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CERTIFICATE OF ACCREDITATION

This is to attest that

ALMITHAK CALIBRATION COMPANY

ALMADINA ASEYAHYA KM9
TRIPOLI 1234, LIBYA

Calibration Laboratory CL-256

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories.* This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date July 6, 2023

Expiration Date January 1, 2025

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ALMITHAK CALIBRATION COMPANY

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Accredited to ISO/IEC 17025:2017 *Effective Date July 6, 2023*

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Dimensional			
Caliper (Analog /Digital)	0 mm to 300 mm	17 µm	Procedure MCC-TP-03 using Gauge Block Set,
Depth gage (Analog /Digital)	0 mm to 300 mm	16 µm	Procedure MCC-TP-33 using Gauge Block Set
Outside Micrometer (Analog/Digital)	0 mm to 200 mm	16 µm	Procedure MCC-TP-04, using Gauge Block Set
Comparators	0 mm to 10 mm	2 µm	Procedure, MCC-TP-32, using Gauge Block Set
Mechanical			
Pneumatic Pressure Measurement Instruments	0 bar to 20 bar	0.04 bar	Procedure MCC-TP-05 using Calibrator DPI610
Hydraulic Pressure Measurement Instruments	0 bar to 600 bar	0.25 bar	Procedure MCC-TP-05 using Hydraulic Pressure Comparator-P5515-140M, Pressure gauge DPI104 and Fluke 700G
Torque Measurement Instruments	10 N·m to 150 N·m 10 N·m to 1500 N·m	0.24 % 0.57 %	Procedure MCC-TP-31 using Torque Tools Tester Norbar
Weights Class F1,F2,F3, M1,M2,M3	1 mg to 500 mg 1 g to 500 g 1 g to 500 g 1 kg to 5 kg 5 kg 10 kg 20 kg	8.3 µg 0.26 mg 0.26 mg 8.8 mg 80 mg 160 mg 300 mg	Procedure MCC-TP-13 Set of weight E2,F1,M1

** If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Electronic Balances, Mechanical Balances	1 mg to 500 mg 1 g to 500 g 1 g to 500 g 1 g to 5 kg 5 kg 10 kg 20 kg	8.3 µg 0.26 mg 0.26 mg 8.8 mg 80 mg 160 mg 300 mg	Procedure MCC-TP-08 Set of weight E2,F1,M1
Thermal			
Thermometer	-20 ºC to 100 ºC 100 ºC to 600 ºC	0.15 ºC 0.70 ºC	Procedure MCC-TP-22 using Fluke 1523with Fluke 5628 probe
Oven & Water Bath	-20 ºC to 100 ºC 100 ºC to 600 ºC	0.15 ºC 0.70 ºC	Procedure MCC-TP-26 using Fluke 1523with Fluke 5628 probe
Thermo hygrometer Humidity chamber	10 ºC to 50 ºC 29.00 % to 48.30 % 48.30 % to 70.50 %	0.4 ºC 1.8 % 2.3 %	Procedure MCC-TP-24 using Thermo-hygrometer TR300
Electrical – DC/LF			
DC Voltage Generate[3]	60 mV to 600 mV 0.6 V to 6 V 6 V to 60 V 60 V to 600 V 100 V to 1000 V	1.9 mV 3.5 mV 17 mV 71 mV 0.57 V	Procedure MCC-TP-15 using Fluke Calibrator 5500A
AC Voltage Generate[3] (50 Hz)	60 mV to 600 mV 0.6 V to 6 V 6 V to 60 V 60 V to 600 V 100 V to 1000 V	10 mV 54 mV 0.1 V 0.5 V 0.8 V	
DC Current Generate[3]	6 mA to 60 mA 60 mA to 300 mA 300 mA to 600 mA 0.6 A to 6 A 1 A to 10 A	0.1 mA 0.75 mA 4.8 mA 0.17 A 0.2 A	
AC Current Generate[3] (50 Hz)	6 mA to 60 mA 60 mA to 300 mA 300 mA to 600 mA 0.6 A to 10 A 1 A to 10 A	0.6 mA 3.1 mA 7.4 mA 0.09 A 0.1 A	
Low DC Resistance Generate[3]	60 Ω to 600 Ω 0.6 kΩ to 6 kΩ 6 kΩ to 60 kΩ 60 kΩ to 100 kΩ 0.6 MΩ to 6 MΩ 6 MΩ to 30 MΩ	0.5 Ω 6 Ω 0.09 kΩ 0.2 kΩ 0.14 MΩ 0.96 MΩ	

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
High DC Resistance Generate[3]	1 MΩ to 10 MΩ 10 MΩ to 50 MΩ 50 MΩ to 100 MΩ 100 MΩ to 500 MΩ 500 MΩ to 1000 MΩ 1 GΩ to 4 GΩ	0.03 MΩ 0.9 MΩ 3 MΩ 20 MΩ 35 MΩ 0.16 GΩ	Procedure MCC-TP-18 using High Resistance Decade Substitute
Inductance Generate[3]	1 mH to 10 mH 10 mH to 100 mH	0.29 mH 4.8 mH	Procedure MCC-TP-19 using Inductance Substituter (LS-400)
Capacitance Generate[3] (50 Hz)	0.1 nF to 10 nF 10 nF 100 nF 0.1 µF to 1 µF	0.094 nF 0.7 nF 0.058 µF	Procedure MCC-TP-20 using Capacitance Decade Box (CS-301)
DC Voltage Measure[4]	10 mV to 100 mV 0.1 V to 1 V 1 V to 10 V 10 V to 100 V 100 V to 1000 V	0.16 mV 1.5 mV 2.5 mV 12 mV 37 mV	Procedure MCC-TP-14 using Fluke precision multimeter 8846A
Low AC Voltage Measure[4] (50 Hz)	10 mV to 100 mV 0.1 V to 1 V 1 V to 10 V 10 V to 100 V 100 V to 700 V	0.63 mV 10 mV 39 mV 86 mV 0.48 V	
High AC Voltage Measure[4](50 Hz)	1 kV to 5 kV 5 kV to 10 kV 10 kV to 100 kV	40 V 0.16 kV 1.1 kV	Procedure MCC-TP-17 using AC/DC High VoltageProbe
DC Current Measure[4]	10 µA to 100 µA 1 mA to 10 mA 10 mA to 100 mA 100 mA to 400 mA 0.1 A to 1 A 1 A to 10 A	0.16 µA 7.0 µA 79 µA 0.74 mA 8.5 mA 18 mA	Procedure MCC-TP-14 using Fluke precision multimeter 8846A
AC Current Measure[4] (50 Hz)	10 mA to 100 mA 100 mA to 400 mA 0.1 A to 1 A 1 A to 10 A	0.34 mA 2.8 mA 7.4 mA 73 mA	
Low DC Resistance Measure[4]	10 Ω to 100 Ω 1 kΩ to 10 kΩ 10 kΩ to 100 kΩ 0.1 MΩ to 1 MΩ 1 MΩ to 30 MΩ	11 mΩ 5.2 Ω 5.1 Ω 27 kΩ 0.12 MΩ	

[1]The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The

measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

[2]When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

[3]Capability is suitable for the calibration of measuring devices in the stated ranges.

[4]Capability is suitable for the calibration of devices intended to generate the indicated quantity in the stated ranges.