

### Typical Specifications

Items	Specifications
Total resistance tolerance	±20%
Maximum operating voltage	50V AC for AC only
Total rotational angle	300° ±5°
Rotational torque	2 to 15mN·m
Operating life	15,000 cycles
Operating temperature range	-10°C to +70°C

### Product Line

Number of resistor elements	Control part orientation	Shaft type	Length of the shaft LM <sub>i</sub> (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Minimum order unit (pcs.)		Products No.	Drawing No.				
							Japan	Export						
Dual-unit for tone	Vertical	Flat	25	With	10	1B	800	1,600	RK12L1230C1K	1				
				Without					RK12L1230C0Q					
			30	With					RK12L123000G					
				Without					RK12L1230A08					
Horizontal	30		With	RK12L1210C1T					2					
			Without	RK12L1210C0V										
Dual-unit for vol.	Vertical		Flat	25					Without	15A	800	1,600	RK12L12C0A0E	1
													30	
		Horizontal		30	RK12L12A0C0R	2								

### Note

Other varieties are also available. Refer to "Other Specifications" (P.323).


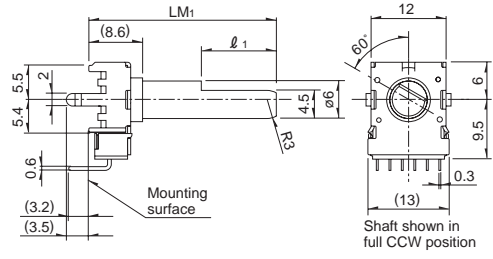
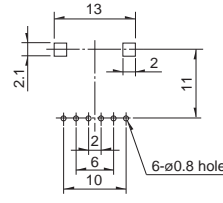

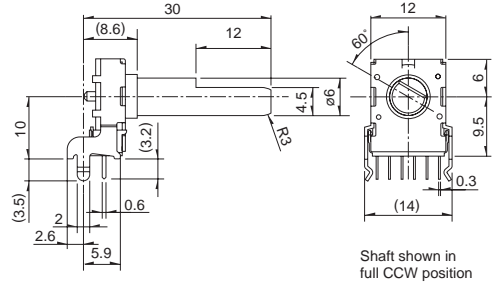
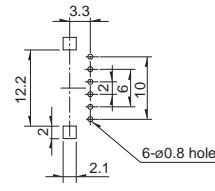
### Packing Specifications

Tray

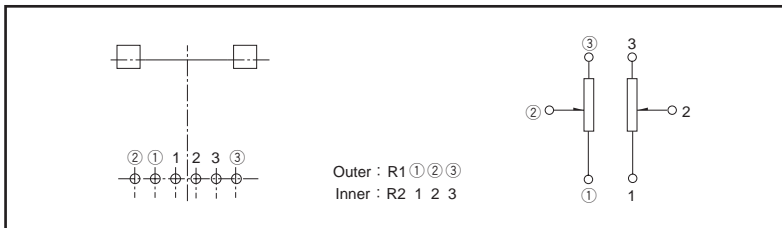
Number of packages (pcs.)		Export package measurements (mm)
1 case / Japan	1 case / export packing	
800	1,600	543×377×250

Refer to P.323 for other specifications.  
 Refer to P.324 for ordering products not listed.  
 Refer to P.331 for soldering conditions.

■ Dimensions

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)						
1	<p><b>Vertical</b>                      RK12L123 (For tone control)                      RK12L12C (For vol. control)</p> 	<table border="1"> <tr> <td>LM<sub>1</sub></td> <td>25</td> <td>30</td> </tr> <tr> <td>ℓ<sub>1</sub></td> <td>12</td> <td>12</td> </tr> </table> 	LM <sub>1</sub>	25	30	ℓ <sub>1</sub>	12	12	
LM <sub>1</sub>	25	30							
ℓ <sub>1</sub>	12	12							
2	<p><b>Horizontal</b>                      RK12L121 (For tone control)                      RK12L12A (For vol. control)</p> 								

■ Terminal Layout / Circuit Diagram



12mm Size Insulated Shaft Snap-in Type / Other Specifications

In addition to the Product Line, we accommodate the following specifications. Combinations not included in the Product Line are treated as semi-standard products.

■ Total Resistance Variety

Total resistance (k Ω)	5	10	20	50	100	200
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■ Resistance Taper

Resistance taper	15A	1B	3B	15C
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■ Shaft Variety

Style		Unit:mm			
Shaft variety	LM <sub>1</sub>	15	20	25	30
	ℓ <sub>1</sub>	4.5	7	12	12

Note

Marked are specifications recommended by Alps Alpine.

Rotary Potentiometers  
 Slide Potentiometers  
 Metal Shaft  
 Insulated Shaft  
 Knob Operating  
 Through Shaft Type  
 Ring Type

# 12mm Size Insulated Shaft Snap-in Type / Ordering Products Not Listed

In addition to the Product Line, we accommodate the following specifications. Combinations not included in the Product Line are treated as semi-standard products. Please refer to the notation example below.

## Sample Part Number

**R K 1 2 L 1 2 C 0** — **F 3 0** — **C 0** — **A 5 0 3**

Model type

Code	Model type
1	Horizontal for tone
3	Vertical for tone
A	Horizontal for vol.
C	Vertical for vol.

Shaft type

Code	Shaft type
F	Flat

\*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	25	25
20	20	30	30

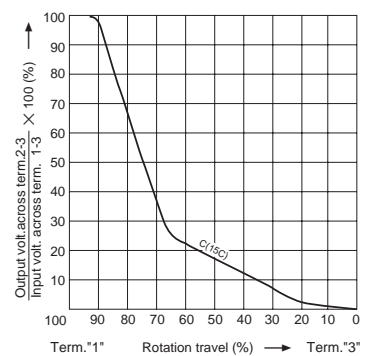
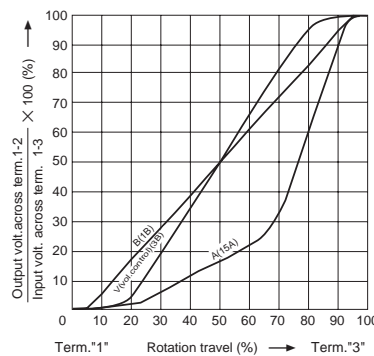
Detent

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, 3)  
V: For vol. (Model type: A, C)



Total resistance

Code	Total resistance (k Ω)	Code	Total resistance (k Ω)
502	5	503	50
103	10	104	100
203	20	204	200

## Note

Marked are specifications recommended by Alps Alpine.

Rotary Potentiometers

Slide Potentiometers

Metal Shaft

Insulated Shaft











Knob Operating

Through Shaft Type

Ring Type

# Insulated Shaft Potentiometers

## List of Varieties

Type	9mm size		11mm size	12mm size	14mm size	
Series	<b>RK09K11</b> <b>RK09D11</b>	<b>RK09Y11L</b>	<b>RK11K</b>	<b>RK12L12</b>	<b>RK14K</b>	
	Single-unit	Single-unit	Single-unit	Dual-unit	Dual-unit	
Photo						
Control part orientation	Vertical / Horizontal		Horizontal	Vertical / Horizontal		
Bushing	Without		With	Without	With	
Operating temperature range	-10°C to +70°C					
Operating life	5,000 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%	±20%		
	Rated power	0.05W	0.01W	0.05W		
	Maximum operating voltage	50V AC 20V DC	50V AC 5V DC	50V AC 20V DC	50V AC for AC only	
	Gang error	—	—	—	For volume control -40dB to 0dB 3dB max. For tone control within 2dB max. 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	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					
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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
<b>RK09D, RK09K, RK09Y11L, RK11K, RK12L, RK14K</b>	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	
<b>RK12L</b>	100°C	1 min. max.	260°C max.	5s max.	2 time max.