Álava Ingenieros
GRUPO ÁLAVA

VAISALA

DMT132 Dew Point Transmitter

For Refrigerant Dryers

Features

- High accuracy ±1 °C (±1.8 °F) in the measurement range of refrigerant dryers
- Excellent long-term stability - resistant to compressor oil and most other chemicals thanks to HUMICAP® technology
- Low power requirements, 10 ... 28 VDC
- Easy to verify functionality with compatible Vaisala DM70 or HM70 hand-held meters
- Optional LED warning light

Vaisala HUMICAP® Dew Point Transmitter DMT132 is an affordable dew point measurement instrument designed to verify the functionality of refrigerant dryers. It is especially well suited for OEM dryer manufacturers.

Direct Measurement Cuts Costs

Direct outlet air dew point measurement provides accurate information about dryer functionality and is more reliable than the traditional method of measuring refrigerator temperature only. Knowledge of the real dew point ensures high quality compressed air at all times and enables customers to optimize dryer capacity. This helps to prevent investment in redundant dryer capacity and avoid unnecessary maintenance and costly malfunctions.

High Accuracy and Long-Term Stability

DMT132 provides optimal performance in the operating range of refrigerant dryers. In the measurement range of -3 ... 20 °C (+26.6 ... +68 °F), where the refrigerator dryers typically operate, the T_d accuracy is ±1 °C (±1.8 °F). The instrument incorporates the proven Vaisala HUMICAP® sensor, which is resistant to compressor oil and most other chemicals, thereby providing excellent long-term stability.

Quick Installation and Easy Field Checking

It takes just a few minutes to install DMT132 directly into a dryer or compressed air line through a G1/2″ ISO thread. Vaisala sampling cells can also be used. The loop-powered electronics mean that wiring is easy and power requirements are low. DMT132 operating voltages can be as low as 10 VDC.

Verifying the performance of DMT132 is easy with the compatible Vaisala DM70 or HM70 hand-held meters. The user can perform possible adjustments with Vaisala HMK15 Humidity Calibrator.

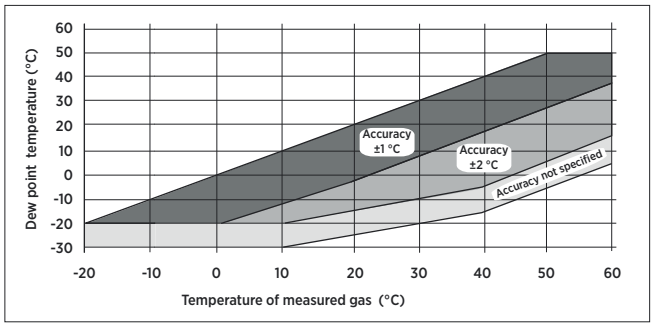
Demand for dew point sensors to verify refrigerant dryers is increasing. Direct dew point measurement enables energy savings and improved efficiency.

Technical Data

Measurement Performance

Measurement range	-30 ... +50 °C (-22 ... +122 °F) T_d
Accuracy at +20 °C (+68 °F)	±1 °C for -3 ... 20 °C (+26.6 ... +68 °F) T_d[1)] ±2 °C for -15 ... -3 °C (+5 ... +26.6 °F) T_d[1)] See accuracy graph below
Typical Response Time at 20 °C (+68 °F) Gas Temperature and 1 Bar Pressure	
-14 → +3 °C (+7 → +37 °F) T_d	17 s (63 %) 40 s (90 %)
+3 → -14 °C (+37 → +7 °F) T_d	33 s (63 %) 85 s (90 %)
Calculated Variables	
Dew point converted to atmospheric pressure	T_{df} atm

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



Operating Environment

Operating temperature	-20 ... +60 °C (-4 ... +140 °F)
Operating pressure	0 ... 20 bar
Relative humidity	0 ... 100 %RH
Sample flow rate	No effect on measurement accuracy
Measured gases	Non-corrosive gases
EMC compliance	EN61326-1, Industrial Environment

Outputs

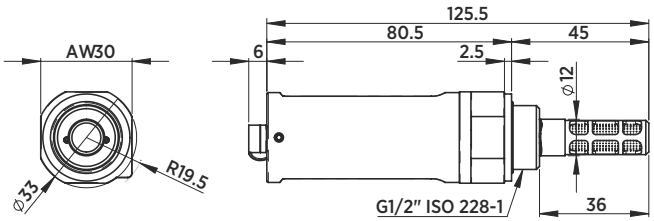
Analog output (scalable)	4 ... 20 mA, 2-wire
Resolution for current output	0.002 mA
Accuracy of analog outputs at +20 °C	±0.05 % full scale
Typical temperature dependence	±0.005 % of full scale/ °C
Connector	4-pin M8 (IEC 60947-5-2)
LED indication available for defined dew point limit/error state indication RS-485 serial line for service use	

Mechanical Specifications

Sensor	Vaisala HUMICAP® 180R
Recommended calibration interval (in refrigerant dryer application)	2 years
Mechanical connection	G1/2" ISO
Operating voltage	10 .... 28 VDC
External load	Max. 100 Ω for supply voltages < 20 VDC Max. 500 Ω for supply voltages 20 ... 28 VDC
Weight	65 g (2.3 oz)
Housing material	PPS + 40 % GF
IP rating	IP65 (NEMA 4)
Storage temperature range	-40 ... +80 °C (-40 ... +176 °F)
Start-up time	3 s

Spare Parts and Accessories

Tube filter	230602
Special cover set for HMK15 (calibrator fitting DMT132 and HMP60)	230914
NPT Adapter	210662SP
Sample cells	DMT242SC, DMT242SC2, DSC74, DSC74B, DSC74C, DMCOIL
Duct installation flange	DM240FA
Cables (several lengths available)	HMP50Z032, HMP50Z300SP, HMP50Z500SP, HMP50Z1000SP
Loop powered external display	226476
USB service cable	219690
Connection cable to DM70/HM70	219980
LED plug	230388
ISO 1/2" plug	218773
NPT 1/2" plug	222507
Sealing ring set (3 pcs U-seal)	221525SP



Dimensions in mm

CE

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