

EE375 Series

Compact Dew Point Temperature Transmitter for OEM Applications

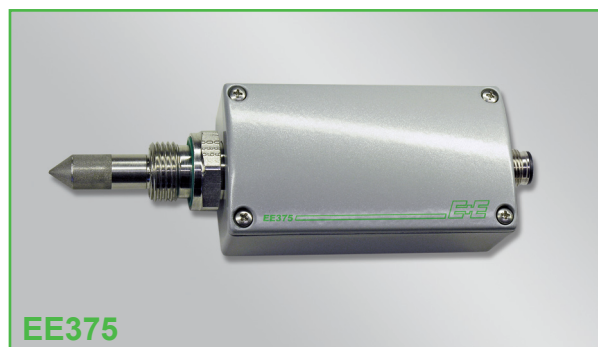
The exact monitoring of dew point temperature in compressed air systems, dryers for plastic and other industrial processes is becoming increasingly more important.

The EE375 is designed for measurement of low dew points in OEM applications down to -60°C (-80°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 $<2^{\circ}\text{C Td}$ ($\pm 3.6^{\circ}\text{F Td}$) possible.

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



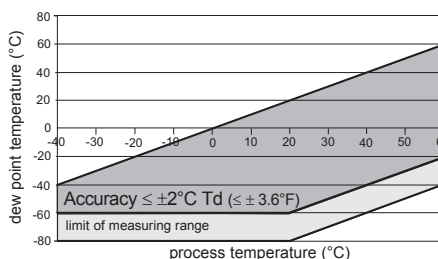
EE375

Technical Data

Measuring Quantities

Dew point (Td)

Dew point sensor	HMC01
Measuring range	$-80 \dots 60^{\circ}\text{C Td}$ ($-112 \dots 140^{\circ}\text{F Td}$)
Accuracy	$\leq \pm 2^{\circ}\text{C Td}$ ($\leq \pm 3.6^{\circ}\text{F}$)
Traceable to intern. standards, administrated by NIST, PTB, BEV...	



Response time t_{90}	80 sec.	$-20^{\circ}\text{C Td} \rightarrow -40^{\circ}\text{C Td}$	$(-4^{\circ}\text{F Td} \rightarrow -40^{\circ}\text{F Td})$
	10 sec.	$-40^{\circ}\text{C Td} \rightarrow -20^{\circ}\text{C Td}$	$(-40^{\circ}\text{F Td} \rightarrow -4^{\circ}\text{F Td})$

Volume concentration

Measuring range	$20 \dots 200\,000\text{ppm}$
Accuracy at 20°C (68°F) and 1013mbar	$5\text{ppm} + 20\%$ of reading

Outputs

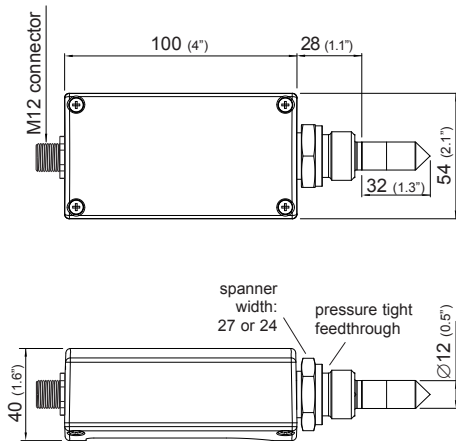
Selectable and scaleable analogue output for Td, Tf, Wv	0 - 10V	$-1\text{mA} < I_L < 1\text{mA}$
	4 - 20mA	$R_L < 500\ \Omega$

General

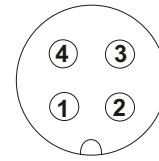
Supply voltage	$21 \dots 28\text{V DC}$
Current consumption at 24V DC	voltage output: typ. 40mA / during autocalibration: 100mA current output: typ. 80mA / during autocalibration: 140mA
Pressure range	$0 \dots 20\text{bar}$ ($0 \dots 290\text{psi}$)
System requirements for software	WINDOWS 2000 or later; 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: $-40 \dots 70^{\circ}\text{C}$ ($-40 \dots 158^{\circ}\text{F}$) electronic: $-40 \dots 60^{\circ}\text{C}$ ($-40 \dots 140^{\circ}\text{F}$)
Storage temperature range	$-40 \dots 60^{\circ}\text{C}$ ($-40 \dots 140^{\circ}\text{F}$)
Electromagnetic compatibility according to	EN 61326-1 EN61326-2-3 ICES-003 ClassB Industrial Environment FCC Part15 ClassB



Dimensions in mm



Connection Diagram



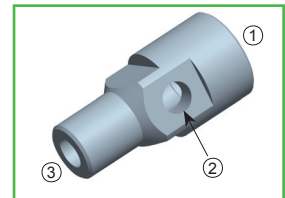
Male connector

- 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.

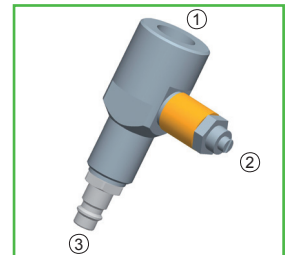
- 1 = G 1/2" ISO
- 2 = G 1/4"
- 3 = G 1/4"



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				E01
	non metric / US				E01
Scaling of Td/Tf-output	-40...60 (Td/Tf02)	-80...20 (Td/Tf63)		Other Td/Tf-scaling refer to page 146	Select according to order guide (Tdx or Tfx)
(in °C or °F)	-10...50 (Td/Tf03)	-60...20 (Td/Tf65)			
ppm range Wv	0...100ppm (X01)				select according to Ordering Guide
	0...500ppm (X02)				
	0...1000ppm (X03)	other measuring range: _____			

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