



IP 67  
 ACCORDING TO  
 EN 60529:1991+A1:2001  
 IEC 60029:2001

UL US  
 E 187490

RoHS  
 compliant

Pb  
 lead-free

## SPECIFICATIONS

**CONTACT RATING:** Dependent upon contact material See Page 63.

**MECHANICAL LIFE:** 30,000 make-and-break cycles.

**CONTACT RESISTANCE:** 10 mΩ max. initial @ 2-4VDC  
 100mA for both silver and gold plated contacts.

**INSULATION RESISTANCE:** 1,000 MΩ min.

**DIELECTRIC STRENGTH:** 1,000 Vrms min. @sea level.

**OPERATING TEMPERATURE:** -30°C to 85°C.

## MATERIALS

**CASE & BUSHING :** Glass filled nylon 6/6, flame retardant,  
 heat stabilized (UL94V-0).

**ACTUATOR:** Nylon, black std. Internal O-ring seal standard  
 with all actuators.

**FRAME:** Spring steel, black std.

**SWITCH SUPPORT:** Brass or steel, tin plated.

**ACTUATOR PIVOT & MOUNTING BRACKET:** Nylon.

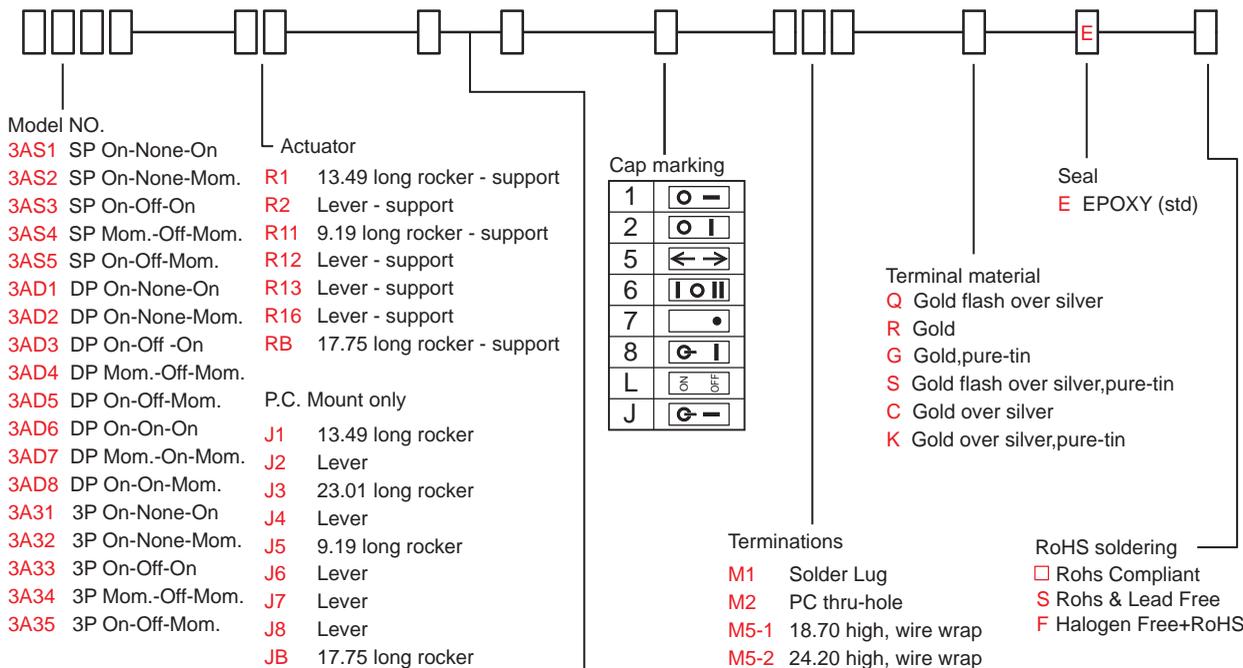
**ACTUATOR PIVOT RETAINER:** Stainless steel.

**TERMINAL/CONTACT:** Silver or gold plated copper alloy.  
 (See Page 63)

## HOW TO ORDER

MODEL NO.    ACTUATOR    FRAME COLOR    ACTUATOR COLOR    CAP MARKING    TERMINATIONS    TERMINAL MATERIAL    SEAL    RoHS SOLDERING

See below



### Frame/Actuator Color

| ITEM NO | COLOR       |
|---------|-------------|
| 1       | White       |
| 2       | Black (Std) |
| 3       | Red         |
| 4       | Orange      |
| 5       | Yellow      |
| 6       | Green       |
| 7       | Blue        |
| 8       | Brown       |
| 9       | Gray        |



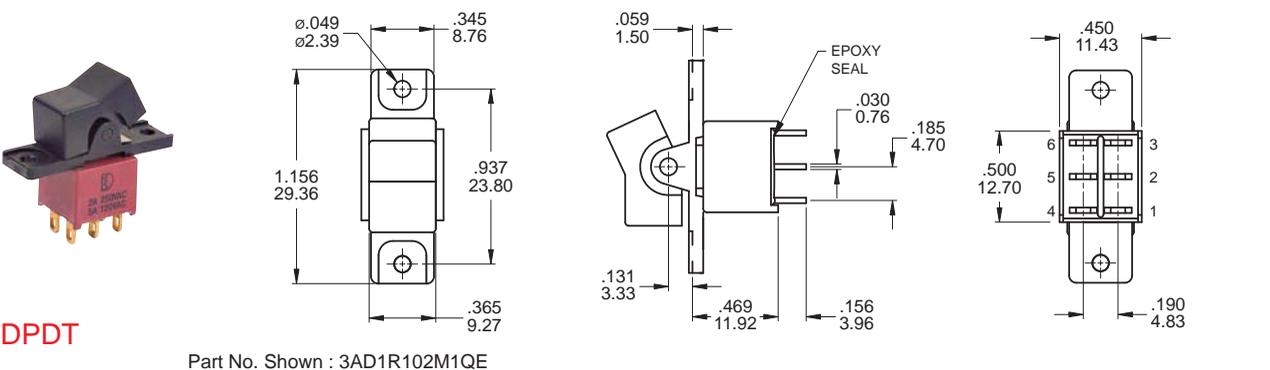
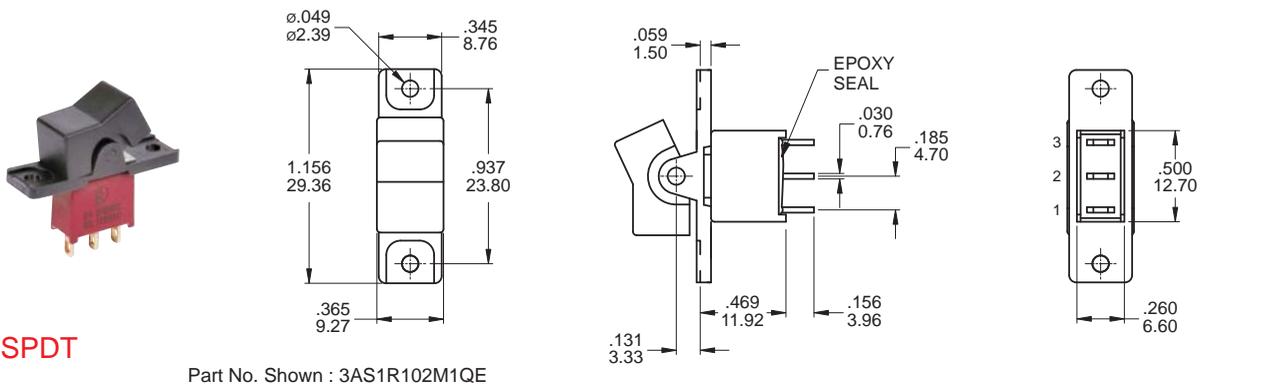
## SWITCH FUNCTION

| NO. POLES | UL/CSA MODEL NO. | MODEL NO. | SWITCH FUNCTION |       |       | CONNECTED TERMINALS / SCHEMATIC |         |             |
|-----------|------------------|-----------|-----------------|-------|-------|---------------------------------|---------|-------------|
|           |                  |           | POS.1           | POS.2 | POS.3 | POS.1                           | POS.2   | POS.3       |
|           |                  |           |                 |       |       |                                 |         |             |
| SP        | Q13A11           | 3AS1      | ON              | NONE  | ON    | 2-3                             | N/A     | 2-1         |
|           | Q13A12           | 3AS2      | ON              | NONE  | MOM   |                                 |         |             |
|           | Q13A13           | 3AS3      | ON              | OFF   | ON    |                                 | OPEN    |             |
|           | Q13A14           | 3AS4      | MOM             | OFF   | MOM   |                                 |         |             |
|           | Q13A15           | 3AS5      | ON              | OFF   | MOM   |                                 |         |             |
| DP        | Q13A21           | 3AD1      | ON              | NONE  | ON    | 2-3,5-6                         | N/A     | 2-1,5-4     |
|           | Q13A22           | 3AD2      | ON              | NONE  | MOM   |                                 |         |             |
|           | Q13A23           | 3AD3      | ON              | OFF   | ON    |                                 | OPEN    |             |
|           | Q13A24           | 3AD4      | MOM             | OFF   | MOM   |                                 |         |             |
|           | Q13A25           | 3AD5      | ON              | OFF   | MOM   |                                 |         |             |
|           | Q13A26           | 3AD6      | ON              | ON    | ON    | 2-3,5-6                         | 2-3,5-4 | 2-1,5-4     |
|           | ▲ Q13A27         | 3AD7      | MOM             | ON    | MOM   |                                 |         |             |
|           | ▲ Q13A28         | 3AD8      | ON              | ON    | MOM   |                                 |         |             |
| 3P        | Q13A31           | 3A31      | ON              | NONE  | ON    | 2-3,5-6,8-9                     | N/A     | 2-1,5-4,8-7 |
|           | Q13A32           | 3A32      | ON              | NONE  | MOM   |                                 |         |             |
|           | Q13A33           | 3A33      | ON              | OFF   | ON    |                                 | OPEN    |             |
|           | Q13A34           | 3A34      | MOM             | OFF   | MOM   |                                 |         |             |
|           | Q13A35           | 3A35      | ON              | OFF   | MOM   |                                 |         |             |

MOM=MOMENTARY

▲ Please check the availability in advance before order

## POLE OPTIONS

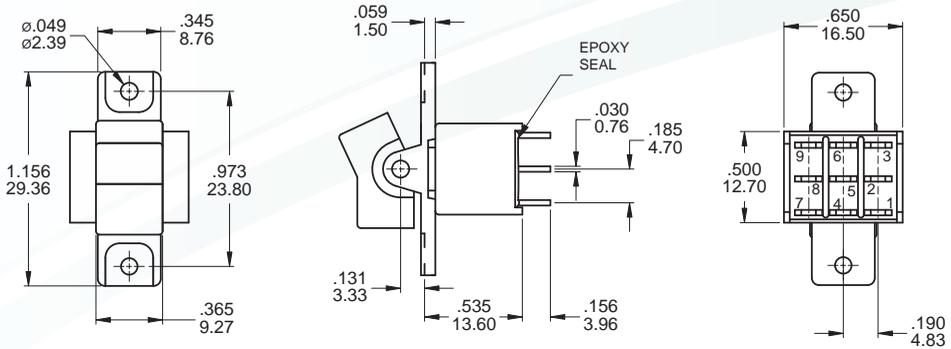


3A  
Rocker Switches



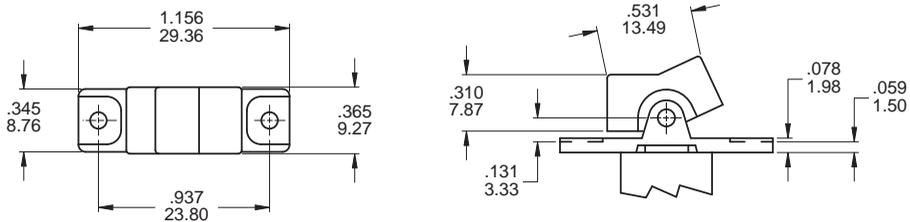
**3PDT**

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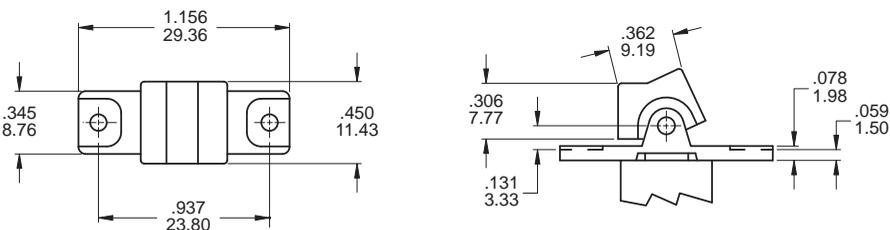


## ACTUATOR OPTIONS FOR PANEL MOUNT ONLY

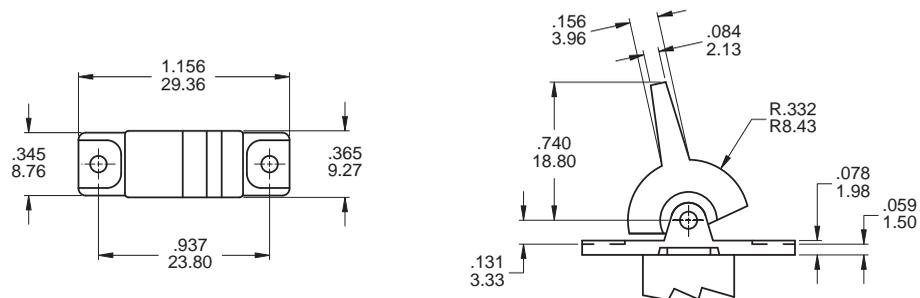
**R1**



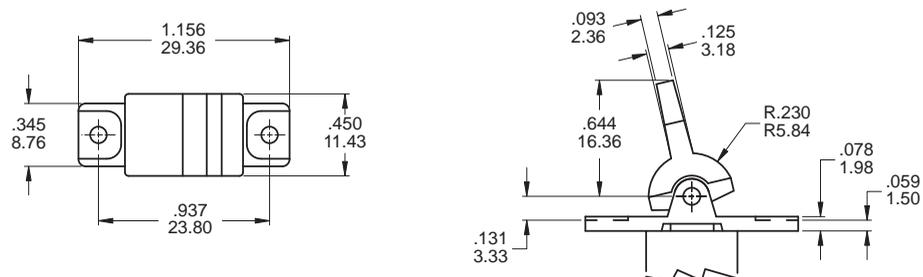
**R11**



**R2**

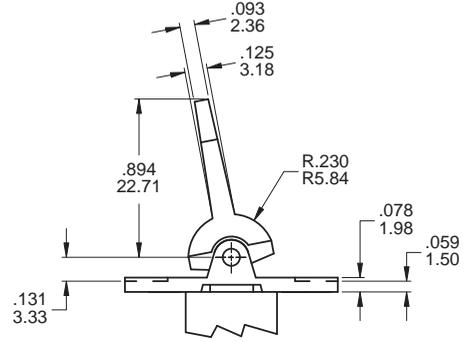
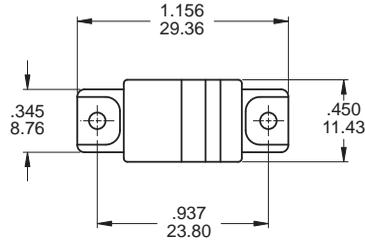


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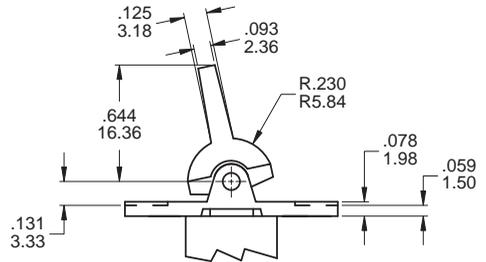
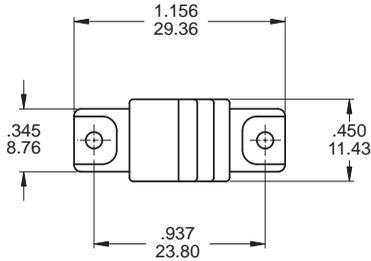




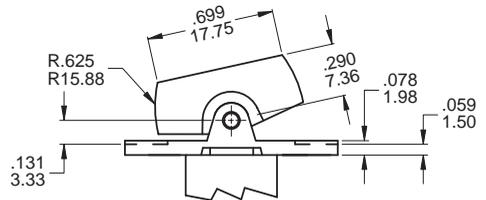
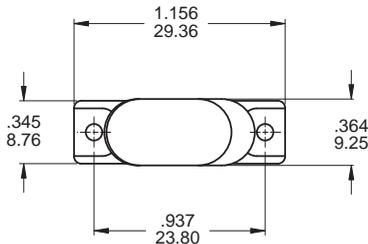
## R13



## R16

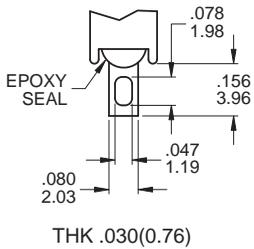


## RB

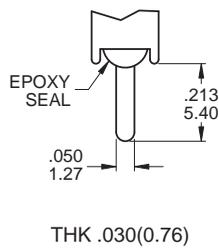


## TERMINATION OPTIONS

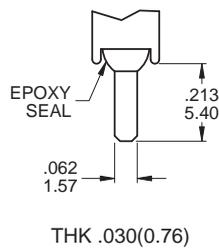
### M1 Solder lug



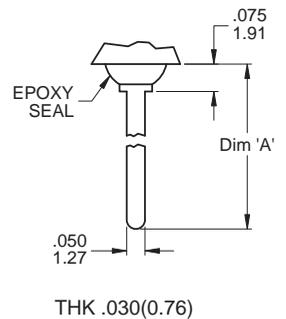
### M2 PC Thru-hole



### M3 Quick connect



### M5 Wire Wrap



## OTHER TERMINATION OPTIONS

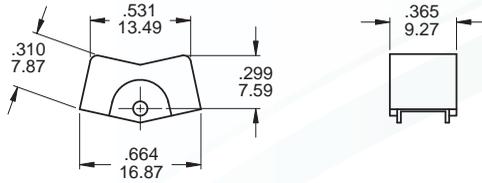
- M6 RIGHT ANGLE P.C. MOUNT
- M7 RIGHT ANGLE P.C. MOUNT
- VS2 VERTICAL BRACKET P.C. MOUNT
- VS3 VERTICAL BRACKET P.C. MOUNT

| OPTION CODE | DIM. 'A'      |
|-------------|---------------|
| M5-1        | .736 (18.70)  |
| M5-2        | .953 (24.20)  |
| M5-3        | .415 (10.55)  |
| M5-4        | 1.062 (26.97) |

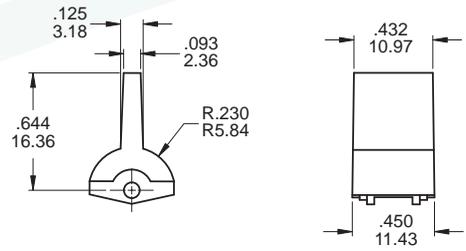
## ACTUATOR OPTIONS FOR P.C. MOUNT ONLY



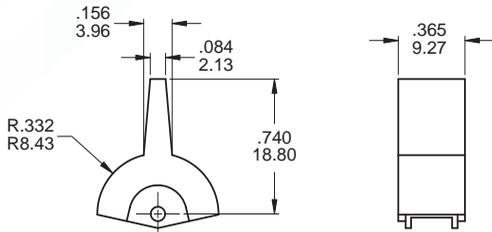
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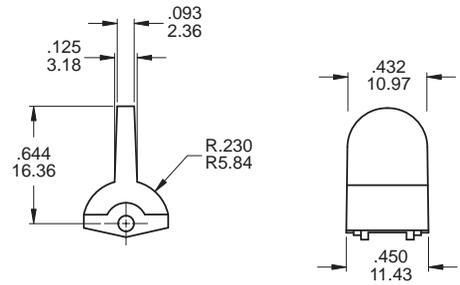
**J6**



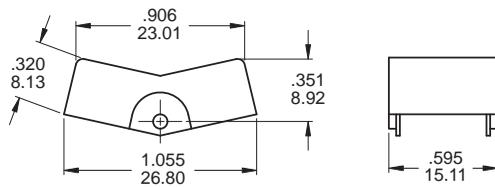
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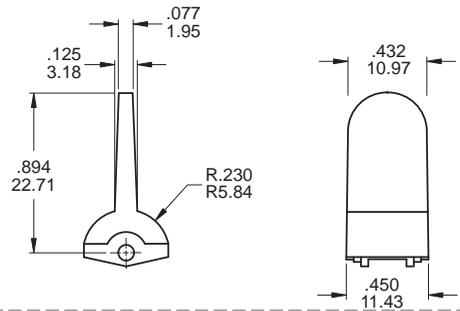
**J7**



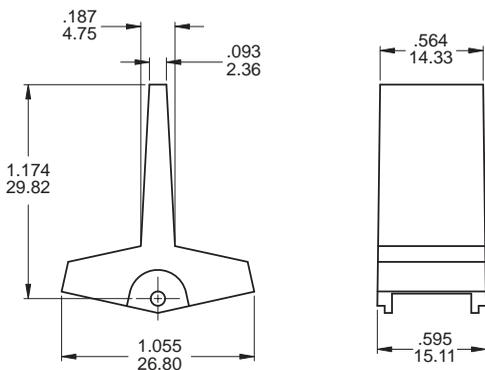
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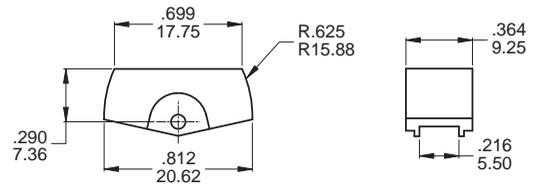
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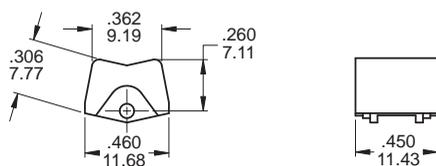
**J4**



**JB**



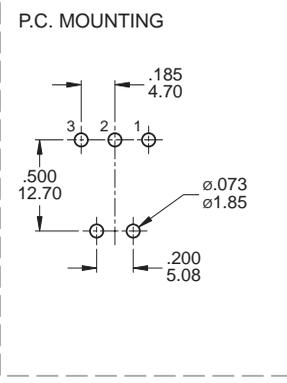
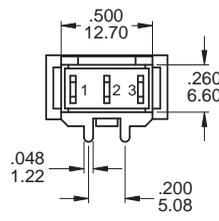
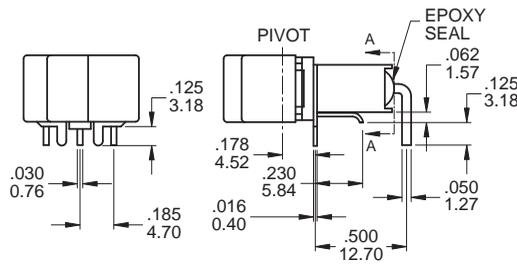
**J5**



**Actuator colors:**

| ITEM NO | COLOR         |
|---------|---------------|
| 1       | White         |
| 2       | Black ( Std ) |
| 3       | Red           |
| 4       | Orange        |
| 5       | Yellow        |
| 6       | Green         |
| 7       | Blue          |
| 8       | Brown         |
| 9       | Gray          |

## M6

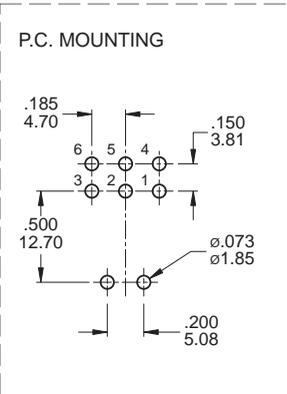
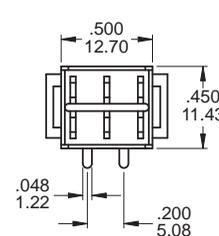
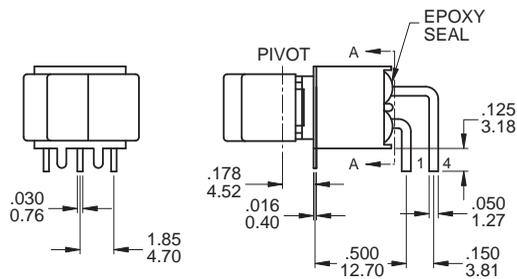


SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## SPDT

Part No. Shown : 3AS1J102M6QE

## M6

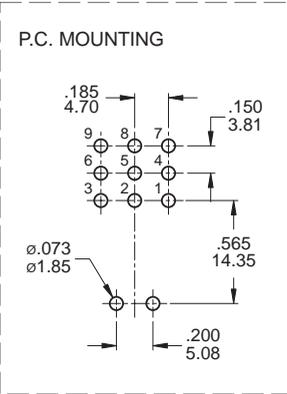
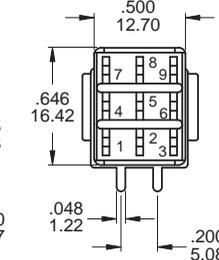
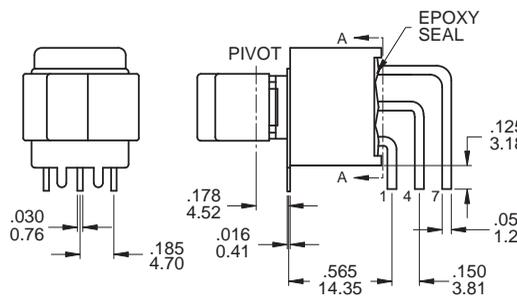


SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## DPDT

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## M6

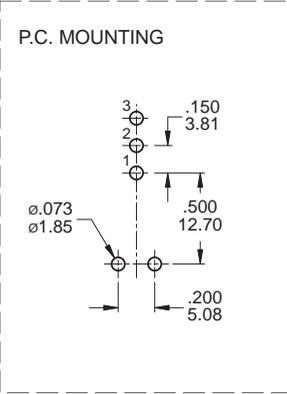
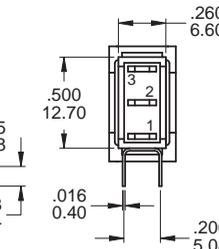
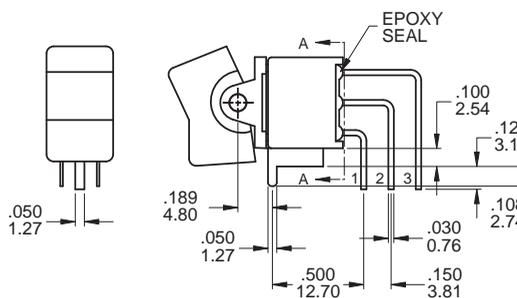


SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## 3PDT

Part No. Shown : 3A31J102M6RE

## M7



SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## SPDT

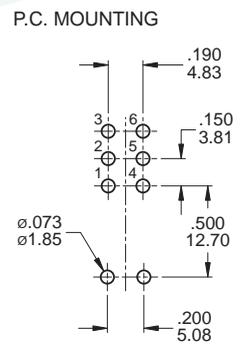
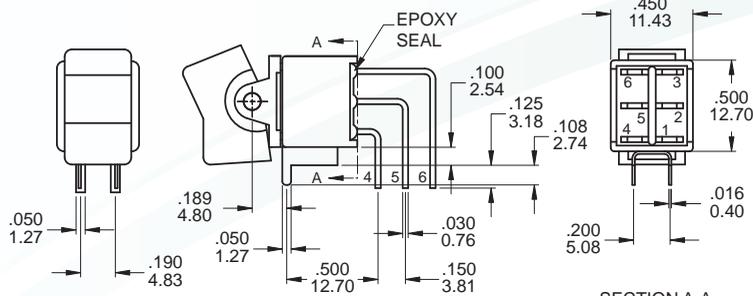
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3A  
Rocker Switches



## M7

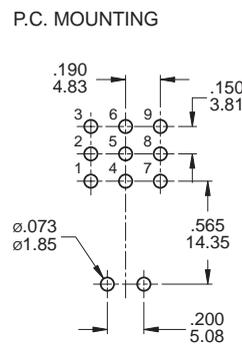
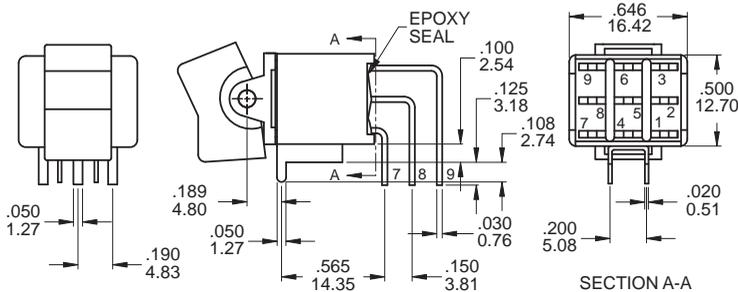


## DPDT

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SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## M7

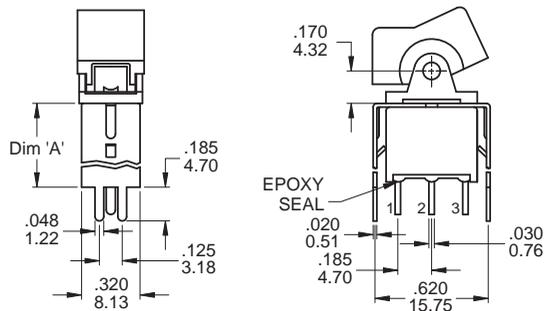


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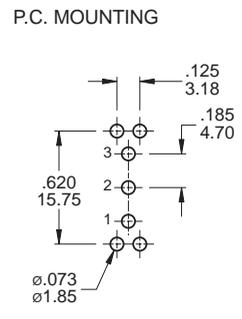
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SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## VS2 - VS3



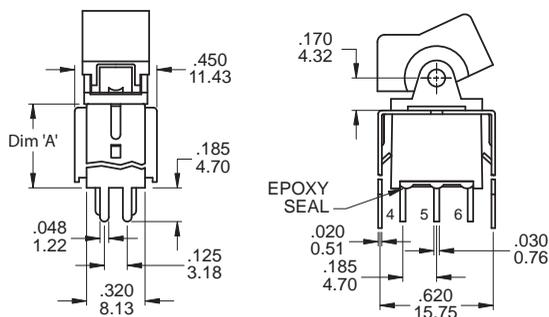
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|-------------|---------------|
| VS2         | .460<br>11.68 |
| VS3         | .630<br>16.00 |



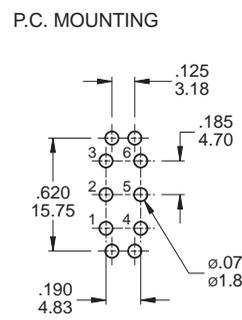
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## VS2 - VS3



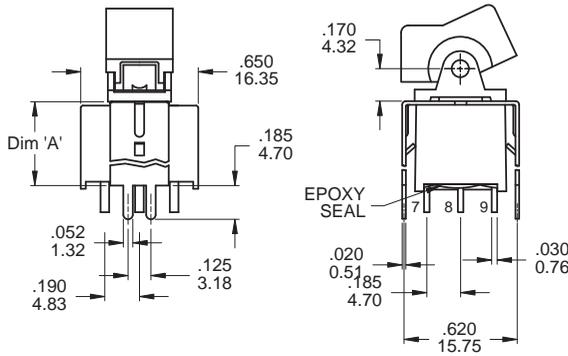
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|-------------|---------------|
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| VS3         | .630<br>16.00 |



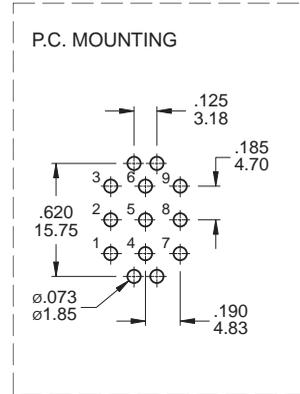
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## VS2 - VS3



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| VS3         | .630<br>16.00 |

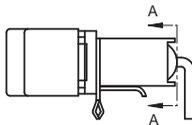


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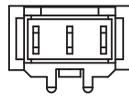
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## SNAP-IN TERMINATION OPTIONS

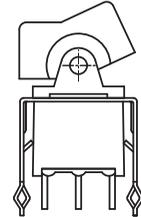
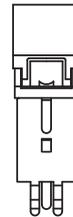
### M6N



### V2N



SECTION A-A



## CONTACT MATERIAL OPTIONS

|   | CONTACT PLATING  | TERMINAL PLATING                      | RATINGS   |
|---|------------------|---------------------------------------|---|
| Q | Silver           | Q = Gold flash over silver            | 5 Amps with resistant load @ 120VAC or 28VDC<br>2 Amps with resistant load @ 250VAC |
| S |                  | S = Gold flash over silver,pure - tin |   |
| C | Gold over Silver | C = Gold over silver                  |   |
| K |                  | K = Gold over silver,pure - tin       |   |
| R | Gold             | R = Gold                              | 0.4 Volt - Amps ( VA ) max. @ 20V max. ( AC or DC )                                 |
| G |                  | G = Gold,pure - tin                   |   |

## SOLDERING PROCESSES

**MANUAL SOLDERING:** Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.

**WAVE SOLDERING:** Recommended Soldering Temperature: 260 ± 5°C  
Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)

