HLX07 Series

Interchangeable Humidity / Temperature Transmitter for OEM Applications

alterations according to customer specifications possible

The compact HLX07 humidity and temperature probe is based on a new electronic concept in combination with the miniaturized SMD humidity sensor element HC105 series.
A wide humidity and temperature working range, small 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.

Typical Applications

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

Features

digital output
fast interchangeable
very small dimensions
highest accuracy
traceable calibration
easy interfacing to microcontroller

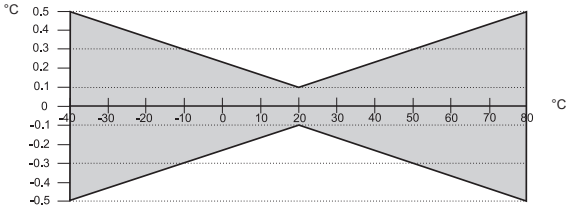
Technical Data

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	$< (0.025 + 0.0003 \times RH) \left[\frac{\%\,RH}{°C}\right]$

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)	

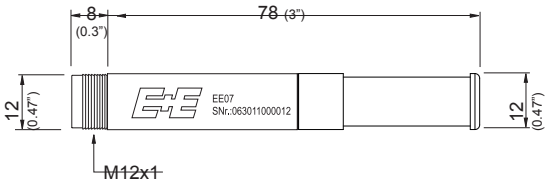
General

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
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)

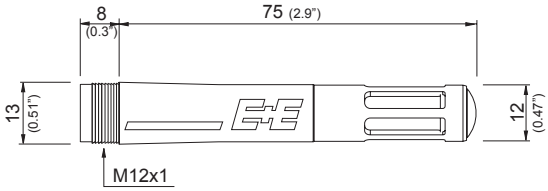
1) serial protocol refer to www.epluse.com
2) refer to the working range of the humidtiy sensor HC105
3) EE07 is not protected against surge
4) dependent on selected Bus frequency

Housing Dimensions (mm)

Metal housing
HLX07-MFTx

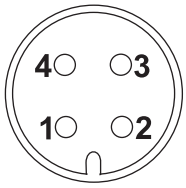


Polycarbonate housing
HLX07-PFTx



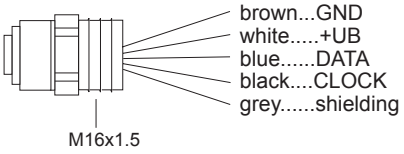
Connection Diagram

HLX07:



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

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

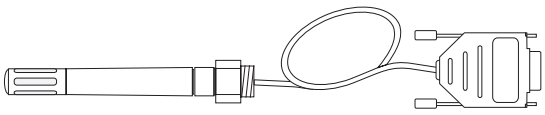


Ordering Guide

HOUSING		MODEL		FILTER		COATING	
metal	(M)	humidity and temperature	(FT)	membrane filter	(1)	without	(no code)
polycarbonate	(P)			PTFE filter	(5)	with	(HC01)
				metal grid filter (polycarbonate)	(6)		
				metal grid filter (stainless steel)	(9)		
HLX07-							

Accessories

- E2 interface - RS232 converter: (HA011001)
  For first testing measurements by a PC is a RS232 converter available
- M12x1 flange coupling with 50mm (2") litz wire (HA010705)
- filter caps (HA0101xx)
- radiation shield (HA010502)



E2 interface - RS232 converter

Order Example

HLX07-PFT6

Housing:	polycarbonate
Model:	humidity and temperature
Filter:	metal grid filter (polycarbonate)