











Metal Shaft Potentiometers

List of Varieties

Type	9mm size				11mm size
Series	RK09L		RK0971	RK0972	RK119
	Single-shaft			Dual-shaft	Single-shaft
Number of resistor elements	Single/dual			Dual	Single
Photo					
Terminal mounting	Horizontal	Vertical	Horizontal		Vertical
Fixing method of bushing	Screw				Guide
Operating temperature range	-10°C to +70°C		-20°C to +70°C -40°C to +85°C (Vehicle-compatible)		-40°C to +85°C
Operating life	15,000 cycles				
Available for automotive use	—	—	○	○	○
Life cycle (availability)					
Mechanical performance	Total resistance (kΩ)	10, 20, 50, 100			10
	Resistance taper	15A, 1B, 3B, 15C			1B
	Rated Power	0.05W			
	Residual resistance	$R \leq 10k\Omega$ 20Ω max. $10k\Omega < R < 50k\Omega$ 30Ω max. $50k\Omega \leq R$ Nominal total resistance of 0.1% or less			$R \leq 10k\Omega$ 50Ω max.
	Maximum attenuation (Volume control)	$5k\Omega \leq R < 10k\Omega$ 70dB min. $10k\Omega \leq R < 50k\Omega$ 80dB min. $50k\Omega \leq R$ 90dB min.	$5k\Omega \leq R < 10k\Omega$ 70dB min. $10k\Omega \leq R < 50k\Omega$ 80dB min. $50k\Omega \leq R < 100k\Omega$ 90dB min. $100k\Omega \leq R$ 100dB min.	—	
	Gang error applicable to Dual-unit parts for audio volume control purposes	-40dB to 0dB 3dB max.			—
	Insulation resistance	100MΩ min. 250V DC			
	Voltage proof	300V AC for 1minute			300V AC for 1 minute or 360V for 2s
	Center-taps	Without	Without / With		Without
Electrical performance	Detent	Without, Center	Without, Center, 11, 31		Without
	Stopper strength	0.5N·m	0.5N·m (With push-lock mechanism: 0.4N·m)		0.5N·m
	Push-pull strength	80N 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			
Shaft style	Flat type			Inner-shaft: flat type Outer-shaft: slotted type	Flat type
Terminal style	Insertion				Reflow
Attached switch	—	—	Rotary switch Push-on push-off switch Push-on switch Push-lock switch	—	Push-on switch
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Notes

- For the switch attached, the single-shaft or inner shaft of the dual-shaft type can be chosen.
- The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- Indicates applicability to some products in the series.

Metal Shaft Potentiometers

List of Varieties

Type	16mm size	20mm size	27mm size	50mm size	Rotary motor-driven	
Series	RK163	RK203	RK271	RK501	RK168	
	Single-shaft					
Number of resistor elements	Single/dual	Single	Single/dual/quad	Dual/quad	Dual/quad/5-ganged/6-ganged	
Photo						
Terminal mounting	Horizontal	Vertical	Horizontal			
Fixing method of bushing	Bushing screw clamp					
Operating temperature range	-10°C to +70°C	-40°C to +85°C	-10°C to +70°C			
Operating life	15,000 cycles	30,000 cycles	15,000 cycles			
Available for automotive use	—	○	—	—	—	
Life cycle (availability)						
Electrical performance	Total resistance (kΩ)	5, 10, 20, 50, 100, 200	10	5, 10, 20, 50, 100, 250	10, 20, 50, 100	
	Resistance taper	15A, 1B, 3B, 15C	B	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 < 3MΩ 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.	5kΩ ≤ R < 10kΩ 70dB min. 10kΩ ≤ R < 50kΩ 80dB min. 50kΩ ≤ R < 100kΩ 90dB min. 100kΩ ≤ R 100dB 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 2dB max.	-60dB to -40dB 5dB max. -40dB to 0dB 3dB max.
	Insulation resistance	100MΩ min. 500V DC	10MΩ min. 250V DC	100MΩ min. 500V DC		100MΩ min. 250V DC
	Voltage proof	500V AC for 1minute	300V AC for 1minute	500V AC for 1minute		300V AC for 1minute
	Center-taps	Without				
Mechanical performance	Detent	Without, Center, 21, 31, 41	17	Without, Center, 21, 31, 41	Without	
	Stopper strength	0.9 N·m	0.5 N·m	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	Flat type	Slotted type, Flat type	Slotted type	Flat type	
Terminal style	Insertion, Lead	Insertion				
Attached switch	—	—	—	—	—	
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Note

○ Indicates applicability to some products in the series.

Insulated Shaft Potentiometers

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Type	9mm size			11mm size	12mm size		14mm size	
Series	RK09K11 RK09D11	RK09K12	RK09Y11L	RK11K	RK12L12	RK12L115	RK14K	
	Single-unit	Dual-unit	Single-unit	Single-unit	Dual-unit	Single-unit	Dual-unit	
Photo								
Terminal mounting	Vertical / Horizontal		Horizontal	Vertical / Horizontal		Vertical	Vertical / Horizontal	
Bushing	Without			With / Without	Without	With	With / Without	
Operating temperature range	-10°C to + 70°C					-40°C to + 85°C	-10°C to + 70°C	
Operating life	5,000 cycles	10,000 cycles	1,000,000 cycles	15,000 cycles				
Available for automotive use	—	—	—	—	—	●	—	
Life cycle								
Electrical performance	Total resistance (k Ω)	5, 10, 20, 50, 100, 200		10	5, 10, 20, 50, 100, 200		5, 10, 20, 50, 100	5, 10, 20, 50, 100, 200
	Resistance taper	15A, 1B, 3B, 15C		B	15A, 1B, 3B, 15C		15A, 1B, 3B	15A, 1B, 3B, 15C
	Total resistance tolerance	±20%	±30%	±30%	±20%			
	Rated power	0.05W	0.03W	0.01W	0.05W			
	Maximum operating voltage	50V AC 20V DC	50V AC for AC only	50V AC 5V DC	50V AC 20V DC	50V AC for AC only	50V AC 20V DC	50V AC for AC only
	Gang error	—	-40dB to 0dB 3dB max.	—	—	Volume control -40dB to 0dB 3dB max. For tone control within 2dB at center	—	Volume control -40dB to 0dB 3dB max. For tone control within 2dB at center
	Insulation resistance	100MΩ min. 250V DC			100MΩ min. 500V DC	100MΩ min. 250V DC		
	Voltage proof	250V AC for 1minute			500V AC for 1minute	300V AC for 1minute		
	Center-taps	Without			Without / With	Without		Without / With (Volume control)
Mechanical performance	Detent	Without, Center		Without	Without, Center	Without	Custom	Without, Center
	Stopper strength	0.3N·m		—	Without bushing 0.5N·m With bushing 0.6N·m	0.5N·m		0.6N·m
	Push-pull strength	50N max.		30N max.	80N 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						
Shaft configuration	Flat type, Knob type, Screwdriver type			Flat type				
Terminal style	Insertion							
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






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Note

● Indicates applicability to all products in the series.

Knob Operating Type Potentiometers

List of Varieties

Type	Without knob type			With knob type				
Series	RK08H1 □ 1	RK08H1 □ 2	RK08H1 □ 3	RK10J1 □ E	RK10J1 □ R	RK14J1 □ A	RK14J1 □ R	
	Single-unit/Dual-unit	Single-unit/Dual-unit	Single-unit/Dual-unit	Single-unit/Dual-unit	Single-unit/Dual-unit	Single-unit/Dual-unit	Single-unit/Dual-unit	
Photo								
Terminal orientation	Vertical	Back-to-back mounting	Reflow type	—	—	—	—	
Operating temperature range	-10°C to +60°C					-25°C to +70°C		
Operating life	Without detent 10,000 cycles With detent 5,000 cycles			10,000 cycles				
Automotive use	—	—	—	—	—	—	—	
Life cycle								
Electrical performance	Total resistance (k Ω)	5, 10, 20, 50, 100		10, 20, 50, 100				
	Resistance taper	15A, 1B, 3B, 15C						
	Rated power	0.03W						
	Insulation resistance	—	—	—	100MΩ min. 100V DC			
	Voltage proof	—	—	—	100V AC for 1minute			
Mechanical performance	Detent	Without / Center detent			Without			
	Stopper strength	0.1N			70mN·m			
	Push-pull strength	10N			5N			
	Vibration	—	—	—	—	—	※	
Terminal style	Insertion		Reflow	Insertion	Reflow	Insertion	Reflow	
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Residual Resistance

※ Applies only to products with specified residual resistance

Nominal total resistance	※ Residual resistance
100kΩ ≥ R ≥ 50kΩ	0.1% or less of nominal total resistance
50kΩ > R > 10kΩ	30Ω or less
10kΩ ≥ R	20Ω or less

Maximum Attenuation

Nominal total resistance	Maximum attenuation
R ≥ 100kΩ	90dB min.
100kΩ > R ≥ 50kΩ	80dB min.
50kΩ > R ≥ 10kΩ	70dB min.
10kΩ > R	60dB min.

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※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