

HLX99-1 Series

OEM - Humidity / Temperature Modules

The HLX99-1 OEM - RH/T modules are designed to meet the specific requirements of RH/T monitoring in climate chambers.

High-end humidity sensor elements of the HC series and accurate temperature compensation of the humidity reading result in an excellent accuracy over a broad measurement range.

The analogue output for relative humidity is 4 - 20mA / 3-wire. The passive temperature output can be connected via 3-wire to an external readout.

Easy mounting and service is possible with a plug-in screw terminals block and by push buttons for field calibration.



HLX99-1

Sensor Coating

Operation in heavily polluted and/or corrosive environments is typical for many industrial processes and can lead to drift or damage of the humidity sensor and therefore to incorrect measurements. The unique protective coating developed for the sensing probe (ordering code: - HC01) means a significant improvement of the long-term stability of the transmitter in very dirty and aggressive environments.

Typical Applications

climate chambers
drying chambers

Features

remote sensing probe up to 10m (32.8ft)
accuracy $\pm 2\%$ RH
traceable calibration
working range humidity 0...100% RH
working range temperature $-50...180^{\circ}\text{C}$ ($-58...356^{\circ}\text{F}$) / up to 200°C (392°F) short term
passive 3-wire temperature output
easy field calibration

Technical Data

Measured quantities

Relative humidity

Humidity sensor¹⁾

Working range

Accuracy incl. hysteresis and nonlinearity with
- special calibration against certified standards
- standard calibration

Output signal

Response time with filter at 20°C (68°F) / t_{90}

Temperature

Temperature sensor element²⁾

Working range

HC1000-400

0...100% RH

$\pm 1\%$ (0...90% RH)

$\pm 2\%$ (90...100% RH)

$\pm 2\%$ (0...90% RH)

$\pm 3\%$ (90...100% RH)

Traceable to intern. standards, administrated by NIST, PTB, BEV...

4 - 20mA (3-wire)

< 15 sec.

Pt100 resp. Pt1000 (class A, DIN EN 60751) see Ordering Guide

$-50...180^{\circ}\text{C}$ ($-58...356^{\circ}\text{F}$) / up to 200°C (392°F) short term

General Data

Supply voltage

Load resistor for 4 - 20 mA output

Current consumption

Working temperature range electronics

Storage temperature range

Electrical connection

Sensor protection

Electromagnetic compatibility

10 - 35V DC or 10 - 28V AC

10 - 35V DC $R_L < \frac{U_V - 5V}{0.02 A}$ [Ω] (max. 350 Ω)

10 - 28V AC $R_L < 350 \Omega$

for DC supply < 32mA

for AC supply < 60mA_{eff}

$-40...60^{\circ}\text{C}$ ($-40...140^{\circ}\text{F}$)

$-40...60^{\circ}\text{C}$ ($-40...140^{\circ}\text{F}$)

pluggable screw terminals up to max. 1.5mm² (AWG 16)

stainless steel grid filter

Designed for installment in and with other equipment (OEM)

Measurements according to EN61000-4-3 and EN61000-4-6

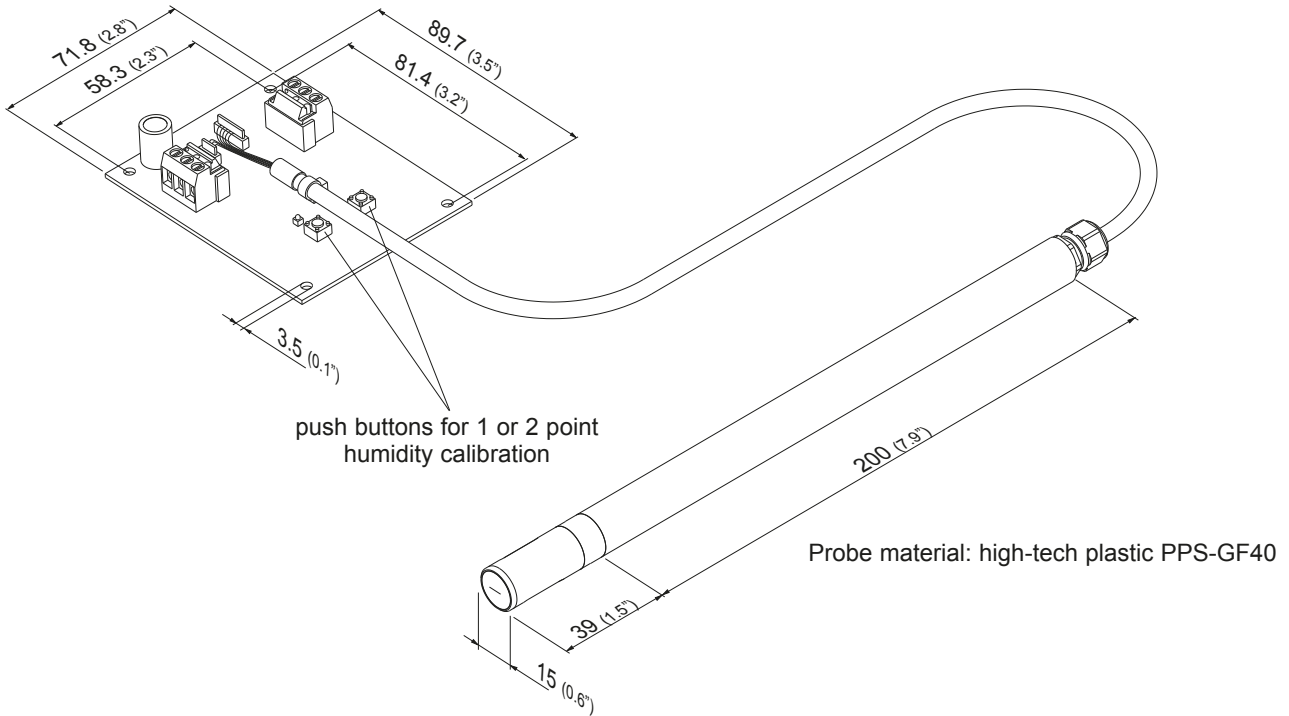
FCC Part15 ClassB

ICES-003 ClassB

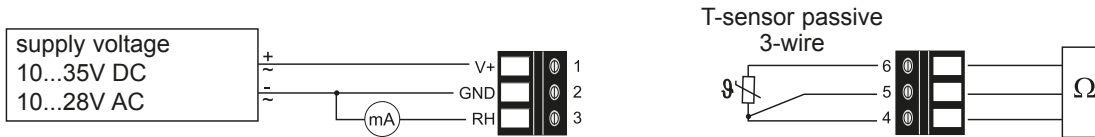
1) Refer to the working range of the humidity sensor

2) max. power dissipation 1mW

Mounting Dimensions (mm)



Connection Diagram



Ordering Guide

MODEL	OUTPUT	T-SENSOR	VERSION	FILTER	CABLE LENGTH
Humidity + Temperature passive (FP) HLX99-1-	4 - 20 mA (6)	Pt100 DIN A (A)	remote sensing probe (D)	stainless steel grid filter (8)	2m (6.6ft) (02)
		Pt1000 DIN A (C)			5m (16.4ft) (05)
					10m (32.8ft) (10)

PROBE LENGTH	SENSOR COATING
200mm (7.9") (5)	without coating (--) with coating (HC01)

Order Example

HLX99-1-FP6AD8025

Model:	Humidity + Temperature passive
Output:	4 - 20mA
T-Sensor:	Pt100 DIN A
Version:	remote sensing probe
Filter:	stainless steel grid filter
Cable length:	2m (6.6ft)
Probe length:	200mm (7.9")
Coating sensor:	without coating