

# RTE Series

## Low Profile Rotary DIP Switches



### Specifications

|                       |                                                        |
|-----------------------|--------------------------------------------------------|
| <b>Contact Rating</b> | Gold: 100 mA max. 10µ A min. 30 V DC max. 20 mVDC min. |
|-----------------------|--------------------------------------------------------|

### Environmental Characteristics

|                              |               |
|------------------------------|---------------|
| <b>Storage Temperature</b>   | -55°C to 85°C |
| <b>Operating Temperature</b> | -25°C to 85°C |
| <b>Operating Force</b>       | 0.75-3 N.cm   |

### Process

|                      |                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Solderability</b> | Surface Mount Terminals: Infrared Reflow Soldering in accordance with IEC 61760-1.<br>Non Reverse Thru-Hole Terminals: Lead free single or double wave soldering process according to C&K Procedure PS-LF-001.<br>Reverse Thru-Hole Terminals: Manual soldering: 3 sec / 350°C. Lead free single wave soldering process can be used but validation of the process must be done by customer |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Mechanical Characteristics

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Mechanical Life</b>       | 20,000 indexations                     |
| <b>Contact Resistance</b>    | 100 mΩ max. initial; 150 mΩ after life |
| <b>Insulation Resistance</b> | 10 <sup>10</sup> Ω min. initial        |
| <b>Dielectric Strength</b>   | 300 Vrms 1 mn                          |

### Description

For designers of timers, automation components, alarms, access controls and smoke detectors, the RTE series low profile rotary DIP switches are the preferred choice. These miniature switches are available with a robust metal cover (in either black or silver nickel finish), a large choice of codings, and in either a vertical or reverse version.

### Features & Benefits

- Thru-hole and surface mount models
- Miniature size with robust metal cover in black or silver nickel finish
- 4, 10 and 16 positions
- Large choice of codings
- Vertical, right angle, or reverse versions
- IP54
- RoHS compliant

### Applications

- Timers, automation components
- Computer peripherals
- Instrumentation
- Alarms, access control, smoke detectors, lighting, and home protection

### Materials

|                            |                                        |
|----------------------------|----------------------------------------|
| <b>Cover</b>               | Brass, nickel plated (black or silver) |
| <b>Base</b>                | PPS                                    |
| <b>Actuator</b>            | LCP                                    |
| <b>Movable Contacts</b>    | Copper alloy, gold plated              |
| <b>Stationary Contacts</b> | Brass, gold plated                     |
| <b>Terminals</b>           | Lead free tin or gold                  |
| <b>O-ring</b>              | Silicone                               |

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

### Packaging

| Terminations | Actuator                | Tube | Box (in bulk) | Carrier Tape | Standard Package |
|--------------|-------------------------|------|---------------|--------------|------------------|
| G            | Flush, screwdriver slot | -    | -             | 1250         | 1250 (1 reel)    |
|              | Shaft for button        | -    | -             | 750          | 750 (1 reel)     |
| N            | All Versions            | 65   | -             | -            | 1950 (30 tubes)  |
| V            |                         | -    | 150           | -            | 1500 (10 boxes)  |
| R            | Flush, screwdriver slot | 65   | -             | -            | 1950 (30 tubes)  |
|              | Shaft for button        | -    | 150           | -            | 1500 (10 boxes)  |

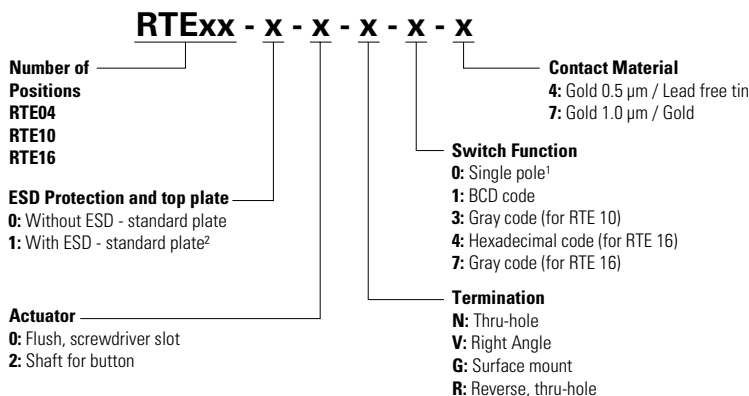
# RTE Series

## Low Profile Rotary DIP Switches



### Ordering Number

The Build-A Switch concept allows you to mix and match options to create the switch you need. Below is a complete listing of options shown in catalog. To order, simply select desired option from each category and place in the appropriate box. All switches supplied in "OFF" position.

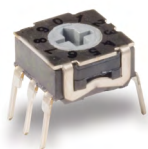


**Notes:**

1. Single pole function not available for RTE10/RTE16  
 2. ESD protection available with "N" and "R" terminations only

### Switches and Standard Options

#### PC Mount-Terminal Option N



#### Right Angle Mount-Terminal Option V

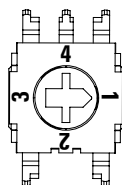


#### Surface Mount-Terminal Option G

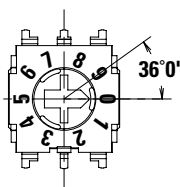


### Number of Positions

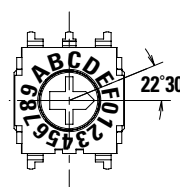
#### RTE04 - 4 positions



#### RTE10 - 10 positions



#### RTE16 - 16 positions



# RTE Series

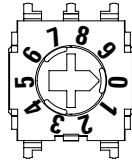
## Low Profile Rotary DIP Switches



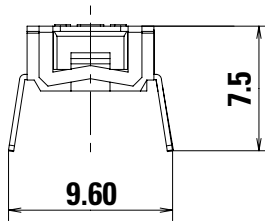
### ESD Protection

0 - Without

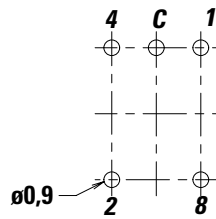
Top View



Side View

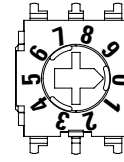


PCB Mounting

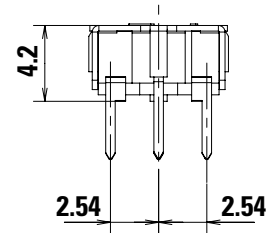


1 - With

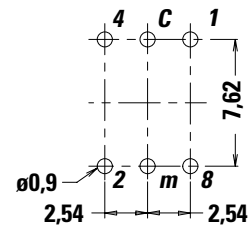
Top View



Side View

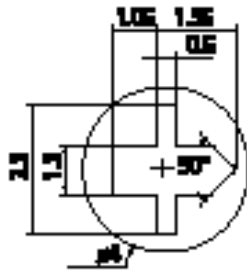


PCB Mounting

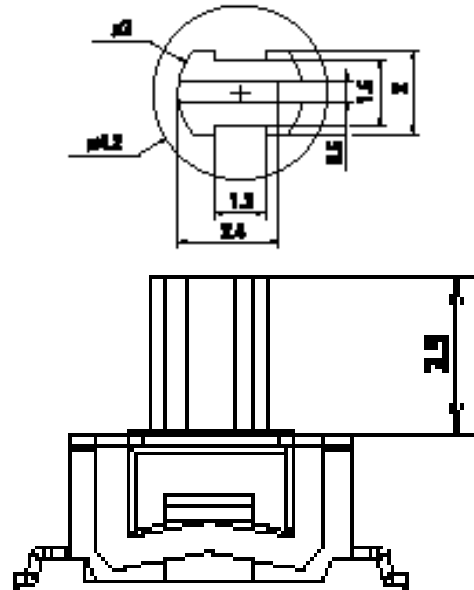


## Low Profile Rotary DIP Switches

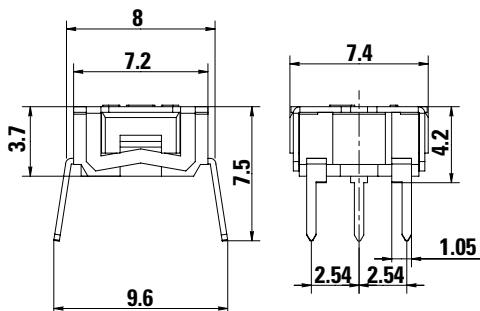
## 0 - Screwdriver Slot



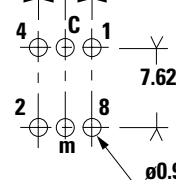
## 2 - Shaft for Button



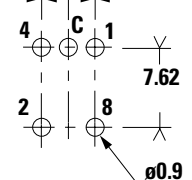
**N - Thru-hole (mm)**



2.54 2.54



2.54)  2.54)

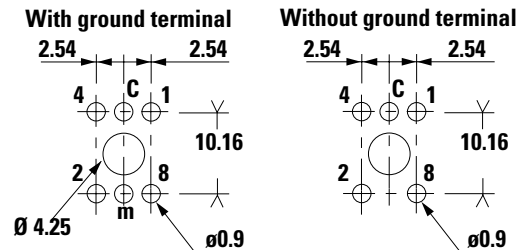
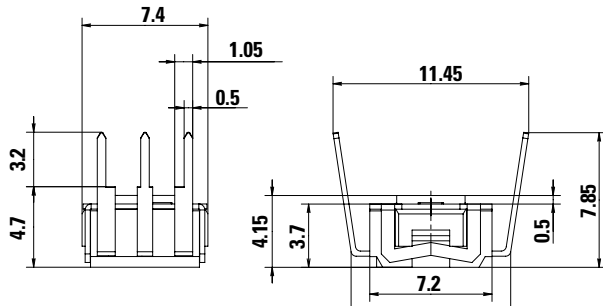


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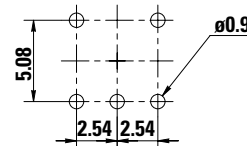
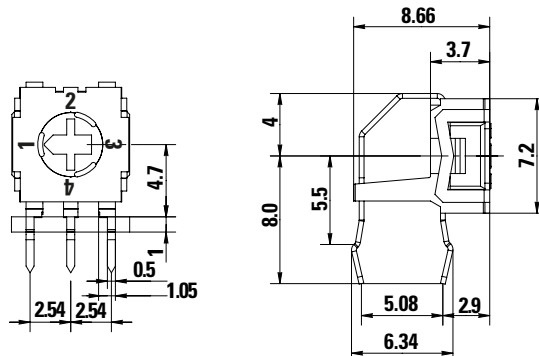
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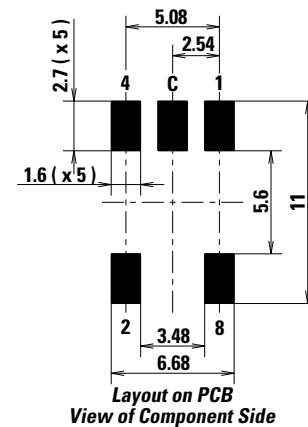
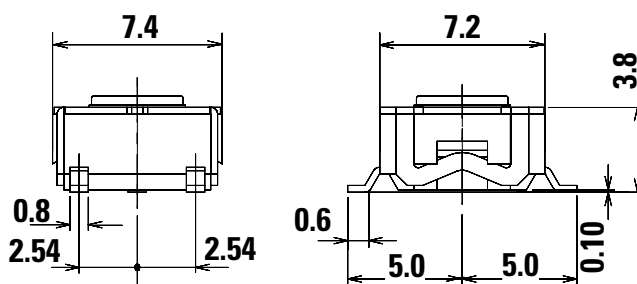
**R - Reverse, Thru-hole (mm)**



### V - Right Angle, Thru-hole (mm)



### G - Surface Mount (mm)



## Switch Function

**0 - Single Pole (For RTE04 only)**

| POS. | 1 | 2 | 3 | 4 |
|------|---|---|---|---|
| C    | ● | ● | ● | ● |
| 1    | ● |   |   |   |
| 2    |   | ● |   |   |
| 3    |   |   | ● |   |
| 4    |   |   |   | ● |

### 1 - BCD code

[illegible]

# RTE Series

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### Switch Function

#### 3 - Gray Code (for RTE10 only)

| POS. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------|---|---|---|---|---|---|---|---|---|---|
| C    | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1    |   | ● |   |   |   | ● |   |   |   | ● |
| 2    |   |   | ● | ● | ● |   |   |   |   |   |
| 4    |   |   |   | ● | ● | ● |   |   | ● | ● |
| 8    |   |   |   |   |   |   |   |   | ● | ● |

#### 4 - Hexadecimal Code (For RTE16 only)

| POS. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C    | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1    |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |
| 2    |   |   | ● | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |
| 4    |   |   |   | ● | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   |
| 8    |   |   |   |   |   |   |   |   | ● | ● | ● | ● | ● | ● | ● | ● |

### Contact Material

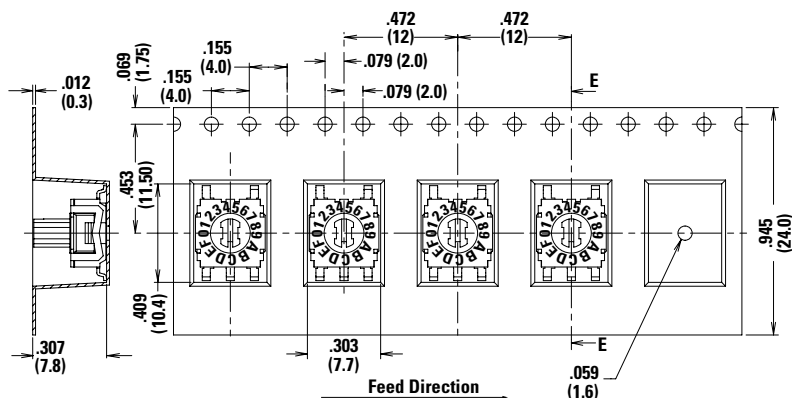
| Option Code | Contact Material | Terminal Plating |
|-------------|------------------|------------------|
| 4           | Gold: 0.5 µm     | Lead Free Tin    |
| 7           | Gold: 1.0 µm     | Gold             |

#### 7-Gray code (for RTE16 only)

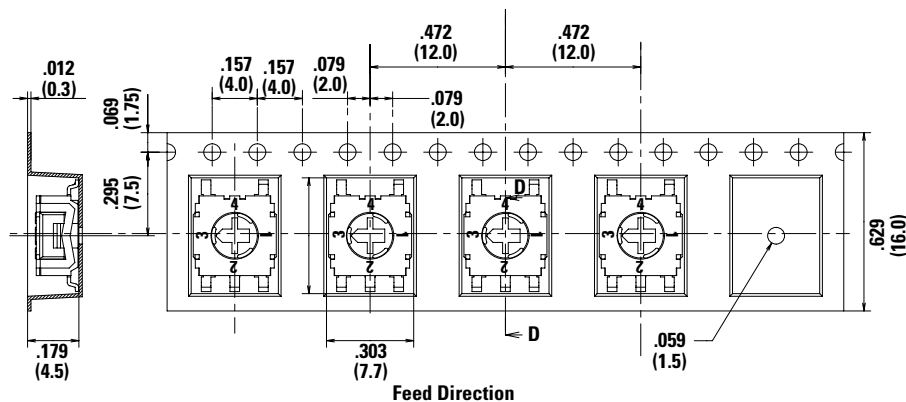
| POS. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C    | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1    |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |
| 2    |   |   | ● | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   | ● |
| 4    |   |   |   | ● | ● |   | ● |   | ● |   | ● |   | ● |   | ● |   |
| 8    |   |   |   |   |   |   |   |   | ● | ● | ● | ● | ● | ● | ● | ● |

### Tape and Reel

#### Tape and reel for RTExx02Gxx 750 pieces per reel. (mm)



#### Tape and reel for RTExx00Gxx, 1,250 pieces per reel. (mm)



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