SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

WATLOW
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CALIBRATION

Valid To: January 31, 2021 Certificate Number: 3086.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1]:

I. Thermodynamics

Parameter/Equipment	Range	CMC[2] (±)	Comments
Thermocouple Calibration –			
Fixed Points:			
Type E	-320 °F	0.48 °F	ASTM E220, Agilent 34420A or HP3456A or HP3458A, PRT reference standard
Type J	-320 °F	0.49 °F	
Type K	-320 °F	0.49 °F	
Type N	-320 °F	0.49 °F	
Type T	-320 °F	0.49 °F	

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Parameter/Equipment	Range	CMC[2] (±)	Comments
Thermocouple Calibration – (cont)			
Type E	(-110 to 32) °F (32 to 1000) °F	0.45 °F 0.46 °F	ASTM E220, Agilent 34420A or HP3456A or HP3458A, PRT reference standard
Type J	(-110 to 32) °F (32 to 1000) °F	0.46 °F 0.47 °F	
Type K	(-110 to 32) °F (32 to 1000) °F	0.46 °F 0.48 °F	
Type N	(-110 to 32) °F (32 to 1000) °F	0.46 °F 0.47 °F	
Type T	(-110 to 32) °F (32 to 700) °F	0.46 °F 0.46 °F	
Type B	(1500 to 2000) °F (2000 to 2500) °F	1.3 °F 3.2 °F	ASTM E220, HP34401, type “B” platinum T/C standard
Type E	(32 to 1600) °F	0.81 °F	
Type J	(32 to 1400) °F	0.81 °F	ASTM E220, HP34401, type “S” platinum T/C standard
Type K	(32 to 2000) °F (2000 to 2350) °F	0.82 °F 2.1 °F	
Type N	(32 to 2000) °F (2000 to 2350) °F	0.81 °F 2.1 °F	
Type R	(32 to 2000) °F (2000 to 2500) °F	0.84 °F 3.1 °F	
Type S	(32 to 2000) °F (2000 to 2500) °F	0.84 °F 3.1 °F	

Parameter/Equipment	Range	CMC[2] (±)	Comments
Calibration of RTD's –			
Fixed Points:			
Pt 385, 100 Ω	-320 °F	0.24 °F	ASTM E644, Agilent 34420A or HP3456A or HP3458A, PRT reference standard
Pt 385, 1000 Ω	-320 °F	0.24 °F	
Ranged:			
Pt 385, 100 Ω	(-110 to 32) °F (32 to 1000) °F (1000 to 1200) °F	0.19 °F 0.22 °F 0.53 °F	ASTM E644, Agilent 34420A or HP3456A or HP3458A, PRT reference standard
Pt 385, 1000 Ω	(-110 to 32) °F (32 to 1000) °F (1000 to 1200) °F	0.19 °F 0.22 °F 0.53 °F	

[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.

Accredited Laboratory

A2LA has accredited

WATLOW

Richmond, IL

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 31st day of January 2019.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3086.01
Valid to January 31, 2021

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