



## RK TECHNOLOGIES

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### Introduction

The RK 14+ is a handheld, battery-operated Temperature Calibrator designed for precise measurement and sourcing of electrical and physical parameters in industrial environments. It supports Thermocouple (TC) and RTD calibration with simultaneous display of temperature and corresponding voltage/resistance values.

### Key Features

- Measure: DC Voltage, Resistance (Ohm), Thermocouple (TC), RTD, Continuity
- Source: DC Voltage, Resistance, TC simulation, RTD simulation
- 2-wire, 3-wire, 4-wire connection methods for Ohm and RTD measurement
- Large LCD simultaneously displays TC/RTD value and corresponding voltage/resistance
- Built-in RJ compensation with auto-reference junction point (same terminal for TC measurement and lead connector)
- Room temperature monitoring available under any operating mode
- Measurement filter function for stable readings
- Manual hold function for measurements

### Measuring Function — Technical Specifications

Function	Reference Range	Resolution	Accuracy	Remark
DCV 50mV	-5.000mV : 55.000mV	1 $\mu$ V	0.02+0.02	Input Resistance $\approx$ 100M $\Omega$
DCV 500mV	-50.00mV : 550.00mV	10 $\mu$ V	0.02+0.01	
R 500 $\Omega$	0.00 $\Omega$ : 550.00 $\Omega$	0.01 $\Omega$	0.05+0.02	$\approx$ 1mA test current
R 5K $\Omega$	0.0000 K $\Omega$ : 5.5000 K $\Omega$	0.1 $\Omega$	0.05+0.02	
TC — R	0°C : 1767°C	1°C	0–500°C: $\pm$ 1.8°C / 500–1767°C: $\pm$ 1.5°C	ITS-90; excl. RJ error
TC — S	0°C : 1767°C	1°C	0–500°C: $\pm$ 1.8°C / 500–1767°C: $\pm$ 1.5°C	
TC — K	-100.0°C : 1372.0°C	0.1°C	-100–0°C: $\pm$ 1.2°C / 0–1372°C: $\pm$ 0.8°C	
TC — E	-50.0°C : 850.0°C	0.1°C	$\pm$ 0.7°C typical	
TC — J	-60.0°C : 1120.0°C	0.1°C	-60–0°C: $\pm$ 1.0°C / 0– 1120°C: $\pm$ 0.7°C	
TC — T	-100.0°C : 400.0°C	0.1°C	0–85°C: $\pm$ 1.5°C	
TC — N	-200.0°C : 1300.0°C	0.1°C	0–1300°C: $\pm$ 0.9°C	



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TC — B	600.0°C : 1820.0°C	1°C	600–800°C: ±2.2°C / 1000–1820°C: ±1.4°C	
TC — L	-60.0°C : 900.0°C	0.1°C	0–900°C: ±0.7°C	
TC — U	-100.0°C : 600.0°C	0.1°C	0–600°C: ±0.7°C	
RTD — PT100 (385)	-200.0°C : 630.0°C	0.1°C	-200–0°C: ±1.5°C / 0–630°C: ±0.9°C	ITS-90; excl. lead R
RTD — Cu10	-100.0°C : 260.0°C	0.1°C	±1.4°C typical	
RTD — Cu50	-50.0°C : 150.0°C	0.1°C	±0.8°C typical	
Continuity 500Ω	0 : 500Ω (beep ≤50Ω)	0.01 Ω	—	≈1mA test current

## Source Function — Technical Specifications

Function	Reference Range	Resolution	Accuracy	Remark
DC Voltage 100mV	-10.000 : 110.000 mV	1 μV	0.02+0.01	
DC Voltage 1000mV	-100.00 : 1100.00 mV	10 μV	0.02+0.01	
Resistance 400Ω	0.00Ω : 400.00Ω	0.01 Ω	0.02+0.02	Excitation: ±0.05–0.3mA
Resistance 4KΩ	0.0000 : 4.0000 KΩ	0.1 Ω	0.05+0.025	Open circuit ≈2.5V
TC — R/S	0°C : 1767°C	1°C	0–100°C: ±1.5°C / 100–1767°C: ±1.2°C	ITS-90; excl. RJ error
TC — K	-200.0°C : 1372.0°C	0.1°C	-200–100°C: ±0.6°C / -100–400°C: ±0.5°C / 400– 1372°C: ±0.9°C	
TC — E	-200.0°C : 1000.0°C	0.1°C	-100–600°C: ±0.5°C / 600–1000°C: ±0.4°C	
TC — J	-200.0°C : 1200.0°C	0.1°C	-100–800°C: ±0.5°C / 800–1200°C: ±0.7°C	
TC — T	-250.0°C : 400.0°C	0.1°C	±0.6°C	
TC — N	-200.0°C : 1300.0°C	0.1°C	-100–900°C: ±0.7°C / 900–1300°C: ±0.8°C	
TC — B	600°C : 1820°C	1°C	600–800°C: ±1.5°C / 800–1820°C: ±1.1°C	
TC — L	-200.0°C : 900.0°C	0.1°C	0–900°C: ±0.5°C	
TC — U	-200.0°C : 600.0°C	0.1°C	0–600°C: ±0.5°C	
RTD — PT100 (385)	-200.0°C : 800.0°C	0.1°C	-200–0°C: ±0.3°C / 0–400°C: ±0.5°C / 400–800°C: ±0.8°C	ITS-90; excl. lead R; Excitation: ±0.5–3mA
RTD — PT1000 (385)	-200.0°C : 630.0°C	0.1°C	-200–100°C: ±0.2°C / 100–300°C: ±0.5°C / 300–630°C: ±0.7°C	Excitation: ±0.05–0.3mA
RTD — PT200 (385)	-200.0°C : 630.0°C	0.1°C	-200–100°C: ±0.8°C / 100–630°C: ±1.0°C	Max output: 0.5mA
RTD — PT500 (385)	-200.0°C : 630.0°C	0.1°C	-200–100°C: ±0.4°C / 300–630°C: ±0.7°C	Max output: 2mA
RTD — Cu10	-10.0°C : 260.0°C	0.1°C	-10–260°C: ±1.8°C	



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RTD — Cu50	-50.0°C : 150.0°C	0.1°C	-50–150°C: ±0.6°C	
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### Standard Accessories

- Industrial Testing Lead set (CL727220)
- Testing Lead set (TP727110)
- Alligator Clip set (CC807130)
- Fuse — 50mA / 250V
- Quick Reference Guide
- User's Manual

### Contact RK Technologies for Pricing, Demo & Calibration Services

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