



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

AMERICAN TESTING SERVICES, LTD.
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Miamisburg, OH 45342
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CALIBRATION

Valid To: July 31, 2023

Certificate Number: 2855.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1, 5}:

I. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
AC Current – Measure ³ In-Series Ammeter– 60 Hz	(100 to 19 990) A	2.4 % of rdg	Current meter with duration timer
DC Current – Measure ³ In-Series Ammeter	(100 to 19 990) A	2.4 % of rdg	Current meter with duration timer
HWDC Current – Measure ³	(100 to 19 990) A	2.4 % of rdg	Current meter with duration timer

II. Magnetic Quantities

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Gauss Meters – Magnetic Flux Density	(0 to 30) G (30 to 300) G (300 to 3000) G (3000 to 10 000) G	0.17 G 1.4 G 8.6 G 84 G	Gauss meter with Helmholtz coil or reference magnets

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Gauss Meters – Magnetic Flux Density ³	(0 to 30) G (30 to 300) G	0.72 G 7.1 G	Gauss meter with Helmholtz coil
Reference Magnets	(0 to 30) G (30 to 300) G (300 to 3000) G (3000 to 10 000) G	0.13 G 0.85 G 8.6 G 84 G	Reference Gauss meter
Magnetometer	(0 to 5) G (>5 to 10) G (>10 to 20) G	0.18 G 0.28 G 0.66 G	Helmholtz coil with magnetometer

III. Mechanical

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
Pressure – Measuring Equipment ³	(0 to 100) psi (>100 to 300) psi (>300 to 1000) psi (>1000 to 10 000) psi	0.25 psi 0.66 psi 5.9 psi 11 psi	Master pressure gauges
AC Hand Yoke ³	10 lb	+ 1.3 %, -0 % of rdg	Verification using model TB-10 10 lb weights
DC Hand Yoke ³	30 lb 50 lb	+ 1.3 %, -0 % of rdg + 1.3 %, -0 % of rdg	Verification using model TB-10 10 lb weights
Quick Break Tester ³	2000 A	1.6 % of rdg	ATS-20B with current source

IV. Optical Quantities

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
Light (Light Meters) – Measure ³			
UV	(0.1 to 100) mW/cm ² (100 to 100 000) μW/cm ²	5 % of rdg 5 % of rdg	Radiometer
Visible	(5.4 to 5300) lux (.5 to 500) ft/candles	5 % of rdg 5 % of rdg	
Digital Luminance	(100 to 200 000) ft/lamberts	5 % of rdg	

V. Thermodynamics

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
Temperature – Measure ³	Up to 400 °F (400 to 2000) °F	1.3 °F 3.5 °F	Reference thermometer with type J & K thermocouples

VI. Time & Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
Duration Meter ³	(0.5 to 2) s	0.074 s	Current meter with duration timer
Stop Watch/Timer ³	(0.6 to 1439) min	10 s / 1400 min	Stopwatch

¹ This laboratory offers commercial calibration service.

² Calibration and Measurement Capability Uncertainty (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. CMCs 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 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.

⁴ G is Gauss.

⁵ This scope meets A2LA's *P112 Flexible Scope Policy*.

⁶ 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.

⁷ 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. CMC's are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.



Accredited Laboratory

A2LA has accredited

AMERICAN TESTING SERVICES, INC.

Miamisburg, OH

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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 April 2017).



Presented this 5th day of August 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2855.02
Valid to July 31, 2023

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