



# 50mm Size Metal Shaft High-quality-audio Type / Other Specifications

In addition to the Product Line, we accommodate the following specifications. Combinations not included in the Product Line are treated as semi-standard products.

## Total Resistance Variety

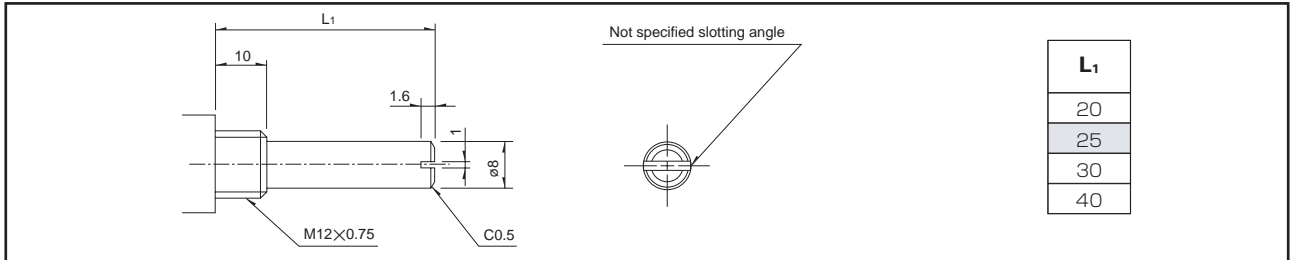
Total resistance (kΩ)	10	20	50	100
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## Resistance Taper

Resistance taper	15A	3B
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## Dimensions of Shaft

Slotted type

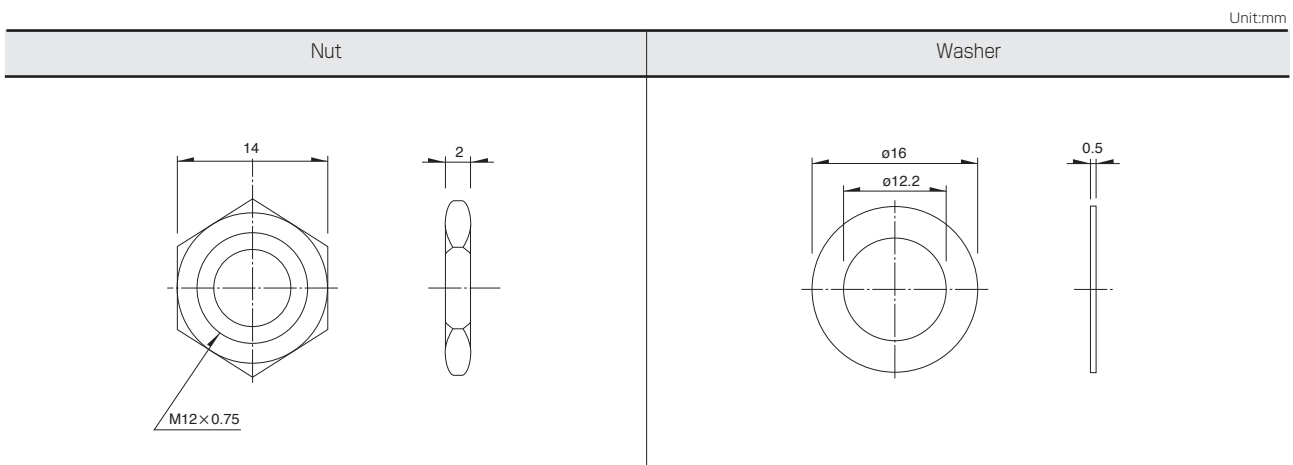










### Note

Marked are specifications recommended by Alps Alpine.

# 50mm Size Metal Shaft High-quality-audio Type / Attached Parts

The following parts are included with the product.



Type	16mm size	27mm size	50mm size	Rotary motor-driven		
Series	RK163	RK271	RK501	RK168		
Single-shaft						
Number of resistor elements	Single/dual	Single/dual/quad	Dual/quad			
Photo						
Control part orientation	Horizontal					
Fixing method of bushing	Bushing screw clamp					
Operating temperature range	-10°C to +70°C					
Operating life	15,000 cycles					
Available for automotive use	—	—	—	—		
Life cycle (availability)						
Electrical performance	Total resistance (k Ω)	5, 10, 20, 50, 100, 200	5, 10, 20, 50, 100, 250	10, 20, 50, 100		
	Resistance taper	15A, 1B, 3B, 15C		15A, 3B		
	Rated Power	0.1W 0.05W (15A)		0.05W	0.1W	0.05W
	Residual resistance	R≤10kΩ 20Ω max. 10kΩ<R≤50kΩ 30Ω max. 50kΩ<R Nominal total resistance of 0.1% or less		R≤10kΩ 20Ω max. 10kΩ<R≤50kΩ 30Ω max. 50kΩ<R Nominal total resistance of 0.1% or less		—
	Maximum attenuation (Volume control)	5kΩ≤R< 10kΩ 70dB min. 10kΩ≤R< 50kΩ 80dB min. 50kΩ≤R<100kΩ 90dB min. 100kΩ≤R 100dB min.		5kΩ≤R< 10kΩ 70dB min. 10kΩ≤R< 50kΩ 80dB min. 50kΩ≤R<100kΩ 90dB min. 100kΩ≤R 100dB min.		120dB min.
	Gang error applicable to Dual-unit parts for audio volume control purposes	-40dB to 0dB 3dB max.		-70dB to -60dB 3dB max. -60dB to 0dB 2dB max.		-100dB to 0dB 3dB max. ※
	Insulation resistance	100MΩ min. 500V DC			100MΩ min. 250V DC	
	Voltage proof	500V AC for 1 minute			300V AC for 1 minute	
	Center-taps	Without				
Mechanical performance	Detent	Without, Cente	Without, Center, 21, 31, 41	Without		
	Stopper strength	0.9 N·m		1.5 N·m	0.9 N·m	
	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 for 2 hours respectively				
Shaft style	Serrated type, Flat type, Slotted type		Slotted type, Flat type	Slotted type	Flat type	
Terminal style	Insertion, Lead		Insertion			
Attached switch	—					
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- Rotary Potentiometers
- Slide Potentiometers
- Metal Shaft
- Insulated Shaft
- Knob Operating
- Through Shaft Type
- Ring Type

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**Note**

- Indicates applicability to some products in the series.
- ※ Gang error of 4-gang (quad) model: - 100dB to 0dB 3dB max. (applies only between R1 and R2 and between R3 and R4)

# Metal Shaft Potentiometers / Soldering Conditions

## ■ Reference for Manual Soldering

Series		Tip temperature	Soldering time	No. of solders
<b>RK09L, RK097</b>		350°C max.	3s max.	1 time
<b>RK271</b>		350°C max.	5s max.	1 time
<b>RK501</b>		350±10°C	5 <sup>+1</sup> <sub>0</sub> s	1 time
<b>RK163</b>		350°C max.	5s max.	1 time
<b>RK168</b>	<b>Potentiometer terminal</b>	300°C max.	3s max.	1 time
	<b>Motor terminal</b>	350°C max.	2s max.	

## ■ Reference for Dip Soldering

Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
<b>RK09L, RK097</b>	100°C max.	2 min. max.	260±5°C	5±1s	2 times max.
<b>RK501</b>	120±10°C	2 min. max.	260±5°C	5±1s	2 times

Rotary Potentiometers

Slide Potentiometers

Metal Shaft

Insulated Shaft

Knob Operating

Through Shaft Type

Ring Type

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