

CALIBRATION CERTIFICATE

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Certificate Number:

HEL182210108



Instrument: Humidity and Temperature Transmitter HMT337
Order code: HMT330 7S1D004BCAB120A3DCABAA1
Serial Number: P2150917
Manufacturer: Vaisala Oyj, Finland
Calibration date: 2018-05-25

Approved by:

Digitally signed by JCHO
 Date: 2018.05.28 07:20:16 +03:00
 Reason: Calibration responsible
 Location: Vaisala Oyj, Finland

The analog outputs of the instrument were calibrated by using working standards of the manufacturer. The outputs were forced by digital input to three output values. The observed values were determined by measuring the voltage over a calibrated precision resistor.

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 via ISO/IEC 17025 accredited calibration laboratories.

Analog output channel 1 calibration results

Channel 1 scaling: RH 0...100 %RH

Output forced to V	Observed output V	Difference V	Acceptance limit V	Pass/Fail
+0.500	+0.500	0.000	±0.0025	Pass
+2.500	+2.500	0.000	±0.0025	Pass
+4.500	+4.500	0.000	±0.0025	Pass

Analog output channel 2 calibration results

Channel 2 scaling: T -40...60 °C

Output forced to V	Observed output V	Difference V	Acceptance limit V	Pass/Fail
+0.500	+0.500	0.000	±0.0025	Pass
+2.500	+2.500	0.000	±0.0025	Pass
+4.500	+4.500	0.000	±0.0025	Pass

Analog output channel 3 calibration results

Channel 3 scaling: -

Output forced to V	Observed output V	Difference V	Acceptance limit V	Pass/Fail
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

Reference equipment used in calibration

Type	Identity Number	Certificate Number	Calibration Date
HP34970A	MY44006286	1250-307084849	2017-06-15
-	-	-	-

Calibration uncertainties (k=2, ~95% confidence level):

Voltage ±0.00069V

Ambient conditions:

Humidity [%RH] Temperature [°C] Pressure [hPa]
 17 ± 4 23 ± 2 1010 ± 20



CALIBRATION CERTIFICATE

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Certificate Number:

HEL182210109



Instrument: Humidity and Temperature Transmitter HMT337
Order Code: HMT330 7S1D004BCAB120A3DCABAA1
Serial Number: P2150917
Manufacturer: Vaisala Oyj, Finland
Calibration Date: 2018-05-28

Approved by:

Digitally signed by JCHO
 Date: 2018.05.28 07:20:20 +03:00
 Reason: Calibration responsible
 Location: Vaisala Oyj, Finland

The humidity sensor of the instrument was calibrated by comparing the instrument's humidity reading to a generated reference humidity reading. The reference humidity reading was calculated based on two-pressure humidity generation principle, using the measurement results of saturator pressure and temperature and calibration chamber pressure and temperature.

The temperature sensor(s) of the instrument was calibrated by comparing the instrument's temperature readings to a reference thermometer.

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 via ISO/IEC 17025 accredited calibration laboratories.

Humidity calibration results

Reference Humidity [%RH]	Reference Temperature [°C]	Observed Humidity [%RH]	Observed Temperature [°C]	Humidity Error [%RH]	Acceptance Limit [%RH]	Pass/Fail
15.1	+20.86	14.7	+20.86	-0.4	±1.0	Pass
33.3	+20.86	32.8	+20.86	-0.5	±1.0	Pass
54.5	+20.87	54.2	+20.86	-0.3	±1.0	Pass
75.6	+20.87	75.6	+20.87	0.0	±1.0	Pass
96.0	+20.87	96.2	+20.86	+0.2	±1.7	Pass

Temperature calibration results

Reference Temperature [°C]	Observed Temperature [°C]	Error [°C]	Acceptance Limit [°C]	Pass/Fail
+21.01	+21.01	0.00	±0.10	Pass

Additional temperature probe calibration results

Reference Temperature [°C]	Observed Temperature [°C]	Error [°C]	Acceptance Limit [°C]	Pass/Fail
+20.87	+20.87	0.00	± 0.10	Pass

Reference equipment used in calibration

Type	Identity Number	Certificate Number	Calibration Date	Calibration Due Date
PTU307	16161	K008-A01249	2017-06-09	2018-06-30
HMP307	17590	K008-A02430	2017-10-31	2018-10-31
GE Druck DPS 823B	17434	K008-A02840	2017-12-04	2018-06-30
AM1612	17592	K008-A02432	2017-10-31	2018-10-31
PXI-4070	17589	A02429	2017-10-30	2018-10-31

Calibration uncertainty (k=2, ~95% confidence level):

Humidity ± 0.5 %RH @ 0...40 %RH, ± 0.8 %RH @ 40...95 %RH
 Temperature ± 0.10 °C

Ambient conditions:

Humidity [%RH] Temperature [°C] Pressure [hPa]
 27 ± 4 22 ± 2 1029 ± 20

Vaisala provides 10-year warranty to the HMT330 transmitters that are annually calibrated at the Vaisala Service Center.
www.vaisala.com/warranty

