



Accredited Laboratory

A2LA has accredited

AMERICAN TESTING SERVICES, LTD.

Miamisburg, OH

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 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 8 January 2009).



Presented this 9th day of August 2017

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 2855.02
Valid to July 31, 2019

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

AMERICAN TESTING SERVICES, LTD.
2000 Old Byers Road
Miamisburg, OH 45342
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CALIBRATION

Valid To: July 31, 2019

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 calibrations¹:

I. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
AC Current – Measure ³ In-Series Ammeter– 60 Hz	(100 to 19 990) A	2.4 % of rdg	TSI ATS 20B current timer meter
DC Current – Measure ³ In-Series Ammeter	(100 to 19 990) A	2.4 % of rdg	TSI ATS 20B current timer meter
HWDC Current – Measure ³	(100 to 19 990) A	2.4 % of rdg	TSI ATS 20B current timer meter

II. Magnetic Quantities

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Magnetic Flux Density (Gauss Meters) – Measure ³	(0 to 30) G (30 to 300) G (300 to 3000) G (3000 to 10 000) G	0.13 G 0.84 G 8.5 G 85 G	Reference magnets and Helmholtz coil
Magnetometer	(0 to 20) G	0.13 G + 0.6R	

III. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Pressure ³	Up to 200 psi (200 to 1000) psi (1000 to 10 000) psi	0.67 psi 5.8 psi 25 psi	Master pressure gauges
AC Hand Yoke ³	10 lb	+ 2 %, -0 % of rdg	Verification using model TB-10 10 lb weights
DC Hand Yoke ³	30 lb 50 lb	+ 2 %, -0 % of rdg + 2 %, -0 % of rdg	Verification using model TB-10 10 lb weights
Quick Break Tester ³	Go / No Go	N/A	Verification with standard quick break tester

IV. Optical Quantities

Parameter/Equipment	Range	CMC ² (±)	Comments
Light (Light Meters) – Measure ³			
UV	(0 to 100) mW/cm ² (0 to 100 000) μW/cm ²	5 % of rdg 5 % of rdg	Radiometer
Visible	(0 to 5300) lux (0 to 500) ft/candles	5 % of rdg 5 % of rdg	
Digital Luminance	(0 to 200 000) ft/lamberts	5 % of rdg	

V. Thermodynamics

Parameter/Equipment	Range	CMC ² (±)	Comments
Temperature ³	Up to 400 °F (400 to 2000) °F	2.4 °F 9.9 °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	0.05 s	TSI ATS 20B current timer meter
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 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.

⁴ *R* is the resolution of the unit under test. *G* is the