

# EE08 Series

## High-Precision Miniature Humidity / Temperature Transmitter

Accurate humidity / temperature measurement over a wide working range, fitted in a small-sized housing and high flexibility have been the main goals for the development of the EE08 series.

Low power consumption and short start-up time support efficient energy management for battery operated systems. For this application an additional version (V10) with supply voltage 4.5-15V DC has been developed.

Calibration data and other relevant functions like linearization or temperature compensation are stored in the probe. This feature, together with the optional connector, allows for easy replacement of the probe without a need for re-adjustment of the reading device (interchangeability).

The humidity and temperature measurement are available as analogue outputs (0-1/2.5/5V) or as a digital interface (E2-interface). Easy implementation and data processing is warranted.

Humidity and temperature reading can be re-adjusted using the calibration software; available as an accessory.



### Typical Applications

meteorology / weather stations  
humidity / temperature data logging  
incubators  
fermentation chambers  
green houses  
snow machines  
dry storage facilities

### Features

small dimensions  
wide working range, high accuracy  
traceable calibration  
customer adjustment possible  
interchangeable in seconds  
low power consumption / short start-up time  
analogue outputs / digital interface

### Technical Data

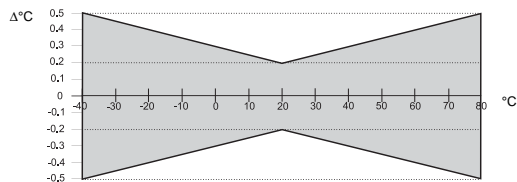
#### Measuring values

##### Relative Humidity

Sensor	HC101	
Working range <sup>1)</sup>	0...100% RH	
Digital output (2 wire) <sup>2)</sup>	output value: 0.00...100.00% RH	
Analogue output 0...100% RH	0-1/2.5/5/10V	-0.2mA < I <sub>L</sub> < 0.2mA
Accuracy at 20°C (68°F) and 10/24V DC	±2% RH (0...90% RH)	±3% RH (90...100% RH)
Temperature dependence	Traceable to intern. standards, administrated by NIST, PTB, BEV... typ. 0.03% RH/°C (typ. 0.02% RH/°F)	

##### Temperature

Sensor	Pt 1000 (DIN A)	
Digital output (2 wire) <sup>2)</sup>	output value: -40.00...+80.00°C (-40...176°F)	
Analogue output	0-1/2.5/5/10V	-0.2mA < I <sub>L</sub> < 0.2mA
Accuracy at 10/24V DC		



#### General

Supply voltage	output 0-1V / 0-2.5V	4.5-15V DC or 7-30V DC
	output 0-5V	7-30V DC
	output 0-10V	12-30V DC
Current consumption	typ. < 1.3mA	
Digital interface	E2-interface	level = 3.3V / ±0.1V
Housing	polycarbonate / IP65	
Sensor protection	metal grid filter	
Electromagnetic compatibility	EN 61000-6-3 EN 61000-6-2	
Temperature ranges	working temperature: -40...80°C (-40...176°F) storage temperature: -40...80°C (-40...176°F)	

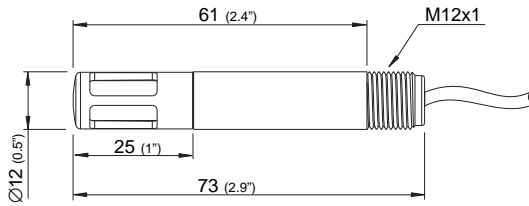
1) refer to the working range of the humidity sensor HC101

2) serial protocol refer to [www.epluse.com](http://www.epluse.com)

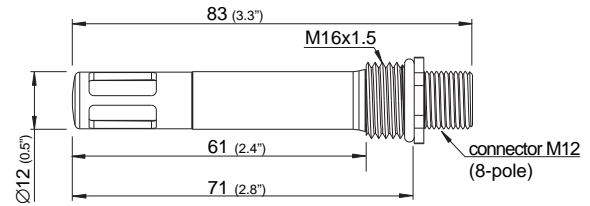


## Dimensions (mm)

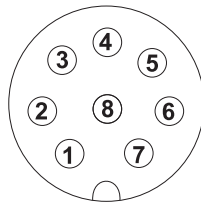
**EE08 with cable (Type E)**



**EE08 with connector (Type D)**



## Connection Diagram



Type D: pin assignment

- 1 T-passive
- 2 T-passive
- 3 GND
- 4 T-out
- 5 RH-out
- 6 SCL } E2-interface
- 7 SDA }
- 8 +UB

Type E: cable assignment

- white
- blue
- pink
- grey
- yellow
- green
- brown
- red

## Ordering Guide

HOUSING	MODEL	OUTPUT	SUPPLY	T-SENSOR (passive)	TYPE
polycarbonate (P)	humidity active / temperature active (FT)	0 - 1V <sup>1)</sup> (1)	4.5 - 15V DC (V10)	Pt 100 DIN A (A)	with connector (D)
	humidity active / temperature passive (FP)	0 - 2.5V <sup>1)</sup> (7)	7 - 30V DC (V11)	Pt 100 DIN B (B)	with cable (E)
		0 - 5V <sup>2)</sup> (2)		Pt 1000 DIN A (C)	
		0 - 10V <sup>2)</sup> (3)		Pt 1000 DIN B (D)	
<b>EE08-</b>					

1) possible with supply 4.5 - 15V DC (V10) or 7 - 30V DC (V11)  
 2) possible with supply 7 - 30V DC (V11) only

FILTER	COATING	CABLE LENGTH (Type E only)	T-SCALING
metal grid filter (6)	without coating (no code)	1m (3.3ft) (01)	-40...80 (T22)
	with coating (HC01)	2m (6.6ft) (02)	-40...60 (T02)
		5m (16.4ft) (05)	-30...70 (T08)
			-20...80 (T24)
			-20...50 (T48)
		other (Txx)	

## Order Example

**EE08-PFT2V11E602T22**

housing: polycarbonate  
 model: humidity active / temp. active  
 output: 0 - 5V  
 supply: 7 - 30V DC  
 type: with cable

filter: metal grid filter  
 coating: without  
 cable length: 2m (6.6ft)  
 T-scaling: -40...80°C (-40...176°F)

## Accessories / Replacement Parts

- M12 connection cable for type D, length 2m (6.6ft) (HA010320)
- M12 connection cable for type D, length 5m (16.4ft) (HA010321)
- E2-interface - RS232 converter (incl. calibration software) for testing purposes and customer adjustment (HA011005)
- radiation shield (HA010506)
- M12 flange coupling (HA010703)