

# 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  $200^{\circ}\text{C}$  ( $392^{\circ}\text{F}$ ) 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 $20^{\circ}\text{C}$ ( $68^{\circ}\text{F}$ ) / $t_{90}$	< 15 sec.	

##### Temperature

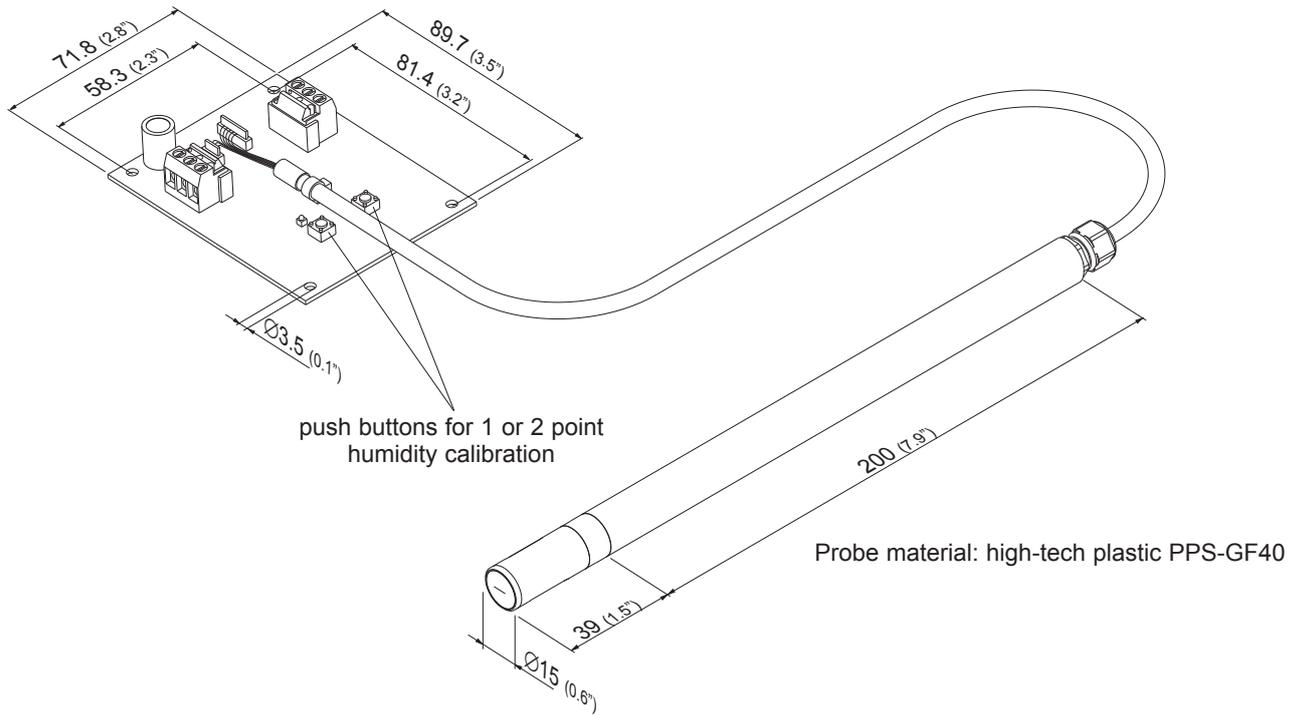
Temperature sensor element <sup>1)</sup>	Pt100 resp. Pt1000 (class A, DIN EN 60751) see Ordering Guide	
Working range	$-50...180^{\circ}\text{C}$ ( $-58...356^{\circ}\text{F}$ ) / up to $200^{\circ}\text{C}$ ( $392^{\circ}\text{F}$ ) short term	

#### General Data

Supply voltage	10 - 35V DC or 10 - 28V AC	
Load resistor for 4 - 20 mA output	10 - 35V DC	$R_L < \frac{U_v - 5V}{0.02A}$ [ $\Omega$ ] (max. 350 $\Omega$ )
	10 - 28V AC	$R_L < 350 \Omega$
Current consumption	for DC supply < 32mA	for AC supply < 60mA <sub>eff</sub>
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 <sup>2</sup> (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

