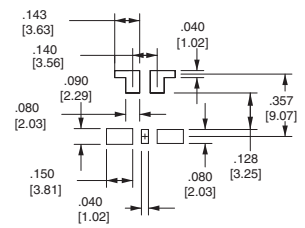
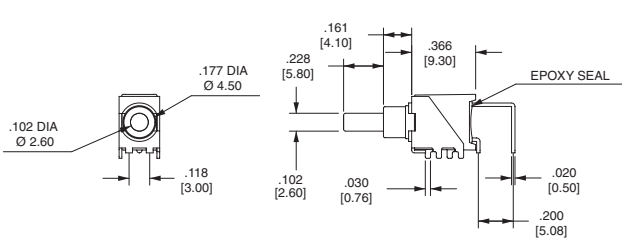
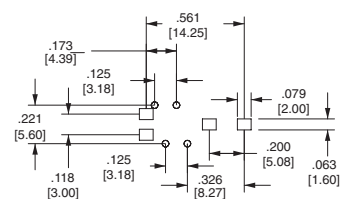
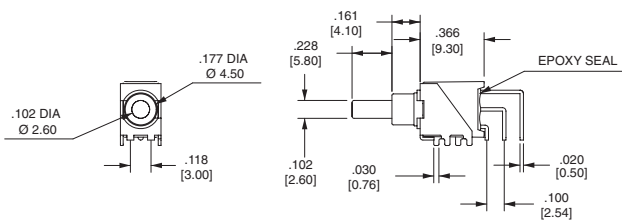
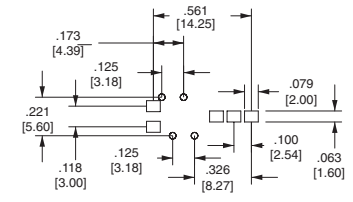
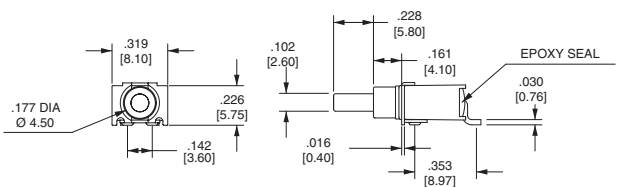
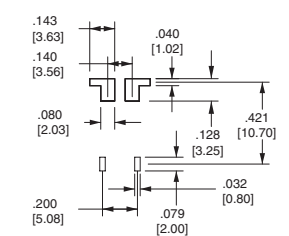
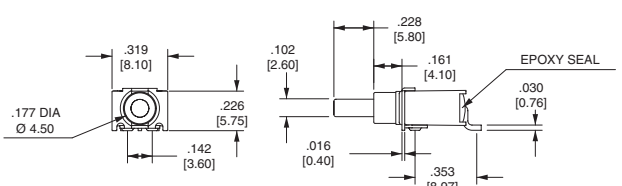
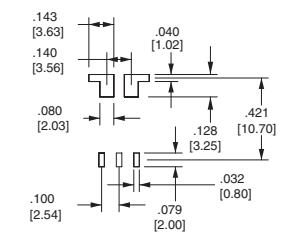


PC MOUNTING



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


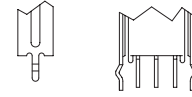
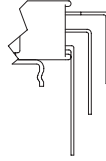
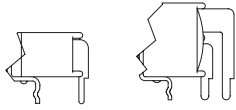
3SM-Series Dimensional Specifications: in. [mm]

SNAP-IN TERMINATION

M61

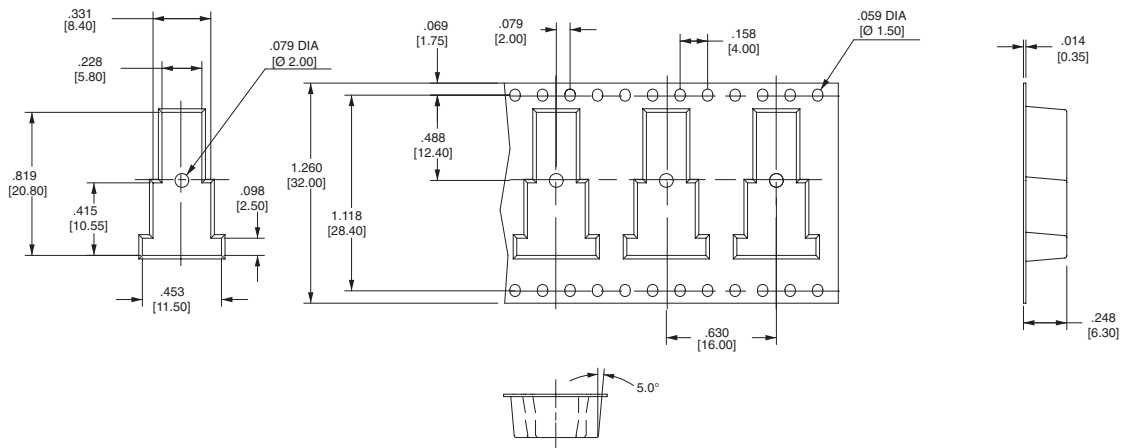
M71

VS21



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

REEL TAPING



FOR M6 ONLY