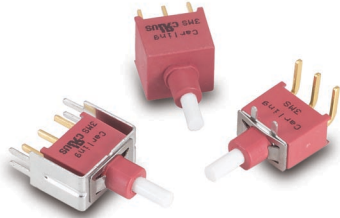
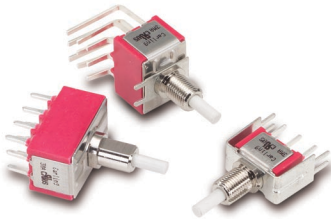




3MN-Series
Snap-Action Miniature Pushbutton Switch



3MS-Series
Sealed Snap-Action Miniature Pushbutton Switch



3MA-Series
Alternate Action Miniature Pushbutton Switch

Specifications

| | |
|-------------------------------|--|
| Contact Rating | refer to ordering scheme |
| Electrical Life | 50,000 make & break cycles @ full load |
| Contact Resistance. | <i>3MN & 3MA-Series:</i> 10 mΩ max. initial @ 2-4 VDC 100mA for both silver & gold plated contacts. <i>3MS-Series:</i> 50 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 | <i>3MS -Series:</i> IP68 |
| Cap Installation Support . . | <i>3MS-Series:</i> 10 lbs. max. |
| Solder Heat Resistance. . . | MIL-STD-202, Method 210 |
| Actuator Travel | .25° |

Materials

| | |
|-----------------------------|---|
| Case | <i>3MN & 3MA-Series:</i> Diallyl phthalate (DAP) (UL 94V-0) <i>3MS-Series:</i> Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0) |
| Plunger. | <i>3MN-Series:</i> Thermoplastic polyester, black <i>3MS & 3MA-Series:</i> Glass filled nylon or glass filled polyester (UL 94V-0) |
| Bushing | <i>3MN-Series:</i> Brass, nickel plated <i>3MA-Series:</i> Zinc, nickel plated |
| Housing. | <i>3MN & 3MA-Series:</i> Stainless Steel |
| Switch Support Retainer . . | <i>3MS-Series:</i> Stainless Steel |
| Terminal Seal | Epoxy |

3M-Series Optional Cap

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

Ex: 3MN-SP-7-P2-B6-M6QE-C13ASSEMBLED

To order caps in bulk, specify the Series, followed by the cap. Ex.) 3MN-C13

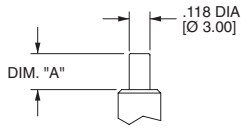


| | |
|---|--|
| 1 SERIES OR SWITCH CATALOG NUMBER 3MN, 3MS or 3MA | |
| 2 CAP SIZE | |
| C1 round 7.6mm dia. | C5 round 14.5mm dia. (for 3MA w/ PL bushing) |
| C2 round 9.35 mm dia. | C6 brass chrome plated (for 3MA w/ PD bushing) |
| C3 square 11.7 x 11.7mm | |
| C4 round 5mm dia. | |

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

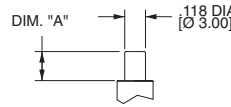
3MN-Series Dimensional Specifications: in. [mm]

PLUNGER



| OPTION CODE | DIM. "A" |
|-------------|-------------|
| P0 | .000 [0.00] |
| P1 | .205 [5.20] |
| P2 | .079 [2.00] |

FOR B10,B11,B20,B21 ONLY

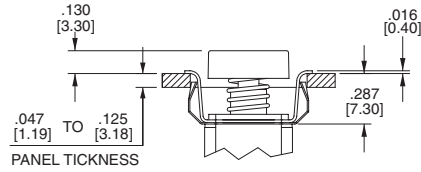
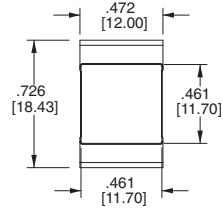


| OPTION CODE | DIM. "A" |
|-------------|-------------|
| P0 | .098 [2.50] |
| P1 | .295 [7.50] |
| P2 | .165 [4.20] |

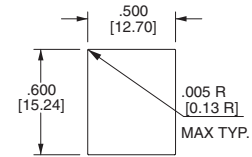
FOR B6 ONLY

ACTUATOR

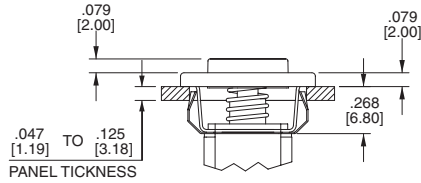
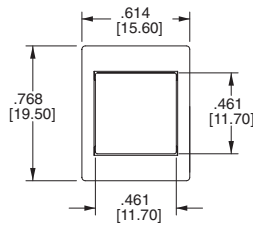
AP1



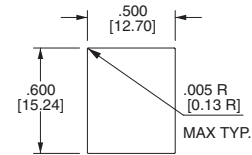
PANEL MOUNTING



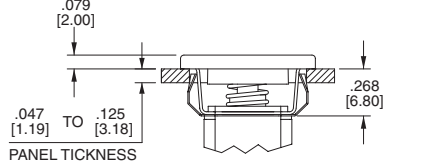
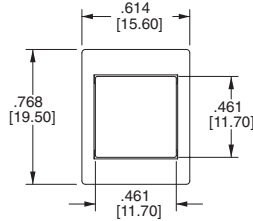
AP2



PANEL MOUNTING

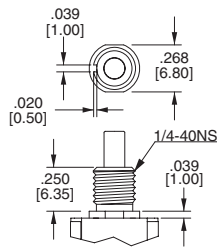


AP3

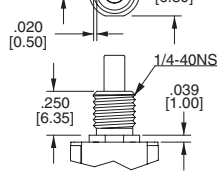


BUSHING

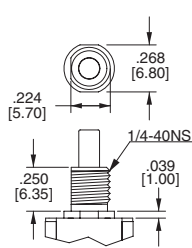
B10
STANDARD KEYWAY
THREADED SHOWN



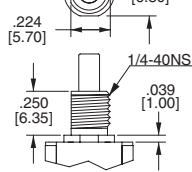
B20
STANDARD KEYWAY
NON-THREADED



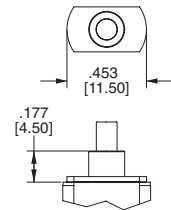
B11
THREADED SHOWN
WITH FLAT



B21
NON-THREADED
WITH FLAT

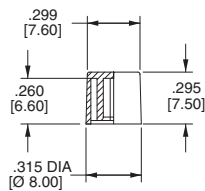


B6
NON-THREADED
(FOR TERMINATION
OPTIONS VS6-VS9 ONLY)

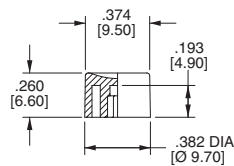


CAP

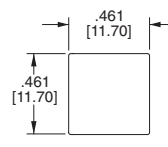
C1



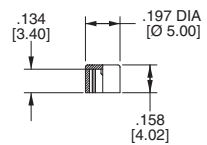
C2



C3



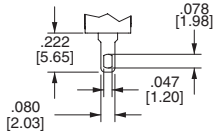
C4



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

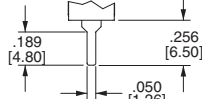
TERMINATION

M1



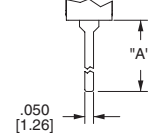
THK .030 [0.75]

M2



THK .030 [0.75]

M5

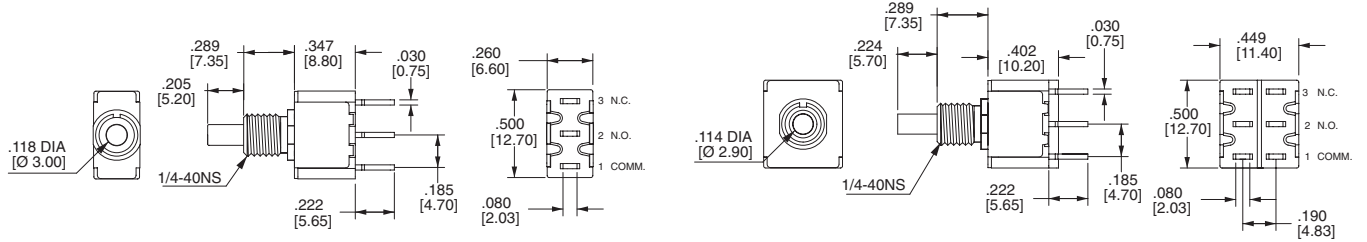


THK .030 [0.75]

| OPTION CODE | DIM. "A" |
|-------------|--------------|
| M5-1 | .750 [19.05] |
| M5-3 | .425 [10.80] |

SINGLE POLE

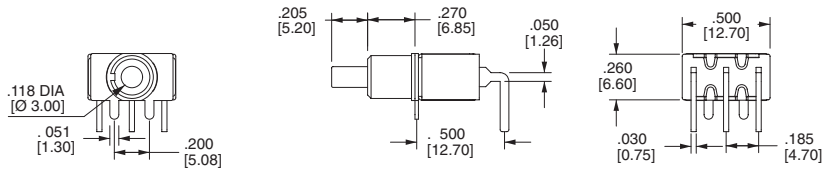
DOUBLE POLE



M6

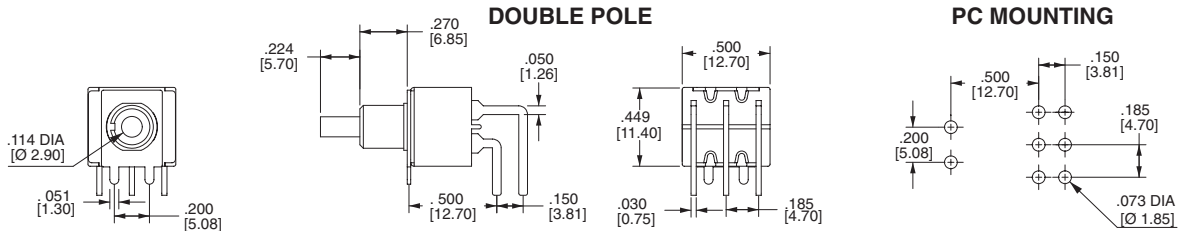
SINGLE POLE

PC MOUNTING



DOUBLE POLE

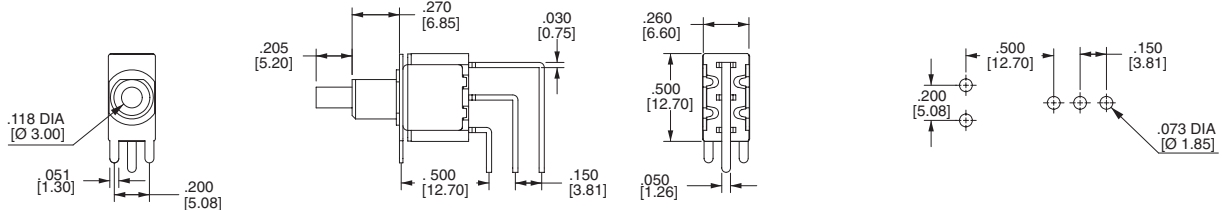
PC MOUNTING



M7

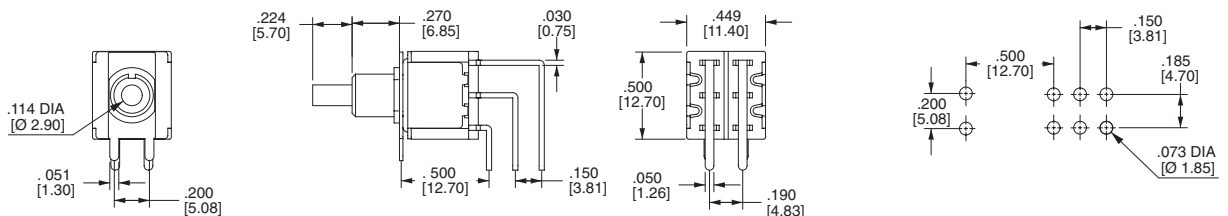
SINGLE POLE

PC MOUNTING



DOUBLE POLE

PC MOUNTING

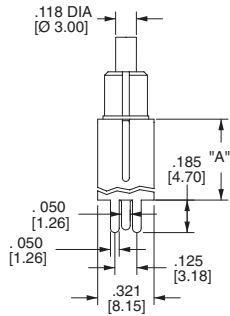


3MN-Series Dimensional Specifications: in. [mm]

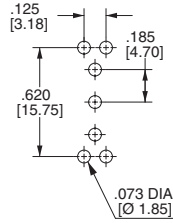
TERMINATION

SINGLE POLE

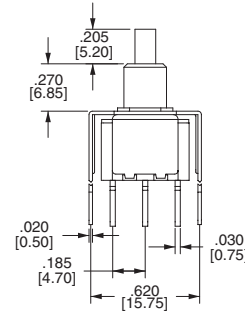
| OPTION CODE | DIM. "A" |
|-------------|--------------|
| VS2 | .460 [11.68] |
| VS3 | .630 [16.00] |
| VS7 | [16.00] |



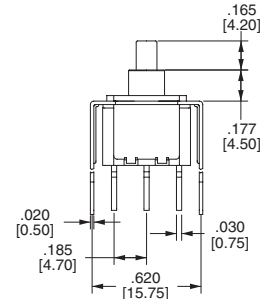
PC MOUNTING



VS2-VS3

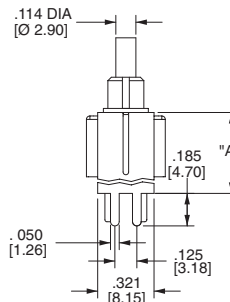


VS6-VS7 (For B6 Bushing Only)

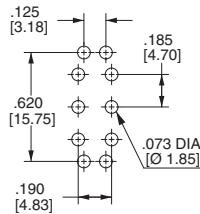


DOUBLE POLE

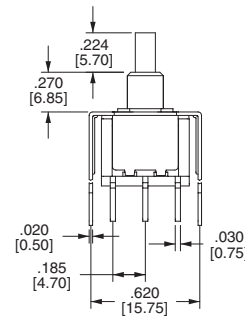
| OPTION CODE | DIM. "A" |
|-------------|--------------|
| VS2 | .460 [11.68] |
| VS3 | .630 [16.00] |
| VS7 | [16.00] |



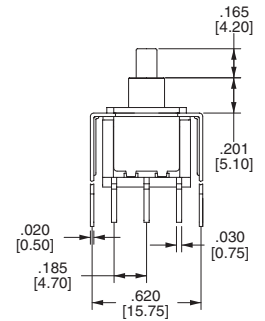
PC MOUNTING



VS2-VS3

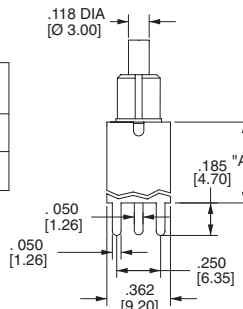


VS6-VS7 (For B6 Bushing Only)

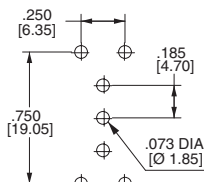


SINGLE POLE

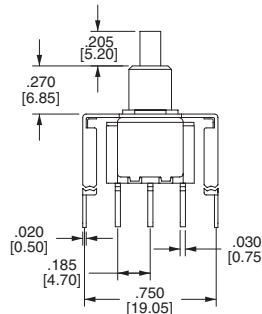
| OPTION CODE | DIM. "A" |
|-------------|--------------|
| VS4 | .460 [11.68] |
| VS5 | .630 [16.00] |
| VS9 | [16.00] |



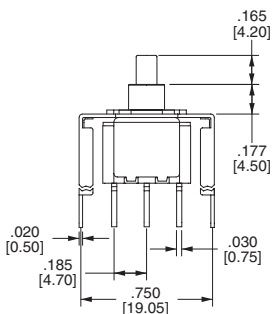
PC MOUNTING



VS4-VS5

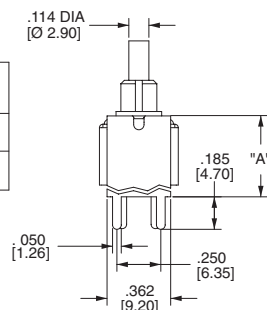


VS8-VS9 (For B6 Bushing Only)

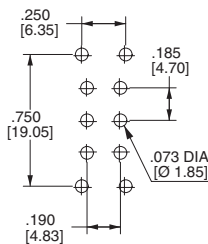


DOUBLE POLE

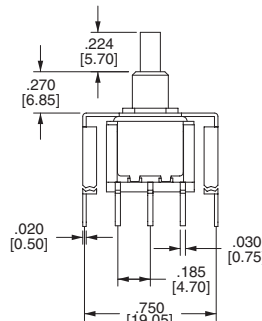
| OPTION CODE | DIM. "A" |
|-------------|--------------|
| VS4 | .460 [11.68] |
| VS5 | .630 [16.00] |
| VS9 | [16.00] |



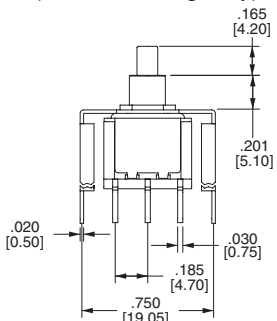
PC MOUNTING



VS4-VS5



VS8-VS9 (For B6 Bushing Only)



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

PLUNGER

| | <table border="1"> <thead> <tr> <th>OPTION CODE</th> <th>DIM. "A"</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>.173 [4.40]</td> </tr> <tr> <td>P2</td> <td>.220 [5.60]</td> </tr> <tr> <td>P3</td> <td>.087 [2.20]</td> </tr> </tbody> </table> | OPTION CODE | DIM. "A" | P1 | .173 [4.40] | P2 | .220 [5.60] | P3 | .087 [2.20] | | <table border="1"> <thead> <tr> <th>OPTION CODE</th> <th>DIM. "A"</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>.276 [7.00]</td> </tr> <tr> <td>P2</td> <td>.327 [8.30]</td> </tr> <tr> <td>P3</td> <td>.193 [4.90]</td> </tr> </tbody> </table> | OPTION CODE | DIM. "A" | P1 | .276 [7.00] | P2 | .327 [8.30] | P3 | .193 [4.90] |
|----------------|--|----------------|----------|-----------|-------------|-----------|-------------|-----------|-------------|--|--|-------------|----------|-----------|-------------|-----------|-------------|-----------|-------------|
| OPTION CODE | DIM. "A" | | | | | | | | | | | | | | | | | | |
| P1 | .173 [4.40] | | | | | | | | | | | | | | | | | | |
| P2 | .220 [5.60] | | | | | | | | | | | | | | | | | | |
| P3 | .087 [2.20] | | | | | | | | | | | | | | | | | | |
| OPTION CODE | DIM. "A" | | | | | | | | | | | | | | | | | | |
| P1 | .276 [7.00] | | | | | | | | | | | | | | | | | | |
| P2 | .327 [8.30] | | | | | | | | | | | | | | | | | | |
| P3 | .193 [4.90] | | | | | | | | | | | | | | | | | | |
| FOR B1 BUSHING | | FOR B4 BUSHING | | | | | | | | | | | | | | | | | |

BUSHING

| | |
|---------------|---------------|
| B1 | B4 |
|---------------|---------------|

TERMINATION

| | |
|-----------------|-----------------|
| M1 | M2 |
| THK .030 [0.75] | THK .030 [0.75] |

| | |
|------------------------|------------------------|
| SINGLE POLE | DOUBLE POLE |
|------------------------|------------------------|

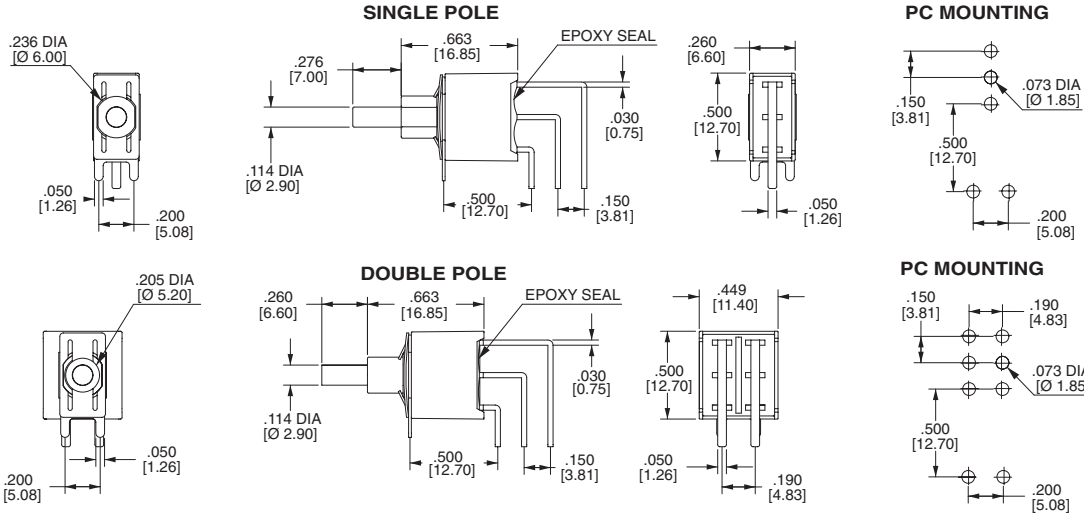
M6

| | | | |
|--|------------------------|--|------------------------|
| | SINGLE POLE | | PC MOUNTING |
| | DOUBLE POLE | | PC MOUNTING |

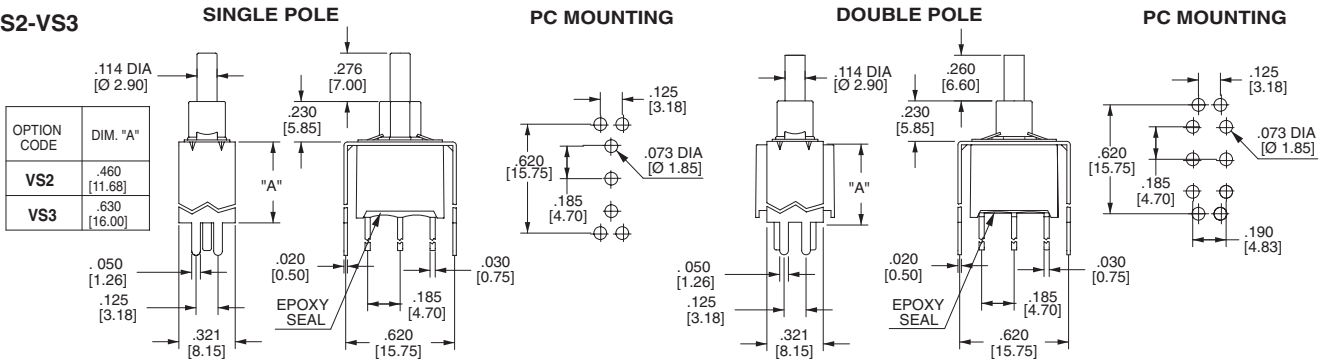
3MS-Series Dimensional Specifications: in. [mm]

TERMINATION

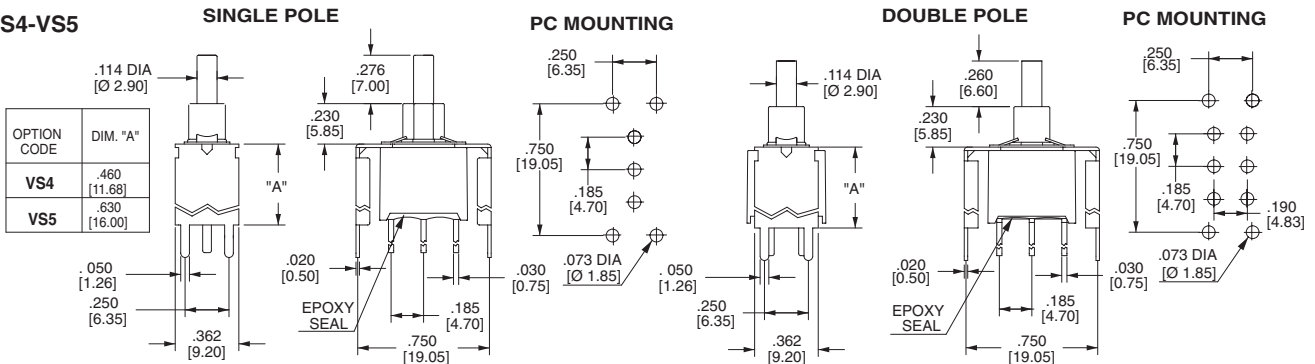
M7



VS2-VS3



VS4-VS5

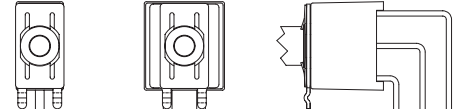


SNAP-IN TERMINATION OPTIONS

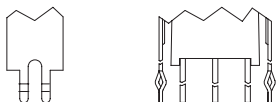
M61



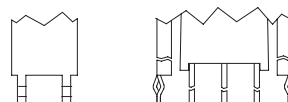
M71



VS21, VS31



VS41, VS51

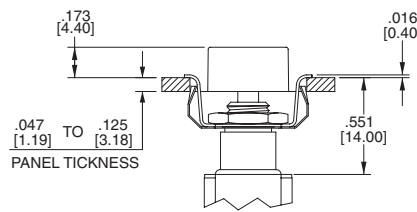
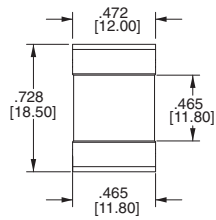


M61, M71, VS21, VS31, VS41, VS51 have the same P.C. mounting but with snap-in bracket.

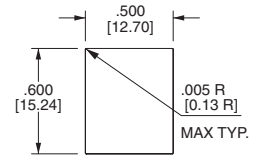
3MA-Series Dimensional Specifications: in. [mm]

ACTUATOR

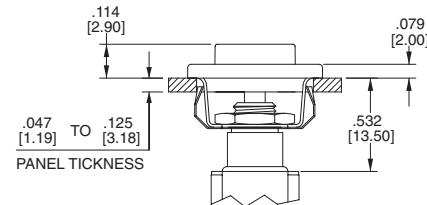
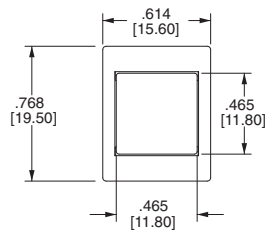
AP1



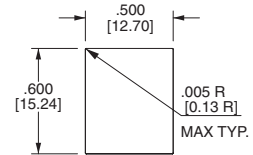
PANEL MOUNTING



AP2

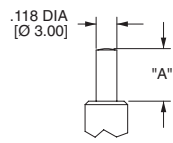


PANEL MOUNTING



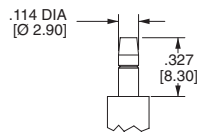
PLUNGER

PA,PI

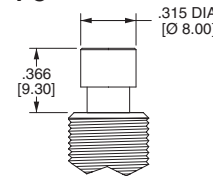


| OPTION CODE | DIM. "A" |
|-------------|-------------|
| PA | .299 [7.60] |
| PI | .244 [6.20] |

PL

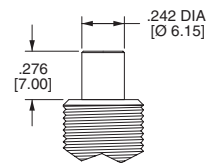


PC



Brass Chrome Plated

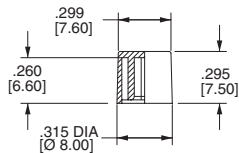
PD



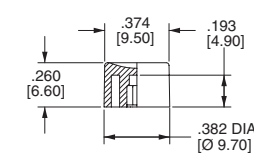
PC, PD Plunger must fit with BD bushing

CAP

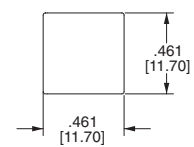
C1



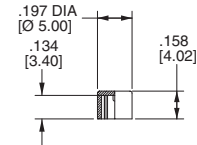
C2



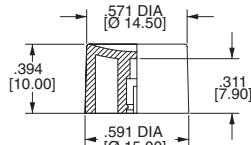
C3



C4

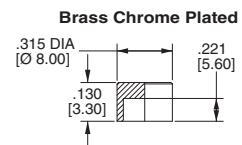


C5



For PL Bushing Only

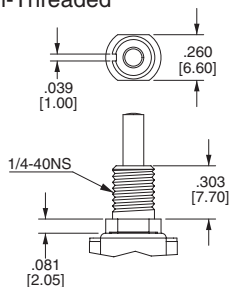
C6



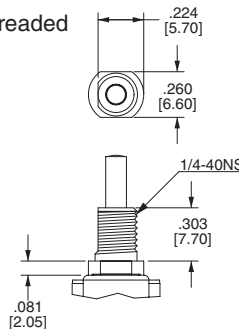
For PD Bushing Only

BUSHING

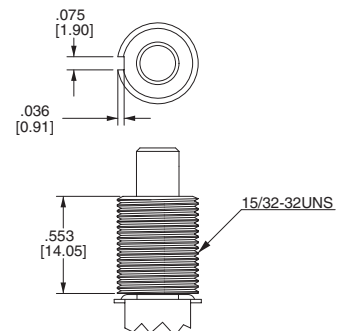
B10 Threaded
B20 Non-Threaded



B21 Non-Threaded



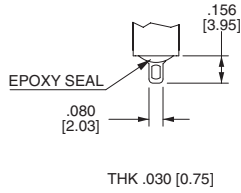
BD



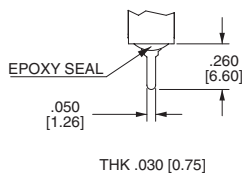
3MA-Series Dimensional Specifications: in. [mm]

TERMINATION

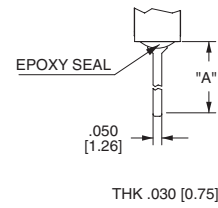
M1



M2



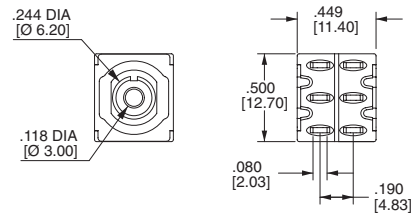
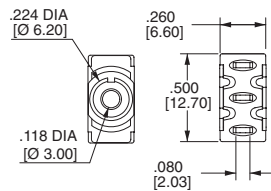
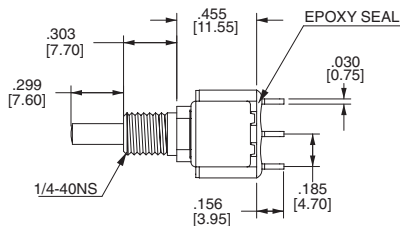
M5



| OPTION CODE | DIM. "A" |
|-------------|---------------|
| M5-1 | .750 [19.05] |
| M5-2 | .964 [24.48] |
| M5-3 | .425 [10.80] |
| M5-4 | 1.062 [26.97] |

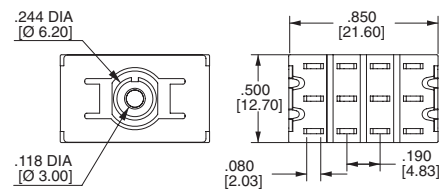
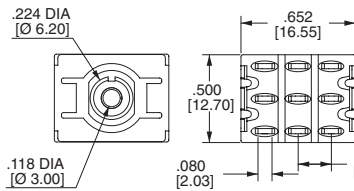
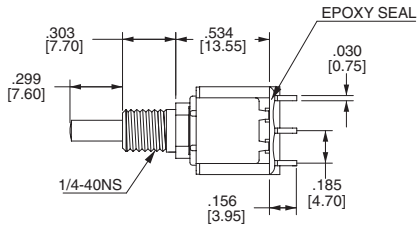
SINGLE POLE

DOUBLE POLE



3 POLE

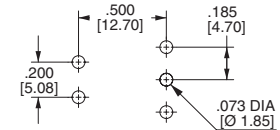
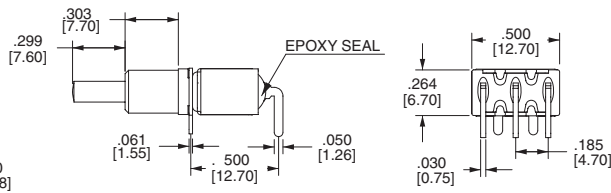
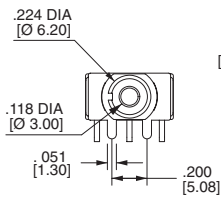
4 POLE



M6

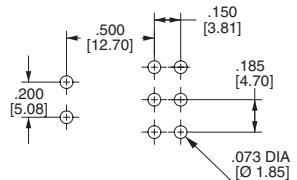
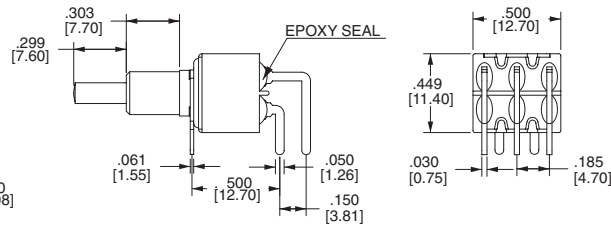
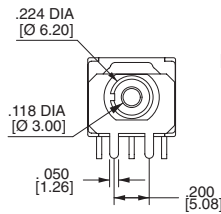
SINGLE POLE

PC MOUNTING



DOUBLE POLE

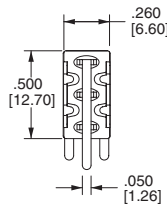
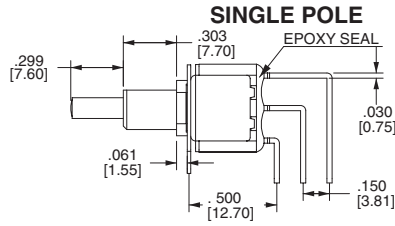
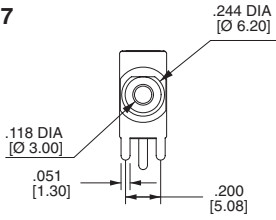
PC MOUNTING



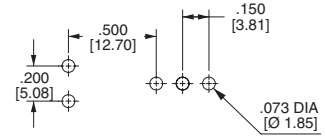
3MA-Series Dimensional Specifications: in. [mm]

TERMINATION

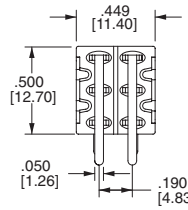
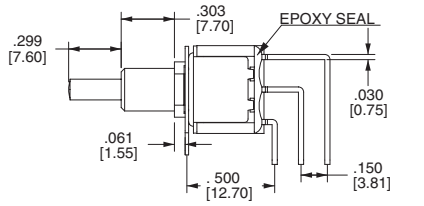
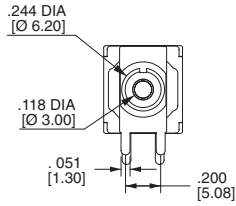
M7



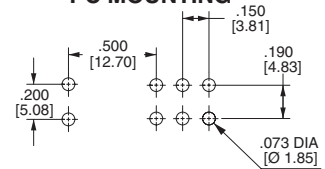
PC MOUNTING



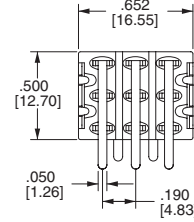
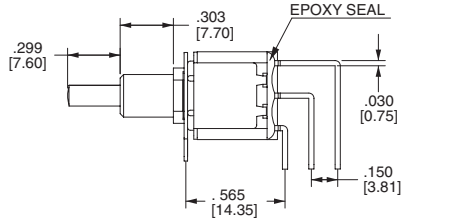
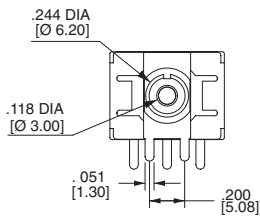
DOUBLE POLE



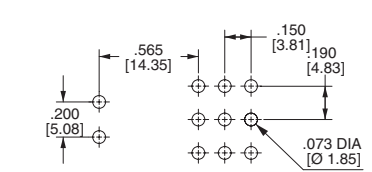
PC MOUNTING



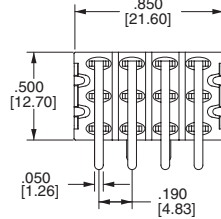
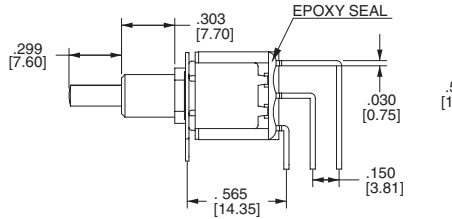
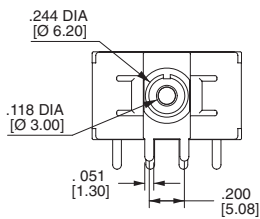
THREE POLE



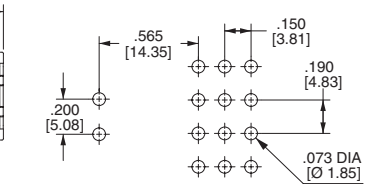
PC MOUNTING



FOUR POLE

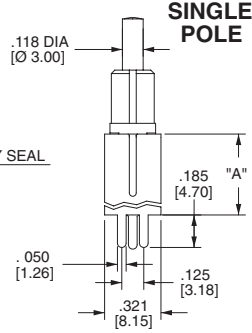
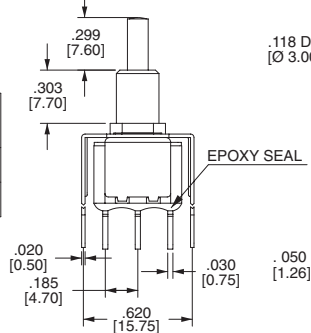


PC MOUNTING

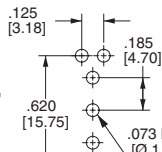


VS2-VS3

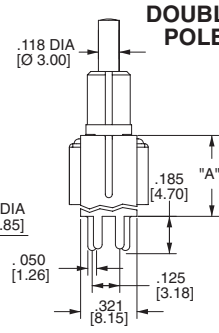
| OPTION CODE | DIM. "A" |
|-------------|--------------|
| VS2 | .460 [11.68] |
| VS3 | .630 [16.00] |



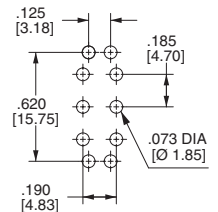
SINGLE POLE PC MOUNTING



DOUBLE POLE

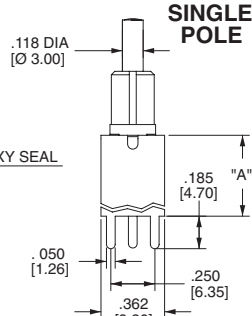
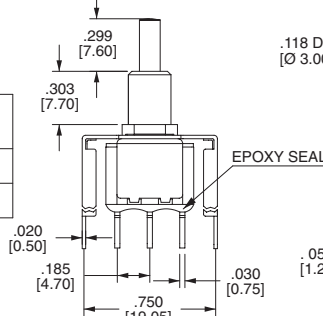


PC MOUNTING

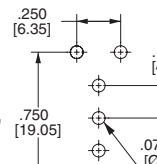


VS4-VS5

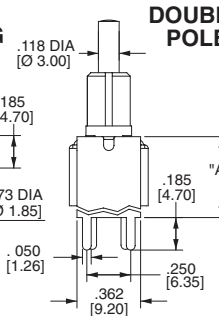
| OPTION CODE | DIM. "A" |
|-------------|--------------|
| VS4 | .460 [11.68] |
| VS5 | .630 [16.00] |



SINGLE POLE PC MOUNTING



DOUBLE POLE



PC MOUNTING

