



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

IIA Lab Services, LLC
8612 South 228th Street
Kent, Washington 98031

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to be 'J. Stine', is positioned above a horizontal line.

Jason Stine, Vice President

Expiry Date: 10 June 2028

Certificate Number: AC-1458



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AND

ANSI/NCSL Z540-1-1994 (R2002)

IIA Lab Services, LLC

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CALIBRATION

ISO/IEC 17025 Accreditation Granted: **03 June 2026**

Certificate Number: **AC-1458** Certificate Expiry Date: **10 June 2028**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage - Source	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V 330 V to 1.02 kV	60 μ V/V + 3 μ V 50 μ V/V + 5 μ V 50 μ V/V + 50 μ V 55 μ V/V + 0.5 mV 55 μ V/V + 1.5 mV	Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual
AC Voltage - Source	(1 to 33) mV (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz (33 to 330) mV (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	3.5 mV/V + 20 μ V 1.5 mV/V + 20 μ V 2 mV/V + 20 μ V 2.5 mV/V + 20 μ V 3.5 mV/V + 33 μ V 10 mV/V + 60 μ V 2.5 mV/V + 50 μ V 0.5 mV/V + 20 μ V 1 mV/V + 20 μ V 1.6 mV/V + 40 μ V 2.4 mV/V + 0.17 mV 7 mV/V + 0.33 mV	Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment		
AC Voltage - Source	330 mV to 3.3 V (10 to 45) Hz	1.5 mV/V + 0.25 mV	Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual		
	45 Hz to 10 kHz (10 to 20) kHz	0.3 mV/V + 60 μV			
	(20 to 50) kHz	0.8 mV/V + 60 μV			
	(50 to 100) kHz	1.4 mV/V + 0.3 mV			
	(100 to 500) kHz	2.4 mV/V + 1.7 mV			
	(3.3 to 33) V (10 to 45) Hz	5 mV/V + 3.3 mV			
	45 Hz to 10 kHz (10 to 20) kHz	1.5 mV/V + 2.5 mV			
	(20 to 50) kHz	0.4 mV/V + 0.6 mV			
	(50 to 100) kHz	0.8 mV/V + 2.6 mV			
	(33 to 330) V 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz	1.9 mV/V + 5 mV 2.4 mV/V + 17 mV			
330 V to 1.02 kV 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.5 mV/V + 6.6 mV 0.8 mV/V + 15 mV 0.9 mV/V + 33 mV 0.60 mV/V + 80 mV 2 mV/V + 0.1 V 2 mV/V + 0.5 V				
DC Current - Source	Up to 3.3 mA (3.3 to 33) mA (33 to 330) mA 330 mA to 2 A (2 to 10) A	0.13 mA/A + 50 nA 0.1 mA/A + 0.15 μA 0.1 mA/A + 3.3 μA 0.3 mA/A + 44 μA 0.6 mA/A + 0.33 mA	Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual		
	AC Current - Source	(33 to 330) μA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz		2.5 mA/A + 0.15 μA 1.3 mA/A + 0.15 μA 1.3 mA/A + 0.25 μA 4 mA/A + 0.15 μA 13 mA/A + 0.15 μA	Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual
		(330 μA to 3.3 mA) (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz		2 mA/A + 0.3 μA 1 mA/A + 0.3 μA 1 mA/A + 0.3 μA 2 mA/A + 0.3 μA 6 mA/A + 0.3 μA	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source	(3.3 to 33) mA		Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual
	(10 to 20) Hz	2 mA/A + 3 μ A	
	(20 to 45) Hz	1 mA/A + 3 μ A	
	45 Hz to 1 kHz	0.9 mA/A + 3 μ A	
	(1 to 5) kHz	2 mA/A + 3 μ A	
	(5 to 10) kHz	6 mA/A + 3 μ A	
	(33 to 330) mA		
	(10 to 20) Hz	2 mA/A + 30 μ A	
	(20 to 45) Hz	1 mA/A + 30 μ A	
	45 Hz to 1 kHz	0.9 mA/A + 30 μ A	
	(1 to 5) kHz	2 mA/A + 30 μ A	
	(5 to 10) kHz	6 mA/A + 30 μ A	
	330 mA to 2.2 A		
	(10 to 45) Hz	2 mA/A + 0.3 mA	
	45 Hz to 1 kHz	1 mA/A + 0.3 mA	
(1 to 5) kHz	7.5 mA/A + 0.3 mA		
(2.2 to 11) A			
(45 to 65) Hz	0.6 mA/A + 3 mA		
(65 to 500) Hz	1 mA/A + 3 mA		
500 Hz to 1 kHz	3.3 mA/A + 3 mA		
Resistance - Source	Up to 11 Ω	0.12 m Ω / Ω + 6 m Ω	Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual
	(11 to 33) Ω	0.12 m Ω / Ω + 10 m Ω	
	(33 to 110) Ω	90 $\mu\Omega$ / Ω + 10 m Ω	
	(110 to 330) Ω	90 $\mu\Omega$ / Ω + 10 m Ω	
	330 Ω to 1.1 k Ω	90 $\mu\Omega$ / Ω + 60 m Ω	
	(1.1 to 3.3) k Ω	90 $\mu\Omega$ / Ω + 60 m Ω	
	(3.3 to 11) k Ω	90 $\mu\Omega$ / Ω + 0.60 Ω	
	(11 to 33) k Ω	90 $\mu\Omega$ / Ω + 0.60 Ω	
	(33 to 110) k Ω	0.11 m Ω / Ω + 6 Ω	
	(110 to 330) k Ω	0.12 m Ω / Ω + 6 Ω	
	330 k Ω to 1.1 M Ω	0.15 m Ω / Ω + 55 Ω	
	(1.1 to 3.3) M Ω	0.15 m Ω / Ω + 55 Ω	
	(3.3 to 11) M Ω	0.6 m Ω / Ω + 0.55 k Ω	
	(11 to 33) M Ω	1 m Ω / Ω + 0.55 k Ω	
(33 to 110) M Ω	5 m Ω / Ω + 5.5 k Ω		
Resistance Simulation of RTD Indicators	PT 100 Ω , 385		Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual
	(-180 to 0) $^{\circ}$ C	0.05 $^{\circ}$ C	
	(0 to 360) $^{\circ}$ C	0.01 $^{\circ}$ C	
	(360 to 750) $^{\circ}$ C	0.23 $^{\circ}$ C	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Millivolt Simulation of Thermocouple Indicators	Type K		Fluke 5500A Multi Product Calibrator SOP-LABE-03, Fluke 5500A Manual
	(-200 to -100) °C	0.33 °C	
	(-100 to -25) °C	0.18 °C	
	(-25 to 120) °C	0.16 °C	
	(120 to 1 000) °C	0.26 °C	
	(1 000 to 1 372) °C	0.4 °C	
	Type J		
	(-210 to -100) °C	0.27 °C	
	(-30 to 150) °C	0.14 °C	
	(150 to 760) °C	0.17 °C	
	(760 to 1 200) °C	0.23 °C	
	Type T		
(-250 to -150) °C	0.63 °C		
(-150 to 0) °C	0.24 °C		
(0 to 120) °C	0.16 °C		
(120 to 400) °C	0.14 °C		

Thermodynamics

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
System Accuracy Tests ¹	Type N		Current revision of AMS 2750
	(0 to 500) °F	1.4 °F	
	(501 to 1 000) °F	1.5 °F	
	(1 001 to 2 300) °F	1.6 °F	
Temperature Uniformity Surveys ¹	Type K (24 gage)		Current revision of AMS2750
	(0 to 300) °F	1.6 °F	
	(301 to 900) °F	1.7 °F	
	(901 to 1 250) °F	1.8 °F	
Temperature Uniformity Surveys ¹	Type K (20 gage)		Current revision of AMS2750
	(1 000 to 1 450) °F	1.5 °F	
	(1 451 to 1 600) °F	1.5 °F	
	(1 601 to 2 300) °F	1.6 °F	

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Gage Blocks ²	(0.01 to 4) in	(2.1 + 4.5L) μin	Mahr UMM, Gage Blocks SOP-LABM-04 Rev B
Calipers ²	Up to 60 in	(4 + 4.9L) μin	Gage Blocks SOP-LABM-17
Micrometers ²	Up to 20 in	60 μin	Gage Blocks SOP-LABM-08
Indicators ² Dial and Digital	Up to 2 in	13 μin	Mahr UMM, Gage Blocks SOP-LABM-10 SOP-LABM-11
Height Gage ²	Up to 60 in	(22 + 4.8L) μin	Gage Blocks SOP-LABM-09

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Force (Tension) Load Cells ¹	Up to 750 lbf	0.017 lbf	Class F Weights SOP-FIELD-12 Rev New ASTM E4
Force (Tension) Load Cells ¹	(58 to 1 010) lbf (288 to 10 100) lbf (1 146 to 51 000) lbf (5 504 to 101 000) lbf	0.15 lbf 0.58 lbf 2 lbf 18 lbf	Load Cells SOP-FIELD-12 Rev New ASTM E4
Force (Compression) Load Cells ¹	Up to 190 lbf	0.008 9 lbf	Class F Weights SOP-FIELD-12 Rev New ASTM E4
Force (Compression) Load Cells ¹	(29 to 505) lbf (200 to 10 100) lbf (2 543 to 61 000) lbf (23 652 to 400 000) lbf	0.057 lbf 0.55 lbf 3.5 lbf 35 lbf	Load Cells SOP-FIELD-12 Rev New ASTM E4
Vacuum	(-29 to 0) inHg	0.14 inHg	Pressure Calibrator SOP-FIELD-05
Pressure	Up to 95 psi (95 to 237.5) psi (237.5 to 475) psi (475 to 3 000) psi (3 000 to 10 000) psi	0.13 psi 0.14 psi 0.24 psi 1.6 psi 5.4 psi	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Scales and Balances	(1 to 20) g (20 to 210) g (0.46 to 21) lb (21 to 190) lb (190 to 750) lb (751 to 1 770) lb	0.000 36 g 0.001 2 g 0.001 4 lb 0.005 1 lb 0.02 lb 0.04 lb	Class F Weights SOP-FIELD-24

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency - Source	0.01 Hz to 10 kHz (10 to 100) kHz	25 μ Hz/Hz + 1 mHz 25 μ Hz/Hz + 15 mHz	Fluke 5500A Multi Product Calibrator

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. L = length in inches.



Jason Stine, Vice President