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**MEASUREMENT STANDARDS LABORATORY**

## **CERTIFICATE OF CALIBRATION no L04545D**

**Customer** Vaisala Oyj  
Vanha Nurmijärventie 21  
01670 Vantaa  
FINLAND

**Instrument** Dewpoint Transmitter

**Manufacturer** Vaisala Oyj

**Model** DMT153

**Serial number** Y2256672

**Calibration date** From June 10 to 13, 2026

**Issue date** June 13, 2026

**Signature**

Ilkka Kotamäki  
Technical Manager

**Page 1 ( 4)**

**Documents attached**

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**NOTES**

This is a new instrument without before adjustment data.

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This Certificate may only be reproduced in full, except with the prior written permission by the issuing Laboratory.  
The measurement results issued in this Certificate are traceable to national or international measurement standards either via  
ISO/IEC 17025 Accredited Laboratories and/or internal calibrations performed in Vaisala Measurement Standards Laboratory.

## CONFIGURATION

The instrument's configuration, settings and coefficients were read from the instrument's memory.

Before measurements the instrument was allowed to stabilize to the conditions of the laboratory for at least 1 hour with  $24 \text{ VDC} \pm 0,3 \text{ VDC}$  power supply switched on.

The instrument was configured to use the settings (gas air, absolute pressure 1013,25 hPa and molecular mass of air 28,96443 g/mol) for the time of the calibration and the reference readings are given against these settings.

The reference and the reading values are averages of ten independent observations.

The corrections given to the instrument readings shall be added algebraically to the instrument readings.

The calibration is valid only with configuration and settings:

AUTOCAL 1 = ON

## REFERENCES USED DURING TEMPERATURE CALIBRATION

HMT337, serial number F4630128, certificate K008-L00010, due date 2027-Jan-31

## REFERENCES USED DURING DEW / FROST POINT TEMPERATURE CALIBRATION

HMT337, serial number F4630128, certificate K008-L00010, due date 2027-Jan-31

DMT347, serial number F4630127, certificate K008-L00012, due date 2027-Jan-31

Thunder 3900, serial number 212040, certificate K008-L00011, due date 2027-Jan-31

PTB330, serial number N3940425, certificate K008-L00009, due date 2027-Jan-31

## TRACEABILITY

The measurement results are traceable to the international system of units (SI) through national metrology institutes (NIST in USA or equivalent) or accredited calibration laboratories.

## CALIBRATION PROCEDURE

DOC234279

When a calibration due date is assigned to the calibrated instrument, it is set, managed, and changeable by the owner of the instrument and does not constitute a recommendation or requirement by the manufacturer or the performing calibration laboratory.

The calibration may have been performed using an accredited calibration method, although this calibration certificate is not issued under accreditation, is therefore not covered by the European Accreditation Multilateral Agreement (EA MLA), and metrological traceability to the SI units through accreditation cannot be demonstrated.

## UNCERTAINTY

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k = 2$ , which for a normal distribution corresponds to a coverage probability of approximately 95 %. The standard uncertainty of measurement has been determined in accordance with EA Publication EA-4/02.

The measurement uncertainty represents the situation at the time and conditions of calibration. When using the UUC at different conditions and at different time the effect of the conditions and stability of the UUC shall be evaluated separately.

The measurement results and uncertainty are representing the measurement points only.

The calibration uncertainty includes known uncertainty components related to the instrument under calibration.

The instrument-dependent calibration uncertainty of the calibration point has not been defined entirely when the calibration uncertainty is marked with the text \*\* due to a large instrument reading error, due to the possibility of digital or analog output freezing to output a constant reading near the upper or lower limit of the output range or due to equivalent instrument-related reason. In the case of marking \*\*, the calibration uncertainty is given without considering the effect of above-mentioned not exactly known reasons on the calibration results.

## AMBIENT CONDITIONS

Temperature  $23 \text{ }^{\circ}\text{C} \pm 3 \text{ }^{\circ}\text{C}$

Humidity  $35 \% \text{rh} \pm 32 \% \text{rh}$

## STATEMENT OF CONFORMITY

The calibration results and the statement of conformity with specification relate only to the calibrated instrument and the calibration points.

Any humidity specification of the dew / frost point instrument is derived from the dew / frost point and temperature specification when results are given in other humidity quantity than dew / frost point.

Any humidity specification of the relative humidity instrument is derived from the relative humidity and temperature specification when results are given in other humidity quantity than relative humidity.

The statement of conformity is based on simple acceptance, whether the calibration result is within or outside the manufacturer's specification. The calibration uncertainty is not taken into account in the statement of conformity. The probability of accepting a non-conforming result or rejecting a conforming result can be as large as 50 % with this acceptance rule when the calibration result is close to the specification limit.

Pass = The calibration result is equal or within the manufacturer's specification.

Fail = The calibration result is outside the manufacturer's specification.

There is no specified specification when the specification is marked with 'None'.

## TEMPERATURE CALIBRATION

The temperature calibration was done in the Measurement Standards Laboratory (MSL) of Vaisala Oyj from June 10 to 13, 2026.

The temperature readings of the instrument were compared to the values of the reference thermometer in a calibration chamber. The instrument was allowed to stabilize to each temperature for at least 30 minutes before the readings were read.

The readings were read via serial port with resolution of 0,01 °C.

Temperature values are given according to the International Temperature Scale of 1990, ITS-90.

Table 1. As left results, temperature

| Reference<br>[ °C ] | Reading<br>[ °C ] | Correction<br>[ °C ] | Uncertainty<br>[ °C ] | Specification<br>[ °C ] | Conformity<br>Statement |
|---------------------|-------------------|----------------------|-----------------------|-------------------------|-------------------------|
| 22,70               | 22,70             | 0,00                 | 0,16                  | None                    | PASS                    |

## DEW / FROST POINT TEMPERATURE CALIBRATION

The dew / frost point temperature calibration was done in the Measurement Standards Laboratory (MSL) of Vaisala Oyj from June 10 to 13, 2026.

The dew / frost point temperature readings of the instrument were compared to the reference dew / frost point temperature values in nitrogen gas and/or in air in a calibration chamber.

The instrument was allowed to stabilize to each calibration point for at least 1 hour before the readings were read. Chemical purge was done before the measurements.

The readings are frost point temperature readings when the readings are marked to be dew / frost point temperature and dew point is below 0 °C. The readings were read via serial port with resolution of 0,01 °C.

Table 2. As left results, dew / frost point temperature

| Calibration Temperature [ °C ] | Reference [ °C ] | Reading [ °C ] | Correction [ °C ] | Uncertainty [ °C ] | Specification [ °C ] | Conformity Statement |
|--------------------------------|------------------|----------------|-------------------|--------------------|----------------------|----------------------|
| 22                             | -79,8            | -79,4          | -0,4              | 1,0                | 2,0                  | PASS                 |
| 23                             | -56,9            | -56,6          | -0,3              | 0,8                | 2,0                  | PASS                 |
| 24                             | -40,0            | -40,4          | 0,4               | 0,9                | 2,0                  | PASS                 |
| 23                             | -20,3            | -20,7          | 0,4               | 1,7                | 3,0                  | PASS                 |

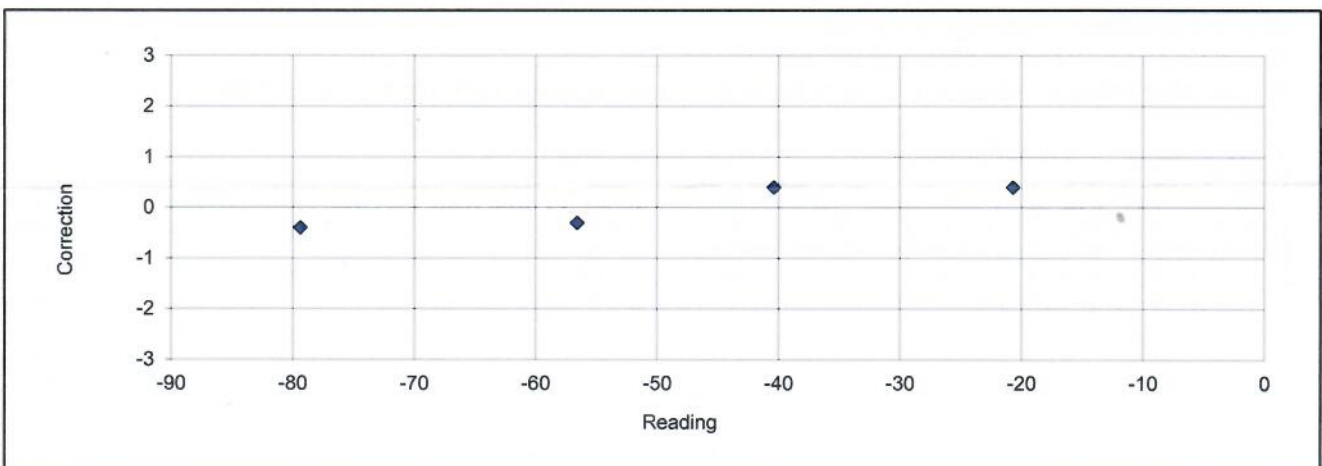


Figure 1. Final results, dew / frost point temperature