



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

**Axiom Test Equipment
2610 Commerce Way
Vista, CA 92081**

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2017

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

AC-2626
Certificate Number


ANAB Approval

Certificate Valid: 10/17/2018-10/17/2020
Version No. 001 Issued: 10/17/2018



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

Axiom Test Equipment

2610 Commerce way
 Vista, CA 92081
 James Smith (760) 806-6600

CALIBRATION

Valid to: **October 17, 2020**

Certificate Number: **AC-2626**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Generate	(10 to 220) μ A		Fluke 5700A Calibrator
	(10 to 20) Hz	0.18 μ A	
	(20 to 40) Hz	97 nA	
	40 Hz to 1 kHz	47 nA	
	(1 to 5) kHz	0.17 μ A	
	(5 to 10) kHz	0.43 μ A	
	220 μ A to 2.2 mA		
	(10 to 20) Hz	1.6 μ A	
	(20 to 40) Hz	0.81 μ A	
	40 Hz to 1 kHz	0.35 μ A	
	(1 to 5) kHz	1.7 μ A	
	(5 to 10) kHz	4.3 μ A	
	(2.2 to 22) mA		
	(10 to 20) Hz	16 μ A	
	(20 to 40) Hz	8.1 μ A	
	40 Hz to 1 kHz	3.5 μ A	
	(1 to 5) kHz	17 μ A	
	(5 to 10) kHz	43 μ A	
	(22 to 220) mA		
	(10 to 20) Hz	0.16 mA	
	(20 to 40) Hz	81 μ A	
40 Hz to 1 kHz	35 μ A		
(1 to 5) kHz	0.17 mA		
(5 to 10) kHz	0.43 mA		
220 mA to 2.2 A			
20 Hz to 1 kHz	0.69 mA		
(1 to 5) kHz	0.84 mA		
(5 to 10) kHz	8.7 mA		



Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Measure	Up to 100 μ A		Agilent 3458A, option 002 Digital Multimeter
	(10 to 20) Hz	0.5 μ A	
	(20 to 45) Hz	0.21 μ A	
	(45 to 100) Hz	0.11 μ A	
	(0.1 to 1) kHz	0.11 μ A	
	100 μ A to 1 mA		
	(10 to 20) Hz	4.9 μ A	
	(20 to 45) Hz	2 μ A	
	(45 to 100) Hz	0.94 μ A	
	100 Hz to 5 kHz	0.6 μ A	
(5 to 10) kHz	0.94 μ A		
AC Current – Measure	(1 to 10) mA		Agilent 3458A, option 002 Digital Multimeter
	(10 to 20) Hz	49 μ A	
	(20 to 45) Hz	20 μ A	
	(45 to 100) Hz	9.5 μ A	
	100 Hz to 5 kHz	6.1 μ A	
	(5 to 10) kHz	9.5 μ A	
	(10 to 100) mA		
	(10 to 20) Hz	0.49 mA	
	(20 to 45) Hz	0.2 mA	
	(45 to 100) Hz	95 μ A	
	100 Hz to 5 kHz	61 μ A	
	(5 to 10) kHz	95 μ A	
	100 mA to 1 A		
	(10 to 20) Hz	4.9 mA	
	(20 to 45) Hz	2.1 mA	
(45 to 100) Hz	1.2 mA		
100 Hz to 5 kHz	1.4 mA		
(5 to 10) kHz	3.7 mA		
AC Voltage – Generate	(0 to 2.2) mV		Fluke 5700A Calibrator
	(10 to 20) Hz	5.7 μ V	
	(20 to 40) Hz	5 μ V	
	40 Hz to 20 kHz	4.8 μ V	
	(20 to 50) kHz	5.4 μ V	
	(50 to 100) kHz	8.9 μ V	
	(100 to 300) kHz	16 μ V	
	(300 to 500) kHz	29 μ V	
500 kHz to 1 MHz	33 μ V		

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Generate	(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 (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 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	17 μ V 9.7 μ V 7.4 μ V 13 μ V 26 μ V 36 μ V 63 μ V 0.1 mV 0.13 mV 54 μ V 31 μ V 79 μ V 0.21 mV 0.27 mV 0.41 mV 0.83 mV 1.2 mV 0.38 mV 0.17 mV 0.28 mV 0.62 mV 1.1 mV 2.7 mV 5.7 mV	Fluke 5700A Calibrator
AC Voltage – Generate	(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	12 mV 3.8 mV 1.7 mV 2.8 mV 5.9 mV 13 mV 32 mV 69 mV	Fluke 5700A Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Generate	(22 to 220) V (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz	38 mV 17 mV 48 mV 0.11 V	Fluke 5700A Calibrator
AC Voltage – Generate	(300 to 750) V (30 to 50) kHz (50 to 100) kHz (300 to 1 100) V 40 Hz to 1 kHz (1 to 20) kHz (20 to 30) kHz	0.44 V 1.7 V 71 mV 81 mV 0.2 V	Fluke 5700A Calibrator, 5725A Amplifier
DC Current – Measure	(10 to 100) μ A 100 μ A to 1 mA (1 to 10) mA (10 to 100) mA 100 mA to 1 A	4.3 nA 39 nA 0.38 μ A 5.7 μ A 0.15 mA	Agilent 3458A, option 002 Digital Multimeter
DC Current – Generate	Up to 220 μ A 220 μ A to 2.2 mA (2.2 to 22) mA (22 to 220) mA 220 mA to 2.2 A	19 nA 0.12 μ A 1.2 μ A 14 μ A 0.11 mA	Fluke 5700A Calibrator
DC Voltage – Generate	up to 0.22 V (0.22 to 2.2) V (2.2 to 11) V (11 to 22) V (22 to 220) V (220 to 1 100) V	2.5 μ V 17 μ V 84 μ V 0.17 mV 1.9 mV 9.9 mV	Fluke 5700A Calibrator
DC Voltage – Measure ²	Up to 100 mV 100 mV to 1 V (1 to 10) V (10 to 100) V	1.1 μ V 7.5 μ V 75 μ V 0.94 mV	Agilent 3458A, option 002 Digital Multimeter
	100 V to 1 kV	24 mV	Agilent 3458A, option 002 Digital Multimeter [+12 ppm x (Vin/1 000) ² for V > 100]



Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Resistance – Measure	(0 to 10) Ω	0.28 m Ω	Agilent 3458A, option 002 Digital Multimeter
	(10 to 100) Ω	2.5 m Ω	
	100 Ω to 1 k Ω	17 m Ω	
	(1 to 10) k Ω	0.16 Ω	
	(10 to 100) k Ω	1.7 Ω	
	100 k Ω to 1 M Ω	24 Ω	
	(1 to 10) M Ω	0.75 k Ω	
AC Voltage – Measure	(10 to 100) M Ω	65 k Ω	Agilent 3458A, option 002 Digital Multimeter
	(1 to 10) mV		
	40 Hz to 1 kHz	4.5 μ V	
	(1 to 20) kHz	5.6 μ V	
	(20 to 50) kHz	16 μ V	
	(50 to 100) kHz	60 μ V	
	(100 to 300) kHz	0.47 mV	
	(10 to 100) mV		
	40 Hz to 1 kHz	12 μ V	
	(1 to 20) kHz	20 μ V	
	(20 to 50) kHz	52 μ V	
	(50 to 100) kHz	0.1 mV	
	(100 to 300) kHz	0.36 mV	
	300 kHz to 1 MHz	1.2 mV	
	100 mV to 1 V		
	40 Hz to 1 kHz	0.12 mV	
	(1 to 20) kHz	0.2 mV	
	(20 to 50) kHz	0.39 mV	
	(50 to 100) kHz	0.97 mV	
	(100 to 300) kHz	3.6 mV	
	300 kHz to 1 MHz	12 mV	
	(1 to 10) V		
	(1 to 40) Hz	1.4 mV	
40 Hz to 1 kHz	1.2 mV		
(1 to 20) kHz	2 mV		
(20 to 50) kHz	3.9 mV		
(50 to 100) kHz	9.6 mV		
(100 to 300) kHz	36 mV		
300 kHz to 1 MHz	0.12 V		



Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Measure	(10 to 100) V		Agilent 3458A, option 002 Digital Multimeter
	40 Hz to 1 kHz	27 mV	
	(1 to 20) kHz	28 mV	
	(20 to 50) kHz	45 mV	
	(50 to 100) kHz	0.15 V	
DC Resistance – Generate Fixed Points	(100 to 1 000) V		Fluke 5700A Calibrator
	1 kHz	0.35 V	
	0 Ω	51 μΩ	
	1 Ω	96 μΩ	
	1.9 Ω	0.18 mΩ	
	10 Ω	0.28 mΩ	
	19 Ω	0.54 mΩ	
	100 Ω	1.7 mΩ	
	190 Ω	3.2 mΩ	
	1 kΩ	13 mΩ	
	1.9 kΩ	25 mΩ	
	10 kΩ	0.12 Ω	
	19 kΩ	0.23 Ω	
	100 kΩ	1.4 Ω	
	190 kΩ	2.7 Ω	
	1 MΩ	20 Ω	
1.9 MΩ	41 Ω		
10 MΩ	0.41 kΩ		
19 MΩ	0.91 kΩ		
100 MΩ	11 kΩ		

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. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2626.

Vice President