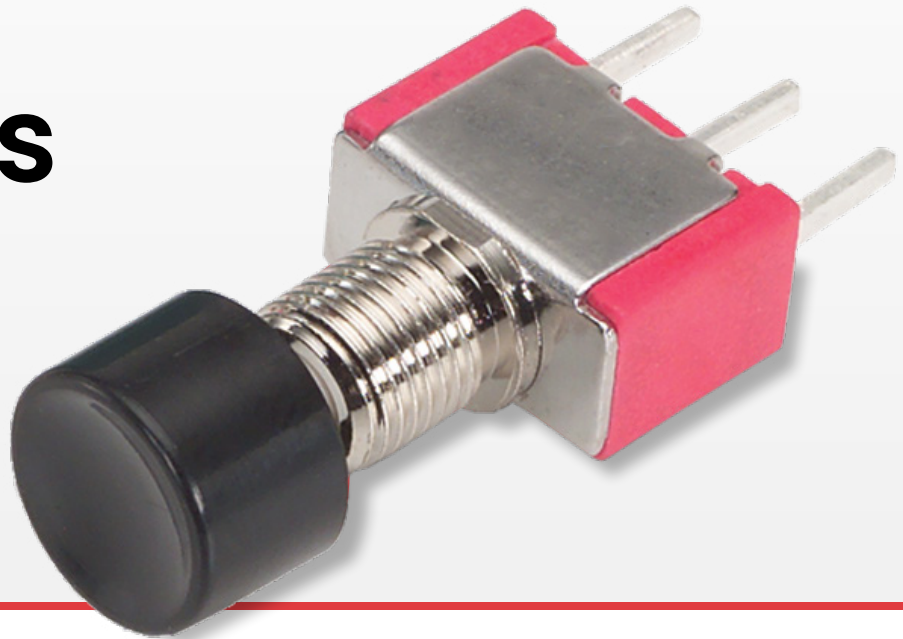


# 3M-Series

Miniature Pushbutton Switches

**PRODUCT WEBPAGE**

*request sample, configure part*



The 3M family of miniature pushbutton switches is composed of four switch series; the 3MNH-Series premium sealed snap-action pushbutton, the 3MN-Series snap-action pushbutton, the 3MS-Series sealed snap-action pushbutton, and the 3MA-Series alternate-action pushbutton. These PC mount pushbutton switches offer a variety of ratings, circuits, contact materials, terminal platings, pushbutton styles, and optional color caps.

**1-2**  
Poles

**.4-6**  
Amps

**125, 250**  
VAC

**28**  
VDC

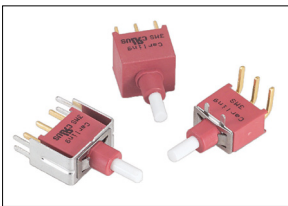
## Typical Applications

- Instrumentation
- Networking
- Computers
- Telecommunications
- Performance Audio
- Low Power On/Off Designs

# Tech Specs



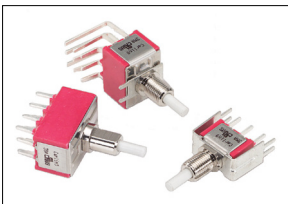
**3MNH-Series**  
**Premium Sealed**  
Miniature Pushbutton Switch



**3MS-Series**  
**Sealed Snap-Action**  
Miniature Pushbutton Switch



**3MN-Series**  
**Snap-Action**  
Miniature Pushbutton Switch



**3MA-Series**  
**Alternate Action**  
Miniature Pushbutton Switch

## Electrical

|                       |                                                                                                                                                                                                                |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact Rating        | refer to ordering scheme                                                                                                                                                                                       |
| Electrical Life       | 50,000 make & break cycles @ full load                                                                                                                                                                         |
| Contact Resistance    | <b>3MS-Series:</b> 50 mΩ max. initial @ 2-4 VDC 100mA for both silver & gold plated contacts.<br><b>3MN, 3MA &amp; 3NMH-Series:</b> 10 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                                                                                                                                                                                     |

## Physical

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Operating Temperature    | -30°C to +85°C                                      |
| Index of Protection      | <b>3MS-Series:</b> IP68<br><b>3MNH-Series:</b> IP67 |
| Cap Installation Support | <b>3MS-Series:</b> 10 lbs. max.                     |
| Solder Heat Resistance   | MIL-STD-202, Method 210                             |

## Material

|                |                                                                                                                                                                                                      |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Case           | <b>3MS-Series:</b> Glass filled nylon 6/6, flame retardant, heat stabilized (UL94V-0)<br><b>3MN, 3MA &amp; 3NMH-Series:</b> Diallyl phthalate (DAP) (UL 94V-0)                                       |
| Plunger        | <b>3MS &amp; 3MA-Series:</b> Glass filled nylon or glass filled polyester (UL94V-0)<br><b>3MN-Series:</b> Thermoplastic polyester, black<br><b>3NMH-Series:</b> Brass, black finish with o-ring seal |
| Bushing        | <b>3MN-Series:</b> Brass, nickel plated<br><b>3MA-Series:</b> Zinc, nickel plated<br><b>3NMH-Series:</b> Brass, black finish with o-ring seal                                                        |
| Housing        | <b>3MN &amp; 3MA-Series:</b> Stainless Steel                                                                                                                                                         |
| Switch Support | <b>3MS-Series:</b> Stainless Steel                                                                                                                                                                   |
| Terminal Seal  | Epoxy                                                                                                                                                                                                |

# Ordering Schemes

Sample Part Number **3MNH - DP 1 - PJ - BJ - M2 - Q E**

Selection 1 2 3 4 5 6 7 8

## 1. SERIES

**3MNH** Premium Sealed Miniature Pushbutton Switch

## 2. POLES

**SP** Single pole - uses terminals 1, 2 & 3  
**DP** Double pole - uses terminals 1, 2, 3, 4, 5 & 6

## 3. CIRCUIT

( ) - momentary  
**Switching Position:** 1 2  
1 ON ON  
7 ON (ON)

Note: Plunger at rest in Position 1. Plunger depressed in Position 2.

## 4. ACTUATOR STYLE

**PJ** .325 height [8.25 mm]  
**PA** .157 height [4.00 mm]  
**PB** .354 height [9.00 mm]

### Notes:

- 1 PJ Plunger for maintained circuits only. PA and PB Plunger for momentary circuits only
- 2 Hardware includes (1) 2MI-HDW4 nut and (1) 3MNH-WCP-0872 o-ring
- 3 BJ Bushing only available with PJ Plunger
- 4 BL Bushing only available with PA or PB Plunger
- 5 Movable contact & terminal platings: silver over copper alloy
- 6 Movable Contact platings: gold over nickel over copper alloy
- 7 Terminal platings: gold over nickel over copper alloy

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 5. ACTUATOR COLOR

**BJ**<sup>3</sup> Threaded 15/32, flat, .553 height [14.05 mm]  
**BL**<sup>4</sup> Threaded 15/32, flat, .295 height [7.49 mm]

## 6. TERMINATION

**M1** Solder Lug  
**M2** PC thru-hole  
**M51** Wire wrap, .711" [18.05 mm]  
**M52** Wire wrap, .924" [23.48 mm]  
**M53** Wire wrap, .386" [9.80 mm]

## 7. CONTACTS / TERMINALS

| Contact Material             | Terminal Plating               | Rating                          | Approvals                                                                                    |
|------------------------------|--------------------------------|---------------------------------|----------------------------------------------------------------------------------------------|
| <b>G</b> silver <sup>5</sup> | gold over silver (SP1, DP1)    | 6A@125VAC or 28VDC<br>3A@250VAC |  us, IP67 |
|                              | (SP7, DP7)                     | 1A@120VAC or 38VDC              |                                                                                              |
| <b>Q</b> silver <sup>5</sup> | silver <sup>5</sup> (SP1, DP1) | 6A@125VAC or 28VDC<br>3A@250VAC |  us, IP67 |
|                              | (SP7, DP7)                     | 1A@120VAC or 38VDC              |                                                                                              |
| <b>R</b> gold <sup>6</sup>   | gold <sup>7</sup>              | 0.4VA max @ 20V max (AC/DC)     | N/A                                                                                          |

## 8. EPOXY SEAL

**E** Epoxy Seal

Sample Part Number **3SM - WSP 7 - P1 - B1 - M6 Q E**

Selection 1 2 3 4 5 6 7 8

## 1. SERIES

**3MS** Sealed Snap-Action Miniature Pushbutton Switch

## 2. POLES

**WSP** Single pole - uses terminals 1, 2 & 3  
**WDP** Double pole - uses terminals 1, 2, 3, 4, 5 & 6

## 3. CIRCUIT

( ) - momentary  
**Switching Position:** 1 2  
2-3, 5-6 2-1, 5-4  
7 ON (ON)

Note: Plunger at rest in Position 1. Plunger depressed in Position 2.

## 4. ACTUATOR STYLE

**P1** Standard Plunger  
**P2** Long Plunger  
**P3** Short Plunger

## 5. BUSHING

**B1**<sup>1</sup> Threaded, with keyway, .350 height [8.89 mm]  
**B4** Unthreaded, flattened, .250 height [6.35 mm]

### Notes:

- 1 Hardware includes (2) 2MI-HDW2 nuts, (1) 2MI-HDW11 washer, and (1) 2MI-HDW15 locking ring
- 2 Movable contact and terminal platings: gold over nickel over copper alloy
- 3 Movable contact and terminal platings: silver over copper alloy

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 6. 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 .461" height  
**VS21** Snap-In, U bracket, .620" mounting x .461" height  
**VS3** PC Mount, U bracket, .620" mounting x .630" height  
**VS31** Snap-In, vertical, .630" height  
**VS4** PC Mount, U bracket, .750" mounting x .461" height  
**VS41** Snap-In, vertical, .461" height  
**VS5** PC Mount, U bracket, .750" mounting x .630" height  
**VS51** Snap-In, vertical, .630" height

## 7. CONTACTS/TERMINALS

| Contact Material             | Terminal Plating    | Rating                    | Approvals                                                                                      |
|------------------------------|---------------------|---------------------------|------------------------------------------------------------------------------------------------|
| <b>G</b> silver <sup>3</sup> | gold over silver    | 1A 120VAC or 38VDC        |  us, IP68 |
| <b>Q</b> silver <sup>3</sup> | silver <sup>3</sup> | 1A 120VAC or 38VDC        |  us, IP68 |
| <b>R</b> gold <sup>2</sup>   | gold <sup>2</sup>   | 0.4VA max 20V max (AC/DC) | IP68                                                                                           |

## 8. EPOXY SEAL

**E** Epoxy Seal **0** without Epoxy Seal

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

# Ordering Scheme

## 3MN-Series with Square Actuator

|                    |     |   |    |   |   |   |     |   |    |    |   |    |   |   |
|--------------------|-----|---|----|---|---|---|-----|---|----|----|---|----|---|---|
| Sample Part Number | 3MN | - | SP | - | 7 | - | AP2 | / | 3  | 2  | - | M6 | Q | E |
| Selection          | 1   |   | 2  |   | 3 |   | 4   |   | 5A | 5B |   | 6  | 7 | 8 |

## 3MN-Series with Plunger Actuator

|                    |     |   |    |   |   |   |    |   |     |   |    |   |   |
|--------------------|-----|---|----|---|---|---|----|---|-----|---|----|---|---|
| Sample Part Number | 3MN | - | SP | - | 7 | - | P2 | - | B10 | - | B6 | Q | E |
| Selection          | 1   |   | 2  |   | 3 |   | 4  |   | 5   |   | 6  | 7 | 8 |

### 1. SERIES

**3MN** Snap-Action Miniature Pushbutton Switch

### 2. POLES

**SP** Single pole - uses terminals 1, 2 & 3  
**DP** Double pole - uses terminals 1, 2, 3, 4, 5 & 6

### 3. CIRCUIT

( ) - momentary  
**Switching Position:**      **1**                      **2**  
                                          2-3, 5-6              2-1, 5-4  
**7**                                      ON                      (ON)

Note: Plunger at rest in Position 1. Plunger depressed in Position 2.

### 4. ACTUATOR

**Square Actuator** (use with Color Options in Selection 5A & 5B)

**AP1** Square with no frame  
**AP2** Square raised above frame  
**AP3** Square flush with frame

**Plunger Actuator** (use with Bushing Options in Selection 5)

**P0** Flush Plunger  
**P1** Standard Plunger  
**P2** Short Plunger

### 5A. ACTUATOR COLOR & 5B FRAME COLOR

**1** White  
**2** Black  
**3** Red

### 5B. BUSHING

**B6** Unthreaded (for terminations VS6-VS9 only)  
**B10**<sup>1</sup> Threaded keyway  
**B11**<sup>2</sup> Threaded with flat  
**B20** Unthreaded keyway  
**B21** Unthreaded with flat

### 6. TERMINATION

**M1** Solder Lug  
**M2** PCB  
**M51** Wire Wrap .750 [19.05]  
**M52** Wire Wrap .964 [24.40]  
**M53** Wire Wrap .425 [10.80]  
**M6** PC Mount, 90° horizontal  
**M7** PC Mount, 90° vertical  
**VS2** PC Mount, U bracket, .620" mounting x .461" height  
**VS3** PC Mount, U bracket, .620" mounting x .630" height  
**VS4** PC Mount, U bracket, .750" mounting x .461" height  
**VS5** PC Mount, U bracket, .750" mounting x .630" height  
**VS6** PC Mount, U bracket, .461 height (for B6 bushing only)  
**VS7** PC Mount, U bracket, .630 height (for B6 bushing only)  
**VS8** PC Mount, U bracket, .461 height (for B6 bushing only)  
**VS9** PC Mount, U bracket, .630 height (for B6 bushing only)

### 7. CONTACTS/TERMINALS

| Contact Material             | Terminal Plating    | Rating                    | Approvals                                                                                       |
|------------------------------|---------------------|---------------------------|-------------------------------------------------------------------------------------------------|
| <b>G</b> silver              | gold over silver    | 1A 125VAC or 28VDC        | c  us, N/A |
| <b>Q</b> silver <sup>5</sup> | silver <sup>5</sup> | 1A 125VAC or 28VDC        |                                                                                                 |
| <b>R</b> gold <sup>6</sup>   | gold <sup>6</sup>   | 0.4VA max 20V max (AC/DC) |                                                                                                 |

### 8. EPOXY SEAL

**E** Epoxy Seal                                      **0** without Epoxy Seal

#### Notes:

- Hardware includes (2) 2M1-HDW2 nuts, (1) 2M1-HDW11 washer, and (1) 2M1-HDW15 locking ring
- Hardware includes (2) 2M1-HDW2 nuts, (1) 2M1-HDW11 washer, and (1) 2M1-HDW16 locking ring
- Selection 5B is blank if actuator style is AP1 (no frame)
- Black, white and red are standard. Other colors available, consult factory for details.
- Movable contact & terminal platings: silver over copper alloy
- Movable contact & terminal platings: gold over nickel over copper alloy

 [Configure Complete Part Number >](#)

 [Browse Standard Parts >](#)

# Ordering Scheme

## 3MA-Series with Square Actuator

Sample Part Number: 3MA - SP - 1 - AP2 / 3 2 - M6 Q E

Selection: 1 2 3 4 5A 5B 6 7 8

## 3MN-Series with Plunger Actuator

Sample Part Number: 3MA - SP - 1 - PD - BD - M6 Q E

Selection: 1 2 3 4 5 6 7 8

### 1. SERIES

**3MA** Alternate Action Miniature Pushbutton Switch

### 2. POLES

**SP** Single pole - uses terminals 1, 2 & 3  
**DP** Double pole uses terminals 1, 2, 3, 4, 5 & 6  
**3P**<sup>1</sup> Three pole uses terminals 1, 2, 3, 4, 5, 6, 7, 8 & 9  
**4P**<sup>1</sup> Four pole uses terminals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

### 3. CIRCUIT

( ) - momentary  
**Switching 1**  
**Position:** 2-3, 5-6, 8-9, 11-12  
**1** ON  
**2\*** ON  
**2** Connected Terminals 2-1, 5-4, 8-7, 11-10  
**3** NONE ON (ON)  
**3** NONE ON (ON)

\*Available in SP & DP only.

### 4. ACTUATOR

**Square Actuator** (use with Color Options in Selection 5A & 5B)  
**AP1** Square with no frame  
**AP2** Square raised above frame  
**Plunger Actuator** (use with Bushing Options in Selection 5)  
**PA** Standard Plunger  
**PI** Medium Plunger  
**PL** Brass Chrome Plunger  
**PC** Brass Chrome Plated Plunger with Cap (for BD bushing only)  
**PD** Brass Chrome Plated Plunger (for BD bushing only)

### 5A. ACTUATOR COLOR & 5B FRAME COLOR

|                |                 |                |
|----------------|-----------------|----------------|
| <b>1</b> White | <b>4</b> Orange | <b>7</b> Blue  |
| <b>2</b> Black | <b>5</b> Yellow | <b>8</b> Brown |
| <b>3</b> Red   | <b>6</b> Green  | <b>9</b> Gray  |

### 5B. BUSHING

**BD**<sup>1</sup> Big bushing for PC, PD actuator 15/32"  
**B10**<sup>2</sup> Threaded 1/4 - 40  
**B20** Unthreaded  
**B21** Unthreaded with flat

### 6. TERMINATION

**M1** Solder Lug  
**M2** PCB  
**M51** Wire Wrap .750  
**M52** Wire Wrap .964  
**M53** Wire Wrap .425  
**M54** Wire Wrap 1.062  
**M6** PC Mount, 90° horizontal  
**M7** PC Mount, 90° vertical  
**VS2** PC Mount, U bracket, .620" mounting x .461" height  
**VS3** PC Mount, U bracket, .620" mounting x .630" height  
**VS4** PC Mount, U bracket, .750" mounting x .461" height  
**VS5** PC Mount, U bracket, .750" mounting x .630" height

### 7. CONTACTS/TERMINALS

| Contact  | Material            | Terminal Plating    | Rating                          | Approvals |
|----------|---------------------|---------------------|---------------------------------|-----------|
| <b>G</b> | silver <sup>6</sup> | gold over silver    | 6A 125VAC or 28VDC<br>3A 250VAC |           |
| <b>K</b> | gold <sup>7</sup>   | tin <sup>8</sup>    | 0.4VA max 20V max (AC/DC)       | N/A       |
| <b>P</b> | silver <sup>6</sup> | gold over silver    | 6A 125VAC or 28VDC<br>3A 250VAC |           |
| <b>Q</b> | silver <sup>6</sup> | silver <sup>6</sup> | 6A 125VAC or 28VDC<br>3A 250VAC |           |
| <b>R</b> | gold <sup>7</sup>   | gold <sup>7</sup>   | 0.4VA max 20V max (AC/DC)       | N/A       |

### 8. EPOXY SEAL

**E** Epoxy Seal **0** without Epoxy Seal

#### Notes:

- Hardware includes (2) 2M1-HDW2 nuts, (1) 2M1-HDW12 washer, and (1) 2M1-HDW17 locking ring
- Hardware includes (2) 2M1-HDW2 nuts, (1) 2M1-HDW11 washer, and (1) 2M1-HDW15 locking ring
- Tin option available with PC type terminations only.
- Available with circuit 1 only
- Black, white and red are standard. Other colors available, consult factory for details.
- Selection 5B is blank if actuator style is AP1 (no frame)
- Movable contact & terminal platings: silver over copper alloy
- Movable contact & terminal platings: gold over nickel over copper alloy
- Terminal platings: tin over nickel over copper alloy, available for PC mount terminations only

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 3M-Series Accessories

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

## Optional Cap

Sample Part Number: 3MN - C1 3

Selection: 1 2 3

### 1. SERIES

**3MN** Fits 3MN, 3MS or 3MA

### 2. PUSHBUTTON CAP SIZE

**C1** Round 8 mm diameter  
**C2** Round 9.70 mm diameter  
**C3** Square 11.7 x 11.7 mm  
**C4** Round 5 mm diameter  
**C5**<sup>1</sup> Round 15 mm diameter  
**C6**<sup>2</sup> Brass Chrome Plated, 3.15 mm diameter

### 3. CAP COLOR

|                 |                 |
|-----------------|-----------------|
| <b>1</b> White  | <b>5</b> Yellow |
| <b>2</b> Black  | <b>6</b> Green  |
| <b>3</b> Red    | <b>7</b> Blue   |
| <b>4</b> Orange |                 |

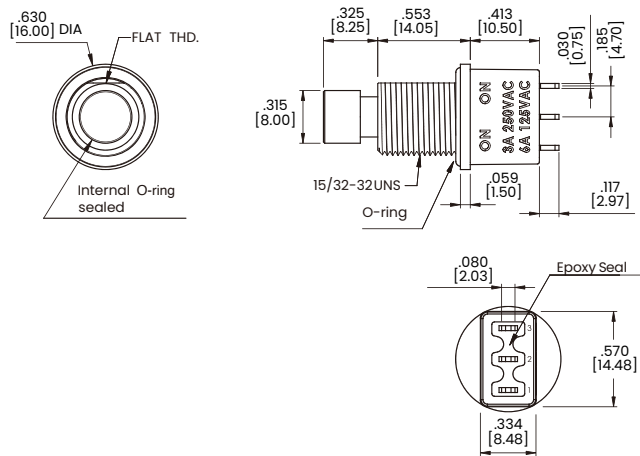
#### Notes:

- For 3MA with PL Bushing
- For 3MA with PD Bushing

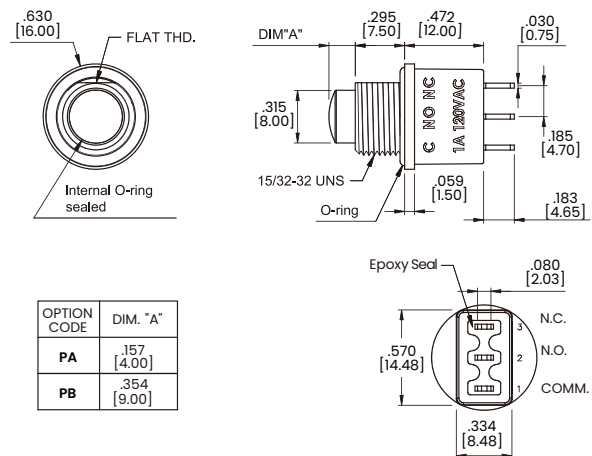
# Dimensional Specs

inches [millimeters]

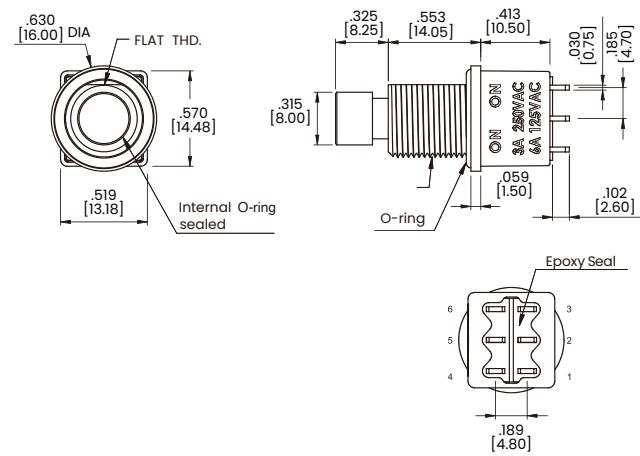
Single Pole Maintained Circuit



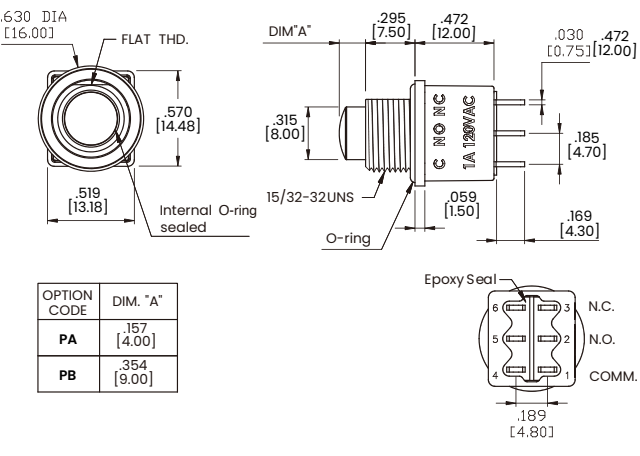
Single Pole Momentary Circuit



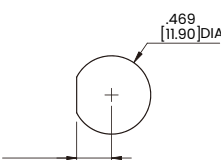
Double Pole Maintained Circuit



Double Pole Momentary Circuit



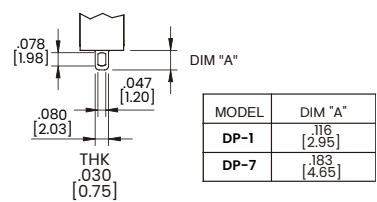
## Panel Mounting



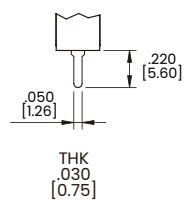
15/32-32 UNS FLAT-CUT  
THREADED BUSHING

## Termination Options

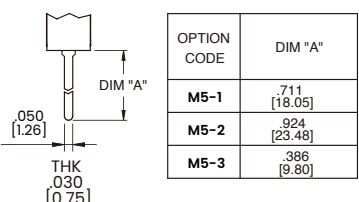
M1 Standard Solder Lug



M2 PC Thru-Hole

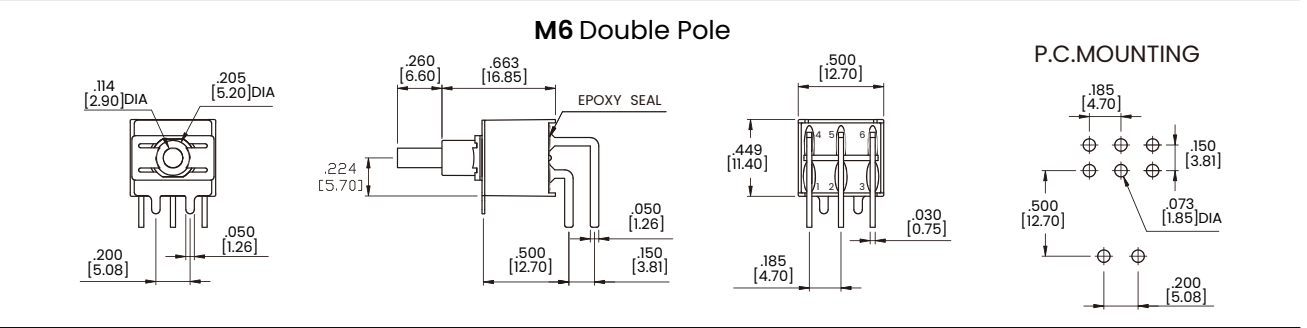
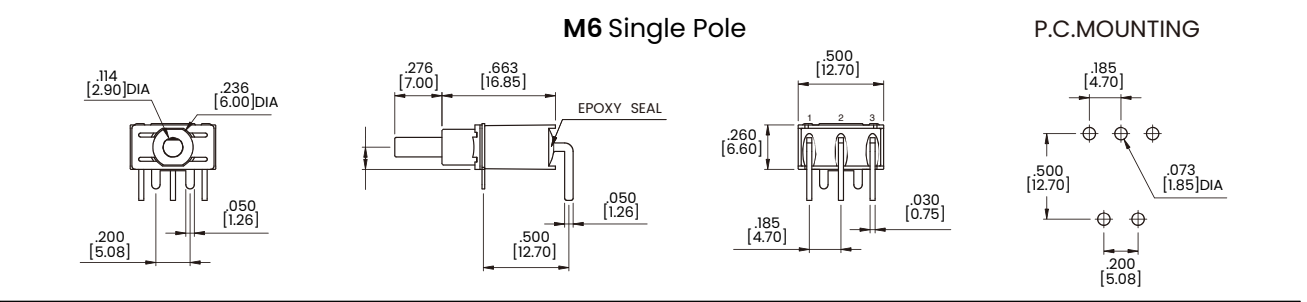
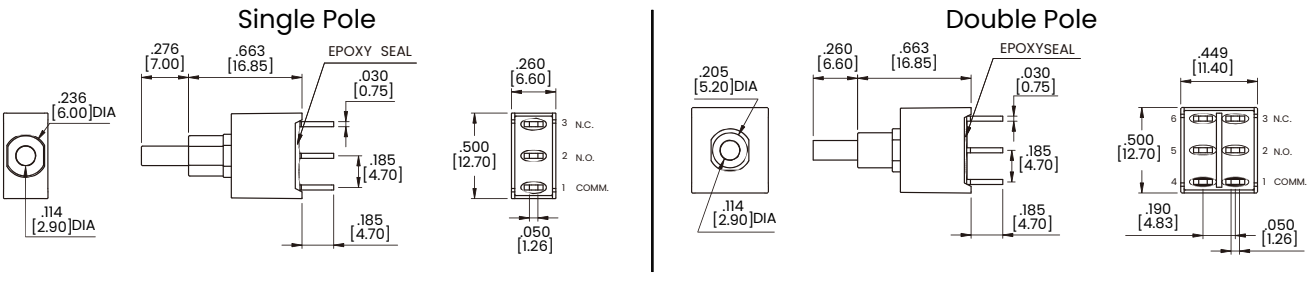


M5 Wire Wrap



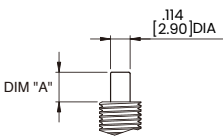
# Dimensional Specs

inches [millimeters]



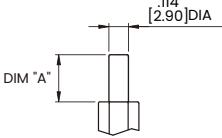
## Plunger Options

For B1 Bushing



| OPTION CODE | DIM. "A"    |
|-------------|-------------|
| P1          | .181 [4.60] |
| P2          | .228 [5.80] |
| P3          | .087 [2.20] |

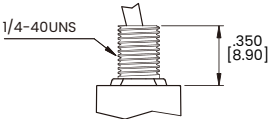
For B4 Bushing



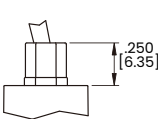
| OPTION CODE | DIM. "A"    |
|-------------|-------------|
| P1          | .276 [7.00] |
| P2          | .323 [8.20] |
| P3          | .181 [4.60] |

## Bushing Options

B1



B4

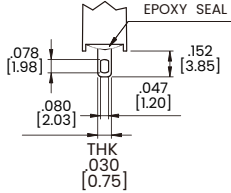


# Dimensional Specs

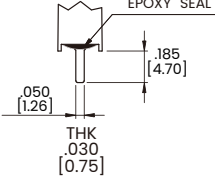
inches [millimeters]

## Termination Options

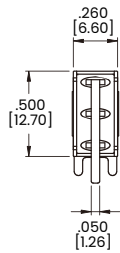
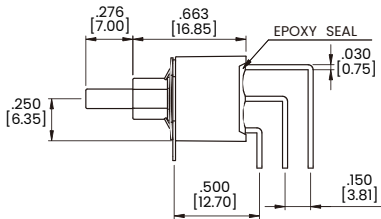
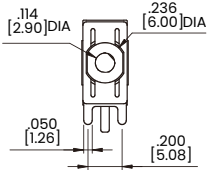
M1



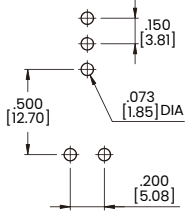
M2



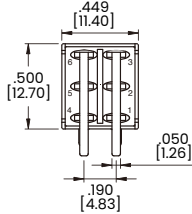
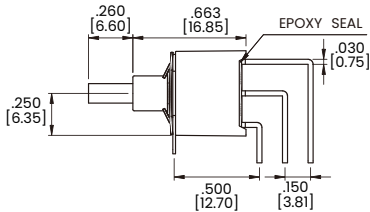
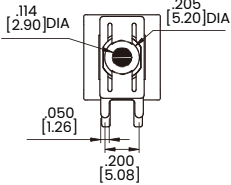
M7 Single Pole



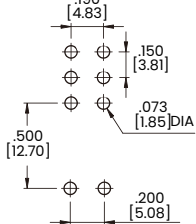
P.C.MOUNTING



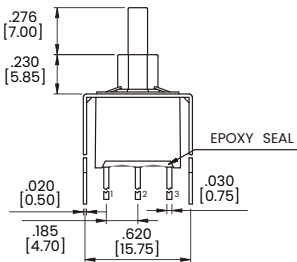
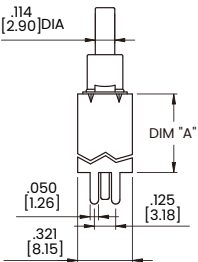
M7 Double Pole



P.C.MOUNTING

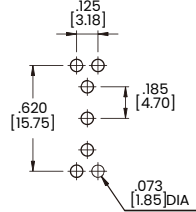


VS2-VS3 Single Pole

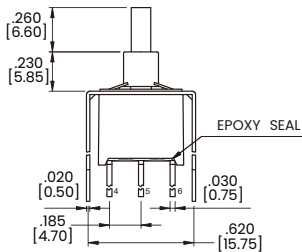
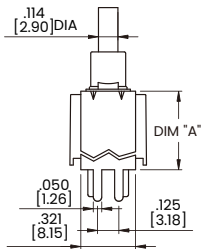


| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS2         | .461 [11.70] |
| VS3         | .630 [16.00] |

P.C.MOUNTING

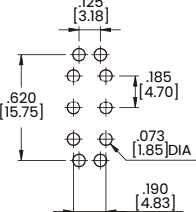


VS2-VS3 Double Pole



| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS2         | .461 [11.70] |
| VS3         | .630 [16.00] |

P.C.MOUNTING

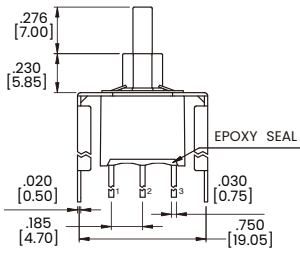
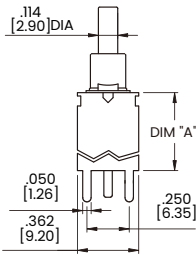


# Dimensional Specs

inches [millimeters]

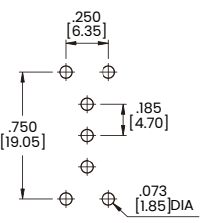
## VS4-VS5 Single Pole

### Termination Options

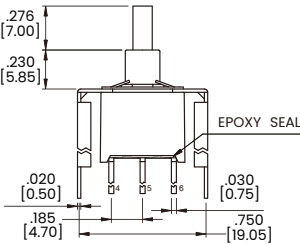
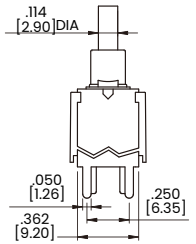


| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS4         | .461 [11.70] |
| VS5         | .630 [16.00] |

### P.C.MOUNTING

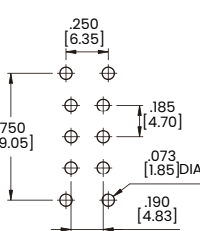


## VS4-VS5 Double Pole



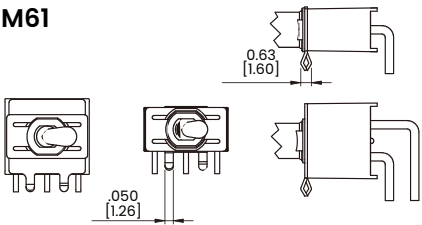
| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS4         | .461 [11.70] |
| VS5         | .630 [16.00] |

### P.C.MOUNTING

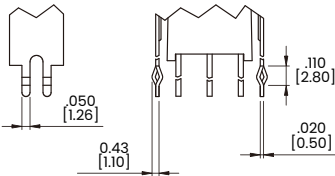


### Snap-In Termination Options

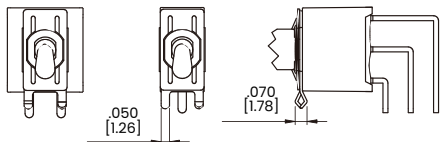
#### M61



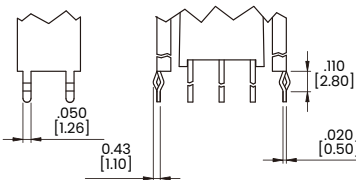
#### VS21, VS31



#### M71



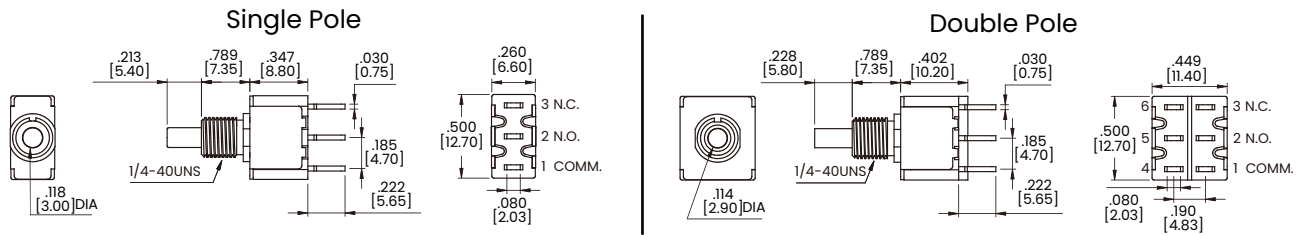
#### VS41, VS51



\* PC Mounting for M61, M71, VS21, VS31, VS41, VS51 refer to M6, M7, VS2, VS3, VS4, VS5 respectively.

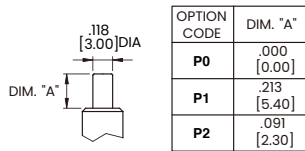
# Dimensional Specs

inches [millimeters]

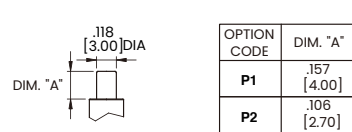


## Plunger Options

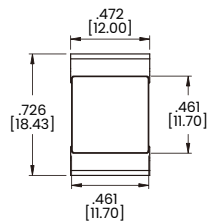
For B1, B2, B3, B4 Bushing



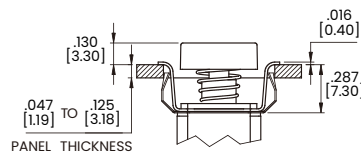
For B6 Bushing



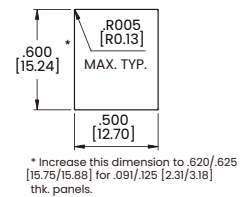
**API**



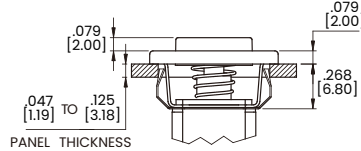
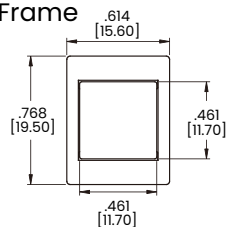
## Actuator Options for Snap-In Front Mount



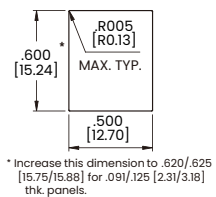
**PANEL MOUNTING**



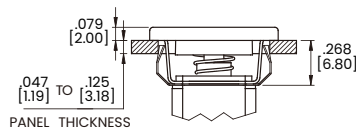
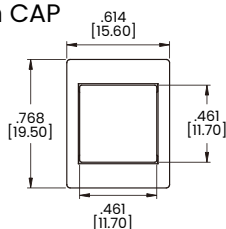
**AP2 with Frame**



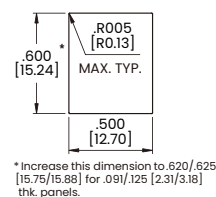
**PANEL MOUNTING**



**AP3 Flush CAP**

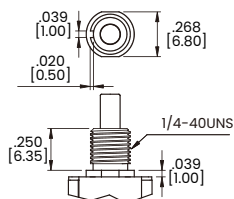


**PANEL MOUNTING**

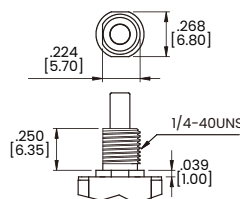


## Bushing Options

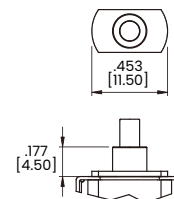
**B1 Threaded Standard**  
**B2 Non-Threaded**



**B3 Threaded Standard**  
**B4 Non-Threaded**



**B6 Non-Threaded**  
(FOR TERMINATION OPTIONS VS6-VS9 ONLY)

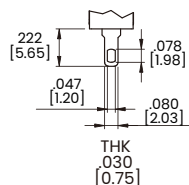


# Dimensional Specs

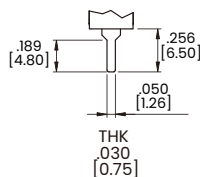
inches [millimeters]

## Termination Options

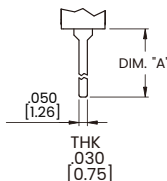
### M1 Standard Solder Lug



### M2 PC Thru-Hole

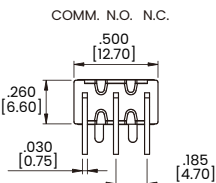
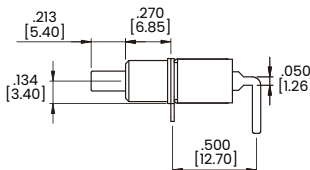
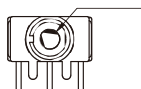


### M5 Wire Wrap

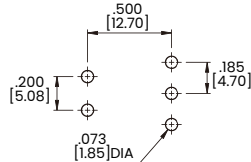


| OPTION CODE | DIM. "A"     |
|-------------|--------------|
| M5-1        | .750 [19.05] |
| M5-2        | .964 [24.48] |
| M5-3        | .425 [10.80] |

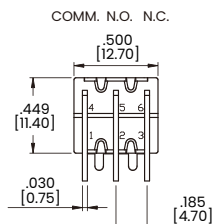
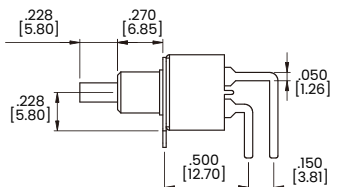
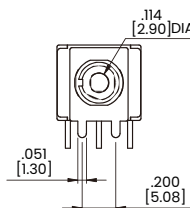
### M6 Single Pole



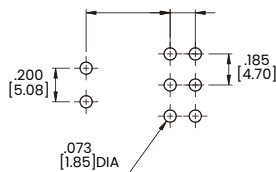
### P.C.MOUNTING



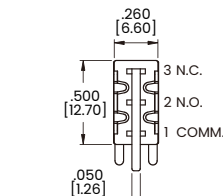
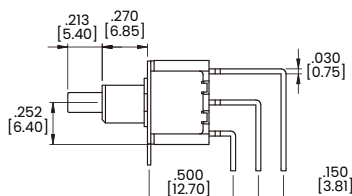
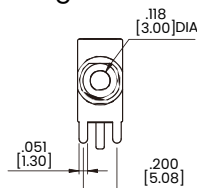
### M6 Double Pole



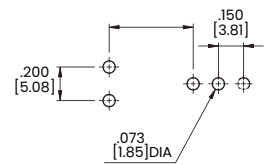
### P.C.MOUNTING



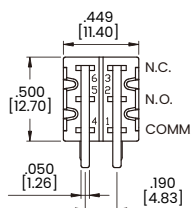
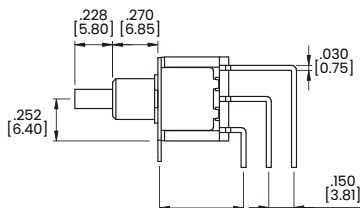
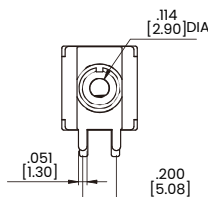
### M7 Single Pole



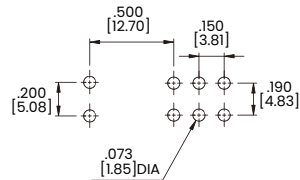
### P.C.MOUNTING



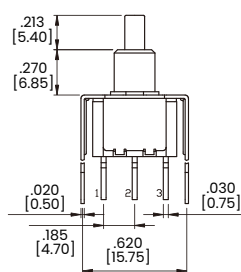
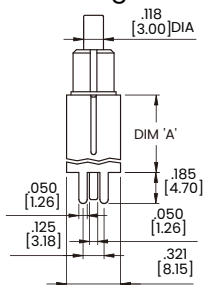
### M7 Double Pole



### P.C.MOUNTING

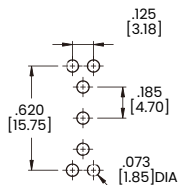


### VS2-VS3 Single Pole



| OPTION CODE | DIM. "A"     |
|-------------|--------------|
| VS2         | .461 [11.70] |
| VS3         | .630 [16.00] |

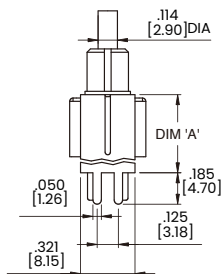
### P.C.MOUNTING



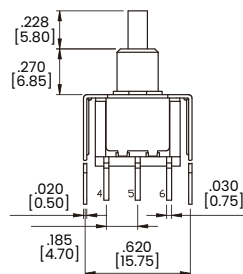
# Dimensional Specs

inches [millimeters]

## VS2-VS3 Double Pole

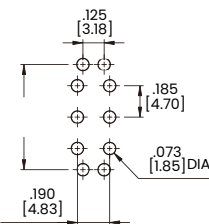


## Termination Options

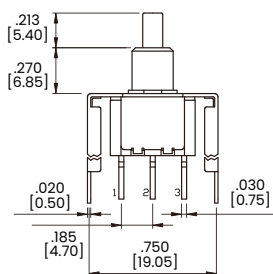
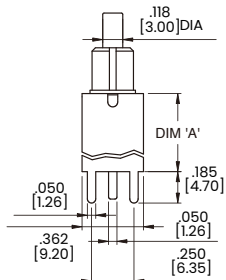


| OPTION CODE | DIM. 'A'     |
|-------------|--------------|
| <b>VS2</b>  | .461 [11.70] |
| <b>VS3</b>  | .630 [16.00] |

## P.C.MOUNTING

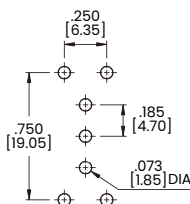


## VS4-VS5 Single Pole

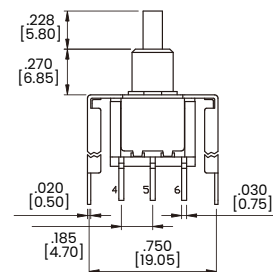
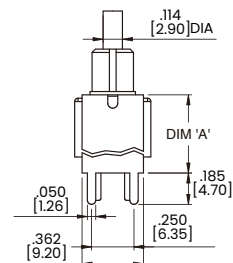


| OPTION CODE | DIM. 'A'     |
|-------------|--------------|
| <b>VS4</b>  | .461 [11.70] |
| <b>VS5</b>  | .630 [16.00] |

## P.C.MOUNTING

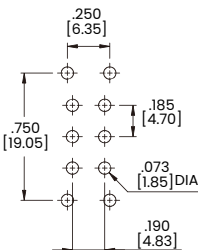


## VS4-VS5 Double Pole

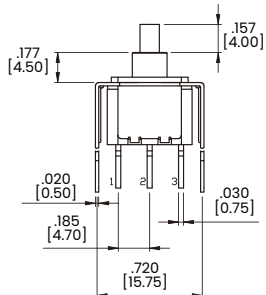
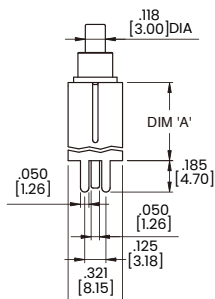


| OPTION CODE | DIM. 'A'     |
|-------------|--------------|
| <b>VS4</b>  | .461 [11.70] |
| <b>VS5</b>  | .630 [16.00] |

## P.C.MOUNTING

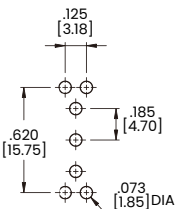


## VS6-VS7 Single Pole (FOR B6 BUSHING ONLY)



| OPTION CODE | DIM. 'A'     |
|-------------|--------------|
| <b>VS6</b>  | .461 [11.70] |
| <b>VS7</b>  | .630 [16.00] |

## P.C.MOUNTING

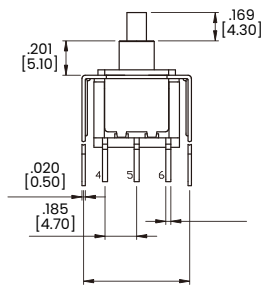
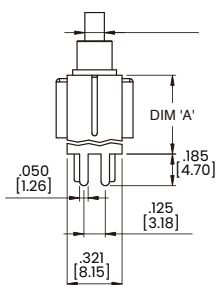


# Dimensional Specs

inches [millimeters]

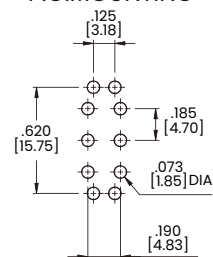
## Termination Options

### VS6-VS7 Double Pole (FOR B6 BUSHING ONLY)

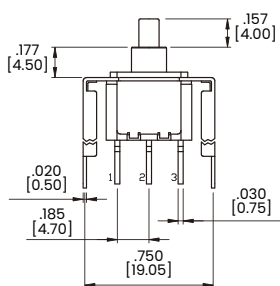
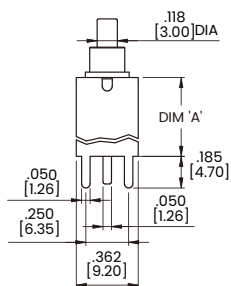


| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| <b>VS6</b>  | .461 [11.70] |
| <b>VS7</b>  | .630 [16.00] |

### P.C.MOUNTING

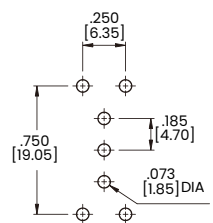


### VS8-VS9 Single Pole (FOR B6 BUSHING ONLY)

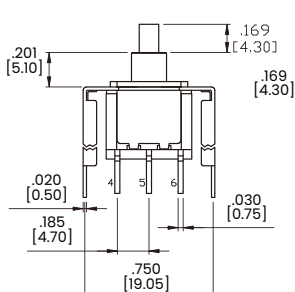
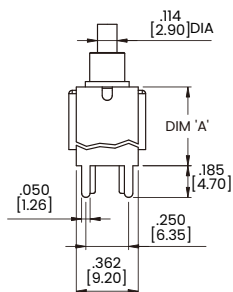


| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| <b>VS8</b>  | .461 [11.70] |
| <b>VS9</b>  | .630 [16.00] |

### P.C.MOUNTING

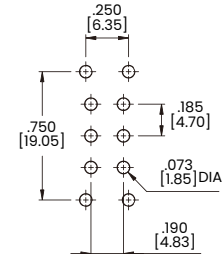


### VS8-VS9 Double Pole (FOR B6 BUSHING ONLY)



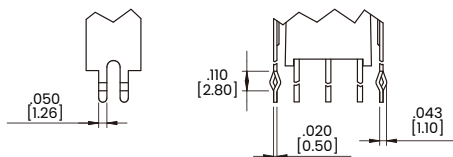
| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| <b>VS8</b>  | .461 [11.70] |
| <b>VS9</b>  | .630 [16.00] |

### P.C.MOUNTING

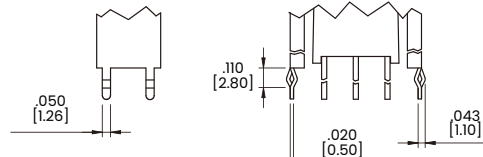


## Snap-In Termination Options

### VS21, VS31



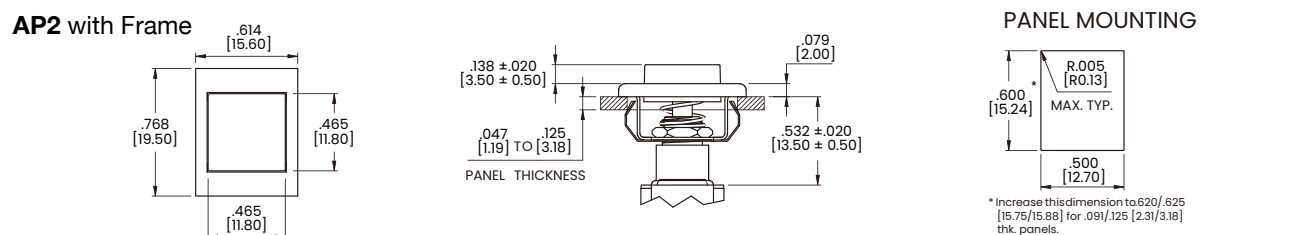
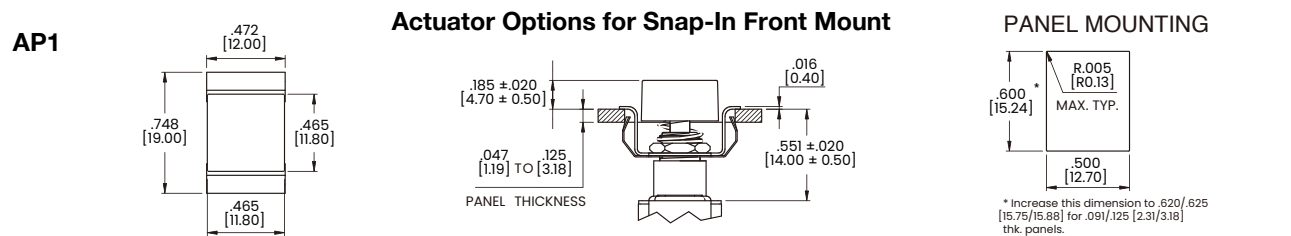
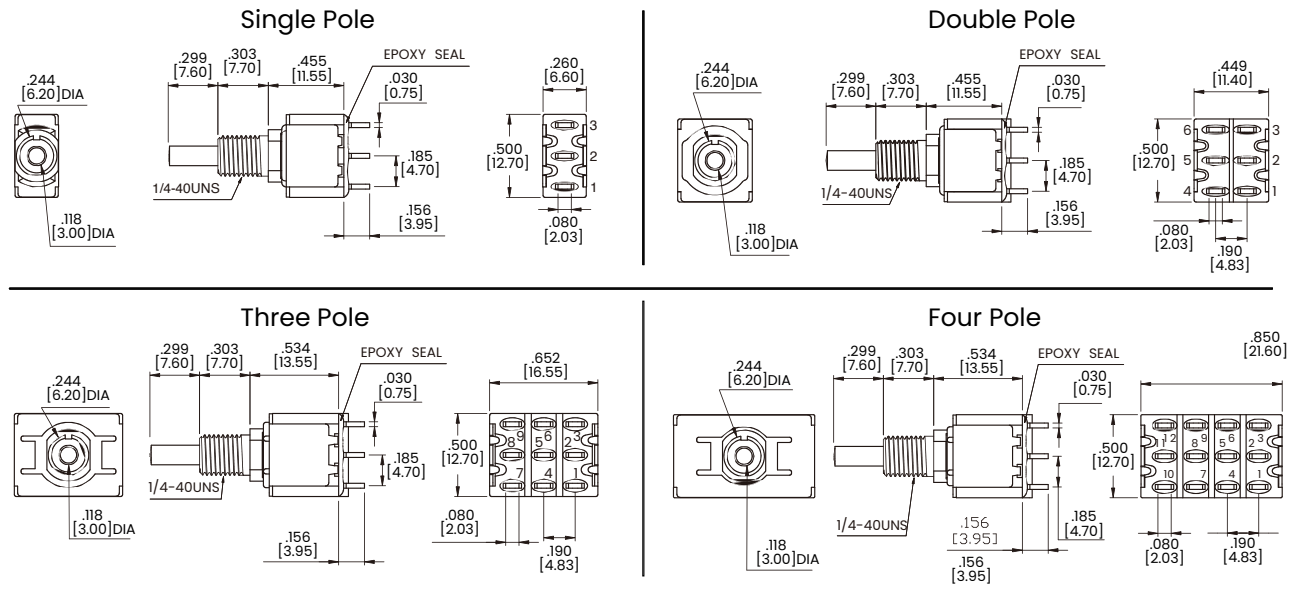
### VS41, VS51



\* PC Mounting for VS21, VS31, VS41, VS51 refer to VS2, VS3, VS4, VS5 respectively.

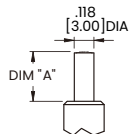
# Dimensional Specs

inches [millimeters]



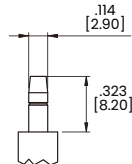
## Plunger Options

PA, PI



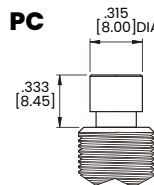
| OPTION CODE | DIM "A"     |
|-------------|-------------|
| PA          | .299 [7.60] |
| PI          | .244 [6.20] |

PL

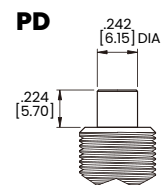


\* Plunger material: Brass Nickel Plated

PC



PD

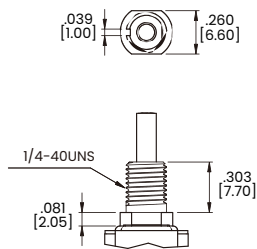


\* Plunger material: Brass Chrome Plated  
\* PC,PD must configure with BD bushing

# Dimensional Specs

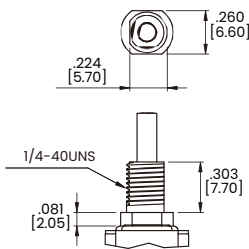
inches [millimeters]

## B10 Threaded Standard B20 Non-Threaded

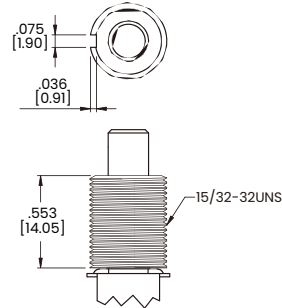


## Bushing Options

### B21 Non-Threaded

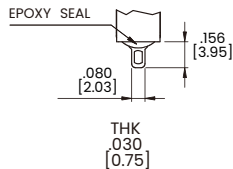


### BD Threaded Standard

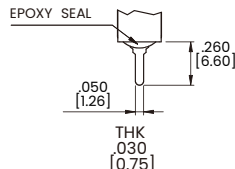


## Termination Options

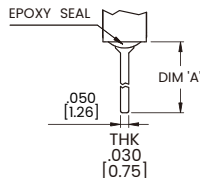
### M1 Standard Solder Lug



### M2 PC Thru-Hole

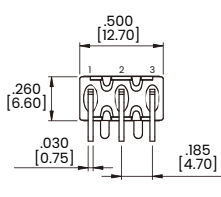
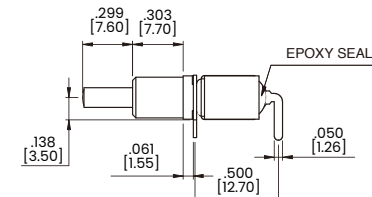
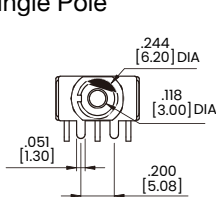


### M5 Wire Wrape

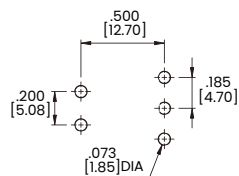


| OPTION CODE | DIM.'A'       |
|-------------|---------------|
| M5-1        | .750 [19.05]  |
| M5-2        | .964 [24.48]  |
| M5-3        | .425 [10.80]  |
| M5-4        | 1.062 [26.97] |

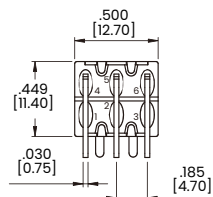
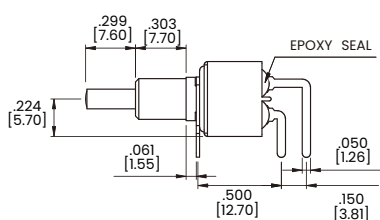
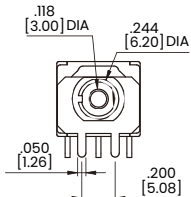
## M6 Single Pole



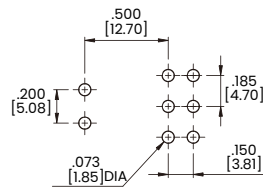
## P.C.MOUNTING



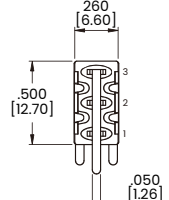
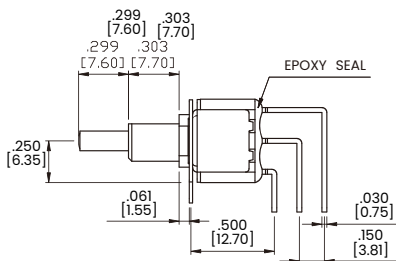
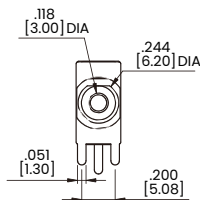
## M6 Double Pole



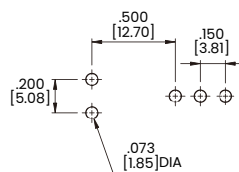
## P.C.MOUNTING



## M7 Single Pole



## P.C.MOUNTING

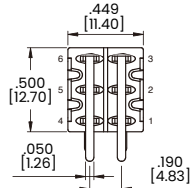
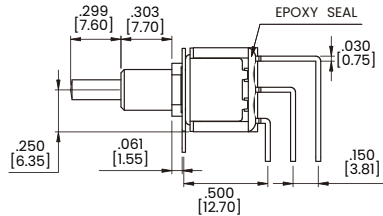
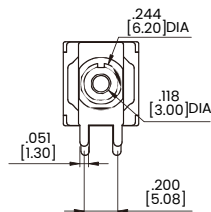


# Dimensional Specs

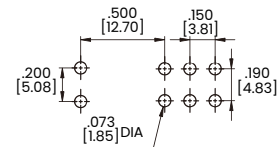
inches [millimeters]

## Termination Options

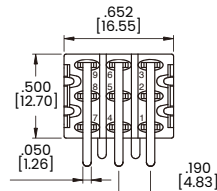
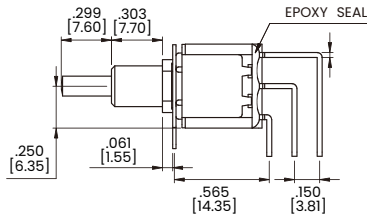
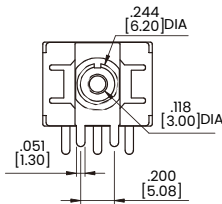
### M7 Double Pole



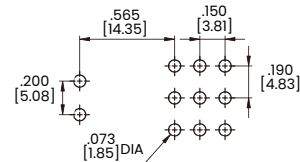
### P.C.MOUNTING



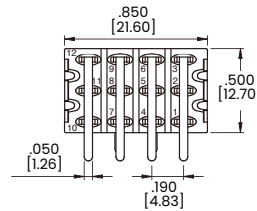
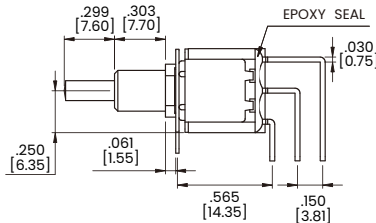
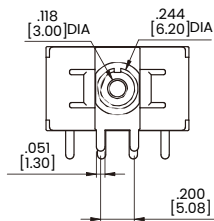
### M7 Three Pole



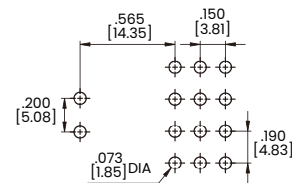
### P.C.MOUNTING



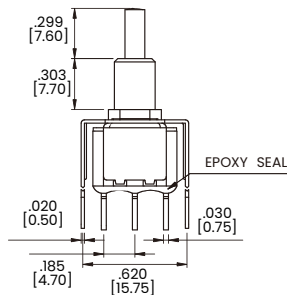
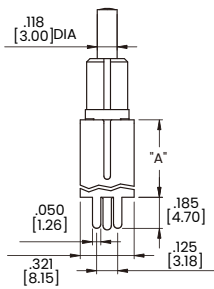
### M7 Four Pole



### P.C.MOUNTING

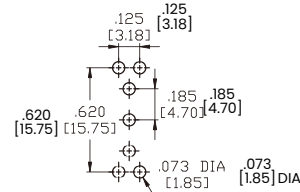


### VS2-VS3 Single Pole

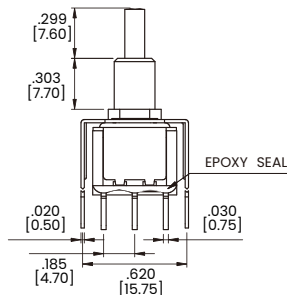
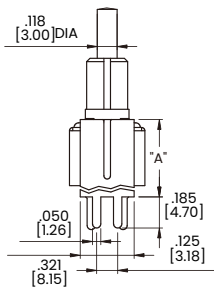


| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS2         | .461 [11.70] |
| VS3         | .630 [16.00] |

### P.C.MOUNTING

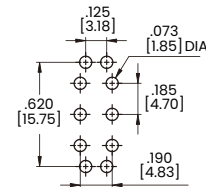


### VS2-VS3 Double Pole



| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS2         | .461 [11.70] |
| VS3         | .630 [16.00] |

### P.C.MOUNTING

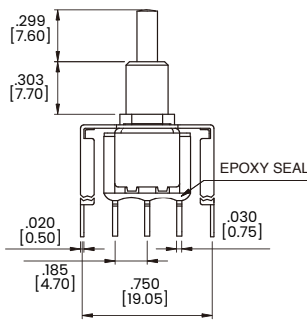
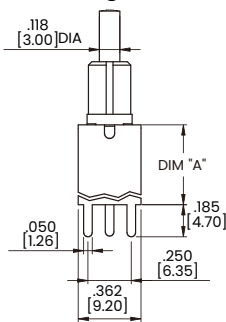


# Dimensional Specs

inches [millimeters]

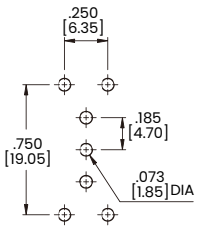
## Termination Options

### VS4-VS5 Single Pole

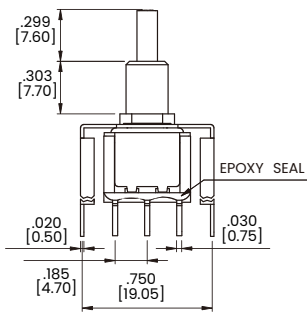
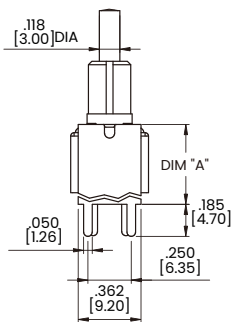


| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS4         | .461 [11.70] |
| VS5         | .630 [16.00] |

### P.C.MOUNTING

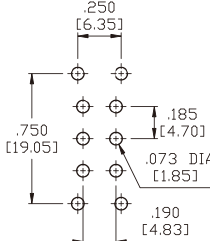


### VS4-VS5 Double Pole



| OPTION CODE | DIM.'A'      |
|-------------|--------------|
| VS4         | .461 [11.70] |
| VS5         | .630 [16.00] |

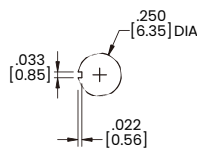
### P.C.MOUNTING



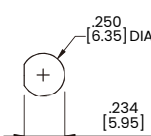
## Panel Mounting

### 1/4 INCH BUSHING

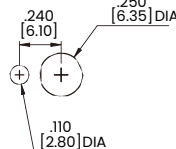
#### B10



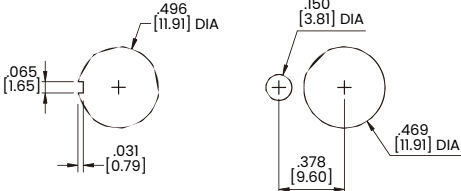
#### B20



#### B21

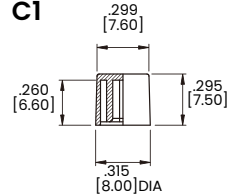


#### BD

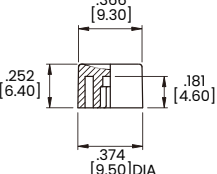


## Plunger Caps

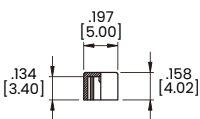
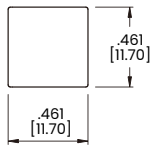
#### C1



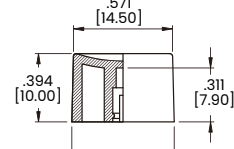
#### C2



#### C3

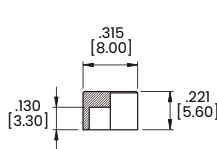


#### C5



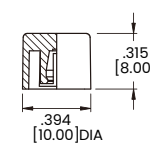
For PL plunger only

#### C6



For PD plunger only

#### C7



For PL plunger only

| CAP AND FRAME COLORS |        |   |       |
|----------------------|--------|---|-------|
| 1                    | White  | 6 | Green |
| 2                    | Black  | 7 | Blue  |
| 3                    | Red    | 8 | Brown |
| 4                    | Orange | 9 | Gray  |
| 5                    | Yellow |   |       |

MATERIAL: ABS for C1-C5, C7  
MATERIAL: Chrome plated brass for C6

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