

Information about temperature and humidity measurement

Information about temperature and humidity measuring instruments

Besides the temperature, the humidity is an important parameter for the well-being of human beings. For example, according to the guidelines of workplaces, people feel well at a relative humidity of 80 % and at a temperature of 20 °C. The DIN EN ISO 7730 describes the range of comfort at a relative humidity of 30 % to 70 %. Also for lots of industrial processes, the humidity is important for the production quality. Mainly in industrial plants where natural materials such as wood, paper, cotton fibers, tobacco, etc. are being treated, the humidity is to be monitored by measurements. Also in industrial plants which produce and treat electronic components, a constant temperature and humidity is required for the functionality and for the reproducible quality. In the agriculture, in market-gardens and in green-houses, it is necessary to keep and monitor certain values of humidity in order to optimize the harvest.

In order to stock art objects in museums, galleries, churches and libraries, the humidity has to be kept constant within close limits. In swimming pools, waterworks and power plants, the humidity is to be monitored constantly in order to avoid long-term damages of the buildings.



Relative humidity (rH)

The relative humidity always applies to a temperature value and in practice it is the most used parameter to indicate the moisture content of the air. The relative humidity at a certain temperature value results from the ratio of water vapor pressure and water vapor saturation pressure.

There is no unit to this value, it is indicated in %. As for all indications of humidity you also have to indicate the temperature, the HDT temperature and humidity instrument displays both values at the same time.

Wet bulb temperature (WET)

Evaporation causes cooling down. On a thermometer, which is enclosed in a wet cloth, the temperature will be reduced as a result of the cold due to evaporation. The evaporation is depending on the surrounding relative humidity and on the air flow.

The HDT temperature and humidity instruments will calculate the wet bulb temperature value and the dry temperature value at the same time.

Dew point temperature (DEW)

The dew point temperature of the air is the temperature to which the surrounding air is to be cooled down in order to be saturated with water vapor and to condensate thereby. The surface of a window pane has to have this value in order that condensation water is forming on it.

HDT temperature and humidity measuring instruments

The HDT temperature and humidity measuring instruments had been designed for simple and rapid determination of humidity values. Generally, all instruments are delivered completely with batteries in order to allow immediate temperature or humidity measuring.



Temperature and humidity measurement instruments

HygroTherm 6003



Easy and handy

Combined Temperature and Humidity Measurement Instrument with integrated Sensor

- DEW point and wet bulb measurement
- Integrated Data Hold
- Min/Max Hold Function
- Switchable for measurements in °C and °F
- Auto-Power Off Function
- Handy Construction
- Carrying Case included

Technical Data

Display	LCD, 2 x 3 digit, 999 Digit
Measurement Range	1 %...99 % relative Humidity -20 °C...60 °C / -4 °F...140 °F
Resolution	0,1 % RH / 0,1 °C / 0,1 °F
Accuracy	± 3 % RH ± 0,8 °C / ± 1,5 °F
Power Supply	1 x 9 V, IEC 6LR61
Dimensions	approx. 200 x 44 x 40 mm
Weight	approx. 160 g

Scope of supply

1 pc HDT HygroTherm 6003
1 pc Battery 9 V, IEC 6LR61
1 pc Carrying Case
1 pc Instruction manual

Order Information

Description	Cat. No.
HDT HygroTherm	6003

HygroTherm 6004



Practical Instrument

Combined, digital Temperature and Humidity measurement Instrument with external Sensor

- Large display with analogue bargraph
- Integrated Data Hold
- Min/Max and relative value measurement
- Switchable for measurements in °C and °F
- Auto-Power Off Function
- DEW point and wet bulb measurement
- Ergonomic Construction
- Carrying Case included

Technical Data

Display	LCD, 2 x 3 digit, 999 Digit Analogue Bargraph
Measurement Range	10 %...95 % relative Humidity -20 °C...60 °C / -4 °F...140 °F
Resolution	0,1 % RH / 0,1 °C / 0,1 °F
Accuracy	± 3 % RH ± 0,5 °C / ± 0,9 °F
Power Supply	6 x 1.5 V, IEC LR03/AAA
Dimensions	approx. 150 x 72 x 35 mm
Weight	approx. 235 g

Scope of supply

1 pc HDT HygroTherm 6004
6 pc Batteries 1,5 V, IEC LR03 / AAA
1 pc Carrying Case
1 pc Instruction manual

Order Information

Description	Cat. No.
HDT HygroTherm	6004