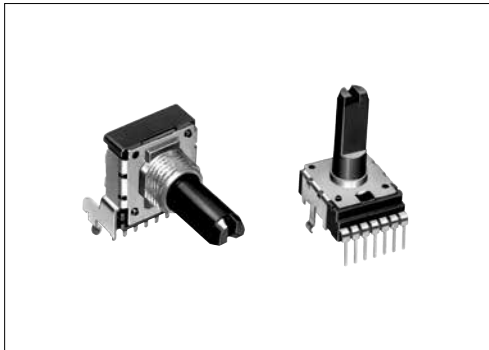


A 14mm wide potentiometer for audio, visual, electronic musical instruments and various applications



Typical Specifications



Items	Specifications
Total resistance tolerance	±20%
Maximum operating voltage	50V AC for AC only
Total rotational angle	300° ±5°
Rotational torque	3 to 20mN·m
Operating life	15,000 cycles
Operating temperature range	-10°C to +70°C

Product Line

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 order unit (pcs.)		Products No.	Drawing No.	
									Japan	Japan			
Dual-unit (Not applicable to DC)	Vertical type	Without	Flat	15	Without	10	1B	For tone	1,200	2,400	RK14K1230A2X	2	
				25					800	1,600			RK14K1230A0X
				20		1,000	2,000	RK14K12C0A1S					
				25					800	1,600	RK14K12C0A0T		
		With		20	With	100	1B	For tone	1,000	2,000	RK14K1240062		4
				25		10			RK14K1240036				
				27.5		100			RK14K1240D04				
				32.5		10			RK14K1240A4S				
	Horizontal type	Without	Flat	27.5	Without	50	15A	For vol.	800	1,600	RK14K12D0A1X	3	
				25		10			RK14K12D0A18				
				15		10			1,200	2,400	RK14K12A0A3C		
				25		50			800	1,600	RK14K1210A1B		
		With		22.5	With	20	1B	For tone	1,000	2,000	RK14K1220A0F		
				50		RK14K1220024							
				10		RK14K1220A25							
				50		15A					For vol.	RK14K12B0A0E	
										RK14K12B0A0R			

Notes

- Other varieties are also available. Refer to "Other Specifications" (P.362).
- Nut and washer are not attached. Please specify if required.

Packing Specifications

Tray

Length of the shaft LM ₁ (mm)	Number of packages (pcs.)		Export package measurements (mm)
	1 case / Japan	1 case / export packing	
15	1,200	2,400	543×377×250
20 to 22.5	1,000	2,000	
25 or more	800	1,600	

Refer to P.362 for other specifications.
Refer to P.363 for ordering products not listed.
Refer to P.366 for soldering conditions.

■ 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> <p>Shaft shown in full CCW position</p>	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> <p>Mounting surface</p> <p>Shaft shown in full CCW position</p>	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>	<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> <p>Shaft shown in full CCW position</p>	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														
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> <p>Mounting surface</p> <p>Shaft shown in full CCW position</p>	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

Metal Shaft

Insulated Shaft

Knob Operating

Through Shaft Type

Ring Type

14mm Size Insulated Shaft Snap-in Type / Other Specifications

In addition to the products listed, we can accommodate the follow specifications.

Total Resistance Variety

Total resistance (k Ω)	5	10	20	50	100
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Resistance Taper

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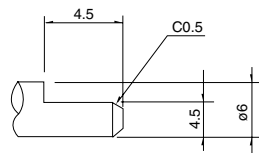
Tapped Types are Also Available

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

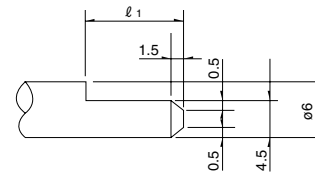
Shaft Variety

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
	L _B	—	—	—	—	5	5	5	5	5	5

Detail dimensions



LM₁ =15 only application



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 Alpine.

Refer to P.363 for ordering products not listed.

14mm Size Insulated Shaft Snap-in Type / Ordering Products Not Listed

When ordering product varieties that are not listed, specify referring to the examples below.

Sample Part Number

R K 1 4 K 1 2 4 0 — **F 2 5** — **C 0** — **B 1 0 3**

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	—	—

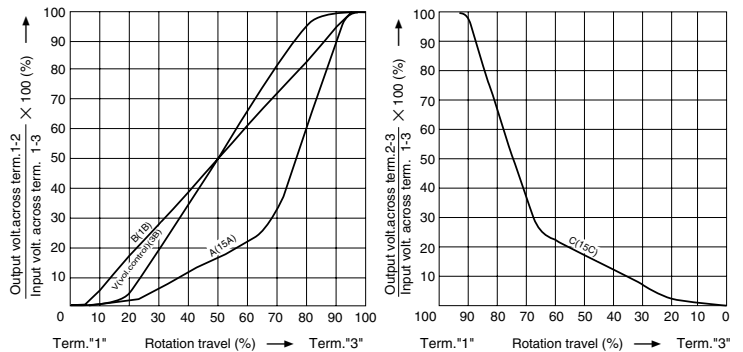
Detent

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 (k Ω)	Code	Total resistance (k Ω)
502	5	503	50
103	10	104	100
203	20	—	—

Note

Marked are specifications recommended by Alps Alpine.

Insulated Shaft Potentiometers

List of Varieties

Type	9mm size			11mm size	12mm size	14mm size	
Series	RK09K11 RK09D11	RK09K12	RK09Y11L	RK11K	RK12L12	RK14K	
	Single-unit	Dual-unit	Single-unit	Single-unit	Dual-unit	Dual-unit	
Photo							
Terminal mounting	Vertical / Horizontal		Horizontal	Vertical / Horizontal			
Bushing	Without			With / Without	Without	With / Without	
Operating temperature range	-10°C to +70°C						
Operating life	5,000 cycles	10,000 cycles	1,000,000 cycles	15,000 cycles			
Available for automotive use	—	—	—	—	—	—	
Life cycle							
Electrical performance	Total resistance (k Ω)	5, 10, 20, 50, 100, 200		10	5, 10, 20, 50, 100, 200		
	Resistance taper	15A, 1B, 3B, 15C		B	15A, 1B, 3B, 15C		
	Total resistance tolerance	±20%	±30%	±30%	±20%		
	Rated power	0.05W	0.03W	0.01W	0.05W		
	Maximum operating voltage	50V AC 20V DC	50V AC for AC only	50V AC 5V DC	50V AC 20V DC	50V AC for AC only	
	Gang error	—	-40dB to 0dB 3dB max.	—	—	Volume control -40dB to 0dB 3dB max. For tone control within 2dB at center	
	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	
	Center-taps	Without			Without / With	Without	Without / With (Volume control)
Mechanical performance	Detent	Without, Center		Without	Without, Center	Without, Center	
	Stopper strength	0.3N·m		—	Without bushing 0.5N·m With bushing 0.6N·m	0.5N·m 0.6N·m	
	Push-pull strength	50N 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					
Shaft configuration	Flat type, Knob type, Screwdriver type			Flat type			
Terminal style	Insertion						
Page	345 364(RK09D117)		352	353	357 364(RK12L12H, RK12L127)	360	

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Potentiometers Measurement and Test Methods	420
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Note

● Indicates applicability to all products in the series.

Reference for Manual Soldering

Series	Tip temperature	Soldering time	No. of solders
RK09D, RK09K, RK09Y11L, RK11K, RK12L, RK14K	350°C max.	3s max.	1 time

Reference for Dip Soldering

Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
RK12L	100°C	1 min. max.	260°C max.	5s max.	2 time max.

Rotary Potentiometers

Slide Potentiometers

Metal Shaft

Insulated Shaft

Knob Operating

Through Shaft Type

Ring Type