

27mm Size Metal Shaft Potentiometer

RK27 Series

High-grade potentiometer featuring good control feel and superior features.

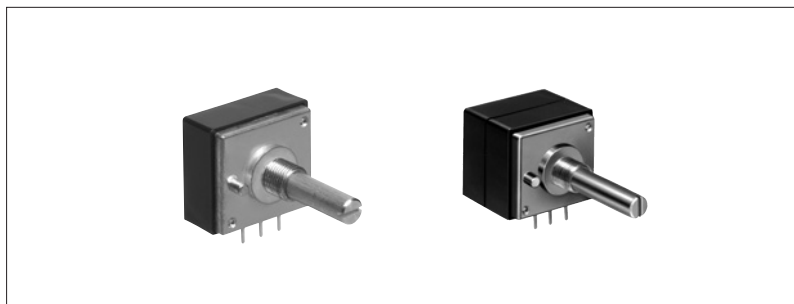
Rotary
Potentiometers

Slide
Potentiometers

Trimmer
Potentiometers

Multi Control
Devices

Position Sensors



Features

- These highgrade potentiometers offer comfortable operation and possess high, precise features (gang error, resistance taper, etc.), ideal for audio applications.

Applications

- Level controls for high grade audio sets
- Controls for audio mixing console

Metal
Shaft

Insulated
Shaft

Knob
Operating

Typical Specifications

Items	Specifications
Total resistance tolerance	$\pm 20\%$
Maximum operating voltage	30V AC
Total rotational angle	$300 \pm 3^\circ$
Rotational torque	5 to 35 mN·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.	Shaft type	Length of the shaft (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Minimum packing unit (pcs.)	Drawing No.			
Single-unit	Horizontal type	RK2711120026	Slotted	25	31	100	15A	100	1			
		RK271111001T			Without							
Dual-unit		RK27112A00AK		20					2			
		RK27112A00CC	25									
		RK27112A0A16	20	3								
		RK27112A00B9	25									

Note

Additional product specifications in response to those not included in the above recommended products are also available. For inquiries, contact our sales department.

For product specifications, see **P.39**
For other detailed specifications, see **P.48, 49**

Product Varieties

In addition to the recommended products, the following specifications can also be accommodated.

Products Specification

Type	Model	Mounting height (mm)	Detent variety	Gang error
Single-shaft, single-unit	RK27111	12.5	Center 21 31 41	—————
Single-shaft, dual-unit	RK27112			—60dB to 0dB within 3dB
Single-shaft, quad-unit	RK27114			—80dB to —60dB within 5dB possible depending on total resistance and taper.

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Total Resistance Variety

Total resistance (kΩ)	10	20	50	100	250
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Resistance Taper

Resistance taper	15A	3B
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Metal Shaft

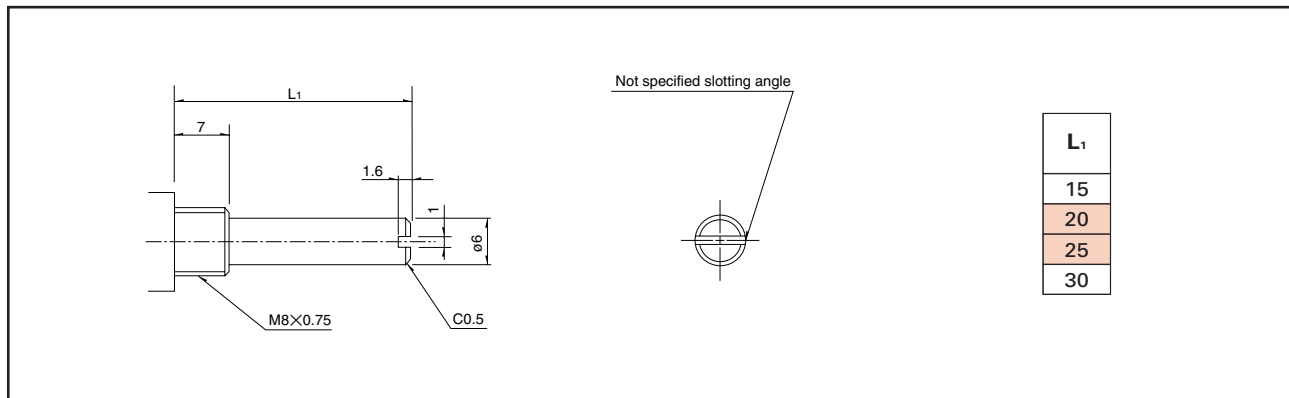
Insulated Shaft

Knob Operating

Dimensions of Shaft

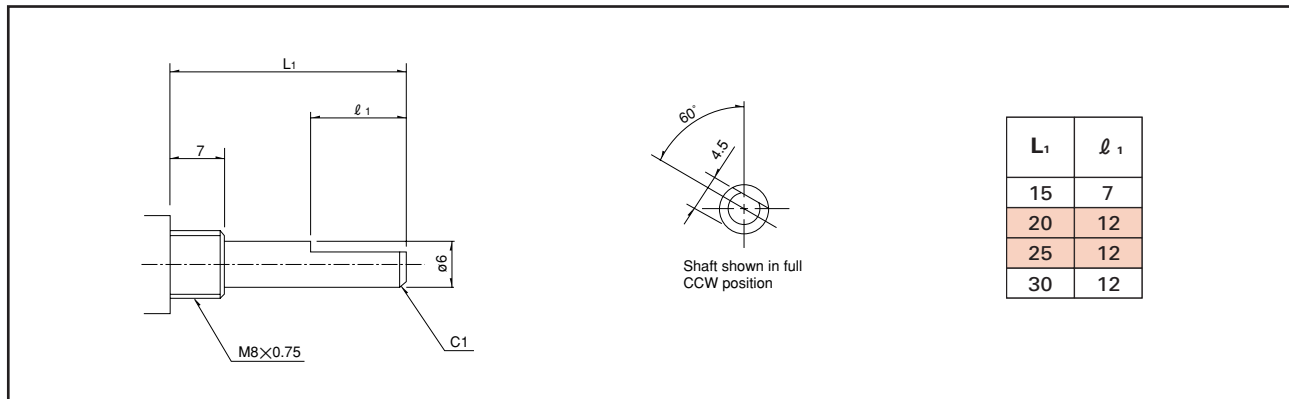
1 Slotted type

Unit:mm



2 Flat type

Unit:mm



For resistance taper, see P.40, 224
For attached parts, see P.50

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 2 7 1 1 2 A — S 2 5 — C 0 — A 1 0 4

Model type

Code	Model type
111	Single unit
12A	Dual unit for vol.

Shaft type

Code	Shaft type
F	Flat
S	Slotted

Length of the shaft (L₁) (mm)

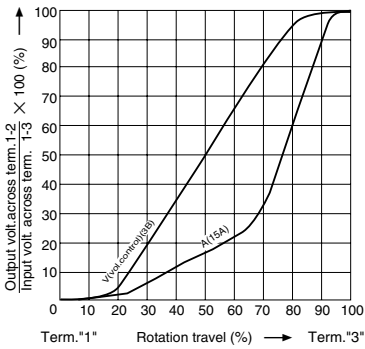
Code	Length of the shaft	Code	Length of the shaft
15	15	25	25
20	20	30	30

Detent

Code	Detent	Code	Detent
C0	Without	31	31
C1	Center	41	41
21	21		

Resistance taper

Code	Resistance taper
A	15A
V	3B



Total resistance

Code	Total resistance (kΩ)	Code	Total resistance (kΩ)
502	5	503	50
103	10	104	100
203	20	254	250

Note

Shows the specification recommended by us.

Dimensions

Unit:mm

No.	Model	Style	PC board mounting hole dimensions (Viewed from mounting side)
1	Single-shaft, single-unit RK27111		
2	Single-shaft, dual-unit RK27112	L₁ 20 25	
3	Single-shaft, dual-unit RK27112	L₁ 20 25	

Products Specifications

Model			RK20B	RK25T	RK271	RK501
Items						
Operating temperature range			−10℃ to +105℃	−10℃ to +60℃	−10℃ to +70℃	
Electrical performance	Total resistance tolerance		±20%			
	Rated power		0.06W	0.05W		0.1W
	Maximum operating voltage		20V DC	5V DC	30V AC	150V AC
	Residual resistance				R≤10kΩ 20Ω max. 10kΩ<R≤50kΩ 30Ω max. 50kΩ<R 0.1% or less of nominal total resistance	
	Maximum attenuation (Volume control)				5kΩ≤R<10kΩ 70dB min. 10kΩ≤R<50kΩ 80dB min. 50kΩ≤R<100kΩ 90dB min. 100kΩ≤R 100dB min.	120dB min.
	Insulation resistance		100MΩ min. 250V DC		100MΩ min. 500V DC	
	Voltage proof		1 minute 300V AC		1 minute 500V AC	
Mechanical performance	Total rotational angle		360°	300±5°	300±3° Motor-driven 300±5°	300±3°
	Rotational torque (mN·m)		20 to 80	0.5 to 7.5	5 to 35 Motor-driven 15 to 45	13 to 43
	Stopper strength (N·m)		—	0.5	0.9	1.5
	Push-pull strength		100N max.			150N 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.			
		Dip soldering (Dip available products)	260±5℃ 4±1s			
Endurance	Operating life		15,000 cycles	100,000 cycles	15,000 cycles	
Environmental test	Cold		−10℃ for 96h			
	Long-term heat resistance		+105℃ for 96h	+70℃ for 96h		
	Moisture resistance		+40±2℃, 90 to 95%RH for 96h			

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Metal Shaft

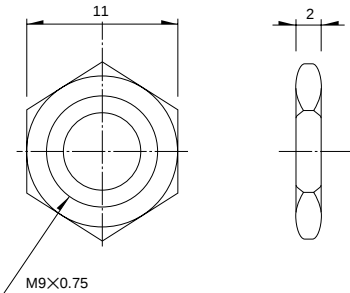
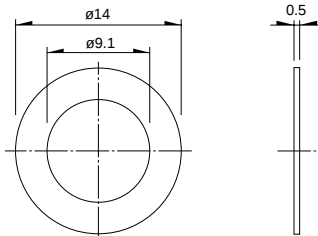
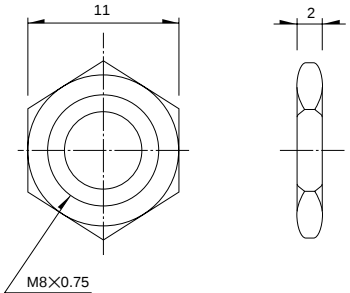
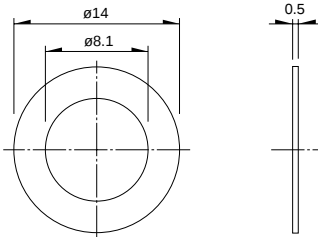
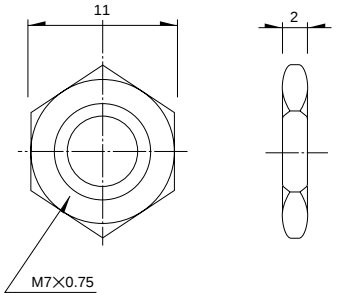
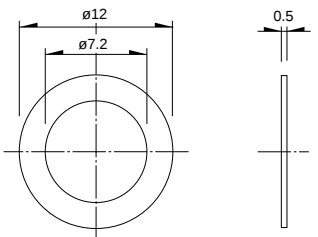
Insulated Shaft

Knob Operating

Attached Parts

These parts are attached to the following products.

Unit:mm

Applicable products	Bearing screw diameter	Hexagonal nut	Flat washer
RK09L RK168 RK097	M9		
RK271	M8		
RK097 RK098 RK163	M7		
RK097 RK098	M6	