



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

ENVIROTRONICS, INC.

Grand Rapids, MI

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).



Presented this 15th day of April 2009.

A handwritten signature in cursive script, reading "Peter Mlynar".

President
For the Accreditation Council
Certificate Number 1276.01
Valid to February 28, 2011

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

ENVIROTRONICS, INC.
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Grand Rapids, MI 49512
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CALIBRATION

Valid to: February 28, 2011

Certificate Number: 1276.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Electrical – DC & Low Frequency

| Parameter/Equipment | Range | Best Uncertainty ^{2,3} (±) | Comments |
|-------------------------------------|------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------|
| DC Voltage ³ – Source | 110.000 mV 1.100 V 15.00 V | 0.9 mV 0.020 V 0.09 V | Fluke 743B Best uncertainty is a product of the value of the reading plus the display |
| DC Resistance ³ – Source | (0 to 10) Ω (10 to 100) Ω (100 to 500) Ω | 0.009 Ω 0.09 Ω 0.5 Ω | Fluke 743B Best uncertainty is a product of the value of the reading plus the display |
| DC Current ³ – Source | (0 to 22) mA | 0.025 mA + 0.005 mA | Fluke 743B Best uncertainty is a product of the value of the reading plus the display |

II. Thermodynamics

| Parameter/Equipment | Range | Best Uncertainty ^{2,3} (±) | Comments |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|
| Relative Humidity ³ – Measure | 5 % to 95 % | 3.1 % | Vaisala HMI 41/HMP 46 |
| Electrical Calibration of Thermocouple Indicating Systems ³ – Measure | | | Fluke 743B |
| Type T | (-200 to 0) °C (0 to 400) °C | 0.5 °C 0.8 °C | |
| Type J | (-100 to 1200) °C | 0.5 °C | |
| Type K | (-100 to 1372) °C | 0.5 °C | |
| Temperature Measure ³ – | (-80 to 0) °C (0 to 200) °C (0 to 760) °C (0 to 1100) °C | 0.9 °C 0.85 °C 0.95 °C 1.8 °C | Thermocouple measuring system. Fluke 743B with T, J and K thermocouples. |
| Electrical Calibration of RTD Indicating Systems ³ – Measure | | | Fluke 743B |
| 100 Ω | (-200 to 250) °C | 0.8 °C | |

¹ This laboratory offers commercial calibration and field calibration service.

² “Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device, to the environment and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the uncertainties achievable on a customer’s site can normally be expected to be larger than the Best Measurement Capabilities (BMC) that the accredited laboratory has been assigned as Best Uncertainty on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the calibration uncertainty being larger than the BMC.