



Precision Temperature Data Logger

Spectrum 1000



- Completely self-contained recorder with internal temperature sensor, memory and 10-year battery
- Real-Time Viewing & Downloading via Palm PDA
- Optional Alarm Monitoring software
- Adjustable logging intervals with 10-year data capacity
- External input for remote temperature probe flexibility

Spectrum 1000 precision temperature data loggers are compact, powerful and easy-to-use recorders for monitoring critical temperature-sensitive products and processes.

Industry-leading Accuracy & Precision

Compact & Self-Powered Convenience

Easy-to-use alternatives for chart recorders and bulky data acquisition systems, Spectrum 1000 loggers offer industry-leading precision and accuracy in a palm-sized and self-powered package. Place them anywhere you need high-accuracy tracking of temperature conditions and they will monitor continuously, on a stand-alone basis, for up to ten years in duration. No power cords, paper charts, or replacement batteries are needed. For wider temperature ranges or difficult to access locations, choose the external thermistor probe with stainless steel tip (see photo above).

Applications

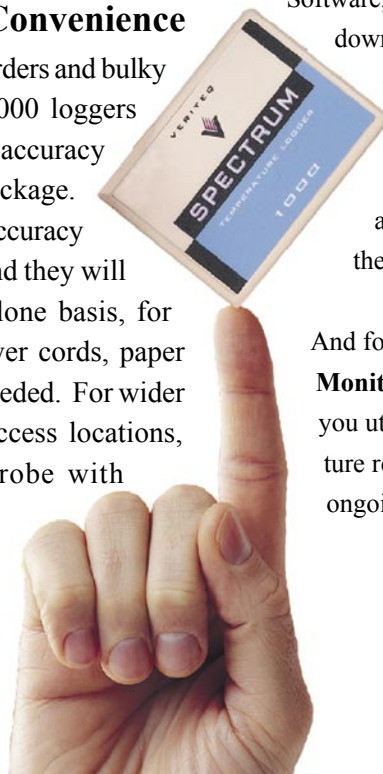
- Process Verification / Validation
- FDA / GMP / ISO 9000 / HACCP Quality Compliance
- Critical product Shipping and Storage
- Temperature Mapping
- Clean Rooms, Freezers, Lab HVAC Systems

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 viewLinc software. It lets you utilize your own computer system to view temperature readings from any PC on the network - ideal for ongoing monitoring of critical areas.



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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, and XP.

Clock

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

Internal Temperature Sensor

Type of Sensor

Precision-tolerance epoxy-encapsulated NTC thermistor

Response Time

10 seconds in moving air (thermistor only)

Remote Temperature Probe Input

Compatibility

Accepts one EPT-010 temperature probe or any 100K ohm thermistor probe compatible with Betatherm 100K6A1. Contact factory for resistance-temperature curve information.

Input Connection

Pluggable screw-type terminal block accepts bare leads or EPT-010 temperature probe connector.

EPT-010 Remote Temperature Probe (optional)

Type of Sensor

Epoxy-encapsulated NTC thermistor encased in a 1-1/2" x 3/16" diameter stainless steel tip.

Cable

Probes are supplied with 3m (10 ft.) of two-conductor twisted pair shielded cable with a SP-1000 compatible plug-in connector.

Custom Probes

For probes with tighter tolerances, longer cable lengths and/or different tip characteristics, please contact the factory.

Memory

Memory Type

Non-volatile 32K x 8 EEROM

Data Sample Capacity

21,500 12-bit samples

Memory Modes

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

Memory Protection

Data retention > 20 years without power.

Sampling Rates

User-selectable (in intervals of 10 seconds) from once every 10 seconds to once a day.

Recording span

Recording span depends on sample interval selected and number of channels enabled. 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	
	One channel	Two channels
10 seconds	60 hours	30 hours
1 minute	14.9 days	7.4 days
15 minutes	7.5 months	3.7 months
1 hour	2.4 years	1.2 years

Ordering Guide

MODEL	DESCRIPTION
SP-1000	Precision Temperature data logger
SP-1000-LT	Low Temperature model; calibrated at -40 C to an accuracy of +/- 0.5 C.
REMOTE THERMISTOR TEMPERATURE PROBE	
EPT-010	Remote general purpose temperature probe
CALIBRATION / DOCUMENTATION	
CA-THS-100	1-point NIST-traceable temperature calibration with certificate
CA-THS-103	3-point NIST-traceable temperature calibration with certificate
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 measurement ranges. Calibration or verification documentation at different temperature points (-50 to 150°C.) also available.

Guarantee / Warranty

30-day return guarantee; 2 year limited warranty.

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