



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Alpha Sensors, Inc. a TE Connectivity Company
125 S. Tremont Street, Suite 100
Oceanside, CA 92054
(and satellite site as shown on scope)

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 09 November 2022

Certificate Number: AC-2093



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
AND ANSI/NCSL Z540-1-1994 (R2002)**

Alpha Sensors, Inc. a TE Connectivity Company

125 S. Tremont Street, Suite 100

Oceanside, CA 92054

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CALIBRATION

Valid to: **November 9, 2022**

Certificate Number: **AC-2093**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance	0 Ω to 2 k Ω	8.2 $\mu\Omega/\Omega$ of reading + 0.52 m Ω	Digital Multi-Meter
Resistance	(2 to 20) k Ω	8.2 $\mu\Omega/\Omega$ of reading + 5.2 m Ω	Digital Multi-Meter
Resistance	(20 to 200) k Ω	8.2 $\mu\Omega/\Omega$ of reading + 100 m Ω	Digital Multi-Meter

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature-Source	(-20.15 to 150.15) $^{\circ}\text{C}$	0.006 $^{\circ}\text{C}$	Standard Platinum Resistance Thermometer, triple point of water cell, copper averaging block, and a Digital Multi-Meter.

Services performed at satellite location

Callejon De Servicio No. 61
Col. El Encanto C.P. 21440, Tecate B.C., Mexico

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance ¹	0 Ω to 1 k Ω	20 $\mu\Omega/\Omega$ of reading + 3.4 m Ω	Digital Multi-Meter
Resistance ¹	(1 to 10) k Ω	20 $\mu\Omega/\Omega$ of reading + 34 m Ω	Digital Multi-Meter
Resistance ¹	(10 to 101) k Ω	20 $\mu\Omega/\Omega$ of reading + 340 m Ω	Digital Multi-Meter

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature-Source ¹	(-20.10 to 150.10) $^{\circ}\text{C}$	0.01 $^{\circ}\text{C}$	Temperature Secondary Standard Thermometer

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. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2093.



R. Douglas Leonard Jr., VP, PILR SBU