OMRON

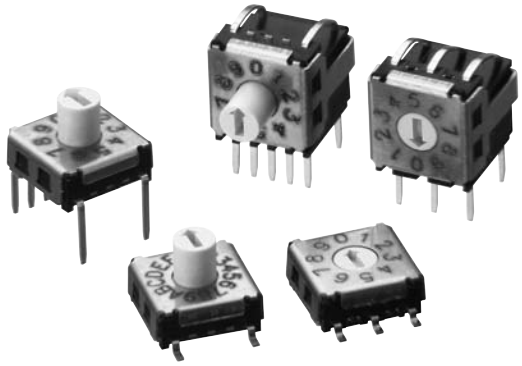
Rotary DIP Switch

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

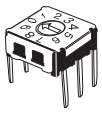
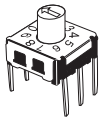
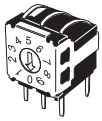
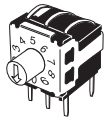


Application

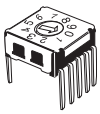
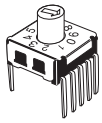
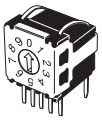
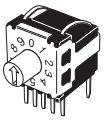
Mode setting of MPU
Modem
Controller of servo motor
Coin changer
Program controller

■List of Models

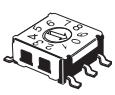
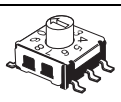
● **Through hole (3 × 3 Terminal)**

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	Top :63 Side:60	BCD Decimal	A6K-102RF	A6K-102RS	A6KV-102RF	A6KV-102RS
16		BCD Hexadecimal	A6K-162RF	A6K-162RS	A6KV-162RF	A6KV-162RS

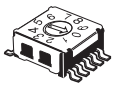
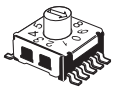
● **Through hole (5 × 2 Terminal)**

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	Top :63 Side:60	BCD Decimal	A6K-104RF	A6K-104RS	A6KV-104RF	A6KV-104RS
16		BCD Hexadecimal	A6K-164RF	A6K-164RS	A6KV-164RF	A6KV-164RS

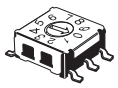
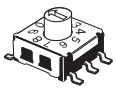
● **SMT (3 × 3 Terminal, Tube)**

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

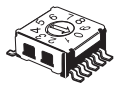
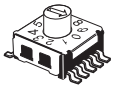
● **SMT (5 × 2 Terminal, Tube)**

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	A6KSV-104RF	A6KSV-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	850	A6KS-102RS-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	750	A6KSV-104RS-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.

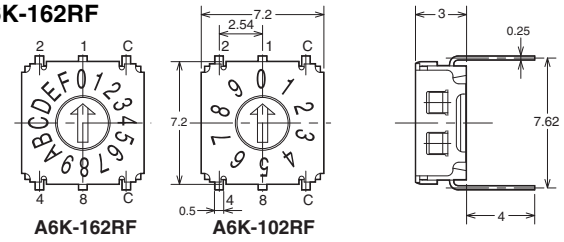
■Dimensions (Unit: mm)

Through hole

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

A6K-102RF

A6K-162RF

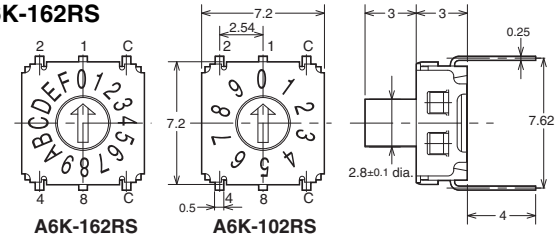


A6K-162RF A6K-102RF

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

A6K-102RS

A6K-162RS

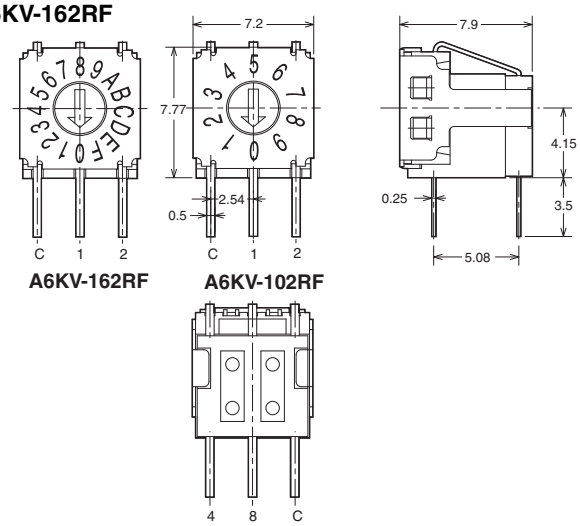


A6K-162RS A6K-102RS

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

A6KV-102RF

A6KV-162RF

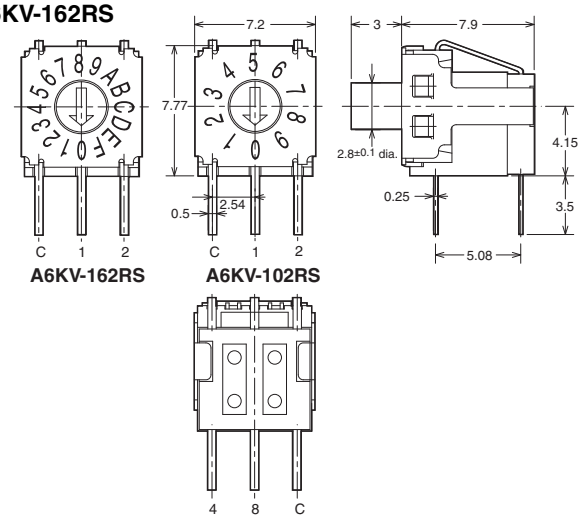


A6KV-162RF A6KV-102RF

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

A6KV-102RS

A6KV-162RS



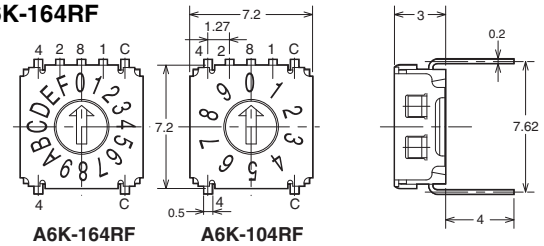
A6KV-162RS A6KV-102RS

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

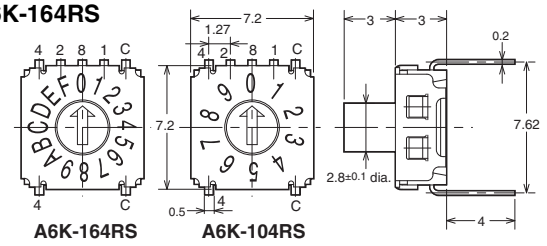


A6K-164RF A6K-104RF

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

A6K-104RS

A6K-164RS

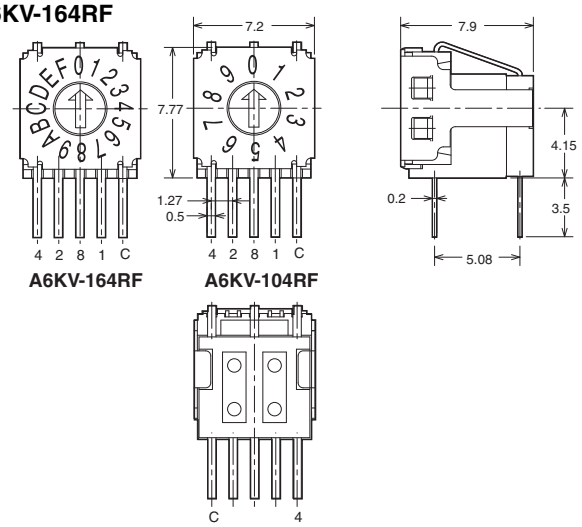


A6K-164RS A6K-104RS

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

A6KV-104RF

A6KV-164RF

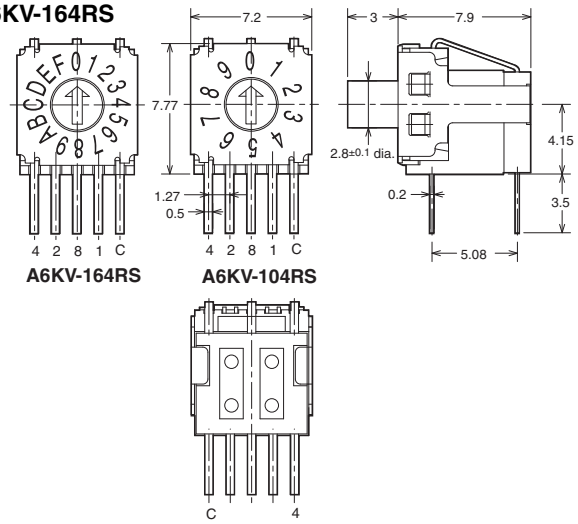


A6KV-164RF A6KV-104RF

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

A6KV-104RS

A6KV-164RS



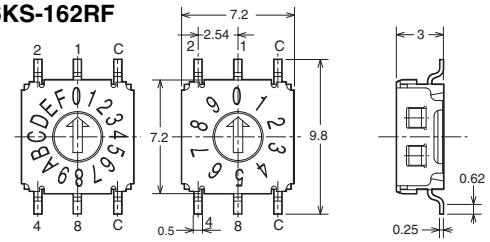
A6KV-164RS A6KV-104RS

SMT

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

A6KS-102RF

A6KS-162RF

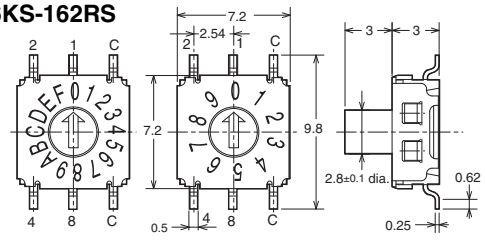


A6KS-162RF A6KS-102RF

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

A6KS-102RS

A6KS-162RS

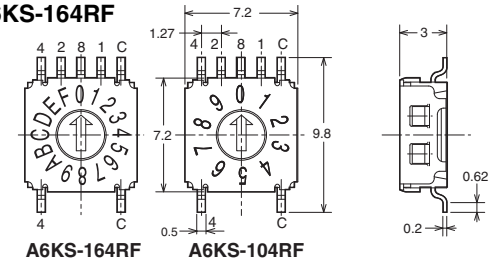


A6KS-162RS A6KS-102RS

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

A6KS-104RF

A6KS-164RF

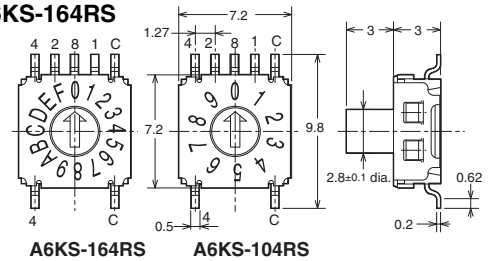


A6KS-164RF A6KS-104RF

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

A6KS-104RS

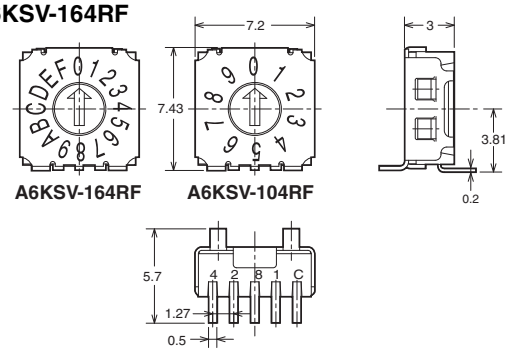
A6KS-164RS



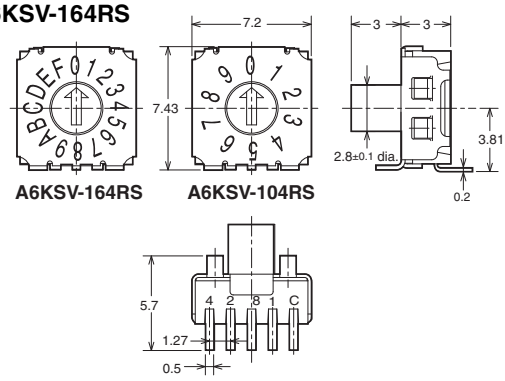
A6KS-164RS A6KS-104RS

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

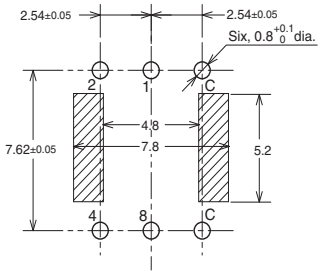


Note: Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

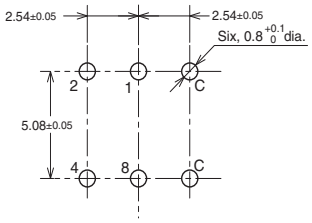
■PCB Dimensions (Top View) (Unit: mm)

● **3 × 3 Terminal Arrangement**

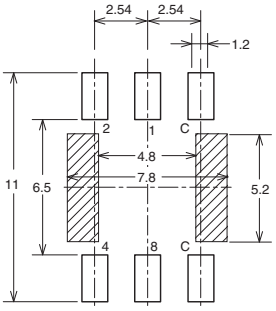
Through hole (Top-actuated Models)



Through hole (Side-actuated Models)

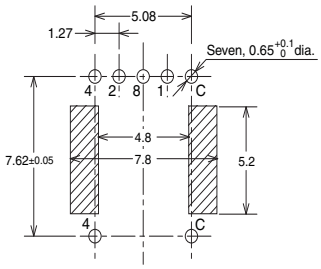


SMT (Top-actuated Models)

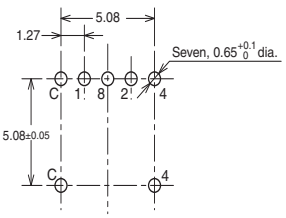


● **5 × 2 Terminal Arrangement**

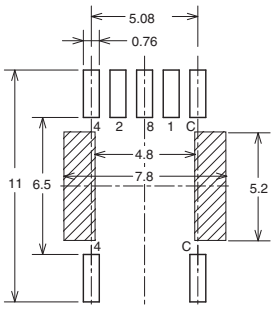
Through hole (Top-actuated Models)



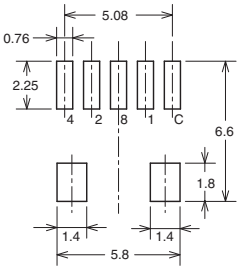
Through hole (Side-actuated Models)



SMT (Top-actuated Models)



SMT (Side-actuated Models)



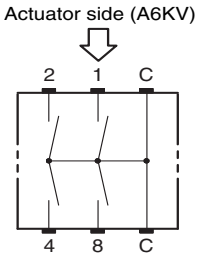
:Through hole and Pattern prohibited area

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

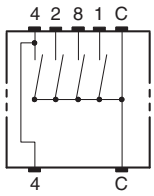
■Internal Connections

Contact Form

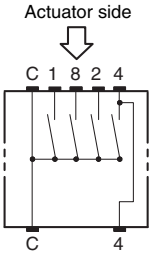
● **Top-actuated/Side-actuated Models with 3 × 3 Terminal Arrangement (Through hole/SMT)**



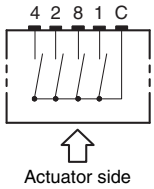
● **Top-actuated Models with 5 × 2 Terminal Arrangement (Through hole/SMT)**



● **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.

OMRON Corporation
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1014(0207)(O)