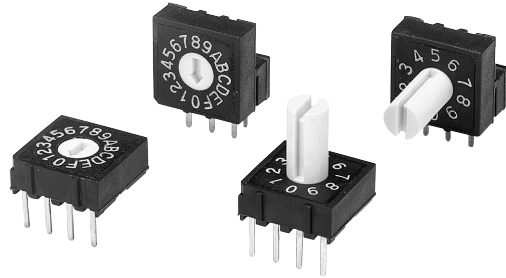


## Rotary DIP Switch

### 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 arrangement are available for each model to allow flexibility in the circuit design.



## Ordering Information

### List of Models

|                     |                    |                      |             | Type (rotor color) | Top-actuated, flat (White) | Top-actuated, extended shaft (White) | Side-actuated, flat (White) | Side-actuated, extended shaft (White) |
|---------------------|--------------------|----------------------|-------------|--------------------|----------------------------|--------------------------------------|-----------------------------|---------------------------------------|
|                     |                    |                      |             | Appearance         |                            |                                      |                             |                                       |
| Number of positions | Quantity per stick | Terminal arrangement | Output code |                    |                            |                                      |                             |                                       |
| 10                  | 48                 | 4 × 1                | Real code   | A6R-101RF          | A6R-101RS                  | A6RV-101RF                           | A6RV-101RS                  |                                       |
|                     |                    | 3 × 3                | Real code   | A6R-102RF          | A6R-102RS                  | A6RV-102RF                           | A6RV-102RS                  |                                       |
| 16                  | 48                 | 4 × 1                | Real code   | A6R-161RF          | A6R-161RS                  | A6RV-161RF                           | A6RV-161RS                  |                                       |
|                     |                    | 3 × 3                | Real code   | A6R-162RF          | A6R-162RS                  | A6RV-162RF                           | A6RV-162RS                  |                                       |

**Note:** Switches are delivered in units of 48. Orders must be made in multiples of 48.

## Specifications

### Ratings/Characteristics

|                                      |   |
|--------------------------------------|---|
| <b>Rating</b>                        | 25 mA at 24 VDC   |
| <b>Ambient operating temperature</b> | -25 to 80°C (with no icing or condensation)   |
| <b>Ambient operating humidity</b>    | 35% to 95%  |
| <b>Insulation resistance</b>         | 100 MΩ min. (at 250 VDC)  |
| <b>Contact resistance</b>            | 200 mΩ max. (initial value)   |
| <b>Dielectric strength</b>           | 250 VAC for 1 minute between terminals of the same polarity   |
| <b>Vibration resistance</b>          | Malfunction: 10 to 55 Hz, 1.5-mm double amplitude   |
| <b>Shock resistance</b>              | Malfunction: Approx. 300 m/s <sup>2</sup>   |
| <b>Electrical life expectancy</b>    | 5,000 steps min.  |
| <b>Operating torque</b>              | 1.96 × 10 <sup>-2</sup> N·m max.  |
| <b>Weight</b>                        | 4×1, top-actuated: 0.64 g<br>3×3, top-actuated: 0.62 g<br>4×1, side-actuated: 0.8 g<br>3×3, side-actuated: 0.83 g<br>(Add 0.13 g for the extended-shaft version of each model.) |

### Output Codes

#### 10-position Models

| Position | Code |   |   |   |
|----------|------|---|---|---|
|          | 1    | 2 | 4 | 8 |
| 0        |      |   |   |   |
| 1        | ●    |   |   |   |
| 2        |      | ● |   |   |
| 3        | ●    | ● |   |   |
| 4        |      |   | ● |   |
| 5        | ●    |   | ● |   |
| 6        |      | ● | ● |   |
| 7        | ●    | ● | ● |   |
| 8        |      |   |   | ● |
| 9        | ●    |   |   | ● |

#### 16-position Models

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

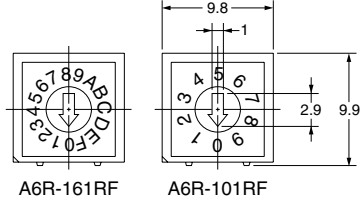
**Note:** “●” indicates that the internal switch is ON.

# Dimensions

- Note:** 1. All units are in millimeters unless otherwise indicated.  
 2. A tolerance of  $\pm 0.4$  mm applies to the above dimensions unless otherwise specified.

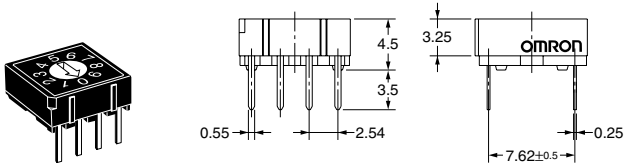
## Top-actuated Flat Models with 4×1 Terminal Arrangement

A6R-101RF  
 A6R-161RF



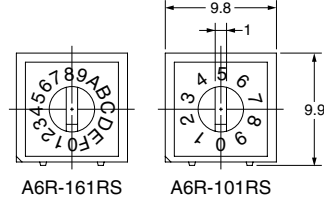
A6R-161RF

A6R-101RF



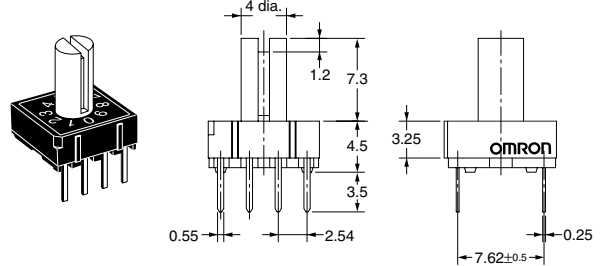
## Top-actuated Extended-shaft Models with 4×1 Terminal Arrangement

A6R-101RS  
 A6R-161RS



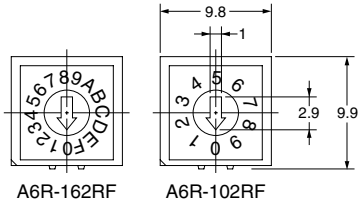
A6R-161RS

A6R-101RS



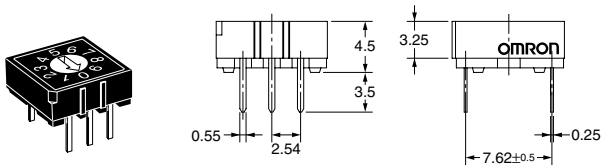
## Top-actuated Flat Models with 3×3 Terminal Arrangement

A6R-102RF  
 A6R-162RF



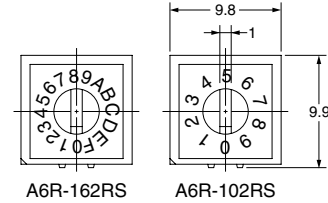
A6R-162RF

A6R-102RF



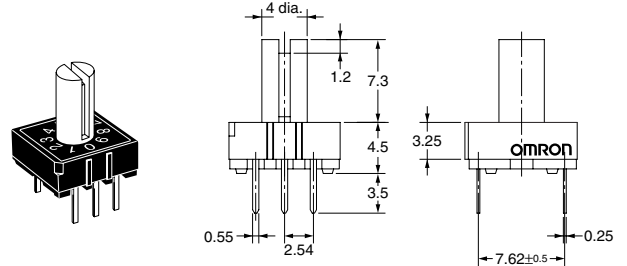
## Top-actuated Extended-shaft Models with 3×3 Terminal Arrangement

A6R-102RS  
 A6R-162RS



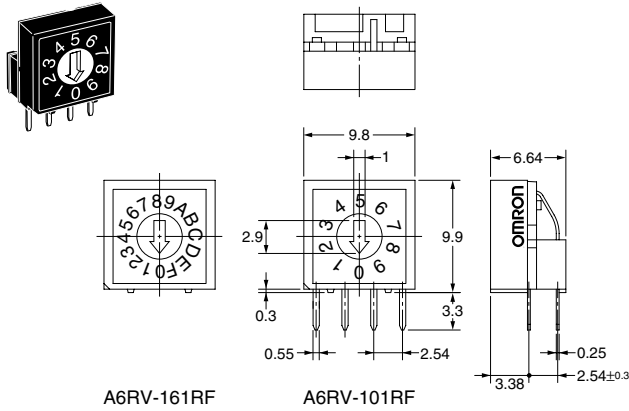
A6R-162RS

A6R-102RS



**Side-actuated Flat Models with 4×1 Terminal Arrangement**

A6RV-101RF  
A6RV-161RF

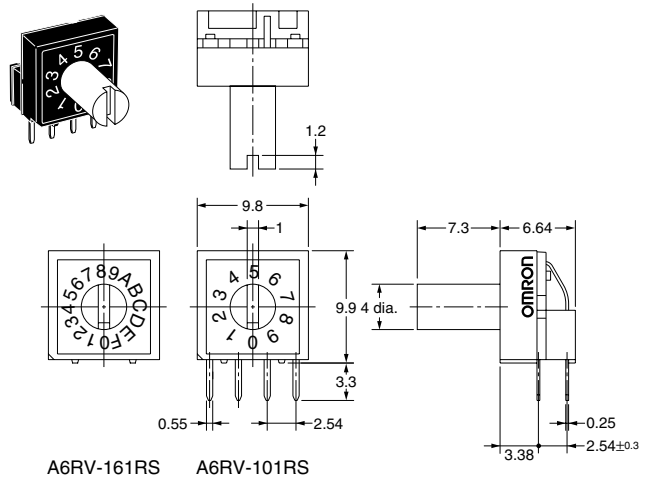


A6RV-161RF

A6RV-101RF

**Side-actuated Extended-shaft Models with 4×1 Terminal Arrangement**

A6RV-101RS  
A6RV-161RS

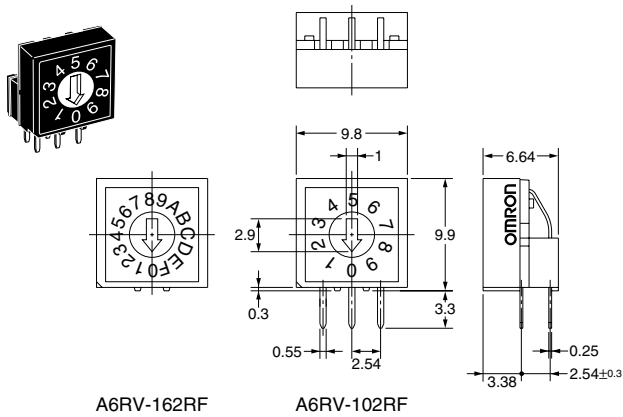


A6RV-161RS

A6RV-101RS

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

A6RV-102RF  
A6RV-162RF

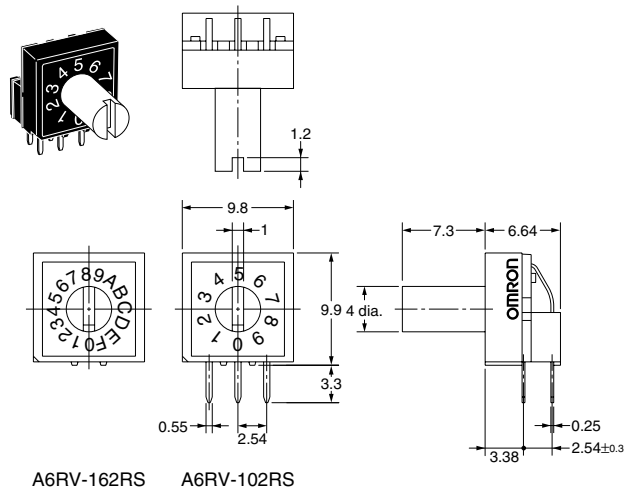


A6RV-162RF

A6RV-102RF

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

A6RV-102RS  
A6RV-162RS



A6RV-162RS

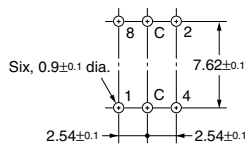
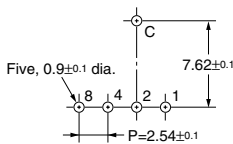
A6RV-102RS

**PCB Cutout Dimensions**

**Top-actuated Models**

4×1 Terminal Arrangement

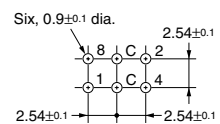
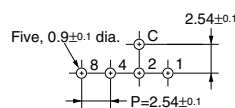
3×3 Terminal Arrangement



**Side-actuated Models**

4×1 Terminal Arrangement

3×3 Terminal Arrangement



## Precautions

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Be sure to refer to General Precautions on pages 4 to 6 for details on proper use.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**  
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.