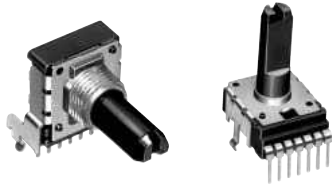


Insulated Shaft Potentiometer 14mm Size Insulated Shaft Snap-in Type

RK14K Series



A 14mm width potentiometer for audio, visual, electronic musical instruments and various applications.



Features

- Closed structure improves dust and flux resistance.
- Available with bushing, tap and detent.

Applications

- For volume, tone and balance adjustments in audio equipment
- For controlling mixing consoles and electronic musical instruments

Typical Specifications

Items	Specifications
Total resistance tolerance	±20%
Total rotational angle	300±5°
Rotational torque	3 to 20mN·m
Operating life	15,000cycles
Operating temperature range	-10°C to +70°C

Recommended Products List

Number of resistor elements	Mounting direction	Bushing	Shaft type	Length of the shaft LM ₁ (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Application	Minimum packing unit (pcs.)	Products No.	Drawing No.
Dual-unit (Not applicable to DC)	Vertical type	Without	Flat	15	Without	10	1B	For tone	100	RK14K1230A2X	2
				25						RK14K1230A0X	
				20			15A	For vol.		RK14K12C0A1S	
				25						RK14K12C0A0T	
		With		20	With	100	1B	For tone		RK14K1240062	4
				25						RK14K1240036	
				27.5		100	15A	For vol.		RK14K1240D04	
				32.5						RK14K1240A4S	
	Horizontal type	Without	Without	27.5	Without	50	15A	For vol.	RK14K12D0A1X	1	
				15					10		RK14K12D0A18
				25			50	1B	For tone		RK14K12A0A3C
				With			22.5	With			10
		20	1B		RK14K1220A0F						
		Without	50		15A	For vol.		RK14K1220024			
			10					RK14K1220A25			
		50	RK14K12B0A0E	3							
RK14K12B0A0R											

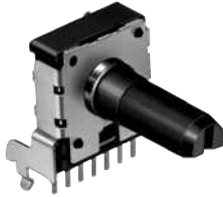
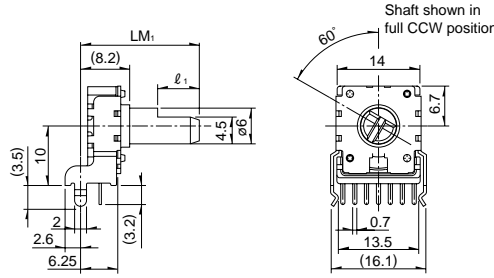
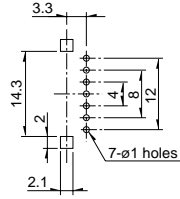

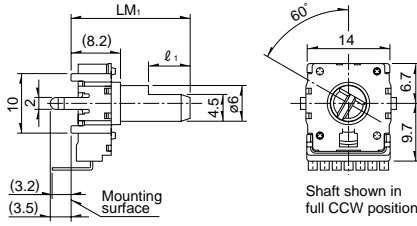
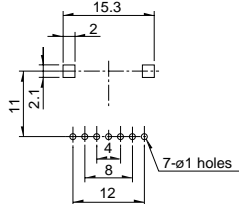
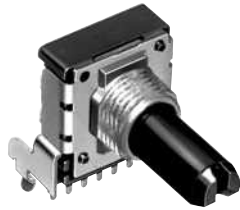
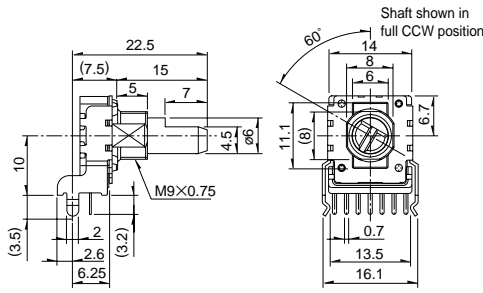
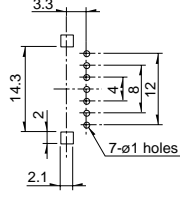

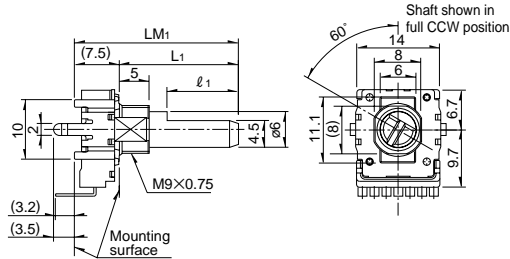
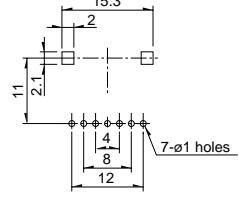
Notes

1. Products other than those listed in above recommended product are also available. Please contact us for details.
2. Nut and washer are not attached. Please specify if required.

Refer to P.72 for product varieties.
Refer to P.78 for product specifications.

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)															
1	<p>Horizontal type without bushing RK14K121 (For tone control) RK14K12A (For vol. control)</p> 	<table border="1"> <tr> <td>LM₁</td> <td>15</td> <td>25</td> </tr> <tr> <td>ℓ₁</td> <td>4.5</td> <td>12</td> </tr> </table> 	LM ₁	15	25	ℓ ₁	4.5	12										
LM ₁	15	25																
ℓ ₁	4.5	12																
2	<p>Vertical type without bushing RK14K123 (For tone control) RK14K12C (For vol. control)</p> 	<table border="1"> <tr> <td>LM₁</td> <td>15</td> <td>20</td> <td>25</td> </tr> <tr> <td>ℓ₁</td> <td>4.5</td> <td>7</td> <td>12</td> </tr> </table> 	LM ₁	15	20	25	ℓ ₁	4.5	7	12								
LM ₁	15	20	25															
ℓ ₁	4.5	7	12															
3	<p>Horizontal type with bushing RK14K122 (For tone control) RK14K12B (For vol. control)</p> 																	
4	<p>Vertical type with bushing RK14K124 (For tone control) RK14K12D (For vol. control)</p> 	<table border="1"> <tr> <td>LM₁</td> <td>20</td> <td>25</td> <td>27.5</td> <td>32.5</td> </tr> <tr> <td>L₁</td> <td>12.5</td> <td>17.5</td> <td>20</td> <td>25</td> </tr> <tr> <td>ℓ₁</td> <td>7</td> <td>12</td> <td>12</td> <td>12</td> </tr> </table> 	LM ₁	20	25	27.5	32.5	L ₁	12.5	17.5	20	25	ℓ ₁	7	12	12	12	
LM ₁	20	25	27.5	32.5														
L ₁	12.5	17.5	20	25														
ℓ ₁	7	12	12	12														

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Sensors

Metal Shaft

Insulated Shaft

Hollow Type

Knob Operating

Product Varieties

In addition to the recommended products, the following specifications can also be accommodated.

Total Resistance Variety

Total resistance (kΩ)	5	10	20	50	100
-----------------------	---	----	----	----	-----

Resistance Taper

Resistance taper	15A	1B	3B	15C
------------------	-----	----	----	-----

Tapped Types are Also Available

RK14K12 (for audio volume control) is also available with tap.

Shaft Variety

Unit:mm

Style	Without bushing				With bushing						
	Horizontal type		Vertical type		Horizontal type		Vertical type				
Detail dimensions	LM ₁	15	20	25	30	20	22.5	25	27.5	30	32.5
	L ₁	—	—	—	—	12.5	15	17.5	20	22.5	25
	ℓ ₁	4.5	7	12	12	7	7	12	12	12	12
	LB	—	—	—	—	5	5	5	5	5	5
Knob dimensions <p>LM₁ = 15 only application</p>											

Terminal Layout/Circuit Diagram (Viewed from Mounting Side)

Without tap for volume	With tap for volume	For tone and for volume (15C)

Note

marked are specifications recommended by ALPS.

Refer to P.73, 211 for resistance taper.

Orders Other Than Recommended Products

When ordering product varieties that are not listed in the Recommended Product list, please specify by referring to the below example.

Sample Part Number



Model type

Code	Model type
1	Horizontal type without bushing for tone
2	Horizontal type with bushing for tone
3	Vertical type without bushing for tone
4	Vertical type with bushing for tone
A	Horizontal type without bushing for vol.
B	Horizontal type with bushing for vol.
C	Vertical type without bushing for vol.
D	Vertical type with bushing for vol.

Shaft type

Code	Shaft type
F	Flat

* Only available in flat format.

Length of the shaft (LM₁) (mm)

Code	Length of the shaft	Code	Length of the shaft
15	15	25	25
20	20	30	30
22	22.5	32	32.5
27	27.5		

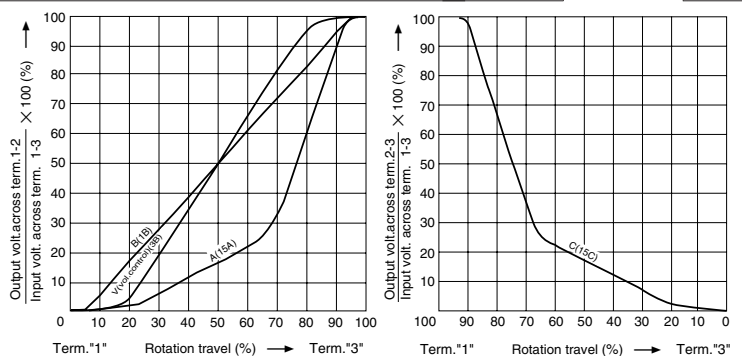
Detent

Code	Center detent
C0	Without
C1	With

Resistance taper

Code	Resistance taper	Code	Resistance taper
A	15A	C	15C
B	1B	V	3B

B: For tone & general (Model type : 1, 2, 3, 4)
V: For vol. (Model type : A, B, C, D)



Total resistance

Code	Total resistance (kΩ)	Code	Total resistance (kΩ)
502	5	503	50
103	10	104	100
203	20		

Note

marked are specifications recommended by ALPS.

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Sensors

Metal Shaft

Insulated Shaft

Hollow Type

Knob Operating

Product Specifications

Items	Type	9mm Size Insulated Shaft Snap-in		11mm Size Insulated Shaft Snap-in	14mm Size Insulated Shaft Snap-in	12mm Size Insulated Shaft Snap-in	9mm Size Insulated shaft Long-life	
	Model	RK09K11□ RK09D11□	RK09K12□	RK11K11□	RK14K12□	RK12L12□	RK09Y11L	
	Items	Single-unit	Dual-unit	Single-unit	Dual-unit	Dual-unit	Single-unit	
Operating temperature range		-10°C to +70°C						
Electrical performance	Total resistance tolerance	±20%	±30%	±20%		±30%		
	Rated power	0.05W	0.03W	0.05W		0.01W		
	Maximum operating voltage	50V AC 20V DC	50V AC For AC only	50V AC 20V DC	50V AC For AC only		50V AC 5V DC	
	Insulation resistance	100MΩ min. 250V DC		100MΩ min. 500V DC	100MΩ min. 250V DC			
	Voltage proof	250V AC (for 1minute)		500V AC (for 1minute)	300V AC (for 1minute)		250V AC (for 1minute)	
	Gang error	—	-40dB to 0dB 3dB max.	—	Volume control -40dB to 0dB 3dB max. For tone control within 2dB at center		—	
Mechanical performance	Total rotational angle	RK09K : 280±5° RK09D11□ : 300±5°		300±5°				
	Rotational torque	1 to 8mN·m		3 to 20mN·m		2 to 15mN·m	5mN·m max.	
	Strength of the actuator	Stopper strength	0.3N·m		Without bushing 0.5N·m With bushing 0.6N·m	0.6N·m	0.5N·m	—
		Push-pull strength	50N max.		80N max.		30N max.	
	Vibration	10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z and for 2 hours respectively						
	Resistance to soldering heat	Manual soldering	350°C max. 3s max.					
		Dip Soldering	—				260°C max. 5s max.	—
Endurance	Operating life	Single-unit : 5,000cycles Dual-unit : 10,000cycles		15,000cycles			1,000,000 cycles	
Environmental performance	Cold	-30±2°C for 96h					-30±2°C for 240h	
	Dry heat	70±2°C for 96h			70±2°C for 240h			
	Damp heat	40±2°C, 90 to 95% RH for 96h					40°C, 90 to 95% RH for 240h	

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Sensors

Metal Shaft

Insulated Shaft

Hollow Type

Knob Operating