

14mm Size Snap-in Insulated Shaft Potentiometer

RK14K Series

14mm outline dimensions, available in a variety and suitable for audio equipment, video equipment, electronic musical instruments and other in various fields.

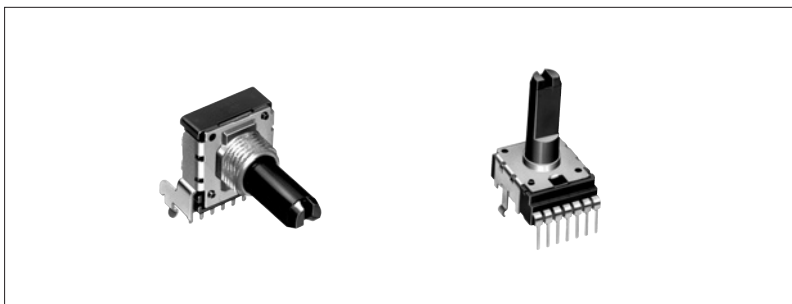
Rotary Potentiometers

Slide Potentiometers

Trimmer Potentiometers

Multi Control Devices

Position Sensors



Metal Shaft

Insulated Shaft

Knob Operating

Features

- Closed structure improved dust-proofing capacity and flux resistance.
- Available with bushing, tap and detent.

Applications

- Sound volume, tone and balance controls for audio devices, including mini component stereos and CD players
- Controls for audio mixes, musical instruments and image devices including DVD players

Typical Specifications

Items	Specifications
Total resistance tolerance	±20%
Total rotational angle	300±10°
Rotational torque	3 to 20mN · m
Operating life	Without detent : 10,000 cycles With detent : 5,000 cycles
Operating temperature range	-10°C to +70°C

Recommended Products List

Number of resistor elements	Mounting direction	Products No.	Bushing	Shaft type	Length of the shaft LM1 (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Application	Minimum packing unit (pcs.)	Drawing No.
Dual-unit (Not applicable to DC)	Vertical type	RK14K1230A2X	Without	Flat	15	Without	10	1B	For tone	100	2
		RK14K1230A0X			25						
		RK14K12C0A1S			20			15A	For vol.		
		RK14K12C0A0T			25						
		RK14K1240062	With		20	100	1B	For tone			
		RK14K1240036			25						
		RK14K1240D04			27.5						
		RK14K1240A4S			32.5	10	15A	For vol.			
		RK14K12D0A1X			27.5						
		RK14K12D0A18			27.5						
	Horizontal type	Without	RK14K12A0A3C	Without	15	Without	10	50	1B	For tone	1
			RK14K1210A1B		25						
		With	RK14K1220A0F	With	22.5	Without	10	50	15A		For vol.
			RK14K1220024								
			RK14K1220A25			With	20	1B			
			RK14K12B0A0E				50				
RK14K12B0A0R	Without	10	15A								
		50									

Notes

1. Additional product specifications in response to those not included in the above recommended products are also available.
2. Nut and washer are not attached. Please specify if required.

For product specifications, see P.67
For other detailed specifications, see P.75

Product Specifications

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

Total Resistance Variety

Total resistance (kΩ)	5	10	20	50	100
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Resistance Taper

Resistance taper	15A	1B	3B	15C
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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					
Shaft variety	LM ₁	15	20	25	30	LM ₁	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	l ₁	7	7	12	12	12	12
	—	—	—	—	—	LB	5	5	5	5	5	5
Detail 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

For other resistance taper, see P.68, 226

Orders other than recommended products

Specify orders for varieties that are not listed in the Recommended Product List, referring to the following 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)

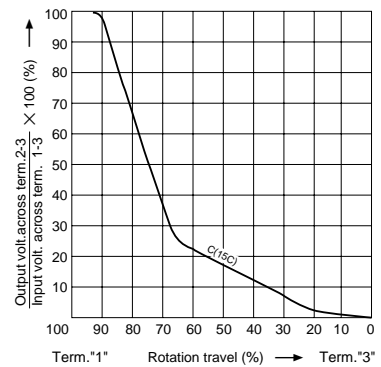
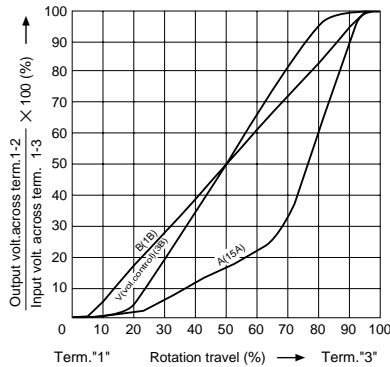
Code	Length of the shaft	Code	Length of the shaft
15	15	25	25
20	20	30	30
22	22.5	32	32.5
27	27.5		

Detent

Code	Center detent
C0	Without
C1	With

Resistance taper

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



Total resistance

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

Note

Shows the specification recommended by us.

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- Multi Control Devices
- Position Sensors

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Dimensions

Unit : mm

No.	Model	Style	PC board mounting hole dimensions (Viewed from mounting side)															
1	Horizontal type without bushing RK14K121 (For tone control) RK14K12A (For vol. control)	<p>Shaft shown in full CCW position</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	<p>7-∅1 holes</p>									
LM ₁	15	25																
ℓ ₁	4.5	12																
2	Vertical type without bushing RK14K123 (For tone control) RK14K12C (For vol. control)	<p>Shaft shown in full CCW position</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	<p>7-∅1 holes</p>							
LM ₁	15	20	25															
ℓ ₁	4.5	7	12															
3	Horizontal type with bushing RK14K122 (For tone control) RK14K12B (For vol. control)	<p>Shaft shown in full CCW position</p>	<p>7-∅1 holes</p>															
4	Vertical type with bushing RK14K124 (For tone control) RK14K12D (For vol. control)	<p>Shaft shown in full CCW position</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	<p>7-∅1 holes</p>
LM ₁	20	25	27.5	32.5														
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Products Specifications

Items		Type	9mm size		11mm size	12mm size 14mm size	
		Model	RK09K11□ RK09D11□	RK09K12□	RK11K11□	RK12L12□ RK14K12□	
			Single-unit	Dual-unit	Single-unit	Dual-unit	
Operating temperature range		-10°C to +60°C			-10°C to +70°C		
Electrical performance	Total resistance tolerance	±20%	±30%	±20%			
	Rated power	0.05W	0.03W	0.05W			
	Maximum operating voltage	50V AC 20V DC	50V AC For AC only	50V AC 20V DC	50V AC For AC only		
	Insulation resistance	100MΩ min. 250V DC		100MΩ min. 500V DC	100MΩ min. 250V DC		
	Voltage proof	1 minute 250V AC		1 minute 500V AC	1 minute 300V AC		
	Gang error	—	-40dB to 0dB within 3dB	—	Volume control -40dB to 0dB max. 3dB For tone control within 2dB at center		
Mechanical performance	Total rotational angle		280±5° RK09D11□ : 300±5°		300±5°		
	Rotational torque		1 to 8mN · m		3 to 20mN · m		
	Strength of the operating section	Stopper strength	0.3N · m		Without bushing 0.5N · m With bushing 0.6N · m	14mm 0.6N · m 12mm 0.5N · m	
		Push-pull strength	50N max.		80N 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				
	Solderability		230±5°C, 3±0.5s				
	Solder heat resistance	Manual soldering	Lower than 350°C for less than 3 seconds				
	Endurance	Operating life	5,000 cycles		Without detent : 10,000 cycles With detent : 5,000 cycles		
Environmental test	Cold	-10°C for 96h					
	Long-term heat resistance	+70°C for 96h					
	Moisture resistance	+40±2°C, 90 to 95%RH for 96h					

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