

EE355

OEM Dew Point Transmitter down to -60 °C Td

The compact EE355 Dew Point Transmitter with a measuring range down to -60 °C Td is ideal for applications in compressed air systems, plastic dryers and industrial drying processes. An integrated auto-calibration procedure permits a measurement accuracy of <2 °C Td.

The measured values for dew point, frost point or ppm volume concentration are available on an analog 4-20 mA and a digital Modbus RTU output. Integration into the measurement task is simplified by the compact design and the exceptionally robust stainless steel housing.

With an optional Modbus to USB converter and the free EE-PCS configuration software the user can adjust the transmitter, set the Modbus parameters, and change the scaling of the analog output.



Technical Data

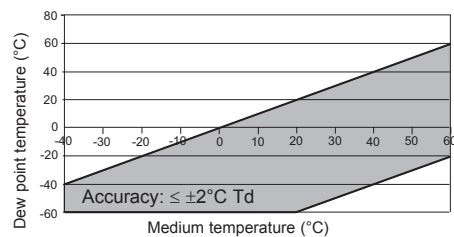
Measuring values

Dew point (Td)

Measurement range

-60...60 °C Td (-76...140 °F Td)

Accuracy ¹⁾



Response time t_{90}

< 5 min -20 °C Td (-4 °F Td) → -60 °C Td (-76 °F Td)
 < 15 sec -60 °C Td (-76 °F Td) → -20 °C Td (-4 °F Td)

Volume concentration (ppm)

Measurement range

20...200,000 ppm

Accuracy at 20 °C (68 °F) and 1013mbar

5 ppm + 9 % from measured value

Output

Analog output (scalable)

4 - 20 mA (3-wire technology) RL < 500 Ohm

Maximum adjustable scaling

-100...80 °C Td (-148...176 °F Td)

Resolution of analog output

2 µA

Digital interface

MODBUS RTU (max. 32 units in one bus)

Temperature dependence

±5ppm of the measuring span / °C (Deviating from 20 °C)

General

Supply voltage

18...28 V DC

Current consumption at 24V DC

<20 mA + load current /
 with autocalibration: 100 mA + load current

Pressure range of use

0...20 bar

Housing / protection class

Stainless steel AISI 316L / IP65

Electrical connection ²⁾

M12x1 5-pin plug

Sensor protection

Stainless steel sintered filter

Temperature / humidity operating range

-40...70 °C (-40...158 °F) / 0...100 % RH

Storage temperature range

-40...60 °C (-40...140 °F)

Electromagnetic compatibility

EN61326-1 EN61326-2-3 Industrial environment
 FCC Part 15 ICES-003 ClassB

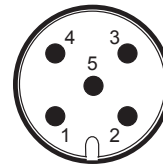
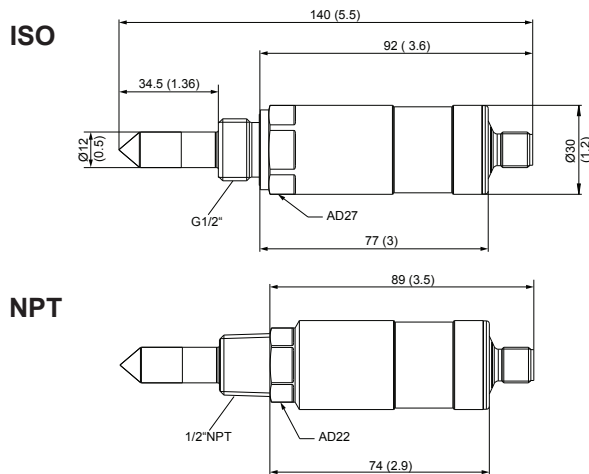


¹⁾ The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

²⁾ Field-attachable mating connector is included in the scope of supply.

Dimensions in mm (inch)

Connection Diagram

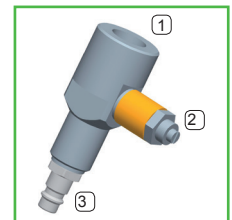


Plug

- 1...V+
- 2...Analog output 4-20mA
- 3...GND
- 4...RS485 A
- 5...RS485 B

Sampling Cell with Quick Connector

The sampling cell is specially developed for use in compressed air lines and has a quick-connector suitable for standard compressed air connections (DN7.2). 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. Pressure range: 0...10 bar (0...145 psi).



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

Ordering Information

				EE355-T63E	
Pressure-tight screw connection	G1/2" thread		A		
	1/2" NPT thread		C		
Software configuration					
Physical parameter for analog output	Dew point temperature		Td	[°C/°F]	TD
	Frost point temperature		Tf	[°C/°F] output for Td < 0	
	volume fraction of water vapor		Wv	[ppm]	
Scaling of analog output	see chart Scaling Range (e.g. TD002 for -40...60 °C Td)				xxx
Measured value unit	metric [°C]				M
	non metric [°F]				N

Scaling Range

Dew point TD or Frost point TF (in °C or °F)						volume fraction of water vapor WV			
002	-40...60	063	-80...20	083	-40...140	001	0...100	004	0...10000
003	-10...50	064	-60...60	141	-100...20	002	0...500	011	0...100000
010	-20...120	065	-60...20			003	0...1000		

Accessories

M12x1 5pin connection cable socket/flying leads 1.5m	HA010819	sampling cell with quick connector	HA050102
M12x1 5pin connection cable socket/flying leads 5m	HA010820	basic sampling cell	HA050103
M12x1 5pin connection cable socket/flying leads 10m	HA010821	stainless steel sintered filter	HA010103
Modbus - USB converter for EE35x	HA011013		

Order example

EE355-T63EA/TD065M

Pressure-tight screw connection: G1/2" thread
 Output: Dew point Td
 Output scaling: 4-20 mA = -60...20 °C Td
 Measured value unit: metric [°C]