

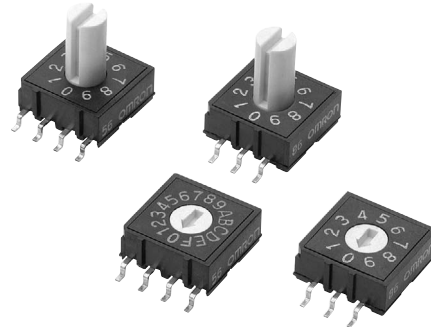
## Rotary DIP Switch (SMT)

## A6RS

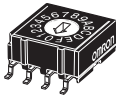
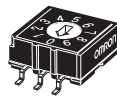
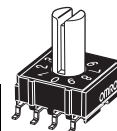
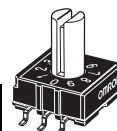
### Surface-mounting Rotary DIP Switches

- Improved solder heat resistance (reflow peak solder temperature: 260 °C).
- Flat/Extended-actuator models available.
- Two different terminal arrangements allow the flexibility.

RoHS Compliant



### List of Models

| Type (actuator color) |                      |                 | Top-actuated, flat (white) |   |                   |   | Top-actuated, extended actuator (white) |   |                   |   |
|-----------------------|----------------------|-----------------|----------------------------|---|-------------------|---|---|---|-------------------|---|
|                       |                      |                 | Tube packaging             |   | Embossed taping   |   | Tube packaging                          |   | Embossed taping   |   |
| Number of positions   | Terminal arrangement | Output code     | Quantity per tube          |  | Quantity per reel |  | Quantity per tube                       |  | Quantity per reel |  |
|                       |                      |                 | 10                         | 4 × 1   | BCD Decimal       | 48  | A6RS-101RF                              | 750   | A6RS-101RF-P      | 48  |
|                       | 3 × 3                |                 | A6RS-102RF                 | A6RS-102RF-P  | A6RS-102RS        |   | A6RS-102RS-P                            |   |                   |   |
| 16                    | 4 × 1                | BCD Hexadecimal | 48                         | A6RS-161RF  | 750               | A6RS-161RF-P  | 48                                      | A6RS-161RS  | 250               | A6RS-161RS-P  |
|                       |                      |                 |                            | 3 × 3   |                   |   |   | A6RS-162RF  |                   | A6RS-162RF-P  |

Note: Order in multiples of the package quantity.

### Ratings/Characteristics

|                               |  |                                      |
|-------------------------------|--|--------------------------------------|
| Ratings                       | 25 mA at 24 VDC, 10 μA (minimum current) at 3.5 VDC                                    |                                      |
| Ambient operating temperature | -25 to +80°C at 60% max. (with no icing or condensation)                               |                                      |
| Ambient operating humidity    | 35% to 95% (at +5 to +35°C)  |                                      |
| Insulation resistance         | 100 MΩ min. (at 250 VDC)   |                                      |
| Contact resistance            | 200 mΩ max. (initial value)  |                                      |
| Dielectric strength           | Between terminals  | 250 VAC for 1 min                    |
| Vibration resistance          | Malfunction  | 10 to 55 Hz, 1.5-mm double amplitude |
| Shock resistance              | Malfunction  | 300 m/s <sup>2</sup> min.            |
| Durability                    | Electrical   | 5,000 steps min.                     |
| Operating torque              | 1.96 × 10 <sup>-2</sup> N·m {2 gf·m} max.  |                                      |
| Weight                        | Top-actuated: Approx. 0.6 g (Add 0.13 g for the extended-actuator type of each model.) |                                      |

### Output Codes

#### 10-position Models

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

#### 16-position Models

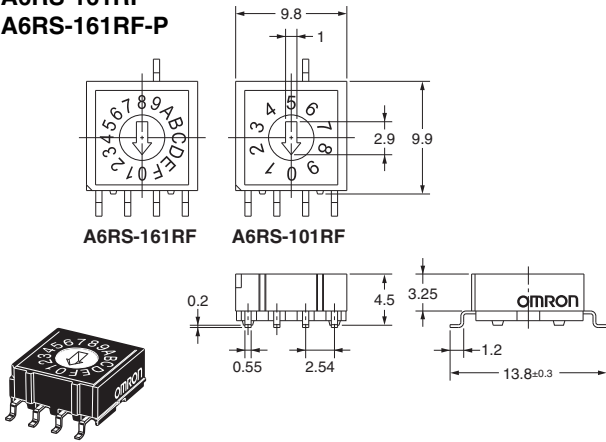
| Position | Code BCD Hexadecimal code |   |   |   |
|----------|---------------------------|---|---|---|
|          | 1                         | 2 | 4 | 8 |
| 0        |                           |   |   |   |
| 1        | ●                         |   |   |   |
| 2        |                       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

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

**Dimensions** (Unit: mm)

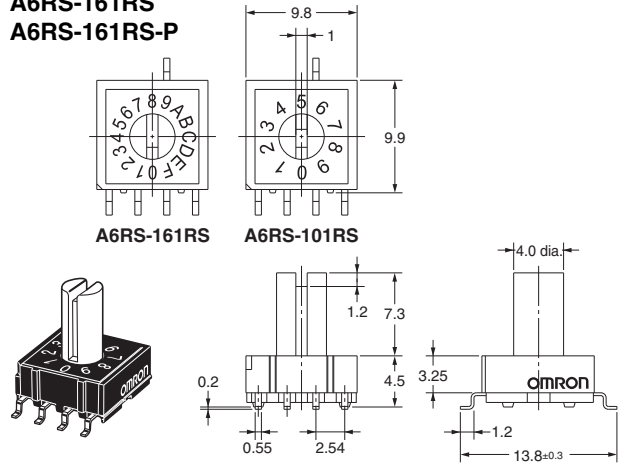
● **Top-actuated Flat Models with 4×1 Terminal Arrangement**

- A6RS-101RF
- A6RS-101RF-P
- A6RS-161RF
- A6RS-161RF-P



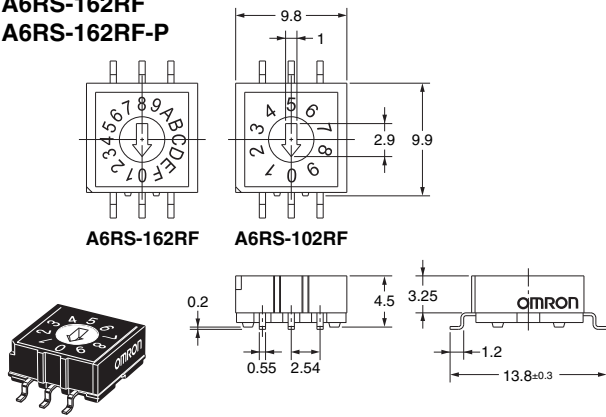
● **Top-actuated Extended-actuator Models with 4×1 Terminal Arrangement**

- A6RS-101RS
- A6RS-101RS-P
- A6RS-161RS
- A6RS-161RS-P



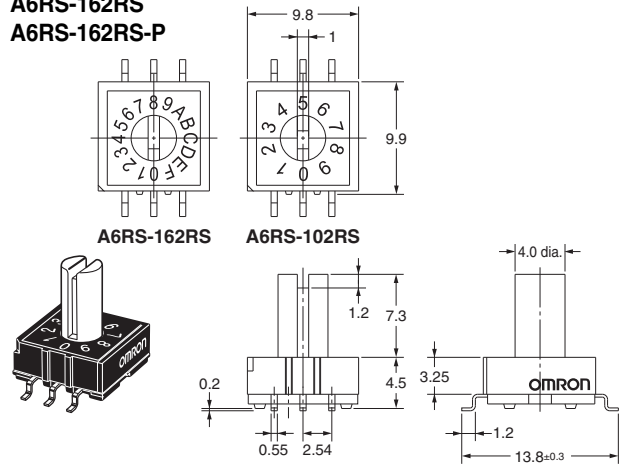
● **Top-actuated Flat Models with 3×3 Terminal Arrangement**

- A6RS-102RF
- A6RS-102RF-P
- A6RS-162RF
- A6RS-162RF-P



● **Top-actuated Extended-actuator Models with 3×3 Terminal Arrangement**

- A6RS-102RS
- A6RS-102RS-P
- A6RS-162RS
- A6RS-162RS-P

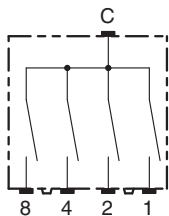


Note: Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

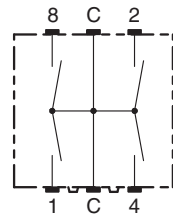
**Internal Connections**

Contact Form (Top View)

4×1 Terminal Arrangement

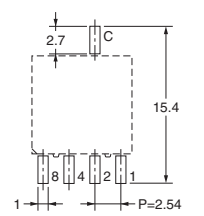


3×3 Terminal Arrangement



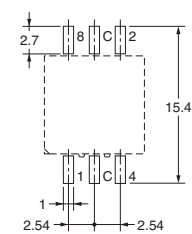
**PCB Dimensions (Top View)**

4×1 Terminal Arrangement



P: Pole numbers

3×3 Terminal Arrangement



**Precautions**

Be sure to read the Safety precautions common to all DIP Switches for correct use.

- Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

**Note: Do not use this document to operate the Unit.**

**OMRON Corporation**

**ELECTRONIC AND MECHANICAL COMPONENTS COMPANY**

**Contact: [www.omron.com/ecb](http://www.omron.com/ecb)**

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