



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

PRECISION SOLUTIONS, LLC.
 2525 Tollgate Road
 Quakertown, PA 18951
 Jeanette Filipowicz Phone: 215 536 4400

CALIBRATION

Valid To: August 31, 2025

Certificate Number: 3840.01

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. Dimensional

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Surface Plates ³ –			
Flatness	(17 to 72) in diagonal	$(72 + 0.21DL) \mu\text{in}$	Planekator
	(12 to 60) in diagonal	$(21 + 0.8DL) \mu\text{in}$	Federal level system
	(>60 to 120) in diagonal	$(40 + 0.48DL) \mu\text{in}$	
Repeatability	0.002 in	40 μin	Repeat-o-meter, dial indicator
Optical Comparators ³ –			
Linearity	(0.2 to 12) in	$(160 + 0.71L) \mu\text{in}$	Glass master
Magnification	10X, 20X, 31.25X, 50X, 62.5X, 100X, 125X, 250X	1700 μin	Glass master & glass measuring scale
Angle	90°, 180°, 270°, 360°	0.10°	Glass master
Calipers ³	(0.1 to 40) in	$(280 + 3.6L) \mu\text{in}$	Gage blocks

Parameter/Equipment	Range	CMC ^{2,4} (\pm)	Comments
Micrometers ³	(0.1 to 40) in	(59 + 6.5L) μ in	Gage blocks
Depth Micrometers ³	(0.1 to 12) in	(130 + 2.8L) μ in	Gage blocks, optical flat
Indicators ³	(0.000 05 to 0.2) in (0.2 to 1) in (1 to 4) in	15 μ in 33 μ in 74 μ in	Gage blocks
Height Gages ³	(0.1 to 48) in	(49 + 6.9L) μ in	Gage blocks

II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2,7} (\pm)	Comments
DC Voltage – Generate ³	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V (330 to 1000) V	16 μ V/V + 1.0 μ V 8.5 μ V/V + 2.0 μ V 9.7 μ V/V + 20 μ V 14 μ V/V + 150 μ V 14 μ V/V + 1.5 mV	Fluke multi-function calibrator
DC Voltage – Measure ³	(0 to 100) mV 100 mV to 1 V (1 to 10) V (10 to 100) V (100 to 1000) V (1 to 10) kV (10 to 70) kV	14 μ V/V + 0.35 μ V 10 μ V/V + 0.35 μ V 9.3 μ V/V + 0.58 μ V 13 μ V/V + 35 μ V 14 μ V/V + 150 μ V 0.035 % + 0.067 V 0.038 % + 0.23 V	Agilent precision DMM Vitrek 4700 Vitrek 4700 w/HVL-70

Parameter/Equipment	Range	CMC ^{2, 7} (\pm)	Comments
DC Current – Generate ³	Up to 330 μ A (330 μ A to 3.3 mA (3.3 to 33) mA (33 to 330) mA 330 mA to 1.1 A (1.1 to 3.0) A (3.0 to 11) A (11 to 20.5) A	0.012 % + 0.020 μ A 0.0079 % + 0.050 μ A 0.0082 % + 0.25 μ A 0.0082 % + 2.5 μ A 0.015 % + 40 μ A 0.03 % + 40 μ A 0.039 % + 500 μ A 0.085 % + 750 μ A	Fluke multi-function Calibrator
Clamp-On Only	(20.5 to 150) A (150 to 1025) A	0.52 % + 0.14 A 0.54 % + 0.5 A	Fluke 5500A/coil
DC Current – Measure ³	(10 to 100) μ A 100 μ A to 1 mA (1 to 10) mA (10 to 100) mA 100 mA to 1 A (1 to 3) A	38 μ A/A + 0.80 nA 27 μ A/A + 5.0 nA 27 μ A/A + 50 nA 39 μ A/A + 0.50 nA 0.011 % + 10 μ A 0.12 % + 0.60 mA	Agilent precision DMM Agilent 34401A
Resistance – Measure ³	(0 to 10) Ω (10 to 100) Ω (100 to 1000) Ω (1 to 10) k Ω (10 to 100) k Ω 100 k Ω to 1 M Ω (1 to 10) M Ω (10 to 100) M Ω 100 M Ω to 1 G Ω	17 $\mu\Omega/\Omega$ + 50 $\mu\Omega$ 14 $\mu\Omega/\Omega$ + 0.50 m Ω 10 $\mu\Omega/\Omega$ + 0.5 m Ω 13 $\mu\Omega/\Omega$ + 5 m Ω 13 $\mu\Omega/\Omega$ + 50 m Ω 18 $\mu\Omega/\Omega$ + 2 Ω 54 $\mu\Omega/\Omega$ + 100 Ω 0.05 % + 1.0 k Ω 0.54 % + 10 k Ω	Agilent precision DMM
Capacitance – Generate ³	(0.19 to 3.3) nF (3.3 to 330) nF 330 nF to 3.3 μ F (3.3 to 33) μ F (33 to 330) μ F 330 μ F to 3.3 mF (3.3 to 33) mF (33 to 110) mF	0.42 % + 0.01 nF 0.21 % + 0.30 nF 0.20 % + 3.0 nF 0.42 % + 30 nF 0.36 % + 300 nF 0.36 % + 3.0 μ F 0.58 % + 30 μ F 0.85 % + 100 μ F	Fluke multi- function calibrator

Parameter/Equipment	Range	CMC ^{2, 7} (\pm)	Comments
Resistance – Generate ³	(0 to 11) Ω	35 $\mu\Omega/\Omega$ + 1.0 m Ω	Fluke multi-function calibrator
	(11 to 33) Ω	24 $\mu\Omega/\Omega$ + 1.5 m Ω	
	(33 to 110) Ω	23 $\mu\Omega/\Omega$ + 2.0 m Ω	
	110 W to 1.1 k Ω	23 $\mu\Omega/\Omega$ + 2.0 m Ω	
	(1.1 to 11) k Ω	25 $\mu\Omega/\Omega$ + 20 m Ω	
	(11 to 110) k Ω	23 $\mu\Omega/\Omega$ + 0.20 Ω	
	110 k to 1.1 M Ω	27 $\mu\Omega/\Omega$ + 2.0 Ω	
	(1.1 to 3.3) M Ω	48 $\mu\Omega/\Omega$ + 30 Ω	
	(3.3 to 11) M Ω	0.010 % + 50 Ω	
	(11 to 33) M Ω	0.02 % + 2.5 k Ω	
	(33 to 110) M Ω	0.04 % + 3.0 k Ω	Decade box
	(110 to 330) M Ω (330 to 1100) M Ω	0.23 % + 100 k Ω 1.2 % + 500 k Ω	
	10 M Ω	0.051 M Ω	Standard resistors
	100 M Ω	0.13 M Ω	
	100 G Ω	0.45 G Ω	
	1 T Ω	0.01 T Ω	
Fixed Points ³	1.0 m Ω	0.1 $\mu\Omega$	L&N resistors
	10.0 m Ω	1.2 $\mu\Omega$	
	100.0 m Ω	11 $\mu\Omega$	
	1 Ω	51 $\mu\Omega$	
Electrical Calibration of Thermocouple Indicators ³			
Type B	(600 to 800) $^{\circ}\text{C}$	0.35 $^{\circ}\text{C}$	Fluke multi-function calibrator
	(800 to 1000) $^{\circ}\text{C}$	0.28 $^{\circ}\text{C}$	
	(1000 to 1550) $^{\circ}\text{C}$	0.24 $^{\circ}\text{C}$	
	(1550 to 1800) $^{\circ}\text{C}$	0.27 $^{\circ}\text{C}$	
Type C	(0 to 150) $^{\circ}\text{C}$	0.24 $^{\circ}\text{C}$	
	(150 to 650) $^{\circ}\text{C}$	0.22 $^{\circ}\text{C}$	
	(650 to 1000) $^{\circ}\text{C}$	0.25 $^{\circ}\text{C}$	
	(1000 to 1800) $^{\circ}\text{C}$	0.40 $^{\circ}\text{C}$	
	(1800 to 2316) $^{\circ}\text{C}$	0.66 $^{\circ}\text{C}$	
Type E	(-250 to -100) $^{\circ}\text{C}$	0.40 $^{\circ}\text{C}$	
	(-100 to -25) $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	
	(-25 to 350) $^{\circ}\text{C}$	0.13 $^{\circ}\text{C}$	
	(350 to 650) $^{\circ}\text{C}$	0.14 $^{\circ}\text{C}$	
	(650 to 1000) $^{\circ}\text{C}$	0.18 $^{\circ}\text{C}$	
Type J	(-210 to -100) $^{\circ}\text{C}$	0.22 $^{\circ}\text{C}$	
	(-100 to -30) $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	
	(-30 to 150) $^{\circ}\text{C}$	0.13 $^{\circ}\text{C}$	
	(150 to 760) $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	
	(760 to 1200) $^{\circ}\text{C}$	0.19 $^{\circ}\text{C}$	

Parameter/Equipment	Range	CMC ² (±)	Comments
Electrical Calibration of Thermocouple Indicators ³ (cont)			
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.27 °C 0.16 °C 0.14 °C 0.21 °C 0.32 °C	Fluke multi-function calibrator
Type N	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1300) °C	0.32 °C 0.19 °C 0.17 °C 0.16 °C 0.22 °C	
Type R	(0 to 250) °C (250 to 400) °C (400 to 1000) °C (1000 to 1767) °C	0.45 °C 0.28 °C 0.27 °C 0.32 °C	
Type S	(0 to 250) °C (250 to 1000) °C (1000 to 1400) °C (1400 to 1767) °C	0.37 °C 0.29 °C 0.30 °C 0.36 °C	
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.49 °C 0.20 °C 0.14 °C 0.13 °C	
Electrical Calibration of RTD Indicators ³			
Pt 385, 100 Ω	(-200 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 630) °C (630 to 800) °C	0.039 °C 0.057 °C 0.072 °C 0.095 °C 0.18 °C	Fluke multi-function calibrator
Pt 3926, 100 Ω	(-200 to 0) °C (0 to 300) °C (300 to 630) °C	0.039 °C 0.072 °C 0.095 °C	

Parameter/Equipment	Range	CMC ² (±)	Comments
Electrical Calibration of RTD Indicators ³ (cont)			
Pt 3916, 100 Ω	(-200 to -190) °C (-190 to 0) °C (0 to 260) °C (260 to 600) °C (600 to 630) °C	0.23 °C 0.049 °C 0.055 °C 0.078 °C 0.18 °C	Fluke multi- function calibrator
Pt 385, 200 Ω	(-200 to 260) °C (260 to 630) °C	0.041 °C 0.12 °C	
Pt 385, 500 Ω	(-200 to 260) °C (260 to 400) °C (400 to 630) °C	0.049 °C 0.071 °C 0.088 °C	
Pt 385, 1000 Ω	(-200 to 260) °C (260 to 600) °C (600 to 630) °C	0.041 °C 0.055 °C 0.18 °C	
Ni 120, 120 Ω	(-80 to 100) °C (100 to 260) °C	0.063 °C 0.11 °C	
Cu 427, 10 Ω	(-100 to 260) °C	0.23 °C	

Parameter/Range	Frequency	CMC ^{2,7} (±)	Comments
AC Voltage – Generate ³			
(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	0.064 % + 4.7 μV 0.018 % + 4.7 μV 0.022 % + 4.7 μV 0.082 % + 4.7 μV 0.28 % + 9.3 μV 0.63 % + 39 μV	Fluke multifunction calibrator
(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	0.023 % + 6.2 μV 0.012 % + 6.2 μV 0.013 % + 6.2 μV 0.028 % + 6.2 μV 0.064 % + 25 μV 0.048 % + 54 μV	
(0.33 to 3.3) 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	0.024 % + 39 μV 0.012 % + 47 μV 0.015 % + 47 μV 0.024 % + 39 μV 0.054 % + 97 μV 0.19 % + 0.47 μV	
(3.3 to 33) V	(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.024 % + 500 μV 0.012 % + 470 μV 0.015 % + 470 μV 0.024 % + 470 μV 0.070 % + 1.2 mV	
(33 to 330) V	45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.015 % + 1.6 mV 0.016 % + 4.7 mV 0.018 % + 4.7 mV 0.025 % + 4.7 mV 0.16 % + 39 mV	
(330 to 1020) V	45 Hz to 10 kHz	0.024 % + 7.8 mV	

Parameter/Range	Frequency	CMC ^{2,7} (±)	Comments
AC Voltage – Measure ³			
(1 to 10) mV	(10 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz	0.036 % rdg + 0.030 % rng 0.086 % rdg + 0.011 % rng 0.085 % rdg + 0.011 % rng 0.014 % rdg + 0.011 % rng 0.51 % rdg + 0.011 % rng 4.0 % rdg + 0.020 % rng	Agilent precision DMM
(10 to 100) mV, 100 mV to 1 V, & (1 to 10) V	(10 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz (1 to 2) MHz	0.021 % rdg + 0.0040 % rng 0.021 % rdg + 0.0020 % rng 0.024 % rdg + 0.0020 % rng 0.037 % rdg + 0.0020 % rng 0.083 % rdg + 0.0020 % rng 0.031 % rdg + 0.010 % rng 1.0 % rdg + 0.010 % rng 1.5 % rdg + 0.010 % mV	
(10 to 100) V	(10 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz	0.021 % rdg + 0.0040 % rng 0.021 % rdg + 0.0020 % rng 0.021 % rdg + 0.0020 % rng 0.035 % rdg + 0.0020 % rng 0.12 % rdg + 0.0020 % rng 0.40 % rdg + 0.010 % rng 1.5 % rdg + 0.010 % mV	
(100 to 750) V	(10 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.042 % rdg + 0.0040 % rng 0.042 % rdg + 0.0020 % rng 0.061 % rdg + 0.0020 % rng 0.12 % rdg + 0.0020 % rng 0.30 % rdg + 0.0020 % rng	
750 V to 9 kV	(50 to 60) Hz	0.45 %	Vitrek 4700
(9 to 70) kV	(50 to 60) Hz	1.5 %	Vitrek 4700 with HVL-70

Parameter/Range	Frequency	CMC ^{2,7} (±)	Comments	
AC Current – Generate ³				
(29 to 330) µA	(10 to 20) Hz (20 to 45) Hz (0.45 to 1) kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.16 % + 0.08 µA 0.12 % + 0.08 µA 0.10 % + 0.08 µA 0.23 % + 0.12 µA 0.64 % + 0.16 µA 1.2 % + 0.31 µA	Fluke multifunction Calibrator	
330 µA to 3.3 mA	10 to 20) Hz (20 to 45) Hz (0.45 to 1) kHz (1 to 5) kHz (5 to 30) kHz	0.16 % + 0.12 µA 0.097 % + 0.12 µA 0.079 % + 0.12 µA 0.39 % + 0.23 µA 0.79 % + 0.47 µA		
(3.3 to 33) mA	(10 to 20) Hz (20 to 45) Hz (0.45 to 1) kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.14 % + 1.6 µA 0.070 % + 1.6 µA 0.033 % + 1.6 µA 0.064 % + 1.6 µA 0.15 % + 2.3 µA 0.33 % + 3.1 µA		
(33 to 330) mA	(10 to 20) Hz (20 to 45) Hz (0.45 to 1) kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.14 % + 16 µA 0.070 % + 16µA 0.033 % + 16 µA 0.079 % + 39 µA 0.16 % + 78 µA 0.30 % + 160 µA		
330 mA to 1.1 A	(10 to 45) Hz (0.45 to 1) kHz (1 to 5) kHz (5 to 10) kHz	0.15 % + 78 µA 0.041 % + 78 µA 0.46 % + 0.78 µA 1.9 % + 3.9 mA		
(1.1 to 3) A	(10 to 45) Hz (0.45 to 1) kHz (1 to 5) kHz (5 to 10) kHz	0.14 % + 78 µA 0.053 % + 78 µA 0.47 % + 0.78 mA 1.9 % + 3.9 mA		
(3 to 11) A	(45 to 100) Hz (0.1 to 1) kHz (1 to 5) kHz	0.045 % + 1.6 mA 0.081 % + 1.6 mA 2.4 % + 1.6 mA		
(11 to 20.5) A	(45 to 100) Hz 100 Hz to 1 kHz (0.1 to 5) kHz	0.10 % + 3.9 mA 0.12 % + 3.9 mA 2.5 % + 500 mA		
Clamp-On Only: (20.5 to 1025) A				
Toroidal	(45 to 65) Hz (65 to 440) Hz	0.35 % rdg 0.82 % rdg		Fluke multifunction calibrator with Fluke 50- turn coil
Non-Toroidal	(45 to 65) Hz (65 to 440) Hz	0.60 % rdg 1.0 % rdg		

Parameter/Range	Frequency	CMC ^{2,7} (±)	Comments
AC Current – Measure ³			
(5 to 100) µA	(10 to 20) Hz (20 to 45) Hz 45 Hz to 5 kHz	0.46 % rdg + 0.030 % rng 0.18 % rdg + 0.030 % rng 0.071 % rdg + 0.030 % rng	Agilent precision DMM
(1, 10, 100) mA	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.46 % rdg + 0.020 % rng 0.17 % rdg + 0.020 % rng 0.07 % rdg + 0.020 % rng 0.036 % rdg + 0.020 % rng 0.40 % rdg + 0.040 % rng 0.42 % rdg + 0.040 % rng 0.56 % rdg + 0.16 % rng	
1 A	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz	0.46 % rdg + 0.020 % rng 0.19 % rdg + 0.020 % rng 0.095 % rdg + 0.020 % rng 0.12 % rdg + 0.020 % rng 0.35 % rdg + 0.020 % rng 0.35 % rdg + 0.020 % rng	
3 A	(3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz	1.1 % + 1.8 mA 0.44 % + 1.8 mA 0.20 % + 1.8 mA	
Oscilloscopes ³ –			
DC, 1 mW to 50 W	(0 to +/- 6.6) V	0.26 % + 40 µV	Fluke multifunction calibrator with scope option
Square Wave, 1 mW to 50 W	(0 to +/- 130) V	0.068 % + 40 µV	
Level Sine Wave: Amplitude (50 kHz Reference)	50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz (600 to 1100) MHz	0.26 % + 40 µV 0.25 % + 40 µV 0.26 % + 40 µV 0.26 % + 40 µV	
Flatness (50 kHz Reference)	50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz (600 to 1100) MHz	0.26 % + 40 µV 0.25 % + 40 µV 0.26 % + 40 µV 0.26 % + 40 µV	
Time Marker	1 ns to 20 ms 50 ms to 5 s	3 µs/s (30 + 1000t) µs/s	t = time in seconds
Rise Time	250 ps	120 ps	

III. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Pressure ³			
Gage/Absolute	(-15 to 30) psi (30 to 300) psi (300 to 1000) psi (1000 to 3000) psi (3000 to 5000) psi (5000 to 10 000) psi	0.011 psi 0.078 psi 0.25 psi 0.79 psi 1.3 psi 2.9 psi	Additel pressure calibrators
Barometric	(8.7 to 16) psia	0.01 psia	Additel ADT761
Scales & Balances ³	(1 to 500) mg (1 to 5) g 10 g 20 g (30 to 200) g (200 to 1000) g (1 to 6) kg (6 to 15) kg (10 to 30) kg (40 to 90) kg (100 to 6000) kg (0.001 to 2) lb (2 to 120 000) lb	0.012 mg 0.04 mg 0.058 mg 0.086 mg 0.0003 % of test load 0.0003 % of test load 0.0003 % of test load 0.0003 % of test load 0.0006 % of test load 0.0006 % of test load 0.012 % of test load 0.000 24 lb 0.012 % of test load	ASTM E617 Class 1 weights ASTM E617 Class 2 weights ASTM E617 Class 6 weights NIST HB 105-1 Class F weights
Calibration of Mass	(1, 2, 5, 10, 20) mg (50, 100, 200, 500) mg (1, 2, 5) g 10 g 20 g 50 g 100 g 200g 500 g 1 kg 2 kg 5 kg 10 kg 20 kg 50 kg	5 µg 5 µg 8.2 µg 13 µg 18 µg 29 µg 58 µg 0.13 mg 0.29 mg 0.58 mg 2.0 mg 3.3 mg 6.0 mg 14 mg 29 mg	Comparison to Class 0 weights

Parameter/Equipment	Range	CMC ² (±)	Comments
Force – Measuring Equipment ³	(0.1 to 200) lbf (200 to 5000) lbf	0.024 % of test load	NIST HB 105-1 Class F weights
Force – Measuring Equipment ³			Interface 9840 indicator
Tension	(20 to 300) lbf (300 to 1000) lbf	0.11 lbf 0.19 lbf	With Morehouse 1000 lbf loadcell
	(200 to 5000) lbf	1.0 lbf	With Morehouse 5000 lbf loadcell
	(2000 to 10 000) lbf (10 000 to 50 000) lbf	6.4 lbf 6.9 lbf	With Interface 50 000 lbf loadcell
Compression	(20 to 300) lbf (300 to 1000) lbf	0.078 lbf 0.17 lbf	With Morehouse 1000 lbf loadcell
	(200 to 5000) lbf	0.89 lbf	With Morehouse 5000 lbf loadcell
	(2000 to 10 000) lbf (10 000 to 50 000) lbf	7.5 lbf 8.0 lbf	With Interface 50 000 lbf loadcell

IV. Time & Frequency

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
Frequency – Generate ³	10 MHz	3.4 parts in 10 ⁻⁸ hz	Frequency counter
Frequency – Measure ³	10 Hz to 350 MHz	3.4 parts in 10 ⁻⁸ hz	Frequency counter

¹ This laboratory offers commercial calibration service and field 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. CMC's 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 actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the Calibration and Measurement Capability Uncertainty (CMC) found 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 actual measurement uncertainty achievable on a customer's site being larger than the CMC

⁴ In the statement of CMC, L is the numerical value of the nominal length of the device measured in inches. In the statement of CMC, DL is the numerical value of the diagonal length of the device measured in inches.

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

PRECISION SOLUTIONS, LLC.

Quakertown, PA

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 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 2nd day of October 2023.

A blue ink signature of Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3840.01
Valid to August 31, 2025.

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