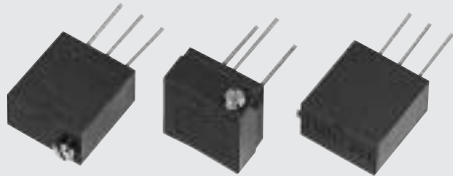


19 TURNS WIREWOUND TRIMMERS

K-9

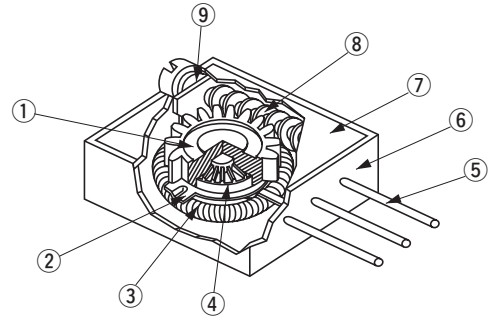
RoHS compliant



FEATURES

- Low temperature coefficient of resistance
- Low contact resistance

INTERNAL STRUCTURE



	Part name	Material	Flammability
①	Wheel gear	Polybutyleneterephthalate	UL-94HB
②	Wiper	Copper alloy, Palladium-plated	—
③	Resistive element	—	
④	Clutch board	Polybutyleneterephthalate	UL-94HB
⑤	Terminal pin	Nickel, Gold-plated	—
⑥	Housing	DAP	UL-94HB
⑦	Cover	Aluminium	—
⑧	Screw shaft	Brass, Nickel-plated	
⑨	“O” ring	Silicone rubber	UL-94HB

PART NUMBER DESIGNATION

K - 9
(1 3 0 9)

Series name

“K” may be replaced by 13 for type writing conveniences.

W 2 0 Ω

Resistance value

Product shape

W : Top adjustment

X : Side adjustment

P : Side adjustment

LIST OF PART NUMBERS

Adjustment position	Shape of terminal (Top view)	Product shape
Top adjustment 		K-9W (1309W)
Side adjustment (↑ Adjustment direction)		K-9X (1309X)
		K-9P (1309P)

* Verify the above part numbers <Nominal resistance values> (Fig. 1) when placing orders.

<Nominal resistance values>

	K-9 (1309)		
	W	X	P
10 Ω	●	●	●
20 Ω	●	●	➡ ●
50 Ω	●	●	➡ ●
100 Ω	●	●	➡ ●
200 Ω	●	●	●
500 Ω	●	●	●
1 kΩ	●	●	●
2 kΩ	●	●	●
5 kΩ	●	●	●
10 kΩ	●	●	●
20 kΩ	●	●	●
25 kΩ	●	➡ ●	➡ ●
50 kΩ	●	●	●

Fig. 1

The products indicated by ➡ mark are manufactured upon receipt of order basis.

ELECTRICAL CHARACTERISTICS

Nominal resistance range	10 Ω ~ 50 kΩ
Resistance tolerance	± 10 %
Power rating *1	0.5 W (70 °C), 0 W (120 °C)
Electrical continuity	Continuous for full mechanical range
End resistance	2 % or 1 Ω, whichever is greater
Absolute minimum resistance	0.5 % or 1 Ω, whichever is greater
Resolution	1.22 ~ 0.10 %
Peak noise	100 Ω (ENR) maximum
Operating temp. range	−55 ~ 120 °C
Temp. coefficient	± 50 10 ⁻⁶ /°C maximum
Insulation resistance	1000 MΩ minimum (DC500 V)
Dielectric strength	900 Vrms, 1 min (Room conditions)
Net weight	Approx. 0.80 g (κ-9P) Approx. 0.88 g (κ-9W) Approx. 0.86 g (κ-9X)

*1 Rated power is given for the maximum input voltage (V) and maximum wiper current (mA) for the resistance value.

RESOLUTION CHARACTERISTICS

Nominal resistance values (Ω)	Resolution (%)
10	1.22
20	0.98
50	0.70
100	0.54
200	0.44
500	0.48
1 k	0.37
2 k	0.27
5 k	0.22
10 k	0.17
20 k	0.15
25 k	0.12
50 k	0.10

MECHANICAL CHARACTERISTICS

Mechanical turn	19 turns
Operating torque	7.85 mN·m {80 gf·cm} maximum
Mechanical stop	Clutch action
Rotational life	200 cycles [$\Delta R/R \leq 2\%$]
Terminal strength	8.89 N {907 gf} minimum (Tensile strength MIL-R-27208)

ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Specifications
Thermal shock	−65 ~ 125 °C	[$\Delta R/R \leq 1\% + 0.05\ \Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
Humidity	80 ~ 98 %, 240 h	[$\Delta R/R \leq 1\% + 0.05\ \Omega$]
Shock	981 m/s ²	[$\Delta R/R \leq 1\% + 0.05\ \Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
Vibration	Acceleration 196 m/s ² , 10 ~ 2000 Hz	
Load life	70 °C Full load, 1000 h	[S.S. $\leq 2\% + \text{Resolution}$]
Low temp. operation	−55 °C, 2 h	[$\Delta R/R \leq 1\% + 0.05\ \Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
High temp. exposure	120 °C, 250 h	[$\Delta R/R \leq 1\% + 0.05\ \Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
Immersion seal	85 °C	No leaks
Salt spray	No corrosion	—
Soldering heat	350 °C, 3 s	—

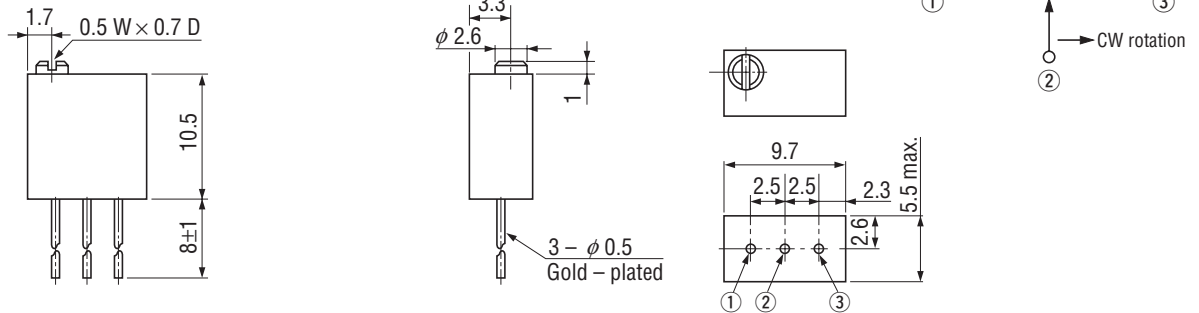
$\Delta R/R$: Change in total resistance
S.S. : Setting stability

OUTLINE DIMENSIONS

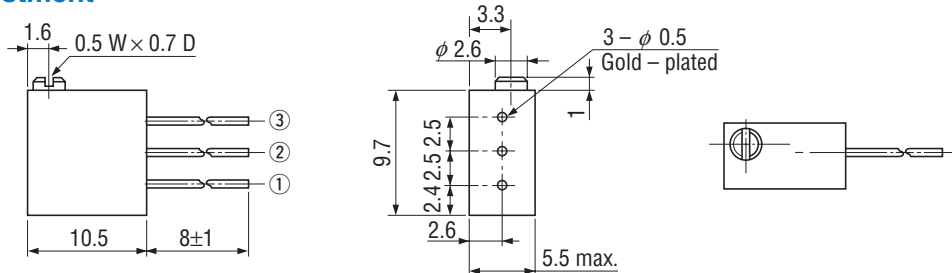
Unless otherwise specified, tolerance : ± 0.2 (Unit : mm)

(Except for adhesive thickness)

● κ -9W (1309W) Top adjustment



● κ -9X (1309X) Side adjustment



● κ -9P (1309P) Side adjustment

