



TL2 LABORATORY THERMOMETER

The TL2 is a 2-channel precision bench top thermometer offering a higher level of metrology accuracy in a very affordable package. The TL2 is a complete NIST traceable system that is ready to use, right out of the box. Based on successful TL1-R technology, the TL2 has been developed for laboratory applications demanding high precision reference thermometry with the added versatility of 2 channel measurement. To fully realize the benefits of 2 channel measurement, the TL2 provides data logging capabilities with the convenience of PC or USB flash drive interface. The ergonomic design and large display make the TL2 ideally suited for use as a calibration reference thermometer and for recording temperature-time based data.

The TL2 calibration software creates custom coefficients for Callendar Van Dusen or ITS-90 curves using the reference points and TL2 readings. It then loads the coefficients to the TL2 and creates a report for each channel.

Standard 5-point Calibration Report, Nominal Points -20°, 0°, 49°, 93°, and 150°C. Report is also available in equivalent °F temperatures.

SPECIFICATIONS

Temperature Measurement

- 2 Channel temperature measurement
- Standard 5-pin DIN connector
- 200Ω 4-wire sensor probe
- Standard system calibrated range of -20 to 150°C (-4 to 300°F)
- Linearization by Callendar-Van Dusen*
- Factory calibrations yield a tolerance of ±0.03 °C (±0.05 °F) (@ 23°C ambient temp.)
- Temperature time constant: 19 sec.
- NIST traceable report of test

User Interface

- Large 13mm (0.5"), 6-digit LCD display with backlight
- Selectable 0.01 or 0.001 display resolution
- F (Fahrenheit), C (Celsius), K (Kelvin), or Ω (Ohms) selectable display output
- Easy viewing of Highest, Lowest, and Average Readings
- Easy Zero Offset adjustment for sensor drift
- Programmable SPDT relay output (3 Amp maximum)

Construction

- Rugged, powder coated, steel enclosure 184mm x 133mm x 57mm (7.25" x 5.25" x 2.25")
- Standard 1.5m (5') cable
- 316L stainless steel sensor design 6mm (¼") diameter
- Highly durable display window, graphics, and silicone keypad
- 0.74kg (1 lb, 10 oz) without temperature sensor & power cord

Electronics

- Microcontroller and precision 20-bit A/D converter.
- Recommended Ambient Temperature Range for Best Accuracy is 0 to 44°C (32 to 112°F)

Data Logging

- Internal real-time clock reference
- PC interface via USB (type A) for direct data capture using Windows OS HyperTerminal function
- Stand alone data capture to a dedicated USB (type B) flash drive interface, saved in comma delimited format
- 0.001 logging display resolution
- Selectable logging intervals: 1, 10, or 30 seconds, 1 minute, 1 hour, or when queried

Included

- Wall mount AC power adapter for US & Canada (120 VAC)**
- USB type 'A' to PC cable included

Optional Features

- High range sensors (up to 288°C, 550°F)
- 100 Ω sensors
- *ITS-90 Calibration
- **Country specific AC power supply

Specifications subject to change