



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

**Super Systems, Inc.**  
**7205 Edington Drive**  
**Cincinnati, OH 45249**

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](http://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: 30 August 2021  
Certificate Number: AC-1186



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

### Super Systems, Inc.

7205 Edington Drive  
Cincinnati, OH 45249

Tony Alvarado (513) 772-0060  
talvarado@supersystems.com www.supersystems.com

### CALIBRATION

Valid to: **August 30, 2021**

Certificate Number: **AC-1186**

#### Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Humidity Solutions, Dew Point Analyzers	(11.3, 75.3) %RH @ 23 °C	1.5 %RH 0.4 °C	Environmental Chamber, Vaisala, Direct Method
Dew Point Analyzers	(11.3, 75.3) %RH @ 23 °C	3.1 %RH 1.2 °C	Calibrated Humidity Salt Solutions, Vaisala Indirect Method

#### Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
NDIR Gas Analyzer <sup>1</sup>	(0, 10, 20) % CO (0, 0.5, 10) % CO <sub>2</sub> (0, 5) % CH <sub>4</sub> (0, 15, 40) % H <sub>2</sub> 100 % N <sub>2</sub>	1.1 % Concentration	Certified Standard Gas Mixture

#### Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Source	(0 to 75) mV T/C out (0 to 100) mV >100 mV to 1 V (>1 to 10) V (>10 to 100) V	0.006 8 mV 0.007 7 mV 0.052 mV 0.51 mV 5.2 mV	Martel Model 3001 Precision Calibrator

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Measure	(0 to 75) mV T/C in (0 to 10) V (>10 to 100) V	0.006 8 mV 0.9 mV 8.2 mV	Martel Model 3001 Precision Calibrator
DC Current – Source	(0 to 100) mA	0.009 mA	
DC Current – Measure	(0 to 50) mA	0.008 mA	
Electrical Simulation of Thermocouple Devices	Type B (600 to 800) °C	0.65 °C	Martel Model 3001 Precision Calibrator
	(>800 to 1 550) °C	0.55 °C	
	(>1 550 to 1 820) °C	0.60 °C	
	Type C (0 to 150) °C	0.43 °C	
	(>150 to 650) °C	0.37 °C	
	(>650 to 1 000) °C	0.44 °C	
	(>1 000 to 1 800) °C	0.7 °C	
	(>1 800 to 2 316) °C	1.2 °C	
	Type E (-270 to -100) °C	0.7 °C	
	(>-100 to -25) °C	0.45 °C	
	(>-25 to 650) °C	0.26 °C	
	(>650 to 1 000) °C	0.3 °C	
	Type J (-210 to -100) °C	0.4 °C	
	(>-100 to -30) °C	0.35 °C	
	(>-30 to 760) °C	0.25 °C	
	(>760 to 1 200) °C	0.33 °C	
	Type K (-270 to -100) °C	0.47 °C	
	(>-100 to -25) °C	0.37 °C	
	(>-25 to 120) °C	0.23 °C	
	(>120 to 1 000) °C	0.37 °C	
(>1 000 to 1 372) °C	0.56 °C		
Type N (-270 to -100) °C	0.57 °C		
(>-100 to -25) °C	0.44 °C		
(>-25 to 410) °C	0.27 °C		
(>410 to 1 300) °C	0.38 °C		

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of Thermocouple Devices	Type R		Martel Model 3001 Precision Calibrator
	(-50 to 250) °C	0.82 °C	
	(>250 to 400) °C	0.5 °C	
	(>400 to 1 000) °C	0.47 °C	
	(>1 000 to 1 767) °C	0.57 °C	
	Type S		
	(-50 to 250) °C	0.77 °C	
	(>250 to 1 000) °C	0.52 °C	
	(>1 000 to 1 400) °C	0.53 °C	
	(>1 400 to 1 767) °C	0.65 °C	
Type T			
(-270 to -150) °C	0.89 °C		
(>-150 to 0) °C	0.34 °C		
(>0 to 400) °C	0.22 °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. % = percent concentration unless otherwise noted.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1186.



R. Douglas Leonard Jr., VP, PILR SBU