SOUTHWEST RESEARCH INSTITUTE CALIBRATION LABORATORY MEMORANDUM

November 30, 2007

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To: DON BANNON DIV20 B57

From: Institute Calibration Laboratory

Subject: Status of Calibration Supplier

Manufacturer/Model: OHIO SEMITRONICS PC5-103D

Description: AC WATT TRANSDUCER

Serial Number: 03080279

Asset Number: 010467

Work Order Number: 303077277 Date Calibrated: November 12, 2007 Supplier: CMI, CENTERVILLE GA - A2LA - 800 525-0408 Remarks:

(✓ Supplier is on the Approved Suppliers List (ASL).

() Supplier is <u>not</u> on the Approved Suppliers List.

(Calibration is ISO 17025 accredited.

() Calibration is not ISO 17025 accredited.

() There is no known supplier to meet ISO 17025 accreditation at this time.

Please contact the Institute Calibration Laboratory, extension 5215, if you have any questions about the condition of this equipment or calibration documentation.

Attachment(s) \mathcal{V}

m:\nonasl2.rpt Rev Nov. 15, 2005



Southwest Research Institute

6220 Culebra Rd



Certificate of Calibration

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Customer Information

PO #: 887739J Reference #: 08004191 Account #: SO1043 SO #: 67492

Serial #: 03080279

Instrument Identification

Instrument Id: 03080279

San Antonio, TX 78238

Noun: AC Watt Transducer Mfr: Ohio Semitronics Model: PC5-103D Accuracy: ± 0.5% of Full Scale

Expanded Measurement Uncertainty at K=2: ± 0.1% of Full Scale

Certification Information

Reason For Service: Calibration Type Of Calibration: Normal As Found Condition: In Tolerance As Left Condition: In Tolerance, Adjusted Procedure: Mfr Manual : Technician: Debbie Nazimiec Cal Date: 12 NOV 07 Cal Due: 12 NOV 08 Temperature: 23.1 °C Humidity: 33.0 %

Quality Remarks: Calibration complies with ISO/IEC 17025 & ANSI/NCSL Z540 requirements.

This instrument has been calibrated using standards with accuracies traceable to the National Institute of Standards and Technology, derived from natural physical constants, derived from ratio measurements, or compared to consensus standards.

Reported uncertainties and/or "test uncertainty ratios" (TUR's) are expressed as expanded uncertainty values at approximately the 95% confidence level using a coverage factor of K=2.

Statements of compliance, where applicable, are based on test results falling within specified limits with no reduction by the uncertainty of the measurement.

Certified Measurements, Inc.'s Quality System complies with the applicable requirements of ANSI/NCSL Z540-1 and ISO/IEC 17025.

The results contained herein relate only to the item calibrated. Calibration due dates appearing on the Certificate of Calibration and label are determined by the client for administrative purposes and do not imply continued conformance to specification.

This certificate shall not be reproduced except in full, without the written permission of Certified Measurements, Inc.

Debaral f. nogemee

Deborah J. Nazimiec, Technical Manager

Saludil. P

Edvaldo Calvao, President

Your calibration records are available on-line at http://www.cmi-labs.com

CERTIFIED MEASUREMENTS, INC. *Raising the Calibration Standard...* Printed: 28 Nov 2007 06:12 AM

510 North Houston Lake Blvd. Centerville, Georgia 31028 Tel: 478.953.5171 Fax: 478.953.2688



Certificate of Calibration

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Tolerance 🗴 Out	of Tolerance	Calibration Data				14	
Range	Nominal	As Found		As Left		Min	Max
		Watt transdu	cer, out	put in volts d	с		
20 W	2.00	2.033	~	2.001	~	1.95	2.05
40 W	4.00	4.034	~	4.009	V	3.95	4.05
60 W	6.00	6.035	~	6.001	\checkmark	5.95	6.05
80 W	8.00	8.033	 ✓ 	8.014	V	7.95	8.05
100 W	10.00	10.030	~	10.004	V	9.95	10.05
	ny waaraanaa ahaanaa ahaa ahaada ahaanaa ahaa ah		End of I	Datasheet	~~~~ ~		4

Calibration Standards

NIST Traceable #	Instrument ID#	Description	Model	Calibration Date	Date Due
1000206177	22956	Calibrator	811A	15 JUN 2006	30 JUN 2008
1000232721	00127	Multimeter	1271	26 OCT 2007	30 APR 2008

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