11mm Size Metal Shaft Low-profile Potentiometer

RK117 Series

3 types available: without switch, with 0.5mm travel or 1.5mm travel push-on switch.

Potentiometers

Slide Potentiometers

Trimmer Potentiometers

Multi Control

Devices

Metal

Shaft

Shaft

Knob

28

Insulated

Operating



Features

- Low-profile (only 7.55mm in height) with a 1.5mm travel push-on switch.
- Rear mounting configuration permits direct mounting on the front side of a PC board.
- Without detent, with center detent, with 41 detents are available.



Applications

- Sound volume, tone and balance controls for car audio systems and other audio players
- Controls for accessories including dimmers and wipers in vehicle cabins
- Level controls for communication devices including transceivers
- Controls for home appliances

Typical Specifications

Items	Specifications
Total resistance tolerance	±20%
Maximum operating voltage	50V AC
Total rotational angle	300 +10°
Rotational torque	2 to 25 mN∙m
Operating life	15,000 cycles
Operating temperature range	−10°C to +70°C

Recommended Products List Single-shaft without switch type

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.
		RK117111000N		20	Without	10	1B	- 100	
	Vertical type	RK1171110W04	- Flat		With	10			1
Single-unit		RK1171110W0D			Without	20	15A		
Single-unit		RK1171110W0L			With	50			
		RK1171110W03			\A('.)	10	1B		2
		RK117111000A			Without	20			2

Recommended Products List

Single-shaft push-on (0.5mm stroke) switch type

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.
Single-unit	Vertical	RK117111400C	Flat	20	Without	- 10	1B	100	3
Single-unit	type	RK1171114D01	riai	20	With				3

Single-shaft push-on (1.5mm stroke) switch type

Number of resistor elem		Mounting direction	Products No.	Shaft type	Length of the shaft (mm)	Number of detent	Total resistance (k Ω)	Resistance taper	Minimum packing unit (pcs.)	Drawing No.
Single-u	nit	Vertical type	RK1171114V02	Flat	15	41	50	1B	100	4

Note

Additional products other than the above recommended products are available. For inquiries, contact our sales department.

Product Specifications

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

■ Total Resistance Variety

Total resistance (kΩ)	10	20	50
-----------------------	----	----	----

Resistance Taper

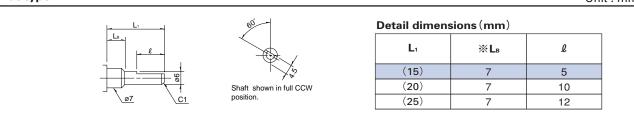
Resistance taper	15A	1B	3B
------------------	-----	----	----

Detent and Attached switch

Variety		Detent		Attached switches travel
Single-shaft, Single-unit	Without	Center	41	0.5, 1.5mm

Dimensions of Shaft

Flat type Unit: mm



Note

XLB is only available in 7mm, and does not support M7 (with screws).

Potentiometers Slide **Potentiometers** Trimmer **Potentiometers**

Multi Control Devices

Position Sensors

Metal **Shaft**

Insulated Shaft Knob

Operating



Specification for Switch

Mechanical Characteristics

Changeover torque Changeover angle Switch type Pole-position Rating (Operating force) (travel) (mm) 5R4411 0.5 6±3N Momentary SPST 3A 16V DC push 5R4511 5±2N 1.5

Potentiometers Slide

Potentiometers

Trimmer Potentiometers

Multi Control **Devices**

Position Sensors

Electrical Characteristics

4U.com Model	Cor	ntact resistance	Insulation resistance	Voltage proof	
5R4411, 5R4511	100m Ω max.	Measured by a 1A 5V DC voltage drop method.	$100 M\Omega$ min. Measured with a 250V DC megger.	300V AC 1 minute min.	

The switch under a rated resistive load shall be subjected to a total of 10,000 cycles

of operation at a speed of 600 to 1,000 cycles per hour.

The contact resistance after testing should not exceed $200 m\,\Omega$.

Durability

Operating life

under load

Metal Shaft

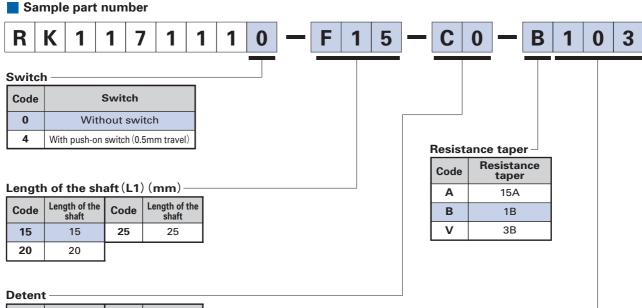
Insulated Shaft

Knob Operating

Note The operating current should be 10mA or greater.

Orders other than recommended products

Specify orders for varieties that are not listed in the Recommended Product List, referring to the following example.



Code	Detent	Code	Detent
C0	Without	41	41
C1	Center		
		•	

Total resistance

Code	Total resistance $(\mathbf{k}\Omega)$	Code	Total resistance $(\mathbf{k}\Omega)$
103	10	503	50
203	20		

- Shows the specification recommended by us.
- 2. Please specify if you need a 1.5mm travel push-on switch.

DimensionsUnit: mm

Dir	mensions		Unit : mm
No.	Model	Style	PC board mounting hole dimensions (Viewed from mounting side)
1 ei4U.con	Single-shaft, single-unit RK1171110	Mounting surface 20.3 (15) 3.5 7 5 4 11,7 12,3 Shaft shown in full CCW position	11.1 1.8 90 7 3-Ø1 holes
2	Single-shaft, single-unit RK1171110	Mounting surface 25.3 (20) 3.5 7 10 11.7 12.3 Shaft shown in full CCW position	11.1 1.8 9.2 2 3-Ø1 holes
3	Single-shaft, single unit with push-on switch travel 0.5mm RK1171114-5R4411	Mounting surface 26.5 Switch travel (20) 0.5 Switch travel (20) 0.5 Switch travel (20) 11.7 Switch travel (20) 12.3 Shaft shown in full CCW position	11.1 5 2 2 2 5 5-Ø1 holes
4	Single-shaft, single unit with push-on switch travel 1.5mm RK1171114-5R4511	Mounting surface 22.55 Switch travel 3.5 7,55 7 1.5 Switch travel 3.6 07 C 11.7 Shaft shown in full CCW position	11.1 5 1.8 2 2 3 7 5-ø1 holes

Rotary Potentiometers

Slide Potentiometers

Trimmer Potentiometers

Multi Control Devices

Position Sensors

Metal Shaft

Insulated Shaft

Knob Operating

Products Specifications

Rotary Potentiometers Slide Potentiometers

Trimmer Potentiometers

Multi Control Devices

Position Sensors

Metal Shaft

Insulated Shaft

Knob Operating

				RK097					
Items		Model	RK09L	RK098	RK117	RK16			
Operating temperature range			−10°C to +70°C						
	resista	Total ince tolerance		±2	0%				
	Rat	ted power		0.0	5W				
i4U.com		laximum ting voltage		50V AC		150V AC			
Electrical		Residual esistance	10kΩ < 50kΩ <	R≤10kΩ 20Ωmax. R≤50kΩ 30Ωmax. R Nominal to	otal resistance of 0.1%	% or less			
performance	att	laximum tenuation ime control)	$\begin{array}{lll} 5k\Omega \leqq R < \ 10k\Omega & 70dB \ min. \\ 10k\Omega \leqq R < 50k\Omega & 80dB \ min. \\ 50k\Omega \leqq R < 100k\Omega & 90dB \ min. \\ 100k\Omega \leqq R & 100dB \ min. \end{array}$						
		sulation sistance		100MΩ min. 500V DC					
	Vol	tage proof		1 minute 500V AC					
	rota	Total tional angle	RK09L 300±5° RK097 300±5°(Axis movement type is 300 ^{+10°} _{-5°}) RK098 300 ^{+10°} _{-5°} 300 ^{+10°}			300±5°			
	Rotat	ional torque	2 to 25mN • m						
	Stop	per strength	0.5N•m (F	0.9N · m (For dual-shaft type, 0.6N · m)					
	Push-	pull strength	80N max. 100N max.						
Mechanical performance	V	ibration	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						
	Sol	lderability	230±5℃, 3±0.5s						
	0.11	Manual soldering		350°C or less and	within 3 seconds				
	Solder heat resistance	Dip soldering (Dip available products)		5 4±1s					
Endurance	Оре	erating life	15,000 cycles						
		Cold	−10°C for 96h						
Environ- mental test		g-term heat esistance		+70°C	for 96h				
		/loisture esistance		+40±2℃, 90 to	95%RH for 96h				