



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

FUTEK ADVANCED SENSOR TECHNOLOGY, INC.
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CALIBRATION

Valid To: May 31, 2021

Certificate Number: 2412.01

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. Mechanical

Parameter/Equipment	Range	CMC ^{2,3,5} (±)	Comments
Force – Measure	(530 to 5000) lbf	0.047 %	Load cells
	(3000 to 24 000) lbf	0.024 %	
	(2150 to 50 000) lbf	0.018 %	
	(5000 to 120 000) lbf	0.036 %	
Force – Measuring Equipment	(1 to 5) mgf	0.20 %	ASTM Class 1 weights
	(10 to 20) mgf	0.025 %	
	(50 to 500) mgf	0.015 %	
	(1 to 20) lbf	0.015 %	ASTM Class 3 weights
	(0.002 to 50) lbf	0.018 %	NIST F weights
	(5 to 50) lbf	0.011 %	Dead weight machines
	(10 to 300) lbf	0.013 %	
	(20 to 500) lbf	0.018 %	
	(200 to 3000) lbf	0.008 %	
	(1000 to 10 000) lbf	0.033 %	

Parameter/Equipment	Range	CMC ^{2,3,5} (±)	Comments
Torque – Measure	(0.10 to 25) in·lbf (530 to 2500) in·lbf (890 to 10 000) in·lbf (3000 to 24 000) in·lbf	0.062 % 0.075 % 0.062 % 0.074 %	Torque cells
Torque – Measuring Equipment	0.0125 to 25 in·lbf (5 to 885) in·lbf (885 to 4000) in·lbf (4000 to 20 000) in·lbf	0.030 % 0.024 % 0.031 % 0.052%	Torque arms and weights
Pressure - Measure	(0 to 1515) psia (100 to 10000) psig	0.014 % 0.058 %	Reference Pressure Cells Mensor CPC6050 CPP 1000X
Pressure - Measuring Equipment	(100 to 10 000) psig	0.035 %	Deadweight tester

II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2,3,5} (±)	Comments
DC Voltage – Measure	(0 to 100) mV (0.1 to 1) V (1 to 10) V (10 to 100) V	0.0004 % 0.0008 % 0.0001 % 0.0002 %	Fluke 8508A
DC Current – Measure	(0 to 10) mA (10 to 100) mA	0.001 % 0.0003%	Fluke 8508A
Resistance – Measure	100 Ω to 10 kΩ	0.0002 %	Fluke 8508A
DC Voltage Ratio – Measure	(0.05 to 10) mV/V	0.005 %	mV/V Simulator Vishay precision calibrator

¹ This laboratory offers commercial 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 In the statement of CMC, % means percentage of reading unless otherwise noted.

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.