

Temperature, RH & Voltage/Current Recorders — 2000 3-in-1



Example of temperature, RH and differential pressure.

System Benefits:

- > Long recording time with 10-year battery and large built-in memory
- > Reports with graphics, data and events for any time period
- > NIST-traceable calibration, including surface calibration of RH sensor for a wide temperature range
- > Cost-saving alternative to chart recorders and substandard data loggers
- > Easy installation with integrated high-accuracy T, RH and analog input
- > Continuous records with redundant monitoring
- > Easy connectivity on existing network — Ethernet wired, PoE and WiFi

Veriteq's 2000 series data loggers provide high accuracy measurements for temperature, relative humidity and an analog sensor of your choice. The 3-in-1 data logger combines internal temperature and RH sensors with an external channel for another input. The third channel can accept either current or voltage to record inputs such as differential pressure, CO₂, level, particles or conductivity.

Ideal for both FDA-regulated and non-GxP environments, the 3-in-1 is customizable for a variety of controlled environments. Use the analog channel for clean rooms and incubators; simply add a sensor or tie into an existing differential pressure or CO₂ sensor.

Veriteq software permits the 3-in-1 loggers to be used for continuous monitoring and alarming or in standalone data recording applications. The unit is available with temperature, relative humidity and one input compatible with 0-5V, 0-10V or 4-20mA. The analog sensor can be powered by an external power supply or Power-over-Ethernet via the vNet snap-in cradle (pictured).

GENERAL

Size	Interfaces	Mounting	PC Software	Internal Clock	Electromagnetic Compatibility	Power Source
85 x 59 x 26mm (3.4 x 2.3 x 1"), 76g (2.7 oz.)	RS-232 serial, USB, Ethernet, WiFi, PoE network interface available	Magnetic strips; 3M Dual Lock™ fasteners	vLog Graphing & Reporting Software viewLinc for continuous monitoring & alarming OPC Server to add on to existing OPC compatible monitoring systems	Accuracy +/- 1 min./month @ -25°C to +70°C (-13°F to +158°F)	FCC Part 15 and CE	Internal 10-year lithium battery (Battery life specified with sample interval of 1 min. or longer)

INTERNAL SENSORS

Sensor	Calibrated Measurement Range ¹	Operating Range	Initial Accuracy ²	One Year Accuracy ³	Resolution
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

- 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.

CURRENT LOOP & VOLTAGE INPUTS

Input Type	Current Loop	Analog Voltage (DC)
Available Ranges	0 to 22 mA	0 to 5V, 0 to 10V
Resolution	5.5 µA	0.025% F.S.
1 Year Accuracy		+/-0.15% F.S. at +25°C (+77°F)
Input Impedances	75 ohms	>1 Mohm
Isolation	One common per logger	One common per logger
Overload Protection	60mA max. (reverse-polarity protected)	+/-30 volts max. (reverse-polarity protected)

CHANNEL CONFIGURATION

Model Number	Channel Types			
	CH 1	CH 2	CH 3	CH 4
SP/VL-2000-3CR	Temperature	Relative Humidity	Current 4 to 20mA	
SP/VL-2000-3SR	Temperature	Relative Humidity	Voltage 0 to 5V	
SP/VL-2000-3AR	Temperature	Relative Humidity	Voltage 0 to 10V	
SP/VL-2000-4BR	Temperature	Relative Humidity	Boolean/Door Switch	Boolean/Door Switch

MEMORY

Data Sample Capacity	Memory Type	Memory Modes	Sampling Rates
120,000 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)