

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

RK50 Series



Better tone, better characteristics and high definition and suitable for high-grade.

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Rotary Sensors
Linear Sensors



Features

- Employment of low-distortion carbon ink provides high fidelity sound reproduction.
- Gold plated multi contact point wire brushes reduce distortion in sound reproduction.
- Employment of low resistance ink provides a gang error of ± 1 dB for the range between -100 and 0 dB.
- Solid brass lathe-carved case improves channel separation performance.
- Employment of mirror surface-treated resistor materials reduces slide noise.
- Designed torque mechanism adds a good operational feel.

Applications

- Volume control in quality audio components such as amplifiers

Metal Shaft

Insulated Shaft

Knob Operating

Typical Specifications


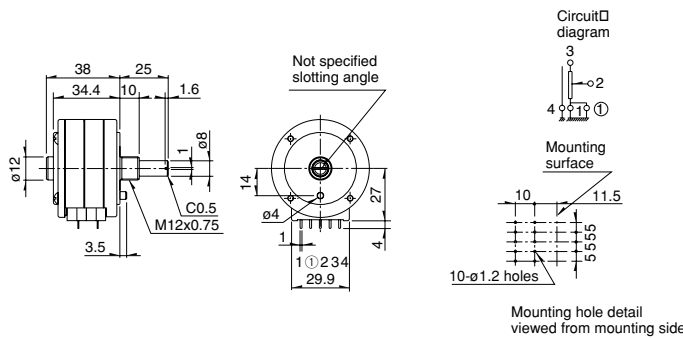

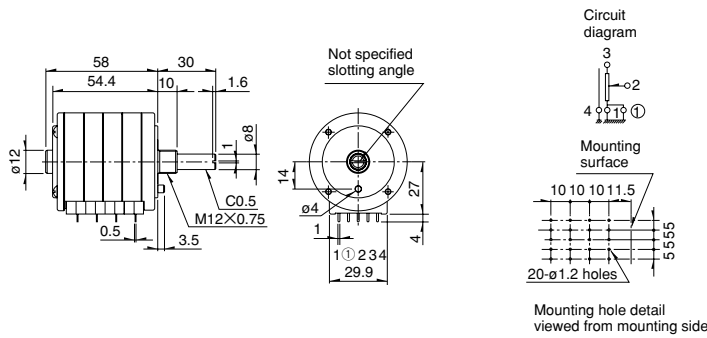
Items	Specifications
Total resistance tolerance	$\pm 20\%$
Maximum operating voltage	150V AC
Total rotational angle	$300 \pm 3^\circ$
Rotational torque	13 to 43 mN·m
Operating life	15,000 cycles
Operating temperature range	-10°C to $+70^\circ\text{C}$

Recommended Products List

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

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Product Varieties

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

Total Resistance Variety

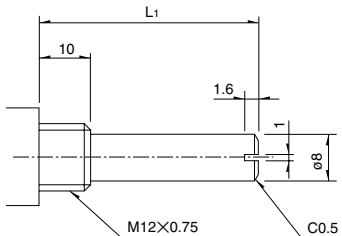
Total resistance (kΩ)	10	20	50	100	250
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Resistance Taper

Resistance taper	15A	3B
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Dimensions of Shaft
Slotted type

Unit:mm

 <p>Not specified slotting angle</p>	<table border="1"> <tr> <td>L₁</td> </tr> <tr> <td>20</td> </tr> <tr> <td>25</td> </tr> <tr> <td>30</td> </tr> <tr> <td>40</td> </tr> </table>	L ₁	20	25	30	40
L ₁						
20						
25						
30						
40						

Note

Shows the specification recommended by us.

For products specifications, see P.46, 47
For resistance taper, see P.199

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	—		$R \leq 10k\Omega$ 20Ω max. $10k\Omega < R \leq 50k\Omega$ 30Ω max. $50k\Omega < R$ 0.1% or less of nominal total resistance		—	
	Maximum attenuation (Volume control)	—		$5k\Omega \leq R < 10k\Omega$ 70dB min. $10k\Omega \leq R < 50k\Omega$ 80dB min. $50k\Omega \leq R < 100k\Omega$ 90dB min. $100k\Omega \leq R$ 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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