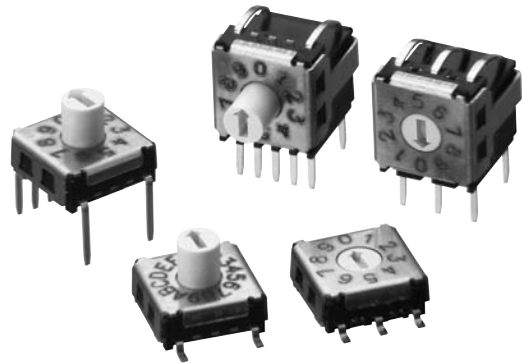


Rotary DIP Switch

A6K/A6KS

Miniature (7.2 × 7.2mm size) Rotary DIP Switch

- Mounting space reduced by 50%.
(compared with conventional models)
- SMT and through hole type Available.
Side-actuated type available.
- Gold-plated contacts ensure high reliability.



RoHS Compliant

Application

Mode setting of MPU
Modem
Controller of servo motor
Coin changer
Program controller

■List of Models

● Through hole (3 × 3 Terminal)

| Type (actuator color) | | | Top-actuated, flat (White) | Top-actuated, extended actuator (White) | Side-actuated, flat (White) | Side-actuated, extended actuator (White) |
|----------------------------|--------------------|-----------------|----------------------------|---|-----------------------------|--|
| No. of switching positions | Quantity per tube | Output code | | | | |
| | | 10 | BCD Decimal | A6K-102RF | A6K-102RS | A6KV-102RF |
| 16 | Top :63 Side:60 | BCD Hexadecimal | A6K-162RF | A6K-162RS | A6KV-162RF | A6KV-162RS |

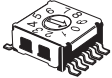
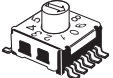


● Through hole (5 × 2 Terminal)

| Type (actuator color) | | | Top-actuated, flat (White) | Top-actuated, extended actuator (White) | Side-actuated, flat (White) | Side-actuated, extended actuator (White) |
|----------------------------|--------------------|-----------------|----------------------------|---|-----------------------------|--|
| No. of switching positions | Quantity per tube | Output code | | | | |
| | | 10 | BCD Decimal | A6K-104RF | A6K-104RS | A6KV-104RF |
| 16 | Top :63 Side:60 | BCD Hexadecimal | A6K-164RF | A6K-164RS | A6KV-164RF | A6KV-164RS |

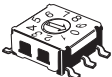
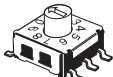
● SMT (3 × 3 Terminal, Tube)

| Type (actuator color) | | | Top-actuated, flat (White) | Top-actuated, extended actuator (White) |
|----------------------------|-------------------|-----------------|----------------------------|---|
| No. of switching positions | Quantity per tube | Output code | | |
| | | 10 | BCD Decimal | A6KS-102RF |
| 16 | 63 | BCD Hexadecimal | A6KS-162RF | A6KS-162RS |

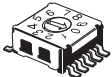
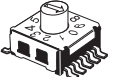

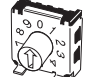
● SMT (5 × 2 Terminal, Tube)

| Type (actuator color) | | | Top-actuated, flat (White) | Top-actuated, extended actuator (White) | Side-actuated, flat (White) | Side-actuated, extended actuator (White) | |
|----------------------------|-------------------|-------------|---|---|---|---|-------------|
| No. of switching positions | Quantity per tube | Output code |  |  |  |  | |
| | | | 10 | 63 | BCD Decimal | A6KS-104RF | A6KS-104RS |
| 16 | | | BCD Hexadecimal | A6KS-164RF | A6KS-164RS | A6KSV-164RF | A6KSV-164RS |

● SMT (3 × 3 Terminal, Embossed taping Packages)

| Type (actuator color) | | Top-actuated, flat (White) | | Top-actuated, extended actuator (White) | |
|----------------------------|-----------------|----------------------------|---|---|---|
| No. of switching positions | Output code | Minimum packing unit |  | Minimum packing unit |  |
| | | 10 | BCD Decimal | 1450 | A6KS-102RF-P |
| 16 | BCD Hexadecimal | | A6KS-162RF-P | | A6KS-162RS-P |

● SMT (5 × 2 Terminal, Embossed taping Packages)

| Type (actuator color) | | Top-actuated, flat (White) | | Top-actuated, extended actuator (White) | | Side-actuated, flat (White) | | Side-actuated, extended actuator (White) | |
|----------------------------|-----------------|----------------------------|---|---|---|-----------------------------|---|--|---|
| No. of switching positions | Output code | Minimum packing unit |  | Minimum packing unit |  | Minimum packing unit |  | Minimum packing unit |  |
| | | 10 | BCD Decimal | 1450 | A6KS-104RF-P | 850 | A6KS-104RS-P | 750 | A6KSV-104RF-P |
| 16 | BCD Hexadecimal | | A6KS-164RF-P | | A6KS-164RS-P | | A6KSV-164RF-P | | A6KSV-164RS-P |

Note: Order in multiples of the package quantity.

■ Ratings/Characteristics

| | | |
|------------------------------------|--|---|
| Rating (resistive load) | 25 mA at 24 VDC 10 μA (minimum current) at 3.5 VDC | |
| Ambient operating temperature | -30 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 with insulation tester) | |
| Contact resistance (initial value) | 200 mΩ max. | |
| 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 ² min. |
| Durability | Electrical | 20,000 steps min. |
| Washing | Not possible | |
| Degree of protection | IEC IP60 | |
| Operating torque | 1.96 × 10 ⁻² N·m {2 gf·m} max. | |
| Weight (See note.) | Through hole terminal | Top-actuated, flat: Approx. 0.4 g, Side-actuated, flat: Approx. 0.7 g |
| | SMT terminal | Top-actuated, flat: Approx. 0.4 g, Side-actuated, flat: Approx. 0.4 g |

Note: Add 0.03 g for the extended-actuator type of each model.

Output Codes

10-position Models

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

16-position Models

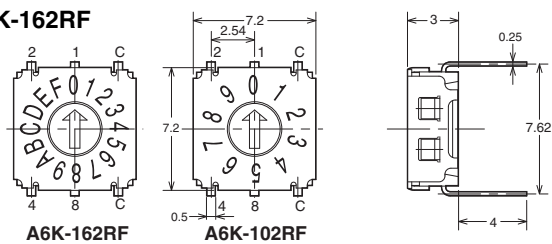
| Code Position | BCD Hexadecimal code | | | |
|------------------|----------------------|---|---|---|
| | 1 | 2 | 4 | 8 |
| 0 | | | | |
| 1 | ● | | | |
| 2 | | ● | | |
| 3 | ● | ● | | |
| 4 | | | ● | |
| 5 | ● | | ● | |
| 6 | | ● | ● | |
| 7 | ● | ● | ● | |
| 8 | | | | ● |
| 9 | ● | | | ● |
| A | |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

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

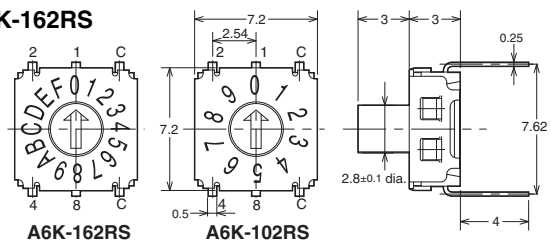
Dimensions (Unit: mm)

Through hole

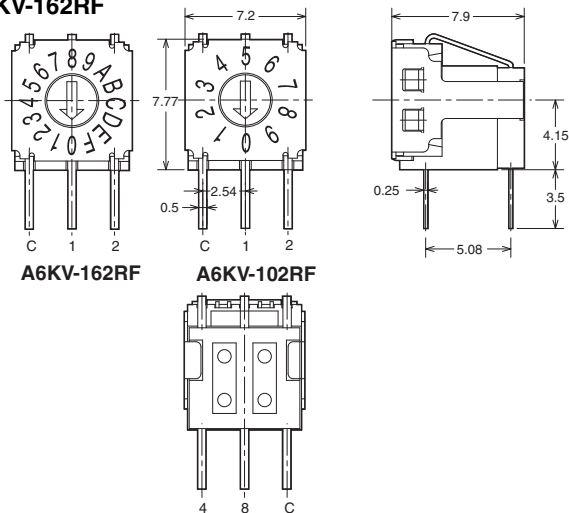
● Top-actuated Flat Models with 3 × 3 Terminal Arrangement
A6K-102RF
A6K-162RF



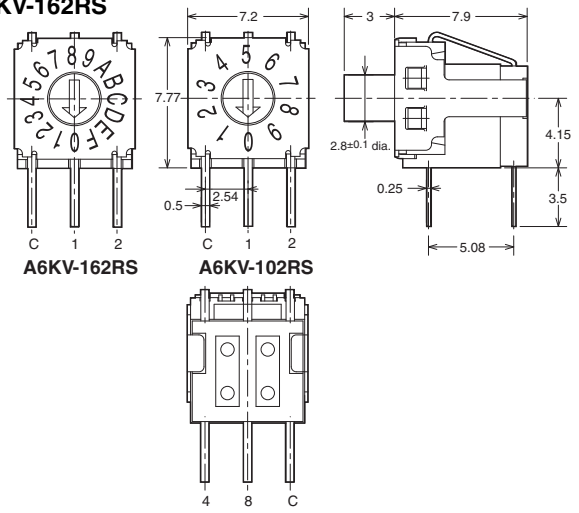
● Top-actuated Extended actuator Models with 3 × 3 Terminal Arrangement
A6K-102RS
A6K-162RS



● Side-actuated Flat Models with 3 × 3 Terminal Arrangement
A6KV-102RF
A6KV-162RF



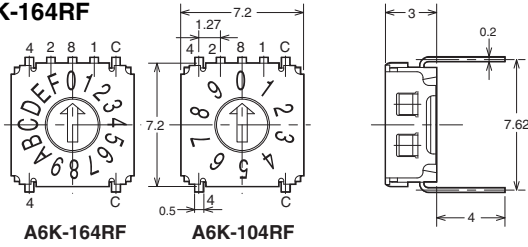
● Side-actuated Extended-actuator Models with 3 × 3 Terminal Arrangement
A6KV-102RS
A6KV-162RS



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

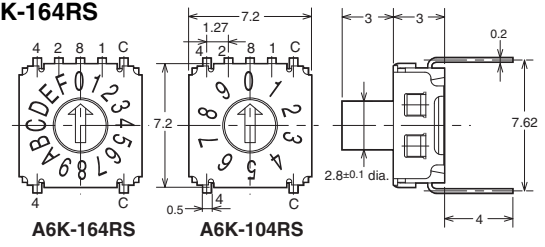
● Top-actuated Flat Models with 5 × 2 Terminal Arrangement

A6K-104RF
A6K-164RF



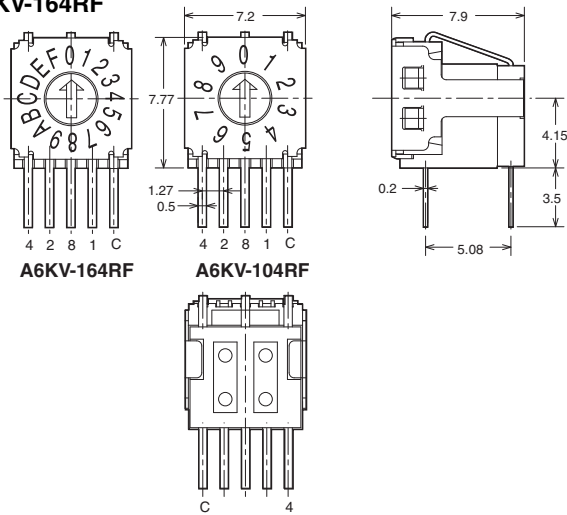
● Top-actuated Extended actuator Models with 5 × 2 Terminal Arrangement

A6K-104RS
A6K-164RS



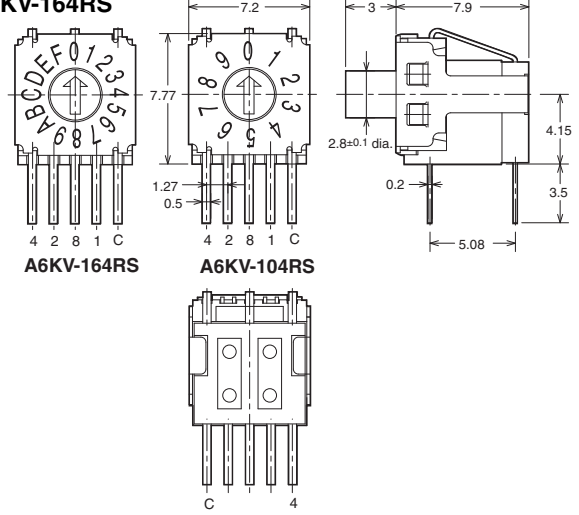
● Side-actuated Flat Models with 5 × 2 Terminal Arrangement

A6KV-104RF
A6KV-164RF



● Side-actuated Extended-actuator Models with 5 × 2 Terminal Arrangement

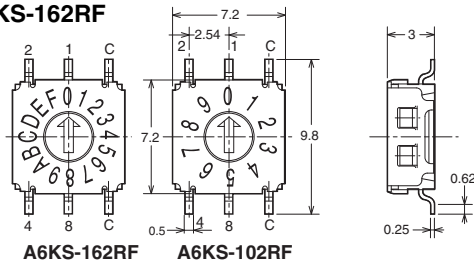
A6KV-104RS
A6KV-164RS



SMT

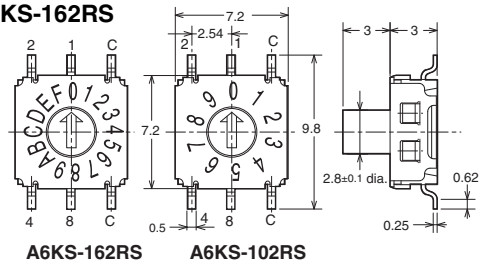
● Top-actuated Flat Models with 3 × 3 Terminal Arrangement

A6KS-102RF
A6KS-162RF



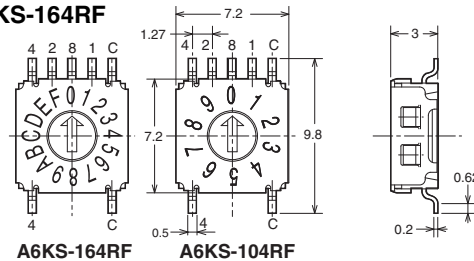
● Top-actuated Extended actuator Models with 3 × 3 Terminal Arrangement

A6KS-102RS
A6KS-162RS



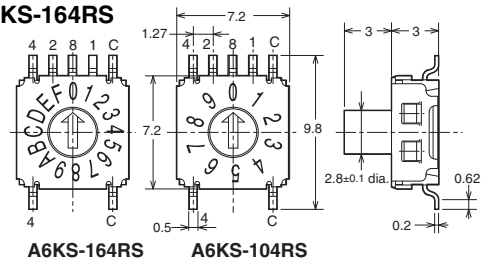
● Top-actuated Flat Models With 5 × 2 Terminal Arrangement

A6KS-104RF
A6KS-164RF



● Top-actuated Extended actuator Models with 5 × 2 Terminal Arrangement

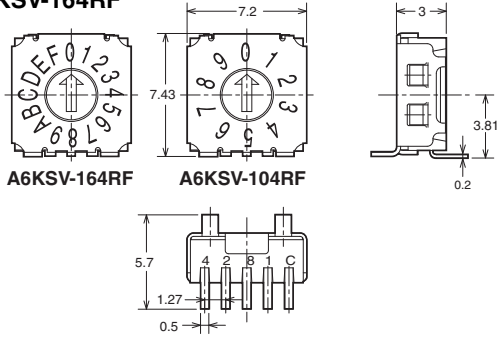
A6KS-104RS
A6KS-164RS



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

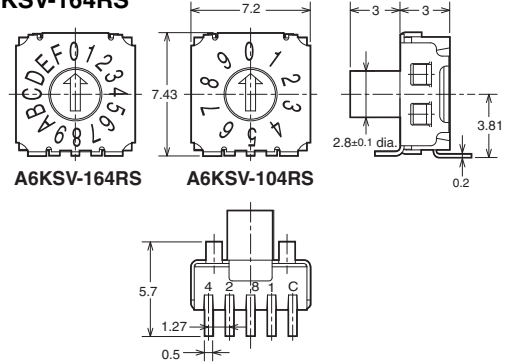
● Side-actuated Flat Models with 5 × 2 Terminal Arrangement

A6KSV-104RF
A6KSV-164RF



● Side-actuated Extended-actuator Models with 5 × 2 Terminal Arrangement

A6KSV-104RS
A6KSV-164RS

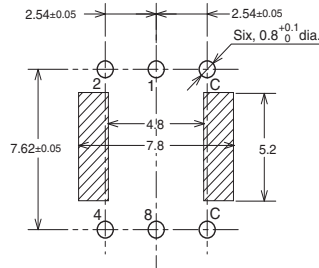


Note: Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

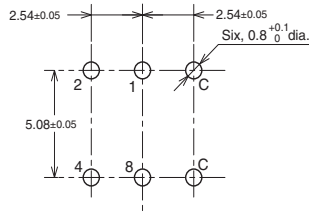
■ PCB Dimensions (Top View) (Unit: mm)

● 3 × 3 Terminal Arrangement

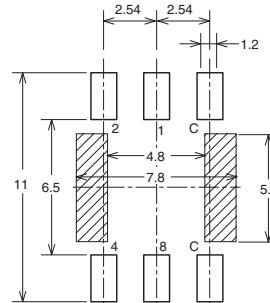
Through hole (Top-actuated Models)



Through hole (Side-actuated Models)

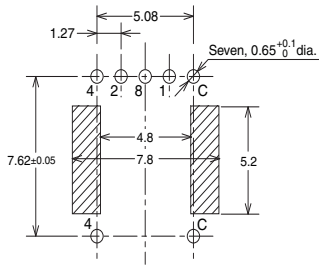


SMT (Top-actuated Models)

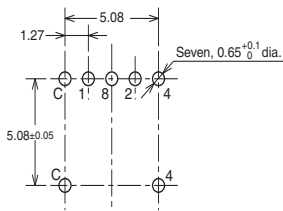


● 5 × 2 Terminal Arrangement

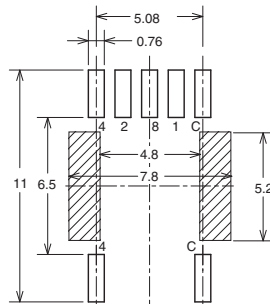
Through hole (Top-actuated Models)



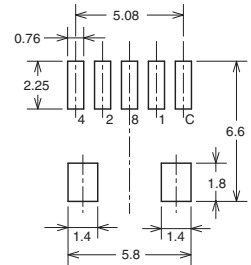
Through hole (Side-actuated Models)



SMT (Top-actuated Models)



SMT (Side-actuated Models)



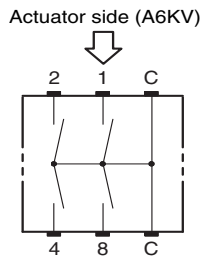
:Through hole and Pattern prohibited area

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

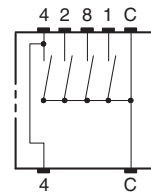
Internal Connections

Contact Form

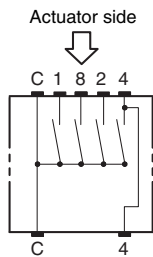
- **Top-actuated/Side-actuated Models with 3 × 3 Terminal Arrangement (Through hole/SMT)**



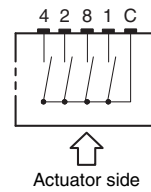
- **Top-actuated Models with 5 × 2 Terminal Arrangement (Through hole/SMT)**



- **Side-actuated Models with 5 × 2 Terminal Arrangement (Through hole)**



- **Side-actuated Models with 5 × 2 Terminal Arrangement (SMT)**



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.