


# ▶ TL1-R LABORATORY THERMOMETER




The TL1-R thermometer is a compact reference thermometer with accuracy comparable to instrument systems costing twice as much. It has all the features of our standard TL1-A plus a higher level of accuracy. It can be used in applications where extreme accuracy is required. The TL1-R is also perfect for metrology applications and as a calibration reference thermometer. It is an extremely accurate portable hand held instrument that is ideally suited for field applications and indoor laboratory uses.

The TL1-R uses a precision, 200 Ohm wire wound platinum resistance temperature sensor and attains its high accuracy through our proprietary calibration algorithm.

Standard 5-point Calibration Report, Nominal Points -4°, 32°, 120°, 200°, and 300°F. Report is also available in equivalent °C temperatures.

-  **ON/OFF BUTTON**
- ON / OFF
  - DISABLE AUTO-OFF

-  **FUNCTION BUTTON**
- USED TO ACCESS THE FOLLOWING OPERATIONS:
- MIN
  - MAX
  - AVERAGE
  - °F < - >°C
  - RESOLUTION

## SPECIFICATIONS

<i>Display:</i>	LCD with 0.25 inch characters Trend Indicating Arrows Low Battery & Fault indication
<i>User Functions:</i>	Auto Off after 20 minutes or continuous operation Lowest Reading, Highest Reading, Average Reading Switchable in Units of °F or °C Display hundredths or thousandths resolution
<i>Construction:</i>	Stainless Steel temperature sensor; Standard Sensor length 8" (20cm) Standard diameter 1/4" (6.35mm) Sensor mount acetyl plastic Electronics and display in 3.5" x 1.2" anodized Aluminum enclosure Molded Silicone seal. Highly durable display window, graphics and membrane switches.
<i>Weight:</i>	4 ounces, 124 grams
<i>Temperature:</i>	Resolution 0.001 Degrees Standard Calibrated Range: -4 to 300F, -20 to 150C Tolerance: ±0.07°F ±0.04°C NIST Traceable Report of Test
<i>Temperature Time Constant:</i>	19 seconds in circulated water bath (63.2% response to temperature change)
<i>Electronics:</i>	Microcontroller and precision 20-bit A/D converter, FLASH Memory Recommended Ambient Temperature Range for Best Accuracy 32 to 112 °F, 0 to 44°C
<i>Sensor:</i>	200 Ohm, Wire-wound Platinum RTD Immersion depth 4", 11cm
<i>Battery:</i>	20mm Coin Size 3V Lithium, Duracell Type CR2032 Over 50 hours Service Life at 70°F, 21°C Battery Operating Range -4 to 130°F, -20 to 54°C Note: Battery may not provide adequate power if ambient temperature is below -4°F, -20°C or above 130°F, 54°C

Specifications subject to change

## TYPICAL APPLICATIONS

Distillations, temperature baths, melting point tests, flash point tests, reference, thermowells, provers, temperature calibration for coriolis flow meters.