

# RHT175

## Relative Humidity and Temperature Probe

The new generation of Relative Humidity and Temperature Probes RHT175 developed and manufactured by MicroStep-MIS, provides reliable and accurate relative humidity and temperature measurement.

RHT175 is designed for meteorological and airport weather stations, and any applications where continuous data monitoring is required.

### Relative Humidity Measurement

Measurement range	0 to 100 % RH
Accuracy (@ 25 °C)	±1 % RH
Short term hysteresis	< 1 % RH
Temperature dependence	better than ±2 % over –20 °C to +60 °C
Typical long-term stability	±1.0 % per year
Calibration traceability	National standard
Response time at +25 °C in still air with a sintered filter	63 % ... < 40 s
Sensor type	capacitive

### Temperature Measurement

Measurement range	–65 °C to +70 °C
Accuracy	±0.1 °C

### General

Operating temp. range	–65 °C to +70 °C
Storage temp. range	–65 °C to +70 °C
Cable coating	PUR
Housing material	POM-C
Housing classification	IP65 (except sensors)
Sensor protection	HDPE sintered filter 10 µm
EMC compliance	tested and conforms to IEC61326:2002
Connector	M12 5-pin male (optional)

### Inputs and Outputs

Communication standard	<ul style="list-style-type: none"> <li>SDI-12 V1.3</li> <li>analog out (0 V to 1 V)</li> <li>RS-485 (optional)</li> <li>3.3 V UART (optional)</li> </ul>
Output resolution	0.05 % RH, 0.01 °C
Measurement period	from 1 s
Supply voltage	5 to 30 V DC
Settling time at power-up	< 3 s



### Features

- Accuracy typical 1 % RH
- Long-term stability < 1 % RH/year
- Humidity sensor 0 to 100 % RH
- Digital and analog interface
- Optional passive thermometer probe

### Optional PT100 Thermometer (cable version only)

Accuracy classes	PT100 1/5 DIN: ±0.10 °C PT100 1/10 DIN (optional)
Operating temp. range	–65 °C to +70 °C
Recommended current	2 mA max.
Resolution	depends on Data Logger
Measurement period	depends on Data Logger

### Optional Continuous Heating

Heating power	≤ 250 mW (adjustable)
Output value	Dew point [°C]