ECEFast
Electro Chemical Engineering Pty Ltd
A. B. N. 42 004 182 772

REPORT CHECKED 21/MAY/21

CALIBRATION REPORT
ON
TEMPERATURE AND RELATIVE HUMIDITY METER

Tested For: Western Australian Land Information Authority (Landgate)

Test Site: ECEFast NATA Calibration Laboratory
26 Business Park Drive
Notting Hill, VIC, 3168

Reference : Customer Reference: "4937" (W&B Instruments), dated 7 April 2021
ECEFast Job No.: 429917

Description:

Manufacturer	: Delta Ohm
Model	: HD 2301.0R
Serial No.	: 21002807
Sensor Model	: HP472ACR
Sensor Description	: External Temperature/RH Probe
Sensor Serial No.	: 20012401
Resolution	: 0.1°C, 0.1%RH

Requirement: The Temperature and Relative Humidity Meter and sensor were calibrated as a system at:
+10, +20, +30 and +40°C and at:
11, 33 and 75%RH at a temperature of +23°C.

Traceability: The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards via Primary Standard Digital Thermometer ASL F250 Serial No.1433 and Primary Standard PRT Serial No. 5V1929/D and via Primary Standard Vaisala MI70 S/N S1823000 & Primary Standard HMP77B RH/Temperature Probe S/N S2440442.

Report No: 29917-2N
Date of Test: 14 April 2021
Date of Issue: 15 April 2021
Sheet 1 of 3

Signatory: L.Chow

Checked By: L. Chow

NATA
WORLD RECOGNISED ACCREDITATION
ISO/IEC 17025
No. 5473

Accredited for compliance with ISO/IEC 17025 - Calibration
Accreditation No. 5473

Victoria (NATA Laboratory) 26 Business Park Drive NOTTING HILL 3168
TEL (03) 9538 8188 **Fax** (03) 9538 8198

FREE CALL *1-800-811-818*
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AUCKLAND *UNIT 9A, 9-11 LAIDLAW WAY, EAST TAMAKI, AUCKLAND, 2016, NEW ZEALAND TEL (+64 9) 262 0206 FAX (+64 9) 262 0207*
INTERNET *www.ecefast.com.au*

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Continuation of Report: On Temperature and Relative Humidity Meter S/N: 21002807

Calibration Results:

TABLE No.1
Instrument Serial No: 21002807
Sensor Serial No. 20012401
Temperature Sensor

Note the results in this table are as found and as left, and are rounded to the nearest 0.1°C.

Indicated Reading On Delta Ohm HD 2301.0R °C	Measured Reference Temperature °C	Correction To Reading On Delta Ohm HD 2301.0R °C
+9.9	+10.0	+0.1
+20.0	+20.0	0.0
+30.0	+30.0	0.0
+40.1	+40.0	-0.1

CORRECTION OF 0.0°C OVAL RANGE

TABLE No.2
Instrument Serial No: 21002807
Sensor Serial No. 20012401
Relative Humidity Sensor

Note the results in this table are as found and as left, and are rounded to the nearest 0.1%RH, and rounded to the nearest 0.1°C.

Measured Reference Temperature °C	Indicated Reading On Delta Ohm HD 2301.0R %RH	Measured Reference Relative Humidity %RH	Correction To Reading On Delta Ohm HD 2301.0R %RH
+23.1	11.4	11.0	-0.4
+23.1	31.9	33.0	+1.1
+23.1	73.6	75.0	+1.4

CORRECTION OF +0.7%RH OVAL RANGE

Note 1: The testing of the relative humidity sensor was done with a soak time of 40 minutes.

Continuation of Report: On Temperature and Relative Humidity Meter S/N: 21002807

Uncertainty of Measurement:
The uncertainty of measurement is reported as an expanded uncertainty and has been calculated to be:
±0.2°C from +10 to +40°C;
±2.3% RH at +23°C and in the range 11%RH to 75%RH;
in accordance with the principles in the ISO Guide to Expression of Uncertainty in the Measurement, and gives an Interval estimated to have a level of confidence of 95% using a coverage factor of K=2.0.

Test Method:
The Test Methods used were 02-16 and 02-08

Note 2: The Temperature and Relative Humidity Meter's calibration has not been adjusted.

Note 3: The uncertainty stated above only applies at the time of testing. It does not consider any future drift or hysteresis that could apply afterwards.

Note 4: The ACJC of our Test Equipment was turned on to obtain these measurements and allowed to stabilise at ambient laboratory environmental conditions for a minimum period of one (1) hour prior to testing.

Note 5: The results in this report expressed in °C have been calculated using the International Temperature Scale of 1990 (ITS-90).

Note 6: The results contained in this report are relevant to the date of test. If the instrument is altered or damaged in any aspect, the results may no longer be valid and the unit will require subsequent calibration.

Environmental Conditions:
Tests were performed with an ambient temperature +21°C ±3°C.
No allowances have been made for temperatures other than ambient.

Definition:
Uncertainty of Measurement:
Uncertainty of Measurement is part of the expression of the corrected result which defines the range of values within which the true value, or if appropriate the accepted true value, is estimated to lie.