



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Greenwich Instrument Company, Inc.

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CALIBRATION

Valid to: August 20, 2011

Certificate Number: AC - 1406

I. Electromagnetic – DC/Low Frequency

PARAMETER / EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Voltage - Source	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V 330 V to 1.02 kV	60 $\mu\text{V/V} + 3 \mu\text{V}$ 50 $\mu\text{V/V} + 5 \mu\text{V}$ 50 $\mu\text{V/V} + 50 \mu\text{V}$ 55 $\mu\text{V/V} + 500 \mu\text{V}$ 55 $\mu\text{V/V} + 1.5 \text{ mV}$	Fluke 5500A SC600	Metcal 5500 Software
	(1 to 20) kV	2.26 mV/V	Spellman HVD-200 and Fluke 8840/8842A with: Power Designs 1584R	WI 014
	(5 to 75) kV	2.26 mV/V	Spellman SL 300	GiCi Developed Software
	(20 to 150) kV	2.26 mV/V	Wallis-Varian HV Power Supply	
Resistance - Source	Up to 11 Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω 330 Ω to 1.1 k Ω (1.1 to 3.3) k Ω (3.3 to 11) k Ω (11 to 33) k Ω (33 to 110) k Ω (110 to 330) k Ω 330 k Ω to 1.1 M Ω (1.1 to 3.3) M Ω (3.3 to 11) M Ω (11 to 33) M Ω (33 to 110) M Ω (110 to 330) M Ω	120 $\mu\Omega/\Omega + 8 \text{ m}\Omega$ 120 $\mu\Omega/\Omega + 15 \text{ m}\Omega$ 90 $\mu\Omega/\Omega + 15 \text{ m}\Omega$ 90 $\mu\Omega/\Omega + 15 \text{ m}\Omega$ 90 $\mu\Omega/\Omega + 60 \text{ m}\Omega$ 90 $\mu\Omega/\Omega + 60 \text{ m}\Omega$ 90 $\mu\Omega/\Omega + 600 \text{ m}\Omega$ 90 $\mu\Omega/\Omega + 600 \text{ m}\Omega$ 110 $\mu\Omega/\Omega + 6 \Omega$ 120 $\mu\Omega/\Omega + 6 \Omega$ 150 $\mu\Omega/\Omega + 55 \Omega$ 150 $\mu\Omega/\Omega + 55 \Omega$ 600 $\mu\Omega/\Omega + 550 \Omega$ 1 m $\Omega/\Omega + 550 \Omega$ 5 m $\Omega/\Omega + 5.5 \text{ k}\Omega$ 5 m $\Omega/\Omega + 16.5 \text{ k}\Omega$	Fluke 5500A SC600	Metcal 5500 Software WI014

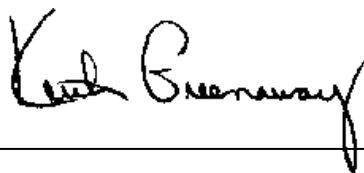


PARAMETER / EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Current - Source	Up to 3.3 mA (3.3 to 33) mA (33 to 330) mA 330 mA to 2.2 A (2.2 to 11) A	130 µA/A + 50 nA 100 µA/A + 250 nA 100 µA/A + 3.3 µA 300 µA/A + 44 µA 600 µA/A + 330 µA		
AC Voltage - Source	(1 to 33) mV (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz (33 to 330) mV (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz 330 mV to 3.3 V (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz (3.3 to 33) V (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (33 to 330) V 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz 330 V to 1.02 kV 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	3.5 mV/V + 20 µV 1.5 mV/V + 20 µV 2 mV/V + 20 µV 2.5 mV/V + 20 µV 3.5 mV/V + 33 µV 10 mV/V + 60 µV 2.5 mV/V + 50 µV 500 µV/V + 20 µV 1 mV/V + 20 µV 1.6 mV/V + 40 µV 2.4 mV/V + 170 µV 37 mV/V + 330 µV 1.5 mV/V + 250 µV 300 µV/V + 60 µV 800 µV/V + 60 µV 1.4 mV/V + 300 µV 2.4 mV/V + 1.7 mV 5 mV/V + 3.3 mV 1.5 mV/V + 2.5 mV 400 µV/V + 600 µV 800 µV/V + 2.6 mV 1.9 mV/V + 5 mV 2.4 mV/V + 17 mV 500 µV/V + 6.6 mV 800 µV/V + 15 mV 900 µV/V + 33 mV 500 µV/V + 80 mV 2 mV/V + 100 mV 2 mV/V + 500 mV	Fluke 5500A SC600	Metcal 5500 Software WI 014

PARAMETER / EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current - Source	(29 to 330) μA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz 330 μA to 3.3 mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (3.3 to 33) mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (33 to 330) mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz 330 mA to 2.2 A (10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (2.2 to 11) A (45 to 65) Hz (65 to 500) Hz 500 Hz to 1 kHz	2.5 mA/A + 150 nA 1.25 mA/A + 150 nA 1.25 mA/A + 250 nA 4 mA/A + 150 nA 12.5 mA/A + 150 nA 2 mA/A + 300 nA 1 mA/A + 300 nA 1 mA/A + 300 nA 2 mA/A + 300 nA 6 mA/A + 300 nA 2 mA/A + 3 μ A 1 mA/A + 3 μ A 900 μ A/A + 3 μ A 2 mA/A + 3 μ A 6 mA/A + 3 μ A 2 mA/A + 30 μ A 1 mA/A + 30 μ A 900 μ A/A + 30 μ A 2 mA/A + 30 μ A 6 mA/A + 30 μ A 2 mA/A + 300 μ A 1 mA/A + 300 μ A 7.5 mA/A + 300 μ A 600 μ A/A + 2 mA 1 mA/A + 2 mA 3.3 mA/A + 2 mA	Fluke 5500A SC600	Metcal 5500 Software WI 014

Notes:

1. Best Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of $k=2$.
2. Uncertainties listed do not include possible contributions from the unit under test.
3. This scope is part of and must be included with the Certificate of Accreditation No. AC - 1406



Vice President

