



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

**MCS Calibration, Inc.**  
1533 Lincoln Avenue  
Holbrook, NY 11741

Fulfills the requirements of

**ISO/IEC 17025:2017**

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](http://www.anab.org).

Jason Stine, Vice President

Expiry Date: 14 May 2028

Certificate Number: L1021-1



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**

**MCS Calibration, Inc.**

1533 Lincoln Avenue  
Holbrook, NY 11741

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**CALIBRATION**

ISO/IEC 17025 Accreditation Granted: **13 May 2026**

Certificate Number: **L1021-1**

Certificate Expiry Date: **14 May 2028**

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Current – Source	0 to 120 uA	113 nA	Comparison to Multifunction Calibrator
	121 to 1.2 mA	95 nA	
	1.21 to 12 mA	184 nA	
	12.1 to 120 mA	1610 nA	
	120.1 mA to 1.2 A	140 uA	
	1.21 to 3.1 A	401 uA	
	3.11 to 12 A	567 uA	
	12.1 to 30 A	1350 uA	
AC Current – Source	(0 to 120)uA		Comparison to Multifunction Calibrator
	3 Hz to 5 kHz	220 nA	
	(5 to 10) kHz	1 400 nA	
	(10 to 30) kHz	3 600 uA	
	120 uA to 12 mA		
	3 Hz to 1 kHz	400 nA	
	(1 to 5) kHz	220 nA	
	(5 to 10) kHz	1 400 nA	
	(10 to 30) kHz	4 500 nA	
	(12 to 120) mA		
	3 Hz to 45 Hz	220 uA	
	45 Hz to 1 kHz	140 uA	
	(1 to 5) kHz	220 uA	
	(5 to 10) kHz	1 400 uA	
(10 to 30) kHz	4 500 uA		

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source	120 mA to 1.2 A		Comparison to Multifunction Calibrator
	3 Hz to 45 Hz	300 uA	
	45 Hz to 1 kHz	170 uA	
	(1 to 5) kHz	270 uA	
	(5 to 10) kHz	2 300 uA	
	(10 to 30) kHz	4 600 uA	
	(1.2 to 3) A		
	3 Hz to 45 Hz	1060 uA	
	45 Hz to 1 kHz	657 uA	
	(1 to 5) kHz	688 uA	
	(5 to 10) kHz	2420 uA	
	(3 to 12) A		
	3 Hz to 45 Hz	335 mA	
	45 Hz to 1 kHz	1040 uA	
(1 to 5) kHz	1640 uA		
(5 to 10) kHz	2200 mA		
DC Current – Measure	(0 to 2) mA	2.3 nA	Comparison to Fluke 8508 Digital Multimeter
	2 mA to 1 A	0.65 mA	
	(1 to 2) A	0.88 mA	
	(2 to 20) A	1.5 mA	
AC Current – Measure	(0 to 200) uA		Comparison to Fluke 8508 Digital Multimeter
	1 to 10 Hz	270 nA	
	10 Hz to 10 kHz	210 nA	
	(10 to 30) kHz	230 nA	
	(30 to 100) kHz	310 nA	
	(0 to 20) mA		
	1 Hz to 10 kHz	21 uA	
	(10 to 30) kHz	27 uA	
	(30 to 100) kHz	31 uA	
	(0 to 200) mA		
	1 Hz to 10 kHz	0.21 mA	
	(10 to 30) kHz	0.27 mA	
	(0 to 2) A		
	10 Hz to 2 kHz	2.3 mA	
	(2 to 10) kHz	2.7 mA	
	(10 to 30) kHz	3.1 mA	
(0 to 20) A			
10 Hz to 2 kHz	3.1 mA		
(2 to 10) kHz	4.0 mA		



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Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance – Source 4W	1 $\Omega$	44 $\mu\Omega$	Comparison to Standard Resistors
	10 $\Omega$	0.4 m $\Omega$	
	100 $\Omega$	3.8 m $\Omega$	
	1 000 $\Omega$	38 m $\Omega$	
	10 k $\Omega$	0.38 $\Omega$	
Resistance – Measure 4W	(0 to 2 $\Omega$	0.66 $\mu\Omega$	Comparison to Fluke 8508 Digital Multimeter
	(2 $\Omega$ to 20) $\Omega$	1.2 m $\Omega$	
	200 $\Omega$ to 200 k $\Omega$	1.8 m $\Omega$	
	200 k $\Omega$ to 2 M $\Omega$	2.3 m $\Omega$	
	(2 to 20) M $\Omega$	2.9 m $\Omega$	
	(20 to 200) M $\Omega$	4.1 m $\Omega$	
DC Volts – Source	(0 to 100) mV	11 $\mu\text{V}$	Comparison to Multifunction Calibrator
	100 mV to 1 V	10 $\mu\text{V}$	
	(1 to 10) V	21 $\mu\text{V}$	
	(10 to 100) V	200 $\mu\text{V}$	
	(100 to 1 000) V	0.20 mV	
DC High Voltage Measure	(0 to 1 000) V	1.2 V	Comparison to Vitrek HVL-70 Standard
	(1 000 to 5 000) V	2.3 V	
	(5 000 to 10 000) V	4.9 V	
	(10 000 to 30 000) V	16 V	
	(30 000 to 50 000) V	39 V	
	(50 000 to 70 000) V	81 V	

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Volts – Source	(0 to 100) mV		Comparison to Multifunction Calibrator
	@ 60 Hz	0.01 mV	
	@ 200 Hz	15 µV	
	@ 5 kHz	25 µV	
	@ 10 kHz	11 µV	
	100 mV to 10 V		
	@ 60 Hz	0.70 mV	
	@ 200 Hz	0.70 mV	
	@ 5 kHz	0.70 mV	
	@ 10 kHz	0.70 mV	
(10 to 200) V	@ 60 Hz	36 mV + 0.02 % of reading	
	@ 200 Hz	12 mV + 0.03 % of reading	
	@ 5 kHz	3.3 mV + 0.01 % of reading	
	@ 10 kHz	20 mV	
	(200 to 1 000) V	@ 50 Hz	3.2 mV + 0.01 % of reading
		@ 300 Hz	3.2 mV + 0.01 % of reading
@ 1 kHz		3.2 mV + 0.01 % of reading	
AC High Voltage @ 60 Hz	(0 to 1 000)	2.0 V	Comparison to Vitrek HVL-70 Standard
	(1 000 to 5 000)	6.7 V	
	(5 000 to 10 000)	13 V	
	(10 000 to 30 000)	41 V	
	(30 000 to 50 000)	80 V	
DC Volts – Measure	(0 to 200) mV	1.2 µV	Comparison to Fluke 8508 Digital Multimeter
	200 mV to 20 V	0.12 nV	
	20 V to 1 kV	8 mV	

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Volts – Measure	(0 to 100) mV		Comparison to Fluke 8508 Digital Multimeter
	@ 60 Hz	41 $\mu$ V	
	@ 200 Hz	39 $\mu$ V	
	@ 5 kHz	0.03 mV	
	@ 10 kHz	38 $\mu$ V	
	100 mV to 10 V		
	@ 60 Hz	1.6 mV	
	@ 200 Hz	1.4 mV	
	@ 5 kHz	1.6 mV	
	@ 10 kHz	0.23 mV	
(10 to 1 000) V	@ 60 Hz	0.35 V	
	@ 200 Hz	0.35 V	
	5 kHz	0.35 V	
	10 kHz	0.35 V	
Thermocouple Simulation			Simulation using Standard mV Source
Type K	(-200 to 1 370) °C	0.6 °C	
Type J	(0 to 750) °C	1.3 °C	
Type T	(-200 to 350) °C	0.79 °C	
Type E	(-200 to 900) °C	0.87 °C	

**Length – Dimensional Metrology**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Gage Blocks	(0.005 to 1) in	6 $\mu$ in	Comparison to Laser Rule Comparator
	2 in	6.7 $\mu$ in	
	3 in	7.5 $\mu$ in	
	4 in	8.6 $\mu$ in	
Plain Pin Gages	(0.001 to 0.005) in	38 $\mu$ in	Comparison to Bench Micrometer P & W Length measuring machine
	(0.005 to 0.5) in	39 $\mu$ in	
	(0.5 to 1) in	39 $\mu$ in	
	(1 to 4) in	64 $\mu$ in	
	(4 to 6) in	83 $\mu$ in	
	(6 to 8) in	97 $\mu$ in	
	(8 to 12) in	110 $\mu$ in	

**Length – Dimensional Metrology**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Plain Ring Gages	(0.4 to 1) in (1 to 4) in (4 to 6) in (6 to 8) in (8 to 12) in	51 uin 67 uin 92 uin 120 uin 140 uin	Comparison to Ring gages Gage blocks using Internal Comparator
Thread Wires (8 to 80) TPI	(0.007 to 0.145) in	30 uin	Comparison to Master Thread Wires, Gage Blocks, and Bench Micrometer
Thread Plugs Pitch Diameter (4 to 80) tpi	(0.05 to 4) in	170 uin	Comparison to Thread Wires, Gage Blocks, and Bench Micrometer
Thread Ring Gages- <sup>3</sup> Functional Pitch Diameter	(0.05 to 4) in	$(63.4 + 0.5L) \mu\text{in}$	In Accordance with ASME B1.2 paragraph 5.1.1:
Height Gages	(0 to 4) in (4 to 12) in (12 to 24) in	120 uin 170 uin 260 uin	Comparison to Gage Blocks
Outside Micrometers	(0 to 12) in	110 $\mu\text{in}$	Comparison to Gage Blocks
Depth Micrometers	(0 to 1) in (1 to 2) in (2 to 4) in (4 to 6) in	130 uin 140 uin 170 uin 200 uin	Comparison to Gage Blocks
Dial Indicators	(0 to 1) in (1 to 2) in (2 to 4) in (4 to 6) in	130 uin 140 uin 170 uin 194 uin	Comparison to Dial Indicator Calibrator
Calipers	(0 to 12) in (12 to 18) in (18 to 24) in (24 to 36) in (36 to 40) in	0.001 in 0.012 in 0.013 in 0.018 in 0.021 in	Comparison to Gage Blocks
Length Standards	(0.5 to 4) in.	28 uin	Comparison to Bench Micrometer and Gage Blocks



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**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Gas Flow	(0 to 500) sccm (500 to 1 000) sccm	2.0 sccm 2.9 sccm	Comparison to Master Flow Cell
Force – Tension	(0 to 100) lbf	1.0 lbf	Comparison to Dead Weights
Force – Compression	(0 to 100) lbf	1.0 lbf	Comparison to Dead Weights
Force - Tension	(100 to 250) lbf (250 to 500) lbf (500 to 5 000) lbf (5 000 to 10 000) lbf	2.7 lbf 3.8 lbf 15 lbf 29 lbf	Comparison to Load Cells
Force – Compression	(100 to 250) lbf (250 to 500) lbf (500 to 5 000) lbf (5 000 to 10 000) lbf	2.7 lbf 3.7 lbf 15 lbf 30 lbf	Comparison to Load Cells
Indirect Verification of Rockwell Hardness Testers <sup>1</sup>	HRBW Low Medium High	1 HRBW 0.65 HRBW 0.49 HRBW	Indirect Verification as per ASTM-E18
	HRC Low Medium High	0.46 HRC 0.43 HRC 0.35 HRC	
Masses / Weights	(10 to 200) mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 500 g 1 kg 2 kg 5 kg (10 to 30) kg	20 µg 20 µg 40 µg 40 µg 41 µg 59 µg 87 µg 150 µg 0.30 mg 2.3 mg 3.4 mg 17 mg 22 mg 0.27 g	Double Substitution Comparison to Mass Standards with Electronic Balances
Barometric Pressure	(-1 to 1.3) bar	0.19 mbar	Comparison to Fluke Pressure Calibrator PM 600-A350K

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pneumatic Pressure	(0 to 50) psi (50 to 1 000) psi (1 000 to 3 000) psi	0.25 psi 0.45 psi 2.4 psi	Comparison to Fluke Pressure Calibrator PM 600 and PM 200
Vacuum	(1 to 30) in Hg	0.029 in Hg	Comparison to Fluke Pressure Calibrator PM 600
Weighing Systems Analytical Balance <sup>1</sup> (0.01 mg Resolution)	(0 to 205) g	0.054 mg	Comparison to ASTM E-617 Class 1 Weights in Accordance with NIST Handbook 44 Section 2.20
Analytical Balance <sup>1</sup> (1 mg Resolution)	(0 to 1 210) g	24 mg	Comparison to ASTM E-617 Class 1 Weights in Accordance with NIST Handbook 44 Section 2.20
Laboratory Balance <sup>1</sup> (0.01 g Resolution)	(0 to 5 000) g	29 mg	Comparison to ASTM E-617 Class 1 Weights in Accordance with NIST Handbook 44 Section 2.20
Bench Scale <sup>1</sup> (0.1 g Resolution)	(0 to 32 100) g	0.35 g	Comparison to ASTM E-617 Class 2 Weights in Accordance with NIST Handbook 44 Section 2.20
Torque Tools	(0 to 20) ozf in (20 to 40) ozf in (40 to 60) ozf in (60 to 80) ozf in (80 to 100) ozf in	0.040 ozf in 0.056 ozf in 0.076 ozf in 0.104 ozf in 0.13 ozf in	Comparison to AWS Torque Tester
Torque Tools	(100 to 215) ozf in (40 to 600) lbf in (50 to 250) lbf ft (150 to 1 000) lbf ft	0.16 ozf in 0.49 lbf in 2.1 lbf ft 3.7 lbf ft	Comparison to AKO Torque Calibration System
Torque Transducers	(10 to 500) lbf·in (500 to 1 200) lbf·in (100 to 1 000) lbf·ft	0.25 lbf·in + 0.04% of reading 0.16 lbf·in + 0.05% of reading 0.51 lbf·ft + 0.01% of reading	Comparison to Standard Torque Arm & Test Weights

**Thermodynamic**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Humidity	10 %RH	0.80 %RH	Comparison to Digital Chilled Mirror Hygrometer
	30 %RH	0.66 %RH	
	50 %RH	0.72 %RH	
	70 %RH	0.76 %RH	
	90 %RH	0.79 %RH	
Temperature – Measure	(-40 to 250) deg C	0.044 deg C	Comparison to High Accuracy Temp. RTD System
	(250 to 660) deg C	0.051 deg C	
Temperature– Source <sup>1</sup>	(-95 to 140) °C	0.31 °C	Comparison to Metrology Well
	(140 to 600) °C	0.35 °C	

**Time and Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency Measure	0 to 200 MHz	0.000 096 Hz	Comparison to Electronic Counter
Frequency Source	10 MHz	9.3 x 10 <sup>-10</sup>	Comparison to GPS Frequency Receiver / Standard

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, % = percent of reading unless otherwise indicated,  $P$  = reading in psi,  $V$  = reading in inHg
3. Thread rings are sized to Class X or W thread setting plugs with a tactile fit.



Jason Stine, Vice President