

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

STANDARD CALIBRATIONS INC

www.standardcal.com

Contact Name Cody DeJong

Contact Phone + 1-619-477-1668

Accredited to ISO/IEC 17025:2017

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CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
Dimensional			
Calipers	Up to 40 in	0.0013 in	Gauge Blocks, 81 Piece Set and Long Block Set
Outside Micrometers	Up to 18 in	80 μin	
Inside Micrometers	Up to 26 in	96 μin	
Depth Micrometers	Up to 12 in	67 μin	
Height Gauge	Up to 24 in 24 in to 40 in	150 μin 210 μin	
Dial & Test Indicators	Up to 1 in	29 μin	Super Micrometer, Gauge Blocks
Length Standards	Up to 17 in	30 μin	
Mechanical			
Torque Wrenches	Up to 50 ozf·in 50 ozf·in to 200 ozf·in 200 ozf·in to 50 lbf·in 50 lbf·in to 400 lbf·in 400 lbf·in to 1,000 lbf·in 1,000 lbf·in to 250 lbf·ft 250 lbf·ft to 600 lbf·ft 600 lbf·ft to 1,000 lbf·ft 1,000 lbf·ft to 2,000 lbf·ft	0.15 ozf·in 0.58 ozf·in 0.13 lbf·in 1.1 lbf·in 2.9 lbf·in 0.73 lbf·ft 1.8 lbf·ft 2.9 lbf·ft 5.9 lbf·ft	CDI Torque Calibrator/Torque Cell
Vacuum and Pressure Gauges/Pressure Transducers	-14.5 psi to 30 psi 30 psi to 150 psi 150 psi to 500 psi 500 psi to 1000 psi 1000 psi to 1500 psi	Super Micrometer, Gauge Blocks	Mensor 600
	1500 psi to 10000 psi		Ametek HPC40
	10000 psi to 30000 psi	18 psi	Omegadyne PXD 1S1-30KGI
	0 inHg to 30 inHg	0.0033 inHg	Mensor 600
Thermal			
Temperature Measure ⁴	-40 °F to 1199 °F	0.085 °F	Direct with Isotech PRT

* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

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Temperature Generate ³	-40 °F to 1199 °F	0.1 °F	Indirect with Isotech PRT
Infrared	122 °F 212 °F 302 °F	2.1 °F 2.1 °F 2.1 °F	Fluke 9135
Temperature Generate ³ Simulation			Fluke 5500A
Type B	600 °C to 800 °C 800 °C to 1000 °C 1,000 °C to 1550 °C 1,550 °C to 1850 °C	0.51 °C 0.4 °C 0.35 °C 0.38 °C	
Type E	-250 °C to -100 °C -100 °C to -25 °C -25 °C to 350 °C 350 °C to 650 °C 650 °C to 1000 °C	0.58 °C 0.19 °C 0.16 °C 0.19 °C 0.24 °C	
Type J	-210 °C to -100 °C -100 °C to -30 °C -30 °C to 150 °C 150 °C to 760 °C 760 °C to 1200 °C	0.31 °C 0.18 °C 0.16 °C 0.2 °C 0.27 °C	
Type K	-200 °C to -100 °C -100 °C to -25 °C -25 °C to 120 °C 120 °C to 1000 °C 1000 °C to 1372 °C	0.38 °C 0.21 °C 0.18 °C 0.3 °C 0.46 °C	
Type T	-250 °C to -150 °C -150 °C to 0 °C 0 °C to 120 °C 120 °C to 400 °C	0.73 °C 0.28 °C 0.18 °C 0.16 °C	
Electrical – DC/LF			
DC Voltage – Generate ³	0 mV to 329.9999 mV 0 V to 3.299999 V 0 V to 32.99999 V 30 V to 329.9999 V 100 V to 1020.000 V	0.023 mV 0.2 mV 2.0 mV 22 mV 65 mV	Fluke 5500A
AC Voltage – Generate ³	1.0 mV to 32.999 mV (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 500 kHz)	130 µV 57 µV 76 µV 95 µV 130 µV 380 µV	Fluke 5500A

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AC Voltage – Generate ³ continued	33 mV to 329.999 mV (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 500 kHz) 0.33 V to 3.29999 V (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 500 kHz) 3.3 V to 32.9999 V (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) 33 V to 329.999 V (45 Hz to 1 kHz) (1 kHz to 10 kHz) (10 kHz to 20 kHz) 330 V to 1020 V (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz)	950 µV 190 µV 380 µV 610 µV 910 µV 2.7 mV 6 mV 1.2 mV 3.1 mV 5.7 mV 11 mV 23 mV 60 mV 16 mV 33 mV 78 mV 110 mV 60 mV 300 mV 340 mV 680 mV 2.4 V 2.4 V	Fluke 5500A
DC Current – Generate ³	0 mA to 3.29999 mA 0 mA to 32.9999 mA 0 mA to 329.999 mA 0 A to 2.19999 A 0 A to 11 A	0.6 µA 4.1 µA 42 µA 52 mA 390 mA	Fluke 5500A
AC Current – Generate ³	0.029 mA to 0.32999 mA (10 Hz to 20 Hz) (20 Hz to 45 Hz) (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz) 0.33 mA to 3.2999 mA (10 Hz to 20 Hz) (20 Hz to 45 Hz) (45 Hz to 1 kHz)	1.1 µA 0.7 µA 0.8 µA 1.7 µA 4.9 µA 8 µA 4.2 µA 4.2 µA	Fluke 5500A

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AC Current – Generate ³ continued	0.33 mA to 3.2999 mA (1 kHz to 5 kHz) (5 kHz to 10 kHz) 3.3 mA to 32.999 mA (10 Hz to 20 Hz) (20 Hz to 45 Hz) (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz) 33 mA to 329.99 mA (10 Hz to 20 Hz) (20 Hz to 45 Hz) (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz) 0.33 A to 2.19999 A (10 Hz to 45 Hz) (45 Hz to 1 kHz) (1 kHz to 5 kHz) 2.2 A to 11 A (45 Hz to 65 Hz) (65 Hz to 500 Hz) (500 Hz to 1 kHz)	8 µA 23 µA 80 µA 42 µA 38 µA 80 µA 230 µA 800 µA 420 µA 380 µA 790 µA 2.3 mA 5.4 mA 2.9 mA 19 mA 11 mA 15 mA 40 mA	Fluke 5500A
DC Resistance – Generate ³	0 Ω to 10.99 Ω 11 Ω to 32.999 Ω 33 Ω to 109.999 Ω 110 Ω to 329.999 Ω 330 Ω to 1.09999 kΩ 1.1 kΩ to 3.29999 kΩ 3.3 kΩ to 10.9999 kΩ 11 kΩ to 32.9999 kΩ 33 kΩ to 109.999 kΩ 110 kΩ to 329.999 kΩ 330 kΩ to 1.09999 MΩ 1.1 MΩ to 3.29999 MΩ 3.3 MΩ to 10.9999 MΩ 11 MΩ to 32.9999 MΩ 33 MΩ to 109.999 MΩ 110 MΩ to 330 MΩ	0.011 Ω 0.022 Ω 0.029 Ω 0.052 Ω 0.6 Ω 0.4 Ω 1.8 Ω 4.1 Ω 21 Ω 53 Ω 300 Ω 600 Ω 8.3 kΩ 39 kΩ 640 kΩ 1.9 MΩ	Fluke 5500A
Capacitance – Generate ^{3,5}	11 nF to 32.999 nF 33 nF to 109.99 nF 110 nF to 329.99 nF 0.33 µF to 1.0999 µF 1.1 µF to 3.2999 µF	0.21 nF 0.44 nF 1.3 nF 4 nF 17 nF	Fluke 5500A

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Capacitance – Generate ^{3,5} continued	3.3 μ F to 10.999 μ F 11 μ F to 32.999 μ F 33 μ F to 109.99 μ F 110 μ F to 329.99 μ F 330 μ F to 1.1 mF	56 nF 190 nF 750 nF 3 μ F 380 μ F	Fluke 5500A
DC Voltage – Measure ⁴	Up to 100 mV 100 mV to 1 V 1 V to 10 V 10 V to 100 V 100 V to 1000 V	5.9 μ V 47 μ V 410 μ V 5.3 mV 52 mV	Agilent 34401A
DC Current – Measure ⁴	Up to 10 mA 10 mA to 100 mA 100 mA to 1 A 1 A to 3 A	5.8 μ A 58 μ A 1.2 mA 4.2 mA	Agilent 34401A
AC Voltage – Measure ⁴	Up to 100 mV (3 Hz to 10 Hz) (10 Hz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 300 kHz) 100 mV to 1 V (3 Hz to 10 Hz) (10 Hz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 300 kHz) 1 V to 10 V (3 Hz to 10 Hz) (10 Hz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) 10 V to 100 V (10 Hz to 20 kHz)	400 μ V 69 μ V 140 μ V 690 μ V 4.6 mV 4.1 mV 0.7 mV 1.4 mV 7 mV 49 mV 40 mV 6.9 mV 14 mV 69 mV 69 mV	Agilent 34401A
AC Current – Measure ⁴	Up to 1 mA (3 Hz to 5 Hz) (5 Hz to 10 Hz) 1 mA to 10 mA (3 Hz to 5 Hz) (5 Hz to 10 Hz) (10 Hz to 5 kHz) 10 mA to 100 mA (3 Hz to 5 Hz) (5 Hz to 10 Hz)	12 μ A 3.5 μ A 120 μ A 35 μ A 12 μ A 1.2 mA 390 μ A	Agilent 34401A

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AC Current – Measure ⁴ continued	10 mA to 100 mA (10 Hz to 5 kHz)	160 µA	Agilent 34401A
	100 mA to 1 A (3 Hz to 5 Hz) (5 Hz to 10 Hz)	12 mA 3.9 mA	
Chemical/Gas			
Gas Detection Equipment – O ₂	12 % 15 % 18 % 20.9 %	0.95 % 0.81 % 0.83 % 0.73 %	Primary Standard Gas
Gas Detection Equipment – CO	20 ppm 50 ppm 60 ppm	1.4 ppm 2.6 ppm 3.0 ppm	
Gas Detection Equipment – H ₂ S	20 ppm 25 ppm	2.7 ppm 2.7 ppm	
Gas Detection Equipment – LEL	50 % 58 %	1.9 % 1.9 %	
Gas Detection Equipment – C ₄ H ₈	100 ppm	2.7 ppm	

¹The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

²When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

³Capability is suitable for the calibration of measuring devices in the stated ranges.

⁴Capability is suitable for the calibration of devices intended to generate the indicated quantity in the stated ranges.

⁵The actual frequency applied by the calibrator cannot be selected and may be dependent on the measurement device under calibration. Approximate frequency ranges for a given capacitance or capacitance range may be found in the Fluke 5500A's published specifications.

Additional standard:

This laboratory was also assessed to the standard ANSI/NCSL Z540.3-2006 and meets these additional requirements.

ppm = parts per million