SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

SIMCO ELECTRONICS
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CALIBRATION

Valid To: September 30, 2025 Certificate Number: 1395.14

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 8]:

I. Dimensional

Parameter/Equipment	Range	CMC[2, 5] (±)	Comments
Pin & Plug Gages, Mikemasters (Tree Type) & Other External Diameters	Up to 1 in (>1 to 12) in	14 µin + 2.2*L* 20 µin + 2.2*L*	ULM-1-600D universal test machine
Plain Ring Gages	(0.08 to 1) in (>1 to 9) in	16 µin + 2.2*L* 23 µin + 2.2*L*	ULM-1-600D universal test machine
Thread & Set Plug Gages –			
Major/Truncated Diameter	(0.06 to 4) in	20 µin + 2.2*L*	ULM-1-600D universal test machine, direct reading
Pitch Diameter	(0.06 to 4) in, (4 to 90) TPI	68 µin + 3.8*L*	3-wire method
Length Standards (Micrometer Standards)	Up to 12 in	18 µin + 2.2*L*	ULM-1-600D

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Parameter/Equipment	Range	CMC[2, 5] (±)	Comments
Adjustable Thread Ring Gages – Functional Diameter	 Up to 4 in for (8 to 80) TPI	 X Class Set Plug Tolerance	 Master setting plug
Micrometers[3] – Linearity Flatness Parallelism	 Up to 36 in Up to 1 in Up to 1 in	 100 µin + 4.2*L* 7.4 µin 7.4 µin	 Gage blocks Optical flat Optical parallel
Calipers[3]	Up to 40 in	180 µin + 4.2*L*	Gage blocks
Dial, Test, & Digital Indicators[3]	Up to 2 in Up to 6 in	15 µin + 2.4*L* 110 µin + 2.4*L*	Gage blocks
Electronic Gage Amplifiers	(-0.01 to +0.01) in	4.5 µin + 2.2*L*	Gage blocks
Indicator Calibrators	Up to 2 in	6.6 µin + 2.2*L*	Gage blocks

II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC[2, 6, 7] (±)	Comments
DC Voltage[3] – Generate	(0 to 220) mV (0.22 to 2.2) V (2.2 to 11) V (11 to 22) V (22 to 220) V (220 to 1100) V	8.3 µV/V + 0.4 µV 5.3 µV/V + 0.7 µV 3.9 µV/V + 2.5 µV 3.8 µV/V + 4 µV 5.2 µV/V + 40 µV 6.7 µV/V + 400 µV	Fluke 5720A series II
DC Voltage[3] – Measure	(0 to 100) mV (0.1 to 1) V (1 to 10) V (10 to 100) V (100 to 1000) V*	5.5 µV/V + 0.32 µV 4.3 µV/V + 0.32 µV 4.3 µV/V + 0.51 µV 6.2 µV/V + 32 µV 6.2 µV/V + 0.10 mV	HP 3458A opt-2 *add $12(V_{in}/1000)^2\ 10^6$ to all $V_{in} > 100$ V
DC Current[3] – Generate	(0 to 220) µA (0.22 to 2.2) mA (2.2 to 22) mA (22 to 220) mA (0.22 to 2.2) A (1.1 to 11) A (11 to 20) A	43 µA/A + 6.0 nA 55 µA/A + 7.0 nA 54 µA/A + 40 nA 62 µA/A + 0.7 µA 110 µA/A + 12 µA 0.05 % + 500 µA 0.1 % + 750 µA	Fluke 5720A series II Fluke 5520A/SC1100
DC Current[3] – Measure	(0 to 1) µA (1 to 10) µA (10 to 100) µA 100 µA to 1 mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	21 µA/A + 70 pA 21 µA/A + 300 pA 21 µA/A + 810 pA 21 µA/A + 5.1 nA 22 µA/A + 51 nA 36 µA/A + 510 nA 0.011 % + 10 µA	HP 3458A opt-2
Resistance[3] – Measure	(0 to 10) Ω (10 to 100) Ω (0.1 to 1) kΩ (1 to 10) kΩ (10 to 100) kΩ (0.1 to 1) MΩ (1 to 10) MΩ (10 to 100) MΩ (0.1 to 1) GΩ	15 µΩ/Ω + 50 µΩ 12 µΩ/Ω + 0.5 mΩ 10 µΩ/Ω + 0.5 mΩ 10 µΩ/Ω + 5 mΩ 10 µΩ/Ω + 50 mΩ 16 µΩ/Ω + 2 Ω 82 µΩ/Ω + 100 Ω 0.051 % + 1 kΩ 0.5 % + 10 kΩ	HP 3458A opt-2 Within ± 1 °C of last ACAL & ± 5 °C of T_{CAL}

Parameter/Equipment	Range	CMC[2, 5, 6, 7] (±)	Comments
Resistance[3] – Generate Fixed Points	0 Ω (1, 1.9) Ω (10, 19) Ω (100, 190) Ω 1 kΩ (1.9, 19) kΩ (100, 190) kΩ 1 MΩ 1.9 MΩ 10 MΩ 19 MΩ 100 MΩ	40 μΩ 95 μΩ/Ω 23 μΩ/Ω 31 μΩ/Ω 9 μΩ/Ω 9.7 μΩ/Ω 13 μΩ/Ω 21 μΩ/Ω 24 μΩ/Ω 44 μΩ/Ω 67 μΩ/Ω 240 μΩ/Ω	Fluke 5720 series II
Resistance[3] – Generate	(0 to 11) Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω (0.33 to 1.1) kΩ (1.1 to 3.3) kΩ (3.3 to 11) kΩ (11 to 33) kΩ (33 to 110) kΩ (110 to 330) kΩ (0.33 to 1.1) MΩ (1.1 to 3.3) MΩ (3.3 to 11) MΩ (11 to 33) MΩ (33 to 110) MΩ (110 to 330) MΩ (0.33 to 1.1) GΩ (1 to 10) GΩ (10 to 100) GΩ 100 GΩ to 1 TΩ	83 μΩ/Ω + 1 mΩ 59 μΩ/Ω + 1.5 mΩ 34 μΩ/Ω + 1.4 mΩ 31 μΩ/Ω + 2.0 mΩ 33 μΩ/Ω + 2.0 mΩ 31 μΩ/Ω + 20 mΩ 31 μΩ/Ω + 20 mΩ 31 μΩ/Ω + 200 mΩ 31 μΩ/Ω + 200 mΩ 41 μΩ/Ω + 2.0 Ω 39 μΩ/Ω + 2.0 Ω 83 μΩ/Ω + 30 Ω 0.015 % + 50 Ω 0.027 % + 2.5 kΩ 0.061 % + 3.0 kΩ 0.30 % + 0.1 MΩ 1.5 % + 0.5 MΩ 0.30 mΩ/Ω + 0.6*R* 3.6 mΩ/Ω + 0.6*R* 3.8 mΩ/Ω + 0.6*R*	Fluke 5520A/SC1100 CMCs shown are based on 4-wire compensation only; for 2-wire & 2-wire compensation add 5 μV per ampere stimulus current (R_{floor} = E/I) IET HRRS-B-6-1M-5kV decade resistor
Capacitance[3] – Generate	(0.19 to 0.3999) nF (0.4 to 1.0999) nF (1.1 to 3.2999) nF (3.3 to 10.9999) nF (11 to 32.9999) nF (33 to 109.999) nF (110 to 329.999) nF (0.33 to 1.099 99) μF (1.1 to 3.299 99) μF (3.3 to 10.9999) μF (11 to 32.9999) μF (33 to 109.999) μF	0.66 % + 10 pF 0.63 % + 10 pF 0.64 % + 10 pF 0.28 % + 10 pF 0.27 % + 0.1 nF 0.23 % + 0.1 nF 0.29 % + 0.3 nF 0.25 % + 1.0 nF 0.21 % + 3.0 nF 0.22 % + 10 nF 0.34 % + 30 nF 0.37 % + 0.1 μF	Fluke 5520A

Parameter/Equipment	Range	CMC[2, 6, 7] (±)	Comments
Capacitance[3] – Generate (cont)	(110 to 329.999) µF (0.33 to 1.099 99) mF	0.37 % + 0.3 µF 0.38 % + 1.0 µF	Fluke 5520A
Electrical Simulation of Thermocouples[3] –			
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1000) °C	0.58 °C 0.19 °C 0.17 °C 0.19 °C 0.25 °C	Fluke 5520A
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1200) °C	0.32 °C 0.32 °C 0.18 °C 0.21 °C 0.28 °C	
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.39 °C 0.22 °C 0.19 °C 0.31 °C 0.47 °C	
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.73 °C 0.29 °C 0.21 °C 0.19 °C	
Type S	(0 to 250) °C (250 to 1000) °C (1000 to 1400) °C (1400 to 1767) °C	0.55 °C 0.42 °C 0.44 °C 0.54 °C	
Electrical Calibration of RTDs[3] –			
Pt 385, 100 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 300) °C	0.080 °C 0.080 °C 0.096 °C 0.11 °C	Fluke 5520A

Parameter/Equipment	Range	CMC[2, 5, 6, 7] (±)	Comments
Electrical Calibration of RTDs[3] – (cont)			
Pt 385, 100 Ω	(300 to 400) °C (400 to 630) °C (630 to 800) °C	0.12 °C 0.14 °C 0.25 °C	Fluke 5520A
DC Current Generate – Clamp Meters	(10 to 25) A (25 to 150) A (150 to 1025) A	0.62 % + 0.02 A 0.62 % + 0.14 A 0.62 % + 0.5 A	Fluke 5520A, Fluke 5500A coil
Oscilloscope[3] –			
DC Signal			
50 Ω	1 mV to 200 V	0.06 % + 25 µV	Fluke 9500B w/ 9530 & 9560 active head
1 MΩ	1 mV to 50 V	0.06 % + 25 µV	
Square Wave			
50 Ω	1 mV_{pk-pk} to 200 V_{pk-pk}	0.37 % + 10 µV	
1 MΩ	40 μV_{pk-pk} to 1 mV_{pk-pk}	0.28 % + 10 µV	
Leveled Sine Wave			
5 mV to 5 V	50 kHz to 10 MHz 0.1 Hz to 300 MHz (>300 to 550) MHz (>0.55 to 3) GHz	1.3 % 1.9 % 2.2 % 2.4 %	
5 mV to 2 V	(>3 to 6.4) GHz	2.8 %	
Time Markers	9.0091 ns to <83 µs	0.42 µs/s	
50 Ω	>83 µs to 55 s	2.4 µs/s	
Edge Transition			
10 Hz to 2 MHz rate	500 ps	33 ps	
10 Hz to 2 MHz rate	150 ps	14 ps	
10 Hz to 1 MHz rate	70 ps	8.0 ps	
Pulse Width	(1 to 100) ns	4.1 % + 200 ps	

Parameter/Range	Frequency	CMC[2, 6, 7] (±)	Comments
AC Voltage[3] – Measure			
(1 to 10) mV	(1 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 % + 3.6 µV 0.028 % + 2.3 µV 0.036 % + 2.3 µV 0.11 % + 2.3 µV 0.50 % + 2.3 µV 4.0 % + 2.8 µV	HP 3458A opt-2
(10 to 100) mV	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (0.3 to 1) MHz	89 µV/V + 4.0 µV 89 µV/V + 2.0 µV 0.015 % + 2.0 µV 0.035 % + 2.0 µV 0.082 % + 2.0 µV 0.30 % + 10 µV 1.0 % + 10 µV	
100 mV to 1 V	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (0.3 to 1) MHz	77 µV/V + 40 µV 77 µV/V + 20 µV 0.014 % + 20 µV 0.03 % + 20 µV 0.8 mV/V + 20 µV 3.0 mV/V + 100 µV 10.0 mV/V + 100 µV	
(1 to 10) V	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (0.3 to 1) MHz	78 µV/V + 400 µV 78 µV/V + 200 µV 0.14 mV/V + 200 µV 0.3 mV/V + 200 µV 0.8 mV/V + 200 µV 3.0 mV/V + 1.0 mV 10 mV/V + 1.0 mV	
(10 to 100) V	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (0.3 to 1) MHz	0.2 mV/V + 4.0 mV 0.2 mV/V + 2.0 mV 0.2 mV/V + 2.0 mV 0.36 mV/V + 2.0 mV 1.2 mV/V + 2.0 mV 4.0 mV/V + 10 mV 15 mV/V + 10 mV	

Parameter/Range	Frequency	CMC[2, 6, 7] (±)	Comments
AC Voltage[3] – Measure (cont)			
(100 to 700) V	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.4 mV/V + 40 mV 0.4 mV/V + 20 mV 0.6 mV/V + 20 mV 1.2 mV/V + 20 mV 3.0 mV/V + 20 mV	HP 3458A opt-2
AC Voltage[3] – Generate			
(0 to 2.2) mV	(10 to 20) Hz (>20 to 40) Hz (>0.040 to 20) kHz (>20 to 50) kHz (>50 to 100) kHz (>100 to 300) kHz (>300 to 500) kHz (>0.5 to 1) MHz	0.22% + 4.0 µV 0.18 % + 4.0 µV 0.18 % + 4.0 µV 0.29 % + 4.0 µV 0.39 % + 5.0 µV 0.69 % + 10 µV 1.0 % + 20 µV 1.2 % + 20 µV	Fluke 5720 series II
(>2.2 to 22) mV	(10 to 20) Hz (>20 to 40) Hz (>0.040 to 20) kHz (>20 to 50) kHz (>50 to 100) kHz (>100 to 300) kHz (>300 to 500) kHz (>0.5 to 1) MHz	0.048 % + 4 µV 0.030 + 4 µV 0.030 % + 4 µV 0.054 % + 4 µV 0.088 % + 5 µV 0.19 % + 10 µV 0.24 % + 20 µV 0.43 % + 20 µV	
(>22 to 220) mV	(10 to 20) Hz (>20 to 40) Hz (>0.040 to 20) kHz (>20 to 50) kHz (>50 to 100) kHz (>100 to 300) kHz (>300 to 500) kHz (>0.5 to 1) MHz	0.029 % + 12 µV 0.018 % + 7 µV 0.011 % + 7 µV 0.025 % + 7 µV 0.056 % + 17 µV 0.10 % + 20 µV 0.16 % + 25 µV 0.32 % + 45 µV	

Parameter/Range	Frequency	CMC[2, 6, 7] (±)	Comments
AC Voltage[3] – Generate (cont)			
(>0.22 to 2.2) V	(10 to 20) Hz (>20 to 40) Hz (>0.040 to 20) kHz (>20 to 50) kHz (>50 to 100) kHz (>100 to 300) kHz (>300 to 500) kHz (>0.5 to 1) MHz	0.026 % + 40 µV 0.0099 % + 15 µV 0.0062 % + 8 µV 0.011 % + 10 µV 0.016 % + 30 µV 0.052 % + 80 µV 0.11 % + 200 µV 0.23 % + 300 µV	Fluke 5720 series II
(>2.2 to 22) V	(10 to 20) Hz (>20 to 40) Hz (>0.040 to 20) kHz (>20 to 50) kHz (>50 to 100) kHz (>100 to 300) kHz (>300 to 500) kHz (>0.5 to 1) MHz	0.027 % + 400 µV 0.010 % + 150 µV 0.0066 % + 50 µV 0.011 % + 100 µV 0.016 % + 200 µV 0.044 % + 600 µV 0.12 % + 2.0 mV 0.24 % + 3.2 mV	
(>22 to 220) V	(10 to 20) Hz (>20 to 40) Hz (>0.040 to 20) kHz (>20 to 50) kHz (>50 to 100) kHz (>100 to 300) kHz (>300 to 500) kHz (>0.5 to 1) MHz	0.027 % + 4.0 mV 0.011 % + 1.5 mV 0.0079 % + 0.6 mV 0.014 % + 1.0 mV 0.022 % + 2.5 mV 0.094 % + 16 mV 0.45 % + 40 mV 0.82 % + 80 mV	Fluke 5720 Series II, 5725A
(>220 to 1020) V	(15 to 50) Hz (>0.05 to 1) kHz	0.030 % + 16 mV 0.0080 % + 3.5 mV	
(220 to 750) V	(30 to 50) kHz (50 to 100) kHz	0.24 % + 11 mV 0.33 % + 45 mV	
(750 to 1100) V	40 Hz to 1kHz (1 to 20) kHz (20 to 30) kHz	0.011 % + 4 mV 0.018 % + 6 mV 0.060 % + 11 mV	

Parameter/Range	Frequency	CMC[2, 6, 7] (±)	Comments
AC Current[3] – Measure			
(5 to 100) µA	(45 to 1000) Hz	0.061 % + 30 nA	HP 3458A opt-2
(0.1 to 1) mA	(45 to 100) Hz (0.1 to 5) kHz	0.062 % + 200 nA 0.034 % + 200 nA	
(1 to 10) mA	(45 to 100) Hz (0.1 to 5) kHz	0.062 % + 2 µA 0.034 % + 2 µA	
(10 to 100) mA	(45 to 100) Hz (0.1 to 5) kHz	0.062 % + 20 µA 0.034 % + 20 µA	
(0.1 to 1) A	(45 to 100) Hz (0.1 to 5) kHz	0.085 % + 200 µA 0.1 % + 200 µA	
AC Current[3] – Generate			
(0 to 220) µA	(10 to 20) Hz (>20 to 40) Hz (>0.04 to 1) kHz (>1 to 5) kHz (>5 to 10) kHz	0.025 % + 16 nA 0.016 % + 10 nA 0.013 % + 8.0 nA 0.028 % + 12 µA 0.11 % + 65 µA	Fluke 5720A series II
(>0.22 to 2.2) mA	(10 to 20) Hz (>20 to 40) Hz (>0.04 to 1) kHz (>1 to 5) kHz (>5 to 10) kHz	0.025 % + 40 nA 0.017 % + 35 nA 0.013 % + 35 nA 0.020 % + 110 nA 0.11 + 650 nA	
(>2.2 to 22) mA	(10 to 20) Hz (>20 to 40) Hz (>0.04 to 1) kHz (>1 to 5) kHz (>5 to 10) kHz	0.027 % + 400 nA 0.018 % + 350 nA 0.014 % + 350 nA 0.021 % + 550 nA 0.11 % + 5.0 µA	
(>22 to 220) mA	(10 to 20) Hz (>20 to 40) Hz (>0.04 to 1) kHz (>1 to 5) kHz (>5 to 10) kHz	0.027 % + 4.0 µA 0.018 % + 3.5 µA 0.014 % + 2.5 µA 0.021 % + 3.5 µA 0.11 % + 10 µA	

Parameter/Range	Frequency	CMC[2, 5, 6, 7] (±)	Comments
AC Current[3] – Generate (cont)			
(>0.22 to 2.2) A	(0.02 to 1) kHz (>1 to 5) kHz (>5 to 10) kHz	0.027 % + 35 µA 0.046 % + 80 µA 0.7 % + 160 µA	Fluke 5720A series II
(>2.2 to 11) A	40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.047 % + 0.17 mA 0.095 % + 0.38 mA 0.36 % + 0.75 mA	Fluke 5720A Series II, 5725A
(11 to 20) A	45 Hz to 1 kHz (>1 to 5) kHz	0.15 % + 5.0 mA 3.0 % + 5.0 mA	Fluke 5520A/SC1100
AC Current Generate – Clamp Meters –			
(10 to 25) A	(45 to 65) Hz (65 to 440) Hz	0.71 % + 0.03 A 1.3 % + 0.03 A	Fluke 5520A, Fluke 5500A coil
(25 to 150) A	(45 to 65) Hz (65 to 440) Hz	0.73 % + 0.25 A 1.7 % + 0.25 A	
(150 to 1025) A	(45 to 65) Hz (65 to 440) Hz	0.72 % + 0.9 A 1.6 % + 0.9 A	
AC Power – Generate			
(0.01 to 0.1) W (0.1 to 890) W (0.89 to 3) kW (3 to 11) kW (11 to 20.4) kW	45 Hz to 1 kHz 45 Hz to 1 kHz 45 Hz to 1 kHz 45 Hz to 1 kHz 45 Hz to 1 kHz	0.22 % 0.18 % 0.19 % 0.26 % 0.27 %	Fluke 5520A

III. Mechanical

Parameter/Equipment	Range	CMC[2, 5, 9] (±)	Comments
Pressure Measuring Equipment – Gauges, Indicators & Transducers[3]			
Pneumatic	(2 to 50) in WC (2 to 5) psi (5 to 30) psi (30 to 100) psi (100 to 600) psi	0.14 % full scale 0.08 % full scale 0.03 % full scale 0.03 % full scale 0.03 % full scale	Pressure calibrator & modules, DMM
Hydraulic	(10 to 10 000) psi	0.027 %	Dead weight tester
Atmospheric Pressure (Vacuum) Measuring Equipment[3] – Indicators & Transducers	(0 to 26.5) in·Hg	0.06 % full scale	Pressure calibrator & modules, DMM
Force – Measuring Equipment, Tension & Compression	(0 to 1000) gf (0 to 2) lbf (2 to 20) lbf (20 to 110) lbf	2.3 mgf 0.04 lbf 0.05 lbf 0.05 lbf	Using weights
Torque Wrenches – Measuring Equipment	(10 to 100) lbf·in 100 lbf·in to 50 lbf·ft (50 to 1000) lbf·ft	0.21 % 0.18 % 0.19 %	AKO Torque calibrator w/ load cells
Torque Watches & Screwdrivers – Measuring Equipment	(0.5 to 215) ozf ·in	0.39 %	Waters 6500 TS calibrator w/ weights & wheels

IV. Thermodynamics[4]

Parameter/Equipment	Range	CMC[2, 9] (±)	Comments
Temperature – Measuring Equipment	(-20 to 140) °C (140 to 350) °C	0.084 °C 0.14 °C	Precision oil bath, dry block calibrator or environmental chamber, electronic ice point comparison w/PRT
Temperature – Measure[3]	(-196 to 420) °C	0.068 °C	Hart 1502A w/ Hart 5615 PRT
Relative Humidity – Measure[3]	(10 to 50) % RH (<50 to 90) % RH (<90 to 95) % RH	1.2 % RH 1.4 % RH 2.4 % RH	Vaisala HMI 41 w/ HMP 46 probe
Relative Humidity – Measuring Equipment	(10 to 50) % RH (<50 to 90) % RH	1.2 % RH 1.4 % RH	General Eastern M1 dew point meter

V. Time & Frequency

Parameter/Equipment	Range	CMC[2, 5, 9] (±)	Comments
Frequency – Measuring Equipment[3]	10 MHz Reference DC to 80 MHz 10 MHz to 26.5 GHz	0.01 nHz/Hz 0.01 nHz/Hz + 0.6*R* 0.01 nHz/Hz + 0.6*R*	HP 58503A GPS reference monitor Agilent 33250A HP 8340B
Frequency – Measure[3]	0.1 Hz to 225 MHz 100 MHz to 26.5 GHz	0.01 nHz/Hz + 0.6*R* 0.01 nHz/Hz + 0.6*R*	Agilent 53131A HP 5351B
Stopwatches & Timers	(0 to 19.99) s/day	0.037 s/day	Helmut Klein 4500 Timometer
Tachometer – Optical	(60 to 200 000) RPM	0.0017 % + 0.6*R*	HP 3325B

[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. 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. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the 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 actual 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] Type of devices calibrated under the Thermodynamic parameters: Liquid in Glass Thermometers, Bi-metallic Thermometers, Thermometry Systems, Thermocouple Probes and Wires, Temperature Indicators, Temperature Transmitters, Relative Humidity Indicators, Relative Humidity Transmitters, Ovens, Chambers, Temperature Controllers, Temperature Measuring Equipment, Thermometry System Calibrators and Temperature Meter and Probe Combinations.

[5] In the statement of CMC, R is the numerical value of the resolution of the device and L is the length in inches. In the statement of CMC, the value is defined as the percentage of reading.

[6] 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. CMCs 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.

[7] Floor noise is additive to all readings.

[8] This scope meets A2LA's *P112 Flexible Scope Policy*.

[9] 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.

Accredited Laboratory

A2LA has accredited

SIMCO ELECTRONICS

Bloomington, MN

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 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 April 2017*).

Presented this 15th day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1395.14
Valid to September 30, 2025

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