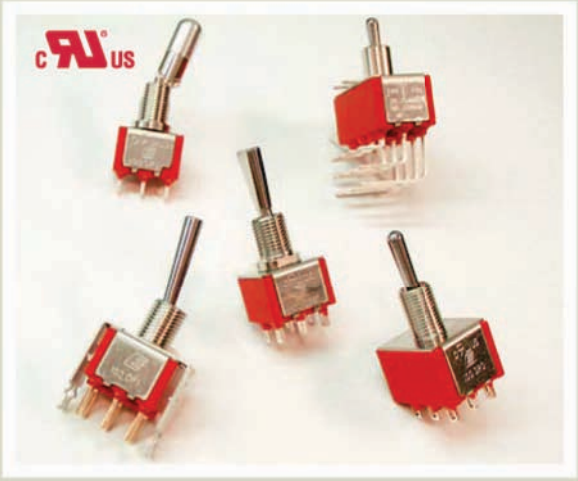
# SERIES 100 SWITCHES

## TOGGLE SWITCHES - MINIATURE



### FEATURES & BENEFITS

- Up to 4 poles available
- Variety of switching functions
- Miniature
- Multiple actuator & bushing options

### APPLICATIONS/MARKETS

- Telecommunications
- Instrumentation
- Networking
- Medical equipment

### SPECIFICATIONS

| | |
|---|---|
| Contact Rating: | See contact material options |
| Life Expectancy: | 40,000 make-and-break cycles |
| Contact Resistance: | 10 mΩ max. typical initial @ 2-4 VDC<br>100 mA for both silver and gold plated contacts |
| Insulation Resistance: | 1,000 MΩ min. |
| Dielectric Strength: | 1,000 V RMS @ sea level |
| Operating Temperature: | -30° C to 85° C |

### MATERIALS

| | |
|---|---|
| Case: | Diallyl Phthalate (DAP) |
| Toggle Handle: | Brass, chrome plated |
| Switch Support: | Brass or steel, tin plated |
| Bushing: | Brass, nickel plated |
| Housing: | Stainless steel |
| Contacts / Terminals: | Silver or gold plated copper alloy |

### HOW TO ORDER

| SERIES | MODEL NO. | ACTUATOR | BUSHING | TERMINATION | CONTACT MATERIAL | SEAL | HARDWARE |
|---|---|---|---|---|---|---|---|
| 100 | ☐☐☐ | ☐☐ | ☐☐☐ | ☐☐☐☐ | ☐ | E | ☐ |
| | SP1<br>SP2*<br>SP3<br>SP4*<br>SP5*<br>DP1<br>DP2*<br>DP3<br>DP4*<br>DP5*<br>DP6<br>DP7*<br>DP8*<br>3P1<br>3P2*<br>3P3<br>3P4*<br>3P5*<br>4P1<br>4P2*<br>4P3<br>4P4*<br>4P5*<br>4P6<br>4P7*<br>4P8* | T1†<br>T2<br>T3<br>T4<br>T5<br>T6<br>T7<br>T8<br>T9<br>K1<br>K2<br><br>† Optional Toggle Cap (T1 Only):<br>T100-1 = White<br>T100-2 = Black | B1<br>B2<br>B3<br>B4<br>B5<br>B6<br>B8<br>B9<br>B11<br>B12<br>B13<br>B15<br>B16<br>B25**<br>B26** | M1<br>M2<br>M3<br>M5<br>M6<br>M61<br>M7<br>M71<br>VS2<br>VS3<br>VS5*<br>M64*<br>VS21*<br>VS31* | Q = Silver<br>R = Gold | E = Epoxy Sealed at Base of Terminal | H = Hardware |

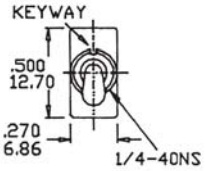
Notes: * Not available with the K1 and K2 actuator options.
** Available only with the K1 and K2 actuator options.

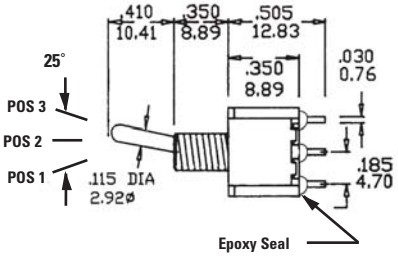
**Example Ordering Number**
100–SP1–T4–B2–M1–R–E

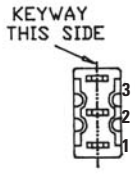
Specifications subject to change without notice.

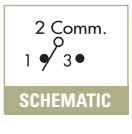

Phone: 800-867-2717 Fax: 763-531-8235

## SPDT



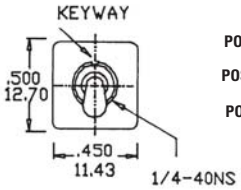



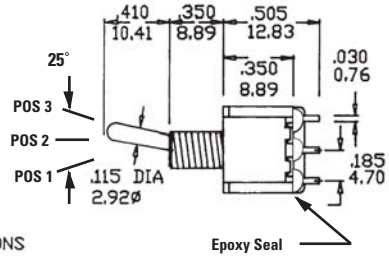

SCHEMATIC

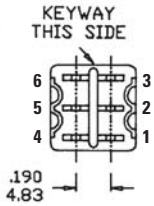
| Model No. | POS 1 | POS 2 | POS 3 |
|---|---|---|---|
| SP-1 | ON | NONE | ON |
| SP-2 | ON | NONE | (ON) |
| SP-3 | ON | OFF | ON |
| SP-4 | (ON) | OFF | (ON) |
| SP-5 | ON | OFF | (ON) |
| Term. Comm. | 2-3 | OPEN | 2-1 |

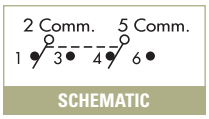
( ) = Momentary

## DPDT



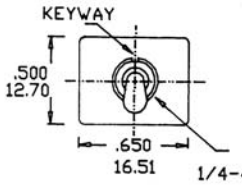



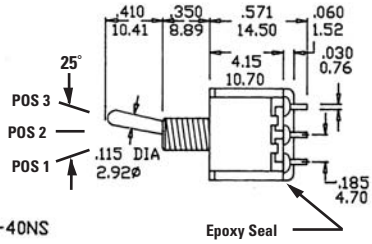

SCHEMATIC

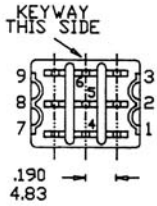
| Model No. | POS 1 | POS 2 | POS 3 |
|---|---|---|---|
| DP-1 | ON | NONE | ON |
| DP-2 | ON | NONE | (ON) |
| DP-3 | ON | OFF | ON |
| DP-4 | (ON) | OFF | (ON) |
| DP-5 | ON | OFF | (ON) |
| DP-7 | ON | ON | (ON) |
| DP-8 | (ON) | ON | (ON) |
| Term. Comm. | 2-3, 5-6 | OPEN | 2-1, 5-4 |
| DP-6 | ON | ON | ON |
| Term. Comm. | 2-3, 5-6 | 2-3, 5-4 | 2-1, 5-4 |

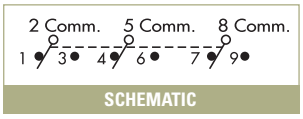
( ) = Momentary

## 3PDT



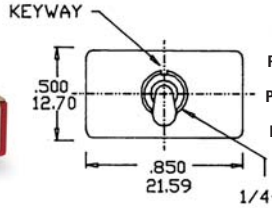



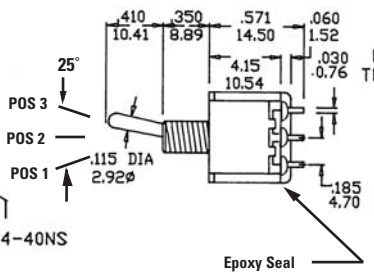

SCHEMATIC

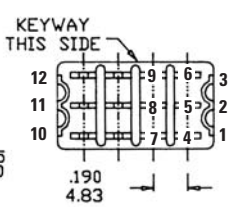
| Model No. | POS 1 | POS 2 | POS 3 |
|---|---|---|---|
| 3P-1 | ON | NONE | ON |
| 3P-2 | ON | NONE | (ON) |
| 3P-3 | ON | OFF | ON |
| 3P-4 | (ON) | OFF | (ON) |
| 3P-5 | ON | OFF | (ON) |
| Term. Comm. | 2-3, 5-6<br>8-9 | OPEN | 2-1, 5-4<br>8-7 |

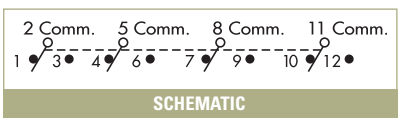
( ) = Momentary

## 4PDT




SCHEMATIC

| Model No. | POS 1 | POS 2 | POS 3 |
|---|---|---|---|
| 4P-1 | ON | NONE | ON |
| 4P-2 | ON | NONE | (ON) |
| 4P-3 | ON | OFF | ON |
| 4P-4 | (ON) | OFF | (ON) |
| 4P-5 | ON | OFF | (ON) |
| 4P-7 | ON | ON | (ON) |
| 4P-8 | (ON) | ON | (ON) |
| Term. Comm. | 2-3, 5-6<br>8-9<br>11-12 | OPEN | 2-1, 5-4<br>8-7<br>11-10 |
| 4P-6 | ON | ON | ON |
| Term. Comm. | 2-3, 5-6<br>8-9<br>11-12 | 2-3, 5-4<br>8-9<br>11-10 | 2-1, 5-4<br>8-7<br>11-10 |

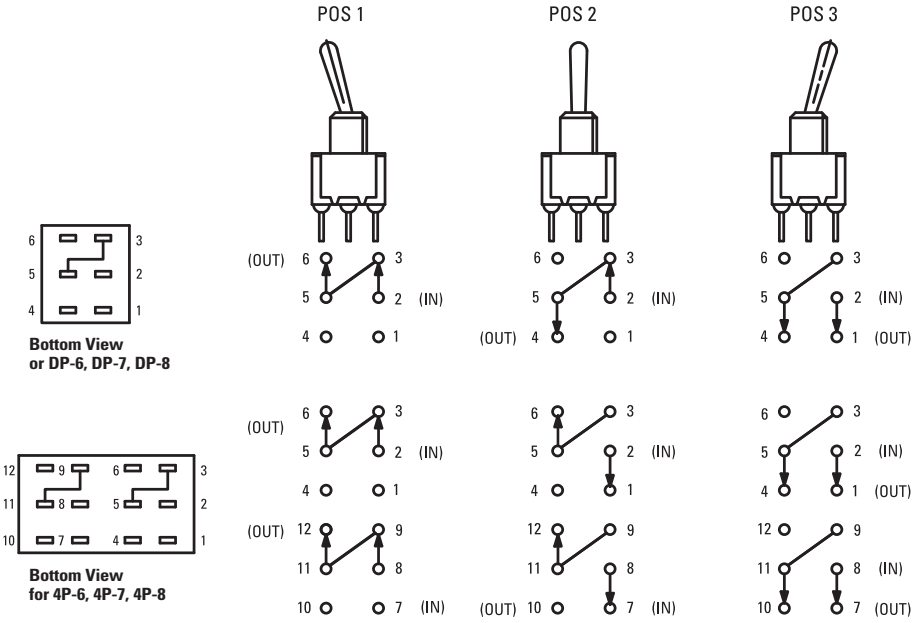
( ) = Momentary

# SERIES 100 SWITCHES

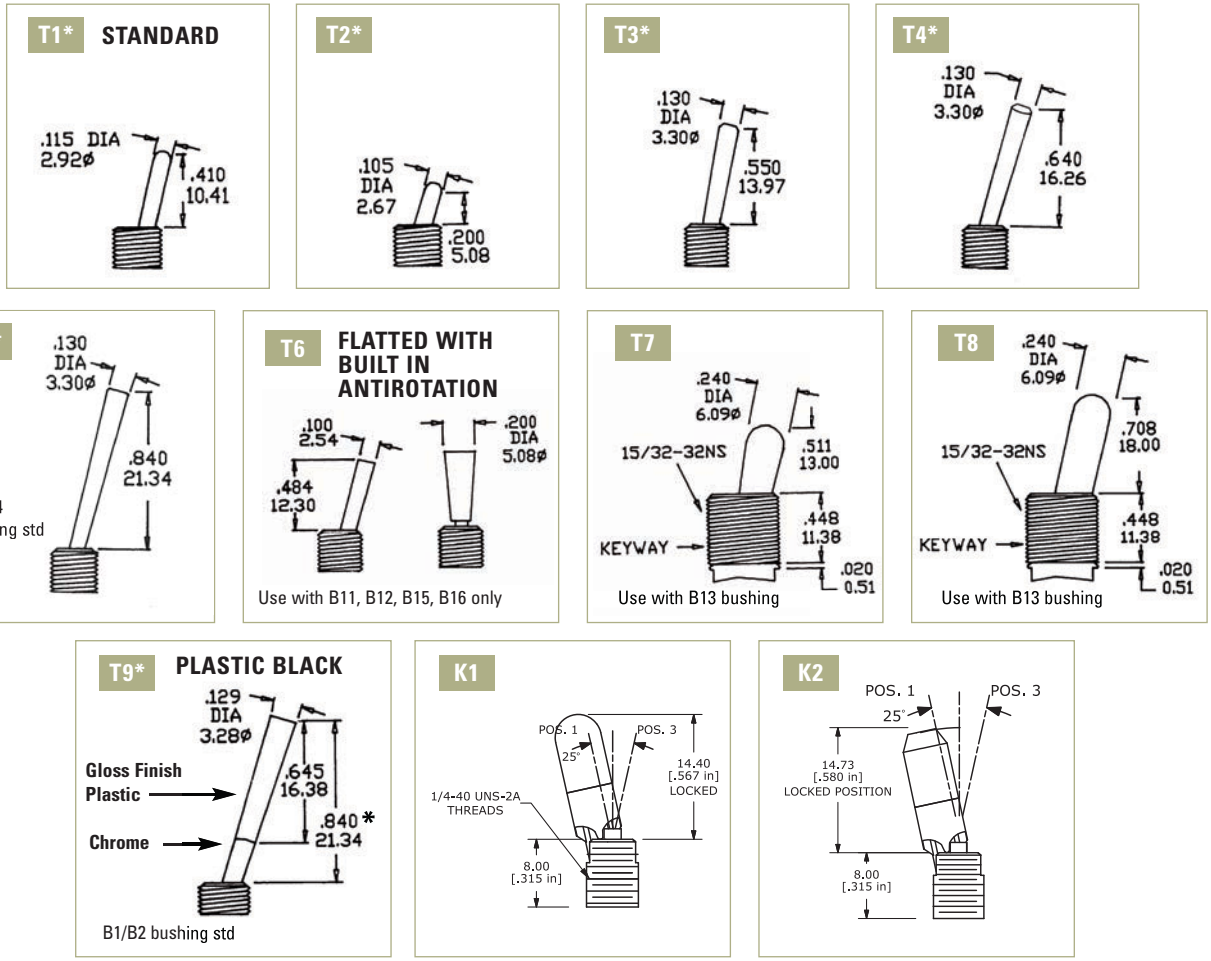
## TOGGLE SWITCHES - MINIATURE



### 3 - WAY WIRING DIAGRAM SCHEMATICS



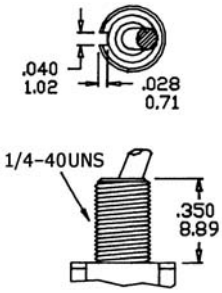

### ACTUATOR OPTIONS



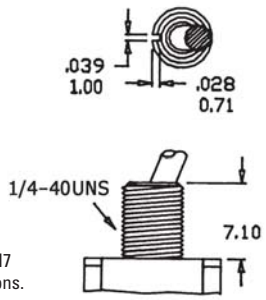

*Add .070 (1.78) for B3, B4 bushings, subtract .020 (0.51) for B6 bushing.

## BUSHING OPTIONS

### B1 THD STD
### B2 NON-THD

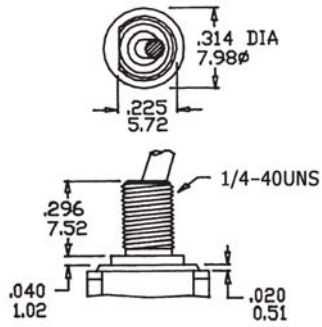



### B3 THD STD
### B4 NON-THD

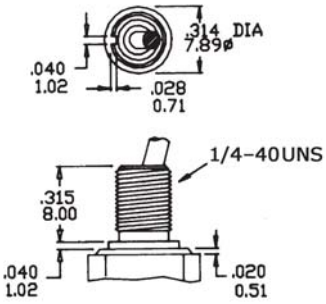



B4 is standard for M6, M7 and VS termination options.

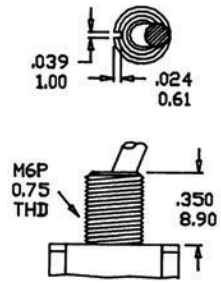
### B5 HIGH TORQUE



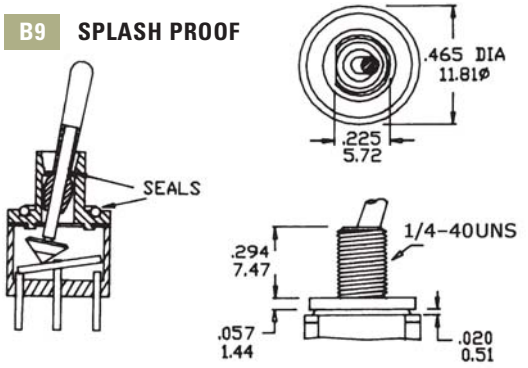

### B6 HIGH TORQUE



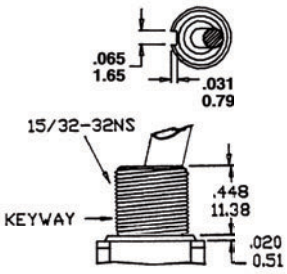

### B8 METRIC THD




### B9 SPLASH PROOF

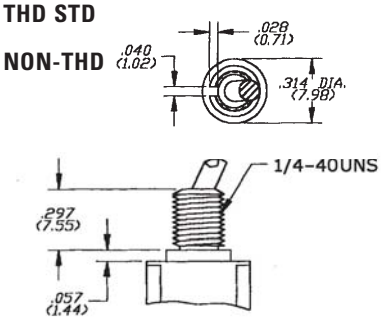



### B13



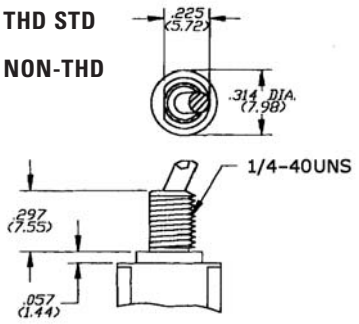

Use with T7 and T8 actuators only

### B11 THD STD
### B12 NON-THD



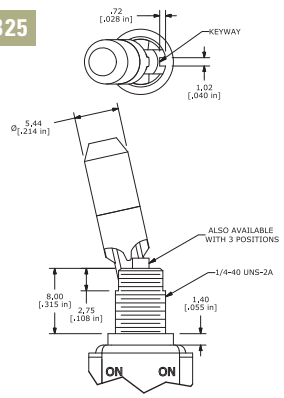

Use with T6 actuator only

### B15 THD STD
### B16 NON-THD

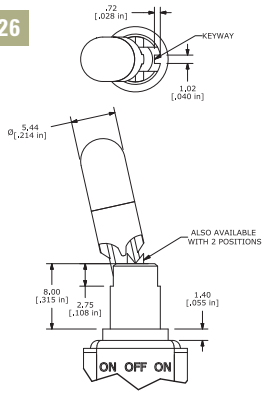



Use with T6 actuator only

### B25




### B26

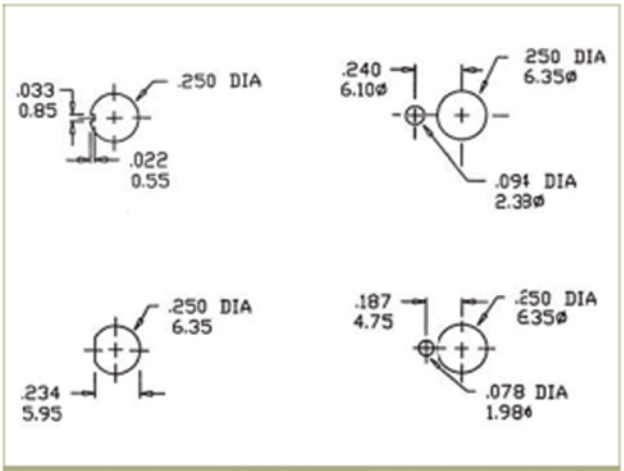


# SERIES 100 SWITCHES

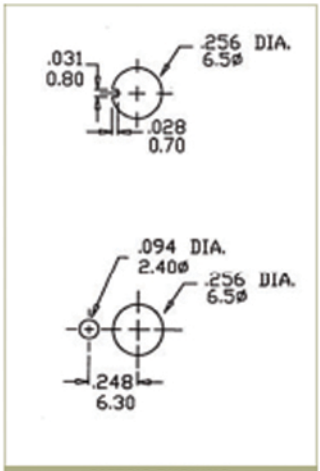
## TOGGLE SWITCHES - MINIATURE



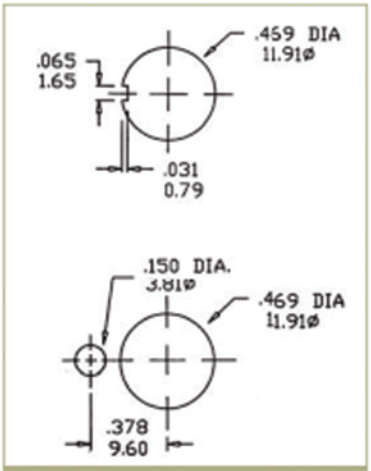
### BUSHING OPTIONS - PANEL MOUNTING




1/4 IN. BUSHING



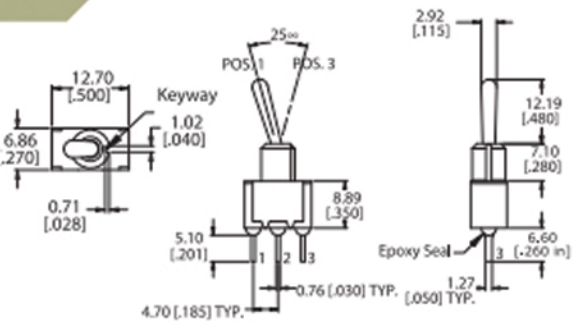

METRIC BUSHING

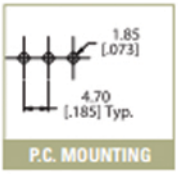



15/32 IN. BUSHING

### TERMINATION OPTIONS

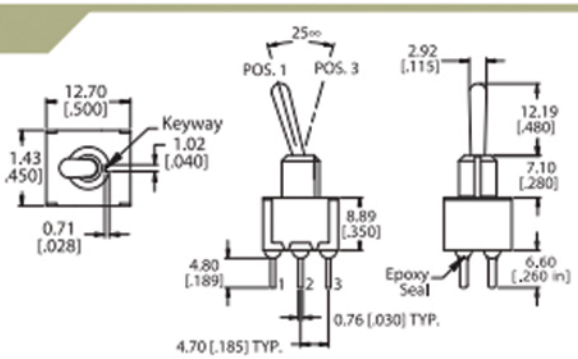
#### M2 SPDT

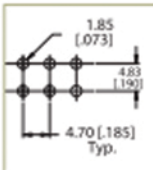



P.C. MOUNTING

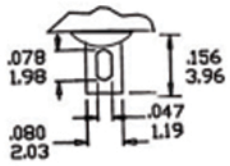
#### M2 DPDT



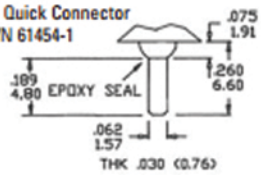

P.C. MOUNTING

#### M1 SOLDER LUG



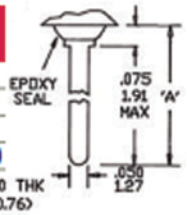

#### M3 QUICK CONNECT

Mating Quick Connector
Amp P/N 61454-1

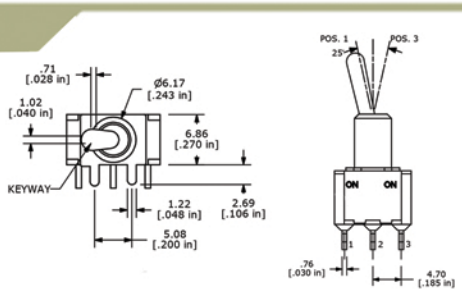


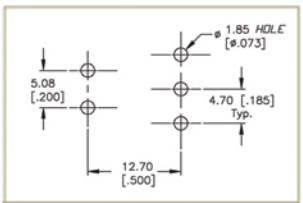

#### M5 WIRE WRAP

| Option Code | Dim. 'A' |
|---|---|
| M51 | .750 (18.7) |
| M52 | .964 (24.48) |
| M53 | .425 (10.80) |
| M54 | 1.062 (26.97) |




#### M6 SPDT

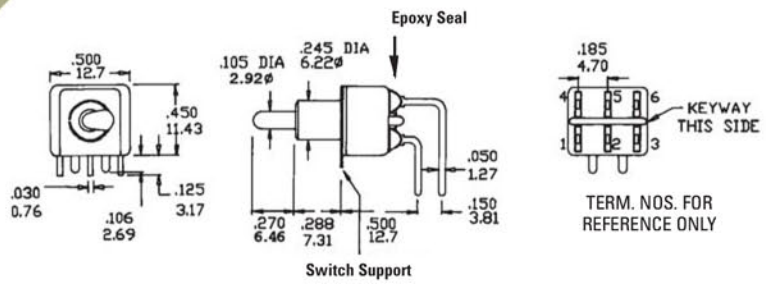


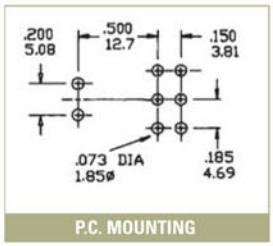




P.C. MOUNTING

## M6

DPDT

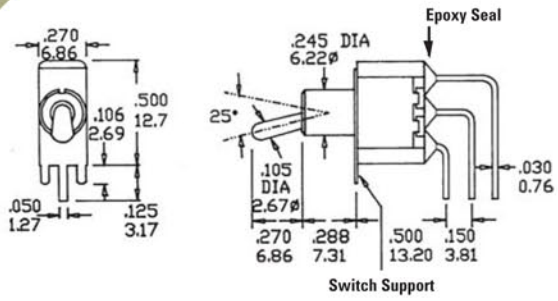


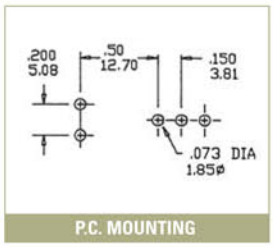




P.C. MOUNTING

## M7

SPDT

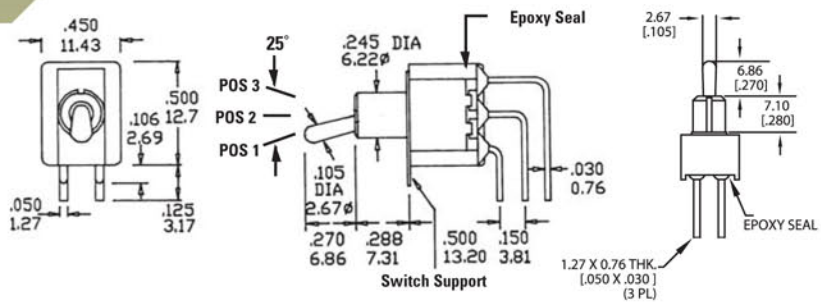


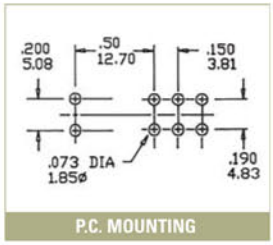




P.C. MOUNTING

## M7

DPDT

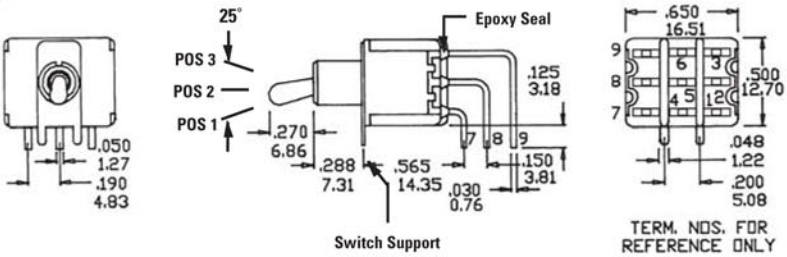


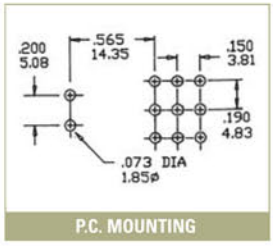




P.C. MOUNTING

## M7

3PDT

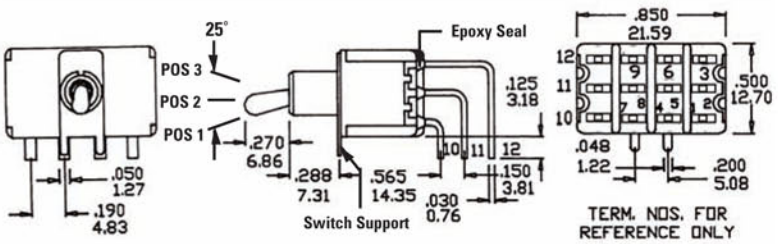


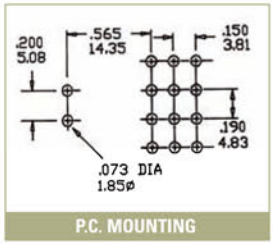




P.C. MOUNTING

## M7

4PDT



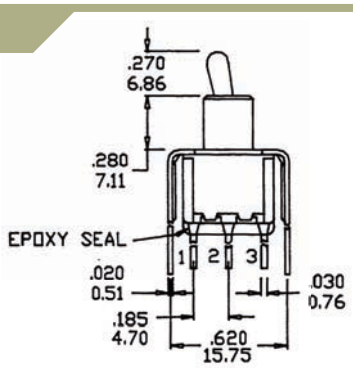

P.C. MOUNTING

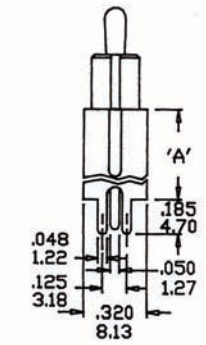
# SERIES 100 SWITCHES

## TOGGLE SWITCHES - MINIATURE

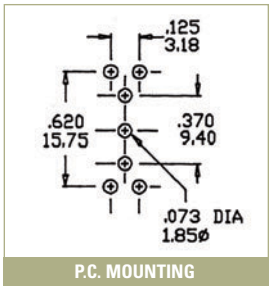
### VS2-VS3

SPDT



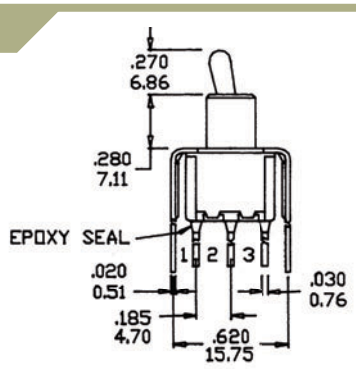

| Option Code | Dim. 'A' |
|---|---|
| VS2 | .460 (11.68) |
| VS3 | .630 (16.00) |

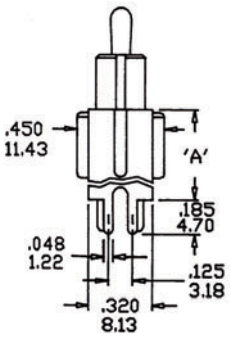



P.C. MOUNTING

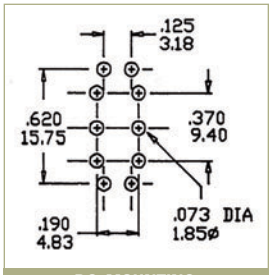
### VS2-VS3

DPDT



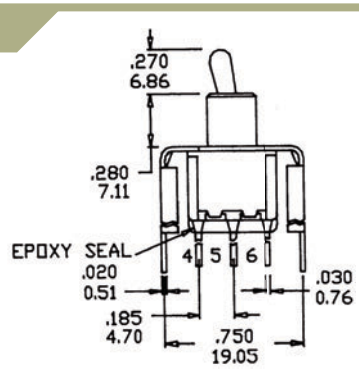

| Option Code | Dim. 'A' |
|---|---|
| VS2 | .460 (11.68) |
| VS3 | .630 (16.00) |

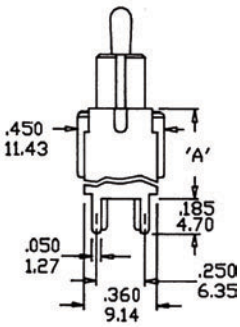



P.C. MOUNTING

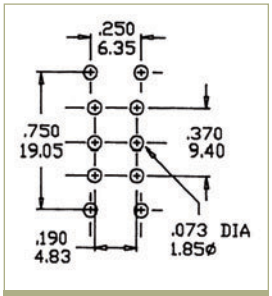
### VS5

DPDT



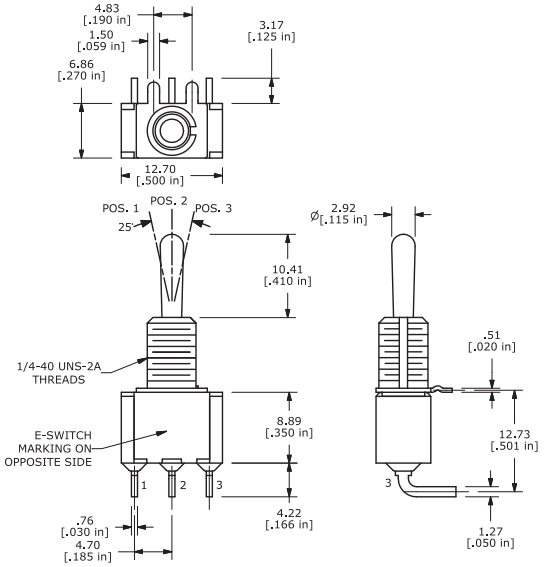

| Option Code | Dim. 'A' |
|---|---|
| VS5 | .630 (16.00) |

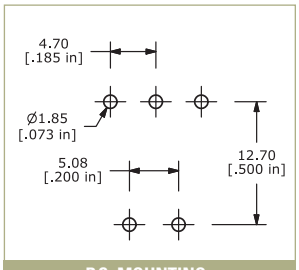



P.C. MOUNTING

### M61

SPDT

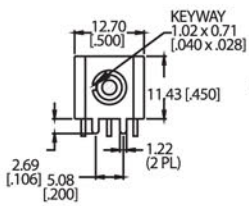


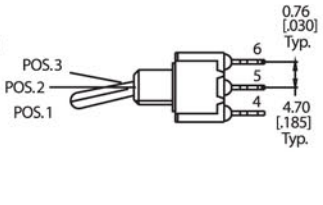



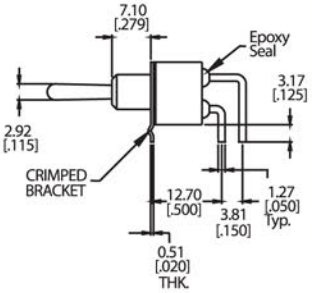

P.C. MOUNTING

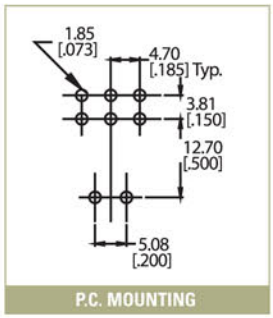
## M61

DPDT



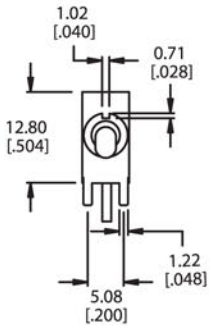



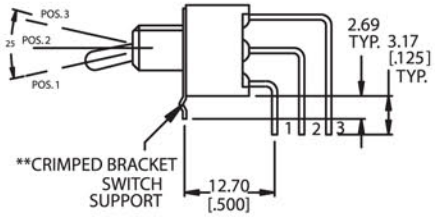



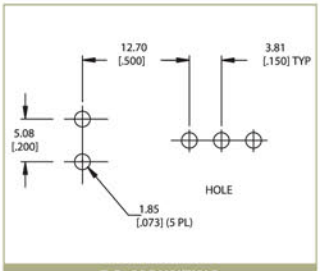

P.C. MOUNTING

## M71

SPDT



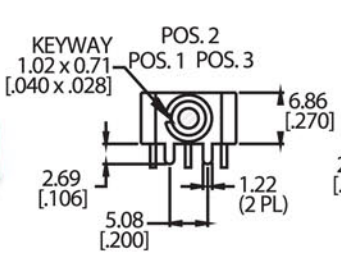



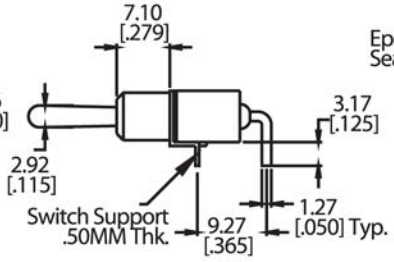



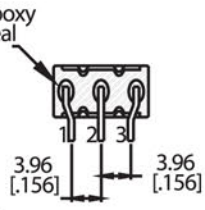

P.C. MOUNTING

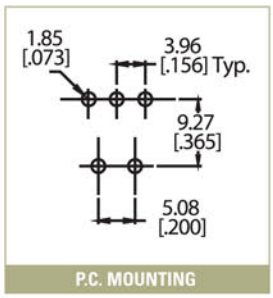
## M64

SPDT




P.C. MOUNTING

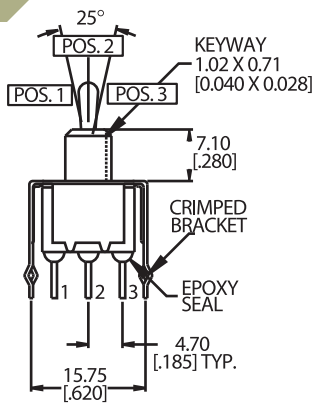
# SERIES 100 SWITCHES

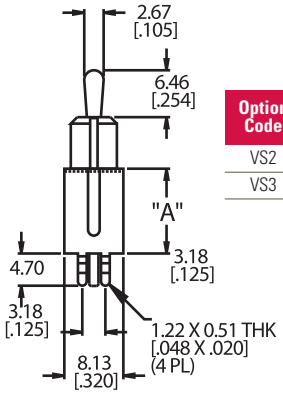
## TOGGLE SWITCHES - MINIATURE



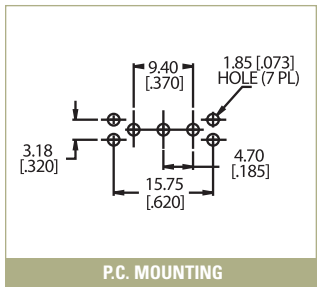
### VS21-VS31

SPDT



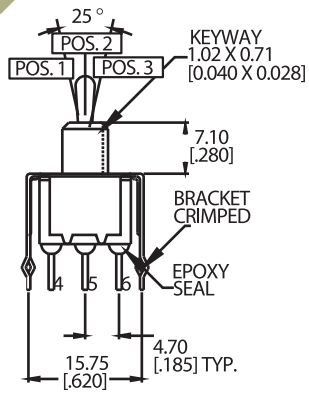

| Option Code | Dim. 'A' |
|---|---|
| VS2 | .460 (11.68) |
| VS3 | .630 (16.00) |

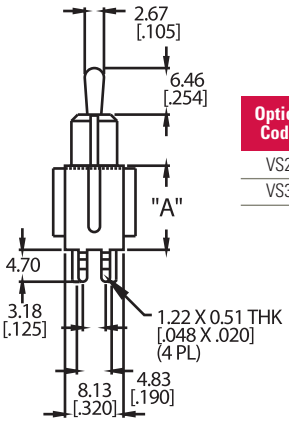



P.C. MOUNTING

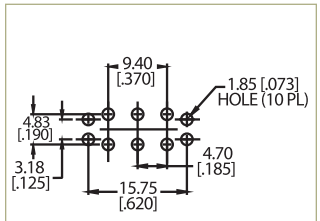
### VS21-VS31

DPDT



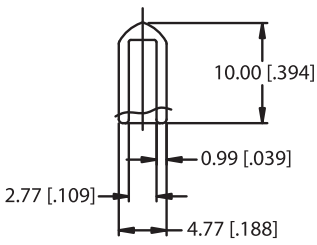

| Option Code | Dim. 'A' |
|---|---|
| VS2 | .460 (11.68) |
| VS3 | .630 (16.00) |




P.C. MOUNTING

### OPTIONAL TOGGLE CAP

Use with T1
T100-1 WHITE
T100-2 BLACK




### CONTACT MATERIAL OPTIONS

**Q**

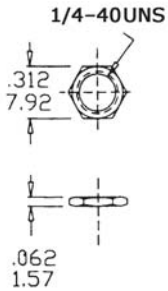
| | |
|---|---|
| Fixed Terminal: | Silver plated over copper alloy |
| Moving Contact: | Silver plated over copper alloy |
| Rating: | 5 Amps with resistive load @ 120VAC or 28VDC; 2 Amps with resistive load @ 250VAC |

**R**

| | |
|---|---|
| Fixed Terminal: | Copper alloy with gold plate over nickel plate |
| Moving Contact: | Copper alloy with gold plate over nickel plate |
| Rating: | 0.4 Volt-Amps (VA) max. @ 20V max. (AC or DC) |

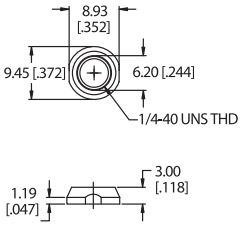
## HARDWARE

### HDW2 1/4 IN. NUTS

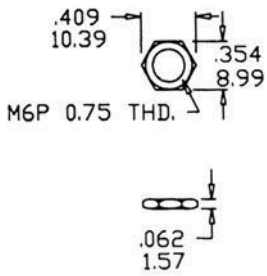



Supplied standard with
B1, B3, B5, B6 and B9 options

### HDW3 BLIND DRESSNUT

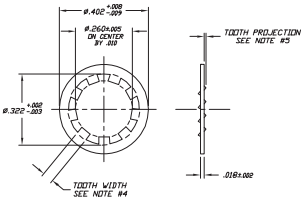



### HDW6 METRIC NUT



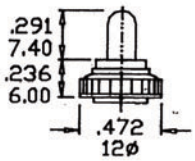

Supplied standard with B8
metric bushing

### HDW11 LOCK WASHER



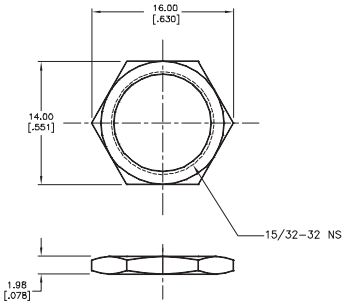
Supplied standard with B1/B3
bushing

### Optional Rubber Hood Sealing E1



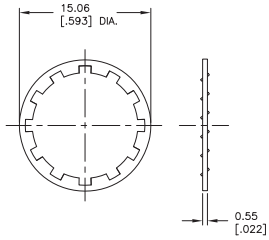

E1= Inch (Std.) for actuator T1, T2 and bushings
B1, B3, B5, B6 Optional rubber boot sealing

### HDW4 15/32 IN. NUTS



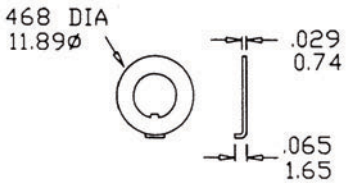

Supplied standard with B13 bushing

### HDW12 LOCK WASHER



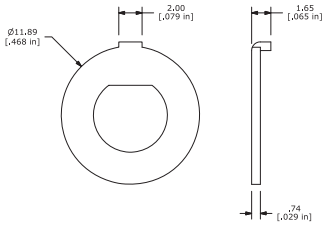

Supplied standard with B13 bushing

### HDW15 LOCKING RING



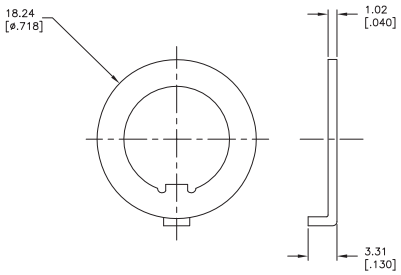

Supplied standard

### HDW16 LOCKING RING




Supplied with B5 bushing

### HDW17 LOCKING RING




Supplied with B13 bushing