

Certificate of Calibration

Certificate Number: XXXXX
Certificate Date: XXXXXXXXX
Customer: XXXXXXXXX

Instrument Under Test: **Model No** EL-USB-1-LCD **Instrument Serial Number:** 000040780

Test Equipment Used: **Test Equipment Serial Number:**
 Climatic Chamber ID0896
 Rotronic Hygroclip 2 61396959
 HW4 24 00004727 49128

The Hygroclip 2 is certified to 'traceable' national standards.
 The Climatic Chamber is used to generate the temperature and humidity source.

Lab Environmental conditions at time of calibration: Temp 20.5°C±1°C/ RH 52% RH ±5% RH

True Reading (°C)	Instrument Measured Value (°C)		Error (°C)		Uncertainty of Measurement (°C)
	DISPLAY	GRAPH	DISPLAY	GRAPH	
-9.94	-10	-10.5	0.06	0.56	± (0.15°C + D)
5.07	4.5	5.0	0.57	0.07	± (0.15°C + D)
25.07	24.5	25.0	0.57	0.07	± (0.15°C + D)
40.08	39.5	39.5	0.58	0.58	± (0.15°C + D)

Temperature cycle and uniformity was conducted at full immersion with readings observed 5 minutes after stabilisation.

The reported expanded uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95%.

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Certificate No.

XXXXX

Qualification of Standard Used

This is to certify that the stated instrument has been verified and calibrated at the measured values given in the results table on page 1 of this 2 page document using test equipment which itself has been calibrated and certified to the stated standard. The procedures and work instructions used to verify and calibrate the instrument are fully documented.

The errors reported refer to measured values only with no account being taken of the instrument's ability to maintain its calibration.

Signed:

Authorised Signatory

Sean Wigmore



879 Maple St. Hopkinton, New Hampshire 03229



Certificate of Calibration

Report Number: 16-0909-00
 Calibration Date: Friday, September 9, 2016
 Calibration Due Date: September 9, 2017

Customer: Lascar Electronics, Inc.
 Customer PO #: N/A
 Sales Order #: N/A

Manufacturer: Lascar Electronics, Inc.
 Model: EL-USB-1
 Serial Number: 000000000

The above instrumentation has been calibrated and tested to meet or exceed the published specifications. This calibration and testing was performed using instrumentation and standards that are traceable to the United States Department of Commerce National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).

MDQ Calibration Laboratory is in compliance with ISO/IEC 17025:2005. This Calibration has been performed within the Lab's defined scope of accreditation. Any measurements not covered by the lab's scope are noted below. Uncertainties have been estimated at a 95 % confidence level ($k=2$). The uncertainty of measurement associated with the measurement result reported in this certificate is available from the organization upon request and was accounted for in making the decision of compliance or noncompliance with the relevant specification identified below. Any number of factors may cause a unit to drift out of tolerance before the calibration due date. This certificate may not be used to claim product endorsement by PJLA, NIST or any agency of the U.S government. Not valid without signature.

Calibration Environment: Temperature: 23.0 °C, Humidity (RH): 40.0 %

Method: Temperature Calibration Procedure Rev. A

Notes: None.

Calibration Information

As Found Data:	Ref. Value	As Read	Diff.	Spec.	Result
Temperature	25.0 °C	25.0 °C	+0.0 °C	± 1.0 °C	Pass

As Left Data:	Ref. Value	As Read	Diff.	Spec.	Result
Temperature	25.0 °C	25.0 °C	+0.0 °C	± 1.0 °C	Pass

As Found Accuracy: In Tolerance
As Left Accuracy: In Tolerance

Standards Used for Calibration

GE SENSING Model M2801/IRTD-400, ITS-90, Serial Number I0102. Calibration due 3/14/17

Calibrated By: Peter Polizos
 Title: Lead Calibration Technician

This Certificate/Report shall not be reproduced, except in full, without the written consent of MDQ Calibration Lab.

MDQ Calibration Lab 879 Maple Street Hopkinton, New Hampshire 03229 603.746.2772

Calibration Certificate

Certificate: ID-524159

<u>Customer Information</u>			<u>Equipment Information</u>		
Customer:	Lascar Electronics		Equipment ID:	L15-3733	
Address:	4258 West 12th St		Model No:	EL-WIFI-TP+	
City, State Zip:	Erie	PA 16505	Manufacturer:	Lascar	
Contact:			Serial No:	98:8B:AD:00:74:3F	
Phone:	(814) 835-0621				

Calibration Summary

Calibrated:	01/27/2016	Temp:	70F +/- 10	As Found:	In Tolerance
Next Cal:	01/27/2017	Humidity:	50% +/-20	Result:	Pass
Frequency:	Yearly	Technician:	Angela Relyea		
Remarks:					

Temperature Calibration (C)

<u>Tolerance</u>	<u>Units</u>	<u>As Found</u>	<u>Result</u>	<u>Procedures</u>
Tolerance (+/-)	0.3 °C	In Tolerance	Pass	CSI-CWB-1 R4

<u>Desc</u>	<u>Nominal</u>	<u>Limits</u>		<u>As Found</u>			<u>As Left (Cal Status)</u>		
		<u>Upper</u>	<u>Lower</u>	<u>Actual</u>	<u>Error</u>	<u>Result</u>	<u>Actual</u>	<u>Error</u>	<u>Result</u>
	25.00	25.30	24.70	24.95	-00.05	Pass	24.95	-00.05	Pass

Standard Equipment Used

<u>Equip ID</u>	<u>Model</u>	<u>Description</u>	<u>Cal Due</u>
Control Co.2	4000		12/08/2016
Water Bath 1	9006A11B		03/05/2016

Control Solutions, Inc. certifies that the above equipment has been calibrated using instrumentation capable of producing results that are traceable through NIST to the International System of Units (SI). Control Solutions, Inc. is accredited to ISO/IEC 17025:2005. Measurement uncertainty = 0.12 C, utilizing a coverage factor of K=2 to approximate 95% confidence level
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 35851 Industrial Way, Suite D, St. Helens, OR 97051



www.lascarelectronics.com
 (814) 835 0621
 4258 West 12th Street, Erie, PA 16505

