

11mm Size Snap-in Insulated Shaft Potentiometer

RK11K Series

11mm 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

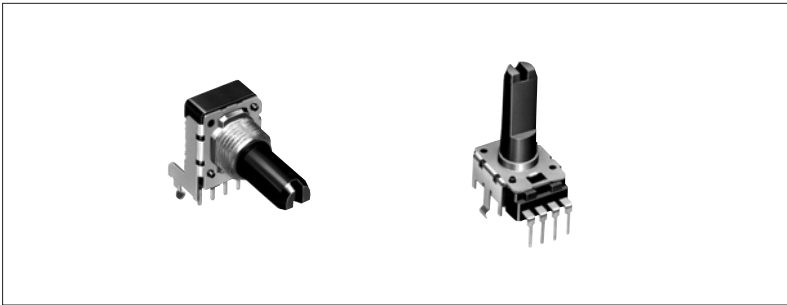
Multi Control Devices

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

- Controls for audio devices, including mini component stereos, portable audio players and speaker systems
- Controls for audio mixing console and musical instruments
- Controls for LCD-TVs, game consoles, photo copiers and refrigerators(temperature control)

Typical Specifications

Items	Specifications
Total resistance tolerance	±20%
Total rotational angle	300±5°
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	Minimum packing unit (pcs.)	Drawing No.	
Single-unit (20V DC)	Vertical type	RK11K1130A2X	Without	Flat	15	Without	10	1B	100	2	
		RK11K1130A0M			20						
		RK11K1130040			25	With					
		RK11K1130A07				Without					
		RK11K113002F				With					
		RK11K114003Y	With		20	10					
		RK11K1140A9L			22.5						
		RK11K1140A23			25	Without					
		RK11K114001Z			27.5	With					
		RK11K1140A3L			30	Without	20				
	RK11K1140A4Q	32.5	10								
	RK11K1140A2S	25	10								
	Horizontal type	Horizontal type	RK11K1110A3D	Without	Flat	25	Without	10	15A	100	1
			RK11K1120060	With		22.5					
			RK11K1120A5T			25	10				
RK11K1120A31			27.5			Without	20				

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.63
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	200
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Resistance Taper

Resistance taper	15A	1B	3B	15C
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Tapped Types are Also Available

RK11K (single-unit) 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													
LM ₁ = 15 only application													

Terminal Layout / Circuit Diagram

Viewed from the Mounting Side

<p>Without tap</p>	<p>With tap</p>
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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
2	Horizontal type with bushing
3	Vertical type without bushing
4	Vertical type with bushing

Shaft type

Code	Shaft type
F	Flat

* Only available in flat format.

Length of the shaft (LM1) (mm)

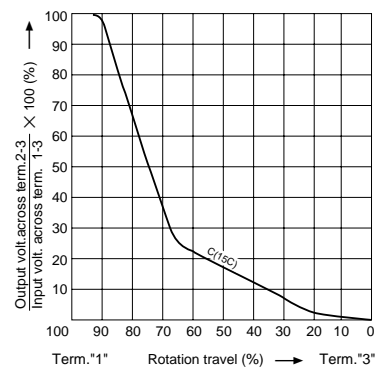
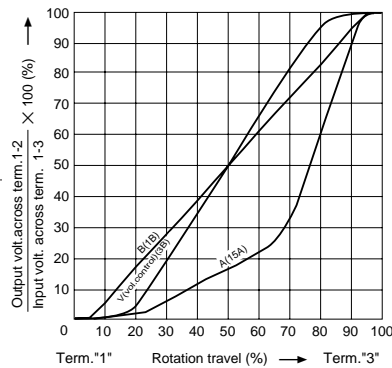
Code	Length of the shaft	Code	Length of the shaft
15	15	25	25
20	20	30	30
22	22.5	32	32.5
27	27.5		

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	204	200

Note

Shows the specification recommended by us.

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Dimensions

Unit : mm

No.	Model	Style	PC board mounting hole dimensions (Viewed from mounting side)																					
1	Horizontal type without bushing RK11K111 (Single-unit)																							
2	Vertical type without bushing RK11K113 (Single-unit)	<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														
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ℓ ₁	4.5	7	12																					
3	Horizontal type with bushing RK11K112 (Single-unit)	<table border="1"> <tr> <td>LM₁</td> <td>22.5</td> <td>25</td> <td>27.5</td> </tr> <tr> <td>L₁</td> <td>15</td> <td>17.5</td> <td>20</td> </tr> <tr> <td>ℓ₁</td> <td>7</td> <td>12</td> <td>12</td> </tr> </table>	LM ₁	22.5	25	27.5	L ₁	15	17.5	20	ℓ ₁	7	12	12										
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4	Vertical type with bushing RK11K114 (Single-unit)	<table border="1"> <tr> <td>LM₁</td> <td>20</td> <td>22.5</td> <td>25</td> <td>27.5</td> <td>30</td> <td>32.5</td> </tr> <tr> <td>L₁</td> <td>12.5</td> <td>15</td> <td>17.5</td> <td>20</td> <td>22.5</td> <td>25</td> </tr> <tr> <td>ℓ₁</td> <td>7</td> <td>7</td> <td>12</td> <td>12</td> <td>12</td> <td>12</td> </tr> </table>	LM ₁	20	22.5	25	27.5	30	32.5	L ₁	12.5	15	17.5	20	22.5	25	ℓ ₁	7	7	12	12	12	12	
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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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