



MODEL DC80T

MODEL DC80T - THERMOCOUPLE CALIBRATOR/SIMULATOR

Features

- Measures and simulates eight different thermocouple types: J, K, T, E, R, S, B and N
- Generates and measures electrical voltage (mV) in the -10 mV to +75 mV range
- Accuracy of $\pm 0.3^{\circ}\text{C}$ for temperature
- Accuracy of 0.025 % for mV
- Temperature resolution: 0.1°C
- Voltage resolution: 0.01 mV
- Automatic cold junctions compensation (Cjc)
- Maximum error for cold junction compensation: $\pm 0.3^{\circ}\text{C}$
- Maximum voltage allowed between terminals or terminals and ground: 30 V
- Temperature unit selection from $^{\circ}\text{C}$ and $^{\circ}\text{F}$
- Low battery indication
- Operating temperature: $0^{\circ}\text{C} \sim 50^{\circ}\text{C}$
- Storage temperature: $-40^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- Temperature effect on measurement/simulation: 0.02 %/ $^{\circ}\text{C}$ from $0^{\circ}\text{C} \sim 18^{\circ}\text{C}$ and $28^{\circ}\text{C} \sim 50^{\circ}\text{C}$
- Operating relative humidity: 95 % up to 30°C , 75 % up to 40°C e 45% up to 50°C
- Operating altitude: 3000 meters
- Power: 6 type AAA batteries 1.5 V
- Dimensions: 205 mm x 98 mm x 46 mm
- Weight: 475 g with batteries included
- Accessories included: 6 size AAA batteries, two mini thermocouple connectors, one bead thermocouple sensor with mini connector, operation manual and carrying pouch

Measuring and Simulation Ranges:

Type	Range	Resolution	Accuracy	Max. Cjc Error
J	-200 a 1200°C / -328 a 2192°F	$0.1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(0.3^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
K	-200 to 1370°C / -328 to 2498°F	$0.1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(0.3^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
T	-200 to 400°C / -328 to 752°F	$0.1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(0.3^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
E	-200 to 950°C / -328 to 1742°F	$0.1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(0.3^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
R	-20 to 1750°C / -4 to 3182°F	$1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(1^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
S	-20 to 1750°C / -4 to 3182°F	$1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(1^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
B	-600 to 1800°C / 1112 to 3272°F	$1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(1^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
N	-250 to 1300°C / -418 to 2372°F	$0.1^{\circ}\text{C}/^{\circ}\text{F}$	$\pm(0.3^{\circ}\text{C} + 10 \mu\text{V})$	$\pm 0.3^{\circ}\text{C}$
mV	-10 a + 75 mV	0.01 mV	$\pm(0.025 \% + 0.02 \text{ mV})$	

MODEL DC80R

MODEL DC80R - RTD CALIBRATOR / INDICATOR

Features:

- Measures and simulates SEVEN types of RTDs: Pt10, Pt50, Pt100 (385), Pt100 (392), Pt200, Pt500 and Pt1000
- Generates and measures resistance values from 0 Ω to 3200 Ω .
- Accuracy of ± 0.2 $^{\circ}\text{C}$ for temperature
- Accuracy of 0.1 Ω for resistance
- Temperature resolution: 0.1 $^{\circ}\text{C}$
- Resistance resolution: 0.1 Ω
- Maximum allowed voltage between terminals or terminals and ground: 30 V
- Temperature unit selection from $^{\circ}\text{C}$ and $^{\circ}\text{F}$
- Low battery indication
- Operating temperature: 0 $^{\circ}\text{C}$ ~ 50 $^{\circ}\text{C}$
- Storage temperature: -40 $^{\circ}\text{C}$ ~ 60 $^{\circ}\text{C}$
- Temperature effect on measurement/simulation: 0.01 % / $^{\circ}\text{C}$ from 0 $^{\circ}\text{C}$ ~ 18 $^{\circ}\text{C}$ and 28 $^{\circ}\text{C}$ ~ 50 $^{\circ}\text{C}$
- Operating relative humidity: 95 % up to 30 $^{\circ}\text{C}$, 75 % up to 40 $^{\circ}\text{C}$ e 45% up to 50 $^{\circ}\text{C}$
- Operating altitude: 3000 meters
- Power: 6 type AAA batteries 1.5V
- Dimensions: 205 mm x 98 mm x 46 mm
- Weight: 475 g with batteries included
- Accessories included: 6 size AAA batteries, one pair of test lead extension, one pair of stackable cable extension, one pair of heavy duty alligator clips, operation manual and carrying pouch

MODEL DC80L

MODEL DC80L - VOLTAGE AND CURRENT CALIBRATOR

Features:

- Measures and simulates electrical voltage from 0 to 100 mV and from 0 to 15 V
- Measures and simulates electrical current from 0 to 24 mA
- Accuracy of $\pm (0.02 \% + 0.03 \text{ mV} / 0.003 \text{ V})$ $^{\circ}\text{C}$ for electrical voltage
- Accuracy of $\pm (0.015 \% + 0.003 \text{ mA})$ $^{\circ}\text{C}$ for electrical current
- 24 Vdc supply for loop power
- Rated input impedance: 2 M Ω , < 100 pF
- Maximum output current in voltage mode: 1 mA
- Temperature resolution: 0.1 $^{\circ}\text{C}$
- Resistance resolution: 0.1 Ω
- Maximum allowed voltage between terminals or terminals and ground: 30 V
- Temperature unit selection from $^{\circ}\text{C}$ and $^{\circ}\text{F}$
- Low battery indication
- Operating temperature: 0 $^{\circ}\text{C}$ ~ 50 $^{\circ}\text{C}$
- Storage temperature: -40 $^{\circ}\text{C}$ ~ 60 $^{\circ}\text{C}$
- Temperature effect on measurement/simulation: 0.005 % / $^{\circ}\text{C}$ from -10 $^{\circ}\text{C}$ ~ 18 $^{\circ}\text{C}$ and 28 $^{\circ}\text{C}$ ~ 55 $^{\circ}\text{C}$
- Operating relative humidity: 95 % up to 30 $^{\circ}\text{C}$, 75 % up to 40 $^{\circ}\text{C}$ e 45% up to 50 $^{\circ}\text{C}$
- Operating altitude: 3000 meters
- Power: 6 type AAA batteries 1.5V
- Dimensions: 205 mm x 98 mm x 46 mm
- Weight: 475 g with batteries included
- Accessories included: 6 size AAA batteries, one pair of flying probes, one pair of alligator clips, operation manual and carrying pouch
- Optional external power adaptor

Measuring and Simulation of Electrical Voltage:

TYPE	RANGE	RESOLUTION	ACCURACY
Measure V/mV	0~110 mV	0.01 mV	$\pm (0.02 \% + 0.01 \text{ mV} / 0.003 \text{ V})$
	0~15 mV	0.001 mV	
Simulate V/mV	0~100 mV	0.01 mV	
	0~15 mV	0.001 mV	

Measuring and Simulation of Electrical Current:

TYPE	RESOLUTION	ACCURACY
0 ~24 mA Measure & Simulate	0~15 mV	0.015 % + 0.003 mA