

Report #: 031912-G0620104-RH SR #: 55419
 Model #: HMT337

Calibration Date: Mar-19-2012
 Serial #: G0620104

Instrument Type: Humidity Transmitter
 Instrument Range: 0 to 100%, RH
 Instrument Range: -70 to +180 °C, T

Ch 1: 0...5 V, 0...100 %RH
 Ch 2: 0...5 V, -40...+180 °C, T

Calibration Procedure: 11603100
 Recommended Calibration Due Date: Mar-19-2013

Customer: OREGON STATE UNIVERSITY
 City, State: CORVALLIS, OR USA

The test chamber used to produce the humidity and temperature for the calibration is a Thunder 2500 Two-Pressure Generator. If 0% RH is presented on the certificate, it is generated by using a dry-air line. The dry-air line is monitored with DMP248 reference instruments. The Unit Under Test is allowed at least 1 hour to stabilize prior to recording a measurement. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement.

One measurement point was checked after Chemical Purge, or Sensor Baking, but before any adjustment is made to the unit. Either a Chemical purge was performed on the sensor by the unit itself, or the sensor was removed and placed in an oven at elevated temperature for a set amount of time. This is done to drive off any built up solvents that may have adhered to the sensor causing the readings to drift low compared to the reference instrument. The higher the humidity the lower the RH reading would be if chemical contamination were present. A rise in the reading compared to the "As Found" reading indicates an interfering chemical was present in the sensor.

Calibration Data (As Found)				
Out of Tolerance: YES				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
22.21	22.26	0.05	0.20	0.10
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	1.00	0.50
11.09	10.60	-0.49	1.00	0.42
33.12	32.00	-1.12	1.00	0.60
75.09	72.80	-2.29	1.00	0.79
94.08	90.70	-3.38	1.70	0.72
Calibration Data (After Chemical Purge)				
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %RH	± Uncertainty, %RH
75.10	74.20	-0.90	1.00	0.79
Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
22.20	22.30	0.10	0.20	0.10
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	1.00	0.50
11.11	11.80	0.69	1.00	0.42
33.07	33.10	0.03	1.00	0.60
75.10	75.00	-0.10	1.00	0.79
94.08	94.00	-0.08	1.70	0.72

Problem Noted: The unit was out of tolerance as found.

Action Taken: The sensor tested fine, it was purged to eliminate possible contamination. The unit was adjusted and calibrated.

The results of this calibration are related only to the items being calibrated at the time of calibration, and are traceable to the National Institute of Standards and Technology. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSS Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC 17025. Vaisala is ISO 9001:2008 certified.

Calibration Equipment Used: Thunder - CSL			
Model Number	Serial Number	Calibration Date	Due Date
DMP248	Z3230008	Feb. 13, 2012	Feb. 13, 2013
Thunder 2500ST	0105303	Dec. 27, 2011	Jun. 27, 2012

Ambient Conditions	
Temperature:	22.47 °C
Humidity:	49.19 %RH

Approved By 

Technical Operator
 Jhonson François 