

HEATED HYGROCLIP2



THE HEATED SENSOR FOR HIGH HUMIDITY

WITH THE LATEST AIRCHIP TECHNOLOGY

INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Measures relative humidity, temperature and dew point
- Outstanding accuracy and repeatability
- Automatic heating function
- Eliminates of condensation
- SMD Thermo sensor element



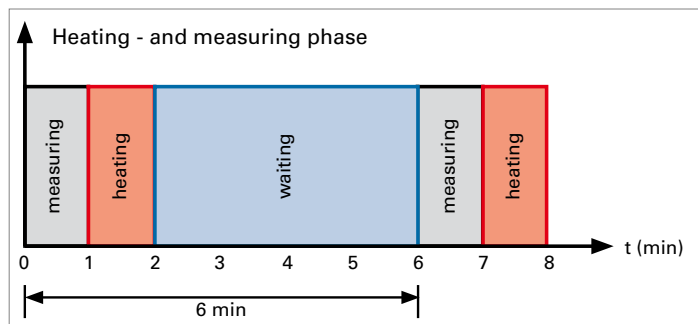
TECHNICAL INFORMATION

Heating function

The HC2-S(3)-HEATED is equipped with an automatic sensor heater. It is activated cyclically and prevents condensation on the sensor.

Measuring - heating - cooling phases

The complete cycle (measuring - heating - cooling) takes six minutes.

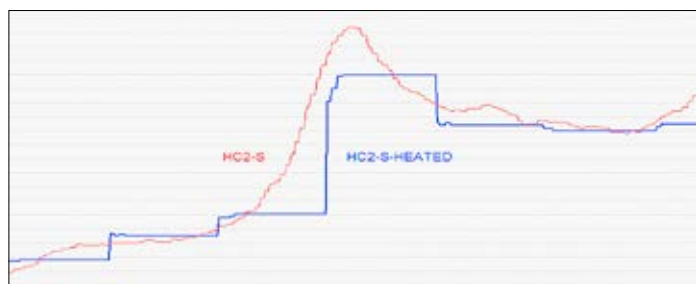


Current consumption rises up to 35 mA (at 3.3 VDC) during the heating phase. To ensure a correct heating function, 35 mA is required.

Measurement results



During the heating phase, the probe will not measure, it will keep the last measured value for the duration of the heating period. The steep rise (red circle) corresponds to the one-minute long measuring phase. The probe is then heated and cooled (green circle) over a period of five minutes. The probe must always be powered in order for the heating function to work correctly.



Field of application

The HC2-S(3)-HEATED is suitable for use wherever high humidity with the possibility of condensation is present. Typically, when condensation occurs long dry out periods are required or false readings are measured. This is often the case in environmental chambers, food manufacturing, tunnels/caves and many other applications.

General specifications	
Device type	Humidity and temperature probe
Range of application of probe	-50...+100 °C / 0...100 %RH
Accuracy	±1.3 %RH / ±0.15 K, at 10...30 °C
Power supply	3.2...5.0 VDC (adjusted at 3.3 VDC)
IP protection	IP65
Current consumption	<35 mA at VDD = 3.3 VDC <60 mA at VDD = 5 VDC
Sensor heating	
Heating capacity	+3 °C above normal temperature
Heating mode	Interval
Measurement period	1 min.
Heating period	1 min.
Measuring-heating-cooling cycle	6 min.
Heating element	SMD Thermo
Probe	
Filter	Polyethylene, 20 µm
Filter carrier	Polycarbonate
Maximum wind velocity	3 m/s, without filter 20 m/s, with polyethylene filter
Maintenance/Calibration	Annual calibration recommended
Humidity sensor	SMD Thermo
Long-term stability	<1 %RH/year
Sensor response time	Typically 8 s, 63 % of a step change from 95 to 45 %RH (1 m/s air flow at sensor, without filter)
Temperature sensor	SMD Thermo (Pt100)
Long-term stability	<0.1 °C/year
Conformity, standards	
CE / EMC immunity	EMC Directive 2014/30/EU
FDA / GAMP directives	Compatible
Housing material	Polycarbonate
Dimensions	Ø15 x 85 mm

Compatible products

- HF5 / HF8 (3/4-wire)
- MP102H
- AC3001
- E3-xxXX-ACT