



National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Unified Industries Incorporated Standards Laboratory

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CALIBRATION LABORATORIES

NVLAP LAB CODE 200597-0

NVLAP Code: 20/A01

ANSI/NCSL Z540-1-1994; Part 1

Compliant

ELECTROMAGNETICS - DC/LOW FREQUENCY

NVLAP Code: 20/E02

AC Current

Range	Best Uncertainty (\pm) in ppm ^{note 1}			Remarks
	400	1 k	5 k	
10 mA	90	90	90	Measure
20 mA	85	85	85	Measure
30 mA	125	125	125	Measure
100 mA	100	100	100	Measure
200 mA	95	95	95	Measure
300 mA	230	230	230	Measure
500 mA	185	185	185	Measure
1 A	150	150	150	Measure
2 A	45	45	45	Measure
3 A	45	45	45	Measure
5 A	50	50	55	Measure
10 A	55	55	55	Measure
20 A	85	85	85	Measure

2009-07-01 through 2010-06-30

Effective dates

Sally S. Bruce

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10 mA	90	90	90	Generate
20 mA	85	85	85	Generate
30 mA	125	125	125	Generate
100 mA	100	100	100	Generate
200 mA	95	95	95	Generate
300 mA	230	230	230	Generate
500 mA	185	185	185	Generate
1 A	150	150	150	Generate
2 A	45	45	45	Generate
3 A	45	45	45	Generate
5 A	50	50	55	Generate
10 A	55	55	55	Generate
20 A	85	85	85	Generate

NVLAP Code: 20/E05
DC Current

Range in A	Best Uncertainty in (\pm) ppm ^{note 1}		Remarks
3		22	Measure
6		22	Measure
9		22	Measure
12		22	Measure
15		22	Measure
20		27	Measure
40		27	Measure
60		33	Measure
80		33	Measure
100		19	Measure
3		22	Generate
6		22	Generate
9		22	Generate
12		22	Generate
15		22	Generate

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20	27	Generate
40	27	Generate
60	33	Generate
80	33	Generate
100	19	Generate

NVLAP Code: 20/E05

DC Resistance

<i>Range</i>	<i>Best Uncertainty (±) in ppm ^{note 1}</i>	<i>Remarks</i>
0.001 Ω	6.0	Measure
0.01 Ω	2.2	Measure
0.1 Ω	0.9	Measure
1 Ω	0.25	Measure
10 Ω	0.25	Measure
100 Ω	0.25	Measure
1 kΩ	0.25	Measure
10 kΩ	0.25	Measure
100 kΩ	0.5	Measure
1 MΩ	0.8	Measure
10 MΩ	8.4	Measure
0.001 Ω	6.0	Generate
0.01 Ω	2.2	Generate
0.1 Ω	0.9	Generate
1 Ω	0.25	Generate
10 Ω	0.25	Generate
100 Ω	0.25	Generate
1 kΩ	0.25	Generate
10 kΩ	0.25	Generate
100 kΩ	0.5	Generate
1 MΩ	0.8	Generate
10 MΩ	8.4	Generate

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NVLAP Code: 20/E06

DC Voltage

Range	Best Uncertainty (\pm) in ppm ^{note 1}	Remarks
100 mV	0.7	Measure
1 V	1.1	Measure
1.018 V	2.1	Measure
10 V	0.7	Measure
100 V	0.7	Measure
1000 V	0.9	Measure
0 to 1000 V	0.7	Measure
0 to 1000 V	0.7	Generate

NVLAP Code: 20/E09

AC Voltage

Range	Best Uncertainty (\pm) in ppm ^{note 1}												Remarks	
	Frequency in Hz													
	10	20	40	100	1 k	10 k	20 k	50 k	100 k	300 k	500 k	800 k	1 M	
22 mV	100	90	80	110	85	85	80	120	160	240	360	450	610	Measure & Generate
220 mV	50	30	40	30	30	30	30	30	50	100	160	290	380	Measure & Generate
700 mV	35	40	20	14	14	14	14	14	35	145	80	170	250	Measure & Generate
2.2 V	35	35	25	16	14	14	14	14	14	40	45	35	50	Measure & Generate
7 V	40	30	20	9	7	7	7	7	10	25	30	35	45	Measure & Generate
22 V	40	25	25	12	12	12	14	12	12	25	30	35	50	Measure & Generate
70 V	40	25	20	9	8	8	8	16	12	35				Measure & Generate
220 V	50	25	25	14	14	14	14	16	20					Measure & Generate
1000 V	60	30	30	25	25	25	25	50	80					Measure & Generate

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NVLAP Code: 20/E10

LF Capacitance

<i>Range in pF</i>	<i>Best Uncertainty (±) in ppm ^{note 1}</i>	<i>Remarks</i>
1000	7	Measure at 1 kHz
100	5	Measure at 1 kHz
10	13	Measure at 1 kHz
1000	7	Generate at 1 kHz
100	5	Generate at 1 kHz
10	13	Generate at 1 kHz

NVLAP Code: 20/E15

Phase Meters

<i>Range in degrees</i>	<i>Volts rms</i>	<i>Frequency kHz</i>	<i>Best Uncertainty (±) in mdegree ^{note 1}</i>	<i>Remarks</i>
0 to 360	10	0.06	5.0	Generate
0 to 360	10	0.4	5.0	Generate
0 to 360	10	1	5.0	Generate
0 to 360	10	2	5.0	Generate
0 to 360	10	5	5.0	Generate
0 to 360	10	10	5.0	Generate
0 to 360	10	20	5.0	Generate
0 to 360	10	50	5.0	Generate
0 to 360	50	0.06	5.0	Generate
0 to 360	50	0.04	5.0	Generate
0 to 360	100	0.06	5.0	Generate
0 to 360	100	0.4	5.0	Generate
0 to 360	10	0.06	30	Measure
0 to 360	10	0.4	30	Measure
0 to 360	10	1	30	Measure
0 to 360	10	2	30	Measure
0 to 360	10	5	30	Measure

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0 to 360	10	10	30	Measure
0 to 360	10	20	30	Measure
0 to 360	10	50	30	Measure
0 to 360	50	0.06	30	Measure
0 to 360	50	0.04	30	Measure
0 to 360	100	0.06	30	Measure
0 to 360	100	0.4	30	Measure

NVLAP Code: 20/E19
Voltage Transformers

Range	Best Uncertainty (\pm) in ppm^{note 1}	Remarks
0 to 1 ^{note 2}	0.6	Ratio

TIME AND FREQUENCY

NVLAP Code: 20/F01
Frequency Dissemination

Range in MHz	Best Uncertainty (\pm)^{note 1}	Remarks
10	1×10^{-13} (7 day average)	Measure
10	1×10^{-13} (7 day average)	Generate

MECHANICAL

NVLAP Code: 20/M06
Force: Compression and Tension

Range in lbf	Best Uncertainty (\pm) in %^{note 1}	Remarks
10 to 500	0.02	500 lb Deadweight Tester
500 to 2 k	0.04	2 k Load Cell
2 k to 5 k	0.04	5 k Load Cell
5 k to 10 k	0.04	10 k Load Cell
10 k to 25 k	0.04	25 k Load Cell
25 k to 50 k	0.05	50 k Load Cell

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70	0.0025	Measure
80	0.0029	Measure
90	0.0032	Measure
100	0.0035	Measure
0.5	0.0005	Generate
10	0.0007	Generate
20	0.0009	Generate
30	0.0012	Generate
40	0.0015	Generate
50	0.0019	Generate
60	0.0022	Generate
70	0.0025	Generate
80	0.0029	Generate
90	0.0032	Generate
100	0.0035	Generate

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1. Represents an expanded uncertainty using a coverage factor, $k = 2$, at an approximate level of confidence of 95 %.
 2. Actual ratio could be ≤ 1.1 .

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