

Metal Shaft Potentiometer 50mm Size Metal Shaft High-quality-audio Type

RK50 Series



High sound quality, good response and high grade for high end audio devices.

Rotary Potentiometers

Slide Potentiometers



Typical Specifications

Items	Specifications
Total resistance tolerance	± 20%
Maximum operating voltage	150V AC
Total rotational angle	300 ± 3 °
Rotational torque	13 to 43mN·m
Operating life	15,000cycles
Operating temperature range	- 10 to + 70

Metal Shaft

Insulated Shaft

Knob Operating

Product Line

Number of resistor elements	Mounting direction	Shaft type	Length of the shaft (mm)	Center detent	Total resistance (k)	Resistance taper	Minimum order unit (pcs.)	Products No.	Drawing No.
Dual-unit	Horizontal type	Slotted	25	Without	100	15A	1	RK50112A0004	1
Quad-unit			30		50			RK50114A0001	2

Dimensions

Unit:mm

No.	Photo	Style
1	<p>Single-shaft, dual-unit RK50112</p>	<p>Not specified slotting angle</p> <p>Circuit diagram</p> <p>Mounting surface</p> <p>Mounting hole detail viewed from mounting side</p>
2	<p>Single-shaft, quad-unit RK50114</p>	<p>Not specified slotting angle</p> <p>Circuit diagram</p> <p>Mounting surface</p> <p>Mounting hole detail viewed from mounting side</p>

Product Varieties

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

Total Resistance Variety

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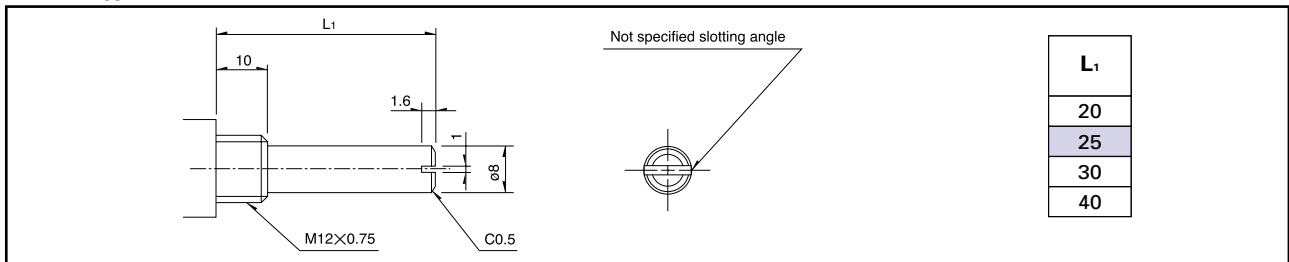
Resistance Taper

Resistance taper	15A	3B
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Dimensions of Shaft

Slotted type

Unit:mm



Note






marked are specifications recommended by ALPS.

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Refer to P.502 for resistance taper.

List of Varieties

Type	20mm size metal shaft	27mm size metal shaft	50mm size metal shaft high-quality-audio	Rotary motor-driven		
Number of drive shafts	Single-shaft					
Model	RK203 / EC20A	RK2711	RK5011 A	RK1681 / MG0	RK2711 MC0	
Photo						
Fixing method of bushing	The bushing can be fastened by use of screws	Bushing screw clamp	The bushing can be fastened by use of screws			
Terminal mounting	Vertical type	Horizontal type				
Attached switch	Without					
Gang error applicable to Dual-unit parts for audio volume control purposes	—	- 60dB to 0dB 3dB max.	- 100dB to 0dB 2dB max.	- 40dB to 0dB 3dB max.	- 60dB to 0dB 3dB max.	
Solder heat resistance	Manual soldering	300 max. 3s max.	350 max. 5s max.	350 ± 10 , 5 ⁺¹ s	350 max. 3s max. Motor terminal: 350 ⁰ max 2s max.	
	Dip soldering	260 ± 5 , 5 ± 1s	—	260 ± 5 , 5 ± 1s	—	
	Reflow soldering	—				
Operating temperature range	- 30 to + 80		- 10 to + 70			
Electrical performance	Rated power	0.05W		0.1W	0.05W	
	Residual resistance	—	R 10k 20 max. 10k < R 50k 30 max. 50k < R Nominal total resistance of 0.1% or less	—	R 10k 20 max. 10k < R 50k 30 max. 50k < R Nominal total resistance of 0.1% or less	
	Maximum attenuation (Volume control)	—	5k R < 10k 70dB min. 10k R < 50k 80dB min. 50k R < 100k 90dB min. 100k R 100dB min.	120dB min.	5k R < 10k 70dB min. 10k R < 50k 80dB min. 50k R < 100k 90dB min. 100k R 100dB min.	
	Insulation resistance	100M min. 250V DC	100M min. 500V DC		100M min. 250V DC	100M min. 500V DC
	Voltage proof	300V AC for 1minute	500V AC for 1minute		300V AC for 1minute	500V AC for 1minute
Mechanical performance	Stopper strength(N·m)	0.5	0.9	1.5	0.9	
	Push-pull strength	100N max.		150N max.	100N 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				
Environmental performance	Cold	- 40 ± 2 for 192h	- 30 ± 3 for 96h	- 20 ± 3 for 240h	- 20 ± 2 for 96h	- 30 ± 3 for 96h
	Dry heat	85 ± 2 for 192h	70 ± 2 for 96h	70 ± 2 for 240h	70 ± 2 for 96h	
	Damp heat	60 ± 3 , 90 to 95%RH for 240h	40 ± 2 , 90 to 95%RH for 96h	60 ± 2 , 90 to 95%RH for 240h	40 ± 2 , 90 to 95%RH for 96h	
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