



THE AMERICAN ASSOCIATION FOR  
LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**OHM-LABS, INC.**  
**Pittsburgh, PA**

for technical competence in the field of

### Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. 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 18 June 2005*).



Presented this 30<sup>th</sup> day of October 2008.

A handwritten signature in cursive script, reading "Peter Abney".

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President  
For the Accreditation Council  
Certificate Number 2481.01  
Valid to October 31, 2010

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005  
& ANSI/NCSL Z540-1-1994

OHM-LABS, INC.  
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CALIBRATION

Valid To: October 31, 2010

Certificate Number: 2481.01

I. Electrical – DC& Low Frequency

Parameter/Equipment	Range <sup>3</sup>	Best Uncertainty <sup>2</sup> (±)	Comments
DC High Voltage Ratio, Applied Voltage  (100 to 1 000 000):1	(1 to 150) kV	0.006 % of ratio	Comparison with high voltage divider Ohm-Labs HV-S
DC Voltage – Measure	(1 to 150) kV	95 µV/V	Ohm-Labs HV-S w/DC meter
Resistance – Measure Fixed Points	10 µΩ 100 µΩ  (1 to 11) mΩ (10 to 110) mΩ  (0.1 to 1.1) mΩ  (0.1 to 1.1) Ω	9 µΩ/Ω 7 µΩ/Ω  1.9 µΩ/Ω 1.5 µΩ/Ω  3 µΩ/Ω  1.4 µΩ/Ω	Comparison to 1000 A, current comparator bridge, Guildline 9920; or Comparison to 100 A with Guildline 9975 & 9923 extender   Guildline 9975 & 9923, L&N 4210-B  Comparison to 1000 A, current comparator bridge, Guildline 9920; or Comparison to 100 A with Guildline 9975 & 9923 extender

Parameter/Equipment	Range <sup>3</sup>	Best Uncertainty <sup>2</sup> (±)	Comments
Resistance (cont.) – Measure	(1 to 11) Ω (10 to 110) Ω (100 to 1100) Ω (1 to 11) kΩ	0.8 μΩ/Ω 0.9 μΩ/Ω 1.2 μΩ/Ω 1.1 μΩ/Ω	Comparison with current comparator bridge, Guildline 9975
	100 kΩ (10 to 110) kΩ 1 MΩ (100 to 1100) kΩ (1 to 11) MΩ	1.4 μΩ/Ω 8.17 μΩ/Ω 4 μΩ/Ω 12.06 μΩ/Ω 12.06 μΩ/Ω	Comparison with conjugate Kelvin bridge, ESI 242D Fixed points, comparison with Hamon transfer standards
	10 MΩ 100 MΩ 1 GΩ 10 GΩ 100 GΩ 1 TΩ 10 TΩ	5 μΩ/Ω 12 μΩ/Ω 25 μΩ/Ω 50 μΩ/Ω 100 μΩ/Ω 250 μΩ/Ω 500 μΩ/Ω	Comparison with Active Arm Bridge
DC Current – Measure	(0 to 500) μA (0 to 5) mA (0 to 50) mA (0 to 400) mA (0 to 5) A (0 to 10) A	0.25 % of rdg + 0.2 μA 0.25 % of rdg + 0.2 μA 0.15 % of rdg + 10 μA 0.15 % of rdg + 20 μA 0.5 % of rdg + 1 mA 0.5 % of rdg + 2 mA	Measurement with Fluke 179A

Parameter/Range	Frequency	Best Uncertainty <sup>2</sup> (±)	Comments
AC High Voltage Ratio, Applied Voltage  (100 to 100 000:1)	(1 to 100) kV 60 Hz	0.10 % of ratio	Comparison with inductive high voltage divider

<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> “Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device and to influences from the circumstances of the specific calibration.

<sup>3</sup> Where ranges are not specified, the best measurement uncertainty stated is for the cardinal points only.