ATEX certification for use in potentially explosive environments

with output 4 – 20 mA

Programmable transmitters T3110Ex, T3111Ex, T3113Ex

- Accurate measurement of:
  - Temperature
  - Humidity
  - Dew Point
- Industrial design with protection up to IP65
  - integrated sensors
  - Compatibility with an external probe
- ATEX - certified design suitable for potentially explosive atmospheres (Zone 2)

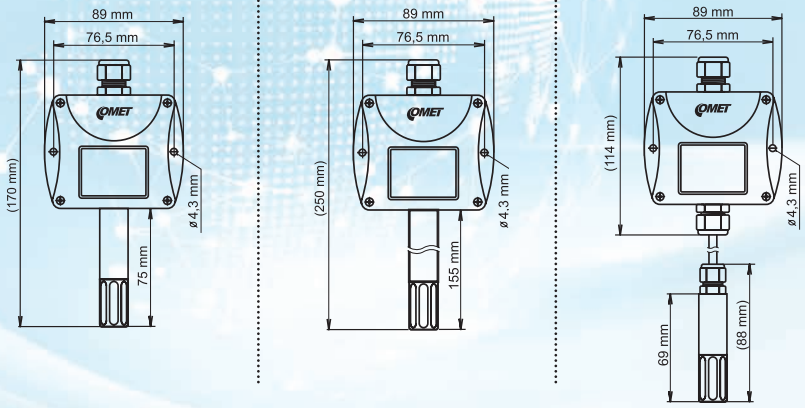
Two identical Zener barriers, ZB1 and ZB2, are housed in a common case.

product catalog for analogue sensors

T311xEx transmitters are intrinsically safe, which is a method of equipment protection based on limiting the energy (both electrical and thermal) to a level below that which could cause ignition in specific hazardous atmospheric mixtures. Elemental types of intrinsically safe interfaces, such as intrinsically safe Zener barriers and intrinsically safe isolation amplifiers, are designed to protect electrical circuits installed in potentially hazardous areas.

MEASURED VALUES		Temperature + relative humidity		
SENSOR MODEL		T3110Ex	T3113Ex	T3111Ex
temperature	range	-30 to +80 °C	-30 to +125 °C	-30 to +105 °C
	accuracy	±0,4 °C		
relative humidity	range	0 to 100 % RH		
	accuracy	±2,5 % RH from 5 to 95 % at 23 °C		
computed values		YES		
output		4-20 mA		
protection class of the case		IP65 / IP40		

Absolute humidity
Dew point temperature
Mixing ratio
Specific humidity
Specific enthalpy



Example of connecting an analog sensor to an Ethernet network.

Zener barrier ZbC2 +

Ex	II	(3)G	Ex ic Gc	IIC

certificate: FTZU 22 ATEX 0018X

Key features

- **Two identical Zener barrier ZB1 and ZB2 in the common housing**
- **Positive polarity with return diode**
- **Series resistance Rs1 = 355 Ω (terminals 1-5, terminals 3-7)**
  Rs2 = 42 Ω (terminals 2-6, terminals 4-8)
- **Fuse rating 40 mA**
- **DIN rail mounting in a safe area**
- **Voltage Uo 29,4 V**
- **Current Io 96 mA**
- **Resistance Romin. 306 Ω**

The Zener barrier is a certified intrinsically safe interface. It is used to connect a certified intrinsically safe device located in a potentially explosive atmosphere (Hazardous area) to a non-certified device that is in a safe area.