

SCOPE OF ACCREDITATION TO ISO 17025:2017

SIGMA SENSORS (TCL) GMBH Maximilian-Haller str. 20 Sigmaringen, Germany 72488

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CALIBRATION

Valid To: June 30, 2023 Certificate Number: 6327.01

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. Thermodynamics

Parameter/Equipment	Range	CMC ^{2, 5} (±)	Comments
Temperature – Measuring Equipment	(-40 to -20) °C (-20 to 0) °C (0 to 150) °C (150 to 250) °C (250 to 300) °C	0.12 °C 0.062 °C 0.091 °C 0.15 °C 0.28 °C	PRT, data logger, thermal source
Temperature – Measure ³	(-40 to -20) °C (-20 to 0) °C (0 to 150) °C (150 to 250) °C (250 to 300) °C	0.12 °C 0.062 °C 0.091 °C 0.15 °C 0.28 °C	PRT, data logger

¹ This laboratory offers commercial calibration service and field calibration services.

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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 this calibration. 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.



(A2LA Cert. No. 2108.05) 05/14/2021



Accredited Laboratory

A2LA has accredited

SIGMA SENSORS (TCL) GMBH

Sigmaringen, GERMANY

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 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 14 day of May 2021.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 6327.01 Valid to June 30, 2023