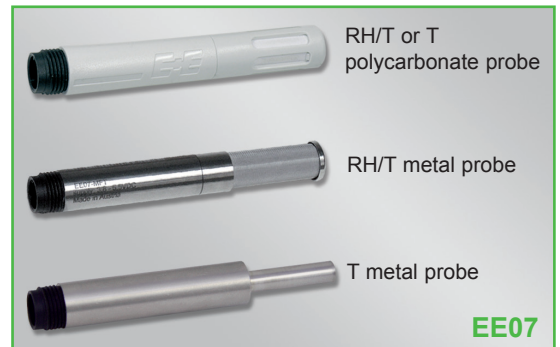


EE07

Interchangeable Humidity / Temperature Probes with Digital Output

EE07 is ideal for demanding climate control and OEM applications and features the well-proven E+E HC105 humidity (RH) sensor. It is available in polycarbonate or metal enclosure, as well as for temperature (T) measurement only.

The wide T working range, the T compensation and the choice of filter caps make EE07 appropriate for both indoor and outdoor use. Due to the excellent RH and T accuracy, the probe can be employed with the optional radiation shield even in meteorology. The E+E proprietary coating protects the humidity sensor against corrosion and dirt, which leads to best long term stability even in harsh environment.



The measured values are available on the serial E2 interface. The M12 connector allows for EE07 replacement within seconds. The user can perform the RH and T adjustment of the probe with the optional configuration kit.

Typical Applications

Demanding climate control
Outdoor and meteorology
OEM applications

Features

Outstanding RH and T Accuracy
Excellent long term stability
Digital output
Pluggable and interchangeable

Technical Data

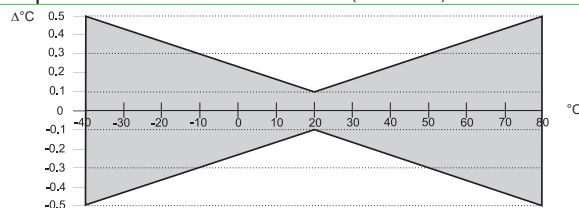
Measured values

Relative Humidity

Sensor element	E+E HC105	
Digital output (2 wire E2 interface) ¹⁾	output value: 0.00...100.00 % RH	
Working range	0...100 % RH	
Accuracy ²⁾ incl. hysteresis and nonlinearity	±2 % RH (0...90 % RH)	±3 % RH (90...100 % RH)
Temperature dependence	Traceable to intern. standards, administrated by NIST, PTB, BEV... < (0.025 + 0.0003 x RH) [$\frac{\% RH}{^{\circ}C}$]	

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 (68 °F): ±0.1 °C (±0.18 °F)	



General

Supply voltage (Class III)	3.8 V DC - 5.5 V DC	
Current consumption	< 1.5 mA	
Voltage digital interface	max. 3.5 V	
Housing	polycarbonate or stainless steel / IP65	
Electromagnetic compatibility ³⁾	EN 61326-1 EN 61326-2-3	
Temperature range	working temperature:	-40...80 °C (-40...176 °F)
	storage temperature:	-40...60 °C (-40...140 °F)
Max. cable length ⁴⁾	30 m (98.4 ft)	



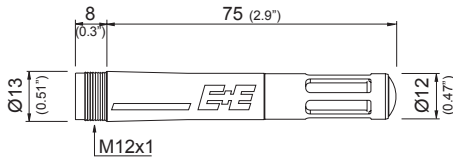
1) For details see support literature at www.epluse.com/EE07.

2) Traceable to intern. standards, administrated by NIST, PTB, BEV,... The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

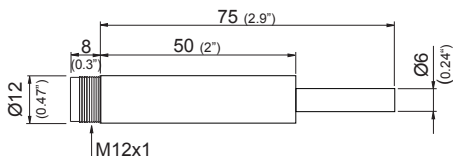
3) No protection against surge 4) Depends on the bus frequency

Dimensions (mm/inch)

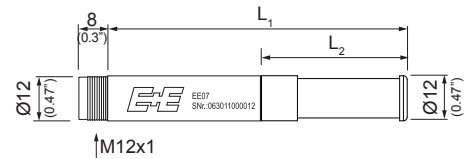
EE07-PFTx, EE07-PT1



EE07-MT



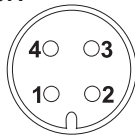
EE07-MFTx



Filter	L ₁	L ₂
Stainless steel grid	79.5 mm (3.13")	38.5 mm (1.52")
H ₂ O ₂	73.5 mm (2.89")	33 mm (1.3")

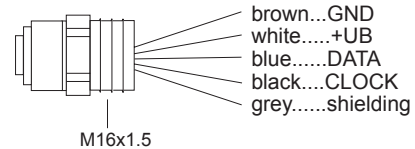
Connection Diagram

EE07:



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

M12x1 flange coupling with 50 mm (2") flying leads (HA010705):



E+E Sensor Coating

The E+E proprietary sensor coating is a protective layer applied to the sensing elements. The coating extends substantially the lifetime and the measurement performance of EE07 in **corrosive environment**. Additionally, it improves relevantly the long term stability in **dusty, dirty or oily applications** by preventing stray impedances caused by deposits on the active sensor surface.

Ordering Guide

Humidity & Temperature Probes:

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

1) The metal housing (M) is only available with stainless steel grid filter (9) and with H₂O₂ filter (8). The stainless steel grid filter (9) is only available with metal housing (M).

Temperature Probes:

HOUSING	MODEL	FILTER (ONLY FOR HOUSING P)
metal (M)	temperature (T)	membrane (1)
polycarbonate (P)		
EE07-		

Order Example

EE07-PFT6

Housing: Polycarbonate
 Model: Humidity and temperature
 Filter: Metal grid
 Coating: without

EE07-MT

Housing: Metal
 Model: Temperature

Scope of Supply

- EE07 probe according to ordering guide
- Inspection certificate according to DIN EN10204 - 3.1

Accessories (See data sheet "Accessories")

- M12x1 flange coupling with 50 mm (2") flying leads
- Connecting cable M12x1 - flying leads (1.5 m (59.1") / 5 m (196.9") / 10 m (393.7"))
- Filter caps
- Radiation shield with cable gland (M20x1.5)
- Configuration adapter

HA010705
HA010819/20/21
HA0101xx
HA010502
see data sheet EE-PCA