

EE07

Interchangeable Humidity / Temperature Probes for OEM Applications

customer specific modifications possible

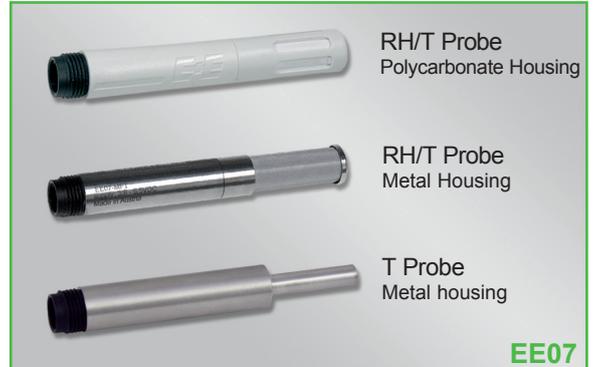
The compact EE07 humidity and/or temperature probe is based on a new electronic concept in combination with the miniaturized SMD humidity sensor element HC105 series. A wide humidity and/or temperature working range, compact dimensions of the polycarbonate or metal housing and appropriate filters allow for the use in a large variety of applications.

Calibration data and other measurement relevant functions (e.g. linearization or temperature compensation) are stored in the electronics, integrated in the probe.

In combination with the M12 connector, replacement in seconds without readjustment of the evaluation electronics is guaranteed.

The digital output signal allows for easy processing of the measurement results and cost efficient interfacing to customers electronics.

The configuration equipment allows humidity and temperature adjustment of the sensor.



Typical Applications

- humidifiers and dehumidifiers
- meteorological applications
- climate and ventilation control
- snowguns
- OEM applications

Features

- digital output
- interchangeable
- easy to install
- compact size
- highest accuracy
- traceable calibration
- easy interfacing to microcontroller

Technical Data

Measuring values

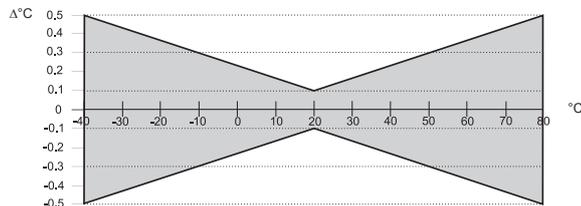
Relative Humidity

Sensor element	HC105	
Digital output (2 wire) ¹⁾	output value: 0.00...100.00% RH	
Working range ²⁾	0...100% RH	
Accuracy incl. hysteresis and nonlinearity	±2% RH (0...90% RH)	±3% RH (90...100% RH)
	Traceable to intern. standards, administrated by NIST, PTB, BEV...	
Temperature dependence	$< (0.025 + 0.0003 \times RH) \left[\frac{\% RH}{^{\circ}C} \right]$	

Temperature

Sensor element	Pt1000 (tolerance class A, DIN EN 60751)
Digital output (2 wire) ¹⁾	output value: -40.00...+80.00°C (-40...176°F)

Accuracy (at 20°C: ±0,1°C)



General

Supply voltage	3.8V DC - 5.5V DC	
Current consumption	< 1.5mA	
Housing	polycarbonate or stainless steel / IP65	
Sensor protection	membrane filter, PTFE filter, metal grid filter (polycarbonate), metal grid filter (stainless steel)	
Electromagnetic compatibility ³⁾	EN 61326-1 EN 61326-2-3	CE
Temperature range	working temperature:	-40...80°C (-40...176°F)
	storage temperature:	-40...60°C (-40...140°F)
max. cable length ⁴⁾	30m (98.4ft)	

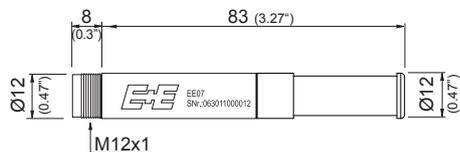
1) serial protocol refer to www.epluse.com

2) refer to the working range of the humidity sensor HC105

Housing Dimensions (mm)

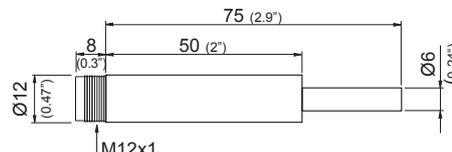
Humidity & Temperature Probes:

Metal Housing EE07-MFTx

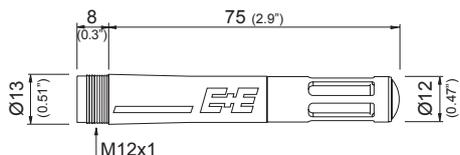


Temperature Probes:

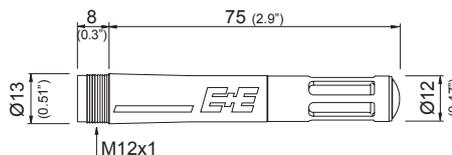
Metal Housing EE07-MT



Polycarbonate Housing EE07-PFTx



Polycarbonate Housing EE07-PT1



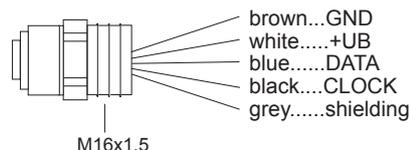
Connection Diagram

EE07:



- 1...GND
- 2...+UB
- 3...DATA
- 4...CLOCK

M12x1 flange coupling with 50mm (2") litz wire (HA010705):



Ordering Guide

Humidity & Temperature Probes:

HOUSING	MODEL	FILTER	COATING
metal ¹⁾ (M)	humidity and temperature (FT)	membrane filte (1)	without (no code)
polycarbonate (P)		PTFE filter (5)	with (HC01)
		metal grid filter (polycarbonate) (6)	
		metal grid filter (stainless steel) (9)	
		H ₂ O ₂ filter (8)	
EE07-			

1) The metal housing is only available with metal grid filter (stainless steel) (9)

Temperature Probes:

- Polycarbonate housing **EE07-PT1**
- Metal housing **EE07-MT**

Order Example

EE07-PFT6

- Polycarbonate housing
- Humidity and temperature
- Metal grid filter (polycarbonate)

EE07-MT

- Metal housing
- Temperature probe

Accessories

- M12x1 flange coupling with 50mm (2") litz wire (HA010705)
- filter caps (HA0101xx)
- radiation shield (HA010502)

Configuration equipment: The configuration equipment allows humidity and temperature adjustment of the sensor.

- configuration cable (HA011001)
- configuratin software: free download at www.epluse.com/configurator

