



DMT152 Dewpoint Transmitter

for Low Dew Point Measurement in OEM Applications



Features

- Vaisala DRYCAP® technology with a polymer sensor
- Measures dew point down to -80 °C (-112 °F)
- Withstands condensation
- Traceable calibration (certificate included)
- Applications: dry chambers, dry gases, semiconductor manufacturing, research and testing, and compressed air

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, dry 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.

Benefits

- Accurate
- Compact and powerful
- Fast response time
- Reduced maintenance costs due to long calibration interval

Technical Data

Measurement Performance

Sensor	Vaisala DRYCAP® 180U Thin-film capacitive polymer sensor
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Recommended calibration interval	2 years
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Dew Point Temperature

Measurement range	-80 ... -10 °C (-112 ... +14 °F) T _d
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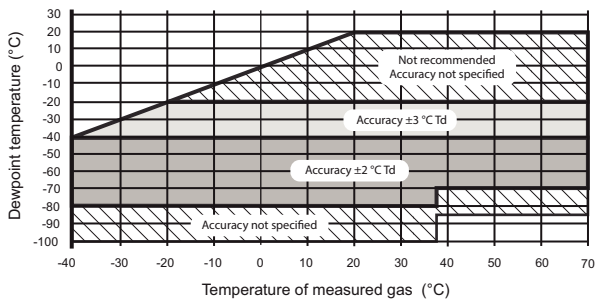
Accuracy	
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-80 ... -40 °C (-112 ... -40 °F)	±2 °C (3.6 °F) T _d
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-40 ... -20 °C (-40 ... -4 °F)	±3 °C (5.4 °F) T _d
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Non-calibrated range	-100 ... +20 °C (-148 ... +68 °F) T _d
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Accuracy over temperature range:



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

-10 ... -80 °C T _d	0.5 min [7.5 min]
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-80 ... -10 °C T _d	2 s [5 s]
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Typical long-term stability	Better than 2 °C (3.6 °F) /year
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Concentration by Volume (ppm)

Measurement range (typical)	0 ... 500 ppm
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Accuracy at +20 °C (+68 °F), 1013 mbar	±(0.2 ppm + 20 % of reading)
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Operating Environment

Temperature	-40 ... +70 °C (-40 ... +158 °F)
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Relative humidity	0 ... 100 %RH (up to +20 °C/+68 °F)
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Pressure	0 ... 50 bar (725 psia)
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Measured gases	Non-corrosive gases
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Sample flow rate	No effect on measurement accuracy
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Accessories

Connection cable for MI70 hand-held indicator	219980
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USB cable for pc connection	219690
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NW40 flange	225220SP
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Sampling cells (available for ISO G $\frac{1}{2}$ ")

basic sampling cell	DMT242SC
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with Swagelok 1/4" male connectors	DMT242SC2
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with a quick connector and leak screw	DSC74
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two-pressure sampling cell	DSC74B
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Inputs and Outputs

Two analog outputs (scalable)	4 ... 20 mA, 0 ... 20 mA (3 wire) 0 ... 5 V, 0 ... 10 V
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Accuracy of analog outputs	±0.01 V / ±0.01 mA
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Digital output	RS-485 (2-wire)
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Alarm-level indication by analog signal	User selectable
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Purge information	5 V, 10 V, 20 mA or LED
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Operating Voltage

RS-485 output	11 ¹⁾ ... 28 VDC
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voltage output	15 ¹⁾ ... 28 VDC
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current output	21 ... 28 VDC
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Supply Current

normal measurement	20 mA + load current
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during self-diagnostics	Max. 220 mA pulsed
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Supply voltage fluctuation	Max. 0.3 V
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External Load

voltage output	Min. 10 kΩ
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current output	Max. 500 Ω
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1) For extended temp. down to -40 °C (-40 °F) or pressure up to 50 bar (725 psia), the supply voltage is 21 ... 28 VDC.

Mechanical Specifications

Housing material (wetted parts)	AISI316L
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Stainless steel mesh filter	Filter body AISI303, mesh AISI316L, grade 18 μm
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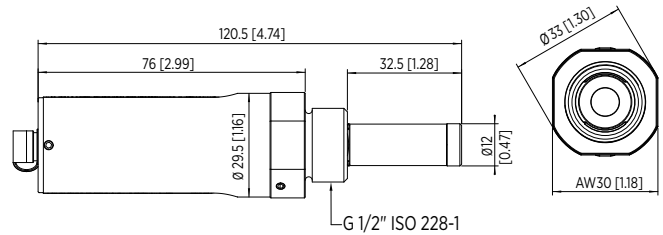
Mechanical connections	ISO G $\frac{1}{2}$ ", NPT $\frac{1}{2}$ ", UNF 3/4" - 16"
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Housing classification	IP66
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Storage temperature range	-40 ... +80 °C (-40 ... +176 °F)
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Weight (ISO G $\frac{1}{2}$ ")	190 g (6.70 oz)
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Complies with EMC standard EN61326-1, Electrical equipment for measurement control and laboratory use - EMC requirements; Industrial environment



Dimensions in mm (inches)



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