



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY BURTON
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CALIBRATION

Valid To: May 31, 2024

Certificate Number: 1123.04

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1,7}:

I. Electrical – DC/Low Frequency

Parameter/Equipment

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Electrical Calibration of Thermocouple Indicating Systems ³			
Type J	(-100 to 800) °C	0.014 % + 0.85 °C	Fluke 724 / 725
Type K	(-100 to 400) °C	0.014 % + 0.92 °C	
Type T	(-80 to 0) °C (0 to 300) °C	0.87 °C 0.05% + 0.85 °C	
Type R	(-20 to 0) °C (0 to 500) °C (500 to 1750) °C	3.2 °C 2.2 °C 1.7 °C	
Type S	(-20 to 0) °C (0 to 500) °C (500 to 1750) °C	3.2 °C 2.3 °C 1.9 °C	
Type N	(-200 to 0) °C (0 to 1300) °C	1.7 °C 1.0 °C	

II. Thermodynamics

Parameter/Equipment	Range	CMC ^{2, 5} (±)	Comments
Temperature – Measure ³	(-40 to 120) °C	0.68 °C	Vaisala HMP3
	(10 to 40) °C	0.64 °C	Vaisala HMI 41/HMP46
	(-80 to 300) °C	2.3 °C	Type T thermocouple
Relative Humidity – Measure ³	(20 to 90) % RH	2.3 % RH	Vaisala HMP9
	(90 to 95) % RH	3.1 % RH	
	(20 to 80) % RH	3.5 % RH	Vaisala HMI 41/HMP46

¹ This laboratory offers commercial calibration service and field calibration service.

- ² Calibration and Measurement Capability (CMC) 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 or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.
- ³ Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found 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 actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.
- ⁴ The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMCs are expressed as either a specific value that covers the full range or as a fraction/percentage of the reading plus a fixed floor specification.
- ⁵ The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.
- ⁶ AC power is calibrated in the artificial weathering equipment to control irradiance.
- ⁷ This scope meets A2LA's *P112 Flexible Scope Policy*.



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY BURTON

Burton, MI

for technical competence in the field of

Calibration

ISO

17025

R

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