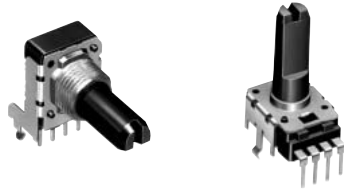


Insulated Shaft Potentiometer 11mm Size Insulated Shaft Snap-in Type

RK11K Series



11mm outline dimensions, available in a variety and suitable for audio equipment, video equipment, electronic musical instruments and other in various fields.



Features

- Closed structure improved dust-proofing capacity and flux resistance.
- Available with bushing, tap and detent.

Applications

- Controls for audio devices
- Controls for audio mixing console and musical instruments
- Controls for LCD TVs, game consoles, photo copiers and refrigerators (temperature control)

Typical Specifications

Items	Specifications
Total resistance tolerance	$\pm 20\%$
Total rotational angle	$300 \pm 5^\circ$
Rotational torque	3 to 20mN·m
Operating life	15,000 cycles
Operating temperature range	-10°C to $+70^\circ\text{C}$

Recommended Products List

Number of resistor elements	Mounting direction	Products No.	Bushing	Shaft type	Length of the shaft LM ₁ (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Minimum packing unit (pcs.)	Drawing No.			
Single-unit (20V DC)	Vertical type	RK11K1130A2X	Without	Flat	15	Without	10	1B	100	2			
		RK11K1130A0M			20						With		
		RK11K1130040			25	Without						20	
		RK11K1130A07				With							
		RK11K113002F	With		20	Without	10			4			
		RK11K114003Y			22.5						Without		
		RK11K1140A9L			25	With							
		RK11K1140A23			27.5	Without	20						
		RK11K114001Z			30		10						
		RK11K1140A3L			32.5		20						
		RK11K1140A4Q			25								
		RK11K1140A2S			22.5	With	20			1			
		Horizontal type	RK11K1110A3D		Without		25				10		
	RK11K1120060		22.5				Without	20		15A		3	
	RK11K1120A5T		With		25	10							
	RK11K1120A31				27.5	Without	20						


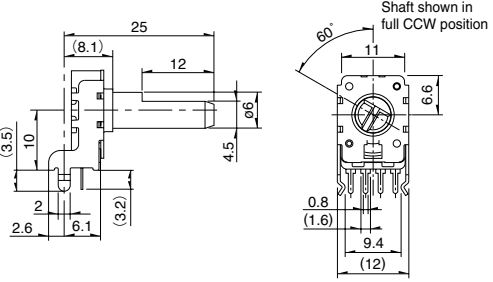
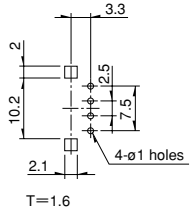

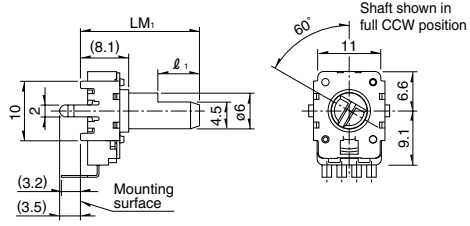
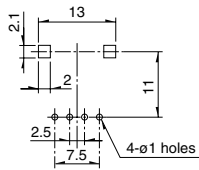
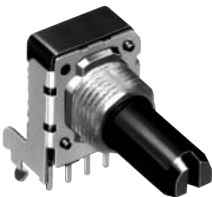
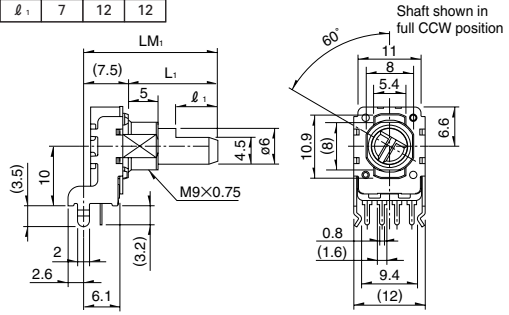
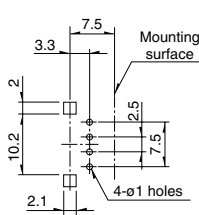

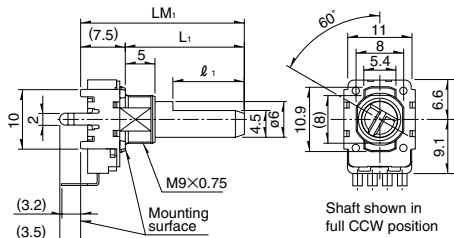
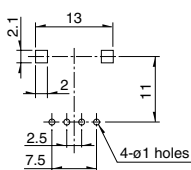
Notes

1. Additional product specifications in response to those not included in the above recommended products are also available.
2. Nut and washer are not attached. Please specify if required.

For product varieties, see P.62
For products specifications, see P.72

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)																					
1	Horizontal type without bushing RK11K111 (Single-unit) 																							
2	Vertical type without bushing RK11K113 (Single-unit) 	<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> 	LM ₁	15	20	25	ℓ ₁	4.5	7	12														
LM ₁	15	20	25																					
ℓ ₁	4.5	7	12																					
3	Horizontal type with bushing RK11K112 (Single-unit) 	<table border="1"><tr><td>LM₁</td><td>22.5</td><td>25</td><td>27.5</td></tr><tr><td>L₁</td><td>15</td><td>17.5</td><td>20</td></tr><tr><td>ℓ₁</td><td>7</td><td>12</td><td>12</td></tr></table> 	LM ₁	22.5	25	27.5	L ₁	15	17.5	20	ℓ ₁	7	12	12										
LM ₁	22.5	25	27.5																					
L ₁	15	17.5	20																					
ℓ ₁	7	12	12																					
4	Vertical type with bushing RK11K114 (Single-unit) 	<table border="1"><tr><td>LM₁</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>L₁</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>ℓ₁</td><td>7</td><td>7</td><td>12</td><td>12</td><td>12</td><td>12</td></tr></table> 	LM ₁	20	22.5	25	27.5	30	32.5	L ₁	12.5	15	17.5	20	22.5	25	ℓ ₁	7	7	12	12	12	12	
LM ₁	20	22.5	25	27.5	30	32.5																		
L ₁	12.5	15	17.5	20	22.5	25																		
ℓ ₁	7	7	12	12	12	12																		

Rotary
Potentiometers

Slide
Potentiometers

Multi Control
Devices

Rotary Sensors

Linear Sensors

Metal
Shaft

Insulated
Shaft

Knob
Operating

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
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Resistance Taper

Resistance taper	15A	1B	3B	15C
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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 ₁	15	20	25	30	LM ₁	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	l ₁	7	7	12	12	12	12
	—	—	—	—	—	LB	5	5	5	5	5	5
Detail dimensions												
 LM ₁ =15 only application												

Terminal Layout/Circuit Diagram

Viewed from the Mounting Side

Without tap	With tap

Note

Shows the specification recommended by us.

Orders other than recommended products

Specify orders for varieties that are not listed in the Recommended Product List, referring to the following example.

Sample Part Number

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

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 (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

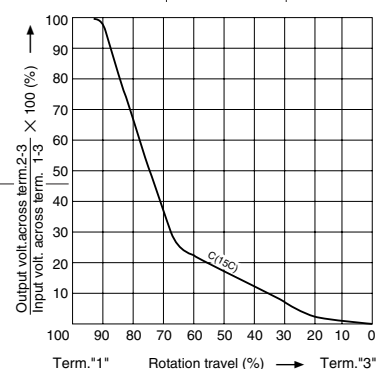
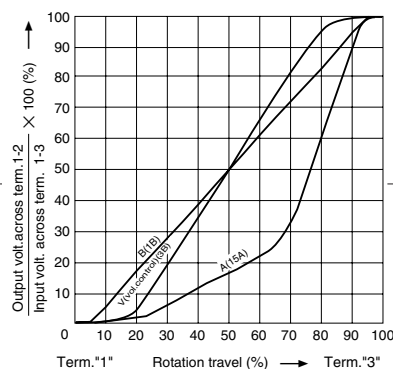
Resistance taper

Code	Resistance taper	Code	Resistance taper
A	15A	C	15C
B	1B	V	3B

B:For tone & general
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



Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Rotary Sensors
Linear Sensors

Metal Shaft

Insulated Shaft

Knob Operating

Products Specifications

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Rotary Sensors

Linear Sensors

Metal Shaft

Insulated Shaft

Knob Operating

Items			Type	9mm Size Insulated Shaft Snap-in		9mm Size Insulated shaft Long-life	11mm Size Insulated Shaft Snap-in	12mm/14mm Size Insulated Shaft Snap-in	
			Model	RK09K11□ RK09D11□	RK09K12□	RK09Y11L	RK11K11□	RK12L12□ RK14K12□	
				Single-unit	Dual-unit	Single-unit	Single-unit	Dual-unit	
Operating temperature range			−10℃ to +70℃						
Electrical performance	Total resistance tolerance		±20%	±30%		±20%			
	Rated power		0.05W	0.03W	0.01W	0.05W			
	Maximum operating voltage		50V AC 20V DC	50V AC For AC only	50VDL	50V AC 20V DC	50V AC For AC only		
	Insulation resistance		100MΩ min. 250V DC			100MΩ min. 500V DC	100MΩ min. 250V DC		
	Voltage proof		1 minute 250V AC			1 minute 500V AC	1 minute 300V AC		
	Gang error		—	−40dB to 0dB within 3dB	—	Volume control −40dB to 0dB max. 3dB For tone control within 2dB at center			
Mechanical performance	Total rotational angle		280±5° RK09D11□ : 300±5°		300±5°				
	Rotational torque		1 to 8mN・m		5mN・m max	3 to 20mN・m			
	Strength of the operating section	Stopper strength	0.3N・m		150mN・m	Without bushing 0.5N・m With bushing 0.6N・m	14mm 0.6N・m 12mm 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						
	Solder heat resistance Manual soldering		350℃ max. 3s max.						
Endurance	Operating life		5,000 cycles		1,000,,000 cycles	15,000 cycles			
Environmental test	Cold		−10℃ for 96h						