

Vaisala Veriteq Thermocouple Data Recorder Series 1700



Applications

- Ideal for extreme temperatures - from -240 °C to 1760 °C
- Accepts type J, K, T, E, R and S thermocouples
- No programming or complicated equations required
- Highly accurate replacement for bulky data acquisition systems

The Vaisala Veriteq 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 VL 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. Coupled with vLog SP 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 multistage alarm notification and remote monitoring for both the SP and VL-series of data recorders.

Technical Data

General

Size	71x53x20mm (2.8 x 2.1 x 0.8"), 65g (2.4 oz.)
Operating Range	-40 °C to +85 °C (-40 °F to +185 °F) and 0 %RH to 100 %RH (non-condensing)
Interfaces	RS-232 serial, USB, Ethernet, WiFi network interface available
Mounting	Magnetic strips, 3M Dual Lock™ fasteners
PC Software	Graphing & Reporting Software vLog SP for SP series vLog VL for VL-series viewLinc for continuous monitoring & alarming
Internal Clock	Accuracy: +/- 1 min./month at 0 to +50 °C (+32 °F to +122 °F)
Electromagnetic Compatibility	FCC Part 15 and CE
Power Source	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)

Technical Data

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)
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)
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 once 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.

Recording Span

SAMPLE INTERVAL	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



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