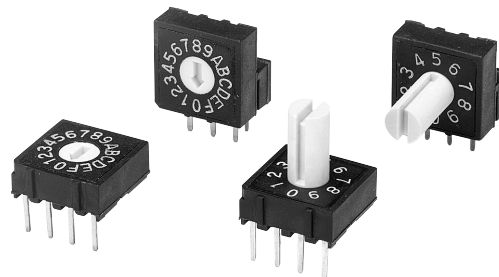


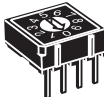
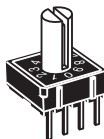
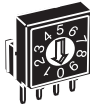
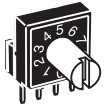
# Rotary DIP Switch A6R/A6RV

## 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	●	●	●	●

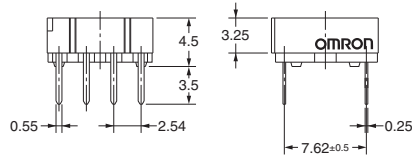
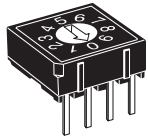
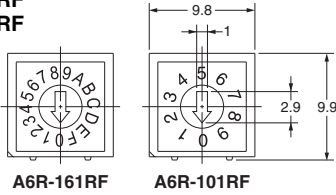
Note: "●" indicates that the internal switch is ON.

# 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.

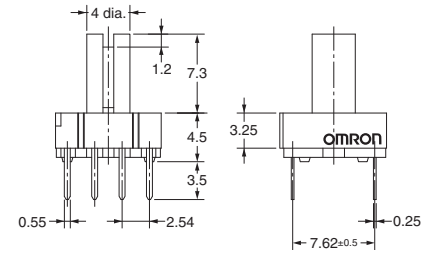
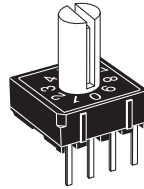
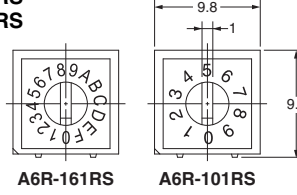
## Top-actuated Flat Models with 4x1 Terminal Arrangement

A6R-101RF  
A6R-161RF



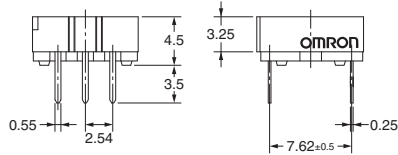
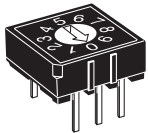
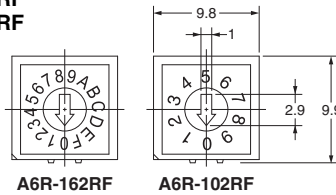
## Top-actuated Extended-shaft Models with 4x1 Terminal Arrangement

A6R-101RS  
A6R-161RS



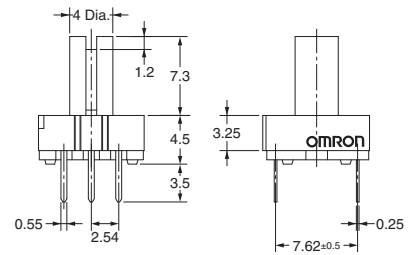
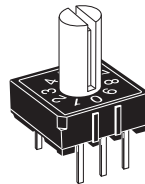
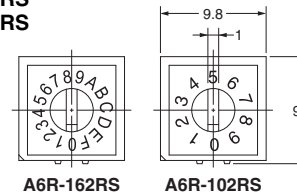
## Top-actuated Flat Models with 3x3 Terminal Arrangement

A6R-102RF  
A6R-162RF



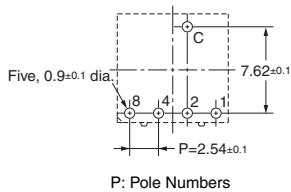
## Top-actuated Extended-shaft Models with 3x3 Terminal Arrangement

A6R-102RS  
A6R-162RS

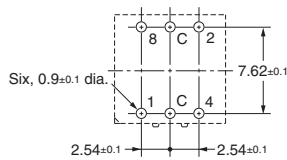


### Mounting holes Top-actuated models

#### 4x1 Terminal

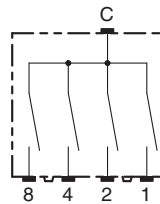


#### 3x3 Terminal

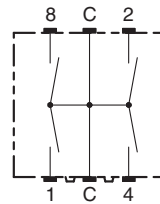


### Internal connections Top-actuated models

#### 4x1 Terminal

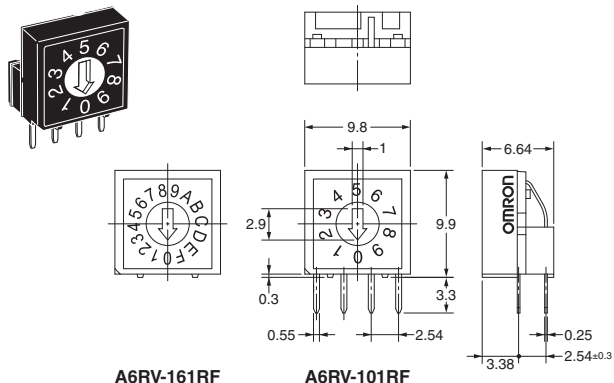


#### 3x3 Terminal



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

A6RV-101RF  
A6RV-161RF

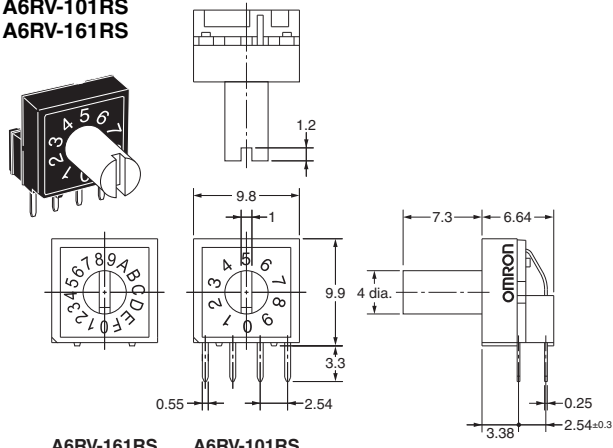


A6RV-161RF

A6RV-101RF

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

A6RV-101RS  
A6RV-161RS

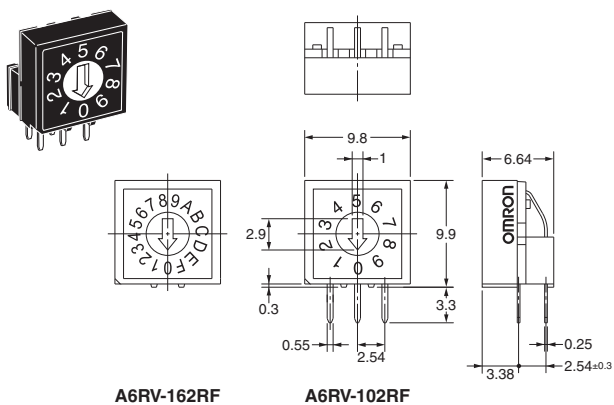


A6RV-161RS

A6RV-101RS

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

A6RV-102RF  
A6RV-162RF

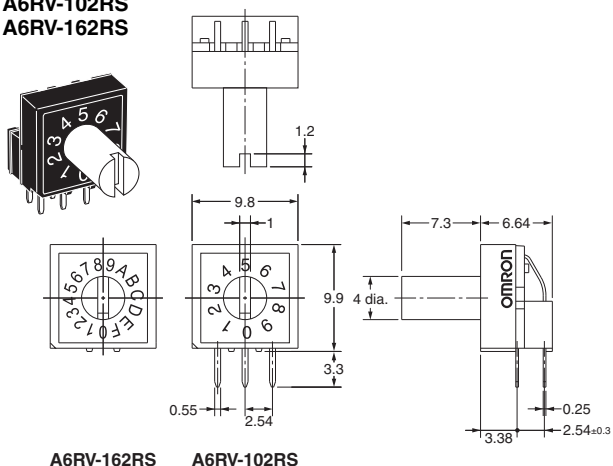


A6RV-162RF

A6RV-102RF

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

A6RV-102RS  
A6RV-162RS

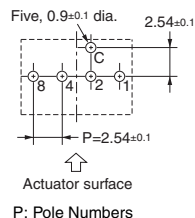


A6RV-162RS

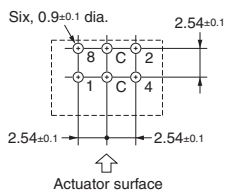
A6RV-102RS

**Mounting holes Side-actuated models**

**4x1 Terminal**

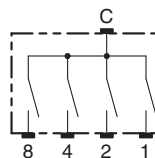


**3x3 Terminal**

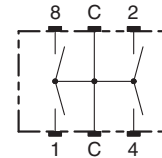


**Internal connections Side-actuated models**

**4x1 Terminal**



**3x3 Terminal**





# Omron Electronic Components, LLC

## Terms and Conditions of Sales

### I. GENERAL

- Definitions:** The words used herein are defined as follows.
  - Terms:** These terms and conditions
  - Seller:** Omron Electronic Components LLC and its subsidiaries
  - Buyer:** The buyer of Products, including any end user in section III through VI
  - Products:** Products and/or services of Seller
  - Including:** Including without limitation
- Offer; Acceptance:** These Terms are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of Products by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
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- Governmental Approvals:** Buyer shall be responsible for all costs involved in obtaining any government approvals regarding the importation or sale of the Products.
- Taxes:** All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Seller or required to be collected directly or indirectly by Seller for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Seller.
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- Force Majeure:** Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
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  - All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;
  - Delivery and shipping dates are estimates only; and
  - Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
- Claims:** Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

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- Suitability:** IT IS THE BUYER'S SOLE RESPONSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS, (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM, (F) MATERIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in all cases. Buyer must know and observe all prohibitions of use applicable to the Product/s.
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- Use in consumer Products or any use in significant quantities.
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  - Systems, machines, and equipment that could present a risk to life or property.
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- Warranty:** Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
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- Performance Data:** Performance data is provided as a guide in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements.
- Change In Specifications:** Product specifications and descriptions may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
- Errors And Omissions:** The information on Seller's website or in other documentation has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.
- Export Controls:** Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to non-citizens of regulated technology or information.

### VI. MISCELLANEOUS

- Waiver:** No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller.
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  - (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
  - (iii) Use in consumer products or any use in significant quantities.
  - (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

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2. **Programmable Products.** Seller shall not be responsible for the user's programming of a programmable product, or any consequence thereof.
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6. **RoHS Compliance.** Where indicated, our products currently comply, to the best of our knowledge as of the date of this publication, with the requirements of the European Union's Directive on the Restriction of certain Hazardous Substances ("RoHS"), although the requirements of RoHS do not take effect until July 2006. These requirements may be subject to change. Please consult our website for current information.

Complete "Terms and Conditions of Sale" for product purchase and use are on Omron's website at <http://www.components.omron.com> – under the "About Us" tab, in the Legal Matters section.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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

# OMRON®

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