



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

JAC Manufacturing, Inc.
701 Industrial Blvd.
Palmyra, WI 53156

Fulfills the requirements of

ISO/IEC 17025:2017

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.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 27 November 2024
Certificate Number: L1151-1



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

JAC Manufacturing, Inc.

701 Industrial Blvd.
Palmyra, WI 53156
Don Miller 262-495-2141

CALIBRATION

Valid to: **November 27, 2024**

Certificate Number: **L1151-1**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Current – Source ¹	(0 to 22) mA	575 μ A/A + 14 μ A	Comparison performed with a Process Calibrator
DC Current – Measure ¹	(0 to 30) mA (30 to 110) mA	207 μ A/A + 12 μ A 167 μ A/A + 49 μ A	
DC Voltage – Source ¹	(0 to 110) mV (0.11 to 1.1) V (1.1 to 15) V	100 μ V/V + 61 μ V 206 μ V/V + 210 μ V 222 μ V/V + 2.6 mV	
DC Voltage – Measure ¹	(0 to 110) mV (0.11 to 1.1) V (1.1 to 11) V (11 to 110) V (110 to 300) V	330 μ V/V + 35 μ V 300 μ V/V + 290 μ V 300 μ V/V + 2.9 mV 531 μ V/V + 29 mV 521 μ V/V + 80 mV	
Thermocouple Millivolt Simulation – Source ¹	Type N (-200 to 1 300) °C Type J (-210 to 1 200) °C Type K (-200 to 1 372) °C Type T (-200 to 400) °C Type R (-20 to 1 767) °C Type S (0 to 1 760) °C Type C (0 to 2 316) °C	1.1 °C 0.9 °C 1 °C 1 °C 1.7 °C 1.7 °C 1.5 °C	Comparisons performed with a Process Calibrator and Electronic Thermometer

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Thermocouple Millivolt Simulation – Measure ¹	Type N (-200 to 1 300) °C	1.5 °C	Comparisons performed with a Process Calibrator and Electronic Thermometer
	Type J (-210 to 1 200) °C	1.1 °C	
	Type K (-200 to 1 372) °C	1.2 °C	
	Type T (-200 to 400) °C	1.1 °C	
	Type B (600 to 1 820) °C	1.8 °C	
	Type R (-20 to 1 767) °C	2 °C	
	Type S (0 to 1 760) °C	2 °C	


Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Humidity Measure ¹	(10 to 90) % RH	3.4 % RH	Comparison performed with a Thermo-hygrometer
Temperature Measure ¹ (System Accuracy Test)	(-200 to 1 100) °C	1.6 °C	Comparison performed with a Process Calibrator and Thermocouple
Temperature Uniformity Calibration Surveys ¹			Comparisons performed with a Multi-Channel Recorder and Thermocouples per Current AMS 2750
Type J	(-100 to 300) °C	2.3 °C	
Type K	(300 to 1 100) °C	2.3 °C	

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. On-site calibration service is available for all parameters, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. L1151-1.



R. Douglas Leonard Jr., VP, PILR, SBU