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P3110E Economy humidity and temperature transmitter with 4-20mA outputs



code: P3110E

Low cost ambient temperature, relative humidity transmitter. Outdoor, indoor use.

Built-in relative humidity, temperature sensors.

Included in delivery:

- Traceable calibration certificate
- Quick start manual

Features

Relative humidity and temperature transmitter is equipped with temperature and relative humidity sensors. Transmitter contains a microprocessor based control circuitry in a durable plastic case with connection terminals and sensors in a filter with stainless steel mesh. Humidity transmitters is equipped with two galvanic isolated 4-20mA outputs. Computerized design ensures temperature compensation of the humidity sensor and fail indication. State-of-the-art capacitive polymer sensor ensures excellent calibration long term stability, inertia against water and condensation. Transmitters are designed for use in non-aggressive environment.

APPLICATIONS - measuring and control of air humidity at:

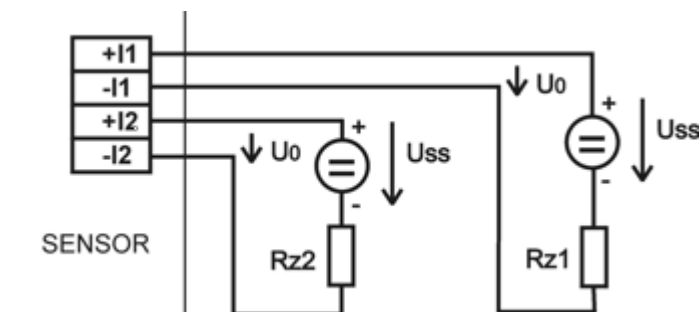
- building HVAC management
- building HVAC automation
- warehouses
- glasshouses
- manufacturers
- museums, archives, galleries

- air-conditioned rooms
- weather stations

Outputs are set to maximum range from the manufacturer -30 to +80°C and 0 to 100%RH.

If different adjustment of outputs is required, please specify required output values RH and T and required ranges in the order. Adjustment is free of charge.

Ordering example: Transmitter P3110E, output 1: RH 10 to 90%, output 2: temperature 0 to 35°C



Typical application wiring of dual output transmitter

Calculation of minimum power voltage U_{ss} for proper operation:

$$U_{ss \text{ min}} > U_{o \text{ min}} + I_{\text{max}} * R_z$$

where: $U_{o \text{ min}} = 9 \text{ V}$

I_{max} ... approximately 20 mA

R_z ... sensing resistor (shunt)

Both current loops (I1 and I2) are connected analogically, current loop I1 must be always connected.

Technical Data

Technical parameters	Value
Output	4-20mA
Measured Value	Temperature + Relative Humidity
Construction Type	Ambient Air
Design	Industrial
Temperature Measuring Range	-30 to 80 °C
Relay Output	No
Two-State Input	No
Lcd Display	No
PoE	No
Relative humidity range	0 to 100%
Accuracy of relative humidity measurement	±3.0% relative humidity from 5 to 95% at 23°C
Accuracy of temperature output	±0.6°C
Temperature operating range	-30 to +80°C
Range of humidity sensor temperature compensation	all temperature range
Current outputs - two-wire connection	4-20mA, galvanic isolated
Filtering ability of sensor cover	0.025mm - filter with stainless steel mesh

Protection of the case with electronics	IP65 electronics, IP40 sensors
Power	9-30Vdc
Dimensions	89 x 170 x 40 mm (W x H x D), stem length 75 mm
Weight	approximately 150g
Warranty	3 years