

ACCREDITATION CERTIFICATE

LB-113-CAL

Dubai Accreditation Department

has accredited

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

In accordance with the requirements of ISO/ IEC 17025: 2005 to undertake the tests in the field of:

Calibration

Listed in the attached Scope of Accreditation

This Accreditation is invalid without the attached scope of accreditation and shall remain in force within the validity period printed below, subject to continuing compliance with the requirements of the accreditation program.

Validity of Certificate: from 18- 12- 2015 to 17- 12- 2018

Initial Accreditation Date: 18- 12- 2012

Director, Dubai Accreditation Department



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04

Accreditation Certificate No: LB-113-CAL

Issued by (Head of Section): Scope Validity Period: 18-12-2015 to 17-12-2018

DETAILS OF T	HE APPLICABLE RANGE OF CALI THE SCOPE OF	BRATION AND MEASUR	EMENT CAPABILITY FO	R
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
DC Voltage /Calibration of Meters	Procedure No: JCP 01 W37 Comparison Method using	0 mV up to 330 mV	0.14 X 10 ⁻³ <i>U</i> + 15 μV	Laboratory
	Multifunction Calibrator U = measured voltage value	<0.33 V up to 3.3 V	0.10 X 10 ⁻³ <i>U</i> + 98 μV	
		<3.3 V up to 33 V	0.10 X 10 ⁻³ <i>U</i> + 1.0 mV	
		<33 V up to 330 V	0.12 X 10 ⁻³ U + 9.7 mV	
		<330 V up to 1000 V	0.09 X 10 ⁻³ U + 98 mV	
AC Voltage/ Calibration of Meters	Procedure No: JCP 01 W37	Frequency 45 Hz		Laboratory
of Meters	Comparison Method using Multifunction Calibrator U = measured voltage value	10 mV up to 33 mV	3.8 X 10 ⁻³ U + 71 μV	
		<33 mV up to 330 mV	1.7 X 10 ⁻³ <i>U</i> + 78 μV	
		<0.33 V up to 3.3 V	1.1 X 10 ⁻³ <i>U</i> + 0.38 μV	

[·] Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04

Scope Validity Period: 18-12-2015 to 17-12-2018

Accreditation Certificate No: LB-113-CAL

Issued by (Head of Section):

Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
AC Voltage/ Calibration of Meters	Procedure No: JCP 01 W37	Frequency 45 Hz		Laborator
of Meters	Comparison Method using Multifunction Calibrator U = measured voltage value	<3.3 V up to 33 V	1.1 X 10 ⁻³ U + 3.8 mV	
		<33 V up to 330 V	1.5 X 10 ⁻³ U + 50 mV	
		<330 V up to 1000 V	3.8 X 10 ⁻³ U + 0.24 V	
		Frequency 100 Hz		
		10 mV up to 33 mV	3.9 X 10 ⁻³ <i>U</i> + 70 μV	
		<33 mV up to 330 mV	1.8 X 10 ⁻³ U + 76 μV	
		<0.33 V up to 3.3 V	1.2 X 10 ⁻³ U + 0.33 mV	
		<3.3 V up to 33 V	1.4 X 10 ⁻³ U + 3.3 mV	
		<33 V up to 330 V	1.7 X 10 ⁻³ U + 49 mV	
		<330 V up to 1000 V	1.7 X 10 ⁻³ U + 0.24 V	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04 Accreditation Certificate No: LB-113-CAL

Scope Validity Period: 18-12-2015 to 17-12-2018 Issued by (Head of Section):

DETAILS OF T	HE APPLICABLE RANGE OF CAL THE SCOPE O	IBRATION AND MEASURE FACCREDITATION	MENT CAPABILITY FOR		
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location	
AC Voltage/ Calibration	Procedure No: JCP 01 W37	Frequency 1 kHz		Laboratory	
of Meters	Comparison Method using Multifunction Calibrator U = measured voltage value	10 mV up to 33 mV	3.8 X 10 ⁻³ <i>U</i> + 70 μV		
		<33 mV up to 330 mV	1.8 X 10 ⁻³ <i>U</i> + 76 μV		
		Frequency 1 kHz			
	<0.33 V up to 3.3 V	1.2 X 10 ⁻³ U + 0.33 mV			
			<3.3 V up to 33 V	1.4 X 10 ⁻³ U + 3.3 mV	
		<33 V up to 330 V	1.7 X 10 ⁻³ U + 49 mV		
		<330 V up o 1000 V	1.7 X 10 ⁻³ U + 0.24 V		
DC Current/ Calibration	Procedure No: JCP 01 W37	0.0 μA up to 330 μA	0.19 X 10 ⁻³ / + 1.2 μA	Laboratory	
of Meters	of Meters Comparison Method using Multifunction Calibrator	<0.33 mA up to 3.3 mA	0.50 X 10 ⁻³ / + 1.6 μA		
I = measured current value	I = measured current value	<3.3 mA up to 33 mA	0.56 X 10 ⁻³ / + 2.0 μA		
		<33 mA up to 330 mA	0.57 X 10 ⁻³ / + 22 μA		
		<0.33 mA up to 3 A	1.6 X 10 ⁻³ / + 0.91 mA		

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k =
 The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04

Scope Validity Period: 18-12-2015 to 17-12-2018

Accreditation Certificate No: LB-113-CAL

Issued by (Head of Section):

DETAILS OF T	HE APPLICABLE RANGE OF CAL THE SCOPE OI	BRATION AND MEASURI ACCREDITATION	EMENT CAPABILITY FOR	
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
DC Current/ Calibration	Procedure No: JCP 01 W37 Comparison Method using Multifunction Calibrator	<3 A up to 20 A	2.2 X 10 ⁻³ / + 4.6 mA	Laboratory
of Meters		<20 A up to 100 A	2.9 X 10 ⁻³ / + 1.6 mA	
	I = measured current value	<100 A up to 1000 A	5.8 X 10 ⁻³ / + 17 mA	
Resistance/ Calibration of Meters Procedure No: JCP 01 W37 Comparison Method using Multifunction Calibrator		0.01 Ω up to 1.0 Ω	4.8 X 10 ⁻³ R + 12 mΩ	Laboratory
	1.0 Ω up to 1.9 Ω	$3.4 \times 10^{-3} R + 10 \text{ m}\Omega$		
	R = measured resistance value	1.9 Ω up to 10.0 Ω	1.1 X 10 ⁻³ R + 10 mΩ	
		10.0 Ω up to 19.0 Ω	$0.94 \times 10^{-3} R + 7 \text{ m}\Omega$	
		19.0 Ω up to 100.0 Ω	0.41 X 10 ⁻³ R + 6.8 mΩ	
		100.0 Ω up to 190.0 Ω	0.46 X 10 ⁻³ R + 2.2 mΩ	
		$0.19~\text{k}\Omega$ up to $1.0~\text{k}\Omega$	0.12 R	
		1.0 kΩ up to 1.9 kΩ	0.12 R	
		1.9 kΩ up to 10.0 kΩ	0.43 X 10 ⁻⁶ R + 1.2 Ω	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04

Scope Validity Period: 18-12-2015 to 17-12-2018

Accreditation Certificate No: LB-113-CAL

Issued by (Head of Section):

DETAILS OF T	HE APPLICABLE RANGE OF CAL THE SCOPE O	IBRATION AND MEASURE F ACCREDITATION	EMENT CAPABILITY FOR	3
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Resistance/ Calibration of Meters		10.0 kΩ up to 19.0 kΩ	1.4 X 10 ⁻⁶ R + 1.2 Ω	Laboratory
of Weters		19.0 kΩ up to 100.0 kΩ	1.0 X 10 ⁻⁶ R + 12 Ω	
		100.0 kΩ up to 190 kΩ	2.9 X 10 ⁻⁶ R + 12 Ω	
		$0.19~\text{k}\Omega$ up to $1.0~\text{M}\Omega$	1.1 X 10 ⁻³ R + 0.12 KΩ	
		$1.0~\text{M}\Omega$ up to $1.9~\text{M}\Omega$	0.12 X 10 ³ R	
		1.9 MΩ up to 10.0 MΩ	1.5 X 10 ³ R	
		10.0 MΩ up to 19.0 MΩ	1.5 X 10 ³ R	
		19.0 M Ω up to 100 M Ω	0.13 X· 10 ⁶ R	
		100 MΩ up to 190 MΩ	0.15 X 10 ⁶ R	
AC Current/ Calibration Procedure No: JCP 01 W37	Frequency 45 Hz		Laboratory	
of Meters	Comparison Method using Multifunction Calibrator I = measured current value	30.0 μA up to 330 μA	2.2 X 10 ⁻³ / + 1.4 μA	
		<0.33 mA up to 3.3 mA	2.4 X 10 ⁻³ / + 1.8 μA	

[•] Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04

Scope Validity Period: 18-12-2015 to 17-12-2018

Accreditation Certificate No: LB-113-CAL

Issued by (Head of Section): 0 \

DETAILS OF THE APPLICABLE RANGE OF CALIBRATION AND MEASUREMENT CAPABILITY FOR THE SCOPE OF ACCREDITATION				
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
	Procedure No: JCP 01 W37	Frequency 45 Hz		Laboratory
or weters	Comparison Method using Multifunction Calibrator	<3.3 mA up to 33 mA	1.2 X 10 ⁻³ / + 14 μA	
I = measured current value	<33 mA up to 330 mA	1.2 X 10 ⁻³ / + 0.14 mA		
	<0.33 A up to 3 A	1.1 X 10 ⁻³ / + 1.8 mA		
		<3 A up to 20 A	1.1 X 10 ⁻³ / + 2.3 mA	
	Frequency 45 Hz			
		<20 A up to 100 A	2.9 X 10 ⁻³ / + 8.2 mA	
		<100 A up to 1000 A	5.8 X 10 ⁻³ / + 30 mA	
	Frequency 1 kHz			
		30.0 μA up to 330 μA	2.3 X 10 ⁻³ / + 1.4 μA	
		<0.33 mA up to 3.3 mA	2.5 X 10 ⁻³ / + 1.7 μA	
		<3.3 mA up to 33 mA	2.2 X 10 ⁻³ / + 15 μA	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Electrical Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04 Accreditation Certificate No: LB-113-CAL

Scope Validity Period: 18-12-2015 to 17-12-2018 Issued by (Head of Section):

DETAILS OF T	HE APPLICABLE RANGE OF CAL THE SCOPE O	IBRATION AND MEASURE FACCREDITATION	EMENT CAPABILITY FOR	
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
AC Current/ Calibration	Procedure No: JCP 01 W37	Frequency 1 kHz		Laboratory
of Meters	Comparison Method using Multifunction Calibrator I = measured current value	<33 mA up to 330 mA	2.2 X 10 ⁻³ / + 0.14 mA	
		<0.33 A up to 3 A	2.7 X 10 ⁻³ / + 1.7 mA	
		Frequency 1 Hz		
		<3 A up to 20 A	3.2 X 10 ⁻³ / + 1.9 mA	
		<20 A up to 100 A	4.6 X 10 ⁻³ / + 7.7 mA	
		<100 A up to 1000 A	6.0 X 10 ⁻³ / + 29 mA	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k =
 The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Pressure Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04 Accreditation Certificate No: LB-113-CAL

Scope Validity Period: 18-12-2015 to 17-12-2018 Issued by (Head of Section):

	THE SCOPE OF	ACCREDITATION		
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Hydraulic Pressure Pressure gauge, Indicator	JCP 01 W02 based on DKD-R 6-1	10 bar up to 1400 bar	5 X 10 ⁻⁴ * p _e , but not lower than 10 mbar	Laboratory
Preumatic Pressure Pressure gauge, Indicator	JCP 01 W02/1 based on DKD- R 6-1	-1 bar up to 0 bar 0 bar up to 20 bar	5 mbar 15 mbar	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k =
 The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Balance Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04 Accreditation Certificate No: LB-113-CAL

Scope Validity Period: 18-12-2015 to 17-12-2018 Issued by (Head of Section):

DETAILS OF	THE APPLICABLE RANGE OF CAL THE SCOPE O	IBRATION AND MEASURE F ACCREDITATION	MENT CAPABILITY FO	OR
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Weighing Machine	Comparison Method using "F1" class weight set Euramet cg 18	up to 4 kg max load	3 x 10-6	Customer premises

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Temperature Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04 Accreditation Certificate No: LB-113-CAL

Scope Validity Period: 18-12-2015 to 17-12-2018 Issued by (Head of Section):

DETAILS OF	THE APPLICABLE RANGE OF CAL THE SCOPE OI	IBRATION AND MEASURE FACCREDITATION	EMENT CAPABILITY FO	PR
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Digital and Anologue Thermometer	JCP 01 W03 & W05 BS 1041-2 -2: 1989	-25 °C up to 150 °C 150 °C up to 300 °C	± 0.13 °C 0.22 °C	Laboratory
Oven /Incubator Climatic Chamber	JCP 01 W 08 DKD R5-7 (9 points)	0 °C up to 100 °C 100 °C up to 200 °C	±0.7 °C ±0.9 °C	Customer premises
Refrigerator Chiller Freezer	JCP 01 W 23 DKD R5-7 1 (9 points)	-25 °C up to 25 °C	±0.7 °C	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k =
 The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



إدارة اعتماد تقييم المطابقة

SCOPE OF ACCREDITATION

Dimensional Calibration

Jansal Calibration Services

No: 203, 2nd Floor

Zabeel Business Centre, Al Karama

Dubai- United Arab Emirates

Scope Issue No: 04

o: 04 Accreditation Certificate No: LB-113-CAL

Scope Validity Period: 18-12-2015 to 17-12-2018 Issued by (Head of Section):

DETAIL OF	THE APPLICABLE RANGE OF CALIB THE SCOPE OF	ACCREDITATION	EIVIENT CAPABILITY FO	JK
Calibration Field/ Measured Quantity	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Digital Calipers (Vernier+ Dial)	JCP 01 W04 based on ISO BS-EN-ISO 13385-1-2011	0 up to 300 mm	0.007 mm 0.015 mm	Laboratory
Dial Gauges	JCP 01 W06 based on ISO BS EN ISO 463:2006	Up to 100 mm	0.003 mm	

Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.