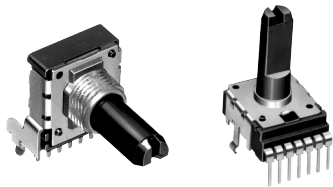


# Insulated Shaft Potentiometer 14mm Size Insulated Shaft Snap-in Type

RK14K Series



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



## 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

## Product Line

Number of resistor elements	Mounting direction	Bushing	Shaft type	Length of the shaft LM <sub>1</sub> (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Application	Minimum order unit (pcs.)	Products No.	Drawing No.
Dual-unit (Not applicable to DC)	Vertical type	Without	Flat	15	Without	10	1B	For tone	2,400	RK14K1230A2X	2
				25					1,600	RK14K1230A0X	
				20			15A	For vol.	2,000	RK14K12C0A1S	
				25					50	1,600	
		With		20	With	100	1B	For tone	1,600	RK14K1240062	4
				25		10				RK14K1240036	
				27.5		100				RK14K1240D04	
				32.5		10				RK14K1240A4S	
	Horizontal type	Without	Flat	27.5	Without	10	15A	For vol.	RK14K12D0A1X	1	
				25					50		RK14K12D0A18
				15			10	2,400	RK14K12A0A3C		
				25			50	1,600	RK14K1210A1B		
		With		10	15A	1B	For tone	2,000	RK14K1220A0F	3	
				20					RK14K1220024		
				50					RK14K1220A25		
				10					15A		For vol.
50	15A	For vol.	RK14K12B0A0R								

## Packing specifications

### Tray

Length of the shaft LM <sub>1</sub> (mm)	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case/export packing	
15	1,200	2,400	374 × 532 × 240
20 to 22.5	1,000	2,000	
25 or more	800	1,600	

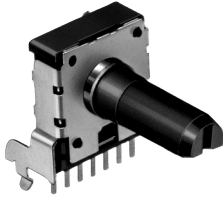
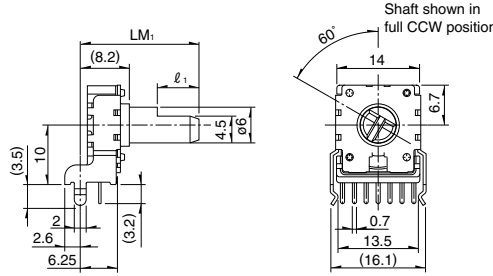
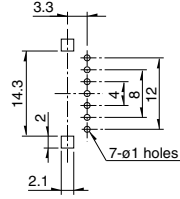
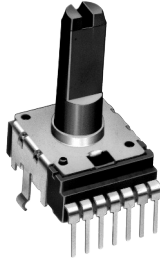
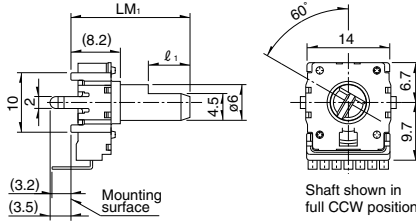
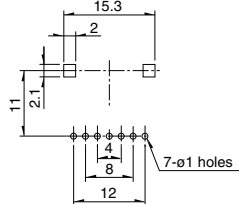
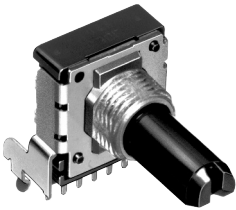
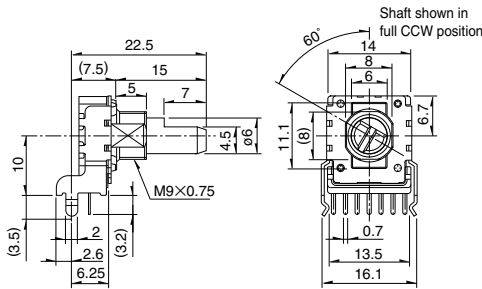
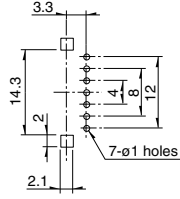
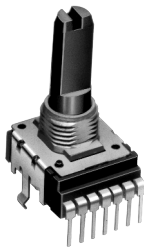
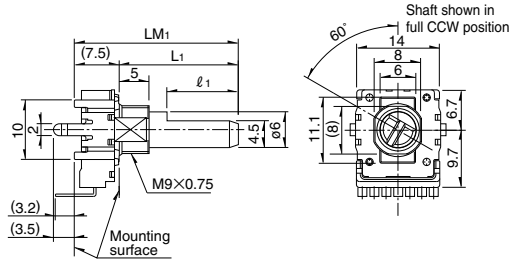
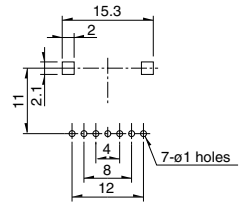
### Notes

1. Products other than those listed in above products are also available. Please contact us for details.
2. Nut and washer are not attached. Please specify if required.
3. Please place purchase orders per minimum order unit N (integer).

Refer to P.399 for product varieties.  
Refer to P.399, 400, 470 for resistance taper.

**Dimensions**

Unit:mm

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

Rotary Potentiometers  
 Slide Potentiometers

Metal Shaft  
 Insulated Shaft  
 Knob Operating  
 Ring Type Devices

## 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
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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				
	LM <sub>1</sub>	ℓ <sub>1</sub>	LM <sub>1</sub>	ℓ <sub>1</sub>	LM <sub>1</sub>	L <sub>1</sub>	LM <sub>1</sub>	L <sub>1</sub>	ℓ <sub>1</sub>		
Detail dimensions	LM <sub>1</sub>	15	20	25	30	20	22.5	25	27.5	30	32.5
	L <sub>1</sub>	—	—	—	—	12.5	15	17.5	20	22.5	25
	ℓ <sub>1</sub>	4.5	7	12	12	7	7	12	12	12	12
	LB	—	—	—	—	5	5	5	5	5	5
<b>Knob dimensions</b> <p>LM<sub>1</sub> = 15 only application</p>											

### Terminal Layout/Circuit Diagram

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

### Note

marked are specifications recommended by ALPS.

Refer to P.400, 470 for resistance taper.

Rotary Potentiometers  
Slide Potentiometers

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# Orders Other Than Recommended Products

When ordering product varieties that are not listed in the Product Line, 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
<b>4</b>	<b>Vertical type with bushing for tone</b>
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
<b>F</b>	<b>Flat</b>

\* Only available in flat format.

### Length of the shaft (LM<sub>1</sub>) (mm)

Code	Length of the shaft	Code	Length of the shaft
15	15	<b>25</b>	<b>25</b>
20	20	30	30
22	22.5	32	32.5
27	27.5		

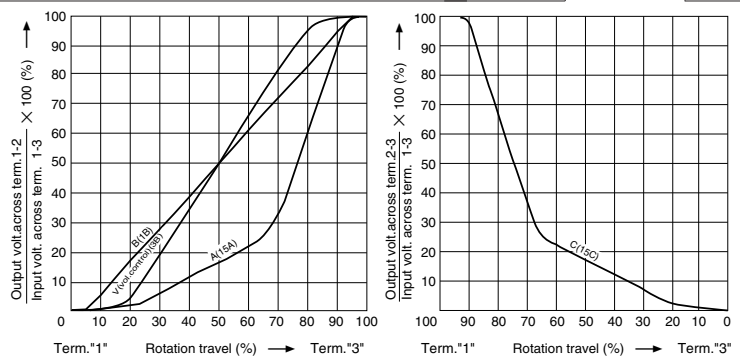
### Detent

Code	Center detent
<b>C0</b>	<b>Without</b>
C1	With

### Resistance taper

Code	Resistance taper	Code	Resistance taper
A	15A	C	15C
<b>B</b>	<b>1B</b>	<b>V</b>	<b>3B</b>

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
<b>103</b>	<b>10</b>	<b>104</b>	<b>100</b>
203	20		

### Note

marked are specifications recommended by ALPS.

Rotary Potentiometers  
Slide Potentiometers

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Ring Type Devices

## List of Varieties

Items	Type	9mm Size Insulated Shaft Snap-in		11mm Size Insulated Shaft Snap-in	12mm Size Insulated Shaft Snap-in	14mm Size Insulated Shaft Snap-in	9mm Size Insulated shaft Long-life	12mm Size Insulated shaft Snap-in	
	Model	RK09K11□ RK09D11□	RK09K12□	RK11K11□	RK12L12□	RK14K12□	RK09Y11L	RK12L115	
		Single-unit	Dual-unit	Single-unit	Dual-unit		Single-unit		
Photo									
Bushing	Without		With/With out	Without	With/With out	Without	With		
Operating temperature range	-10°C to +70°C							-40°C to +85°C	
Automotive use								○	
Electrical performance	Total resistance tolerance	±20%	±30%	±20%			±30%	±20%	
	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	50V AC 20V 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	300V 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	Strength of the actuator	Stopper strength	0.3N·m		Without bushing 0.5N·m With bushing 0.6N·m	0.5N·m	0.6N·m	—	0.5N·m
		Push-pull strength	50N max.		80N max.		30N 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						
	Resistance to soldering heat	Manual soldering	350°C max. 3s max.						
Dip Soldering		—		260°C max. 5s max.	—				
Environmental performance	Cold	-30±2°C for 96h					-30±2°C for 240h	-40±3°C for 96h	
	Dry heat	70±2°C for 96h			70±2°C for 240h	70±2°C for 96h	70±2°C for 240h	85±3°C for 96h	
	Damp heat	40±2°C, 90 to 95% RH for 96h					40±2°C, 90 to 95% RH for 240h	40±2°C, 90 to 95% RH for 96h	
Page	384		390	394	397	401	402		

● Insulated Shaft Potentiometers Cautions .....404, 405

### Note

○marks in "Available for automotive use" indicate that some of the series products can work at the operating temperature range from -40°C to +85°C.

Rotary Potentiometers  
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