



handheld thermometers

4500 High Accuracy Smart Probe Thermometer



4500
High accuracy smart probe

The Model 4500 Series Ultra-High Accuracy Thermometer take metrology-level temperature measurement to the laboratory, the production floor and the field.

Ultra-high system accuracy, $\pm 0.015^{\circ}\text{C}$, is achieved because the thermometer and probe function as if they were calibrated together as a system even though they can be purchased separately. The 4500 System uses coefficients stored in each probe with the Steinhart-Hart algorithm to calculate the exact temperature reading every time you plug in a probe to take a measurement.

The 4500 series thermometers accept a wide range of plug-in probes equipped with proprietary Smart Probe system. The probes utilize super stable thermistors capable of providing high resolution, fast response and ultra high accuracy.

System Features

- High system accuracy
- NIST traceable calibration included
- Interchangeable temperature probes
- Hand-held flexibility
- Hold reading button
- $^{\circ}\text{C}/^{\circ}\text{F}$ display
- Auto shut off
- Three decimal place mode
- Delta T
- Function keys
- Min/Max reading
- RS-232 serial port

Applications

- Calibrate/verify your PCR Thermal Cycler
- Reference thermometer for your liquid bath
- Clinical laboratory quality control
- Chemical & petroleum regulatory/safety
- Metrology
- Thermal cycler plate uniformity
- Autoclave integrity

Technical Specification

Resolution:	0.01 $^{\circ}\text{C}$ or 0.001 $^{\circ}\text{C}$ selectable 0.001 $^{\circ}\text{C}$ when using serial output
Display:	LCD 4 1/2 digit 0.6" high. Function icons.
Maximum Meter Range:	-40 to +150 $^{\circ}\text{C}$ (-40 to +299 $^{\circ}\text{F}$)
Power:	9 volt Alkaline battery or external 12 VDC. Battery life 25 hours, typical; 15 with RS-232.
Reading Rate:	2 per second (update every 524 milliseconds)
Over Range Indication	Displays LO or HI
Operating conditions	Temperature 0 $^{\circ}\text{C}$ to 45 $^{\circ}\text{C}$ Humidity 0 to 85%

Ordering Information

Product Code	Model Number
FDB4400T	4500 High Accuracy Thermometer



Smart Probes Thermometer

Stainless Steel Tube Probe, for waterbaths, block calibrators & other general purpose use. Designed for use with the 4500 Thermometer simply plug & play into the 4500 Thermometer.

Technical Specification

Sheath Size:	0.156" (5/32") dia. x 12.0" L
Temperature Range:	-40°C to +150°C
Accuracy*: 0 to 100°C ±0.025°C	-25 to 125°C ±0.05°C
	-40 to 150°C ±0.15°C

*(accuracy specification includes 4500 thermometer)



Ordering Information

Product Code	Model Number	Temperature Range
FDBPR32	4500 5/32" Probe	-40°C to 150°C
FDBPR02	4500 0.2ml Probe	0°C to 100°C
FDBPR05	4500 0.5ml Probe	0°C to 100°C