

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

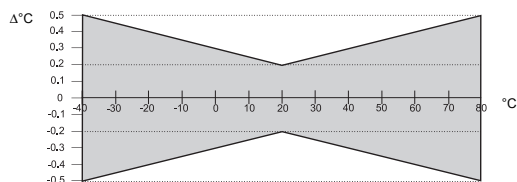
Measuring values

Relative Humidity

Sensor	HC101	
Working range ¹⁾	0...100% RH	
Digital output (2 wire) ²⁾	output value: 0.00...100.00% RH	
Analogue output 0...100% RH	0-1/2.5/5/10V	-0.2mA < I _L < 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) ²⁾	output value: -40.00...+80.00°C (-40...176°F)	
Analogue output	0-1/2.5/5/10V	-0.2mA < I _L < 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)	

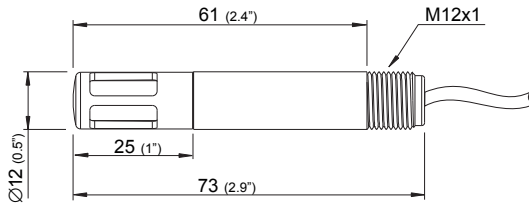
¹⁾ refer to the working range of the humidity sensor HC101

²⁾ serial protocol refer to www.epluse.com

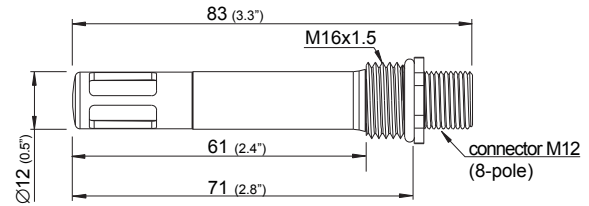


Dimensions (mm)

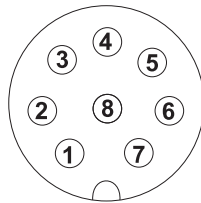
EE08 with cable (Type E)



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 / M12 connection cable

- 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 ¹⁾ (1)	4.5 - 15V DC (V10)	Pt 100 DIN A (A)	with connector (D)
	humidity active / temperature passive (FP)	0 - 2.5V ¹⁾ (7)	7 - 30V DC (V11)	Pt 100 DIN B (B)	with cable (E)
		0 - 5V ²⁾ (2)		Pt 1000 DIN A (C)	
		0 - 10V ²⁾ (3)		Pt 1000 DIN B (D)	
EE08-					

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 1,5m (5ft) (HA010322)
- M12 connection cable for type D, length 3m (10ft) (HA010323)
- E2-interface - RS232 converter (incl. calibration software) for testing purposes and customer adjustment (HA011005)
- radiation shield (HA010506)
- M12 female socket with wires (HA010703)
- M12 female cable connector assembly possible (HA010704)