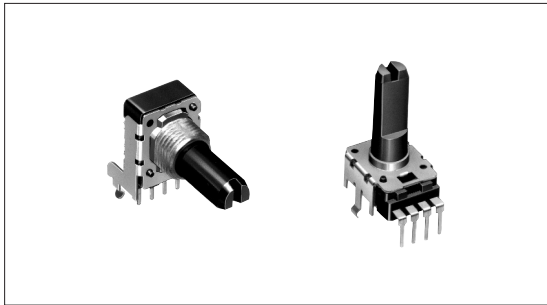


# Insulated Shaft Potentiometer 11mm Size Insulated Shaft Snap-in Type

RK11K Series



A 11mm 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

Rotary Potentiometers  
Slide Potentiometers

## 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	Minimum order unit (pcs.)	Products No.	Drawing No.		
Single-unit (20V DC)	Vertical type	Without	Flat	15	Without	10	1B	2,400	RK11K1130A2X	2		
				20	With			2,000	RK11K1130A0M			
				25	Without			1,600	RK11K1130040			
				20	With				RK11K1130A07			
				22.5	Without				RK11K113002F			
		25		With	2,000	RK11K114003Y		4				
		27.5		Without		RK11K1140A9L						
		30		With		RK11K1140A23						
		32.5		Without		RK11K114001Z						
		25		With		RK11K1140A3L						
	Horizontal type	With	Without	25	Without	20		15A	1,600	RK11K1140A4Q	1	
				25	Without	10				RK11K1140A2S		
				22.5	With	20				RK11K1110A3D		
				25	Without	10				RK11K1120060		3
				27.5	With	20				RK11K1120A5T		
27.5	Without	20	RK11K1120A31									

Metal Shaft  
Insulated Shaft  
Knob Operating  
Ring Type Devices

## 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.392 for product varieties.  
Refer to P.392, 393, 470 for resistance taper.

Dimensions

Unit:mm

Rotary Potentiometers  
 Slide Potentiometers

Metal Shaft  
 Insulated Shaft  
 Knob Operating  
 Ring Type Devices

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)																					
1																								
2		<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		<table border="1"> <tr> <td>LM<sub>1</sub></td> <td>22.5</td> <td>25</td> <td>27.5</td> </tr> <tr> <td>L<sub>1</sub></td> <td>15</td> <td>17.5</td> <td>20</td> </tr> <tr> <td>ℓ<sub>1</sub></td> <td>7</td> <td>12</td> <td>12</td> </tr> </table>	LM <sub>1</sub>	22.5	25	27.5	L <sub>1</sub>	15	17.5	20	ℓ <sub>1</sub>	7	12	12										
LM <sub>1</sub>	22.5	25	27.5																					
L <sub>1</sub>	15	17.5	20																					
ℓ <sub>1</sub>	7	12	12																					
4		<table border="1"> <tr> <td>LM<sub>1</sub></td> <td>20</td> <td>22.5</td> <td>25</td> <td>27.5</td> <td>30</td> <td>32.5</td> </tr> <tr> <td>L<sub>1</sub></td> <td>12.5</td> <td>15</td> <td>17.5</td> <td>20</td> <td>22.5</td> <td>25</td> </tr> <tr> <td>ℓ<sub>1</sub></td> <td>7</td> <td>7</td> <td>12</td> <td>12</td> <td>12</td> <td>12</td> </tr> </table>	LM <sub>1</sub>	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>	7	7	12	12	12	12	
LM <sub>1</sub>	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>	7	7	12	12	12	12																		

## 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	200
-----------------------	---	----	----	----	-----	-----

### Resistance Taper

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

### Tapped Types are Also Available

RK11K (single-unit) is also available with tap.

### Shaft Variety

Unit:mm

Style	Without bushing				With bushing						
	Horizontal type		Vertical type		Horizontal type		Vertical type				
Shaft variety	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
Detail dimensions											
LM <sub>1</sub> = 15 only application											

### Terminal Layout/Circuit Diagram

<p>Without tap</p>	<p>With tap</p>
--------------------	-----------------

### Note

marked are specifications recommended by ALPS.

Rotary Potentiometers

Slide Potentiometers

Metal Shaft

Insulated Shaft

Knob Operating

Ring Type Devices

Refer to P.393, 470 for resistance taper.

# 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
2	Horizontal type with bushing
3	Vertical type without bushing
4	Vertical type with bushing

### 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
22	22.5	32	32.5
27	27.5		

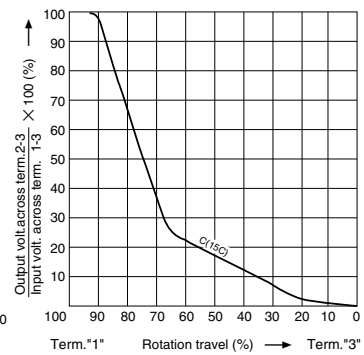
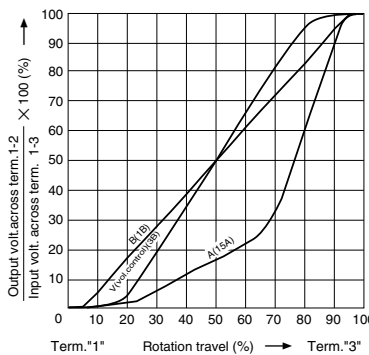
### Detent

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  
V: For vol.



### Total resistance

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

### Note

marked are specifications recommended by ALPS.

Rotary Potentiometers

Slide Potentiometers

Metal Shaft

Insulated Shaft

Knob Operating

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  
Slide Potentiometers

Metal Shaft  
Insulated Shaft  
Knob Operating  
Ring Type Devices