



# SERIES 400 SWITCHES

## ROCKER SWITCHES - SUB-MINIATURE

TACT SWITCHES

NAVIGATION SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

ROCKER SWITCHES

SLIDE SWITCHES

SNAP-ACTION SWITCHES

DIP SWITCHES

KEYLOCK SWITCHES

ROTARY SWITCHES

DETECTOR SWITCHES

CAP OPTIONS



### FEATURES & BENEFITS

- ▶ Variety of switching functions
- ▶ Sub-miniature
- ▶ Multiple actuator options

### APPLICATIONS/MARKETS

- ▶ Telecommunications
- ▶ Instrumentation
- ▶ Test equipment
- ▶ Networking
- ▶ Computer peripherals

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Contact Rating:        | See contact material options   |
| Life Expectancy:       | 30,000 make-and-break cycles at full load  |
| Contact Resistance:    | 20 mΩ max. typical initial @ 2-4 VDC<br>100 mA for 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) or glass filled nylon, flame retardant, heat stabilized (UL 94-V0) |
| Rocker:                  | Nylon  |
| Bushing:                 | Brass, nickel plated   |
| Housing:                 | Stainless steel  |
| Terminal/Switch Support: | Brass, or steel tin plated   |
| Contacts / Terminals:    | Silver or gold plated copper alloy   |

### HOW TO ORDER

| SERIES | MODEL NO.                                       | ACTUATOR    | ACTUATOR COLOR                      | TERMINATION                                       | CONTACT MATERIAL       | SEAL                                 |
|--------|---|-------------|-------------------------------------|---|------------------------|--------------------------------------|
| 400    | □ □ □ □ □                                       | □ □         | □ □ □                               | □ □ □ □   | □                      | E                                    |
|        | MSP1<br>MSP2<br>MSP3<br>MSP4<br>MSP5<br>MSP6*** | R1*<br>R6** | BLK =Black<br>WHT=White<br>RED =Red | M1<br>M2<br>M6<br>M61<br>M7<br>M71<br>VS2<br>VS21 | Q = Silver<br>R = Gold | E = Epoxy Sealed at Base of Terminal |

### Example Ordering Number

400-MSP1-R6-BLK-M6-R-E

\* Std. all models except SPDT with M6 + M61 terminations.

\*\* Std. on SPDT models with M6 + M61 terminations.

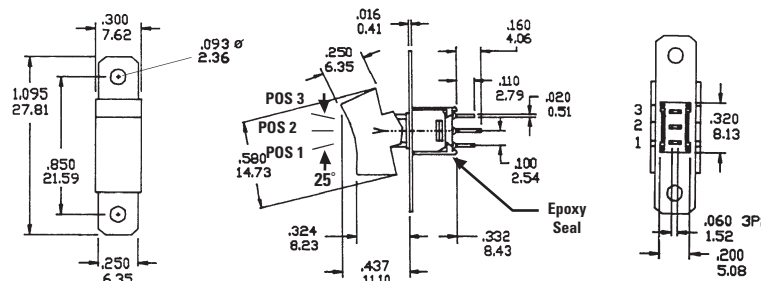
\*\*\* Not available with M6 terminations.

Specifications subject to change without notice.

### SPDT



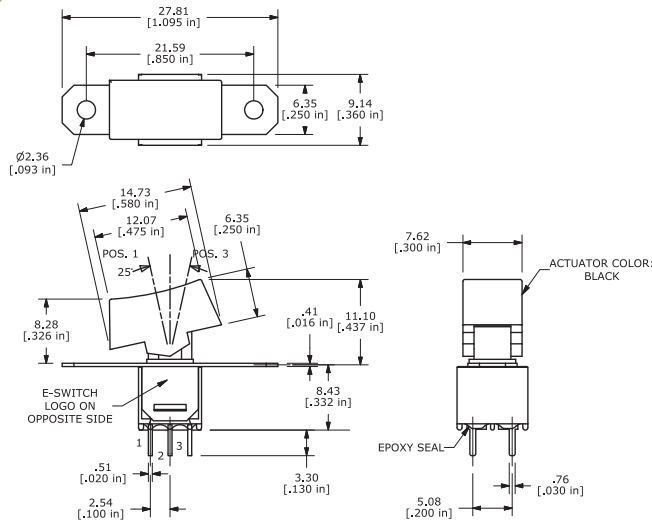
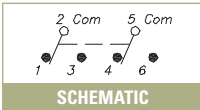
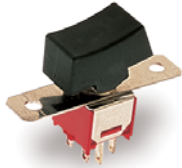
SCHEMATIC



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

( ) = Momentary

## DPDT

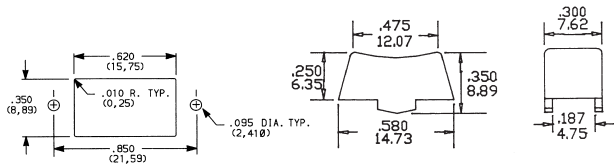


| Model No.   | POS 1    | POS 2 | POS 3    |
|-------------|----------|-------|----------|
| MDP-1       | ON       | NONE  | ON       |
| MDP-2       | ON       | NONE  | (ON)     |
| MDP-3       | ON       | OFF   | ON       |
| Term. Comm. | 2-3, 5-6 | OPEN  | 2-1, 5-4 |

( ) = Momentary

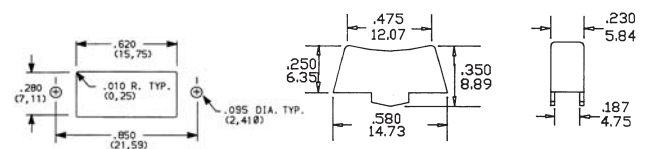
## ACTUATOR OPTIONS

### R1



Std. all models except SPDT with M6 terminations.

### R6



Std. on SPDT models with M6 terminations.

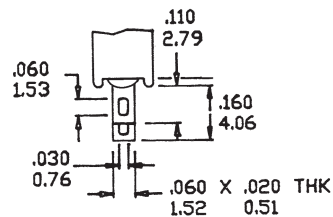
## TERMINATION OPTIONS

### M1

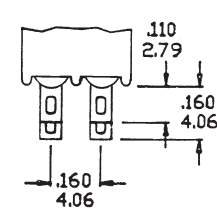
#### SOLDER LUG



#### Single Pole



#### Double Pole

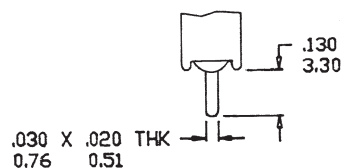


### M2

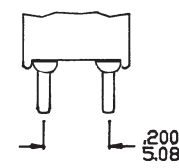
#### P.C. MOUNT



#### Single Pole



#### Double Pole



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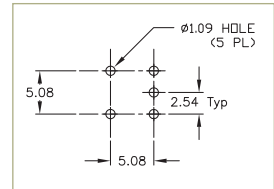
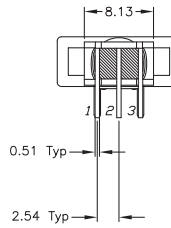
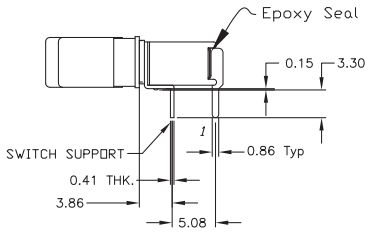
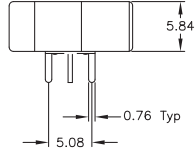
ROTARY SWITCHES

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CAP OPTIONS

### M6

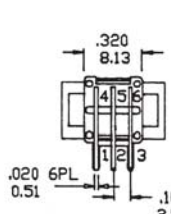
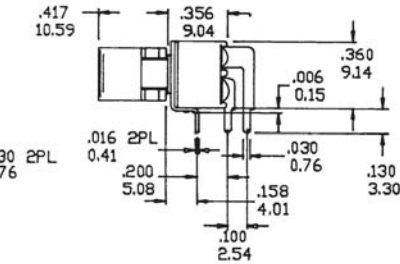
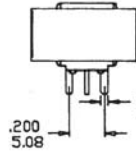
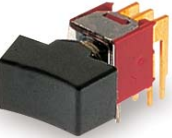
SPDT



P.C. MOUNTING

### M6

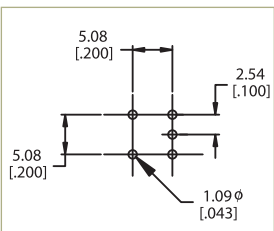
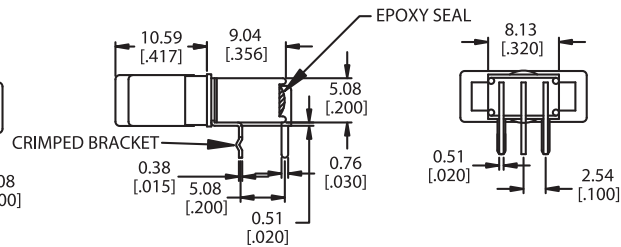
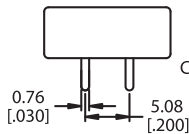
DPDT



P.C. MOUNTING

### M61

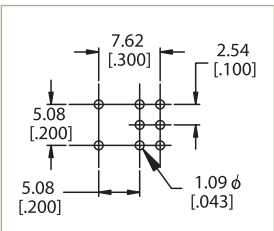
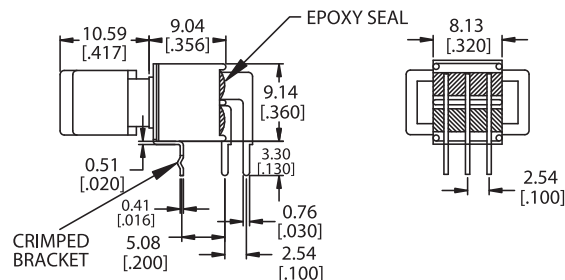
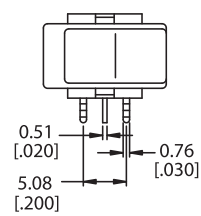
SPDT



P.C. MOUNTING

### M61

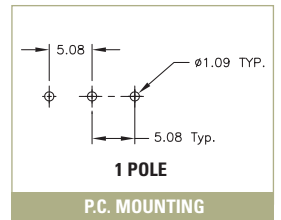
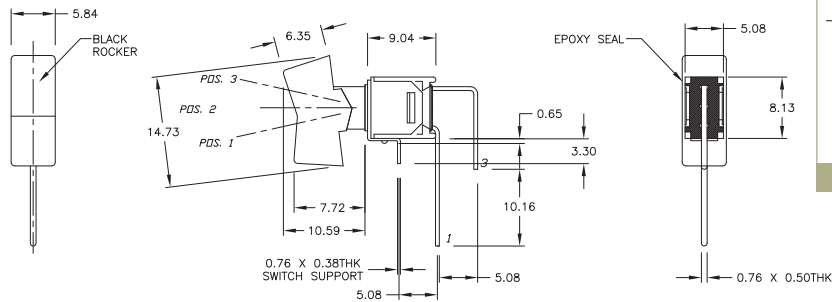
DPDT



P.C. MOUNTING

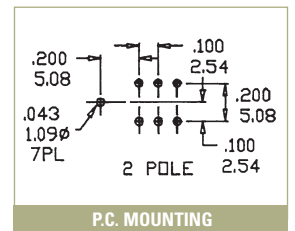
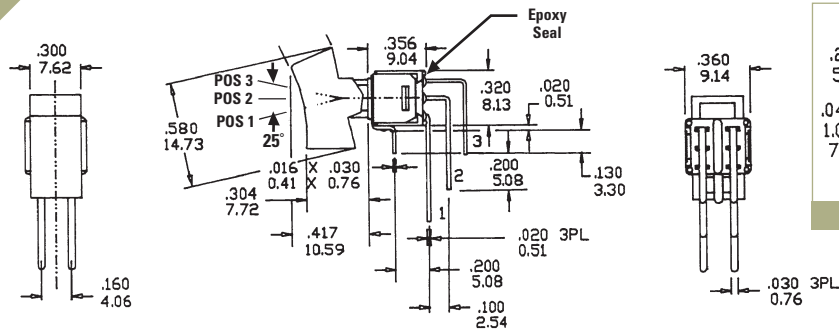
### M7

SPDT



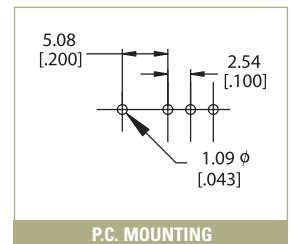
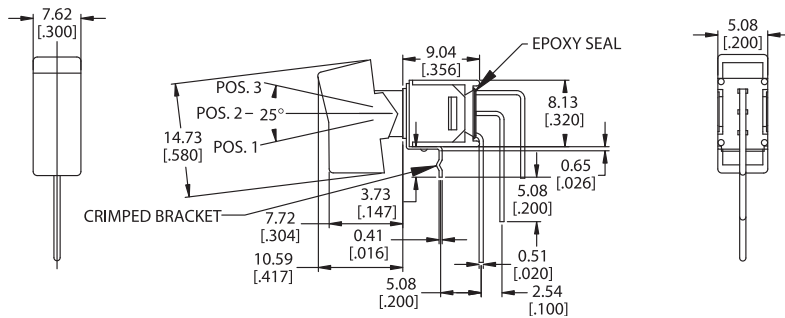
### M7

DPDT



### M71

SPDT



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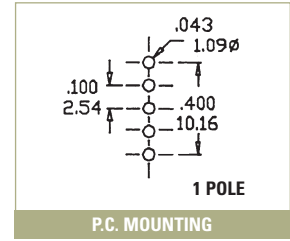
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### VS2

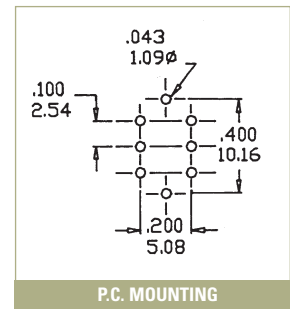
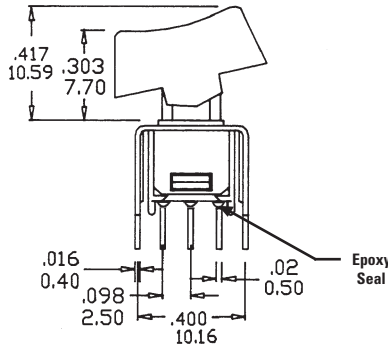
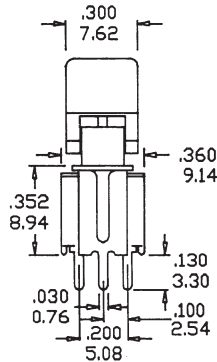
SPDT



1 POLE  
P.C. MOUNTING

### VS2

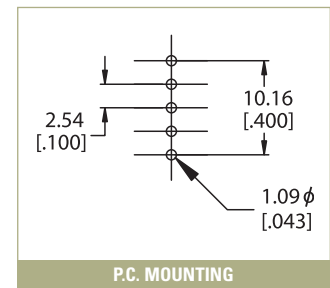
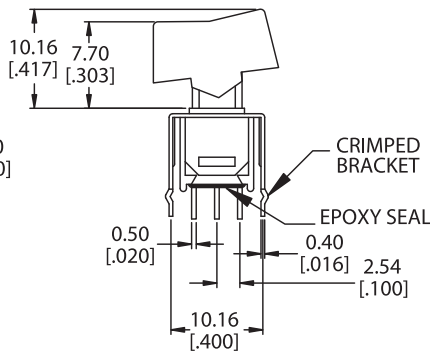
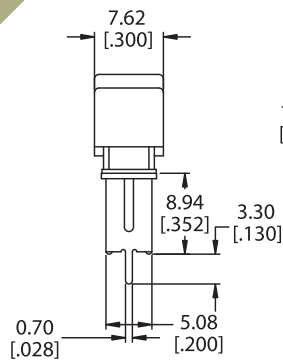
DPDT



P.C. MOUNTING

### VS21

SPDT



P.C. MOUNTING

### CONTACT MATERIAL OPTIONS

**Q**

|                 |   |
|-----------------|---|
| Fixed Terminal: | Silver plated copper alloy                    |
| Moving Contact: | Silver plated copper alloy                    |
| Rating:         | 3 AMPS @ 120 VAC or 28 VDC;<br>1 AMP @ 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 VA max. @ 20 VAC or DC max.                |