VAISALA

Certificate report no. H81-19040036

CALIBRATION CERTIFICATE

Instrument	Humidity and Temperature Probe HMP155
Order code	A2JB11A0A0A1A0A
Serial number	R0350206
Manufacturer	Vaisala Oyj, Finland
Calibration date	23rd January 2019

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
0.100	0.100	0.000	±0.001
0.500	0.500	0.000	±0.001
0.900	0.900	0.000	±0.001

Analog output channel 2 calibration results

Output forced to V	Observed output V	Difference V	Permissible difference V
0.100	0.100	0.000	±0.001
0.500	0.500	0.000	±0.001
0.900	0.900	0.000	±0.001

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
HP34970A	MY44031851	2018-02-17	1250-307091239

Uncertainty (95 % confidence level, k=2)
Voltage ±0.00064V

Ambient conditions / Humidity 19.98± 5%RH, Temperature23.01 ± 2 °C, Pressure 1004.49 ± 20 hPa.

Technician

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VAISALA

Certificate report no. H54-19030089

CALIBRATION CERTIFICATE

Instrument	Humidity and Temperature Probe HMP155
Serial number	R0350206
Manufacturer	Vaisala Oyj, Finland
Calibration date	18th January 2019

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 an ISO/IEC 17025 accredited calibration laboratory (FINAS), 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.

Humidity calibration results

Reference humidity	Reference temperature	Observed humidity	Observed probe temperature	Additional probe temperature	Humidity difference	Permissible difference
%RH	°C	%RH	°C	°C	%RH	%RH
+ 0.1	+ 22.00	+ 0.1	+ 22.01	-	0.0	±1.0
+ 12.6	+ 22.00	+ 12.6	+ 22.00	-	0.0	± 1.0
+ 33.1	+ 21.99	+ 32.8	+ 22.00	-	- 0.3	± 1.0
+ 53.9	+ 21.99	+ 53.8	+ 21.99	-	- 0.1	± 1.0
+ 74.8	+ 21.99	+ 75.0	+ 22.00	-	+ 0.2	± 1.0
+ 94.4	+ 22.00	+ 94.9	+ 22.00	-	+ 0.5	± 1.7

Temperature calibration results

Reference temperature	Observed probe temperature	Temperature difference		Additional probe temperature	Temperature difference	Permissible difference
°C	°C	°C		°C	°C	°C
+ 21.99	+ 22.00	+ 0.01		-	-	± 0.10

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
373 LHX	11-0405	2018-01-24	M-18H002
PTU303 / T	H0730002	2018-02-06	K008-B00345
HMT337	E0840007	2018-02-06	K008-B00342
PTU303 / RH	H0730002	2018-11-12	H54-18461002
HMT337 / RH	E0840007	2018-11-12	H54-18461002

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 29 ± 5%RH, Temperature 24 ± 1 °C, Pressure 995 ± 1 hPa.

Technician

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