



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Centro Integral de Metrología, S.A. de C.V.

***Av. Circunvalación # 3829, Col Nuevo San Rafael,
Guadalupe, Nuevo León, México. C.P. 67110***

*(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-ILAC-IAF Communiqué dated January 2009):

***Dimensional, Mass, Weighing Devices, Mechanical, Chemical, Thermodynamic
and Electrical Calibration***
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. 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:

Initial Accreditation Date:

December 13, 2010

Issue Date:

March 16, 2017

Expiration Date:

April 30, 2019

Tracy Szerszen
President/Operations Manager

Accreditation No.:

66573

Certificate No.:

L17-118

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

*The validity of this certificate is maintained through ongoing assessments based on a
continuous accreditation cycle. The validity of this certificate should be
confirmed through the PJLA website: www.pjilabs.com*



Certificate of Accreditation: Supplement

Centro Integral de Metrología, S.A. de C.V.

Av. Circunvalación # 3829, Col Nuevo San Rafael,

Guadalupe, Nuevo León, México. C.P. 67110

Contact Name Guillermo Prieto Flores. Phone: 818-479-1354

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

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Calipers ^F	1 mm to 1 500 mm	(5.5 + 0.076L) μ m	Gage Blocks Grade 0
Depth Gauges ^F	1 mm to 300 mm	(5.5 + 0.076L) μ m	
Outside Micrometers ^F	1 mm to 600 mm	(2.0 + 0.017L) μ m	
Inside Micrometers ^F	40 mm to 600 mm	(2.2 + 0.017L) μ m	
Depth Micrometers ^F	1 mm to 300 mm	(2.1 + 0.017L) μ m	
Height Master ^F	10 mm to 600 mm	2.9 μ m	
End Measuring Rods (Standards) ^F	25 mm to 300 mm	(0.9 + 0.018L) μ m	
Micrometer Heads ^F	2.5 mm to 50 mm	3 μ m	
Height Gauges ^F	0.5 mm to 1 000 mm	12 μ m	Thickness Gage Films
Ultrasonic Thickness Gauge ^F	10 mm to 200 mm	25 μ m	Gage Blocks Grade 0
Indicators ^F	1 mm to 50 mm	(4.8 + 0.005L) μ m	Electronic Head Micrometer
Test Indicator ^F	0.1 mm to 1.5 mm	2 μ m	
Microscopes ^F	200 mm x 100 mm	4.5 μ m	Glass Scale, Reticule
Tape Measures Error of Indication ^F	1 m to 20 m	(0.21 + 0.035L) mm	Length Standard
Granite Surface Plates Repeat Measurement ^O	0.050 mm	1.3 μ m	Repeat-O-Meter Rahn with Micro indicator
Optical Comparators X axis Linearity Y axis Linearity ^O	1 mm to 200 mm 1 mm to 200 mm	7.6 μ m 7.6 μ m	Glass Scale, Gage Blocks
Optical Comparators Axial Orientation ^O	At 100 mm Y Axis Travel	0.01°	Glass Scale
Optical Comparators Magnification ^O	10X	0.05 %	Magnification Sphere Standards / Glass Scale
	20X	0.03 %	
	50X	0.03 %	
	100X	0.03 %	
Optical Comparators Angularity ^O	0° to 90°	0.05°	Reticule
Bore Gauges ^F	10 mm to 150 mm	7 μ m	Super Micrometer
Pin Gauges ^F	0.5 mm to 25.4 mm	0.6 μ m	
Plain Plug Gauges ^F	0.5 mm to 100 mm	1.5 μ m	
Snap Gauge Go / No Go ^F	12 mm to 100 mm	1.7 μ m	
Setting Rings ^F	12 mm to 200 mm	1.6 μ m	Micro Indicator with Resolution: 0.0254 μ m



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Thread Gauges Pitch Diameter ^F	0-80 to 4-12	120 μ m	Super Micrometer, Thread Wires Set
Surface Roughness Ra Fixed point ^F	2.97 μ m	0.13 μ m	Ra Roughness Master
Surface Roughness Ry Fixed point ^F	9.4 μ m	0.15 μ m	

Mass, Force and Weighting Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Analytical Balances ^O	1 g to 200 g (Res.= 0.000 1g)	$(1.1 \times 10^{-3} + 1.8 \times 10^{-6}Wt)$ g	Class F1 Weights
Lab Balances ^O	201 g to 10 000 g (Res.= 0.001 g)	$(5 \times 10^{-3} + 5.73 \times 10^{-6}Wt)$ g	Class F1 Weights
Bench Scales ^O	10 001 g to 50 kg (Res.= 0.002 g)	$(3 \times 10^{-3} + 4 \times 10^{-5}Wt)$ g	Class M1 Weights
Platform Scales ^O	51 kg to 500 kg (Res.= 0.02 kg)	$(1 + 3 \times 10^{-5}Wt)$ kg	Class M2 Weights
Floor Scales ^O	501 kg to 3 000 kg (Res.= 0.1 kg)	$(1 + 4.5 \times 10^{-5}Wt)$ kg	
	3 001 kg to 4 000 kg (Res.= 0.2 kg)	210 g	
	4 001 kg to 5 000 kg (Res.= 0.2 kg)	220 g	
	5 001 kg to 10 000 kg (Res.= 1.0 kg)	1.5 kg	
	10 001 kg to 20 000 kg (Res.= 2.0 kg)	1.9 kg	
	20 001kg to 100 000 kg (Res.= 2.0 kg)	8 kg	
Mass - Class M1 Fixed Points ^F	1 mg	0.04 mg	Class F1 Weights
	2 mg	0.04 mg	
	5 mg	0.04 mg	
	10 mg	0.04 mg	
	20 mg	0.07 mg	
	50 mg	0.1 mg	
	100 mg	0.13 mg	



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Mass - Class M1 Fixed Points ^F	200 mg	0.17 mg	Class F1 Weights
	500 mg	0.23 mg	
	1 g	0.27 mg	
	2 g	0.3 mg	
	5 g	0.3 mg	
	10 g	0.55 mg	
	20 g	0.55 mg	
	50 g	0.73 mg	
	100 g	1.3 mg	
	500 g	6.1 mg	
	1 kg	12 mg	
	2 kg	25 mg	
	5 kg	64 mg	
	10 kg	0.15 g	
	20 kg	0.25 g	
25 kg	0.25 g		
Mass - Class M2 Fixed Points ^F	1 mg	0.04 mg	
	2 mg	0.04 mg	
	5 mg	0.04 mg	
	10 mg	0.04 mg	
	20 mg	0.07 mg	
	50 gm	0.1 mg	
	100 mg	0.13 mg	
	200 mg	0.17 mg	
	500 mg	0.23 mg	
	1 g	0.27 mg	
	2 g	0.3 mg	
	5 g	0.3 mg	
	10 g	0.55 mg	
	20 g	0.55 mg	
	50 g	0.73 mg	
100 g	1.3 mg		



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Mass - Class M2 Fixed Points ^F	500 g	6.1 mg	Class F1 Weights
	1 kg	12 mg	
	2 kg	25 mg	
	5 kg	64 mg	
	10 kg	0.15 g	
	20 kg	0.25 g	
	25 kg	0.25 g	

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Force Measurement Instrument Tensile and Compression ^O	1 kN to 10 kN	0.3 % of reading	Load Cells PT
	10 kN to 50 kN	0.35 % of reading	
	50 kN to 98.06 kN	0.35 % of reading	
	98.06 kN to 196kN	0.4 % of reading	
	196 kN to 294 kN	0.4 % of reading	
Dynamometer ^F	1 N to 10 N	0.25 % of reading	Class F1 Weights
	10 N to 100 N	0.27 % of reading	Class M1 Weights
	100 N to 1 000 N	0.3 % of reading	Load Cells
Torque Meter ^F	0.1 N·m to 11.3 N·m	0.7 % of reading	Torque Analyzer Sturtevant Richmond System 4
	11.3 N·m to 33.9 N·m	0.7 % of reading	
	33.9 N·m to 108 N·m	1 % of reading	
	108 N·m to 203 N·m	1 % of reading	
	203 N·m to 338.9 N·m	1 % of reading	
	338.9 N·m to 813 N·m	1 % of reading	
	813 N·m to 1 355 N·m	1 % of reading	
Indirect Verification of Rockwell Hardness Testers HRC ^O	20 HRC to 39 HRC	0.45 HRC	ASTM E-18-08A and Calibrated Rockwell Hardness Test Block
	40 HRC to 59 HRC	0.42 HRC	
	60 HRC to 70 HRC	0.4 HRC	
Indirect Verification of Rockwell Hardness Testers HRB ^O	40 HRB to 59 HRB	0.95 HRB	
	60 HRB to 80 HRB	0.7 HRB	
	81 HRB to 100 HRB	0.45 HRB	



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Indirect Verification of Rockwell Hardness Testers HR15N ^O	70 HR15N to 77 HR15N	0.33 HR15N	ASTM E-18-08A and Calibrated Rockwell Hardness Test Block
	78 HR15N to 88 HR15N	0.33 HR15N	
	89 HR15N to 91 HR15N	0.3 HR15N	
Indirect Verification of Rockwell Hardness Testers HR30N ^O	42 HR30N to 54 HR30N	0.51 HR30N	
	55 HR30N to 73 HR30N	0.3 HR30N	
	74 HR30N to 80 HR30N	0.3 HR30N	
Indirect Verification of Rockwell Hardness Testers HR15T ^O	75 HR15T to 80 HR15T	0.79 HR15T	ASTM E-18 and Calibrated Rockwell Hardness Test Block
	81 HR15T to 87 HR15T	0.79 HR15T	
	88 HR15T to 93 HR15T	0.79 HR15T	
Indirect Verification of Rockwell Hardness Testers HR30T ^O	43 HR30T to 56 HR30T	0.61 HR30T	
	57 HR30T to 69 HR30T	0.32 HR30T	
	70 HR30T to 82 HR30T	0.32 HR30T	
Indirect Verification of Brinell Hardness Tester HBW 10/3000 ^O	92.5 HBW to 650 HBW	3.8 HBW	ASTM E-10 and Calibrated Brinell Hardness Test Block
Indirect Verification of Brinell Hardness Tester HBW 10/500 ^O	92.5 HBW to 125 HBW	1.5 HBW	
Indirect Verification of Micro Hardness Tester Vickers ^O	100 HV to 900 HV	15 HV	ASTM E384
		17 HK	
Indirect Verification of Micro Hardness Tester Knoop ^O	100 HK to 900 HK	17 HK	
Vacuum ^F	-76 cmHg to -0.1 cmHg	0.07 cmHg	Vacuum Calibrator Fluke 718 1G, Vacuum Module Fluke 700PV4
Pressure ^F	1 psi to 100 psi	1 % of reading	Pressure Calibrator Meriam MH-10KT and MGF16BN-10 000 psig Pressure Transducer
	100 psi to 1 000 psi	1 % of reading	
	1 000 psi to 2 000 psi	1 % of reading	
	2 000 psi to 5 000 psi	1 % of reading	
	5 000 psi to 10 000 psi	1 % of reading	
Rotational Viscometers ^F	0.01 Pa·s to 100 Pa·s	2.2 % of reading	Visco Standards



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Direct Verification of Durometer Hardness Tester Types A, B, C, D, E, O & DO Extension at zero reading	2.46 mm to 2.54 mm	7.4 μ m	ASTM D-2240
Indenter Shape (Not all parameters apply to all of Durometer Types) Indenter Diameter Indenter Tip Diameter Indenter Tip Radius Indenter Tip Angle		7.4 μ m 7.4 μ m 7.4 μ m 0.06°	Electronic Head Micrometer Video Comparator 20x Video Comparator 20x Video Comparator 20x Video Comparator 20x
Durometer Indenter Spring Types A, B, E & O Types C, D & DO ^F	0.55 N to 8.05 N 4.445 N to 44.45 N	1.4 N 1.4 N	Electronic Balance Electronic Balance

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
pH Meters - Probe Calibration Fixed Points ^F	4 pH	0.02 pH	pH Buffer Solution
	7 pH	0.02 pH	
	10 pH	0.02 pH	
Conductivity Meter - Probe Calibration Fixed Point ^F	10 μ S/cm to 100 μ S/cm	1.2 % of reading	Conductivity Calibration Solutions
	100 μ S/cm to 10 000 μ S/cm	1.3 % of reading	
	10 000 μ S/cm to 100 000 μ S/cm	1.3 % of reading	

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Bimetallic Thermometers ^F	-15°C to 100°C	0.3 °C	Thermocouple Output Escort 22
	100 °C to 350 °C	0.5 °C	
Infrared Non-Contact Thermometers ^F	-15 °C to 450 °C	2.1 °C	Infrared Calibrator
	450 °C to 900 °C	2.3 °C	



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Temperature Calibration, Indication and Control Equipment used with Thermocouple Type B ^F	315.6 °C to 550 °C	2.2 °C.	Electrical Simulation of Thermocouple Output Escort 22
	550 °C to 900 °C	1.6 °C	
	900 °C to 1 150 °C	1.2 °C	
	1 150 °C to 1 820 °C	1.1 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type E ^F	-240 °C to -200 °C	0.8 °C	
	-200 °C to -100 °C	0.4 °C	
	-100 °C to 850 °C	0.3 °C	
	850 °C to 1 000 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J ^F	-210 °C to -180 °C	0.6 °C	
	-180 °C to -50 °C	0.4 °C	
	50 °C to 500 °C	0.2 °C	
	500 °C to 1 200 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K ^F	-230 °C to -100 °C	0.8 °C	
	-100 °C to 1 050 °C	0.4 °C	
	1 050 °C to 1 371.1 °C	0.6 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type L ^F	-200 °C to -50 °C	0.4 °C	
	-50 °C to 500 °C	0.2 °C	
	500 °C to 750 °C	0.3 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type N ^F	-230 °C to -180 °C	1.5 °C	
	-180 °C to -50 °C	1 °C	
	-50 °C to 1 100 °C	0.4 °C	
	1 100 °C to 1 300 °C	0.6 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type R ^F	-18.3 °C to 250°C	1.6 °C	
	250 °C to 750 °C	1.2 °C	
	750 °C to 1 600 °C	1 °C	
	1 600 °C to 1 767.8 °C	1.2 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type S ^F	-18.3 °C to 100 °C	1.8 °C	
	100 °C to 400 °C	1.4 °C	
	400 °C to 1 700 °C	1.2 °C	
	1 700 °C to 1 767.8 °C	1.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T ^F	-260 °C to -200 °C	1.5 °C	
	-200 °C to -50 °C	0.8 °C	



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Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T ^F	-50 °C to 0 °C	0.4 °C	Electrical Simulation of Thermocouple Output Escort 22
	0 °C to 400 °C	0.2 °C	
	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type U ^F	-200 °C to -75 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type U ^F	-75 °C to 100 °C	0.4 °C	
	100 °C to 6 200 °C	0.2 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 3926, 100 Ω^F	-200 °C to 0 °C	0.2 °C	
	0 °C to 630 °C	0.3 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 385, 100 Ω^F	-200 °C to 0 °C	0.2 °C	
	0 °C to 400 °C	0.3 °C	
	400 °C to 800 °C	0.6 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 3916, 100 Ω^F	-200 °C to -190 °C	0.4 °C	
	-190 °C to 0 °C	0.2 °C	
	0 °C to 360 °C	0.3 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Ni 672, 120 Ω^F	-200 °C to 0 °C	0.2 °C	
	0 °C to 100 °C	0.2 °C	
	100 °C to 260 °C	0.3 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 385, 200 Ω^F	-200 °C to 0 °C	0.2 °C	
	0 °C to 400 °C	0.3 °C	
	400 °C to 630 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 385, 500 Ω^F	-200 °C to 0 °C	0.2 °C	
	0 °C to 400 °C	0.3 °C	
	400 °C to 630 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 385, 1 000 Ω	-200 °C to 0 °C	0.2 °C	
	0 °C to 400 °C	0.3 °C	
	400 °C to 630 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Type Cu 427, 10 W ^F	-100 °C to 0 °C	1.1 °C	
	0 °C to 260 °C	1.4 °C	



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Equipment to Measure DC Voltage ^F	1 mV to 99 mV	0.005 % of reading + 0.003 5 mV	Agilent 34001A Multimeter	
	100 mV to 0.99 V	0.004 % of reading + 0.000 7 mV		
	1 V to 9.99 V	0.003 5 % of reading + 0.000 5 mV		
	10 V to 99.9 V	0.004 5 % of reading + 0.000 6 mV		
	100 V to 1 000 V	0.004 5 % of reading + 0.001 V		
Equipment to Measure AC Voltage At the listed frequencies ^F			Agilent 34001A Multimeter	
3 Hz to 5 Hz	10 mV to 100 mV	1 % of reading + 0.04 mV		
5 Hz to 10 Hz	10 mV to 100 mV	0.35 % of reading + 0.04 mV		
10 Hz to 20 kHz	10 mV to 100 mV	0.06 % of reading + 0.04 mV		
20 kHz to 50 kHz	10 mV to 100 mV	0.12 % of reading + 0.04 mV		
50 kHz to 100 kHz	10 mV to 100 mV	0.6 % of reading + 0.08 mV		
100 kHz to 300 kHz	10 mV to 100 mV	4 % of reading + 0.5 mV		
3 Hz to 5 Hz	100 mV to 1 V	1 % of reading + 0.03 V		
5 Hz to 10 Hz	100 mV to 1 V	0.35 % of reading + 0.03 V		
10 Hz to 20 kHz	100 mV to 1 V	0.06 % of reading + 0.03 V		
20 kHz to 50 kHz	100 mV to 1 V	0.12 % of reading + 0.04 V		
50 kHz to 100 kHz	100 mV to 1 V	0.6 % of reading + 0.08 V		
100 kHz to 300 kHz	100 mV to 1 V	4 % of reading + 0.5 V		
Equipment to Measure AC Current At the listed frequencies ^F				Agilent 34001A Multimeter
3 Hz to 5 Hz	1 V to 750 V	1 % of reading + 0.03 V		
5 Hz to 10 Hz	1 V to 750 V	0.35 % of reading + 0.03 V		
10 Hz to 20 kHz	1 V to 750 V	0.06 % of reading + 0.03 V		
20 kHz to 50 kHz	1 V to 750 V	0.12 % of reading + 0.04 V		
50 kHz to 100 kHz	1 V to 750 V	0.6 % of reading + 0.08 V		
100 kHz to 300 kHz	1 V to 750 V	4 % of reading + 0.5 V		
Equipment to Measure AC Current At the listed frequencies ^F			Agilent 34001A Multimeter	
3 Hz to 5 Hz	1 mA to 0.999 99 A	1 % of reading + 0.04 A		
5 Hz to 10 Hz	1 mA to 0.999 99 A	0.3 % of reading + 0.04 A		
10Hz to 5 kHz	1 mA to 0.999 99 A	0.1 % of reading + 0.04 A		



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MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Measure AC Current At the listed frequencies ^F			Agilent 34001A Multimeter
3 Hz to 5 Hz	1 A to 3 A	1 % of reading + 0.04 A	
5 Hz to 10 Hz	1 A to 3 A	0.3 % of reading + 0.04 A	
10Hz to 5 kHz	1 A to 3 A	0.1 % of reading + 0.04 A	
Equipment to Measure Resistance	0 Ω to 100 Ω	0.01 % of reading + 0.004 Ω	
	100 Ω to 1 000 Ω	0.01 % of reading + 0.001 Ω	
	1 k Ω to 10 k Ω	0.01 % of reading + 0.001 k Ω	
	10 k Ω to 100 k Ω	0.01 % of reading + 0.001 k Ω	
	100 k Ω to 1 M Ω	0.01 % of reading + 0.001 M Ω	
	1 M Ω to 10 M Ω	0.04 % of reading + 0.001 M Ω	
Equipment to Measure Frequency At the listed Voltage (100 mV to 750 V) ^F	3 Hz to 5 Hz	0.1 % of reading	
	5 Hz to 10 Hz	0.05 % of reading	
	10 Hz to 40 Hz	0.03 % of reading	
	40 Hz to 300 Hz	0.01 % of reading	
Equipment to Output DC Voltage ^F	1 mV to 1 V	0.05 % of reading	AC/DC V-A Source Model 828
	1 V to 10 V	0.05 % of reading	
	10 V to 100 V	0.05 % of reading	
	100 V to 1 000 V	0.05 % of reading	
Equipment to Output DC Current ^F	1 mA to 1A	0.1 % of reading	
	1 A to 10A	0.1 % of reading	
Equipment to Output AC Voltage At the listed frequencies ^F			
50 Hz	1 mV to 32.999 mV	0.05 % of reading	
60 Hz	1 mV to 32.999 mV	1 % of reading	
400 Hz	1 mV to 32.999 mV	1 % of reading	
Equipment to Output AC Voltage At the listed frequencies ^F			
50 Hz	33 mV to 329.999 mV	0.05 % of reading	
60 Hz	33 mV to 329.999 mV	1 % of reading	
400 Hz	33 mV to 329.999 mV	1 % of reading	



Certificate of Accreditation: Supplement

Centro Integral de Metrología, S.A. de C.V.

Av. Circunvalación # 3829, Col Nuevo San Rafael

Guadalupe, Nuevo León, México. C.P. 67110

Contact Name Guillermo Prieto Flores. Phone: 818-479-1354

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Output AC Voltage At the listed frequencies ^F			AC/DC V-A Source Model 828
50 Hz	0.33 mV to 3.299 99 mV	0.05 % of reading	
60 Hz	0.33 mV to 3.299 99 mV	1 % of reading	
400 Hz	0.33 mV to 3.299 99 mV	1 % of reading	
Equipment to Output AC Voltage At the listed frequencies ^F			
50 Hz	33 V to 329.999 V	0.5 % of reading	
60 Hz	33 V to 329.999 V	1 % of reading	
400 Hz	33 V to 329.999 V	1 % of reading	
Equipment to Output AC Voltage At the listed frequencies ^F			
50 Hz	3.3 V to 32.999 9 V	0.5 % of reading	
60 Hz	3.3 V to 32.999 9 V	1 % of reading	
400 Hz	3.3 V to 32.999 9 V	1 % of reading	
Equipment to Output AC Voltage At the listed frequencies ^F			
50 Hz	330 V to 1 000 V	0.5 % of reading	
60 Hz	330 V to 1 000 V	0.1 % of reading	
400 Hz	330 V to 1 000 V	0.1 % of reading	
Equipment to Output AC Current At the listed frequencies ^F			
50 Hz	0.029 mA to 0.329 99 mA	0.5 % of reading	
60 Hz	0.029 mA to 0.329 99 mA	0.1 % of reading	
400 Hz	0.029 mA to 0.329 99 mA	0.1 % of reading	
Equipment to Output AC Current At the listed frequencies ^F			
50 Hz	0.33 mA to 3.299 9 mA	0.05 % of reading	
60 Hz	0.33 mA to 3.299 9 mA	1 % of reading	
400 Hz	0.33 mA to 3.299 9 mA	1 % of reading	



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Equipment to Output AC Current At the listed frequencies ^F			AC/DC V-A Source Model 828
50 Hz	3.3 mA to 32.999 mA	0.05 % of reading	
60 Hz	3.3 mA to 32.999 mA	1 % of reading	
400 Hz	3.3 mA to 32.999 mA	1 % of reading	
Equipment to Output AC Current At the listed frequencies ^F			
50 Hz	33 mA to 329.99 mA	0.05 % of reading	
60 Hz	33 mA to 329.99 mA	1 % of reading	
400 Hz	33 mA to 329.99 mA	1 % of reading	
Equipment to Output AC Current At the listed frequencies ^F			
50 Hz	0.33 A to 2.199 99 A	0.5 % of reading	
60 Hz	0.33 A to 2.199 99 A	0.1 % of reading	
400 Hz	0.33 A to 2.199 99 A	0.1 % of reading	
Equipment to Output AC Current At the listed frequencies ^F			
50 Hz	2.2 A to 11 A	0.5 % of reading	
60 Hz	2.2 A to 11 A	0.1 % of reading	
400 Hz	2.2 A to 11 A	0.1 % of reading	

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.



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

2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this calibration at its fixed location.
4. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations. Example: Outside Micrometer^O would mean that the laboratory performs this calibration onsite at the customer's location.
5. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.
6. The term L represents length in inches or millimeters as appropriate to the uncertainty statement.
7. The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement