

# USER'S GUIDE

## EE210 - Humidity and Temperature Transmitter for demanding Climate Control Applications

### GENERAL

The EE210 transmitter, available for wall or duct mounting, is designed for the highly accurate measurement of humidity and temperature in demanding climate control applications. The EE210 incorporates the E+E humidity and temperature sensor HCT01.

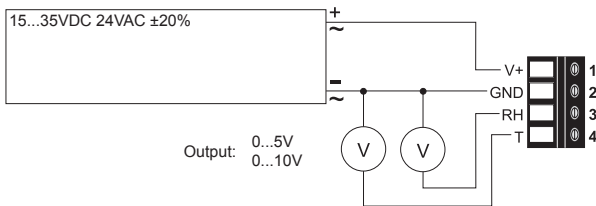
For use in special applications do not hesitate to contact E+E Elektronik or a local distributor.

### CAUTION

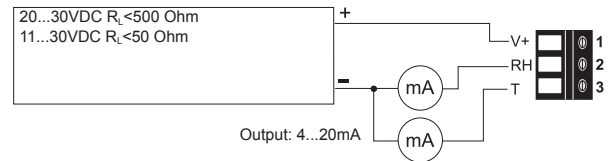
- For accurate measurement it is essential that the temperature of the sensing probe and mainly of the sensing head is same as the temperature of the air to measure. Avoid mounting the EE210 transmitter in a way which creates temperature gradients along the probe.
- The transmitter and mainly the sensing head shall not be exposed to extreme mechanical stress.
- The transmitter must be operated with the filter cap on at all times. Do not touch the sensors inside the sensing head.
- While replacing the filter cap ( because of pollution for instance) against an original E+E spare one please take very good care to not touch the sensors.

### CONNECTION DIAGRAM

EE210-HT3



EE210-HT6



### LED INDICATION

**Green LED** - information to normal operation mode:

- on = everything OK
- flashing = the main board does not recognize the measurement electronics inside the sensing probe
- off = no power supply or main board failure

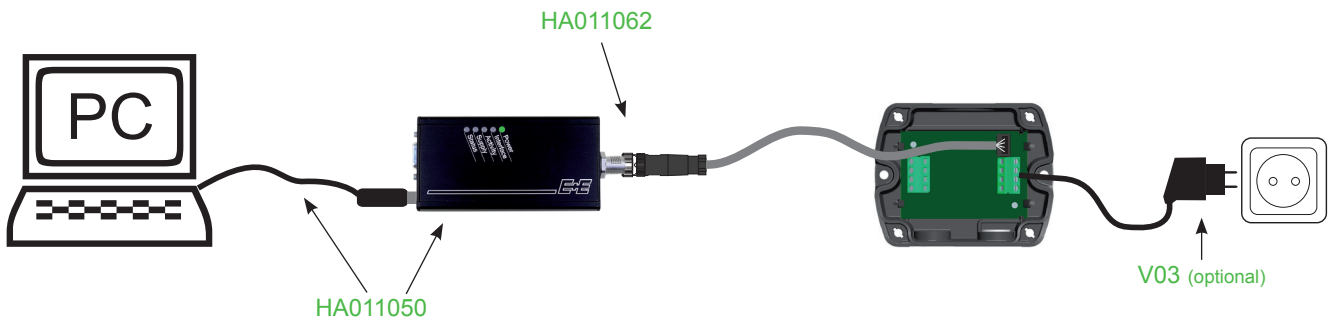
**Blue LED** - information during setup with the optional E+E Configuration Kit:

- on = E+E Product Configuration Adapter (EE-PCA) is powered, no communication in progress
- flashing = EE-PCA powered, communication in progress
- off = EE-PCA not connected to the EE210

### SETUP AND ADJUSTMENT

The EE210 transmitter is ready to use and does not require any configuration by the user. The factory setup of EE210 corresponds to the type number ordered. Ordering guide please see data sheet at [www.epluse.com/EE210](http://www.epluse.com/EE210).)

If needed, the user can change the factory setup by using the optional E+E Product Configuration Adapter (EE-PCA) and the E+E Product Configuration Software (EE-PCS).



One can assign other physical quantities to the analogue outputs, change the scaling of the outputs and perform one or two point adjustment for humidity and temperature.

For product data sheets EE-PCS and EE-PCA please see [www.epluse.com](http://www.epluse.com).

The E+E Product Configuration Software (EE-PCS) is free and can be downloaded from [www.epluse.com/configurator](http://www.epluse.com/configurator).

## TECHNICAL DATA

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### Measured values

#### Relative Humidity

Sensor

Analog output 0...100% RH

E+E Sensor HCT01-00D

0-5 V

-1 mA < I<sub>L</sub> < 1 mA

0-10 V

-1 mA < I<sub>L</sub> < 1 mA

4-20 mA (two-wire)

R<sub>i</sub> ≤ 500 Ohm

Working range

0...100% RH

Accuracy (incl. hysteresis, non-linearity and repeatability)

-15...40°C (5...104°F) ≤90% RH

±(1.3 + 0.3%\*mv) % RH

-15...40°C (5...104°F) >90% RH

± 2.3% RH

-40...60°C (0...140°F)

±(1.5 + 1.5%\*mv) % RH

#### Temperature

Sensor

Pt1000 (tolerance class B, DIN EN 60751) integrated in HCT01

Analog output<sup>1)</sup>

0-5 V

-1 mA < I<sub>L</sub> < 1 mA

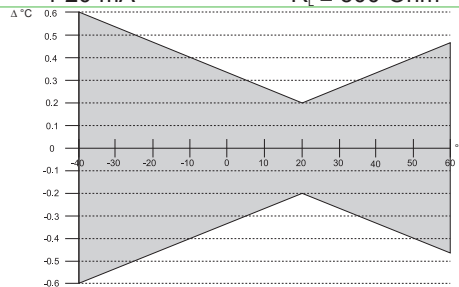
0-10 V

-1 mA < I<sub>L</sub> < 1 mA

4-20 mA

R<sub>i</sub> ≤ 500 Ohm

T-Accuracy



### General

Power supply

for 0-5 V / 0-10 V

for 4-20 mA

15 - 35V DC<sup>2)</sup> or 24V AC ±20%

10V + R<sub>i</sub> x 20 mA < V+ < 30V DC

Current consumption (voltage output)

with DC power supply typ. 5mA

with AC power supply typ. 13mA<sub>eff</sub>

Connection

Screw terminals, max. 1.5 mm<sup>2</sup>

Housing / protection class

Polycarbonate (UL listed) / IP65

Cable gland

M16 x 1,5

Sensor protection

E+E Coating

Electromagnetic compatibility

EN61326-1 EN61326-2-3

Industrial Environment



Temperature ranges

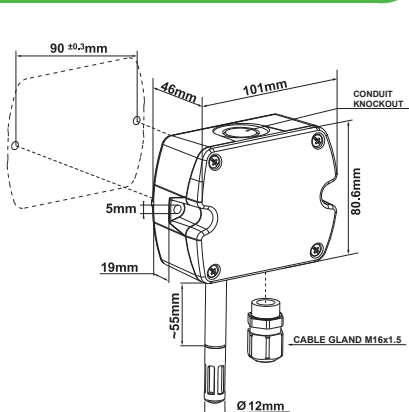
Operating temperature: -40...60°C (-40...140°F)

Storage temperature: -40...60°C (-40...140°F)

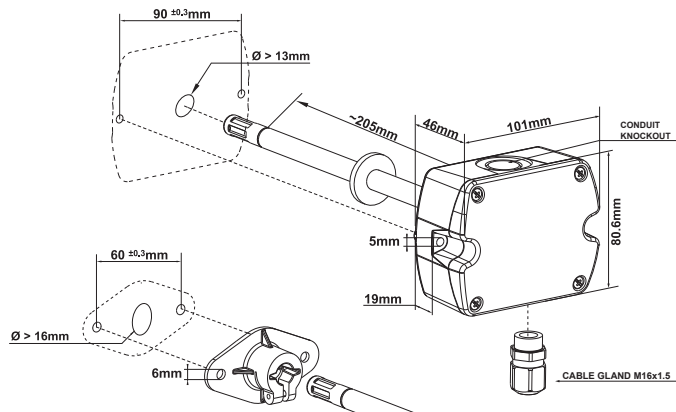
<sup>1)</sup> Output scaling see Ordering Guide

<sup>2)</sup> USA & Canada: class 2 supply required, max. supply voltage 30V

### DIMENSIONS



Typ A



Typ B

### INFORMATION

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