



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

TEKTRONIX SERVICE SOLUTIONS
 200 Upper Mountain Road, Bldg. 6, Plant 2
 Lockport, NY 14094
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CALIBRATION

Valid To: March 31, 2013

Certificate Number: 1623.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Chemical

Parameter/Equipment	Range	CMC ² (±)	Comments
Gas Flow	(0.1 to 10) cc/min	0.97 % of reading	ATC IF2-010C-250P
Gas Concentration Alarms – Carbon Monoxide (CO)	25 parts in 10 ⁶ 50 parts in 10 ⁶	2.8 parts in 10 ⁶ 5.5 parts in 10 ⁶	Standard gases
Sulfur Dioxide (SO ₂)	10 parts in 10 ⁶	2 parts in 10 ⁶	

II. Dimensional

Parameter/Equipment	Range	CMC ² (±)	Comments
Micrometers ⁵	Up to 36 in	(65 + 1.6L) μin	Grade 2 gage blocks
Calipers ⁵	Up to 36 in	(610 + 1.6L) μin	Grade 2 gage blocks

Parameter/Equipment	Range	CMC ² (±)	Comments
Dial Indicators ⁵	Up to 2 in	(65 + 1.6L) μin	Grade 2 gage blocks
Height & Depth Gages ⁵	Up to 36 in	(65 + 1.6L) μin	Grade 2 gage blocks
Steel Rulers	Up to 48 in	0.009 in	Grade 2 gage blocks
Pin Gages ⁵	Up to 10 in	(73 + 1.6L) μin	P&W supermic with gage blocks

III. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2, 3, 4, 6} (±)	Comments
DC Voltage – Generate	(0 to 220) mV 220 mV to 2.2 V (2.2 to 11) V (11 to 22) V (22 to 220) V (220 to 1100) V	8.1 μV/V + 0.6 μV 7.1 μV/V + 1 μV 7.1 μV/V + 3.5 μV 7.1 μV/V + 6.5 μV 8.1 μV/V + 80 μV 9.1 μV/V + 500 μV	Fluke 5700A
DC Voltage – Measure	Up to 0.1 V (0.1 to 1) V (1 to 10) V (10 to 100) V (100 to 1100) V	6.2 μV/V + 0.3 μV 5.2 μV/V + 0.3 μV 5.2 μV/V + 5 μV 7.3 μV/V + 30 μV 7.3 μV/V + 110 μV +12(V _{in} /1000) ² μV/V	HP 3458A Opt. 002
DC Current – Generate	0.1 nA to 2.2 mA (2.2 to 22) mA (22 to 220) mA 220 mA to 2.2 A (2.2 to 11) A (10 to 100) A	50 μA/A + 8 nA 50 μA/A + 80 nA 60 μA/A + 0.8 μA 80 μA/A + 25 μA 0.037 % + 480 μA 0.3 %	Fluke 5700A Fluke 5700A Fluke 5725A Power supply w/ shunt
Clamp-On Only	(0 to 550) A	0.3 % + 0.5 A	Fluke 5500A Fluke 50-turn coil

Parameter/Equipment	Range	CMC ^{2, 3, 4, 6} (\pm)	Comments
DC Power – Generate	(0.01 to 330) W (0.33 to 11) kW	0.2 % 0.21 %	Fluke 5500A
DC Current – Measure	100 pA to 100 μ A (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A (1 to 100) A	24 μ A/A + 0.8 nA 24 μ A/A + 5 nA 24 μ A/A + 50 nA 41 μ A/A + 0.5 μ A 0.013 % + 10 μ A 0.29 %	HP 3458A Opt. 002 Empro shunts
DC Resistance – Generate	(0 to 11) Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω (0.33 to 1.1) k Ω (1.1 to 3.3) k Ω (3.3 to 11) k Ω (11 to 33) k Ω (33 to 110) k Ω (110 to 330) k Ω (0.33 to 1.1) M Ω (1.1 to 3.3) M Ω (3.3 to 11) M Ω (11 to 33) M Ω (33 to 110) M Ω (110 to 330) M Ω	0.014 % + 8 m Ω 0.014 % + 15 m Ω 0.01 % + 15 m Ω 0.01 % + 15 m Ω 0.01 % + 15 m Ω 0.01 % + 60 m Ω 0.01 % + 60 m Ω 0.01 % + 0.6 Ω 0.011 % + 0.6 Ω 0.012 % + 6 Ω 0.02 % + 55 Ω 0.02 % + 55 Ω 0.06 % + 0.55 k Ω 0.1 % + 0.55 k Ω 0.51 % + 5.5 k Ω 0.58 % + 17 k Ω	Fluke 5500A
Fixed Points	1 Ω 1.9 Ω 10 Ω 19 Ω 100 Ω 190 Ω 1 k Ω 1.9 k Ω 10 k Ω 19 k Ω 100 k Ω 190 k Ω 1 M Ω 1.9 M Ω 10 M Ω 19 M Ω 100 M Ω	95 parts in 10 ⁶ 95 parts in 10 ⁶ 28 parts in 10 ⁶ 27 parts in 10 ⁶ 17 parts in 10 ⁶ 17 parts in 10 ⁶ 13 parts in 10 ⁶ 13 parts in 10 ⁶ 12 parts in 10 ⁶ 12 parts in 10 ⁶ 14 parts in 10 ⁶ 14 parts in 10 ⁶ 20 parts in 10 ⁶ 21 parts in 10 ⁶ 40 parts in 10 ⁶ 47 parts in 10 ⁶ 0.011 %	Fluke 5700A

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
DC Resistance – Measure	(0.1 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 1.2) GΩ	19 μΩ/Ω + 0.05 mΩ 15 μΩ/Ω + 0.5 mΩ 13 μΩ/Ω + 0.5 mΩ 13 μΩ/Ω + 5 mΩ 13 μΩ/Ω + 0.05 Ω 24 μΩ/Ω + 2 Ω 65 μΩ/Ω + 100 Ω 0.058 % + 1 kΩ 0.58 % + 10 kΩ	HP 3458A Opt. 002
Electrical Calibration of Thermocouple Indicators – Generate			
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1200) °C	0.27 °C 0.16 °C 0.14 °C 0.17 °C 0.23 °C	Fluke 5500A Ectron 1140A
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.33 °C 0.18 °C 0.16 °C 0.26 °C 0.4 °C	
Type R	(0 to 250) °C (250 to 400) °C (400 to 1000) °C (1000 to 1767) °C	0.57 °C 0.35 °C 0.33 °C 0.4 °C	
Type S	(0 to 250) °C (250 to 1000) °C (1000 to 1400) °C (1400 to 1767) °C	0.47 °C 0.36 °C 0.37 °C 0.46 °C	
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.63 °C 0.24 °C 0.16 °C 0.14 °C	
Type U	(-200 to 0) °C (0 to 600) °C	0.56 °C 0.27 °C	

Parameter/Equipment	Range	CMC ² (±)	Comments
Electrical Calibration of RTDs – Generate			
Pt 385, 100 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 400) °C (400 to 630) °C (630 to 800) °C	0.05 °C 0.05 °C 0.07 °C 0.09 °C 0.1 °C 0.12 °C 0.23 °C	Fluke 5500A
Pt 3926, 100 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 400) °C (400 to 630) °C	0.05 °C 0.05 °C 0.07 °C 0.09 °C 0.1 °C 0.12 °C	
Pt 3916, 100 Ω	(-200 to -190) °C (-190 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.25 °C 0.04 °C 0.05 °C 0.06 °C 0.07 °C 0.08 °C 0.09 °C 0.1 °C 0.23 °C	
Pt 385, 200 Ω	(-200 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.04 °C 0.05 °C 0.12 °C 0.13 °C 0.14 °C 0.16 °C	
Pt 385, 500 Ω	(-200 to -80) °C (-80 to 100) °C (100 to 260) °C (260 to 400) °C (400 to 600) °C (600 to 630) °C	0.04 °C 0.05 °C 0.06 °C 0.08 °C 0.09 °C 0.11 °C	
Pt 385, 1000 Ω	(-200 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 600) °C (600 to 630) °C	0.03 °C 0.04 °C 0.05 °C 0.06 °C 0.07 °C 0.23 °C	

Parameter/Equipment	Range	CMC ² (±)	Comments
Electrical Calibration of RTDs – Generate (cont)			
Ni 120, 120 Ω	(-80 to 100) °C (100 to 260) °C	0.08 °C 0.14 °C	Fluke 5500A
Cu 427, 10 Ω	(-100 to 260) °C	0.3 °C	

Parameter/Range	Frequency	CMC ^{2,3,6} (±)	Comments
AC Voltage – Generate			
(0.2 to 2.2) mV	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz	0.055 % + 4.5 μV 0.021 % + 4.5 μV 0.011 % + 4.5 μV 0.037 % + 4.5 μV 0.085 % + 7 μV 0.11 % + 13 μV 0.17 % + 25 μV 0.34 % + 25 μV	Fluke 5700A
(2.2 to 22) mV	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz	0.055 % + 5 μV 0.021 % + 5 μV 0.011 % + 5 μV 0.037 % + 5 μV 0.085 % + 7 μV 0.11 % + 12 μV 0.17 % + 25 μV 0.34 % + 25 μV	
(22 to 220) mV	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz	0.055 % + 13 μV 0.021 % + 8 μV 0.011 % + 8 μV 0.032 % + 8 μV 0.085 % + 25 μV 0.11 % + 25 μV 0.17 % + 35 μV 0.34 % + 80 μV	

Parameter/Range	Frequency	CMC ^{2,3,6} (±)	Comments
AC Voltage – Generate (cont)			
220 mV to 2.2 V	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz	0.05 % + 80 µV 0.016 % + 25 µV 75 µV/V + 6 µV 0.012 % + 16 µV 0.025 % + 70 µV 0.043 % + 130 µV 0.11 % + 350 µV 0.22 % + 850 µV	Fluke 5700A
(2.2 to 22) V	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz	0.05 % + 0.8 mV 0.016 % + 0.25 mV 75 µV/V + 0.06 mV 0.012 % + 0.16 mV 0.025 % + 0.35 mV 0.05 % + 1.5 mV 0.13 % + 4.3 mV 0.27 % + 8.5 mV	
(22 to 220) V	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz	0.05 % + 8 mV 0.016 % + 2.5 mV 80 µV/V + 0.8 mV 0.022 % + 3.5 mV 0.05 % + 8 mV 0.15 % + 90 mV 0.47 % + 90 mV 1.2 % + 190 mV	
(220 to 750) V	30 kHz to 50 kHz (50 to 100) kHz	0.06 % + 11 mV 0.23 % + 45 mV	
(220 to 1100) V	(15 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 30) kHz	0.04 % + 16 mV 90 µV/V + 4 mV 0.017 % + 6 mV 0.06 % + 11 mV	Fluke 5700A Fluke 5725A
AC Power – Generate			
(0.01 to 0.1) W (0.1 to 890) W (0.89 to 3) kW (3 to 11) kW	(45 to 65) Hz, PF = 1	0.23 % 0.14 % 0.13 % 0.15 %	Fluke 5500A

Parameter/Range	Frequency	CMC ^{2,3,6} (±)	Comments
AC Current – Generate			
(9 to 220) µA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.07 % + 25 nA 0.035 % + 20 nA 0.014 % + 16 nA 0.06 % + 40 nA 0.16 % + 80 nA	Fluke 5700A
220 µA to 2.2 mA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.07 % + 40 nA 0.035 % + 35 nA 0.014 % + 35 nA 0.06 % + 400 nA 0.16 % + 800 nA	
(2.2 to 22) mA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.07 % + 0.4 µA 0.035 % + 0.35 µA 0.014 % + 0.35 µA 0.060 % + 4 µA 0.16 % + 8 µA	
(22 to 220) mA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.07 % + 4 µA 0.035 % + 3.5 µA 0.014 % + 3.5 µA 0.06 % + 40 µA 0.16 % + 80 µA	
220 mA to 2.2 A	20 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.065 % + 35 µA 0.075 % + 80 µA 0.85 % + 160 µA	
(2.2 to 11 A)	40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.046 % + 170 µA 0.095 % + 380 µA 0.36 % + 750 µA	Fluke 5700A, Fluke 5725A
Clamp-On Only			
(0 to 550) A	(45 to 65) Hz	0.38 % + 0.5 A	Fluke 5500A, Fluke 50-turn coil
(0 to 110) A	(65 to 440) Hz	0.32 % + 0.5 A	Fluke 5500A, Fluke 50-turn coil

Parameter/Range	Frequency	CMC ^{2, 4, 6} (\pm)	Comments
AC Voltage – Measure			
3 μ V 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	0.03 % + 3 μ V 0.02 % + 1.1 μ V 0.03 % + 1.1 μ V 0.12 % + 1.1 μ V 0.58 % + 1.1 μ V 4.6 % + 2 μ V	HP 3458A Opt. 002
(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 (1 to 2) MHz	80 μ V/V + 4 μ V 80 μ V/V + 2 μ V 0.02 % + 2 μ V 0.03 % + 2 μ V 0.09 % + 2 μ V 0.35 % + 10 μ V 1.2 % + 10 μ V 1.7 % + 10 μ V	
(0.1 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 (1 to 2) MHz	80 μ V/V + 40 μ V 80 μ V/V + 20 μ V 0.02 % + 20 μ V 0.03 % + 20 μ V 0.09 % + 20 μ V 0.35 % + 100 μ V 1.2 % + 100 μ V 1.7 % + 100 μ V	
(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 (1 to 2) MHz	80 μ V/V + 0.4 mV 80 μ V/V + 0.2 mV 0.02 % + 0.2 mV 0.03 % + 0.2 mV 0.09 % + 0.2 mV 0.35 % + 1 mV 1.2 % + 1 mV 1.7 % + 1 mV	
(10 to 100) V	(1 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (0.3 to 1) MHz	0.02 % + 4 mV 0.02 % + 2 mV 0.04 % + 2 mV 0.14 % + 2 mV 0.46 % + 10 mV 1.7 % + 10 mV	
(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	0.05 % + 40 mV 0.05 % + 20 mV 0.07 % + 20 mV 0.14 % + 20 mV 0.35 % + 20 mV	

Parameter/Range	Frequency	CMC ^{2,4,6} (±)	Comments
AC Current – Measure			
(5 to 100) µA	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz (0.1 to 1) kHz	0.46 % + 0.03 µA 0.17 % + 0.03 µA 0.07 % + 0.03 µA 0.07 % + 0.03 µA	HP 3458A Opt. 002
(0.1 to 1) mA	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz (0.1 to 5) kHz	0.5 % + 0.2 µA 0.17 % + 0.2 µA 0.07 % + 0.2 µA 0.04 % + 0.2 µA	
(1 to 10) mA	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz (0.1 to 5) kHz	0.46 % + 2 µA 0.17 % + 2 µA 0.07 % + 2 µA 0.04 % + 2 µA	
(10 to 100) mA	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz (0.1 to 5) kHz	0.46 % + 20 µA 0.17 % + 20 µA 0.07 % + 20 µA 0.04 % + 20 µA	
(0.1 to 1) A	(10 to 20) Hz (20 to 45) Hz (45 to 100) Hz (0.1 to 5) kHz	0.46 % + 200 µA 0.18 % + 200 µA 0.09 % + 200 µA 0.12 % + 200 µA	
Capacitance – Generate			
(0.33 to 11) nF (11 to 110) nF (110 to 330) nF (0.33 to 1.1) µF (1.1 to 3.3) µF (3.3 to 11) µF (11 to 33) µF (33 to 110) µF (110 to 330) µF (0.33 to 1.1) mF	(0.05 to 1) kHz (0.05 to 1) kHz (0.05 to 1) kHz (0.05 to 1) kHz (0.05 to 1) kHz (50 to 400) Hz (50 to 400) Hz (50 to 200) Hz (50 to 100) Hz (50 to 100) Hz	0.54 % + 0.01 µF 0.27 % + 0.1 µF 0.27 % + 0.3 µF 0.27 % + 1 µF 0.38 % + 3 µF 0.38 % + 10 µF 0.44 % + 30 µF 0.53 % + 100 µF 0.75 % + 300 µF 1.1 % + 300 µF	Fluke 5500A

IV. Mechanical

Parameter/Range	Frequency	CMC ^{2,6} (±)	Comments
Vibration – Measuring Equipment Up to 490 $\mu\text{C}/\text{m}/\text{s}^2$ Up to 50 g	(10 to 99) Hz (0.10 to 1.999) kHz (2 to 7) kHz (7 to 10) kHz	6.1 % 6 % 6.7 % 13 %	MB Dynamics WIN47

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
Pressure Gauges & Transducers	(0 to 20) psia	0.03 psia	Setra 370
	(0 to 30) psig	0.03 psig	
	(30 to 1000) psig	0.065 %	Eaton UPC 5000
	(1000 to 10 000) psig	0.12 %	Deadweight tester
	(0 to 24) in H ₂ O	0.0027 in H ₂ O	Hook gauge
	(24 to 40) in H ₂ O	0.005 in H ₂ O	Micro-manometer
Vacuum Gauges	< 0.25 psia	0.013 psia	Setra 370
Torque Wrenches – Measure	(5 to 50) in·lb (50 to 250) in·lb (250 to 1000) in·lb (25 to 250) ft·lb	0.3 %	CDI 5000-ST
RPM – Measure	(5 to 20 000) rpm	0.012 % + 36 rpm	Omega HHT13

V. Thermodynamics

Parameter/Equipment	Range	CMC ² (±)	Comments
Relative Humidity – Measure	(5 to 95) % RH	1.2 % RH	Vaisala HMI-41 and HMP-46

Parameter/Equipment	Range	CMC ² (±)	Comments
Temperature – Measuring Equipment Thermocouples, RTDs and Thermometers	-40 °C to 150 °C	0.039 °C	Fluke 7340 bath Azonix A1011 thermometer Rosemont 162CE SPRT

VI. Time & Frequency

Parameter/Equipment	Frequency	CMC ² (±)	Comments
Frequency – Measure	10 Hz to 100 MHz	5 parts in 10 ⁸	HP 5335A
Time Interval	1 s to 8 hr	0.5 s	HP 5335A

This accreditation covers calibrations performed at the main laboratory listed above, and the satellite laboratory listed below.

Satellite Laboratory
 TEKTRONIX SERVICE SOLUTIONS
 4236 Ridge Lea Road
 Amherst, NY 14226

I. Electrical – DC/Low Frequency

Parameter/Equipment	Frequency	CMC ^{2,6} (±)	Comments
DC Voltage – Measure	Up to 0.1 V (0.1 to 1) V (1 to 10) V (10 to 100) V (100 to 1100) V	59 $\mu\text{V/V} + 4.6 \mu\text{V}$ 47 $\mu\text{V/V} + 9.1 \mu\text{V}$ 42 $\mu\text{V/V} + 9.3 \mu\text{V}$ 53 $\mu\text{V/V} + 0.8 \text{mV}$ 53 $\mu\text{V/V} + 13 \text{mV}$	HP 34401A
DC Current – Measure	(0 to 10) mA (10 to 100) mA 100 mA to 1 A (1 to 3) A (1 to 50) A	0.60 % + 2.3 μA 0.60 % + 5.8 μA 1.2 % + 20 μA 1.5 % + 0.70 mA 1.2 % + 41 mA	HP 34401A Empro shunts
Electrical Calibration of Thermocouple Indicators –			
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1200) °C	0.27 °C 0.16 °C 0.14 °C 0.17 °C 0.23 °C	Ectron 1140A
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.33 °C 0.18 °C 0.16 °C 0.26 °C 0.4 °C	
Type T	(-200 to 0) °C (0 to 600) °C	0.56 °C 0.27 °C	

II. Mechanical

Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
Pressure Gauges & Transducers	(0 to 20) psia	0.03 psia	Setra 370
	(0 to 30) psig	0.03 psig	
	(30 to 1000) psig	0.065 %	Eaton UPC 5000

III. Time & Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
Frequency – Measuring Equipment	DC to 20 MHz	5 parts in 10 ¹²	HP 3325B

¹ This laboratory offers commercial calibration service service.

² Calibration and Measurement Capability (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. Calibration and Measurement Capabilities 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 The measurands stated are generated with the Fluke 5700A. This capability is suitable for the calibration of the devices intended to measure the stated measurand in the ranges indicated. CMC is read as output plus one-year floor specifications where defined.

⁴ The measurands stated are measured with the HP 3458A. This capability is suitable for the calibration of the devices intended to generate the measurand in the ranges indicated. CMC is based upon one-year floor specifications plus one-year floor specifications where defined.

⁵ In the statement of CMC, L is the numerical value of the nominal length of the device measured in inches.

⁶ In the statement of CMC, percentages are to be read as percent of reading unless otherwise noted.



World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

TEKTRONIX SERVICE SOLUTIONS

Lockport, NY

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. 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 8 January 2009*).

Presented this 29th day of November 2011.





Peter Meyer

President & CEO
For the Accreditation Council
Certificate Number 1623.02
Valid to March 31, 2013

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