

RTA Series

1-4 Poles Coded Rotary Switches



Electrical Characteristics

| | Silver | Gold |
|---|-------------------|--------|
| Switching Mode | Break-Before-Make | |
| 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 | |
| Dielectric Strength at 50 Hz Between Contacts and Ground Terminals | 500V rms | |
| Insulation Resistance Between Contacts or Contacts and Frame (500V =): | 10 ⁹ Ω | |
| No. of Indexations | 10,000 | |
| Bounce | < 5 ms | |
| Operating Temperature | -20°C to 70°C | |
| Storage Temperature | -40°C to 85°C | |

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

Description

The RTA series are 1–4 pole coded rotary switches, found most often in appliances, off-road vehicles, medical building automation applications and HVAC air conditioning equipment. The RTA series are available in PCB or hand soldering versions, with bushing mounting and multiple poles.

Features & Benefits

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

Applications

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

Mechanical Characteristics

| | |
|-------------------------|--|
| Max No. Of Banks | 1 |
| Operating Torque | 5N cm. ± 20% |
| End Stop Torque | 50N cm. minimum |
| Stop | With/without or adjustable |
| Mounting | By fixed index 9.5 mm (0.0374) of center, for bushing mount only |

Materials

| | |
|--|---|
| Housing & Bushing | 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. |

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Ordering Number

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

RTA - X - X - XXXX - X - XXX - X

Designation
RTA

Termination

P: With thru-hole PC pins

H: Horizontal with thru-hole PC pins

Indexing

3: 30° index (12 positions max.)

4: 36° index (10 positions max.)

Switch Function

1W12: SP, 30° Index, 12 pos. no stop

1W10: SP, 36° Index, 10 pos. no stop

1S02: SP, 30° /36° Index, 2 pos.

1S03: SP, 30° /36° Index, 3 pos.

1S04: SP, 30° /36° Index, 4 pos.

1S05: SP, 30° /36° Index, 5 pos.

1S06: SP, 30° /36° Index, 6 pos.

1S07: SP, 30° /36° Index, 7 pos.

1S08: SP, 30° /36° Index, 8 pos.

1S09: SP, 30° /36° Index, 9 pos.

1S10: SP, 30° /36° Index, 10 pos.

1S11: SP, 30° Index, 11 pos.

1S12: SP, 30° Index, 12 pos.

2S02: DP, 30° /36° Index, 2 pos.

2S03: DP, 30° /36° Index, 3 pos.

2S04: DP, 30° /36° Index, 4 pos.

2S05: DP, 30° /36° Index, 5 pos.

2S06: DP, 30° Index, 6 pos.

4S02: 4P, 30° /36° Index, 2 pos.

EW10: Direct + complement, 36° Index, no stop

EW12: Direct + complement, 30° Index, no stop

ES_: Direct + complement, 30°/36°Index, with stop (specify stop position)

Contact Material

S: Silver plated, matte-tin terminal

P: Gold plated, matte-tin terminal

Actuator

25N: 0.984 (25,0) with screwdriver slot

50N: 1.97 (50,0) with screwdriver slot

FLS: Flush shaft with screwdriver slot and position indicator

25F: 0.984 (25,0) Shaft with flat

06F: 0.236 (6,0) Shaft with flat

Mounting Style

W: Without bushing

R: 3/8-32 Threaded Bushing

M: M10x0.75 Metric Threaded Bushing

A: 3/8-32 Threaded Bushing with Offset Bracket

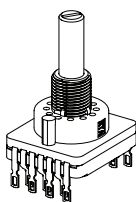
B: M10x0.75 Metric Threaded Bushing with Offset Bracket

C: 3/8-32 Threaded Bushing with Straight Bracket

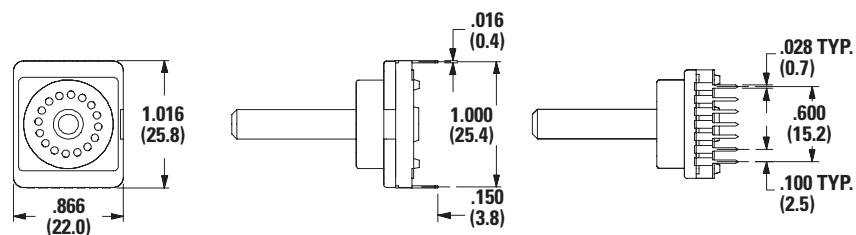
D: M10x0.75 Metric Threaded Bushing with Straight Bracket

Designation

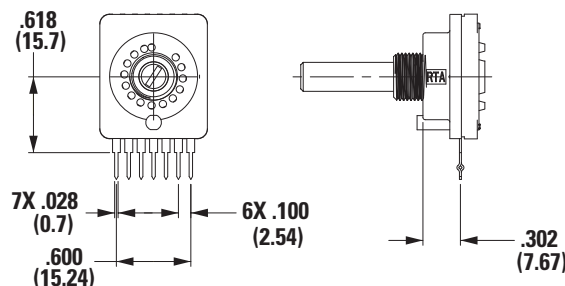
RTA



Termination P with Thru-hole PC pins



H Horizontal with PC Thru-hole



Notes:

H¹ termination only available with the following options:

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

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Indexing

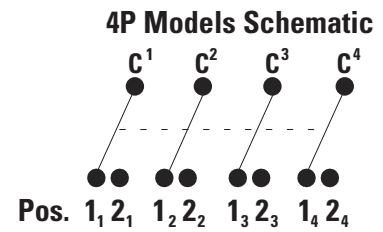
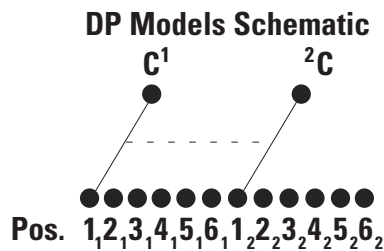
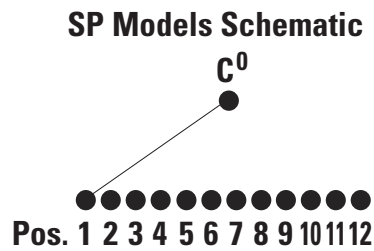
3 - 30° index, 12 positions max.
 4 - 36° index, 10 positions max.
 Both commons must be connected by user to ground

Switch Function

| No. Poles | Model No. | Switch Function | Index |
|-----------|-----------|--------------------------|---------|
| SP | 1W12 | 12 Positions No Stops | 30° |
| | 1W10 | 10 Positions No Stops | 36° |
| | 1S02 | 2 Positions | 30°/36° |
| | 1S03 | 3 Positions | |
| | 1S05 | 5 Positions | |
| | 1S06 | 6 Positions | |
| | 1S08 | 8 Positions | |
| | 1S09 | 9 Positions | |
| | 1S10 | 10 Positions | |
| | 1S11 | 11 Positions | |
| | 1S12 | 12 Positions | 30° |

| No. Poles | Model No. | Switch Function | Index |
|-----------|-----------|-------------------------|---------|
| DP | 2W05 | 5 Positions No Stops | 30°/36° |
| | 2W06 | 6 Positions No Stops | 30° |
| | 2S02 | 2 Positions | 30°/36° |
| | 2S03 | 3 Positions | |
| | 2S04 | 4 Positions | |
| | 2S05 | 5 Positions | |
| | 2S06 | 6 Positions | 30° |
| 4P | 4S02 | 2 Positions | 30°/36° |

| Model No. | Switch Function | Index |
|-----------|---|----------|
| EW10 | Direct + complement, No stop | 36° |
| EW12 | | 30° |
| ES_ _ | Direct + complement, With stop (specify stop position) | 30°/ 36° |



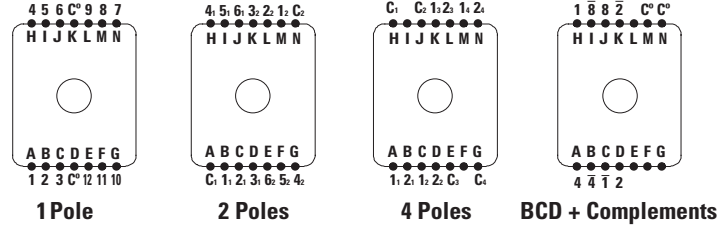
| | | 30° | 36° | Pos. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|-----|-------|-------|------|---|---|---|---|---|---|---|---|---|----|----|----|
| | | Term. | Term. | | | | | | | | | | | | | |
| Direct | M,N | L,N | C | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | H | D | 1 | | • | | • | | • | | • | | • | | • | • |
| | D | B | 2 | | | • | • | | | | • | • | | | • | • |
| | A | I | 3 | | | | | | • | • | • | • | | | | |
| Compliment | J | J | 8 | | | | | | | | | | • | • | • | • |
| | C | K | 1 | • | | • | | • | | • | | • | | • | | |
| | K | H | 2 | • | • | | | | • | | | | | | | |
| | B | A | 4 | • | • | • | • | | | | | | • | • | • | • |
| | I | C | 8 | • | • | • | • | • | • | • | • | • | | | | |

RTA Series

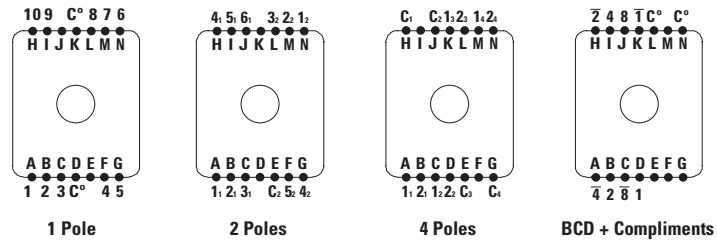
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Indexing Option Code 3, 30 Indexing Angle PCB Layout



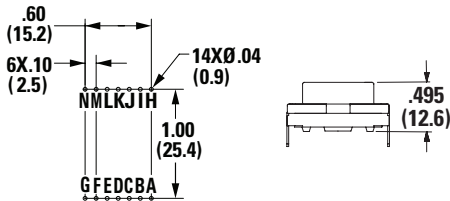
Indexing Option Code 4, 36 Indexing Angle PCB Layout



Notes: 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.

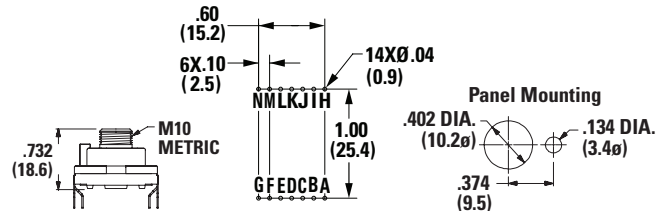
Mounting Style

W Without Bushing



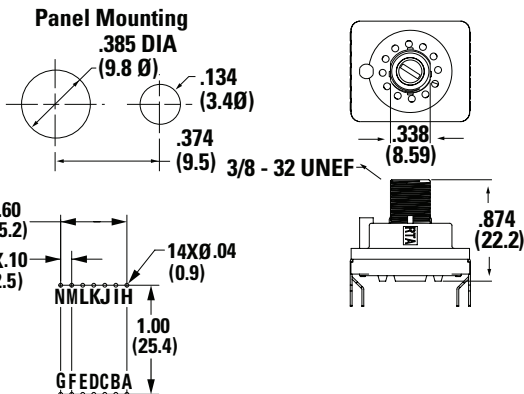
Note: W mounting style not available with H termination.

M M10 x 0.75 Metric Threaded Bushing



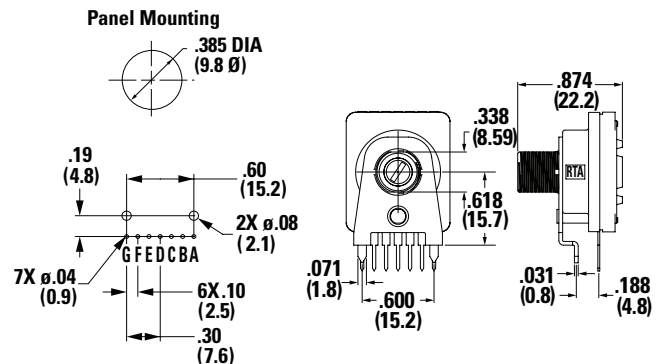
Note: M mounting style not available with H termination.

R 3/8-32 Threaded Bushing



Note: R mounting style not available with H termination.

A 3/8-32 Threaded Bushing With Bracket



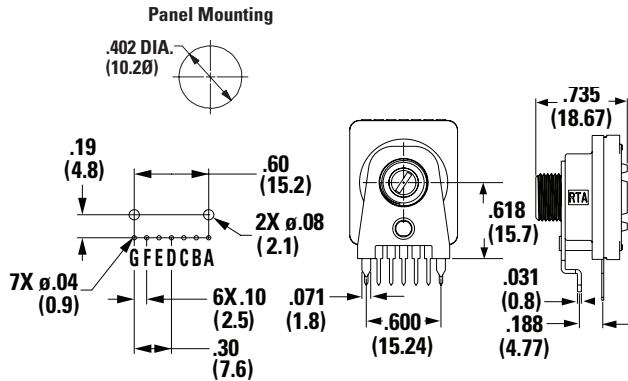
Note: A mounting style not available with H termination.

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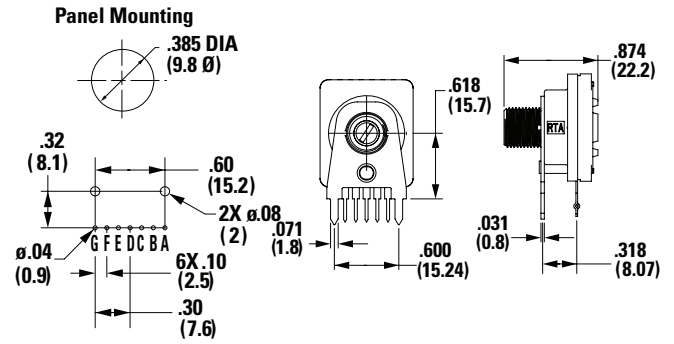


B M10 x 0.75 Metric Threaded Bushing With Bracket



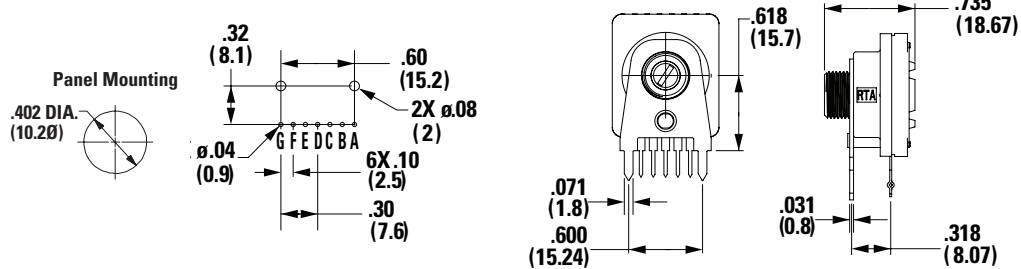
Note: R mounting style not available with H termination.

C 3/8-32 Threaded Bushing With Straight Bracket



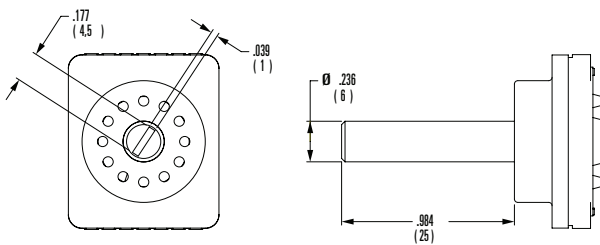
Note: A mounting style not available with H termination.

D M10 x 0.75 Metric Threaded Bushing With Straight Bracket

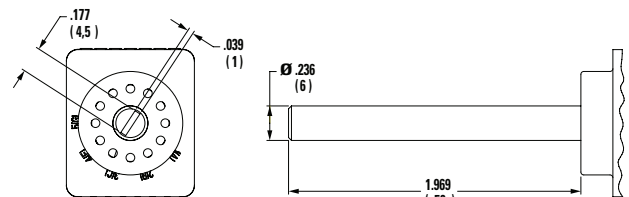


Actuator

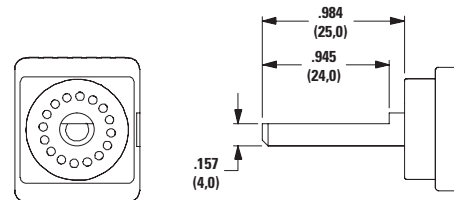
25N 0.984 (25.0) With Screwdriver Slot



50N 1.97 (50.0) With Screwdriver Slot

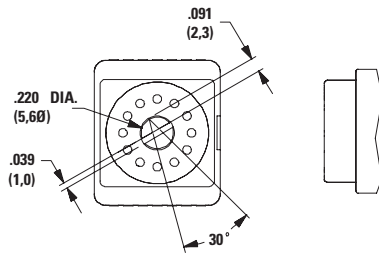


25F 0.984 (25.0) Shaft with Flat



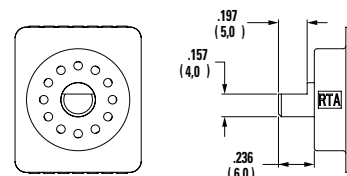
Notes: only available with "W" Mounting Style

FLS Flush Shaft With Screwdriver Slot and Position Indicator



Notes: only available with "W" Mounting Style

06F 0.236 (6.0) Shaft With Flat



Notes: only available with "W" Mounting Style

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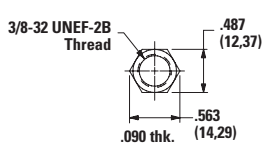
Contact Material

| Option Code | Contact Material | Typical Usage | Rating |
|-------------|------------------|----------------------------------|--|
| S | Silver | Low Level / Dry Circuit | Switch: 150 mA ,ax., 60 V nominal. Power: 5 VA ,ax. Carry-5 amps max. |
| P | Gold | Low Level / Dry Circuit or Power | Switch: 20 mA max., 25 V nominal. Power: 0.5 VA max. Carry-1 amp max. |

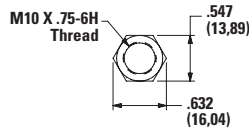
Notes: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications.

Available Hardware

Mounting Nuts



Part No. 472706201
Standard



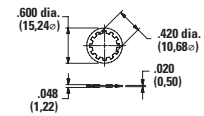
Part No. 205D00201CH
Metric

Stop pins



Part No. Y200300200PCH

Lockwasher



Part No. 472800A47CH

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

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