



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

MICHELLI MEASUREMENT GROUP, LLC
10751 Forest Street
Santa Fe Springs, CA 90670
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CALIBRATION

Valid To: December 31, 2024

Certificate Number: 5104.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1,4}:

I. Dimensional

Parameter/ Equipment	Range	CMC ² (±)	Comments	Location ⁶
Micrometers ³	Up to 12 in (12 to 40) in	60 µin 590 µin	Gage blocks	SFS
Calipers ³	Up to 12 in (12 to 40) in	80 µin 300 µin	Gage blocks	SFS

II. Mechanical

Parameter/ Equipment	Range	CMC ² (±)	Comments	Location ⁶
Scales and Balances ³ –	(1 to 500) mg (1 to 200) g	0.9 µg 200 µg	Class 0 weights (applied load)	SFS, CV, LVN, PNX
	(1 to 500) mg (1 to 100) g	6.0 µg 200 µg	Class 1 weights (applied load)	SFS, CV, LVN, PNX
	(1/32 to 8) oz	0.0011 oz	ASTM Class 5 (applied load)	SFS, CV, LVN, PNX

Parameter/ Equipment	Range	CMC ^{2,5} (±)	Comments	Location ⁶
Scales and Balances ³ - (cont)	(1 to 5) g (5 to 20) g (20 to 50) g (50 to 100) g (100 to 200) g (200 to 500) g (500 to 1000) g	1.1 mg 1.2 mg 1.3 mg 1.8 mg 5.3 mg 5.9 mg 9.0 mg	ASTM Class 5 (applied load)	SFS, CV, LVN, PNX
	(1 to 5) kg (0.001 to 1) lb (1 to 10) lb (10 to 20) lb (20 to 50) lb (50 to 500) lb (500 to 1000) lb (1000 to 24 000) lb	3.0 g 0.0010 lb 0.0011 lb 0.0012 lb 0.0037 lb 0.0047 lb 0.09 lb 0.70 lb		
	(5000 to 30 000) lb	6.8 lb	Weight cart and weight blocks (applied load)	SFS, CV, LVN, PNX
Pressure – Measuring Equipment ³	(-15 to 30) psig (0 to 500) psig (0 to 1000) psig (0 to 5000) psig (0 to 10 000) psig	0.044 psig 0.10 psig 0.097 psig 0.28 psig 1.2 psig	Digital test gauges	SFS

III. Thermodynamics

Parameter/ Equipment	Range	CMC ^{2,5} (±)	Comments	Location ⁶
Temperature – Measure ³	(-197 to 0) °C (0 to 157) °C (157 to 232) °C (232 to 420) °C (420 to 660) °C	0.029 °C 0.030 °C 0.030 °C 0.037 °C 0.042 °C	Fluke 7109A, portable bath w/ Fluke 5609 PRT	SFS
	(50 to 160) °C	2.5 °C		

Parameter/ Equipment	Range	CMC ^{2,5} (±)	Comments	Location ⁶
Temperature – Measuring Equipment ³	(-25 to 140) °C	0.037 °C	Fluke 7109A, portable bath w/Fluke 5609 PRT	SFS

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 these calibrations. 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 This scope meets A2LA's *P112 Flexible Scope Policy*.

⁵ 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.

⁶ The locations that can perform the calibrations are given by the letter code listed in the table below. The field locations below are service locations and all calibrations are performed at customer sites:

Location	Code
(Main Location) 10751 Forest Street, Santa Fe Springs, CA 90670	SFS
(Field Location) 2240 Main Street #24, Chula Vista, CA 91911	CV
(Field Location) 3345 S. Rainbow Blvd Las Vegas, NV 89146	LVN
(Field Location) 3702 East Roeser Road #24, Phoenix, AZ 85040	PNX



Accredited Laboratory

A2LA has accredited

MICHELLI MEASUREMENT GROUP, LLC

Santa Fe Springs, CA

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 11th day of January 2023.

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

Mr. Trace McInturff Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5401.01
Valid to December 31, 2024
Revised January 2, 2024

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