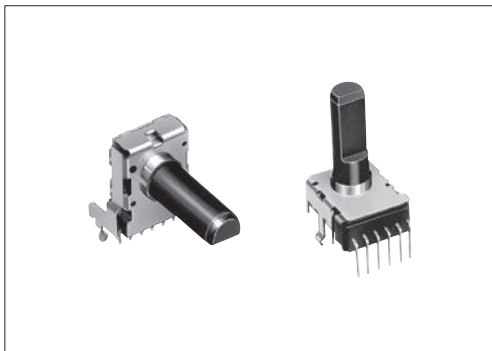


RK12L

12mm Size Insulated Shaft Snap-in Type

High performance 12mm wide type



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	Mounting direction	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	Export		
Dual-unit	Vertical type	Flat	20	Without	50	1B	For tone	1,000	2,000	RK12L1230C0K	2
					10	15A				RK12L1230C0T	
			25	With	20	1B		800	1,600	RK12L1230C1M	
					50					RK12L123000E	
	Horizontal type		30	Without	10	15A	RK12L1210C0R	1			
					50	15C	For vol.	1,200	2,400	RK12L12C0C0V	2
	Vertical type		15	Without	10	15A				RK12L12C0A0E	
					25			RK12L12C0A0G			
	Horizontal type	30	Without	20	15A	RK12L12C0A0A		1			
				10		RK12L12A0C0R					

For the Mixing Console Market

Number of resistor elements	Mounting direction	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	Export		
Dual-unit	Vertical type	Flat	30	Without	20	15A	For vol.	800	1,600	RK12L12H0005	2
				With		1B				RK12L1270009	

Note

Other varieties are also available. Refer to "Other Specifications" (P.364).

Packing Specifications

Tray

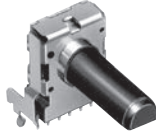
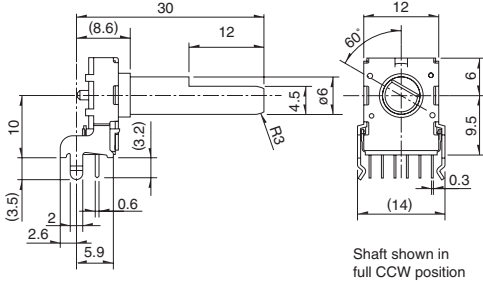
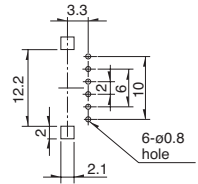

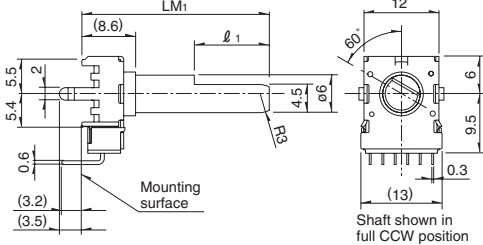
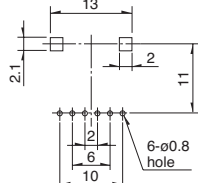
Length of the shaft LM ₁ (mm)	Number of packages (pcs.)		Export package measurements (mm)
	1 case / Japan	1 case / export packing	
15	1,200	2,400	374×532×240
20	1,000	2,000	
25, 30	800	1,600	

Refer to P.364 for other specifications.
Refer to P.365 for ordering products not listed.
Refer to P.371 for soldering conditions.

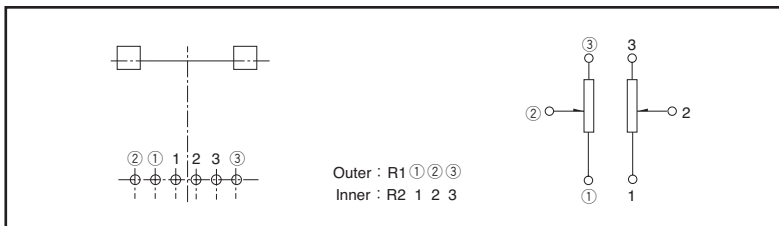
RK12L 12mm Size Insulated Shaft Snap-in Type

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)										
1	<p>Horizontal type RK12L121 (For tone control) RK12L12A (For vol. control)</p> 												
2	<p>Vertical type RK12L123 (For tone control) RK12L12C (For vol. control) RK12L127 (For tone control) RK12L12H (For vol. control)</p> 	<table border="1" style="margin-bottom: 10px;"> <tr> <td>LM₁</td> <td>15</td> <td>20</td> <td>25</td> <td>30</td> </tr> <tr> <td>ℓ₁</td> <td>4.5</td> <td>7</td> <td>12</td> <td>12</td> </tr> </table> 	LM ₁	15	20	25	30	ℓ ₁	4.5	7	12	12	
LM ₁	15	20	25	30									
ℓ ₁	4.5	7	12	12									

Terminal Layout / Circuit Diagram



12mm 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	200
------------------------	---	----	----	----	-----	-----

Resistance Taper

Resistance taper	15A	1B	3B	15C
------------------	-----	----	----	-----

Shaft Variety

Unit:mm

Style	Vertical type		Horizontal type	
	LM ₁	15	20	25
ℓ ₁	4.5	7	12	12

Note

Marked are specifications recommended by Alps.

Refer to P.365 for ordering products not listed.

12mm 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 2 L 1 2 C 0 — **F 3 0** — **C 0** — **A 5 0 3**

Model type

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

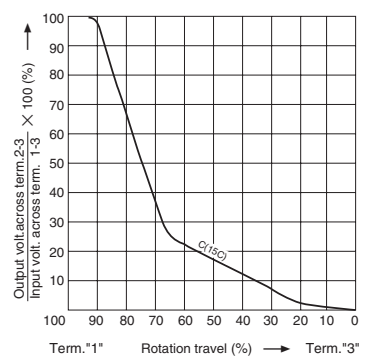
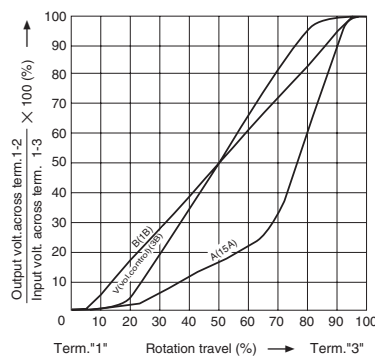
Detent

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.

- Potentiometers
- Slide Potentiometers
- Metal Shaft
- Insulated Shaft
- Knob Operating
- Ring Type

Insulated Shaft Potentiometers

List of Varieties

Type	9mm size			11mm size	12mm size		14mm size	
Series	RK09K11 RK09D11	RK09K12	RK09Y11L	RK11K	RK12L12	RK12L115	RK14K	
	Single-unit	Dual-unit	Single-unit	Single-unit	Dual-unit	Single-unit	Dual-unit	
Photo								
Terminal mounting	Vertical / Horizontal		Horizontal	Vertical / Horizontal		Vertical	Vertical / Horizontal	
Bushing	Without			With / Without	Without	With	With / Without	
Operating temperature range	-10°C to + 70°C					-40°C to + 85°C	-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		5, 10, 20, 50, 100, 200	
	Resistance taper	15A, 1B, 3B, 15C		B	15A, 1B, 3B, 15C		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	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	—	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	Custom	
	Stopper strength	0.3N·m		—	Without bushing 0.5N·m With bushing 0.6N·m	0.5N·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	351		358	359	363	366	367	

Insulated Shaft Potentiometers Soldering Conditions	371
Potentiometers Cautions	427
Potentiometers Measurement and Test Methods	429
Potentiometers Resistance Taper	431

Note

● Indicates applicability to all products in the series.

Insulated Shaft Potentiometers / Soldering Conditions

■ Reference for Manual Soldering

Series	Tip temperature	Soldering time	No. of solders
RK09D, RK09K, RK09Y11L, RK11K, RK12L, RK12L115, 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

Ring Type

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[70B1N056S202W](#) [70B8N056F502W](#) [70J8N048S104U](#) [70L1N040P103W](#) [70L1N048P103X](#) [70L1N048S103W](#) [81R1A-R22-A20L](#) [85A2A-](#)
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[103](#) [132B00301](#) [RK14K1220-F25-C0-A103](#) [RK14K1220F25C0C104](#) [RK14K1220-F25-C1-B103](#) [14910AABHSX10102KA](#)
[14910F0GJSX10105KA](#) [14910FAGJSX10102KA](#) [14910FBGLFY00103KA](#) [14910AABHSX10103KA](#) [14910AABHSX10502KA](#)
[14910FAGJSX10104KA](#) [ASM6674E](#) [152-01031](#) [P140KH1-F15AR50K](#) [P170SPD-FC15BR10K](#) [P231-EC20BR5K](#) [P270-109A](#) [J97589](#)
[P9A2R000FISX1103MA](#) [248BBHS0XB25104MA](#) [248BBHS0XB25503MA](#) [RV170F-10-15R1-B500K-0021](#) [RV24AF-10-15R1-B500-3](#) [A43-](#)
[750](#) [A47-15K](#)