



# HT-200

Humidity & Temperature probe



## Features

- Designed for meteorological applications
- Relative humidity and temperature outputs
- Fully recovers from condensing environments
- Precision accuracy  $\pm 2\%$  RH,  $\pm 0.6^\circ\text{C}$
- Low power, 500  $\mu\text{A}$  typical supply current
- Wide supply range: 6-40VDC

## Introduction

HT-200 relative Humidity/Temperature probe combines a high accuracy, capacitance type humidity sensor and a precision solid state temperature sensor in one probe. The integrated sensor block has excellent long term stability and is highly resistant to chemical vapors and other contaminants.

Dual outputs provide humidity and temperature as 0-1V linear voltages. The probe can be easily installed in naturally ventilated (multi-plate) and aspirated radiation shields.

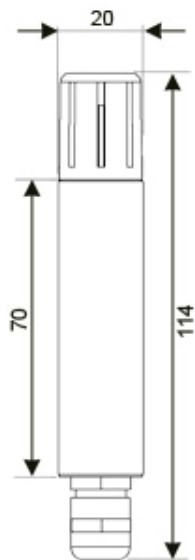
The humidity measurement is accurate to  $\pm 2\%$  from 20% to 80% RH. The temperature accuracy is  $\pm 1^\circ\text{C}$  from  $0^\circ\text{C}$  to  $+70^\circ\text{C}$  and  $\pm 0.6^\circ\text{C}$  at  $25^\circ\text{C}$ . The probe is particularly suited for battery applications, drawing only 500  $\mu\text{A}$  of supply current.

RoHS Compliant  
Directive 2002/95/EC

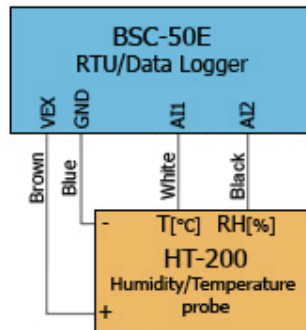


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Probe dimensions  
[mm]



Typical Application

## Specifications

Relative Humidity	
Sensor	Planar Capacitive Polymer
Range	0 to 100% RH
Accuracy @ 25 °C	±2% from 20% to 80%, ±3% from 0% to 20% and 80% to 100%
Resolution	0.4% RH
Response Time	20 sec with FG16 Cap (for clean environment), 1 min with FG17 Cap (Mesh filter against dirt), 3 min with FG18 Cap (PTFE filter for extreme conditions)
Temperature	
Sensor	Integral band gap PTAT
Temperature Scale	-50 °C to 150 °C
Accuracy	±0.6 °C at 25 °C, ±1 °C from 0 °C to +70 °C
Resolution	0.2 °C
Electrical Characteristics	
Power supply	6...40 VDC
Supply current	550 µA max
Humidity output	0-1V, %RH = $V_{out} \times 100$
Temperature Output	0-1V, $T_c = V_{out} \times 200 - 50$
Min. Load Resistance	5 kΩ
Max. Output Load Capacitance	5 nF
Cable length	1.2 m
Environmental Conditions	
Storage Temperature	-55 °C to 85 °C
Operating Temperature	-40 °C to 85 °C
Operating RH Range	71 x 90 x 58 mm
Operating RH Range	0 to 100% RH, non-condensing

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