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DMT132 Dewpoint Transmitter for Refrigerant Dryers

The optional LED warning light tells the user when the defined dew point limit has been exceeded.

Features / Benefits

- Affordable dew point transmitter for refrigerator dryers
- High accuracy ±1°C (±1.8°F) in the measurement range of refrigerator 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 hand-held meters DM70 or HM70
- Optional LED warning light

The Vaisala HUMICAP® Dewpoint 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

The 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 Td 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 the 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 the DMT132 is easy with the compatible Vaisala hand-held DM70 or HM70 meters. The user can perform possible adjustments with the 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

Performance

DEWPOINT

Measurement range	-20 ... +50 °C (-4 ... +122 °F) Td
Accuracy (at +20 °C (+68 °F))	±1 °C for -3...20 °C (+26.6 ... +68 °F) Td
	±2 °C for -15...-3 °C (+5 ... +26.6 °F) Td
	see accuracy graph below

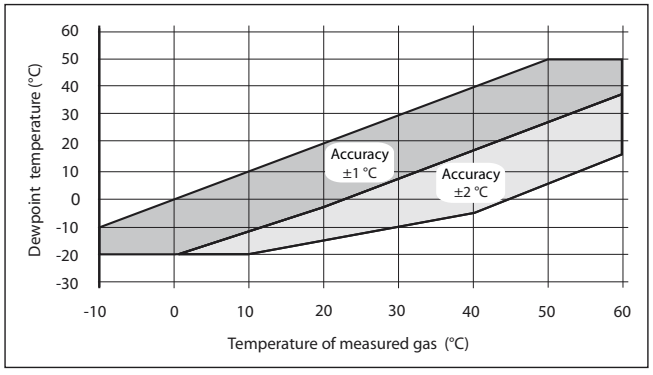
* when dewpoint is below 0 °C (+32 °F), the transmitter outputs frostpoint

Response time at 20 °C (+68 °F) gas temperature and 1 bar pressure

-20 -> +50 °C (-4 -> +122 °F) Td	17 s (63%)
	40 s (90%)
+50 -> -20 °C (+122 -> -4 °F) Td	33 s (63%)
	85 s (90%)

CALCULATED VARIABLES

Dewpoint converted to atmospheric pressure	Tdf atm



Operating environment

Operating temperature	-10 ... + 60 °C (+14 ... +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

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 dewpoint limit/ error state indication	
RS485 serial line for service use	

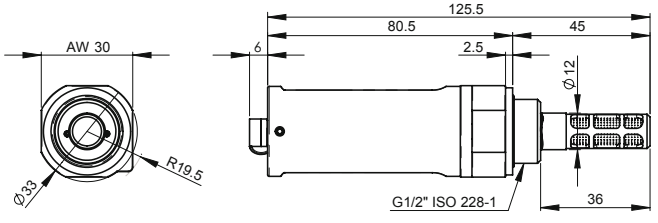
General

Sensor	Vaisala HUMICAP®180R
Recommended calibration interval (in refrigerant dryer application)	2 years
Mechanical connection	G 1/2" ISO
Operating voltage	10 .... 28 VDC
External load	max 100 ohm for supply voltages <20 VDC
	max 500 ohm for supply voltages 20...28 VDC
Weight	65 g (2.3 oz)
Housing material	PPS + 40% GF
Housing classification	IP65 (NEMA 4)
Storage temperature range	-40 ... + 80 °C (-40 ... +176 °F)
Start-up time	3 s

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

Options 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
NPT1/2" plug	222507
Sealing ring set (3 pcs U-seal)	221525SP



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