

# TE-660

## OEM Dew Point Transmitter down to -60 °Cdp

The compact TE-660 Dew Point Transmitter with a measuring range down to -60 °Cdp 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 °Cdp.

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

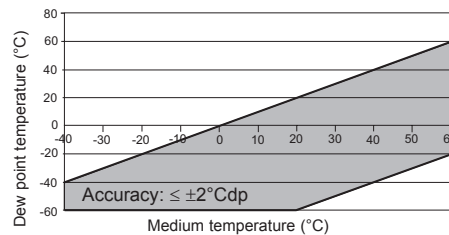
#### Measuring values

##### Dew point (dp)

Measurement range

-60...+20 °Cdp (Max. Measurement range -100...+80 °Cdp)

Accuracy <sup>1)</sup>



Response time  $t_{90}$

< 5 min -20 °Cdp ( -4 °F Td) → -60 °Cdp ( -76 °F Td)  
< 15 sec -60 °Cdp ( -76 °F Td) → -20 °Cdp ( -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 °Cdp (-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...80 bar

Housing / protection class

Stainless steel 1.4404 (AISI 316L) / IP65

Electrical connection <sup>2)</sup>

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

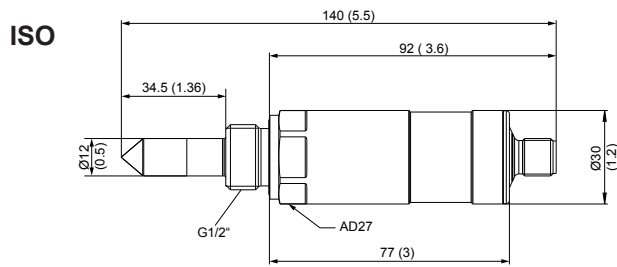
EN61326-1 EN61326-2-3 Industrial environment  
FCC Part 15 ICES-003 ClassB



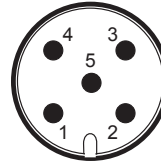
<sup>1)</sup> The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

<sup>2)</sup> 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 (=D+)
- 5...RS485 B (=D-)

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