SENSOVANT *Smart Sensing*

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EE375 Series

Compact Dew Point Temperature Transmitter for OEM Applications

The exact monitoring of dew point temperature in compressed air systems, dryers for plastic and other industrial processes is becoming increasingly more important.

The EE375 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 E+E Elektronik 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°C Td (±3.6°F Td) possible.

The transmitter has one analogue output for dew point, frost point or ppm volume concentration.

EE375

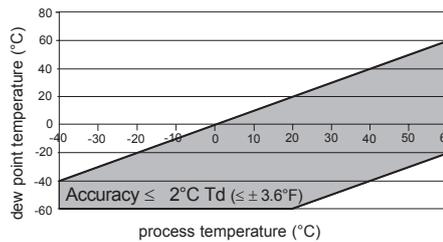## Technical Data

Measuring Quantities

Dew point (Td)

Dew point sensor	HMC01
Measuring range	-60...60°C Td (-76...140°F Td)
Accuracy	
Traceable to intern. standards, administrated by NIST, PTB, BEV...	

Response time t_{90}	80 sec.	-20°C Td → -40°C Td	(-4°F Td → -40°F Td)
	10 sec.	-40°C Td → -20°C Td	(-40°F Td → -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 scaleable	0 - 10V	-1mA < I_L < 1mA
analogue output for Td, Tf, Wv	4 - 20mA	R_L < 500 Ohm

General

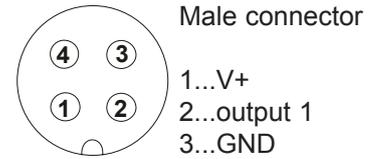|		
Supply voltage	21...28V DC	
Current consumption at 24V DC	voltage output: typ. 40mA / during autocalibration: 100mA	
	current output: typ. 80mA / during autocalibration: 140mA	
Pressure range	0...20bar (0...290psi)	
System requirements for software	WINDOWS 2000 or later; serial interface	
Serial interface for configuration	RS232C	
Housing / protection class	Al Si 9 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 according to	EN 61326-1 EN61326-2-3 ICES-003 ClassB	
	Industrial Environment FCC Part15 ClassB	CE

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Dimensions in mm

M12 connector

100 (4") | 28 (1.1")

54 (2.1")

32 (1.3")

spanner width: 27 or 24

pressure tight feedthrough

Ø12 (0.5")

40 (1.6")

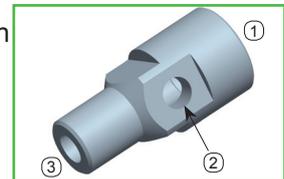## Connection Diagram

Male connector

4 3
1 2

1...V+
2...output 1
3...GND
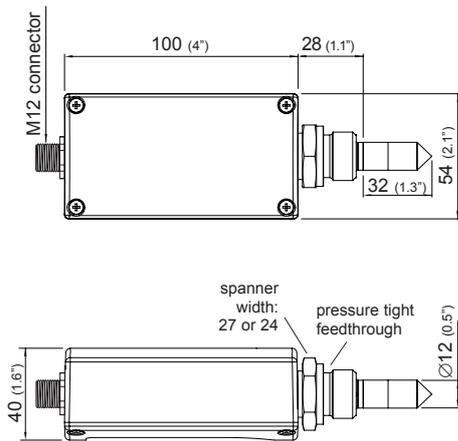
Basic Sampling Cell

The basic sampling cell offers the possibility to integrate the EE375 into an existing or self-constructed sampling system.
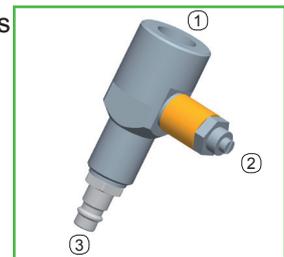
1 = G 1/2" ISO / 2 = G 1/4" / 3 = G 1/4"

Sampling Cell with Quick Connector up to 10 bar (145psi)

The sampling cell is specially developed for use in compressed air lines and has a quick-connector suitable for standard compressed air connections.
It allows for the cell to be fitted and removed without interrupting the process.
The flow of gas can be adjusted using a bleed screw.

1 = G 1/2" ISO / 2 = Bleed screw / 3 = Quick connector

Ordering Guide

						EE375-
Hardware Configuration						
Model	transmitter					**T**
Pressure range	up to 20bar (290psi)					**E**
Pressure tight feedthrough	G1/2" male thread					**HA03**
	1/2" NPT thread					**HA07**
	5/8"-18 UNF					**HA08**
Software 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**		**Select accorcding to**
	-10...50 **(Td/Tf03)**			**refer to data sheet "T-Scalings"**		**order guide (Tdxx or Tfxx)**
ppm range Wv	0...100ppm **(X01)**					**select according to**
	0...500ppm **(X02)**					**Ordering Guide**
	0...1000ppm **(X03)**		other measuring range: _____			

Accessories

- sampling cell with quick connector (HA050102)
- basic sampling cell (HA050103)
- configuration software + interface cable (HA010604)

- stainless steel sintered filter (HA010103)
- display (D08)

Order Example

EE375-TEHA07/C3-Td03

Model: transmitter
Pressure range: up to 20bar (290psi)
Pressure tight feedthrough: 1/2" NPT thread
Output: Td

Output signal: 0-10V
Measured value unit: metric
Scaling of output: -10...50°C

EE375