

Certificate Number: B08-1020966

Page 1 (2)

Customer: Sample Inc
123 Sample Rd.
Sample, MA 01234

Manufacturer: Vaisala Oyj

Instrument: VL-2000-20R Humidity and Temperature Logger

Serial Number: 10062253

The internal temperature sensor of the logger was calibrated by comparing the logger readings to a reference thermometer in Vaisala Boston Calibration and Repair Services (CRS).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95 %.

The measurement results are traceable to the international system of units (SI) through national metrology institutes (NIST USA, MIKES Finland, or equivalent) or accredited calibration laboratories. Pass: Error less than Limit minus Uncertainty; Pass*: Error less than or equal to Limit; Fail: Error more than Limit.

Measurement results before adjustment:

Reference		Channel 1			
Temperature	Observed	Error	Uncertainty	Limit	Pass/Fail
°C	°C	°C	°C	°C	
-25.03	-25.06	-0.03	0.08	±0.25	Pass
10.01	9.99	-0.02	0.06	±0.25	Pass
25.01	24.99	-0.02	0.06	±0.15	Pass
30.03	30.03	0.00	0.06	±0.25	Pass
40.04	40.03	-0.01	0.06	±0.25	Pass
45.03	45.02	-0.01	0.07	±0.25	Pass
69.89	69.92	0.03	0.08	±0.25	Pass

Measurement results after adjustment:

Reference		Channel 1			
Temperature	Observed	Error	Uncertainty	Limit	Pass/Fail
°C	°C	°C	°C	°C	
-25.03	-25.03	0.00	0.08	±0.15	Pass
10.01	10.01	0.00	0.06	±0.15	Pass
25.01	25.00	-0.01	0.06	±0.1	Pass
30.03	30.04	0.01	0.06	±0.15	Pass
40.04	40.04	0.00	0.06	±0.15	Pass
45.03	45.03	0.00	0.07	±0.15	Pass
69.89	69.89	0.00	0.08	±0.15	Pass

Reference(s):	Instrument Number	Calibration Date	Certificate	Next Calibration
Fluke 1560/2560/5606	1011-0342-1	2016-05-04	K008-Z01358	2017-05-31

Note(s):
Service report as an attachment

Calibration Date: February 22, 2017 **Next Calibration:** February 22, 2018

Date: March 09, 2017 **Ambient Condition(s):**
22.5 °C ±1.3 °C

Signature: _____
Joey Yang
Service Technician 40.4 %RH ±8.8 %RH
1007.8 hPa ±3.9 hPa

Calibration Certificate

Certificate Number: B08-1020966

Page 2 (2)

The humidity sensor of the logger was calibrated by comparing the logger readings to the generated reference humidity readings in Vaisala Boston Calibration and Repair Services (CRS).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95 %.

The measurement results are traceable to the international system of units (SI) through national metrology institutes (NIST USA, MIKES Finland, or equivalent) or accredited calibration laboratories. Pass: Error less than Limit minus Uncertainty; Pass*: Error less than or equal to Limit; Fail: Error more than Limit.

Measurement results before adjustment:

Reference		Channel 2				
Humidity	Temperature	Observed	Error	Uncertainty	Limit	Pass/Fail
%RH	°C	%RH	%RH	%RH	%RH	
44.98	10.01	43.80	-1.18	0.80	±3	Pass
10.99	24.99	11.13	0.14	0.70	±2	Pass
45.03	25.01	45.38	0.35	0.80	±2	Pass
59.82	25.02	60.03	0.21	0.80	±2	Pass
79.79	24.98	79.59	-0.20	0.80	±2	Pass
65.06	30.03	64.85	-0.21	0.80	±3	Pass
74.94	40.04	74.57	-0.37	0.90	±3	Pass
44.94	45.03	44.75	-0.19	0.80	±3	Pass

Measurement results after adjustment:

Reference		Channel 2				
Humidity	Temperature	Observed	Error	Uncertainty	Limit	Pass/Fail
%RH	°C	%RH	%RH	%RH	%RH	
44.98	10.01	45.02	0.04	0.80	±2	Pass
10.99	24.99	11.05	0.06	0.70	±1	Pass
45.03	25.01	45.13	0.10	0.80	±1	Pass
59.82	25.02	59.86	0.04	0.80	±1	Pass
79.79	24.98	79.88	0.09	0.80	±1	Pass
65.06	30.03	65.06	0.00	0.80	±2	Pass
74.94	40.04	75.01	0.07	0.90	±2	Pass
44.94	45.03	44.97	0.03	0.80	±2	Pass

Reference(s):	Instrument Number	Calibration Date	Certificate	Next Calibration
Thunder 2500	5011-0088	2016-12-16	161216-TS2500-1007799	2017-12-31
Fluke 1560/2560/5606	1011-0342-1	2016-05-04	K008-Z01358	2017-05-31
PTU303	3011-0400	2016-11-09	161109-PTU303-L1330477	2017-05-31

Note(s):

Service report as an attachment

Calibration Date: February 22, 2017

Next Calibration: February 22, 2018

Ambient Condition(s):

22.5 °C ±1.3 °C
 40.4 %RH ±8.8 %RH
 1007.8 hPa ±3.9 hPa