



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

YELFRI CARIBBEAN CALIBRATION SERVICES, S.R.L
C/ Eusebio Manzueta #32, Dominican Republic

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

ISO/IEC 17025:2017

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 April 2017):

Electrical, Mechanical, Thermodynamic, Time and Frequency, and Mass, Force, and Weighing Devices 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:

Tracy Szerszen
President

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

Initial Accreditation Date:

August 16, 2022

Issue Date:

August 16, 2022

Expiration Date:

November 30, 2024

Accreditation No.:

113385

Certificate No.:

L22-542

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

YELFRI CARIBBEAN CALIBRATION SERVICES, S.R.L

C/ Eusebio Manzueta #32, Dominican Republic
Contact Name: Yelfri Almanzar Phone: 1809 454 0729

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 DC Voltage ^{FO}	Up mV to 200 mV	0.0 069 mV	AC DC Single Phase Standard Power Programmble Source - ZX1030E OEM
	200 mV to 2 V	0.00 017 V	
	2 V to 5 V	0.00 017 V	
	5 V to 10 V	0.00 017 V	
	10 V to 20 V	0.0 046 V	
	20 V to 200 V	0.0 046 V	
	200 V to 500 V	0.061 V	
	500 V to 1 000 V	0.061 V	
Equipment to Measure DC Voltage ^{FO}	Up mV to 100 mV	0.83 mV	DMM Fluke 8846A OEM
	100 mV to 1 V	0.0 037 V	
	1 V to 10 V	0,033 V	
	10 V to 100 V	0.51 V	
	100 V to 1 000 V	5.9 V	
Equipment to Output DC Current ^{FO}	Up μ A to 100 μ A	0.0 098 μ A	AC DC Single Phase Standard Power Programmble Source - ZX1030E OEM
	100 μ A to 500 μ A	0.0 098 μ A	
	500 μ A to 2 mA	0.00 034 mA	
	2 mA to 5 mA	0.00 034 mA	
	5 mA to 20 mA	0.0 082 mA	
	20 mA to 50 mA	0.0 082 mA	
	50 mA to 200 mA	0.0 082 mA	
	200 mA to 500 mA	0.0 082 mA	
	500 mA to 2 A	0.013 A	
	2 A to 5 A	0.009 A	
	5 A to 20 A	0.018 A	
	Equipment to Measure DC Current ^{FO}	Up μ A to 100 μ A	
100 μ A to 1 mA		0.064 mA	
1 mA to 10 mA		0.81 mA	
10 mA to 100 mA		6.4 mA	
100 mA to 1 A		0.081 A	
1 A to 3 A		0.35 A	
3 A to 10 A		1.8 A	



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Equipment to Output Resistance ^{FO}	10 Ω to 24 Ω	0.058 Ω	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	24 Ω to 50 Ω	0.058 Ω	
	50 Ω to 100 Ω	0.058 Ω	
	100 Ω to 240 Ω	0.058 Ω	
	240 Ω to 500 Ω	0.31 Ω	
	500 Ω to 1 k Ω	0.00 059 k Ω	
	1 k Ω to 2.4 k Ω	0.00 058 k Ω	
	2.4 k Ω to 5 k Ω	0.00 065 k Ω	
	5 k Ω to 10 k Ω	0.0 029 k Ω	
	10 k Ω to 24 k Ω	0.0 029 k Ω	
24 k Ω to 24 M Ω	0,0 015 M Ω		
Equipment to Measure Resistance ^{FO}	Up Ω to 100 Ω	0.047 Ω	DMM Fluke 8846A OEM
	100 Ω to 1 k Ω	0.00 013 k Ω	
	1 k Ω to 10 k Ω	0.0 013 k Ω	
	10 k Ω to 100 k Ω	0.013 k Ω	
	100 k Ω to 1 M Ω	0.00 013 M Ω	
	1 M Ω to 10 M Ω	0.0 048 M Ω	
Equipment to Output AC Voltage At the listed frequencies 50 Hz ^{FO}	Up mV to 200 mV	0.14 mV	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	200 mV to 2 V	0.002 V	
	2 V to 5 V	0.002 V	
	5 V to 10 V	0.002 V	
	10 V to 20 V	0.002 V	
	20 V to 200 V	0.029 V	
	200 V to 500 V	0.45 V	
	500 V to 1 000 V	0.45 V	
Equipment to Output AC Voltage At the listed frequencies 60 Hz ^{FO}	Up mV to 200 mV	0.14 mV	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	200 mV to 2 V	0.002 V	
	2 V to 5 V	0.002 V	
	5 V to 10 V	0.002 V	
	10 V to 20 V	0.002 V	
	20 V to 200 V	0.029 V	
	200 V to 500 V	0.45 V	
	500 V to 1 000 V	0.45 V	



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Equipment to Output AC Voltage At the listed frequencies 400 Hz ^{FO}	Up mV to 200 mV	0.14 mV	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	200 mV to 2 V	0.002 V	
	2 V to 5 V	0.002 V	
	5 V to 10 V	0.002 V	
	10 V to 20 V	0.002 V	
	20 V to 200 V	0.029 V	
	200 V to 500 V	0.45 V	
	500 V to 1 000 V	0.45 V	
Equipment to Output AC Current At the listed frequencies 50Hz ^{FO}	Up μ A to 100 μ A	0.11 μ A	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	100 μ A to 500 μ A	0.11 μ A	
	500 μ A to 2 mA	0.00 096 mA	
	2 mA to 5 mA	0.00 096 mA	
	5 mA to 20 mA	0.00 096 mA	
	20 mA to 50 mA	0.0 096 mA	
	50 mA to 200 mA	0.1 mA	
	200 mA to 500 mA	0.1 mA	
	500 mA to 2 A	0. 0 044 A	
	2 A to 5 A	0.009 A	
5 A to 20 A	0.018 A		
Equipment to Output AC Current At the listed frequencies 60 Hz ^{FO}	Up μ A to 100 μ A	0.11 μ A	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	100 μ A to 500 μ A	0.11 μ A	
	500 μ A to 2 mA	0.00 096 mA	
	2 mA to 5 mA	0.00 096 mA	
	5 mA to 20 mA	0.00 096 mA	
	20 mA to 50 mA	0.0 096 mA	
	50 mA to 200 mA	0.1 mA	
	200 mA to 500 mA	0.1 mA	
	500 mA to 2 A	0.0 044 A	
	2 A to 5 A	0.009 A	
5 A to 20 A	0.018 A		



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Equipment to Output AC Current At the listed frequencies 400Hz ^{FO}	Up μ A to 100 μ A	0.11 μ A	AC DC Single Phase Standard Power Programmable Source - ZX1030E OEM
	100 μ A to 500 μ A	0.11 μ A	
	500 μ A to 2 mA	0.00 096 mA	
	2 mA to 5 mA	0.00 096 mA	
	5 mA to 20 mA	0.00 096 mA	
	20 mA to 50 mA	0.0 096 mA	
	50 mA to 200 mA	0.1 mA	
	200 mA to 500 mA	0.1 mA	
	500 mA to 2 A	0.0 044 A	
	2 A to 5 A	0.009 A	
5 A to 20 A	0,018 A		
Equipment to Measure Frequency ^{FO}	Up Hz to 40.0 Hz	0.035 Hz	DMM Fluke 8846A OEM
	40.0 Hz to 1 kHz	0.012 kHz	
	1 kHz to 300 kHz	0.012 kHz	
Equipment to Measure AC Voltage At the listed frequencies ^{FO}			DMM Fluke 8846A OEM
10 Hz to 300 kHz	Up mV to 100 mV	0.8 mV	
10 Hz to 300 kHz	100 mV to 1 V	0.0 047 V	
10 Hz to 300 kHz	1 V to 10 V	0.032 V	
45 Hz to 100 kHz	10 V to 100 V	0.11 V	
45 Hz to 1 kHz	100 V to 750 V	0.74 V	
Equipment to Measure AC Current At the listed frequencies ^{FO}			DMM Fluke 8846A OEM
10 Hz to 10 kHz	Up mA to 10 mA	0.12 mA	
10 Hz to 10 kHz	10 mA to 100 mA	0.14 mA	
45 Hz to 10 kHz	100 mA to 1 A	0.012 A	
45 Hz to 10 kHz	1 A to 3 A	0.038 A	
45 Hz to 1 kHz	3 A to 10 A	0.12 A	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type J ^{FO}	-200 °C to 0 °C	1.2 °C	Electrical Simulation of Thermocouple Type J, K, T, E, R, S, B, L, U, N, XK, BP Using Fluke 725 to provide mV signals per NIST Monograph 175 revised to ITS-90
	0 °C to 1 200 °C	0.92 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type K ^{FO}	-200 °C to 0 °C	1.5 °C	
	0 °C to 1 370 °C	1.0 °C	



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Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type T ^{FO}	-200 °C to 0 °C	1.5 °C	Electrical Simulation of Thermocouple Type J, K, T, E, R, S, B, L, U, N, XK, BP Using Fluke 725 to provide mV signals per NIST Monograph 175 revised to ITS-90
	0 °C to 400 °C	1.0 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type E ^{FO}	-200 °C to 0 °C	1.1 °C	
	0 °C to 950 °C	0.92 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type R ^{FO}	-20 °C to 0 °C	3.0 °C	
	0 °C to 500 °C	2.3 °C	
	500 °C to 1 750 °C	1.9 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type S ^{FO}	-20 °C to 0 °C	3.0 °C	
	0 °C to 500 °C	2.3 °C	
	500 °C to 1 750 °C	2.0 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type B ^{FO}	600 °C to 800 °C	2.7 °C	
	800 °C to 1 000 °C	2.3 °C	
	1 000 °C to 1 800 °C	1.9 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type L ^{FO}	-200 °C to 0 °C	1.1 °C	
	0 °C to 900 °C	0.92 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type U ^{FO}	-200 °C to 0 °C	1.3 °C	
	0 °C to 400 °C	0.97 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type N ^{FO}	-200 °C to 0 °C	1.8 °C	
	0 °C to 1 300 °C	1.1 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type XK ^{FO}	-200 °C to -100 °C	0.73 °C	
	-100 °C to 800 °C	0.82 °C	
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type BP ^{FO}	0 °C to 800 °C	1.5 °C	
	800 °C to 2 500 °C	2.9 °C	



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Temperature Calibration, Indication, and Control Equipment use with RTD Ni120 ^{FO}	-80 °C to 260 °C	0.27 °C	Electrical Simulation of RTD Output Using Fluke 725 to provide Ω resistance signals per NIST Monograph 175 revised to ITS-90
Temperature Calibration, Indication, and Control Equipment use with RTD Pt100-385 ^{FO}	-200 °C to 800 °C	0.41 °C	
Temperature Calibration, Indication, and Control Equipment use with RTD Pt100-392 ^{FO}	-200 °C to 630 °C	0.37 °C	
Temperature Calibration, Indication, and Control Equipment use with RTD Pt100-JIS ^{FO}	-200 °C to 630 °C	0.37 °C	
Temperature Calibration, Indication, and Control Equipment use with RTD Pt200-385 ^{FO}	-200 °C to 250 °C	0.27 °C	
	250 °C to 630 °C	0.93 °C	
Temperature Calibration, Indication, and Control Equipment use with RTD Pt500-392 ^{FO}	-200 °C to 500 °C	0.37 °C	
	500 °C to 630 °C	0.48 °C	
Temperature Calibration, Indication, and Control Equipment use with RTD Pt100-385 ^{FO}	-200 °C to 100 °C	0.48 °C	
	100 °C to 630 °C	0.27 °C	

Mass, Force, and Weighing Device

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
Balances ^{FO}	1 mg to 500 mg	0.0 051 mg	Standards weights ASTM Class 1 Euramet CG.18
	500 mg to 1 g	0.0 001 g	
	1 g to 10 g	0.0 005 g	
	10 g to 100 g	0.001 g	
	100 g to 500 g	0.005 g	
	500 g to 1 000 g	0.008 g	
	1 000 to 10 kg	0.010 g	
	10 kg to 25 kg	0.013 g	
	25 kg to 100 kg	18 g	Standards weights NIST F Class NIST HB 44
	100 kg to 500 kg	28 g	
500 kg to 1 000 kg	54 g		



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Mechanical

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Pressure and Vacuum Gauges ^{FO}	-14 psi g to 0 psi g	0.014 psi g	Pressure Gauge Euramet C. Guide 17
Pressure and Vacuum Gauges Pneumatic ^{FO}	0 psi g to 14 psi g	0.014 psi g	
	14 psi g to 36 psi g	0.014 psi g	
Pressure and Vacuum Gauges Hydraulic ^{FO}	36 psi g to 3 000 psi g	0.97 psi g	
	3 000 psi g to 5 000 psi g	2.1 psi g	
	5 000 psi g to 10 000 psi g	2.6 psi g	

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
Digital & Mechanical Thermometers/Probes ^{FO}	-38 °C to 0 °C	0.084 °C	Digital Temperature indicator with PRT Dry Block / Liquid Bath OEM
	0 °C to 100 °C	0.091 °C	
	100 °C to 600 °C	0.12 °C	
Glass Thermometers ^{FO}	-30 °C to 0 °C	0.084 °C	
	0 °C to 100 °C	0.091 °C	
	100 °C to 200 °C	0.12 °C	
Chambers, Ovens, Freezers ^{FO}	-30 °C to 0 °C	0.084 °C	Digital Temperature indicator with PRT Dry Block / Liquid Bath OEM
	0 °C to 50 °C	0.091 °C	
	50 °C to 100 °C	0.091 °C	
	100 °C to 600 °C	0.12 °C	
Temperature Blocks with Digital Temperature indicator with PRT ^{FO}	-30 °C to 0 °C	0.084 °C	
	0 °C to 100 °C	0.091 °C	
	100 °C to 600 °C	0.12 °C	

Time and Frequency

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Time – Timer – Stopwatch ^{FO}	Up to 3 600 s	0.25 s	Timer NIST Publication 960-12



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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.
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 FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations. Example: Outside Micrometer^{FO} would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.
4. 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.
5. The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.