

Compact Dew Point Temperature Transmitter for OEM Applications

Application:

The exact monitoring of dew point temperature in compressed air systems, dryers for plastic and other industrial processes is becoming increasingly more important. The OM375 is designed for measurement of low dew points in OEM applications down to -60°C . The core of the transmitter is the monolithic measurement cell type HMC01 developed by Omicron Sensing in thin-film technology. An autocalibration procedure which is integrated in the device and years of experience in low humidity adjustment make an accuracy of $<2^{\circ}\text{C Td}$ ($\pm 3.6^{\circ}\text{F Td}$) possible. The transmitter has one analogue output for dew point, frost point or ppm volume concentration.



Technical Data:

Measuring Quantities

Dew Point (Td)

Dew Point Sensor

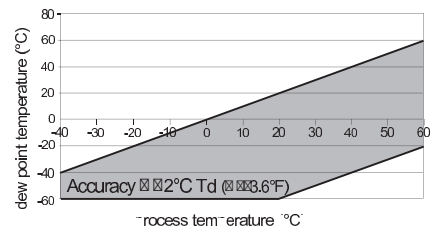
Measuring Range

Accuracy

Traceable to intern. standards, administrated by
NIST, PTB, BEV...

HMC01

-25°C to + 65°C



Response Time t_{90} : 80 sec. -20°C Td \rightarrow -40°C Td (-4°F Td \rightarrow -40°F Td)
10 sec -40°C Td \rightarrow -20°C Td (-40°F Td \rightarrow -4°F Td)

Volume concentration

Measuring range : 20...200 000ppm

Accuracy at 20 °C (68 °F) and 1013mbar : 5ppm + 20% of reading

Outputs

Selectable and scalable : 0 - 10V -1mA < I_L < 1mA
analogue output for Td, Tf, Wv : 4 - 20mA R < 500 Ohm

General

Supply Voltage : 21...28V DC

Current Consumption at 24V DC : voltage output: typ. 40mA / during autocalibration: 100mA
current output: typ. 80mA / during autocalibration: 100mA

Pressure Range : 0...20bar (0...290psi)

Housing / protection class : Al Si Cu 3 / IP65

Electrical connection : M12 connector

Sensor protection : stainless steel sintered filter

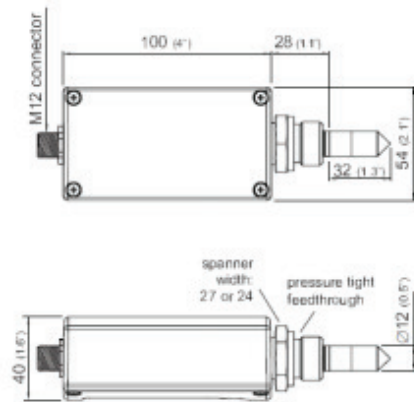
Working temperature range : probe: -40...70°C (-40...158°F)
electronic: -40...60°C (-40...140°F)

Storage temperature range : -40...60°C (-40...140°F)

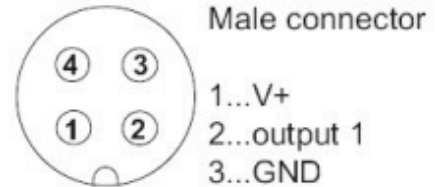
Electromagnetic compatibility : EN 61326-1 EN61326-2-3 ICES-003 ClassB
according to Industrial Environment FCC Part 15 ClassB

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⚙️ Dimensions in mm



⚙️ Connection Diagram



HOW TO ORDER

⚙️ Hardware Configuration:

		OM375
Nominal Size(mm)	100	T
Pressure range	up to 20bar (29 psi)	E
Pressure tight feedthrough	G1/2" male thread	HAO3
	1/2" NPT thread	HAO7
	5/8"-18 UNF	HAO8

⚙️ Output Configuration :

Physical parameters of the output	:	dew point temperature	Td	(°C/° F)	output	C
		frost point temperature	Tf	(°C/° F)		D
		volume concentration	Wv	(ppm)		P
Type of output signal	:	0-10V				3
		4-20mA				6
Measured value units	:	metric / SI				
		non metric / US				E01
Scaling of Td/Tf-output: (in °C or °F)	:	-40...60 (Td/Tf02)	-60...20 (Td/Tf65)	Other Td/Tf-scaling refer to data sheet		Select according to order guide (Tdxx or Tfxx)
		10...50 (Td/Tf03)	"	T-Scalings"		
ppm range Wv	:	0...100ppm	(X01)			
		0...500ppm	(X02)			select according to Ordering Guide
		0...1000ppm	(X03)	other measuring range:		

Ordering Example : OM375-TEHA07/C3-TD03