

> The Veriteq 1700 Series Thermocouple Data Recorder



SP-1700

Veriteq's 1700 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. Coupled with Spectrum software for downloading, displaying, analyzing and reporting of recorded environmental data, the SP-series was designed for use in non FDA/GxP regulated environments.

Data recorders are configured for either wide or narrow range temperature measurement.

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

GENERAL

Size	Operating Range	Interfaces	Mounting	PC Software	Internal Clock	Electromagnetic Compatibility	Power Source
71x53x20mm (2.8 x 2.1 x 0.8"), 65g (2.4 oz.)	-40°C to +85°C (-40°F to +185°F) and 0%RH to 100%RH (non-condensing)	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 at 0 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)

DATA RECORDER INPUTS

1700 Series Type	1700 Series Models	Number of Channels		
		Thermocouple	CJT	Total
Narrow Range	1700-21N	1	1	2
	1700-51N	4	1	5
Wide Range	1700-21W	1	1	2
	1700-51W	4	1	5

Note: One channel on each model provided for Cold Junction Temperature (CJT) reference using on-board precision-tolerance thermistor.

THERMOCOUPLE INPUT CHANNELS

Compatible Thermocouple Types: J, K, T, E, R, S			
Input Impedance: 10M ohms			
1700 Series Type	Input Range	Resolution	Accuracy
Narrow Range	-7.2 to +7.8 mV	0.004 mV	+/- 0.014 mV @ +25°C (+77°F)
Wide Range	-4.6 to +55.4 mV	0.016 mV	+/- 0.055 mV @ +25°C (+77°F)

TEMPERATURE ACCURACY (SPECIFICATIONS FOR WIDE RANGE MODELS ARE SHADED)

	Type K	Type J	Type T	Type E	Type R	Type S
Temperature Measurement Range	-220°C to +210°C (-364°F to +410°F)	-130°C to +160°C (-202°F to +320°F)	-240°C to +190°C (-400°F to +374°F)	-110°C to +140°C (-166°F to +284°F)	-50°C to +790°C (-58°F to +1454°F)	-50°C to +850°C (-364°F to +1562°F)
	-100°C to +1370°C (-148°F to +2498°F)	-50°C to +900°C (-58°F to +1652°F)	-100°C to +350°C (-148°F to +662°F)	-50°C to +740°C (-58°F to +1364°F)	-50°C to +1760°C (-58°F to +3200°F)	-50°C to +1700°C (-58°F to +3092°F)
Instrument Temperature Accuracy at mid-range*	+/-0.36°C (+/-0.65°F)	+/-0.28°C (+/-0.50°F)	+/-0.40°C (+/-0.72°F)	+/-0.24°C (+/-0.43°F)	+/-1.4°C (+/-2.5°F)	+/-1.5°C (+/-2.7°F)
	+/-1.3°C (+/-2.3°F)	+/-1.0°C (+/-1.8°F)	+/-1.2°C (+/-2.2°F)	+/-0.70°C (+/-1.3°F)	+/-4.4°C (+/-7.9°F)	+/-5.1°C (+/-9.2°F)
Resolution at mid-range	0.10°C (0.18°F)	0.08°C (0.14°F)	0.11°C (0.20°F)	0.07°C (0.13°F)	0.40°C (0.72°F)	0.43°C (0.77°F)
	0.37°C (0.67°F)	0.29°C (0.52°F)	0.34°C (0.61°F)	0.20°C (0.36°F)	1.3°C (2.3°F)	1.5°C (2.7°F)

* Listed accuracies are for data recorder only at 25°C (+77°F). They do not include the accuracy of the thermocouple probe or cold junction compensation.

COLD JUNCTION TEMPERATURE CHANNEL

Measurement Range	-40°C to +85°C (-40°F to +185°F)
Accuracy	+/-0.25°C over +20°C to +30°C (+/-0.45°F over +68°F to +86°F) +/-0.35°C over -20°C to +70°C (+/-0.63°F over -4°F to +158°F)

MEMORY

Memory Type	Non-volatile EEROM
Data Sample Capacity	70,300 12-bit samples
Memory Modes	User-selectable. Wrap (FIFO) or stop when memory is full. User selectable start time.
Sampling Rates	User-selectable (in 10 second intervals) from one every 10 seconds to once a day. (Battery life specified with sample interval of 1 min. or longer)
Recording Span	Recording span depends upon sample interval selected and number of channels enabled. Please see table below.

SAMPLE INTERVAL	RECORDING SPAN				
	Number of Channels				
	1	2	3	4	5
10 seconds	8.1 days	4.1 days	2.7 days	2.0 days	1.6 days
30 seconds	24.3 days	12.2 days	8.1 days	6.1 days	4.9 days
1 minute	1.6 months	24.3 days	16.2 days	12.1 days	9.7 days
5 minutes	8.1 months	4.1 months	2.7 months	2.0 months	1.6 months
15 minutes	2.0 years	1.0 years	8.1 months	6.1 months	4.9 months
1 hour	8.0 years	4.0 years	2.6 years	2.0 years	1.6 years