Crystal pressure

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Report Number: 378315

Certificate of Calibration

Calibrations comply with ISO/IEC 17025:2017 and ANSI NCSL Z540-1-1994

ilac-MRA A2LA ACCREDITED CALIBRATION CERT #2601.01

Device Information	
Module	RTD100
Serial Number	110992
Calibration Date	05 June 2021
Certificate Issue Date	02 July 2021
As Received Condition	New
As Left Condition	In Tolerance

Laboratory Conditions	
Laboratory ambient conditions throughout this calibration	
Temperature	19 to 23° C
Humidity	20 to 60% RH

Definitions

Temperature ..... Measured temperature of Device Under Test (DUT) during data collection.
Reference Reading ..... True value according to our reference standards.
Indicated Reading ..... Displayed reading from test unit.
Condition ..... Pass or Fail.
Difference ..... Indicated reading minus reference reading.
Relative Difference ..... (Difference / reference reading) x 100.
Allowable Tolerance .... ± according to manufacturer's specifications.

Traceability Statement

Reference Standards used in this calibration are traceable to the National Institute of Standards and Technology of the United States (NIST) or other NMI.

System Expanded Uncertainty

System expanded uncertainty evaluation includes the calibration reference used and device under test and is calculated in accordance with ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainties reported represent expanded uncertainties using a coverage factor **(k)** to approximate a percentage **(%)** confidence level.

Decision Rule

In Tolerance or *Pass* conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. Test methods defined by COI-054.

Coverage Factor **(k)**	2
Confidence Level **(%)**	~ 95

Traceable Reference Standards

Manufacturer	Calibration Reference Used	Serial Number	Report No.	Reference Cal. Due
HP	Analog System-Ohm 2823A00569	2823A00569	13617050444	04 December 2021

Troy Burns

Laboratory Representative

Troy Burns

Quality Representative

Crystal Engineering Corporation, is ISO 9001:2015 Quality Management System Certified by Intertek, Certificate No. QMS-1058.

AMETEK® SENSORS, TEST & CALIBRATION

Test Results

As Left Results - Resistance Measure - Span Multiplier: 1.00000 - Calibration Performed Using 4-Wire Mode							
Temperature (Celsius)	**Reference Reading (Ohms)**	**Indicated Reading (Ohms)**	**Deviation (Ohms)**	**Relative Deviation (% of Reading)**	**Allowable Tolerance (Ohms)**	**Expanded Uncertainty (Ohms)**	**Condition**
-20	0.000	0.01	0.010		0.020		Pass
-20	100.028	100.04	0.012	0.012	0.035	0.012	Pass
-20	200.294	200.30	0.006	0.003	0.050	0.0069	Pass
-20	398.579	398.60	0.021	0.005	0.080	0.0073	Pass
10	0.000	0.00	0.000		0.020		Pass
10	100.028	100.03	0.002	0.002	0.035	0.012	Pass
10	200.293	200.30	0.007	0.003	0.050	0.0069	Pass
10	398.575	398.59	0.015	0.004	0.080	0.0073	Pass
20	0.000	0.00	0.000		0.020		Pass
20	100.028	100.03	0.002	0.002	0.035	0.012	Pass
20	200.292	200.29	-0.002	-0.001	0.050	0.0069	Pass
20	398.574	398.58	0.006	0.002	0.080	0.0073	Pass
30	0.000	0.00	0.000		0.020		Pass
30	100.029	100.03	0.001	0.001	0.035	0.012	Pass
30	200.292	200.29	-0.002	-0.001	0.050	0.0069	Pass
30	398.575	398.58	0.005	0.001	0.080	0.0073	Pass
50	0.000	0.00	0.000		0.020		Pass
50	100.028	100.02	-0.008	-0.008	0.035	0.012	Pass
50	200.293	200.29	-0.003	-0.001	0.050	0.0069	Pass
50	398.577	398.58	0.003	0.001	0.080	0.0073	Pass

Manufacturer's specifications: 0% to 100% of Full Scale: ±(0.015% of Reading + 0.02 Ohms)