REPORT CHECKED
22/12/2023
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ECE
Temperature
made simple

CALIBRATION REPORT
ON
TEMPERATURE AND RELATIVE HUMIDITY METER

Tested For: Landgate
1 Midland Square
Midland, WA, 6056.

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

Reference : Customer Reference "CARD", dated 14 December 2023
ECEFast Job No.: 461866

Description:

Manufacturer	: Delta Ohm
Model	: HD 2301.OR
Serial No.	: 21002807
Sensor Model	: HP472ACR
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: 61866-1N
Date of Test: 19 December 2023
Date of Issue: 21 December 2023

Signatory: N. Roberts

Checked By: N. Roberts

NATA
WORLD RECOGNISED ACCREDITATION
ISO/IEC 17025
No. 5473

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

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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.OR °C	Measured Reference Temperature °C	Correction To Reading On Delta Ohm HD 2301.OR °C
+10.0	+10.0	0.0
+20.1	+20.0	-0.1
+30.0	+30.0	0.0
+40.0	+40.0	0.0

CORRECTION 0.0°C OVER 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.OR %rh	Measured Reference Relative Humidity %rh	Correction To Reading On Delta Ohm HD 2301.OR %rh
+22.9	11.2	11.0	-0.2
+23.1	32.2	33.0	+0.8
+23.0	73.5	75.0	+1.5

CORRECTION +0.7% RH OVER 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±1°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: Any reported uncertainty for temperature measurements is valid only at the reported calibration points.

Note 3: The Temperature and Relative Humidity Meter's calibration has not been adjusted.

Note 4: 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 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.

Note 7: The RH results are only valid for the temperature range at which the RH was tested.

Note 8: The uncertainty of the RH results includes a component for the effect of hysteresis.

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.