

Handled by
Sepe, Luigi
Forwarding agent
UPS Courier

Service Report

Date
28.10.2011

Seller's reference
41117

Buyer's reference
SM#10285

Consignee
Oregon State University
Oceanic & Atmos. Sciences
130 Burt Hall
Corvallis OR 97331
United States

Invoicing address(if not consignee)
Vaisala Inc.
Boulder Operations
194 South Taylor Ave.
Louisville CO 80027
United States

Pos	Description	Serial number - Lot Number	Quantity
33864	PTU300 Pressure, Humidity and Temperature Transmitter --CUSTOMER'S DESCRIPTION OF FAILURE-- This unit has been giving suspect humidity readings. --PROBLEM(S) FOUND -- The humidity sensor and the cable end corroded. --ACTION(S) TAKEN-- Cable and sensor changed. Filter added. Operation tested, adjustment made and calibrated. Pressure calibration certificate numbers: H53-11430001 (before adjustment) issued. H53-11430005 (after adjustment) issued. Humidity and temperature calibration certificate number: H35-11430009 (after adjustment) issued.	C2610001	1

CALIBRATION CERTIFICATE

Instrument Pressure, Humidity and Temperature Transmitter PTU307
Order code PTU300 71F20A4BCPB1A0C1E4B0B0A
Serial number C2610001
Manufacturer Vaisala Oyj, Finland
Calibration date 26th October 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 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 %RH	Reference temperature °C	Observed humidity %RH	Observed probe temperature °C	Additional probe temperature °C	Humidity difference %RH	Permissible difference %RH
+ 0.2	+ 21.98	+ 0.1	-	+ 22.01	- 0.1	±1.0
+ 12.8	+ 22.04	+ 13.2	-	+ 22.07	+ 0.4	± 1.0
+ 33.1	+ 22.04	+ 33.7	-	+ 22.05	+ 0.6	± 1.0
+ 54.0	+ 22.04	+ 54.4	-	+ 22.06	+ 0.4	± 1.0
+ 74.8	+ 22.06	+ 75.3	-	+ 22.08	+ 0.5	± 1.0
+ 94.4	+ 22.05	+ 95.5	-	+ 22.06	+ 1.1	± 1.7

Temperature calibration results

Reference temperature °C	Observed probe temperature °C	Temperature difference °C	Additional probe temperature °C	Temperature difference °C	Permissible difference °C
+ 22.06	-	-	+ 22.08	+ 0.02	± 0.10

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
MBW 373 LHX	08-1204	2011-05-13	M-11H032
HMT337 / T	E0840006	2011-04-02	K008-U00907
HMT337 / T	E0840007	2011-04-02	K008-U00908
HMT337 / RH	E0840006	2011-08-24	H33-11351001
HMT337 / RH	E0840007	2011-08-24	H33-11351002

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 47 ± 5%RH, Temperature + 22 ± 1 °C, Pressure 1028 ± 1 hPa.

Technician

CALIBRATION CERTIFICATE

Before adjustment

Instrument PTU300(500-1100) Digital Barometer
Serial number C2610001
Manufacturer Vaisala Oyj, Finland
Calibration date 25th October 2011

The above instrument was calibrated by comparing the readings of the instrument to the factory working standard of Vaisala.

The pressure readings of the factory working standard 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.

Calibration results

Reference hPa	Observed hPa	Correction* hPa
500.01	500.02	-0.01
550.02	550.03	-0.01
650.02	650.03	-0.01
750.01	750.02	-0.01
850.00	850.02	-0.02
950.00	950.01	-0.01
1000.01	1000.02	-0.01
1050.01	1050.02	-0.01
1100.00	1100.01	-0.01

*To obtain the true pressure, add the correction to the barometer reading.
Interpolated corrections may be used at intermediate readings of the scale of the barometer.

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
PPC4	476	2011-10-21	K008-U02090

Uncertainty (95 % confidence level, k=2)

Pressure ± 0.07 hPa

Ambient Conditions

Humidity 51 %RH ± 5 %RH
Temperature 22 °C ± 1 °C
Pressure 1028 hPa ± 1 hPa



Technician

CALIBRATION CERTIFICATE

After adjustment

Instrument PTU300(500-1100) Digital Barometer
Serial number C2610001
Manufacturer Vaisala Oyj, Finland
Calibration date 25th October 2011

The above instrument was calibrated by comparing the readings of the instrument to the factory working standard of Vaisala.

The pressure readings of the factory working standard 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.

Calibration results

Reference hPa	Observed hPa	Correction* hPa	Acceptance limit hPa
500.01	500.01	0.00	± 0.05
550.02	550.02	0.00	± 0.05
650.01	650.01	0.00	± 0.05
750.00	750.00	0.00	± 0.05
850.01	850.01	0.00	± 0.05
950.00	950.00	0.00	± 0.05
1000.02	1000.01	0.01	± 0.05
1050.00	1050.00	0.00	± 0.05
1100.01	1100.00	0.01	± 0.05

*To obtain the true pressure, add the correction to the barometer reading.
Interpolated corrections may be used at intermediate readings of the scale of the barometer.

Equipment used in calibration

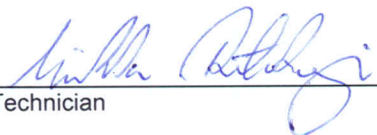
Type	Serial number	Calibration date	Certificate number
PPC4	476	2011-10-21	K008-U02090

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Ambient Conditions

Humidity 50 %RH ± 5 %RH
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Technician