

Metal Shaft Potentiometer 27mm Size Metal Shaft Type

RK27 Series



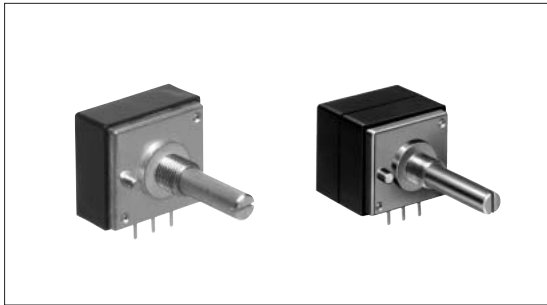
Featuring superb operational feel and high-performance volume.

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Rotary Sensors
Linear 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

Typical Specifications

Items	Specifications
Total resistance tolerance	±20%
Maximum operating voltage	30V AC
Total rotational angle	300±3°
Rotational torque	5 to 35 mN·m
Operating life	15,000 cycles
Operating temperature range	-10°C to +70°C

Metal Shaft

Insulated Shaft

Knob Operating

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	Flat				20	Without	100	100	2		
		RK27112A00CC		25											
		RK27112A0A16	20	25					Without				100	100	3
		RK27112A00B9	25												


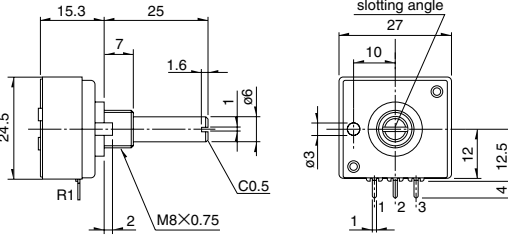
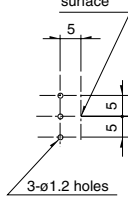

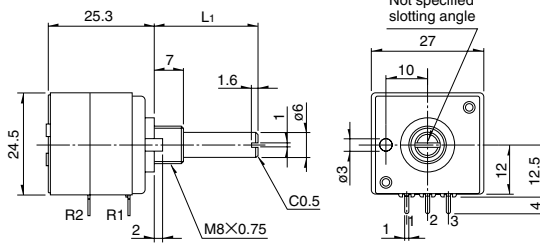
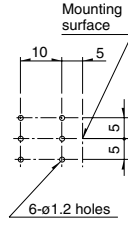

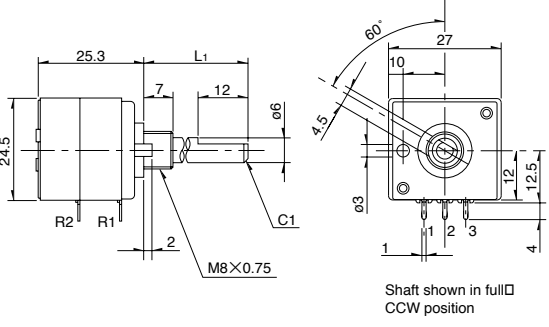
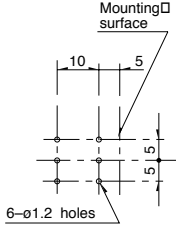
Note

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 varieties, see P.38
For products specifications, see P.46, 47

■ Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)
1	<p>Single-shaft, single-unit RK27111</p> 		
2	<p>Single-shaft, dual-unit RK27112</p> 	<p style="border: 1px solid black; padding: 2px; display: inline-block;">L₁ 20 25</p> 	
3	<p>Single-shaft, dual-unit RK27112</p> 	<p style="border: 1px solid black; padding: 2px; display: inline-block;">L₁ 20 25</p> 	

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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	—60dB to 0dB within 3dB —80dB to —60dB within 5dB possible depending on total resistance and taper.
Single-shaft, dual-unit	RK27112			
Single-shaft, quad-unit	RK27114			

Total Resistance Variety

Total resistance (kΩ)	10	20	50	100	250

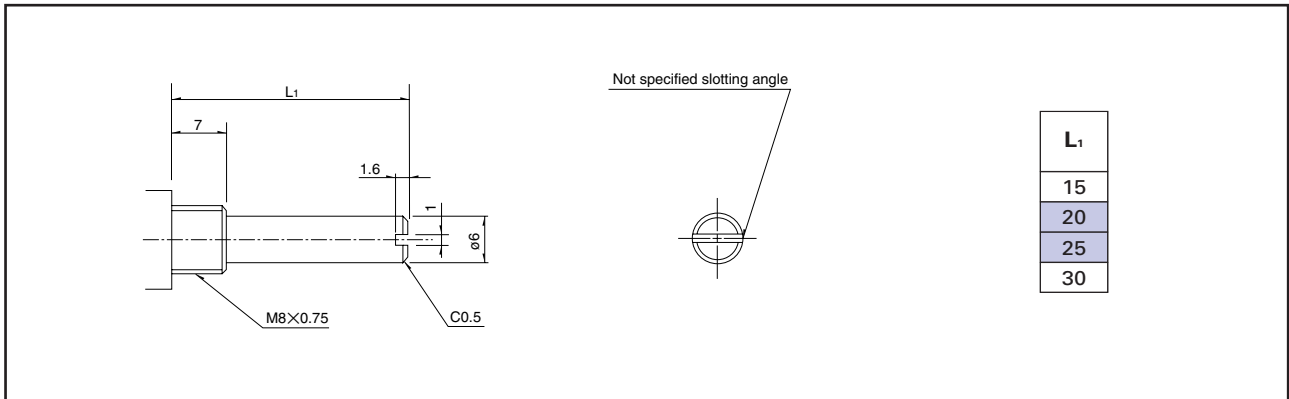
Resistance Taper

Resistance taper	15A	3B

Dimensions of Shaft

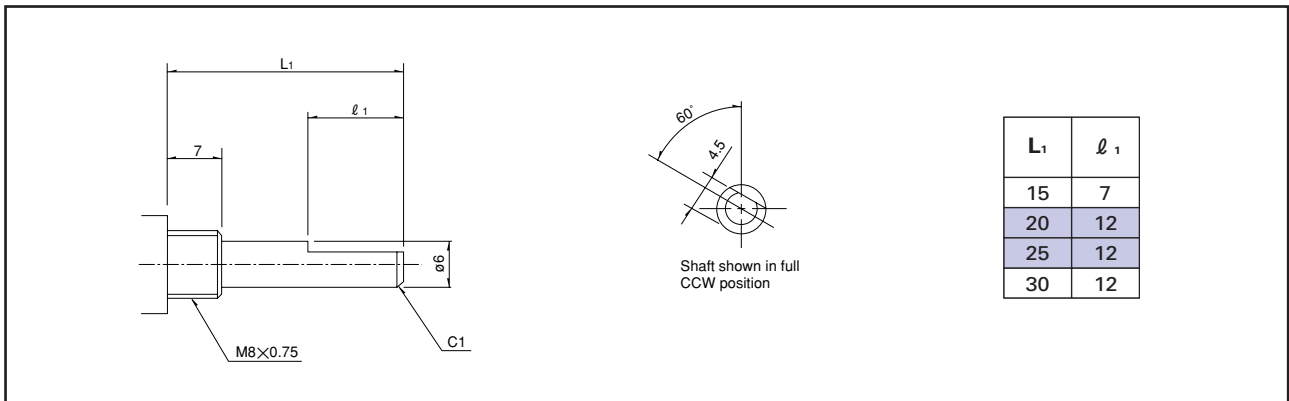
1 Slotted type

Unit:mm



2 Flat type

Unit:mm



Note

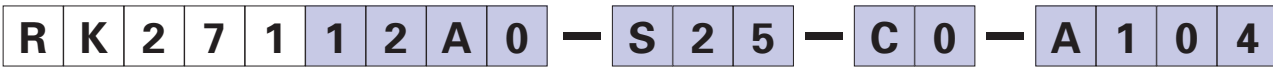
Shows the specification recommended by us.

For attached parts, see P.48
For resistance taper, see P.39, 199

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



Model type

Code	Model type
111	Single unit
112	Single unit, with detent
12A	Dual unit for vol.

Shaft type

Code	Shaft type
F	Flat
S	Slotted

Length of the shaft (L₁) (mm)

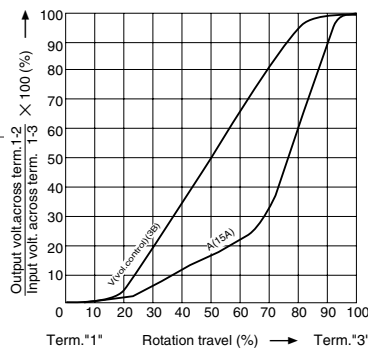
Code	Length of the shaft	Code	Length of the shaft
15	15	25	25
20	20	30	30

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.

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Products Specifications

Items		Model		RK20B	RK25T	RK271	RK501
Operating temperature range		-10°C to +105°C		-10°C to +60°C		-10°C to +70°C	
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°C max. 3s max.				
Dip soldering (Dip available products)		260±5°C, 4±1s			—		260±5°C, 4±1s
Endurance	Operating life	15,000 cycles		100,000 cycles		15,000 cycles	
Environmental test	Cold	-10°C for 96h					
	Long-term heat resistance	+105°C for 96h		+70°C for 96h			
	Moisture resistance	+40±2°C, 90 to 95%RH for 96h					

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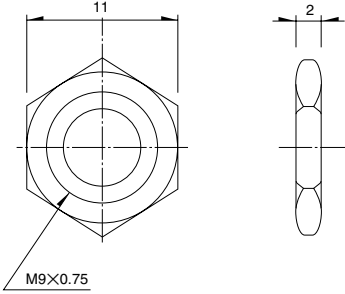
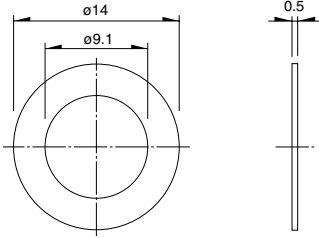
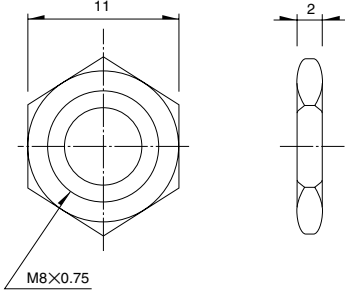
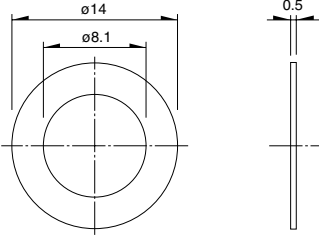
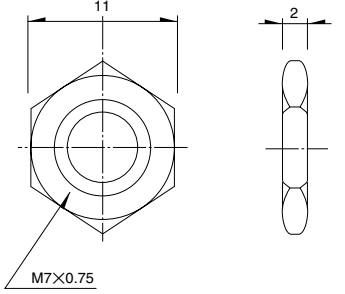
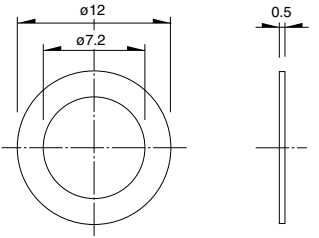
Insulated Shaft

Knob Operating

Attached Parts

These parts are attached to the following products.

Unit:mm

Applicable products	Bearing screw diameter	Hexagonal nut	Flat washer
Rotary Potentiometers Slide Potentiometers Multi Control Devices Rotary Sensors Linear Sensors RK09L RK168 RK097	M9		
Metal Shaft Insulated Shaft Knob Operating RK271	M8		
RK097 RK098 RK163	M7		
RK097 RK098	M6	