

> The Veriteq 2000 Series Temperature & RH Data Recorders



VL-2000-20R



SP-2000-20R

Veriteq's 2000 series data recorders includes the VL-series for regulated environments and the SP-series for non FDA/GxP industries.

The VL-series of data recorders together with vLog software provides a superior, high accuracy solution for use in FDA/GxP regulated environments by providing tamper-proof files and encrypted electronic records that meet 21 CFR Part 11 requirements.

The SP-series provides a compact, easily-deployable, highly accurate measurement and recording device for use in non FDA/GxP regulated industries. Spectrum software for the SP-Series enables the download, display, analysis and reporting of recorded environmental data.

Optional browser-based viewLinc software provides 24/7 multi-stage alarm notification and remote monitoring for both the VL and SP-series of data recorders.

Additional system features include:

- > Industry-leading temperature and relative humidity measurement precision and accuracy
- > High accuracy, adjustable time-based digital recording
- > Printed reports for any time period
- > Extended 10-year long-life battery
- > Ability to perform validation and continuous monitoring with the same tool
- > NIST-traceable, A2LA accredited calibration available
- > Superior alternative to chart recorders and hard-wired systems
- > Utilization of Steinhart- Hart coefficients stored in each data recorder for high system accuracy
- > Integrated high-accuracy capacitive thin-film polymer RH sensor
- > Surface calibration of RH sensor across a wide temperature range

GENERAL

Size	Interfaces	Mounting	PC Software	Internal Clock	Electromagnetic Compatibility	Power Source
71x53x20mm (2.8 x 2.1 x 0.8"), 65g (2.4 oz.)	RS-232 serial, USB, Ethernet, WiFi network interface available	Magnetic strips; 3M Dual Lock™ fasteners	Graphing & Reporting Software Spectrum for SP-series vLog for VL-series viewLinc for continuous monitoring & alarming	Accuracy +/- 1 min./month @ 0°C to +50°C (+32°F to +122°F)	FCC Part 15 and CE	Internal 10-year lithium battery (Battery life specified with sample interval of 1 min. or longer)

INTERNAL SENSORS

Series	Sensor	Calibrated Measurement Range ¹	Operating Range	Initial Accuracy ²	One Year Accuracy ³	Resolution
SP-2000-20R VL-2000-20R	Internal Temperature Sensor	-25°C to +70°C (-13°F to +158°F)	-35°C to +85°C (-31°F to +185°F)	+/-0.10°C over +20°C to +30°C (+/-0.18°F over +68°F to +86°F) +/-0.15°C over -25°C to +70°C (+/-0.27°F over -13°F to +158°F)	+/-0.15°C over +20°C to +30°C (+/-0.27°F over +68°F to +86°F) +/-0.25°C over -25°C to +70°C (+/-0.45°F over -13°F to +158°F)	0.02°C at +25°C (0.04°F at +77°F)
	Internal RH Sensor	45%RH at +10°C (+50°F) 10%RH to 80%RH at +25°C (+77°F) 45%RH at +45°C (+113°F)	0%RH to 100%RH (non-condensing)	+/-1%RH over 10%RH to 90%RH at +20°C to +30°C (+68°F to +86°F) +/-2%RH over 10%RH to 90%RH at -20°C to +70°C (-4°F to +158°F)	+/-2%RH over 10%RH to 90%RH at +20°C to +30°C (+68°F to +86°F) +/-3%RH over 10%RH to 90%RH at -20°C to +70°C (-4°F to +158°F)	0.05%RH
SP-2000-LRH VL-2000-LRH	Internal Temperature Sensor	-25°C to +70°C (-13°F to +158°F)	-35°C to +85°C (-31°F to +185°F)	+/-0.10°C over +20°C to +30°C (+/-0.18°F over +68°F to +86°F) +/-0.15°C over -25°C to +70°C (+/-0.27°F over -13°F to +158°F)	+/-0.15°C over +20°C to +30°C (+/-0.27°F over +68°F to +86°F) +/-0.25°C over -25°C to +70°C (+/-0.45°F over -13°F to +158°F)	0.02°C at +25°C (0.04°F at +77°F)
	Internal RH Sensor	0%RH to 20%RH at +25°C (+77°F)	0%RH to 30%RH	+/-1%RH over 0%RH to 20%RH at +25°C (+77°F)	+/-2%RH over 0%RH to 20%RH at +25°C (+77°F)	0.05%RH

- 1 Custom calibration points available upon request including full ICH coverage.
- 2 Initial accuracy includes all known influence quantities present at the time of calibration including calibration uncertainty, mathematical fit, data logger resolution, hysteresis and reproducibility.
- 3 One Year Accuracy includes all known influence quantities present during the operation of a data logger over the course of one year including Initial Accuracy and Long Term Drift. Not included is any drift related to atypical contamination or misuse.

MEMORY

Data Sample Capacity	Memory Type	Memory Modes	Sampling Rates
26,900 12-bit samples	Non-volatile EEROM	User-selectable. Wrap (FIFO) or stop when memory is full. User selectable start time. User selectable stop time (VL series only).	User-selectable (in 10 second intervals) from 1 every 10 seconds to once a day. (Battery life specified with sample interval of 1 min. or longer)

RECORDING SPAN

Sample Interval	Recording Span
10 Seconds	1.6 Days
1 Minute	9.4 Days
5 Minutes	1.6 Months
15 Minutes	4.6 Months
1 Hour	1.5 Years