

## Model 310 Handheld Thermistor Temperature Monitor



Shown with optional case and thermistor sensor. For sensors, see 400 series thermistor probe data sheet.



- Temperature Range:  $-5^{\circ}\text{C}$  to  $105^{\circ}\text{C}$  (equivalent  $^{\circ}\text{F}$  or K programmable)
- Instrument Uncertainty:  $\pm 0.010^{\circ}\text{C}$  from  $-5^{\circ}$  to  $60^{\circ}$  at  $23^{\circ} \pm 5^{\circ}\text{C}$  ambient  
 $\pm 0.015^{\circ}\text{C}$  from  $60^{\circ}$  to  $105^{\circ}$  at  $23^{\circ} \pm 5^{\circ}\text{C}$  ambient  
equivalent uncertainties apply to  $^{\circ}\text{F}$  or K ranges  
 $\pm 0.01\%$  of reading  $\pm 4$  LSD from 0 to  $9600\ \Omega$
- Temperature Resolution:  $0.01^{\circ}$  or  $0.001^{\circ}$  programmable over full range in  $^{\circ}\text{F}$ ,  $^{\circ}\text{C}$  or K ( $0.01\ \Omega$  resistance resolution)
- Sensor: Steinhart-Hart thermistor polynomial  
YSI 400 Series or equivalent ( $2252\ \Omega$  @  $25^{\circ}\text{C}$ )
- Up to 100 calculated data sets may be stored including:  
min/max/average/date/location and last reading with time stamp
- RS232 serial port for data upload or download of commands
- 7-hour nickel-metal-hydrate battery (AC adapter/charger included)
- Multifunction stand for tilt, lanyard, and wall mounting.

The Instrulab Model 310 employs a stable, large, backlit LCD display with contrast adjustment which facilitates accurate field temperature measurement in almost any environment you are likely to encounter. The display is timed to prevent unnecessary battery drain. Its ability to store calculated data sets along with other necessary parameters means no copying, interpolation or logging errors. Its multifunction stand makes it very versatile on the bench, hanging on the wall or from a lanyard strap.

Password protection prevents accidental or malicious tampering with data or calibration coefficients. The optional carrying case provides convenient portability while protecting the instrument and sensor, as well as a place to store your manual so it won't get lost.

A wide range of thermistor sensors are available from Instrulab to meet your application needs. On top of all that, application assistance is just a phone call away.

## *Let Instrulab be your Temperature Specialist*

### SPECIFICATIONS

Temperature Range	-5° to 105°C, (or equivalent °F or K) When used with YSI series 400 thermistor sensors
Instrument Uncertainty	±0.010°C from -5° to 60°C at 23° ±5°C ambient ±0.015°C from 60° to 105°C at 23° ±5°C ambient equivalent uncertainties apply to °F or K ranges ±0.01% of reading ±4 LSD from 0 to 9600 Ω
Resolution	0.01 or 0.001 programmable over full range in °F, °C or K (0.01 Ω to 0.1 Ω resistance resolution)
Typical System Uncertainty	0.05°C using YSI 400 series sensors
Sensor Type	YSI 400 series or equivalent (2252 Ω @25°C)
Sensor Inputs	Up to four sets of sensor constants may be stored
Sensor Excitation	Less than 250µA
Operating Ambient	5° to 45°C at up to 80% humidity (non-condensing)
Warm-up Time	Within specified accuracy upon turn on, optimum after 15 minutes
Temperature Coefficient	±5 ppm per °C from 23°C
Display	Backlit LCD, approx. 3/8" high for measurements plus smaller characters for alphanumeric information. Backlight may be timed to prevent unnecessary battery drain.
Power Source	115VAC or internal NiMH batteries (up to 7 hours.), charger included (Contact factory for other power sources)
Dimensions	7" H x 4.5"W x 2.24"D
Weight	0.45 kg

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