

## Model 410 Handheld RTD Temperature Monitor



Shown with optional case and RTD sensor. For sensors, see 830/840 data sheets.



- Temperature Range:  $-196^{\circ}\text{C}$  to  $660^{\circ}\text{C}$  (equivalent  $^{\circ}\text{F}$  or K programmable)
- Instrument Uncertainty:  $\pm 0.020^{\circ}\text{C}$  at  $23^{\circ} \pm 5^{\circ}\text{C}$  ambient (used with  $100\ \Omega$  sensors)  
 $\pm 0.036^{\circ}\text{F}$  at  $23^{\circ} \pm 5^{\circ}\text{C}$  ambient (used with  $100\ \Omega$  sensors)  
 $\pm 0.008\ \Omega$  from 0 to  $340.000\ \Omega$
- Temperature Resolution:  $0.01^{\circ}\text{C}$  ( $-196^{\circ}$  to  $-100^{\circ}\text{C}$ ),  
 $0.001^{\circ}\text{C}$  ( $-100^{\circ}$  to  $660^{\circ}\text{C}$ ) and equivalent  $^{\circ}\text{F}$  and K ranges.
- ITS-90 coefficients may be stored for up to 4 RTD sensors
- 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 coefficients and commands
- 7-hour nickel-metal-hydrate battery (AC adapter/charger included)
- Multifunction stand for tilt, lanyard, and wall mounting.

The Instrulab Model 410 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 RTD 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*

<b>SPECIFICATIONS</b>	
Temperature Range	-196° to 660°C, -320°F to 1220°F using ITS-90 coefficients when used with 100 Ω platinum RTD sensors
Instrument Uncertainty	±0.020°C or 0.036°F @ 23° ± 5°C ambient
Resolution	0.01 or 0.001, ° C, ° F, K or Ω (units and resolution programmable) except 0.01 fixed from -196° to -100°C
Resistance:	0 to 340.000 ohms with an uncertainty of ±0.008 Ω
Typical System Uncertainty	0.03° to 0.1°C with Series 830 or 840 Sensors
Sensor Type	100Ω platinum RTD with alpha between 0.00385 and 0.003926
Sensor Coefficients	R <sub>tp</sub> and ITS-90 coefficients for sensors' calibrated range
Sensor Inputs	Up to 4 sets of 100 ohm sensor coefficients may be stored
Sensor Excitation	1 mA DC nominal with automatic thermal offset compensation
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	±2ppm per degree 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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