



Time Electronics

7000 RTD Temperature Calibrator

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MERAZET

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- **Temperature accuracy 0.05°C (0.09°F)**
- **Temperature resolution 0.01°C (0.02°F)**
- **Resistance accuracy 0.03Ω**
- **Resistance resolution 0.01Ω**
- **2, 3, and 4 wire connections**
- **Measure and simulate °C, °F, °K, & Ω**
- **Ramp and step**
- **PT100 plus 7 other RTD types**
- **User programmable**
- **24 hours typical use between charges**

DESCRIPTION

The 7000 is a portable process control instrument that combines a precision digital thermometer (using RTD probes) with an RTD/ohms calibrator.

Compact and easy to use, it solves the problem of making high accuracy temperature measurements without using bulky mains powered instrumentation. Powered from internal long life rechargeable batteries or an external mains adaptor, it is equally valuable in laboratory, workshop or the field. It can also be used as an external temperature reference for dry block and other precision temperature baths.

MODES OF OPERATION

Monitor Mode (4 wire)

- Typical Functions
1. Check RTD probes by measuring their resistance at known temperatures.
 2. Measure resistance values.
 3. Indicate temperature when connected to an RTD probe.
 4. Can be pre-programmed with a particular RTD's characteristics to allow very high accuracy.

- Excitation current 1mA on all ranges
- Resistance range 0.01Ω to 2.6kΩ
- Resolution 0.01Ω
- Accuracy See specifications on next page
- Auto re-calibration Every 0.6 secs.
- Temperature stability Better than 0.0015% per °C
- Max/Min values Logged automatically

*The 7000 may be used with a calibrated and certified probe to produce a highly accurate thermometer.
The performance can be further enhanced by programming the actual characteristic of the probe into the unit.*

Simulator Mode (4 wire)

- Typical Functions
1. Output resistance of precise known value.
 2. Simulate an RTD value from an RTD table chart.
 3. Simulate an RTD value using the internal table.

- Excitation current 0.6mA to 1mA
- Resistance range 0.01Ω to 2.6kΩ
- Resolution 0.01Ω
- Accuracy See specifications on next page
- Auto re-calibration Every 0.6 secs.
- Temperature stability Better than 0.0015% per °C

Enhanced performance may be achieved by programming the unit to simulate the characteristic of a particular probe.

Five fixed step points (0, 25, 50, 75, 100%) are available between a user set minimum (0%) and a maximum (100%).

Programmable ramp function is also available.

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