



Precision Humidity & Temperature Data Logger

Spectrum 2000



Spectrum 2000 precision humidity and temperature data loggers are compact, powerful and easy-to-use recorders for monitoring critical humidity-sensitive products and processes.

Powerful Convenience

Palm-sized and easy-to-use alternatives for chart recorders and bulky data acquisition systems, Spectrum 2000 loggers are completely self-contained and battery-operated. Simply place them where you need to track humidity and temperature conditions and they will record accurate time-based readings covering periods up to several years in duration. No charts, wires, connections or power cords are required.

Industry-Leading Precision & Accuracy

Spectrum 2000 loggers incorporate the latest advances in data logging and RH-sensing technologies. Each unit features integral precision relative humidity and temperature sensors with long-term high-accuracy performance, sensitivity, and responsiveness.

Accurate to +/- 2% RH and 0.15° C., the data loggers can sense changes as minute as 0.05% RH and 0.05° C. with a time-base accuracy of better than two seconds per day. Plus, the rugged relative humidity sensor offers outstanding resistance to air-borne contaminants and condensation, delivering exceptional in-calibration service and reliability.

- Completely self-contained recorder with internal sensors, memory and 10-year battery
- Logs humidity and temperature without wires, power cords or connections
- Palm PDA compatibility
- Optional Alarm Monitoring software
- Premium quality precision sensors offer exceptional in-calibration performance

Applications

- Calibration Lab Monitoring & Alarming
- RH / Temperature Mapping
- Critical Product Shipping and Storage
- Clean Room Monitoring
- Cooler and Chamber Qualifications
- Research & Development

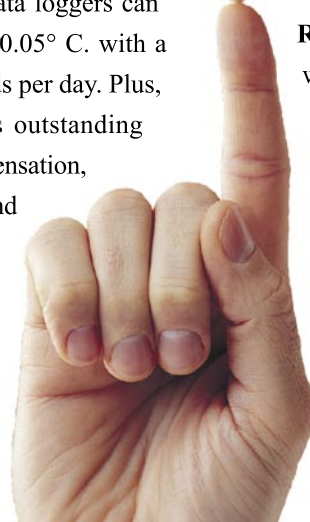
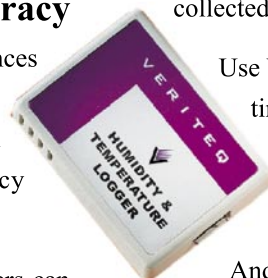
Multiple Ways to Connect

Spectrum 2000 data loggers interface to any PC with Spectrum Software, a powerful Windows-based package for configuring, downloading, displaying, analyzing and reporting your collected humidity and temperature information.

Use Veriteq sGo software to connect and view real-time data logger values on your **Palm PDA**, a great solution for downloading multiple loggers in the field.

And for those needing **Alarm-Notification and Remote Monitoring**, we offer Veriteq viewLine software. It lets you utilize your own computer system to view temperature and humidity readings from any PC on the network - ideal for Calibration Labs.

For custom applications, Spectrum API software allows programmers to access data logger functions from within other Windows based programs.



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SPECIFICATIONS

General

Size

2.8 x 2.1 x 0.7" (71x53x18mm);
60g (2.2 oz.)

Operating Range

-40 to 85° C. (-40 to 185° F.) & 0-100% RH

Interfaces

RS-232 serial port; half-duplex; 19,600 baud.

Mounting

Magnetic strips; velcro optional.

PC Software

Designed for use with Spectrum Software (refer to separate data sheet for summary). Compatible with Windows 95, 98, ME, 2000, NT 4.0 or XP.

Clock

Accuracy: +/- 1 min./month at 0 to 50° C.

Electromagnetic Interference

Meets FCC Part 15 for digital devices; meets CE requirements for radiated emissions, electrostatic discharge, & radiated susceptibility.



Power Source

Internal lithium battery with life of 10 years at 1 min. sampling rate.

Internal Sensors / Accuracy

Sensor	Type	Measuring Range	Precision	1-Year Accuracy	5-Year Accuracy	Sensor Stability	Hysteresis over range	Repeatability over range	Calibration / verification
Relative Humidity	Capacitive polymer-based monolithic integrated circuit	0 to 95% RH	0.05% RH	+/-2% RH over 10 to 90% RH at 25 C.	+/-3% RH over 10-90% RH at 25 C.	+/-1% RH typ. at 50% RH over 5 years	+/-0.8% of span (max)	0.5% RH at 0 to 75% RH	Annual (recommended)
Temperature	Precision-calibrated NTC thermistor	-40 to 85 C.	0.05 C at 25 C.	+/- 0.15 C at 25 C & +/- 0.25 C over -20 to 70 C.	+/- 0.25 C at 25 C & +/- 0.35 C over -20 to 70 C.	<0.1 C over 5 years at 25 C.	<0.01 C.	<0.01 C.	Annual (recommended)

Memory

Memory Type

Non-volatile 32K x 8 EEROM

Data Sample Capacity

21,500 12-bit samples

Memory Modes

User-selectable: 1) Wrap when memory full, or 2) Stop when memory full.

Memory Protection

Data retention > 20 years backup without power.

Sampling Rates

User-selectable (in intervals of 10 seconds) from once every 10 seconds to once every 24 hours.

Recording span

Recording span depends on sample interval selected. Adjacent chart details typical sampling rates and length of time logger will retain data in memory before wrapping around or stopping (see Memory Modes).

Sample interval	Recording span
10 seconds	30 hours
1 minute	7.4 days
15 minutes	3.7 months
1 hour	1.2 years
3 hours	3.6 years

Ordering Guide

MODEL	DESCRIPTION
SP-2000	Precision Humidity and Temperature data logger
SP-2000-LRH	Ultra-Low Humidity and Temperature data logger with increased accuracy over 0-10% RH range
CALIBRATION CERTIFICATE	
CA-RHT-100	3-point NIST-traceable RH calibration with single-point NIST-traceable temperature calibration
SOFTWARE	
PC-SFW-IC	Spectrum Software with PC interface cable. (required with initial purchase)
PLM-SFW-IC	PALM Software and cable (specify Palm PDA model #)
PC-LNC	Alarm Monitoring Software
PC-SFW-API	Software API for direct logger interface from other Windows programs
EXCEL ADD-IN	Free download from website allows users to work within Microsoft Excel

Calibration Services

Custom calibrations are available for increased accuracy over narrower than specified measurement ranges. Verification documentation at different temperature points also available.

Guarantee / Warranty

30-day return guarantee; 2 year limited warranty.

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