

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc., has assessed the Laboratory of:

***Elecservices, Inc.
14505 Commerce Way, Suite 1530
Miami, FL 33016***

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025: 2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-FLAC-IAF Communiqué dated January 2009):

***Dimensional, Mechanical and Electrical Laboratory and Field Calibration
(As detailed in the supplement)***

Such testing and/or calibration services shall only be offered at or from the address given above. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

The validity of this certificate is mandated through ongoing surveillance.

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
26555 Evergreen, Suite 1325
Southfield, Michigan 48076

Initial Accreditation Date:

July 28, 2008

Issue Date:

July 28, 2008

Revision Date:

February 03, 2009

Expiration Date:

July 29, 2010

Accreditation No.

60677

Certificate No.

L08-57-R1

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Certificate of Accreditation: Supplement

Elecservices, Inc.
14505 Commerce Way, Suite 1530
Miami, FL 33016

Accreditation is granted to this facility to perform the following calibrations:

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE. (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	REMARKS
Micrometers – Measure	0 m to 0.304 8 m (0 in to 12 in)	(1.52 + 9L) μ m [(60 + 9L) μ in]	

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE. (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	REMARKS
Pressure Gauges and Transducers Generate / Measure	34 474 kPa to 51 711 kPa (5 000 psig to 7 500 psig)	28 957.98 Pa (4.2 psig)	

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE. (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	REMARKS
DC Voltage Generate / Measure	32 mV to 329 mV	0.088 mV	
DC Current Generate / Measure	0 mA to 100 mA	0.8 mA	
	100 mA to 1 A	5.3 mA	
Resistance Generate / Measure	1 Ω to 10 Ω	0.05 Ω	
	10 Ω to 100 Ω	0.5 Ω	
	100 Ω to 1 000 Ω	2.5 Ω	
	1 000 Ω to 10 000 Ω	5.0 Ω	
AC Voltage @ 1 kHz Generate / Measure	32 mV to 329 mV	1 mV	
AC Current @ 1 kHz Generate / Measure	101 mA to 1 A	0.069 % of reading + 46 μ A	
RF Attenuation Generate / Measure	0 dB to 40 dB 100 kHz to 2.6 GHz	0.08 dB	
	41 dB to 100 dB 100 kHz to 1.3 GHz	0.26 dB	

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Amplitude Modulation Generate / Measure	150 kHz to 10 MHz Rate: 50 Hz to 10 kHz Depth: 5 % to 99 %	2.4 % of Modulation	
	150 kHz to 10 MHz Rate: 20 Hz to 10 kHz Depth: 5 % to 99 %	3.6 % of Modulation	
	10 MHz to 1 300 MHz Rate: 50 Hz to 50 kHz Depth: 5 % to 99 %	1.3 % of Modulation	
	10 MHz to 1 300 MHz Rate: 20 Hz to 100 kHz Depth: 5 % to 99 %	3.6 % of Modulation	
Frequency Modulation Generate / Measure	250 kHz to 10 MHz Rate: 20 Hz to 10 kHz Dev: \leq 40 kHz peak	0.92 kHz	
	10 MHz to 1 300 MHz Rate: 50 Hz to 100 kHz Dev: \leq 400 kHz peak	0.4 kHz	
	10 MHz to 1 300 MHz Rate: 20 Hz to 200 kHz Dev: \leq 40 kHz peak	2 kHz	
Thermocouple Simulate Generate / Measure Type K	-196 °C to -100 °C	0.33 °C	
	-100 °C to -25 °C	0.18 °C	
	-25 °C to 120 °C	0.16 °C	
	120 °C to 1 000 °C	0.26 °C	
	1 000 °C to 1 372 °C	0.40 °C	
Thermocouple Simulate Generate / Measure Type J	-196 °C to -100 °C	0.27 °C	
	-100 °C to -30 °C	0.16 °C	
	-30 °C to 150 °C	0.14 °C	
	150 °C to 760 °C	0.17 °C	
	760 °C to 1 200 °C	0.23 °C	
Thermocouple Simulate Generate / Measure Type T	-196 °C to -150 °C	0.63 °C	
	-150 °C to 0 °C	0.24 °C	
	0 °C to 120 °C	0.16 °C	
	120 °C to 400 °C	0.14 °C	

1. Remarks: This column shall include pertinent information about the calibration of the Measured Instrument or parameter. The information should include the type of standards used and any pertinent information about the measurement method. This column is not to be used for commercial advertisement of laboratory services.
2. The term L represents length in inches or meters appropriate to the uncertainty statement.