

Our NVLAP Lab Code 200502-0 (National Voluntary Laboratory Accreditation Program) Accredited Metrology Laboratory provides comparison temperature calibrations from -196 °C to 1450 °C [-321 °F to 2642 °F] on the International Temperature Scale of 1990 (ITS-90) for temperature sensors and instruments.

Pyromation's laboratory managerial staff and technical team have documented education, training, technical knowledge and experience to precisely perform their assigned functions. The laboratory's test environment is constantly monitored and controlled to maintain all required conditions, while access is strictly defined and controlled.

Our Laboratory equipment includes fluidized baths and tube furnaces, standard platinum resistance thermometers, and type "B" and "S" thermocouples. All standards and calibrations are traceable to the International System of Units (SI) through NIST or other National Metrology Institutes and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported. Note: Our quality system meets or exceeds the requirements for NIST Handbook 150, ISO 9001, and ANSI/NCSS Z540-1.

ORDER CODES

Example Order Numbers:

CAL (100, 200, 300) F - PTD - TBL

1 Standard Calibrations

CODE	DESCRIPTION
CAL ^[2]	Sensor Calibration - All sensors of line item calibrated to specified temperatures.
LOT ^[2]	Lot Calibration - Beginning and End - (BE) - One sample from the beginning and the end of the lot will be tested at specified temperatures.
LOP ^{[1][2]}	Loop Calibration - One instrument and one sensor will be tested together at specified temperatures.
SMC ^{[1][2]}	RTD Sensor Matching Calibration - The RTD is calibrated and offsets are applied to the transmitter. The RTD and transmitter are then retested. Above zero ranges require three test points; below zero ranges require 4 test points.

[1] Additional length may be required for loop calibrations.
[2] Uncertainties are not included in determination of acceptance criteria.

2 Calibration Temperatures: Specified Required Calibration Points

3 Temperature Scale

CODE	DESCRIPTION
C	Degree Celsius
F	Degree Fahrenheit

5 Custom Table Options^[1]

CODE	DESCRIPTION
TBL	Table in 1 degree increments
TBL (0.1)	Table in 0.1 degree increments
TBL (CVD)	Callendar Van Dusen Coefficients

[1] Table options require a minimum of 3 temperature points

4 Tagging Options

CODE	DESCRIPTION
PTD	Calibration Detail, Paper Tag
STD	Calibration Detail, Stainless Tag
ATD	Calibration Detail, Aluminum Tag
PTA	Tag all sensors with Beginning and End Calibration, Paper Tag

1A Calibrations Per SAE AMS2750^[2]

CODE	DESCRIPTION	MAXIMUM PERMITTED ERROR
CAL-AMS-TUS	Temperature Uniformity Survey Calibration - All sensors of line item calibrated to specified temperatures.	±2.2 °C [±4.0 °F] or ±0.75%
CAL-AMS-SAT	System Accuracy Test Calibration - All sensors of line item calibrated to specified temperatures.	±1.1 °C [±2.0 °F] or ±0.4% (J,K,T,E,N) ±0.8 °C [±1.5 °F] or ±0.25% (R,S) ±0.8 °C [±1.5 °F] or ±0.5% (B)
CAL-AMS-CRM	Control, Recording & Monitoring Calibration - All sensors of line item calibrated to specified temperatures.	±1.1 °C [±2.0 °F] or ±0.4% (Class 1 & 2) ±2.2 °C [±4.0 °F] or ±0.75% (Class 3 to 6)
CAL-AMS-L	Load Calibration - All sensors of line item calibrated to specified temperatures.	±2.2 °C [±4.0 °F] or ±0.75%

1B Lot Calibrations Per SAE AMS2750^{[1][2]}

CODE	DESCRIPTION	MAX. LOT LENGTH		MAXIMUM PERMITTED ERROR	Allowable Delta Limits
LOT-AMS-TUS	Temperature Uniformity Survey Lot Calibration - Beginning and End - One sample from the beginning and the end of the lot will be tested at specified temperatures.	Base	5000 ft	±2.2 °C [±4.0 °F] or ±0.75%	1.1 °C [2.0 °F]
		Noble	2000 ft		
LOT-AMS-SAT	System Accuracy Test Lot Calibration - One sample from the beginning and the end of the lot will be tested at specified temperatures.	Base	5000 ft	±1.1 °C [±2.0 °F] or ±0.4% (J,K,T,E,N) ±0.8 °C [±1.5 °F] or ±0.25% (R,S) ±0.8 °C [±1.5 °F] or ±0.5% (B)	1.1 °C [2.0 °F]
		Noble	2000 ft		
LOT-AMS-CRM	Control, Recording & Monitoring Lot Calibration - One sample from the beginning and the end of the lot will be tested at specified temperatures.	Base	5000 ft	±1.1 °C [±2.0 °F] or ±0.4% (Class 1 & 2) ±2.2 °C [±4.0 °F] or ±0.75% (Class 3 to 6)	1.1 °C [2.0 °F]
		Noble	2000 ft		
LOT-AMS-L	Load Lot Calibration - One sample from the beginning and the end of the lot will be tested at specified temperatures.	Base	5000 ft	±2.2 °C [±4.0 °F] or ±0.75%	1.1 °C [2.0 °F]
		Noble	2000 ft		

[1] Lot AMS calibration reports contain beginning, end and average temperatures.

[2] Maximum interval between temperatures is 140 °C [250 °F]

Minimum Sensor Length Requirements for Temperature Calibrations

-196 °C	(-80 to 215) °C	(215 to 1204) °C	(1200 to 1450) °C
[-321 °F]	[-112 to 420] °F	[420 to 2200] °F	[2192 to 2642] °F
12 Inch	6 Inch	18 Inch	30 Inch

Additional charges may apply if sensor modification is required to accommodate the minimum calibration length requirement