Certificate report no. H33-11060072

CALIBRATION CERTIFICATE

Instrument	Humidity and Temperature Transmitter HMT337
Order code	HMT330 7T2D004BCAE140C0EAABAA1
Serial number	G0620104
Manufacturer	Vaisala Oyj, Finland
Calibration date	10th February 2011

The above instrument was calibrated by comparing the readings of the instrument to working standards of the manufacturer. The reference humidity was calculated from dewpoint temperature and temperature readings with the exception of the driest condition that was measured as relative humidity. Dewpoint temperature was measured with a 373 LHX dewpoint meter. Temperature and relative humidity were measured with two factory working standards. At the time of shipment, the instrument described above met its operating specifications.

The 373 LHX dewpoint meter has been calibrated at Centre for metrology and accreditation (MIKES) by using a MIKES working standard traceable to National Institute of Standards and Technology (NIST). The temperature readings of the factory working standards have been calibrated at Vaisala Measurement Standards Laboratory (MSL) by using MSL working standards traceable to NIST. The relative humidity readings of the factory working standards have been calibrated at the Vaisala factory by using a 373 LHX dewpoint meter. The temperature calibration at MSL has been accredited by the FINAS according to the ISO/IEC 17025.

Humidity calibration results

Reference humidity %RH	Reference temperature °C	Observed humidity %RH	Observed probe temperature °C	Additional probe temperature °C	Humidity difference %RH	Permissible difference %RH
+ 93.7	+ 22.19	+ 93.9	-	+ 22.20	+ 0.2	± 1.7
+ 74.2	+ 22.19	+ 74.6	-	+ 22.21	+ 0.4	± 1.0
+ 53.6	+ 22.18	+ 54.3	-	+ 22.20	+ 0.7	± 1.0
+ 32.8	+ 22.18	+ 33.2	-	+ 22.20	+ 0.4	± 1.0
+ 12.4	+ 22.18	+ 12.6	-	+ 22.21	+ 0.2	± 1.0
+ 0.1	+ 22.17	+ 0.1	-	+ 22.21	0.0	±1.0

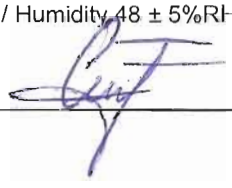
Temperature calibration results

Reference temperature °C	Observed probe temperature °C	Temperature difference °C		Additional probe temperature °C	Temperature difference °C	Permissible difference °C
+ 22.19	-	-		+ 22.21	+ 0.02	± 0.10

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
MBW 373LHX	10-0118	2010-07-07	M-10H040
HMT337 / T	E0840007	2010-03-25	K008-T00650
HMT337 / **T**	E0840005	2010-03-25	K008-T00652
HMT337 / RH	E0840007	2011-01-03	H33-11021003
HMT337 / RH	E0840005	2011-01-03	H33-11021004

Uncertainties (95 % confidence level, k=2)
Humidity ± 0.6%RH @ 0...40%RH, ± 1.0%RH @ 40...97%RH
Temperature ± 0.10 °C.
Ambient conditions / Humidity 48 ± 5%RH, Temperature + 20 ± 1 °C, Pressure 1017 ± 1 hPa.



Technician

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VAISALA

Certificate report no. H04-11060028

CALIBRATION CERTIFICATE

Instrument	Humidity and Temperature Transmitter HMT337
Order code	HMT330-7T2D004BCAE140C0EAABAA1
Serial number	G0620104
Manufacturer	Vaisala Oyj, Finland
Calibration date	10th February 2011

The analog outputs of the above instrument were measured by using working standards of the manufacturer. The outputs were forced by digital input signals to three output values. The observed values were determined by measuring the voltage over the output terminals. All results are traceable in terms of voltage to NIST.

Analog output channel 1 calibration results

Output forced to V	Observed output V	Difference V	Permissible difference V
0.500	0.49942	- 0.00058	±0.0025
2.500	2.49927	- 0.00073	±0.0025
4.500	4.49935	- 0.00065	±0.0025

Analog output channel 2 calibration results

Output forced to V	Observed output V	Difference V	Permissible difference V
0.500	0.4995	- 0.0005	±0.0025
2.500	2.49937	- 0.00063	±0.0025
4.500	4.4995	- 0.0005	±0.0025

Analog output channel 3 calibration results

Output forced to V	Observed output V	Difference V	Permissible difference V
-	-	-	-
-	-	-	-
-	-	-	-

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
HP34970A	EM 12814	2010-03-09	K004-10S154

Uncertainty (95 % confidence level, k=2)
Voltage ±0.00069V
Ambient conditions / Humidity 11.00 ± 5%RH, Temperature 23.00 ± 2 °C, Pressure 1016.00 ± 20 hPa.

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