



**THE DATASHEET OF  
RTE1610N44**



# RTE Series Low Profile Rotary DIP Switches



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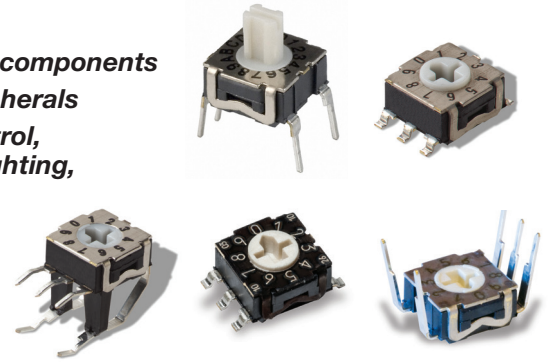
DIP

## Features/Benefits

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

## Typical Applications

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



## Specifications

### CONTACT RATING:

Gold: 100 mA max. 10 $\mu$  A min. 30 V DC max. 20 mVDC min.

MECHANICAL LIFE: 20,000 indexations

CONTACT RESISTANCE: 100 m $\Omega$  max. initial;  
150 m $\Omega$  after life

INSULATION RESISTANCE: 10<sup>10</sup>  $\Omega$  min. initial

DIELECTRIC STRENGTH: 300 Vrms 1 mn

OPERATING TEMPERATURE: -25°C to 85°C.

STORAGE TEMPERATURE: -55°C to 85°C.

PACKAGING:

Quantities

| 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            | All versions            |      | 150           |              | 1500 (10 boxes)  |
| R            | Flush, screwdriver slot | 65   |               |              | 1950 (30 tubes)  |
|              | Shaft for button        |      | 150           |              | 1500 (10 boxes)  |

## Materials

COVER: Brass, nickel plated (black or silver)

BASE: PPS

ACTUATOR: LCP

MOVABLE CONTACTS: Copper alloy, gold plated.

STATIONARY CONTACTS: Brass, gold plated.

TERMINALS: See page I-28 to I-29

O-RING: Silicone

SOLDERING PROCESS:

- Surface Mount Terminals: Infrared Reflow Soldering in accordance with IEC 61760-1.

- Non Reverse Thru-Hole Terminals: Lead free single or double wave soldering process according to C&K Procedure PS-LF-001

- 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

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

## How To Order

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.

**NOTE:** Some of the configurations may not be available or could require some development.



Number of Positions \_\_\_\_\_

- RTE04**    **ESD Protection and top plate**
- RTE10**    **0** Without ESD - standard plate
- RTE16**    **1** With ESD - standard plate <sup>2</sup>
- B** Without ESD - black plate

- Actuator**
- 0** Flush, screwdriver slot
- 2** Shaft for button

- Terminations**
- N** Thru-hole
- V** Right angle
- G** Surface mount
- R** Reverse, thru-hole

- Switch Function**
- 0** Single pole <sup>1</sup>
- 1** BCD code
- 3** Gray Code (for RTE 10)
- 4** Hexadecimal code (for RTE 16)
- 7** Gray Code (for RTE16)

- Contact/Terminal Material**
- 4** Gold 0.5  $\mu$ m/ Lead free tin
- 7** Gold 1.0  $\mu$ m/ Gold

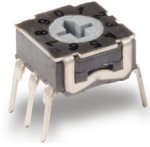


1 - Single pole function not available for RTE10/RTE16  
2 - ESD protection available with "N" and "R" terminations only

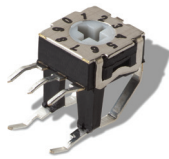
# RTE Series Low Profile Rotary DIP Switches

## SWITCHES WITH STANDARD OPTIONS

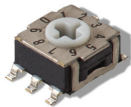
### PC Mount-Terminal Option N



### Right Angle Mount-Terminal Option V

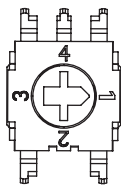


### Surface Mount-Terminal Option G

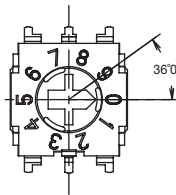


## NUMBER OF POSITIONS

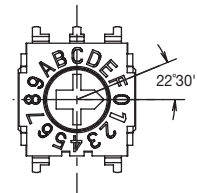
### RTE04 4 POSITIONS



### RTE10 10 POSITIONS



### RTE16 16 POSITIONS



# RTE Series Low Profile Rotary DIP Switches

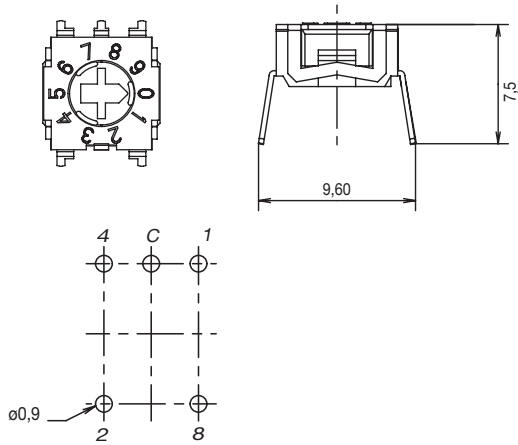


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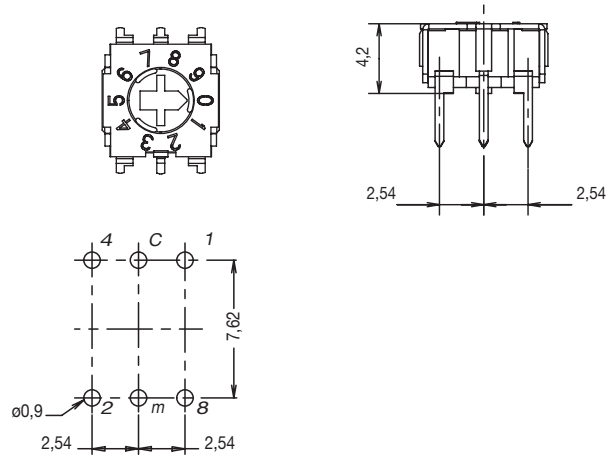
DIP

## ESD PROTECTION

0 WITHOUT

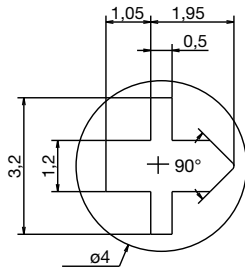


1 WITH

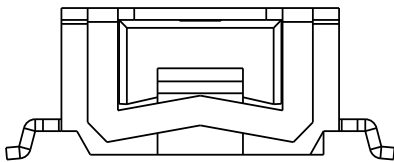


## ACTUATOR

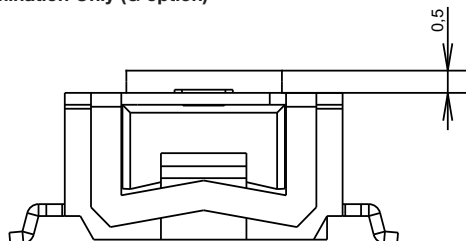
0 SCREWDRIVER SLOT



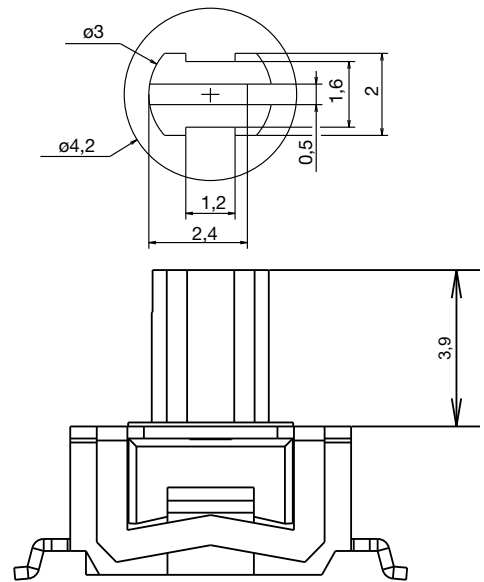
For non-SMT Terminations (N, V or R option)



For SMT Termination Only (G option)



2 SHAFT FOR BUTTON



First Angle  
Projection

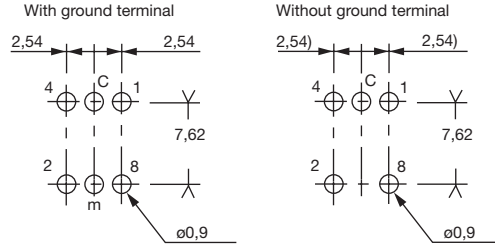
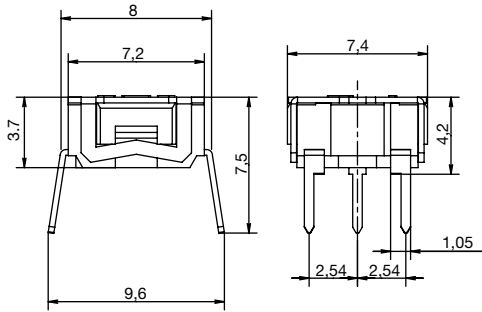
Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

# RTE Series Low Profile Rotary DIP Switches

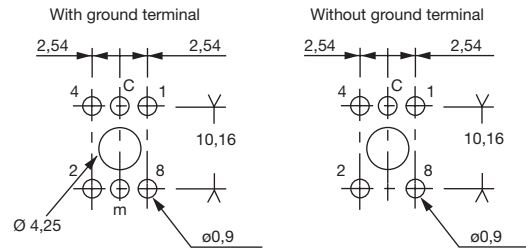
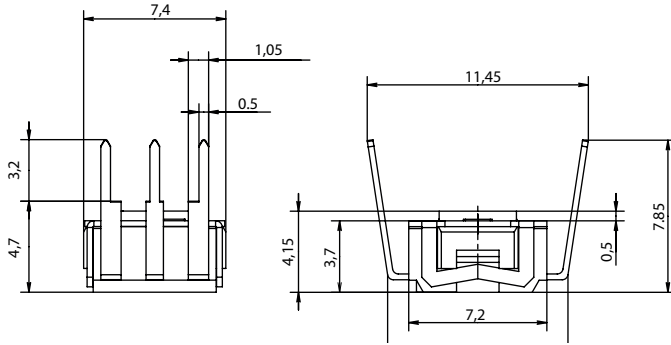
## TERMINATIONS

DIP I

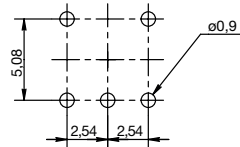
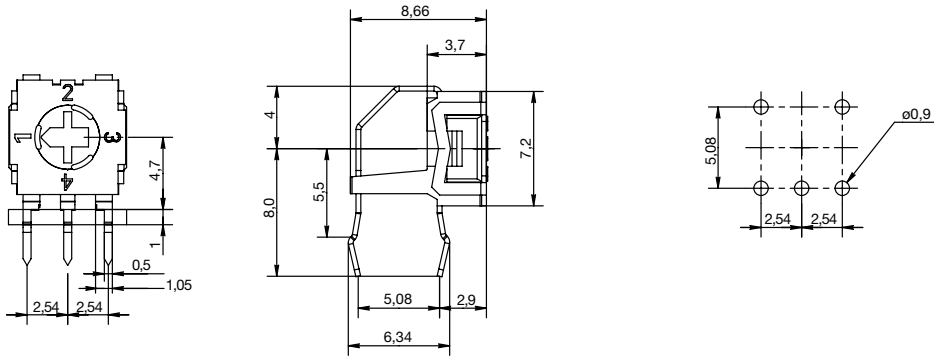
### N THRU-HOLE



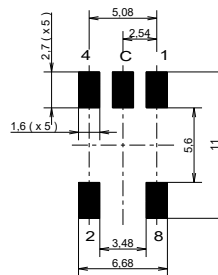
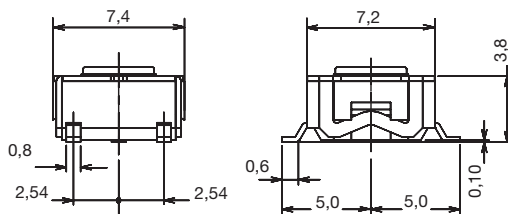
### R REVERSE, THRU-HOLE



### V RIGHT ANGLE, THRU-HOLE



### G SURFACE MOUNT



PCB layout seen component side





### SWITCH FUNCTION

#### 0 SINGLE POLE

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

#### 1 BCD CODE

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

#### 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

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

#### 7 GRAY CODE (for RTE04 only)

| POS. | 1 | 2 | 3 | 4 |
|------|---|---|---|---|
| C    | ● | ● | ● | ● |
| 1    | ● |   |   |   |
| 2    |   | ● |   |   |
| 4    |   |   | ● |   |
| 8    |   |   |   | ● |

(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 $\mu$ m | Lead Free Tin    |
| 7           | Gold: 1 $\mu$ m   | Gold             |





First Angle  
Projection

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



## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View RTE1610N44 on WIN SOURCE](#)
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