

# RTA Series

## 1-4 Poles Coded Rotary Switches



### Features/Benefits

- PCB or hand soldering versions
- Bushing mounting
- Multiple poles
- Decimal and hexadecimal codes
- Screwdriver slot or extended actuator
- RoHS Compliant

### Typical Applications

- Appliances
- Electronic alarm systems
- Medical
- Building automation
- HVAC air conditioning

### Electrical Data

|                                                                               | Silver            | Gold              |
|-------------------------------------------------------------------------------|-------------------|-------------------|
| SWITCHING MODE:                                                               | BBM               | BBM               |
| MAX. SWITCHING POWER                                                          | 5 VA              | 0.5 VA            |
| MAX. SWITCHING CURRENT:                                                       | 150 mA            | 20 mA             |
| MAX. CARRYING CURRENT:                                                        | 5 A               | 1 A               |
| NOMINAL VOLTAGE AT 50 Hz                                                      | 60 V              | 25 V              |
| CONTACT RESISTANCE:                                                           | < 150 mΩ          | < 150 mΩ          |
| DIELECTRIC STRENGTH AT 50 Hz<br>BETWEEN CONTACTS AND<br>GROUND TERMINALS:     | 500 V r           | 500 V r           |
| INSULATION RESISTANCE BETWEEN<br>CONTACTS OR CONTACTS<br>AND FRAME (500 V =): | 10 <sup>9</sup> Ω | 10 <sup>9</sup> Ω |
| NO. OF OPERATIONS:                                                            | 10,000            | 10,000            |
| BOUNCE:                                                                       | < 5 ms            | < 5 ms            |

### Mechanical Data

MAX. NO. OF BANKS: 1.  
 OPERATING TORQUE: 5 Ncm±20%.  
 END STOP TORQUE: < 60 Ncm.  
 STOP: With/without or adjustable  
 MOUNTING: By fixed index 9.5 mm (0.374) of center, for  
 bushing mount only

### Materials

BUSHING/HOUSING: PETP Thermoplastic  
 STATIONARY CONTACTS & TERMINALS: Nickel Plated Brass  
 with additional plating of Gold or Silver.  
 ROTOR: Gold or Silver plated Brass or PCB.  
 CODING PLATE: PA thermoplastic  
 ACTUATOR: Polysulfon thermoplastic  
 HARDWARE: Stop pin: Aluminum. Ball & Spring: Stainless steel.  
 Washer: PA. Nut: Brass.

### Environmental Data

OPERATING TEMPERATURE: -20°C to + 70°C -20°C to + 70°C  
 STORAGE TEMPERATURE: -40°C to + 85°C -40°C to + 85°C

**NOTE:** Specifications and materials listed above are for switches with standard options.  
 For information on specific and custom switches, consult Customer Service Center.

### Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages K-9 thru K-12. For additional options not shown in catalog, consult Customer Service Center.

|                                                                                                                                                                                       |                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Designation</b></p> <p><b>RTA</b></p> <p><b>Termination</b></p> <p><b>P</b> With PC Thru-hole</p> <p><b>C</b> With Solder Lugs</p> <p><b>H</b> Horizontal with PC Thru-hole</p> | <p><b>Indexing</b></p> <p><b>2</b> 22.5 index (coded only)</p> <p><b>3</b> 30° index (12 positions max.)</p> <p><b>4</b> 36° index (10 positions max.)</p> | <p><b>Switch Function</b></p> <p><b>1W12</b> SP, 30° Index, 12 pos. no stop</p> <p><b>1W10</b> SP, 36° Index, 10 pos. no stop</p> <p><b>1S02</b> SP, 30° /36° Index, 2 pos.</p> <p><b>1S03</b> SP, 30° /36° Index, 3 pos.</p> <p><b>1S04</b> SP, 30° /36° Index, 4 pos.</p> <p><b>1S05</b> SP, 30° /36° Index, 5 pos.</p> <p><b>1S06</b> SP, 30° /36° Index, 6 pos.</p> <p><b>1S07</b> SP, 30° /36° Index, 7 pos.</p> <p><b>1S08</b> SP, 30° /36° Index, 8 pos.</p> <p><b>1S09</b> SP, 30° /36° Index, 9 pos.</p> <p><b>1S10</b> SP, 30° /36° Index, 10 pos.</p> <p><b>1S11</b> SP, 30° Index, 11 pos.</p> <p><b>1S12</b> SP, 30° Index, 12 pos.</p> <p><b>2S02</b> DP, 30° /36° Index, 2 pos.</p> <p><b>2S03</b> DP, 30° /36° Index, 3 pos.</p> <p><b>2S04</b> DP, 30° /36° Index, 4 pos.</p> <p><b>2S05</b> DP, 30° /36° Index, 5 pos.</p> <p><b>2S06</b> DP, 30° Index, 6 pos.</p> <p><b>3S02</b> 3P, 30° /36° Index, 2 pos.</p> | <p><b>3S03</b> 3P, 30° /36° Index, 3 pos.</p> <p><b>4S02</b> 4P, 30° /36° Index, 2 pos.</p> <p><b>EW10</b> Direct + complement, 36° Index, no stop</p> <p><b>EW12</b> Direct + complement, 30° Index, no stop</p> <p><b>DW16</b> Direct, 22.5° Index, no stop</p> <p><b>ES__</b> Direct + complement, 30°/36° Index, with stop (specify stop position)</p> <p><b>DS__</b> Direct, 22.5° Index, with stop (specify stop position)</p> | <p><b>Mounting Style</b></p> <p><b>W</b> Without bushing</p> <p><b>R</b> 3/8-32 Threaded Bushing</p> <p><b>M</b> M10x.75 Metric Threaded Bushing</p> <p><b>A</b> 3/8-32 Threaded Bushing with Offset Bracket</p> <p><b>B</b> M10x.75 Metric Threaded Bushing with Offset Bracket</p> | <p><b>Contact Material</b></p> <p><b>S</b> Silver plated, matte-tin terminal</p> <p><b>P</b> Gold plated, matte-tin terminal</p> <p><b>Actuator (max.)</b></p> <p><b>25N</b> .984 (25,0) with screwdriver slot</p> <p><b>50N</b> 1.97 (50,0) with screwdriver slot</p> <p><b>FLS</b> Flush shaft with screwdriver slot and position indicator</p> <p><b>25F</b> .984 (25,0) Shaft with flat</p> <p><b>06F</b> .236 (6,0) Shaft with flat</p> | <p><b>C</b> 3/8-32 Threaded Bushing with Straight Bracket</p> <p><b>D</b> M10x.75 Metric Threaded Bushing with Straight Bracket</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|



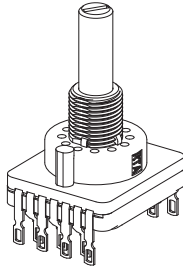
Dimensions are shown: Inch (mm)  
 Specifications and dimensions subject to change

# RTA Series 1-4 Poles Coded Rotary Switches

## DESIGNATION



### RTA

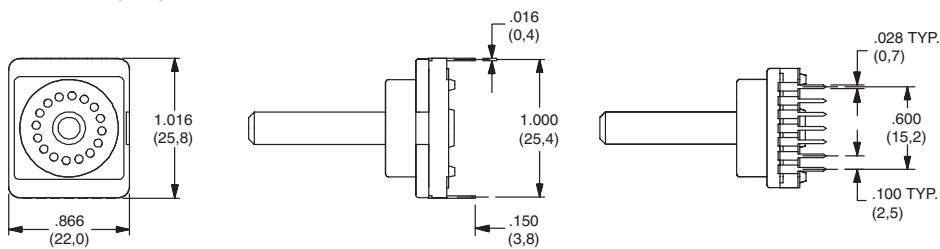


## TERMINATION



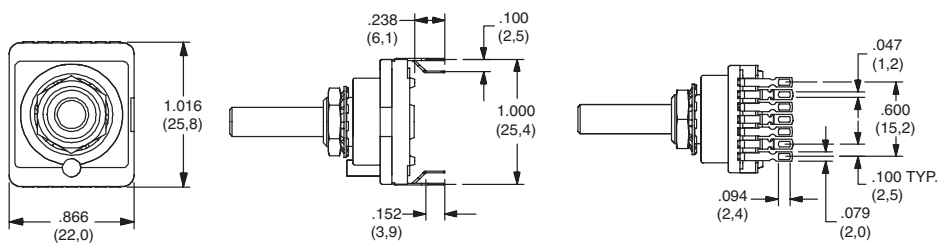
### P

WITH PC PINS



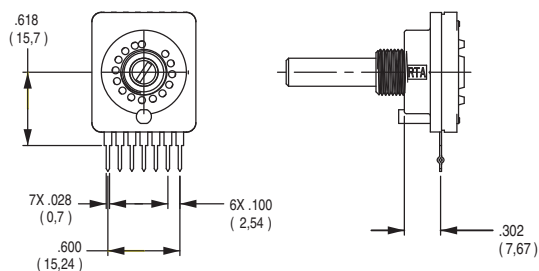
### C

WITH SOLDER LUGS



### H

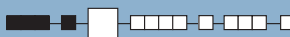
Horizontal with PC Thru-hole



Note: "H" termination only available with the following options:

1. With A or B mounting styles
2. 36° degree indexing
3. Up to 5 positions max

## INDEXING



**2** 22.5 index, 16 positions max.

**3** 30 index, 12 positions max.

**4** 36 index, 10 positions max.

Both commons must be connected by user to ground.



Dimensions are shown: mm

Specifications and dimensions subject to change

[www.ck-components.com](http://www.ck-components.com)



K

Rotary

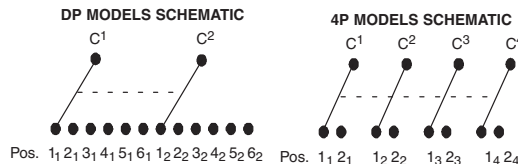
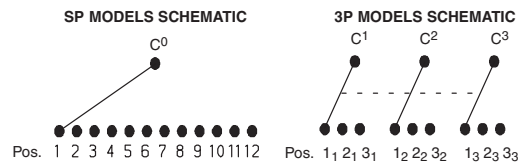
# RTA Series

## 1-4 Poles Coded Rotary Switches

### SWITCH FUNCTION



| NO. POLES | MODEL NO.   | SWITCH FUNCTION      | INDEX   |
|-----------|-------------|----------------------|---------|
| SP        | <b>1W12</b> | 12 Positions No Stop | 30°     |
|           | <b>1W10</b> | 10 Positions No Stop | 36°     |
|           | <b>1S02</b> | 2 Positions          | 30°/36° |
|           | <b>1S03</b> | 3 Positions          | 30°/36° |
|           | <b>1S05</b> | 5 Positions          | 30°/36° |
|           | <b>1S06</b> | 6 Positions          | 30°/36° |
|           | <b>1S08</b> | 8 Positions          | 30°/36° |
|           | <b>1S09</b> | 9 Positions          | 30°/36° |
|           | <b>1S10</b> | 10 Positions         | 30°/36° |
|           | <b>1S11</b> | 11 Positions         | 30°     |
|           | <b>1S12</b> | 12 Positions         | 30°     |

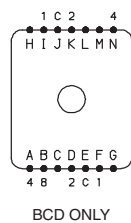


| MODEL NO.   | SWITCH FUNCTION                                        | INDEX     |
|-------------|--------------------------------------------------------|-----------|
| <b>EW10</b> | Direct + complement, No stop                           | 36°       |
| <b>EW12</b> | Direct + complement, No stop                           | 30°       |
| <b>DW16</b> | Direct, No stop                                        | 22.5°     |
| <b>ES__</b> | Direct + complement, with stop (specify stop position) | 30° & 36° |
| <b>DS__</b> | Direct, with stop (specify stop position)              | 22.5°     |

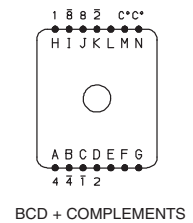
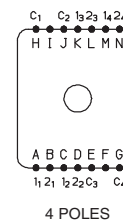
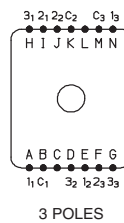
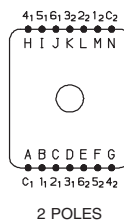
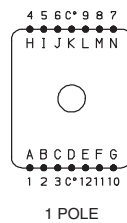
| NO. POLES | MODEL NO.   | SWITCH FUNCTION     | INDEX   |
|-----------|-------------|---------------------|---------|
| DP        | <b>2W05</b> | 5 Positions No Stop | 30°/36° |
|           | <b>2W06</b> | 6 Positions No Stop | 30°     |
|           | <b>2S02</b> | 2 Positions         | 30°/36° |
|           | <b>2S03</b> | 3 Positions         | 30°/36° |
|           | <b>2S04</b> | 4 Positions         | 30°/36° |
|           | <b>2S05</b> | 5 Positions         | 30°/36° |
|           | <b>2S06</b> | 6 Positions         | 30°     |
| 3P        | <b>3S02</b> | 2 Positions         | 30°/36° |
|           | <b>3S03</b> | 3 Positions         | 30°/36° |
| 4P        | <b>4S02</b> | 2 Positions         | 30°/36° |

| 22.5° | 30°   | 36°   |  | Pos. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-------|-------|-------|--|------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Term. | Term. | Term. |  |      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| E,J   | M,N   | L,N   |  | C    | • | • | • | • | • | • | • | • | • | •  | •  | •  | •  | •  | •  | •  |
| F,I   | H     | D     |  | 1    |   | • |   | • |   | • |   | • |   | •  |    | •  |    |    |    | •  |
| D,K   | D     | B     |  | 2    |   |   | • | • |   |   | • | • |   |    | •  | •  |    |    | •  | •  |
| A,N   | A     | I     |  | 4    |   |   |   |   | • | • | • | • |   |    |    |    | •  | •  | •  | •  |
| B     | J     | J     |  | 8    |   |   |   |   |   |   |   |   | • | •  | •  | •  | •  | •  | •  | •  |
| —     | C     | K     |  | 1    | • |   | • |   | • |   | • |   | • |    | •  |    | •  |    | •  |    |
| —     | K     | H     |  | 2    | • | • |   |   | • | • |   |   | • | •  |    |    | •  | •  |    |    |
| —     | B     | A     |  | 4    | • | • | • | • |   |   |   |   | • | •  | •  | •  |    |    |    |    |
| —     | I     | C     |  | 8    | • | • | • | • | • | • | • | • |   |    |    |    |    |    |    |    |

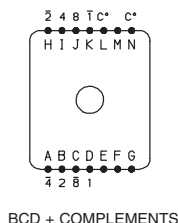
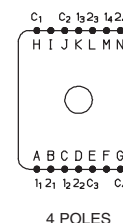
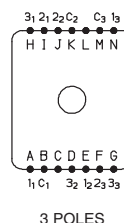
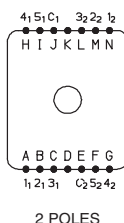
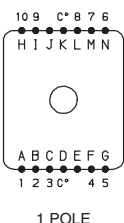
#### Indexing Option Code 2, 22.5 INDEXING ANGLE PCB LAYOUT



#### Indexing Option Code 3, 30 INDEXING ANGLE PCB LAYOUT

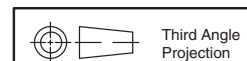


#### Indexing Option Code 4, 36 INDEXING ANGLE PCB LAYOUT



**NOTE:** Layout view from component side.

Common terminals that are in locations A-G are not connected to common terminals that are in locations H-N. For 7-12 position output customer must tie these commons together.



Third Angle Projection

Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

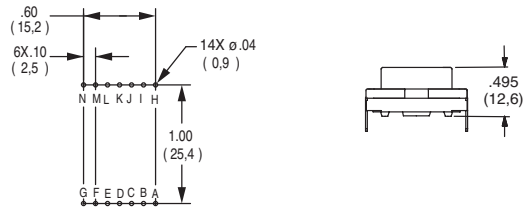


# RTA Series 1-4 Poles Coded Rotary Switches

## MOUNTING STYLE

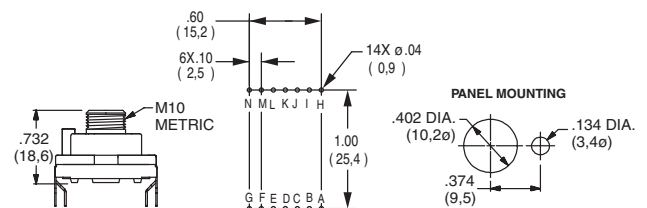


### W WITHOUT BUSHING



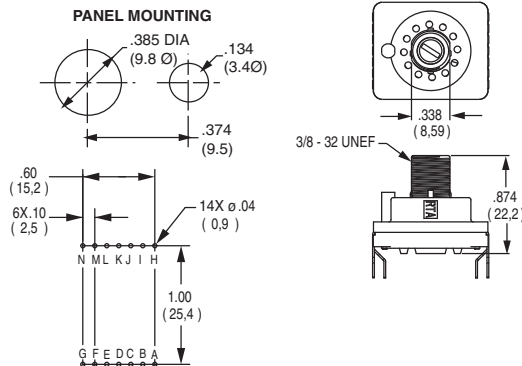
Note: W mounting style not available with H termination.

### M M10 x .75 METRIC THREADED BUSHING



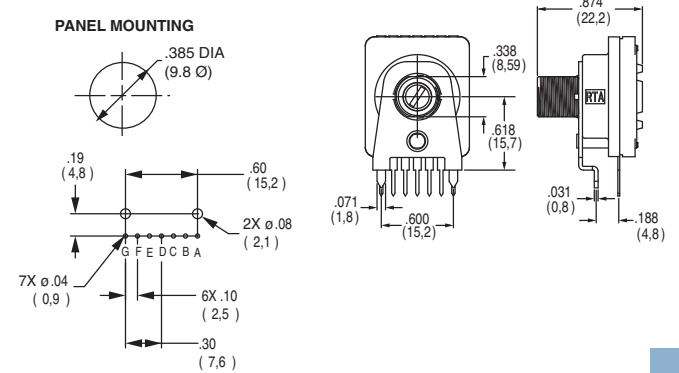
Note: M mounting style not available with H termination.

### R 3/8-32 THREADED BUSHING



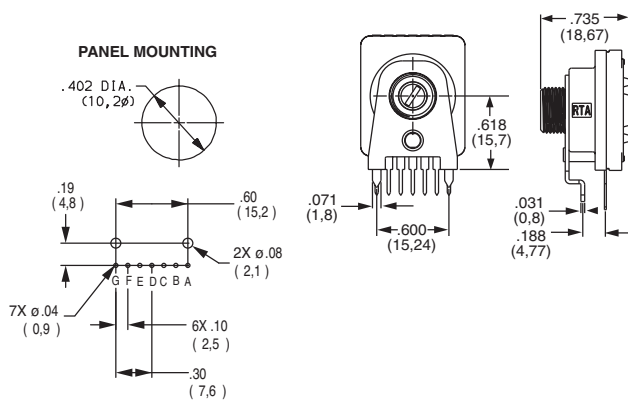
Note: R mounting style not available with H termination.

### A 3/8-32 THREADED BUSHING WITH BRACKET



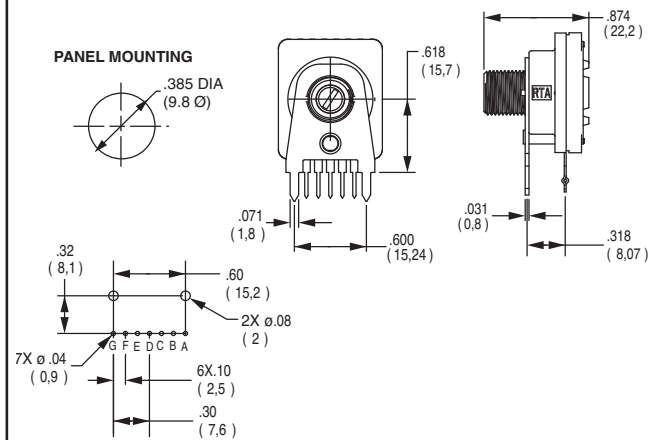
Note: A mounting style only available with H termination.

### B M10 x .75 METRIC THREADED BUSHING WITH BRACKET

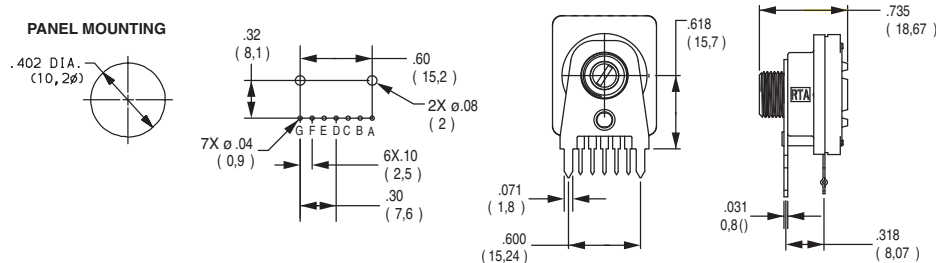


Note: B mounting style only available with H termination.

### C 3/8-32 THREADED BUSHING WITH STRAIGHT BRACKET



### D M10 x .75 METRIC THREADED BUSHING WITH STRAIGHT BRACKET



Third Angle Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change

**C&K**



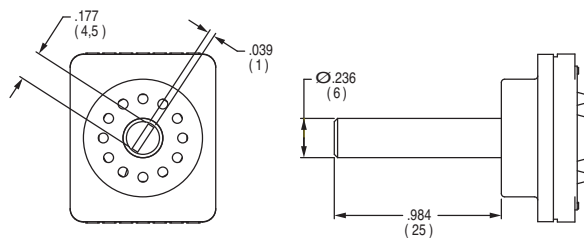
K

Rotary

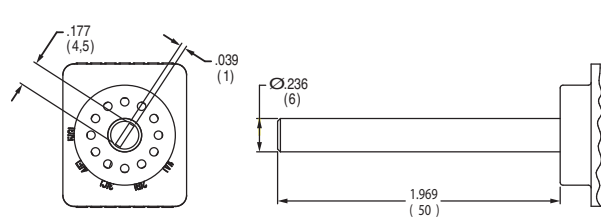
# RTA Series 1-4 Poles Coded Rotary Switches

## ACTUATOR

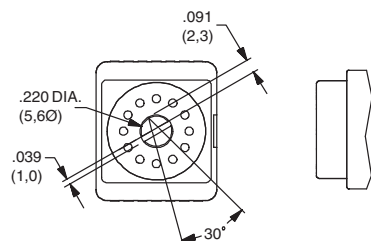
### 25N .984 (25,0) WITH SCREWDRIVER SLOT



### 50N 1.97 (50,0) WITH SCREWDRIVER SLOT

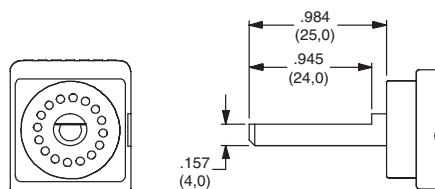


### FLS FLUSH SHAFT WITH SCREWDRIVER SLOT AND POSITION INDICATOR



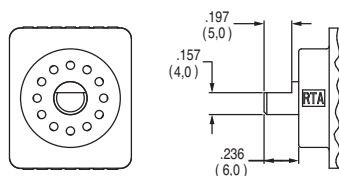
Note: only available with "W" Mounting Style

### 25F .984 (25,0) SHAFT WITH FLAT



Note: only available with "W" Mounting Style

### 06F .236 (6,0) SHAFT WITH FLAT



Note: only available with "W" Mounting Style

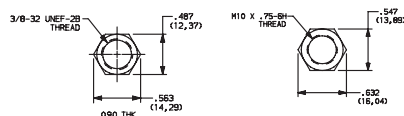
## CONTACT MATERIAL

| OPTION CODE | CONTACT AND TERMINAL MATERIAL | RATING                         |                                                                                      |
|-------------|-------------------------------|--------------------------------|--------------------------------------------------------------------------------------|
| <b>S</b>    | SILVER                        | LOW LEVEL/DRY CIRCUIT          | SWITCH: 150 mA MAXIMUM, 60 V NOMINAL.<br>POWER: 5 VA MAXIMUM. CARRY-5 AMPS MAXIMUM.  |
| <b>P</b>    | GOLD                          | LOW LEVEL/DRY CIRCUIT OR POWER | SWITCH: 20 mA MAXIMUM, 25 V NOMINAL.<br>POWER: 0.5 VA MAXIMUM. CARRY: 1 AMP MAXIMUM. |

\* Note: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications.

## AVAILABLE HARDWARE

### Mounting Nuts



PART NO.  
**472706201**  
Standard

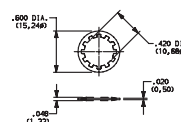
PART NO.  
**495100201**  
Metric

### Stop pins



PART NO.  
**Y200300200P**

### Lockwasher



PART NO.  
**472800202**

NOTE: Additional nuts and lockwashers available separately, see section "Technical Data and Additional Hardware".



Third Angle  
Projection

Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

