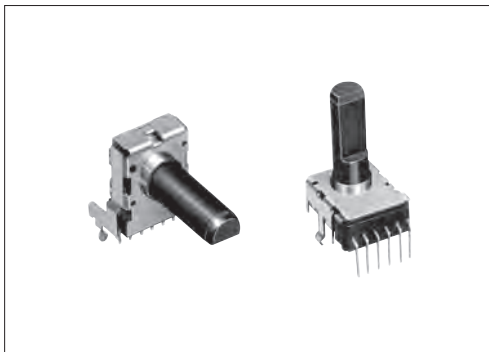




Typical Specifications



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 ₁ (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	
						RK12L1210C0V				
Dual-unit for vol.	Vertical		25	Without	15A	RK12L12C0A0E			1	
			30			RK12L12C0A0G				
	Horizontal	30				RK12L12A0C0R	2			

Note

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

Packing Specifications

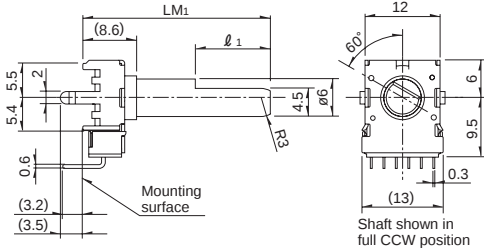
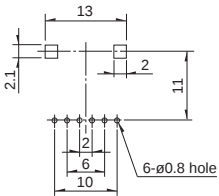
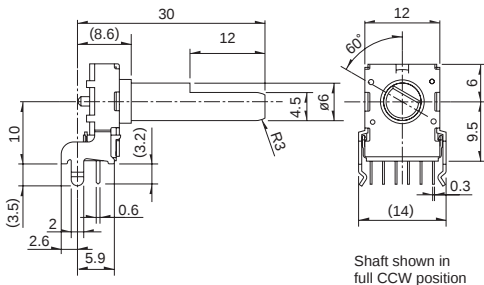
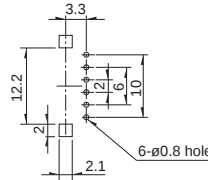
Tray

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

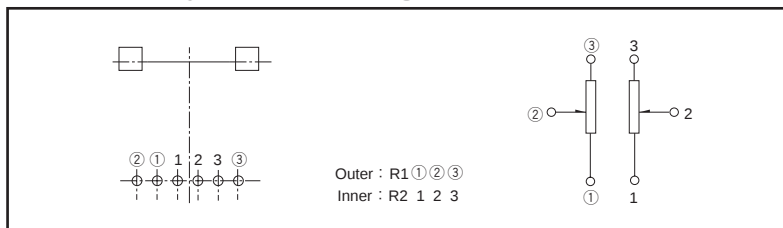
Refer to P.323 for other specifications.
Refer to P.324 for ordering products not listed.
Refer to P.331 for soldering conditions.

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)						
1	Vertical RK12L123 (For tone control) RK12L12C (For vol. control) 	<table border="1"><tr><td>LM₁</td><td>25</td><td>30</td></tr><tr><td>ℓ₁</td><td>12</td><td>12</td></tr></table>  Shaft shown in full CCW position	LM ₁	25	30	ℓ ₁	12	12	
LM ₁	25	30							
ℓ ₁	12	12							
2	Horizontal RK12L121 (For tone control) RK12L12A (For vol. control) 	 Shaft shown in full CCW position							

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

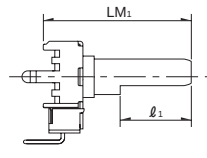
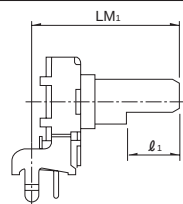
Total resistance (k Ω)	5	10	20	50	100	200
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Resistance Taper

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

Unit:mm

Style		 Vertical				 Horizontal	
Shaft variety	LM ₁	15	20	25	30		
	ℓ ₁	4.5	7	12	12		

Note

Marked are specifications recommended by Alps Alpine.

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 LM₁ (mm)

Code	Length of the shaft	Code	Length of the shaft
15	15	25	25
20	20	30	30

Detent

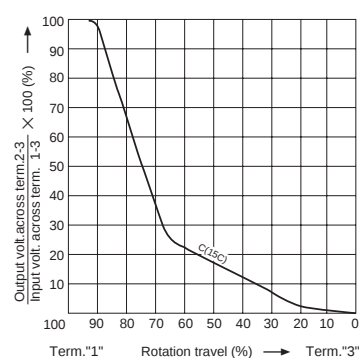
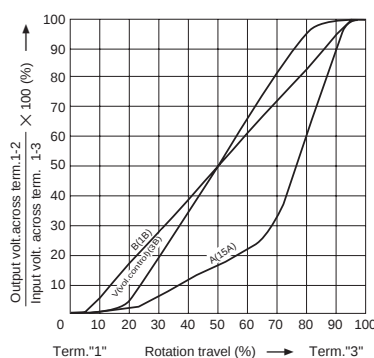
Code	Center detent
C0	Without
C1	With

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.

Insulated Shaft Potentiometers

List of Varieties

Type		9mm size		11mm size	12mm size	14mm size
Series		RK09K11 RK09D11	RK09Y11L	RK11K	RK12L12	RK14K
		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℃ to +70℃				
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				
Page		313 329 (for Mixers)	318	319 329 (for Mixers)	322 329 (for Mixers)	325 329 (for Mixers)

Insulated Shaft Potentiometers Soldering Conditions	331
Potentiometers Cautions	384
Potentiometers Measurement and Test Methods	386
Potentiometers Resistance Taper	388

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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[RK12L12C0A0E](#) [RK12L12A0C0R](#) [RK12L1230C03](#) [RK12L123000G](#) [RK12L1210C0V](#) [RK12L1210C1T](#)
[RK12L1230A08](#) [RK12L1230C0Q](#) [RK12L1230C1K](#)