

# EE060

## Humidity / Temperature Probe with Voltage Output

EE060 probes are the ideal solution for cost-effective, highly accurate and reliable measurement of relative humidity (RH) and temperature (T).

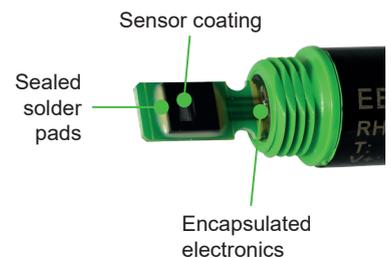
Excellent protection against external influences is ensured by the combination of completely encapsulated electronics and the long-term stable HCT01 sensing element with E+E proprietary protective coating. EE060 is available with an integrated cable or a threaded connector, with wide temperature and supply voltage ranges and dual 0 - 1 V, 0 - 5 V or 0 - 10 V analogue outputs, for humidity and temperature.

The result of the wide temperature range and the flexible supply voltage in combination with the excellent long-term stability is a versatile applicable probe.



### Protective Sensor Coating

The E+E proprietary sensor coating is a protective layer applied to the active surface of the HCT01 sensing element. The coating substantially extends the life-time and the measurement performance of the E+E sensor in corrosive environment. Additionally, it improves the sensor's long term stability in dusty, dirty or oily applications by preventing stray impedances caused by deposits on the active sensor surface.



### Typical Applications

- Stables, incubators, hatchers
- Green houses
- Humidifiers and dehumidifiers
- Monitoring of storage rooms
- HVAC applications

### Features

- Excellent price/performance ratio
- Very good long term stability
- Easy installation
- Well protected against dust and dirt

### Technical Data

#### Measurands

##### Relative humidity

Working range	0...100 % RH
Analogue output 0...100 % RH	0 - 10 V (-1.0 mA < I <sub>L</sub> < 1.0 mA)
	0 - 5 V (-0.2 mA < I <sub>L</sub> < 0.2 mA)
	0 - 1 V (-0.1 mA < I <sub>L</sub> < 0.1 mA)

Accuracy at 24 V DC, 20 °C (68 °F)<sup>1)</sup> ± 2.5 % RH

##### Temperature

Analogue output	0 - 10 V (-1.0 mA < I <sub>L</sub> < 1.0 mA)
T scale no code: -40...+60 °C (-40...140°F)	0 - 5 V (-0.5 mA < I <sub>L</sub> < 0.5 mA)
	0 - 1 V (-0.1 mA < I <sub>L</sub> < 0.1 mA)

SBH80: -40...+80 °C (-40...176°F) ± 0.3 °C (± 0.5 °F)

<sup>1)</sup> Traceable to international 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).

## General

Supply voltage	A1: 3.6 - 30 V DC / A2: 10 - 30 V DC / A3: 15 - 30 V DC
Current consumption, typ.	1.5 mA
Electrical connection	Cable PVC (Ø 4.3 mm (0.17"), 4 x 0.25 mm <sup>2</sup> ) Connector plug M12 x 1 (4 poles)
Enclosure material	Polycarbonate
Protection class	IP65
Electromagnetic compatibility <sup>2)</sup>	EN 61326-1 EN 61326-2-3
Working temperature range	-40...+80 °C (-40...176 °F)
Storage temperature range	-40...+80 °C (-40...176 °F)

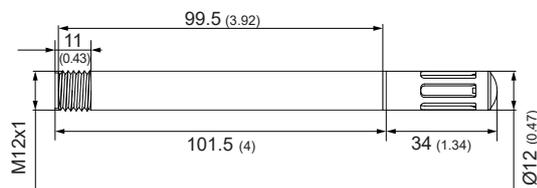


2) Analogue output 0 - 1 V is not protected against surge!

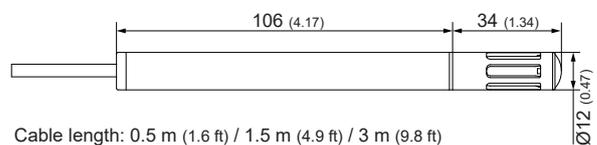
## Dimensions

Values in mm (inch)

### Connector version (Type E9)



### Cable version (Type E8)



## Ordering Guide

		EE060-	
Hardware Configuration	Model	M1	
	Output	Humidity and temperature	
		0 - 1 V	
		0 - 5 V	
	Filter	Membrane	
		Metal grid	
Electrical connection	Cable	E8	E9
	M12 connector, 4 pole		
Cable length	0.5 m (1.6 ft)	KL50	
	1.5 m (4.9 ft)	KL150	
	3 m (9.8 ft)	KL300	
T Scale	T scale low	-40 °C	
	T scale high	60 °C	
		no code	
		no code	
		SBH80	

## Order Example

### EE060-M1A3E8KL50

Model:	Humidity and temperature
Output:	0 - 10 V
Filter:	Membrane
Electrical connection:	Cable
Cable length:	0.5 m (1.6 ft)
T scale low	-40 °C (-40 °F)
T scale high	60 °C (140 °F)

### EE060-M1A1F3E9SBH80

Model:	Humidity and temperature
Output:	0 - 1 V
Filter:	Metal grid
Electrical connection:	M12 plug, 4 pole
Cable length:	None
T scale low	-40 °C (-40 °F)
T scale high	80 °C (176 °F)

## Accessories

(for further information, see data sheet "Accessories")

Female connector 4 pole, M12x1, self assembly	HA010707
Connecting cable 5 pole, M12x1 plug - socket 2 m (6.6 ft) / 5 m (16.4 ft) / 10 m (32.8 ft)	HA010816/HA010817/HA010818
Connecting cable 5 pole, M12x1 socket - flying leads 1.5 m (4.9 ft) / 5 m (16.4 ft) / 10 m (32.8 ft)	HA010819/HA010820/HA010821
Plastic mounting flange Ø12 mm (0.47") black	HA010214
Wall mounting clip Ø12 mm (0.47")	HA010211
Protection cap for Ø12 mm (0.47") probe	HA010783
Radiation shield	HA010502