

SH300 Series

OEM RH/T Module

The SH300 OEM - RH/T modules are designed to meet the specific requirements of RH/T monitoring in climate chambers.

High-end humidity sensor elements 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.



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 sensor	HC1000-400	
Working range	0...100% RH	
Accuracy incl. hysteresis and nonlinearity with - special calibration against certified standards - standard calibration	$\pm 1\%$ (0...90% RH) $\pm 2\%$ (0...90% RH)	$\pm 2\%$ (90...100% RH) $\pm 3\%$ (90...100% RH)
Output signal	4 - 20mA (3-wire)	
Response time with filter at 20°C (68°F) / t_{90}	< 15 sec.	

Temperature

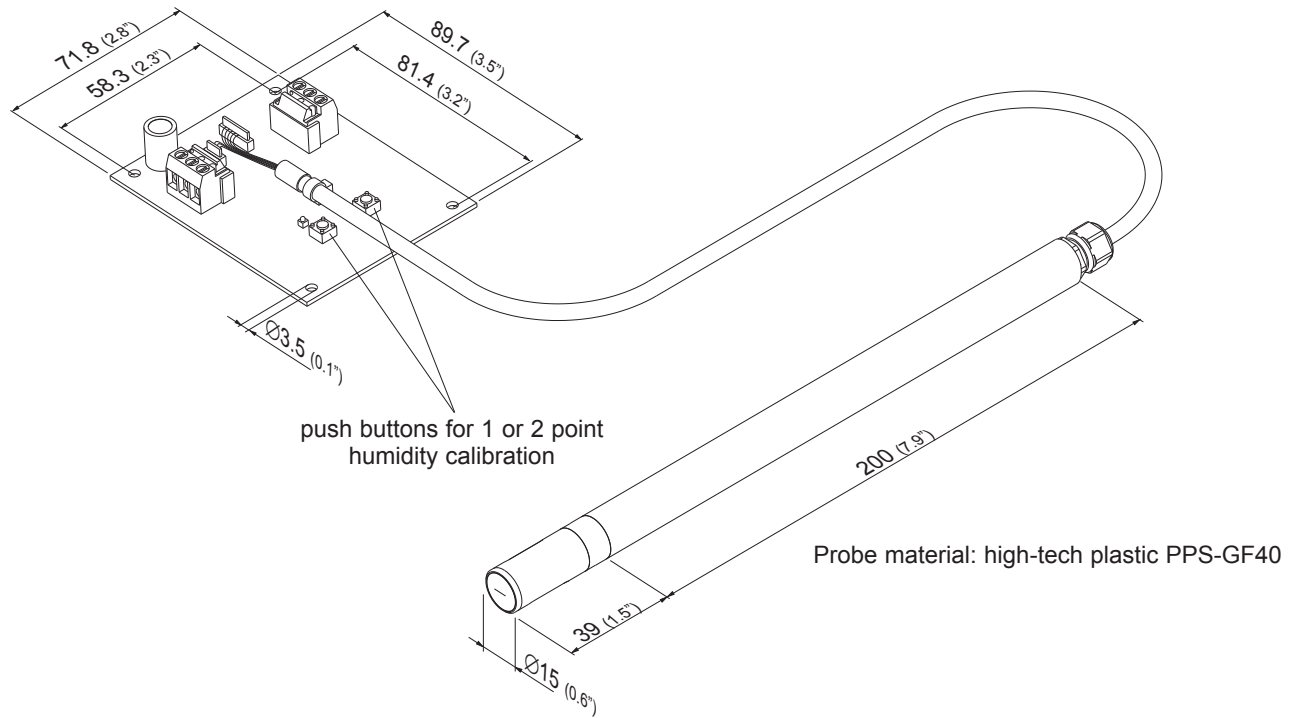
Temperature sensor element ¹⁾	Pt100 resp. Pt1000 (class A, DIN EN 60751) see Ordering Guide	
Working range	$-50...180^{\circ}\text{C}$ ($-58...356^{\circ}\text{F}$) / up to 200°C (392°F) short term	

General Data

Supply voltage	10 - 35V DC or 10 - 28V AC	
Load resistor for 4 - 20 mA output	10 - 35V DC	$R_L < \frac{U_v - 5V}{0.02A}$ [Ω] (max. 350 Ω)
	10 - 28V AC	$R_L < 350 \Omega$
Current consumption	for DC supply < 32mA	for AC supply < 60mA _{eff}
Working temperature range electronics	$-40...60^{\circ}\text{C}$ ($-40...140^{\circ}\text{F}$)	
Storage temperature range	$-40...60^{\circ}\text{C}$ ($-40...140^{\circ}\text{F}$)	
Electrical connection	pluggable screw terminals up to max. 1.5mm ² (AWG 16)	
Sensor protection	stainless steel grid filter	
Electromagnetic compatibility	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) max. power dissipation 1mW

Mounting Dimensions (mm)



Connection Diagram

