



CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

<p>Transcat – San Juan 281 Calle Matadero Urb Puerto Nuevo San Juan, PR 00920 Mr. John Strouth Phone: 787-706-8855 Fax: 787-792-3614 E-mail: jstrouth@transcat.com URL: www.transcat.com</p>	<p>Parameter(s) of Accreditation Dimensional Electromagnetics – DC/Low Frequency Time and Frequency Mechanical Electromagnetics – RF/Microwave Thermodynamic</p> <p>This laboratory is compliant to ANSI/NCSL Z540-1-1994; Part 1. (NVLAP Code: 20/A01)</p>
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
DIMENSIONAL			
<p>NVLAP Code: 20/D05 LENGTH & DIAMETER; STEP GAGES Micrometers and Calipers– Outside, Inside, Depth</p>	<p>0.05 in to 8 in 8 in to 24 in</p>	<p>Where L is the length in inches of device under test. 9 μin + 14L μin 21 μin + 14L μin</p>	<p>Comparison to Gage Blocks</p>
<p>Anvil Flatness</p>	<p>0 in to 1 in</p>	<p>6.5 μin</p>	<p>Optical Flats</p>
<p>Tapes and Rulers</p>	<p>0 ft to 100 ft</p>	<p>Where L is the length in feet of device under test. 2 m inch + 0.2L m inch</p>	<p>Glass Scale with Optics</p>

2012-01-01 through 2012-12-31
 Effective dates

David E. Alderson
 For the National Institute of Standards and Technology



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CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Frequency Range	Uncertainty (<i>k</i> =2) ^{Note 3}	Remarks
ELECTROMAGNETICS – DC/LOW FREQUENCY				
NVLAP Code: 20/E02 AC RESISTORS AND CURRENT AC Current – Measuring Equipment	1 A to 3 A	10 Hz to 45 Hz	0.014 % + 78 μA	Fluke 5520A
		45 Hz to 1 kHz	0.053 % + 78 μA	
		1 kHz to 5 kHz	0.47 % + 0.8 mA	
		5 kHz to 10 kHz	1.9 % + 3.9 mA	
	3 A to 11 A	45 Hz to 100 Hz	0.073 % + 1.6 mA	
		100 Hz to 1 kHz	0.096 % + 1.6 mA	
		1 kHz to 5 kHz	2.3 % + 1.6 mA	
	11 A to 20 A	45 Hz to 100 Hz	0.11 % + 3.9 mA	
		100 Hz to 1 kHz	0.13 % + 3.9 mA	
		1 kHz to 5 kHz	2.3 % + 3.9 mA	
Extended Frequency Ranges	29 μA to 329.99 μA	10 kHz to 30 kHz	1.2 % + 3 μA	Fluke 5520A
	330 μA to 3.299 mA	10 kHz to 30 kHz	0.78 % + 0.5 μA	
	3.3 mA to 32.99 mA	10 kHz to 30 kHz	0.31 % + 3 μA	
	29 mA to 329.99 mA	10 kHz to 30 kHz	0.31 % + 0.16 mA	
Clamp-on Ammeter Toroidal Type	20 A to 150 A	45 Hz to 65 Hz	0.30 % + 26 mA	Fluke 5520A with 5500A/Coil
		65 Hz to 440 Hz	0.83 % + 47 mA	
	150 A to 1000 A	45 Hz to 65 Hz	0.35 % + 0.12 A	
		65 Hz to 440 Hz	1.1 % + 0.22 A	
Clamp-on Ammeter Non-Toroidal Type	20 A to 150 A	45 Hz to 65 Hz	0.57 % + 0.25 A	Fluke 5520A with 5500A/Coil
		65 Hz to 440 Hz	1.0 % + 0.25 A	
	150 A to 1000 A	45 Hz to 65 Hz	0.60 % + 0.90 A	
		65 Hz to 440 Hz	1.3 % + 0.92 A	

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NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Frequency Range	Uncertainty (k=2) ^{Note 3}	Remarks
AC Current – Measure	0 μ A to 100 μ A	10 Hz to 20 Hz	0.40 % + 30 nA	Agilent 3458A opt 2
		20 Hz to 45 Hz	0.15 % + 30 nA	
		45 Hz to 100 Hz	0.060 % + 30 nA	
		100 Hz to 1 kHz	0.060 % + 30 nA	
	100 μ A to 1 mA	10 Hz to 20 Hz	0.40 % + 200 nA	
		20 Hz to 45 Hz	0.15 % + 200 nA	
		45 Hz to 100 Hz	0.066 % + 200 nA	
		100 Hz to 1 kHz	0.040 % + 200 nA	
	1 mA to 10 mA	10 Hz to 20 Hz	0.40 % + 2 μ A	
		20 Hz to 45 Hz	0.15 % + 2 μ A	
		45 Hz to 100 Hz	0.066 % + 2 μ A	
		100 Hz to 1 kHz	0.040 % + 2 μ A	
	10 mA to 100 mA	10 Hz to 20 Hz	0.40 % + 20 μ A	
		20 Hz to 45 Hz	0.15 % + 20 μ A	
		45 Hz to 100 Hz	0.066 % + 20 μ A	
		100 Hz to 1 kHz	0.040 % + 20 μ A	
	100 mA to 1 A	10 Hz to 20 Hz	0.40 % + 200 μ A	
		20 Hz to 45 Hz	0.16 % + 200 μ A	
		45 Hz to 100 Hz	0.084 % + 200 μ A	
		100 Hz to 1 kHz	0.10 % + 200 μ A	

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty (k=2) ^{Note 3}	Remarks
NVLAP Code: 20/E05 DC RESISTANCE AND CURRENT DC Resistance – Measuring Equipment and Measure	0 Ω to 10 Ω 10 Ω to 100 Ω 100 Ω to 1 k Ω	17 $\mu\Omega/\Omega$ + 50 $\mu\Omega$ 13 $\mu\Omega/\Omega$ + 0.50 m Ω 11 $\mu\Omega/\Omega$ + 0.50 m Ω	HP 3458A with Decade Resistor

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Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) Notes 1,2

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
DC Resistance – Measuring Equipment	1 k Ω to 10 k Ω	10 $\mu\Omega/\Omega$ + 5 m Ω	Agilent 3458A with Decade Resistor
	10 k Ω to 100 k Ω	13 $\mu\Omega/\Omega$ + 50 m Ω	
	100 k Ω to 1 M Ω	19 $\mu\Omega/\Omega$ + 2 Ω	
	1 M Ω to 10 M Ω	53 $\mu\Omega/\Omega$ + 100 Ω	
	10 M Ω to 100 M Ω	560 $\mu\Omega/\Omega$ + 1 k Ω	
	100 M Ω to 1 G Ω	0.50 % + 10 k Ω	
DC Resistance – Measuring Equipment	10 G Ω	0.64 %	Decade Resistor
	100 G Ω	1.3 %	
DC Current – Measuring Equipment and Measure	0 μ A to 100 μ A	25 μ A/A + 0.8 nA	Agilent 3458A with Current Source
	100 μ A to 1 mA	23 μ A/A + 5 nA	
	1 mA to 10 mA	23 μ A/A + 50 nA	
	10 mA to 100 mA	37 μ A/A + 500 nA	
	100 mA to 1 A	110 μ A/A + 10 μ A	
DC Current – Measuring Equipment	1 A to 3 A	0.040 % + 40 μ A	Fluke 5520A
	3 A to 11 A	0.050 % + 500 μ A	
	11 A to 20 A	0.082 % + 750 μ A	
Clamp-on Ammeter Non-Toroidal Type	20 A to 150 A	0.50 % + 0.14 A	Fluke 5520A with 5500A/Coil
	150 A to 1000 A	0.52 % + 0.50 A	
NVLAP Code: 20/E06 DC VOLTAGE DC Voltage – Measuring Equipment and Measure	0 V to 100 mV	6.8 μ V/V + 0.50 μ V	Agilent 3458A opt 2 with Fluke 5520A
100 mV to 10 V	4.8 μ V/V + 0.50 μ V		
10 V to 100 V	6.8 μ V/V + 30 μ V		
100 V to 500 V	9.6 μ V/V + 100 μ V		
500 V to 800 V	14 μ V/V + 100 μ V		
800 V to 1000 V	18 μ V/V + 100 μ V		

2012-01-01 through 2012-12-31

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Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
DC Voltage – Measure	1 kV to 2 kV	0.076 % + 0.40 V	Vitrek 4600
	2 kV to 20 kV	0.076 % + 4 V	

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Frequency Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
NVLAP Code: 20/E09 LF AC VOLTAGE AC High Voltage – Measure Only	700 V to 20 kV 20 kV to 20 kV	60 Hz to 400 Hz	0.086 % + 2 V	High Voltage Meter
		60 Hz to 400 Hz	0.23 % + 20 V	
AC Voltage – Measure	0 mV to 10 mV	1 Hz to 40 Hz	0.030 % + 3 μ V	Agilent 3458A opt 2
		40 Hz to 1 kHz	0.020 % + 1 μ V	
		1 kHz to 20 kHz	0.050 % + 1 μ V	
		20 kHz to 50 kHz	0.11 % + 1 μ V	
		50 kHz to 100 kHz	0.50 % + 1 μ V	
		100 kHz to 300 kHz	4.0 % + 2 μ V	
	10 mV to 100 mV	1 Hz to 40 Hz	0.0082 % + 4 μ V	
		40 Hz to 1 kHz	0.0082 % + 2 μ V	
		1 kHz to 20 kHz	0.016 % + 2 μ V	
		20 kHz to 50 kHz	0.030 % + 2 μ V	
		50 kHz to 100 kHz	0.080 % + 2 μ V	
		100 kHz to 300 kHz	0.30 % + 10 μ V	
100 mV to 1 V	1 Hz to 40 Hz	0.0090 % + 40 μ V		
	40 Hz to 1 kHz	0.0090 % + 20 μ V		
	1 kHz to 20 kHz	0.015 % + 20 μ V		
	20 kHz to 50 kHz	0.033 % + 20 μ V		
	50 kHz to 100 kHz	0.081 % + 20 μ V		
	100 kHz to 300 kHz	0.30 % + 100 μ V		
300 kHz to 1 MHz	1.0 % + 100 μ V			

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NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Frequency Range	Uncertainty (k=2) ^{Note 3}	Remarks
AC Voltage – Measuring Equipment Only	1 V to 10 V	1 Hz to 40 Hz	0.0075 % + 400 μV	
		40 Hz to 1 kHz	0.0075 % + 200 μV	
		1 kHz to 20 kHz	0.014 % + 200 μV	
		20 kHz to 50 kHz	0.031 % + 200 μV	
		50 kHz to 100 kHz	0.080 % + 200 μV	
		100 kHz to 300 kHz	0.30 % + 1 mV	
	10 V to 100 V	300 kHz to 1 MHz	1.0 % + 1 mV	
		1 Hz to 40 Hz	0.020 % + 4 mV	
		40 Hz to 1 kHz	0.020 % + 2 mV	
		1 kHz to 20 kHz	0.021 % + 2 mV	
		20 kHz to 50 kHz	0.036 % + 2 mV	
		50 kHz to 100 kHz	0.12 % + 2 mV	
100 V to 700 V	100 kHz to 300 kHz	0.40 % + 10 mV		
	300 kHz to 1 MHz	1.5 % + 10 mV		
	1 Hz to 40 Hz	0.040 % + 40 mV		
	40 Hz to 1 kHz	0.040 % + 20 mV		
	1 kHz to 20 kHz	0.060 % + 20 mV		
700 V to 1000 V	20 kHz to 50 kHz	0.12 % + 20 mV		
	50 kHz to 100 kHz	0.30 % + 20 mV		
	40 Hz to 10 kHz	0.020 % + 10 mV		

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Frequency Range	Uncertainty (k=2) ^{Note 3}	Remarks
NVLAP Code: 20/E10 LOW FREQUENCY CAPACITANCE Capacitance Measuring Equipment	0 pF to 190 pF	1 kHz	0.06 % + 5 pF	Decade Capacitor Fluke 5520A
	0.19 nF to 1.0999 nF	10 Hz to 10 kHz	0.39 % + 7.8 pF	
	1.1 nF to 3.2999 nF	10 Hz to 3 kHz	0.39 % + 7.8 pF	
	3.3 nF to 10.9999 nF	10 Hz to 1 kHz	0.20 % + 7.8 pF	
	11 nF to 109.999 nF	10 Hz to 1 kHz	0.20 % + 78 pF	

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NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Frequency Range	Uncertainty (k=2) ^{Note 3}	Remarks
	110 nF to 329.999 nF 0.33 μF to 1.09999 μF 1.1 μF to 3.2999 μF 3.3 μF to 10.9999 μF 11 μF to 32.9999 μF 33 μF to 109.9999 μF 110 μF to 329.999 μF 0.33 mF to 1.09999 mF	10 Hz to 1 kHz 10 Hz to 600 Hz 10 Hz to 300 Hz 10 Hz to 150 Hz 10 Hz to 120 Hz 10 Hz to 80 Hz DC to 50 Hz DC to 20 Hz	0.20 %+ 0.24 nF 0.20 %+ 0.78 nF 0.20 %+ 2.4 nF 0.20 %+ 7.8 nF 0.32 %+ 24 nF 0.35 %+ 78 nF 0.35 %+ 0.24 μF 0.35 % + 0.24 μF	
NVLAP Code: 20/E15 PHASE METERS LF Phase – Measuring Equipment	0° to 179.99°	10 Hz to 65 Hz 65 Hz to 500 Hz 500 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz 10 kHz to 20 kHz	0.10° 0.20° 0.40° 1.9° 3.9° 7.8°	Fluke 5520A

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty (k=2) ^{Note 3}	Remarks
TIME AND FREQUENCY			
NVLAP Code: 20/F01 FREQUENCY DISSEMINATION Frequency – Measuring Equipment and Measure Uncertainty values of derivatives of 10 MHz will differ due to resolution, noise and gating errors.	10 MHz	5.8×10^{-10} Hz	Rubidium Oscillator

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Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
NVLAP Code: 20/F04 PULSE WAVEFORM Rise Time – Measuring Equipment	≥ 300 ps	2.8 %	Fluke 5520A/SC600
MECHANICAL			
NVLAP Code: 20/M06 FORCE Force/Tension Field calibrations Available <small>Note 4</small>	0.03 lbf to 250 lbf	0.063 %	Deadweights
NVLAP Code: 20/M08 MASS Mass – Metric	10 kg 5 kg 3 kg 2 kg 1 kg 500 g 300 g 200 g 100 g 50 g 30 g 20 g 10 g 5 g 3 g 2 g 1 g 500 mg 300 mg 200 mg 100 mg 50 mg 30 mg	4.0 mg 2.1 mg 1.2 mg 0.85 mg 0.41 mg 0.22 mg 0.12 mg 86 µg 53 µg 28 µg 17 µg 13 µg 10 µg 5.1 µg 4.0 µg 3.6 µg 3.4 µg 1.5 µg 1.5 µg 1.5 µg 1.5 µg 1.5 µg 1.5 µg 1.5 µg	Echelon II

2012-01-01 through 2012-12-31
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**National Voluntary
Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) Notes 1,2

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
	20 mg	1.5 µg	Echelon III
	10 mg	1.5 µg	
	5 mg	1.5 µg	
	3 mg	1.5 µg	
	2 mg	1.5 µg	
	1 mg	1.5 µg	
	25 kg	0.23 g	
	20 kg	0.23 g	
	10 kg	10 mg	
	5 kg	5.1 mg	
	3 kg	3.0 mg	
	2 kg	2.1 mg	
	1 kg	1.0 mg	
	500 g	0.52 mg	
	300 g	0.30 mg	
	200 g	0.21 mg	
	100 g	0.11 mg	
	50 g	55 µg	
	30 g	33 µg	
	20 g	29 µg	
	10 g	20 µg	
	5 g	12 µg	
	3 g	12 µg	
	2 g	12 µg	
	1 g	12 µg	
	500 mg	3.5 µg	
	300 mg	3.5 µg	
	200 mg	3.5 µg	
	100 mg	3.5 µg	
	50 mg	3.5 µg	
	30 mg	3.5 µg	
	20 mg	3.5 µg	
	10 mg	3.5 µg	
	5 mg	3.5 µg	
	3 mg	3.5 µg	

2012-01-01 through 2012-12-31

Effective dates

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CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) Notes 1,2

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
Balances	2 mg	3.5 µg	ASTM Class 1 Weights
	1 mg	3.5 µg	
	10 kg	29 mg	
	5 kg	14 mg	
	3 kg	8.9 mg	
	2 kg	5.8 mg	
	1 kg	2.9 mg	
	500 g	1.4 mg	
	300 g	0.87 mg	
	200 g	0.58 mg	
	100 g	0.29 mg	
	50 g	0.14 mg	
	30 g	0.086 mg	
	20 g	0.086 mg	
	10 g	0.060 mg	
	5 g	0.040 mg	
	3 g	0.040 mg	
	2 g	0.040 mg	
	1 g	0.040 mg	
	500 mg	0.010 mg	
	200 mg	0.010 mg	
	100 mg	0.010 mg	
	50 mg	0.010 mg	
30 mg	0.010 mg		
20 mg	0.010 mg		
10 mg	0.010 mg		
5 mg	0.010 mg		
3 mg	0.010 mg		
2 mg	0.010 mg		
1 mg	0.010 mg		
Balances – Avoirdupois	50 lb	2.3 g	ASTM Class 4 Weights
	30 lb	1.4 g	
	20 lb	0.91 g	
	10 lb	0.46 g	

2012-01-01 through 2012-12-31

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CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

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Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
	5 lb	0.23 g	
	3 lb	0.14 g	
	2 lb	91 mg	
	1 lb	46 mg	
	8 oz	23 mg	
	4 oz	12 mg	
	2 oz	5.7 mg	
	1 oz	2.9 mg	
	0.5 oz	1.4 mg	
ELECTROMAGNETICS – RF/MICROWAVE			
NVLAP Code: 20/R11 RF-DC VOLTAGE/CURRENT CONVERTER Sine Wave Flatness	500 kHz to 100 MHz 100 MHz to 300 MHz 300 MHz to 600 MHz	1.9 % + 100 μ V 2.3 % + 100 μ V 4.2 % + 100 μ V	Fluke 5520A/SC600

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Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
THERMODYNAMIC			
NVLAP Code: 20/T02 HUMIDITY Relative Humidity	10 % to 90 %	0.60 %	Thunder Scientific 2500
NVLAP Code: 20/T05 PRESSURE Absolute Pressure – Source	0 psia to 25 psia 25 psia to 500 psia	0.0019 psia 0.0065 % + 0.001 psia	Ruska 7250xi
Gage Pressure – Pneumatic	-15 psi to 25 psi 25 psi to 500 psi -2 inH ₂ O to 2 inH ₂ O -36 inH ₂ O to -22 inH ₂ O -22 inH ₂ O to 22 inH ₂ O 22 inH ₂ O to 60 inH ₂ O	0.0017 psi 0.0065 % 0.0013 inH ₂ O 0.0090 % + 150 μ inH ₂ O 0.0020 inH ₂ O 0.0090 % + 150 μ inH ₂ O	Ruska 7250xi DHI PPC 4 Controller

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Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200894-0

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) Notes 1,2

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
Gage Pressure – Hydraulic	60 inH ₂ O to 72 inH ₂ O 72 inH ₂ O to 804 inH ₂ O 5 psi to 15 000 psi	0.0067 inH ₂ O 0.0090 % + 150 μinH ₂ O 0.0084 %	Ametek T-150 Deadweight Tester
NVLAP Code: 20/T03 LABORATORY THERMOMETERS, DIGITAL AND ANALOG Temperature – Measuring Equipment	-30 °C to 125 °C 125 °C to 550 °C	0.030 °C 0.030 °C	Liquid Bath with Indicator and SPRT
Temperature – Measure	-195 °C to 0 °C 0 °C to 440 °C 440 °C to 660 °C	0.011 °C + 0.001 % 0.013 °C + 0.001 % 0.015 °C + 0.001 %	SPRT with Indicator

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) Notes 1,2

Measured Parameter or Device Calibrated	Type	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
NVLAP Code: 20/T08 TEMPERATURE INDICATORS Electrical Calibration of Thermocouple Devices	J K T E R S	-210 °C to 1200 °C -270 °C to 1372 °C -270 °C to 400 °C -270 °C to 1000 °C 0 °C to 250 °C 250 °C to 400 °C 400 °C to 1000 °C 1000 °C to 1767 °C 0 °C to 250 °C 250 °C to 1000 °C 1000 °C to 1400 °C 1400 °C to 1767 °C	0.10 °C 0.10 °C 0.10 °C 0.10 °C 0.45 °C 0.28 °C 0.26 °C 0.36 °C 0.37 °C 0.28 °C 0.29 °C 0.36 °C	Thermocouple Half Junctions Fluke 5520A

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NVLAP LAB CODE 200894-0

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	N	-200 °C to -100 °C	0.31 °C	
		-100 °C to -25 °C	0.17 °C	
		-25 °C to 120 °C	0.15 °C	
		120 °C to 410 °C	0.14 °C	
		410 °C to 1300 °C	0.21 °C	
END				

2012-01-01 through 2012-12-31
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Notes

Note 1: A Calibration and Measurement Capability (CMC) is a description of the best result of a calibration or measurement (result with the smallest uncertainty of measurement) that is available to the laboratory's customers under normal conditions, when performing more or less routine calibrations of nearly ideal measurement standards or instruments. The CMC is described in the laboratory's scope of accreditation by: the measurement parameter/device being calibrated, the measurement range, the uncertainty associated with that range (see note 3), and remarks on additional parameters, if applicable.

Note 2: Calibration and Measurement Capabilities are traceable to the national measurement standards of the U.S. or to the national measurement standards of other countries and are thus traceable to the internationally accepted representation of the appropriate SI (Système International) unit.

Note 3: The uncertainty associated with a measurement in a CMC is an expanded uncertainty using a coverage factor, $k = 2$, with a level of confidence of approximately 95 %. Units for the measurand and its uncertainty are to match. Exceptions to this occur when marketplace practice employs mixed units, such as when the artifact to be measured is labeled in non-SI units and the uncertainty is given in SI units (Example: 5 lb weight with uncertainty given in mg).

Note 3a: The uncertainty of a specific calibration by the laboratory may be greater than the uncertainty in the CMC due to the condition and behavior of the customer's device and specific circumstances of the calibration. The uncertainties quoted do not include possible effects on the calibrated device of transportation, long term stability, or intended use.

Note 3b: As the CMC represents the best measurement results achievable under normal conditions, the accredited calibration laboratory shall not report smaller uncertainty of measurement than that given in a CMC for calibrations or measurements covered by that CMC.

Note 3c: As described in Note 1, CMCs cover calibrations and measurements that are available to the laboratory's customers under *normal conditions*. However, the laboratory may have the capability to offer special tests, employing special conditions, which yield calibration or measurement results with lower uncertainties. Such special tests are not covered by the CMCs and are outside the laboratory's scope of accreditation. In this case, NVLAP requirements for the labeling, on calibration reports, of results outside the laboratory's scope of accreditation apply. These requirements are set out in Annex A.1.h. of NIST Handbook 150, Procedures and General Requirements.

Note 4: Uncertainties associated with field service calibration may be greater as they incorporate on-site environmental contributions, transportation effects, or other factors that affect the measurements. (This note applies only if marked in the body of the scope.)

Note 5: Values listed with percent (%) are percent of reading or generated value unless otherwise noted.

Note 6: NVLAP accreditation is the formal recognition of specific calibration capabilities. Neither NVLAP nor NIST guarantee the accuracy of individual calibrations made by accredited laboratories.

Note 7: See [NIST Handbook 150](#) for further explanation of these notes.

2012-01-01 through 2012-12-31

Effective dates

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