

Calibration Report: Pressure Transmitter

S/N: P3210845

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Summary

Calibration date: 2018 Aug 6

Next Calibration date: As needed

A collection, analysis, and calibration of data from a Pressure Transmitter, S/N: P3210845 has been completed. Vaisala, Inc., the manufacturer of the instrument, performed the calibration. The data was collected by Vaisala on 2018 August 6.

Model: PTB110 Barometer (Vaisala)
Serial Number: P3210845

The test data presented in data table format display the pressure transmitter readings (reference and observed) in millibar and any correction needed. The pressure reading at the CRAVE sites historically range between 950-1060mb.

We used this methodology because CRAVE measurements are collected in voltages and we usually request voltage readings for pressure calibrations. The following pages provide more detail into the calibration process and results.

Application: The pressure sensor is read by a Campbell Scientific data logger that collects raw voltage data. Any correction is applied during processing of raw data.

CALIBRATION CERTIFICATE

Instrument PTB110 Barometer
Serial number P3210845
Manufacturer Vaisala Oyj, Finland
Calibration date 6th August 2018

This instrument has been calibrated against a Vaisala PTB220 factory working standard. The Vaisala PTB220 is traceable to the National Institute of Standards and Technology (NIST, USA) via Vaisala Measurement Standards Laboratory (MSL). Vaisala MSL has been accredited by FINAS according to ISO/IEC 17025 standard.

At the time of shipment, the instrument described above was within its operating specifications.

Calibration results

Reference pressure hPa	Calculated pressure hPa	Observed voltage Vdc	Correction* hPa	Uncertainty** hPa
510.1	510.1	0.042	0.0	± 0.15
610.2	610.2	0.459	0.0	± 0.15
700.1	700.1	0.834	0.0	± 0.15
810.3	810.3	1.293	0.0	± 0.15
899.9	899.9	1.666	0.0	± 0.15
999.9	999.9	2.083	0.0	± 0.15
1060.2	1060.2	2.334	0.0	± 0.15
1100.4	1100.4	2.502	0.0	± 0.15

*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.

**The calibration uncertainty given at 95 % confidence level, k = 2

Equipment used in calibration

Type	Serial number	Calibration date	Certificate number
HP34970A	EM 12088	2017-09-30	1250-307087859
PTB220	PA 14019	2017-08-22	K008-A01898

Ambient conditions

Humidity: 33 ± 5 %RH

Temperature: 23 ± 2 °C

Pressure: 1002 ± 20 hPa



 Technician

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