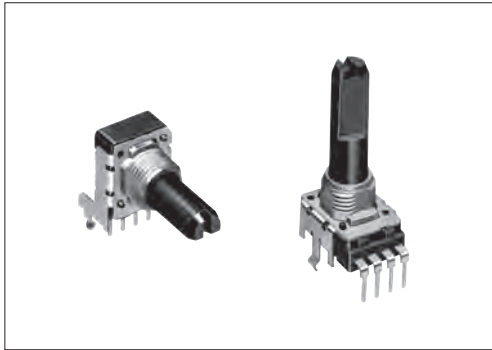


RK11K

1 1 mm Size Insulated Shaft Snap-in Type

A 1 1 mm wide potentiometer for audio, visual, electronic musical instruments and various applications



Typical Specifications

| Items | Specifications |
|-----------------------------|----------------|
| Total resistance tolerance | ±20% |
| Maximum operating voltage | 50V AC, 20V DC |
| Total rotational angle | 300° ±5° |
| Rotational torque | 3 to 20mN·m |
| Operating life | 15,000 cycles |
| Operating temperature range | -10°C to +70°C |

Product Line

| Number of resistor elements | Control part orientation | Shaft type | Length of the shaft LM ₁ (mm) | Center detent | Total resistance (kΩ) | Resistance taper | Minimum order unit (pcs.) | | Products No. | Drawing No. |
|-----------------------------|--------------------------|------------|--|---------------|-----------------------|------------------|---------------------------|--------|--------------|-------------|
| | | | | | | | Japan | Export | | |
| Single-unit (20V DC) | Vertical | Flat | 22.5 | Without | 10 | 15A | 1,000 | 2,000 | RK11K1140AHZ | 1 |
| | | | | With | | 1B | | | RK11K1140097 | |
| | Horizontal | | | Without | | 15A | | | RK11K1120A13 | 2 |
| | | | | With | | 1B | | | RK11K112000P | |

Notes

- Other varieties are also available. Refer to "Other Specifications" (P.320).
- Nut and washer are not attached. Please specify if required.

Packing Specifications

Tray

| Number of packages (pcs.) | | Export package measurements (mm) |
|---------------------------|-------------------------|----------------------------------|
| 1 case / Japan | 1 case / export packing | |
| 1,000 | 2,000 | 543×377×250 |

Dimensions

| No. | Photo | Style | PC board mounting hole dimensions (Viewed from mounting side) |
|-----|-----------------------------------|-------|---|
| 1 | <p>Vertical RK11K114</p> | | |
| 2 | <p>Horizontal RK11K112</p> | | |

Refer to P.320 for other specifications.
 Refer to P.321 for ordering products not listed.
 Refer to P.331 for soldering conditions.

11 mm Size Insulated Shaft Snap-in 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 (k Ω) | 5 | 10 | 20 | 50 | 100 | 200 |
|------------------------|---|----|----|----|-----|-----|

Resistance Taper

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

Tapped Types are Also Available

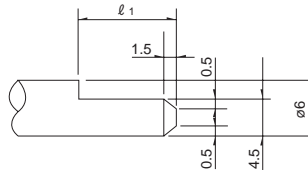
RK11K (single-unit) is also available with tap.

Shaft Variety

Unit:mm

| Style | Horizontal type | | Vertical type | | | | |
|---------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|------|
| | LM ₁ | L ₁ | LM ₁ | L ₁ | LM ₁ | L ₁ | |
| Shaft variety | LM ₁ | 20 | 22.5 | 25 | 27.5 | 30 | 32.5 |
| | L ₁ | 12.5 | 15 | 17.5 | 20 | 22.5 | 25 |
| | ℓ ₁ | 7 | 7 | 12 | 12 | 12 | 12 |
| | L _B | 5 | 5 | 5 | 5 | 5 | 5 |

Detail dimensions



Terminal Layout / Circuit Diagram

| Without tap | With tap |
|-------------|----------|
| | |

Note

Marked are specifications recommended by Alps Alpine.

Refer to P.321 for ordering products not listed.

11 mm Size Insulated Shaft Snap-in Type / Ordering Products Not Listed

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

Sample Part Number

R K 1 1 K 1 1 4 0 — **F 2 2** — **C 0** — **B 1 0 3**

Model type

| Code | Model type |
|------|------------|
| 2 | Horizontal |
| 4 | Vertical |

Shaft type

| Code | Shaft type |
|------|------------|
| F | Flat |

*Only available in flat format.

Length of the shaft LM₁ (mm)

| Code | Length of the shaft | Code | Length of the shaft |
|------|---------------------|------|---------------------|
| 20 | 20 | 25 | 25 |
| 22 | 22.5 | 30 | 30 |
| 27 | 27.5 | 32 | 32.5 |

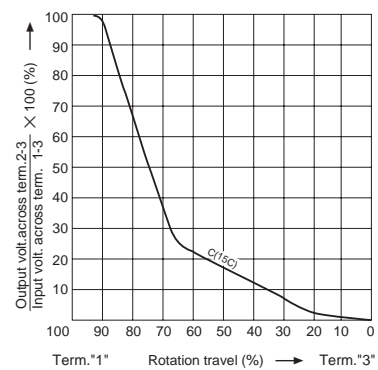
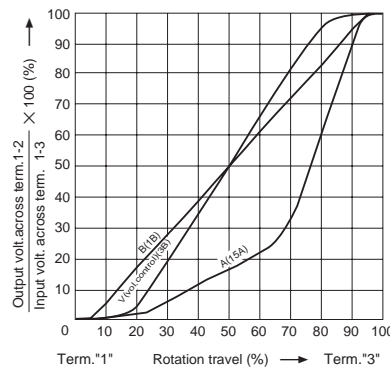
Detent

| Code | Center detent |
|------|---------------|
| C0 | Without |
| C1 | With |

Resistance taper

| Code | Resistance taper | Code | Resistance taper |
|------|------------------|------|------------------|
| A | 15A | C | 15C |
| B | 1B | V | 3B |

B : For tone & general
V : For vol.



Total resistance

| Code | Total resistance (k Ω) | Code | Total resistance (k Ω) |
|------|------------------------|------|------------------------|
| 502 | 5 | 503 | 50 |
| 103 | 10 | 104 | 100 |
| 203 | 20 | 204 | 200 |











Note

Marked are specifications recommended by Alps Alpine.

- Rotary Potentiometers
- Slide Potentiometers
- Metal Shaft
- Insulated Shaft
- Knob Operating
- Through Shaft type
- Ring Type

Insulated Shaft Potentiometers

List of Varieties

| Type | 9mm size | | 11mm size | 12mm size | 14mm size | |
|------------------------------|---|---|---|---|--|------------------------------------|
| Series | RK09K11 RK09D11 | RK09Y11L | RK11K | RK12L12 | RK14K | |
| | Single-unit | Single-unit | Single-unit | Dual-unit | Dual-unit | |
| Photo |  |  |  |  |  | |
| Control part orientation | Vertical / Horizontal | | Horizontal | Vertical / Horizontal | | |
| Bushing | Without | | With | Without | With | |
| Operating temperature range | -10°C to +70°C | | | | | |
| Operating life | 5,000 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 | | |
| | Resistance taper | 15A, 1B, 3B, 15C | B | 15A, 1B, 3B, 15C | | |
| | Total resistance tolerance | ±20% | ±30% | ±20% | | |
| | Rated power | 0.05W | 0.01W | 0.05W | | |
| | Maximum operating voltage | 50V AC 20V DC | 50V AC 5V DC | 50V AC 20V DC | 50V AC for AC only | |
| | Gang error | — | — | — | For volume control -40dB to 0dB 3dB max. For tone control within 2dB max. 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 | 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 | | | | | |
| Page | 313 329 (for Mixers) | 318 | 319 329 (for Mixers) | 322 329 (for Mixers) | 325 329 (for Mixers) | |

| | |
|---|-----|
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| Potentiometers Cautions | 384 |
| Potentiometers Measurement and Test Methods | 386 |
| Potentiometers Resistance Taper | 388 |

Note

● Indicates applicability to all products in the series.

Insulated Shaft Potentiometers / Soldering Conditions

Reference for Manual Soldering

| Series | Tip temperature | Soldering time | No. of solders |
|--|-----------------|----------------|----------------|
| RK09D, RK09K, RK09Y11L, RK11K, RK12L, RK14K | 350°C max. | 3s max. | 1 time |

Reference for Dip Soldering

| Series | Preheating | | Dip soldering | | No. of solders |
|--------------|-------------------------------|--------------|-----------------------|----------------|----------------|
| | Soldering surface temperature | Heating time | Soldering temperature | Soldering time | |
| RK12L | 100°C | 1 min. max. | 260°C max. | 5s max. | 2 time max. |

Rotary Potentiometers

Slide Potentiometers

Metal Shaft

Insulated Shaft

Knob Operating

Through Shaft Type

Ring Type

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