

USER'S GUIDE

EE210 Outdoor - Humidity and Temperature Transmitter for Outdoor and Meteorological Applications

GENERAL

The EE210 Outdoor transmitter is designed for measurements in demanding outdoor applications and is equipped with the HCT01 humidity and temperature sensor from E+E Elektronik.

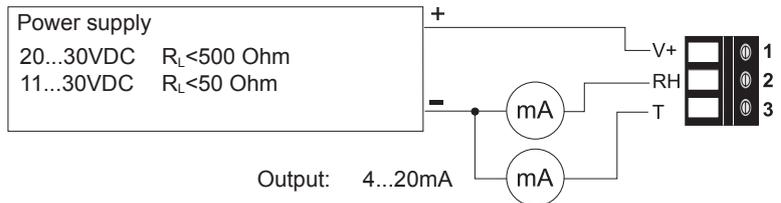
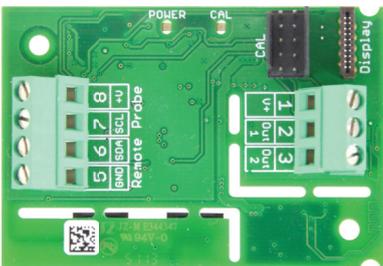
For use in special applications do not hesitate to contact E+E Elektronik or a local distributor.

CAUTION

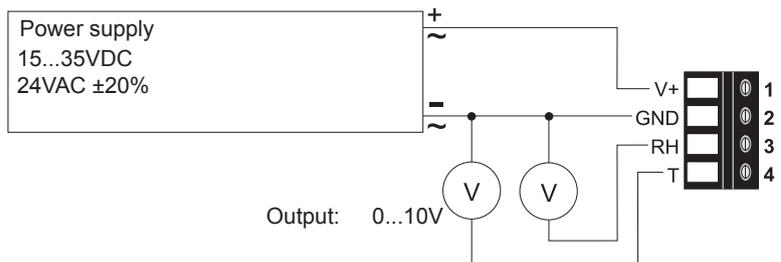
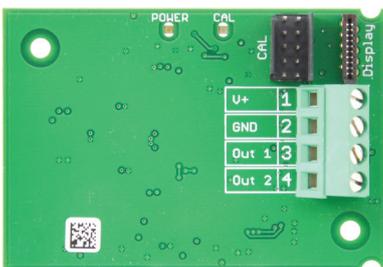
- For precise measurements in outdoor applications, the EE210 Outdoor must be mounted in a radiation shield (HA010501).
- The transmitter and mainly the sensing head shall not be exposed to extreme mechanical stress.
- The transmitter must be operated with the filter cap on at all times. Do not touch 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-HT6



EE210-HT3



LED INDICATION

POWER (green) - information during 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

CAL (blue) - 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 Outdoor

TECHNICAL DATA

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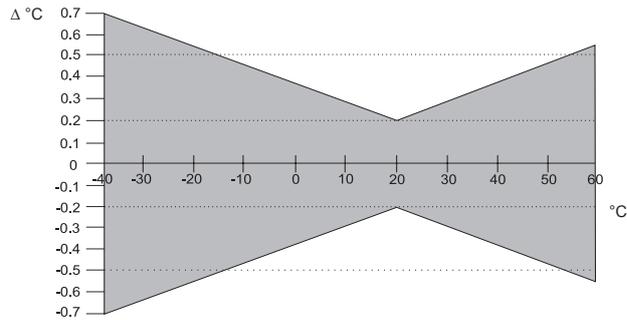
Measured Values

Relative Humidity

Sensor	E+E Sensor HCT01-00D	
Working range	0...100% RH	
RH accuracy ¹⁾		
-15...40°C (5...104°F) ≤ 90% RH		± (1.6 + 0.005*measured value) % RH
-15...40°C (5...104°F) ≥ 90% RH		± 3 % rF
-40...60°C (0...140°F)		± (2.3 + 0.008*measured value) % RH
Temperature dependence electronics	0.06% RH/°C	

Temperature

Sensor	Pt1000 (tolerance class B, DIN EN 60751) integrated in HCT01
T-accuracy ¹⁾	



Outputs

Analog output²⁾ (RH: 0...100%; T: see ordering guide)	0-10 V	-1 mA < I _L < 1 mA
	4-20 mA (two-wire)	250 ≤ R _L ≤ 500 Ohm

General

Power supply		
for 0-10 V	15 - 35V DC ³⁾ or 24V AC ±20%	
for 4-20 mA	24V DC ±10%	
Current consumption		
Voltage output	DC supply typ. 3.3mA AC supply typ. 34mA	
Current output	DC supply max. 40mA	
Connection	Screw terminals, max. 1.5 mm ²	
Housing material	Polycarbonate	
Protection class	IP65	
Cable gland	M16 x 1.5	
Sensor protection	E+E Coating	
Electromagnetic compatibility	EN61326-1 EN61326-2-3 Industrial Environment FCC Part 15 Class B ICES-003 Issue 5 Class B	
Temperature ranges	Operating temperature: -40...60°C (-40...140°F) Storage temperature: -40...60°C (-40...140°F)	



Radiation Shield

Material	Polystyrene
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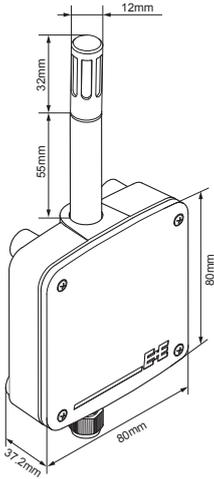
1) At 24V and 250 Ohm incl. hysteresis, non-linearity and repeatability

2) Output scaling see Ordering Guide

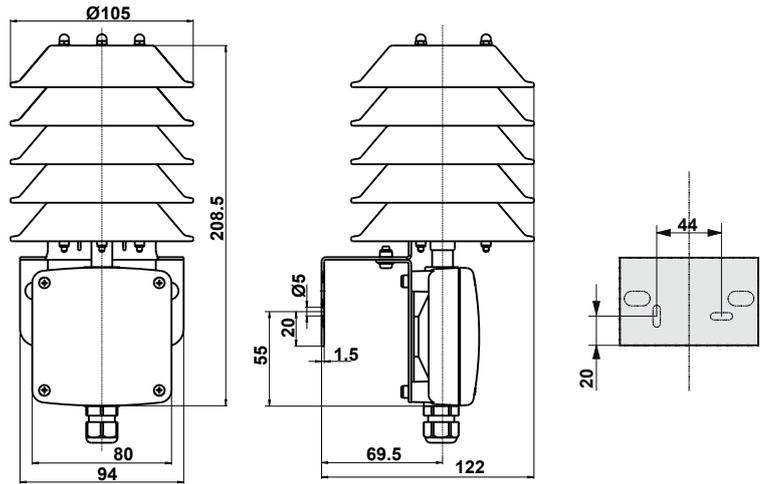
3) USA & Canada: class 2 supply required, max. supply voltage 30V

DIMENSIONS

EE210 Outdoor



Radiation shield HA010501 (ordered separately)



SETUP UND JUSTAGE

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

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.

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

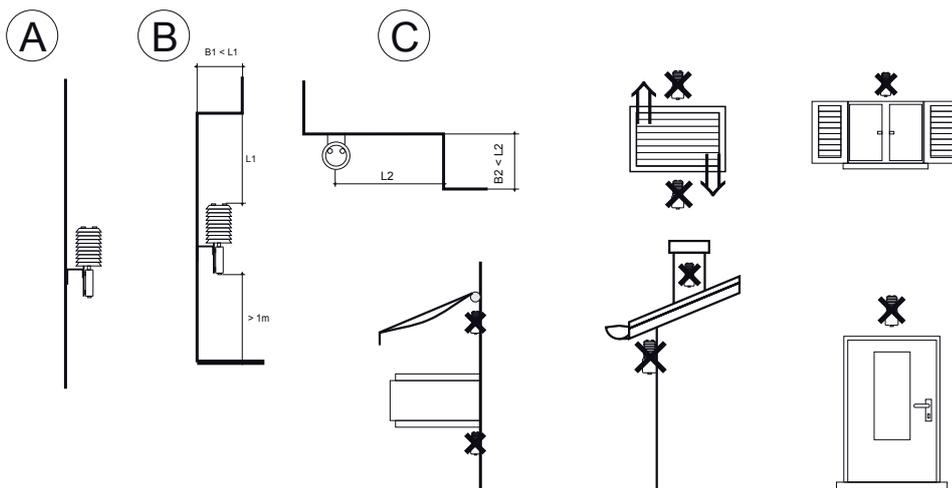
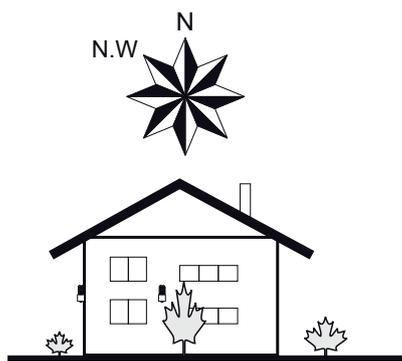
MAINTENANCE

When employed in dusty, polluted environment:

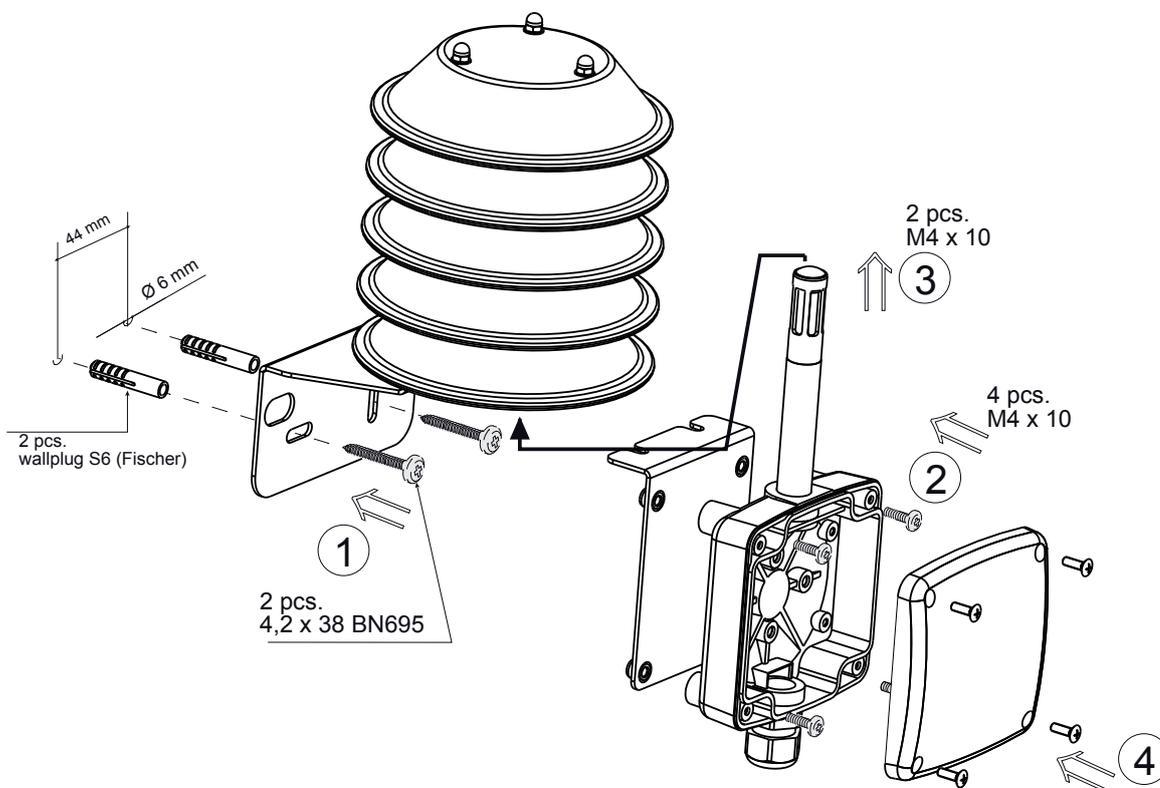
- The filter cap shall be replaced once in a while with an E+E original one. A polluted filter cap causes longer response time of the device.
- If needed, the sensing head can be cleaned. First remove the filter cap very carefully. Take care not to damage the sensing head. Shake the sensing head slowly for one minute in a solution of 50% isopropyl alcohol with 50% distilled water. Then the sensing head shall be rinsed with cold tap water and let dry freely. Do not touch or rub the sensing head! After cleaning the sensors carefully install a new E+E original filter cap.

RADIATION SHIELD (optional)

Mounting position



Mounting instruction



ACCESSORIES

- EE210 Outdoor
- 4x Mounting screws
- Certificate of calibration DIN EN 10204-3.1

INFORMATIONEN

+43 7235 605 0 / info@epluse.com

Langwiesen 7 • A-4209 Engerwitzdorf
Tel: +43 7235 605-0 • Fax: +43 7235 605-8
info@epluse.com • www.epluse.com

LG Linz Fn 165761 t • UID-Nr. ATU44043101
Place of Jurisdiction: A-4020 Linz • DVR0962759

