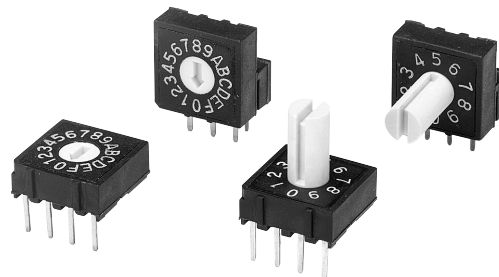


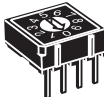
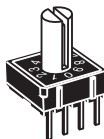
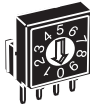
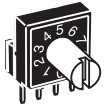
# Rotary DIP Switch A6R/A6RV

## Low-Cost Rotary DIP Switches

- Series includes top-actuated, side-actuated, flat, and extended-shaft models.
- The rotor has an O-ring sealed construction that prevents the ingress of dirt and dust.
- Two different types of terminal arrangements are available for each model to allow flexibility of circuit design.
- RoHS Compliant.



## Ordering Information

| Output code             | Number of positions | Terminal arrangement | Top-actuated flat  | Top-actuated extended shaft   | Side-actuated flat   | Side-actuated extended shaft   |
|-------------------------|---------------------|----------------------|--|---|--|--|
|                         |                     |                      |  |  |  |  |
| BCD 1-2-4-8             | 10                  | 4 × 1                | A6R-101RF  | A6R-101RS   | A6RV-101RF   | A6RV-101RS   |
|                         |                     | 3 × 3                | A6R-102RF  | A6R-102RS   | A6RV-102RF   | A6RV-102RS   |
| BCD Hexadecimal 1-2-4-8 | 16                  | 4 × 1                | A6R-161RF  | A6R-161RS   | A6RV-161RF   | A6RV-161RS   |
|                         |                     | 3 × 3                | A6R-162RF  | A6R-162RS   | A6RV-162RF   | A6RV-162RS   |

Note: Switches are delivered in units of 48 per tube. Order in multiples of 48.

## Specifications

### ■ Ratings/Characteristics

|                               |  |               |
|-------------------------------|--|---------------|
| Switching Capacity            | 25 mA at 24 VDC  |               |
| Min. Permissible Load         | 10 μA at 3.5 VDC   |               |
| Contact resistance            | 200 mΩ max.  |               |
| Insulation resistance         | 100 MΩ min. (at 250 VDC)                                   |               |
| Dielectric strength           | 250 VAC for 1 minute between terminals                     |               |
| Operating torque              | 200 g-cm max. (1.96 x 10 <sup>-2</sup> N-m max.)           |               |
| Vibration resistance          | Malfunction: 10 to 55 Hz, 1.5-mm double amplitude          |               |
| Shock resistance              | Malfunction: 300 m/s <sup>2</sup> (30G) min.               |               |
| Ambient operating temperature | -25 to 80°C at 60% RH max. (with no icing or condensation) |               |
| Ambient operating humidity    | 35% to 95% (at 5 to 35°C)                                  |               |
| Electrical service life       | 5,000 steps min.   |               |
| Weight (See note 2)           | Top-actuated:  | Approx. 0.6 g |
|                               | Side-actuated:   | Approx. 0.8 g |

- Note:
1. Data shown are of initial value.
  2. Add 0.13 g for the extended-shaft version of each model
  3. Switches cannot be water washed

### ■ Output Codes

#### 10-position Models

| Type | BCD 1-2-4-8           |   |   |   |
|------|-----------------------|---|---|---|
|      | Terminal No. Position | 1 | 2 | 4 |
| 0    |                       |   |   |   |
| 1    | ●                     |   |   |   |
| 2    |                       | ● |   |   |
| 3    | ●                     | ● |   |   |
| 4    |                       |   | ● |   |
| 5    | ●                     |   | ● |   |
| 6    |                       | ● | ● |   |
| 7    | ●                     | ● | ● |   |
| 8    |                       |   |   | ● |
| 9    | ●                     |   |   | ● |

#### 16-position Models

| Type | BCD/hexadecimal 1-2-4-8 |   |   |   |
|------|-------------------------|---|---|---|
|      | Terminal No. Position   | 1 | 2 | 4 |
| 0    |                         |   |   |   |
| 1    | ●                       |   |   |   |
| 2    |                         | ● |   |   |
| 3    | ●                       | ● |   |   |
| 4    |                         |   | ● |   |
| 5    | ●                       |   | ● |   |
| 6    |                         | ● | ● |   |
| 7    | ●                       | ● | ● |   |
| 8    |                         |   |   | ● |
| 9    | ●                       |   |   | ● |
| A    |                         | ● |   | ● |
| B    | ●                       | ● |   | ● |
| C    |                         |   | ● | ● |
| D    | ●                       |   | ● | ● |
| E    |                         | ● | ● | ● |
| F    | ●                       | ● | ● | ● |

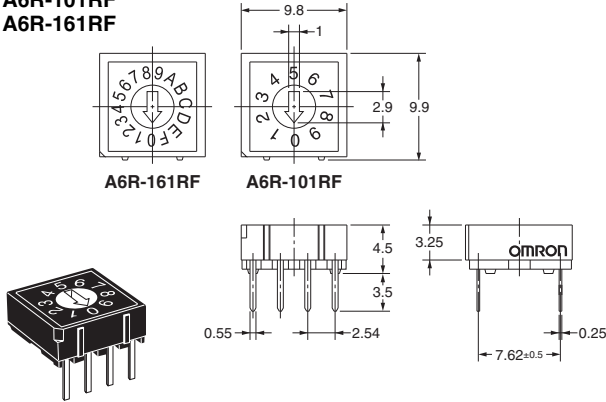
Note: "●" indicates that the internal switch is ON.

# Dimensions

- Note:** 1. All units are in millimeters unless otherwise indicated.  
 2. Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

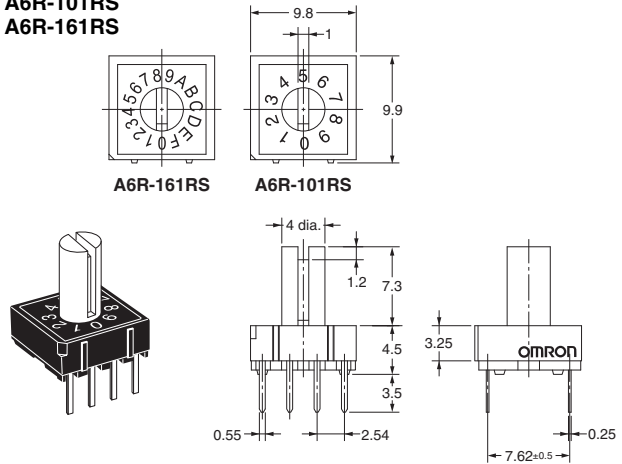
## Top-actuated Flat Models with 4x1 Terminal Arrangement

A6R-101RF  
A6R-161RF



## 4x1 Terminal Arrangement

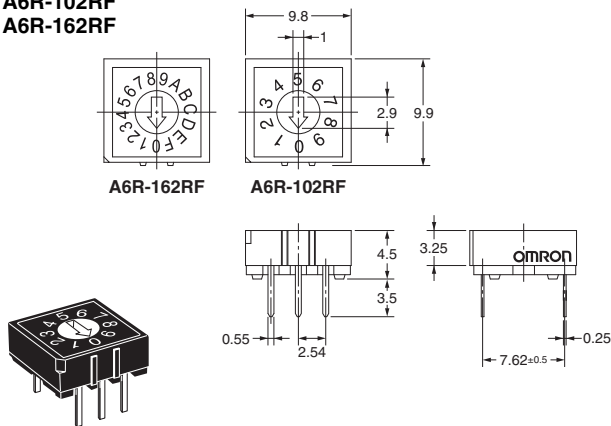
A6R-101RS  
A6R-161RS



## Top-actuated Extended-shaft Models with

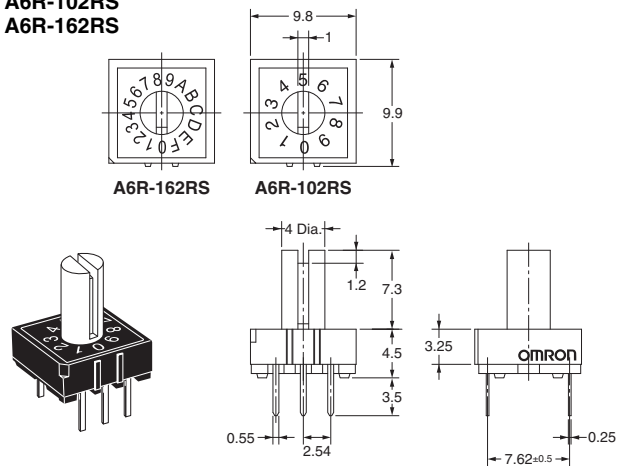
### Top-actuated Flat Models with 3x3 Terminal Arrangement

A6R-102RF  
A6R-162RF



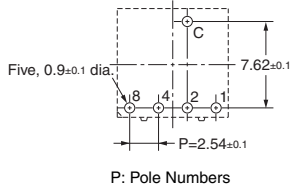
### Top-actuated Extended-shaft Models with 3x3 Terminal Arrangement

A6R-102RS  
A6R-162RS

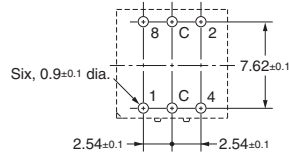


## Mounting holes Top-actuated models

### 4x1 Terminal

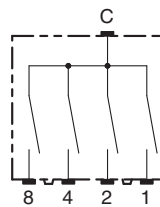


### 3x3 Terminal

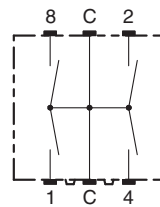


## Internal connections Top-actuated models

### 4x1 Terminal

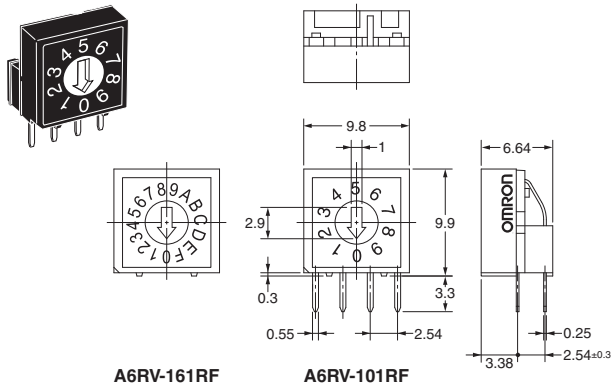


### 3x3 Terminal



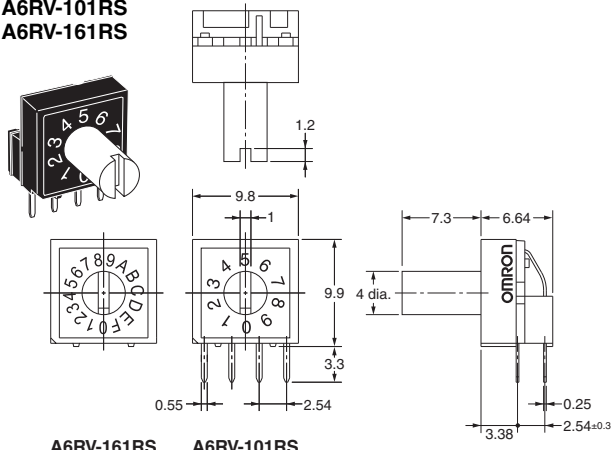
**Side-actuated Flat Models with 4x1 Terminal Arrangement**

A6RV-101RF  
A6RV-161RF



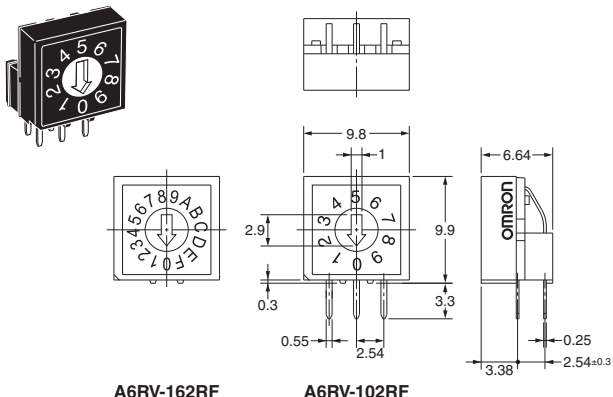
**Side-actuated Extended-shaft Models with 4x1 Terminal Arrangement**

A6RV-101RS  
A6RV-161RS



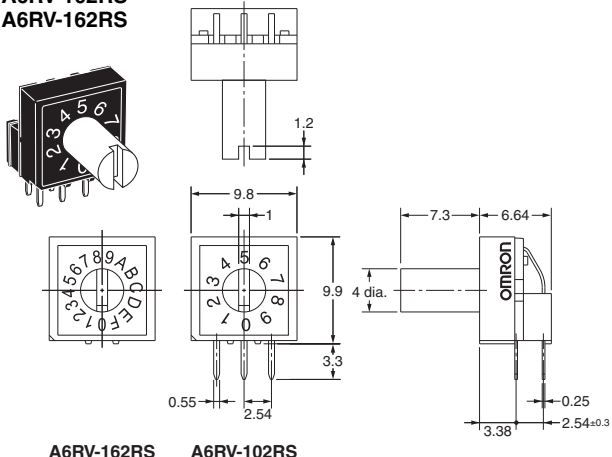
**Side-actuated Flat Models with 3x3 Terminal Arrangement**

A6RV-102RF  
A6RV-162RF



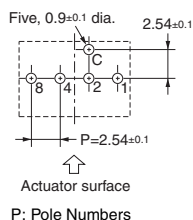
**Side-actuated Extended-shaft Models with 3x3 Terminal Arrangement**

A6RV-102RS  
A6RV-162RS

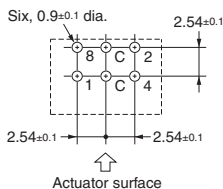


**Mounting holes Side-actuated models**

**4x1 Terminal**

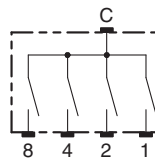


**3x3 Terminal**

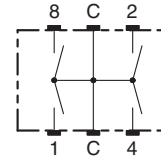


**Internal connections Side-actuated models**

**4x1 Terminal**



**3x3 Terminal**



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To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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Rotary DIP Switch **A6R/A6RV**