The Vaisala DRYCAP® Dewpoint Transmitter DMT152 is designed for measuring low dew point in OEM applications, even down to -80°C. The excellent long-term stability and reliability of its performance is based on the latest DRYCAP® polymer sensor technology.

Low Maintenance

The DMT152 mechanics have been designed for harsh environments requiring protection against dust, dirt, and splashed water. The DRYCAP® technology has a low maintenance need due to its excellent long-term stability and durability against condensation.

Applications

The DMT152 is an ideal choice for industrial applications where it is necessary to control very low humidity. Most typical areas of use are air and plastics dryers, dry chambers, pure gases, and high-voltage circuit breakers. The DMT152 measures accurately and reliably also in the challenging combination of low humidity and hot air, which is typical in plastics drying.
# Technical Data

## Measured Variables

### Dew Point Temperature

**Measurement range**  
-80 ... -10 °C (-112 ... +14 °F)

**Accuracy**  

-80 ... -40 °C (-112 ... -40 °F)  
±2 °C (3.6 °F)

-40 ... -20 °C (-40 ... -4 °F)  
±3 °C (5.4 °F)

**Non-calibrated range**  
-100 ... 80 °C, -10 ... +20 °C  
(-148 ... +112 °F, +14 ... +68 °F)

**Analog output scalings**

- **Option 1**: -80 ... +20 °C (-112 ... +68 °F)
- **Option 2**: -100 ... 0 °C (-148 ... +32 °F)
- **Option 3**: user-specified output scaling

When the dew point is below 0 °C (32 °F) the transmitter outputs frost point.

**Accuracy over temperature range**

![Dewpoint temperature graph]

Response time 63% [90%] at a gas temperature of +20 °C (+68 °F) and pressure of 1 bar:

- -10 ... -80 °Ctd: 0.5 min [7.5 min]
- -80 ... -10 °Ctd: 2 s [5 s]

Typical long-term stability: better than('3.6 °F) /year

### PPM Volume Concentration

**Measurement range (typical)**  
0 ... 500 ppm

**Accuracy at +20 °C (+68 °F)**  
±(0.2 ppm + 20 % of reading)

### General

**Sensor**  
Vaisala DRYCAP® 180U Thin-film capacitive polymer sensor

**Recommended calibration interval**  
2 years

**Operating voltage with**

- RS485 output: 11* ... 28 VDC
- Voltage output: 15* ... 28 VDC
- Current output: 21 ... 28 VDC

*For extended temp. down to -40 °C (-40 °F) or pressure up to 50 bar (725 psia), the supply voltage is 21 ... 28 VDC.

**Supply current**

- Normal measurement: 20 mA + load current
- During self-diagnostics: max. 220 mA pulsed
- Supply voltage fluctuation: max. 0.3 V

**External load for**

- Voltage output: min. 10 kOhm
- Current output: max. 500 Ohm

**Housing material (wetted parts)**

- AISI316L Stainless steel mesh filter
- Filter body AISI303, mesh AISI316L, grade 18 μm

**Mechanical connections**

- ISO G½", NPT ½", UNF ¾"- 16"

**Housing classification**

IP66

**Storage temperature range**

-40 ... +80 °C (-40 ... +176 °F)

**Weight (ISO G½")**

190 g (6.70 oz)

Complies with EMC standard EN61326-1, Electrical equipment for measurement control and laboratory use - EMC requirements; Industrial environment.

## Accessories

- **Connection cable for MI70 hand-held indicator**: 219980
- **USB cable for pc connection**: 219690
- **Sampling cells (available for ISO G½")**:
  - **Basic sampling cell**: DMT242SC
  - **DMT242SC2**: with Swagelok 1/4" male connectors
  - **DSC74**: with a quick connector and leak screw
  - **NW40 flange**: 225220SP

## Outputs

- **Two analog outputs (scalable)**
  - 4 ... 20 mA, 0 ... 20 mA (3 wire)
  - 0 ... 5 V, 0 ... 10 V

**Accuracy of analog outputs**

± 0.01 V / ±0.01 mA

**Digital output**

RS485 (2-wire)

**Alarm-level indication by analog signal**

user selectable

**Purge information**

5 V, 10 V, 20 mA or LED

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Please contact us at [www.vaisala.com](http://www.vaisala.com)

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