



# HUMIDITY METERS

Monitoring climate conditions is important for many industries, for both the comfort of their staff and clientele, storing goods and carrying out processes. Keeping track of humidity makes it easy to see when adjustments need to be made to prevent discomfort and damage.

## THE IMPORTANCE OF HUMIDITY

High or low humidity inside buildings can damage human health and the storage of goods such as wooden construction materials, food products, pharmaceuticals, fuels, paper, and electronic components.

High humidity (above 70 %rh) causes dampness and condensation, leading to mould and dust mites. Humidity levels below 25 %rh can cause respiratory discomfort.

Using a hygrometer for regular monitoring helps to maintain a healthy humidity level. This can be done by opening windows, adjusting heating settings or using humidifiers and dehumidifiers.

## MEASURING HUMIDITY

Humidity is the level of water vapour or moisture in the air. Humidity is usually measured using relative humidity, also known as %rh. It is measured on a scale of 0 to 100 %rh.

100% refers to the maximum amount of water that can be present in the air at the current temperature. So if a hygrometer measures 50 %rh, the air currently contains 50% of the maximum amount of water it could contain.

## DEW POINT

Some hygrometers also measure dew point. This is the temperature at which water vapour will turn into a liquid form, whether this is condensation, fog, rain or snow. It is calculated using the %rh. The dew point is a good indicator of how muggy the atmosphere will feel.

## HUMIDITY CALIBRATION

The best way to check hygrometer accuracy is by sending it to an accredited humidity laboratory for testing. At ETI we have a UKAS-accredited laboratory for temperature and humidity where you can send your instrument for testing and recalibration. Please see pages 107 and 108 for more information.

# 6000 SERIES THERMA-HYGROMETERS

- High accuracy  $\pm 2\% \text{rh}$  &  $\pm 1^\circ \text{C}$
- Remote or integral  $\% \text{rh}$  & temperature probe
- Displays max/min humidity or temperature
- Dew point indication

The 6000 series therma-hygrometers are easy-to-use, relative humidity and air temperature measuring instruments. The units measure  $\% \text{rh}$  over the range of 0 to 100  $\% \text{rh}$  with a resolution of 0.1  $\% \text{rh}$  and temperature over the range of  $-20$  to  $70^\circ \text{C}$  ( $-20$  to  $50^\circ \text{C}$  with a fixed probe) with a resolution of  $0.1^\circ \text{C}$ .

The therma-hygrometers incorporate a custom LCD, displaying  $\% \text{rh}$ ,  $^\circ \text{C}/^\circ \text{F}$ , dew point indication, max/min and hold. There is an automatic display of both open circuit and low battery. The 6000/6100 display the temperature and humidity at the push of a button separately, whereas the 6002/6102 display humidity and temperature simultaneously and additionally incorporates a backlit display.

All units are powered by three AAA batteries with a minimum life expectancy of 10000 hours. An auto-power-off facility turns the therma-hygrometer off automatically after ten minutes, maximising battery life.

## 6100/6102 therma-hygrometers with remote probe

The 6000 series hygrometer has an integral humidity and temperature sensor. The 6100 has a wired humidity and temperature sensor. If you select the 02 version, you will see both temperature and humidity simultaneously on the LCD display.

## Optional UKAS Certificate of Calibration

An optional three-point UKAS Humidity Calibration Certificate is available at a preferential price when purchased with these units.



HUMIDITY

## Protective silicone boot (830-227)

Various colours are available  
- see page 14 for details



Order code	Description	£ each
224-600	6000 therma-hygrometer	90.00
224-610	6100 therma-hygrometer	120.00
224-602	6002 therma-hygrometer	100.00
224-612	6102 therma-hygrometer	130.00
224-617	6100/6102 spare probe**	52.00
830-227	Protective silicone boot - black	8.00
890-111	*UKAS 3-point Certificate	85.00
6100/6102 are supplied inclusive of probe		
*Price when purchased with a new instrument		

Specification	Temperature	Humidity
Range - 6000/6002	-20 to 50 °C	0 to 100 %rh
Range - 6100/6102	-20 to 70 °C	0 to 100 %rh
Resolution	0.1 °C/°F	0.1 %rh
Accuracy	±1 °C ±1 digit*	±2 %rh (10 to 90 %rh)
Hysteresis	N/A	±1 %rh
Sensor type	Silicon bandgap	Capacitance polymer
Battery & life	3 x 1.5 volt AAA - 10000 hours	
Display	12 mm LCD	
Dimensions	25 x 56 x 128 mm	
Weight	130/160 grams	
*Accuracy ±0.4 °C over the range 10 to 40 °C otherwise ±1 °C		

\*\* Please note this probe will only work with 6100 Instrument with serial numbers later than D20120375, and 6102 Instruments with serial numbers later than D20100842.

## 6500 THERMA-HYGROMETER

- Dew point calculation, max/min & hold functions
- Remote %rh & temperature probe

The 6500 therma-hygrometer measures both relative humidity and air temperature. The clear, easy-to-read LCD displays %rh over the range of 0 to 100 %rh with a resolution of 0.1 %rh and temperature over the range of -20 to 70 °C with a resolution of 0.1 °C/°F.

The unit incorporates a custom LCD with %rh, °C/°F, dew point indication, max/min and hold. An auto-power-off facility turns the therma-hygrometer off automatically after ten minutes, maximising battery life.

The 6500 therma-hygrometer incorporates four, easy-to-use, push buttons allowing the user to select on/off, hold, max/min and mode functions. Each unit is supplied with a remote sensor and integral PVC lead.

Order code	Description	£ each
224-655	6500 therma-hygrometer	85.00
830-227	Protective silicone boot - black	8.00
890-111	*UKAS 3-point Certificate	85.00

\*Price when purchased with a new instrument



Specification	Temperature	Humidity
Range	-20 to 70 °C	0 to 100 %rh
Resolution	0.1 °C/°F	0.1 %rh
Accuracy	±1 °C ±1 digit*	±3 %rh (20 to 80 %rh)
Hysteresis	N/A	±1 %rh
Sensor type	Silicon bandgap	Capacitance polymer
Battery & life	3 x 1.5 volt AAA - 10000 hours	
Display	12 mm LCD	
Dimensions	25 x 56 x 128 mm	
Weight	185 grams	

\*Accuracy ±1 °C over the range 5 to 45 °C otherwise ±1.7 °C

## POCKET HYGROMETER

- Max/min memory function
- Displays both humidity & temperature

The pocket hygrometer incorporates a large, clear LCD that simultaneously displays both humidity and temperature over the range of 20 to 95 %rh and 0 to 49.9 °C.

This pen-shaped hygrometer is ideal for monitoring the humidity and temperature in a wide range of applications. This versatile unit incorporates a max/min button which allows the user to display the maximum and minimum humidity and temperature simultaneously.

Unlike many hygrometers that are large and heavy to carry around, this compact hygrometer is truly pocket-sized and convenient to use.

The unit is housed in a slim, pen-shaped, ABS case measuring 20 x 23 x 130 mm and incorporates a pocket clip.

Order code	Description	£ each
810-190	Pen-shaped pocket hygrometer	21.00



Specification	Temperature	Humidity
Range	0 to 49.9 °C	20 to 95 %rh
Resolution	1 °C	1 %rh
Accuracy	±1 °C	±3 %rh (30 to 80 %rh)
Sensor type	Silicon bandgap	Capacitance
Battery & life	3 volt CR2032 lithium coin cell - 15000 hours	
Display	Custom LCD	
Dimensions	20 x 23 x 130 mm	
Weight	31 grams	

## THERMA-HYGROMETER - COMFORT

- Save on energy bills
- Helps maintain a healthy living & work environment

These therma-hygrometers display both the humidity and temperature in addition to indicating and recording the maximum and minimum readings. Each unit features an analogue arrow indicator and a colour-coded bar to display either humidity comfort levels e.g. dry, comfort and wet (810-130) or temperature comfort levels e.g. cold, comfort and hot (810-135).

These therma-hygrometers are ideal for monitoring both temperature and humidity in rooms, offices, factories and similar to ensure optimum environmental conditions are maintained.

Each unit is housed in an ABS case, measuring 20 x 100 x 110 mm, that incorporates a useful foldaway stand and a keyhole slot for hanging on a wall.

Order code	Description	£ each
810-130	Therma-hygrometer	12.50
810-135	Comfort thermometer	12.50



MAX/  
MIN

Specification	Temperature	Humidity
Range	0 to 50 °C	10 to 99 %rh
Resolution	0.1 °C/°F	1 %rh
Accuracy	±1 °C	±5 %rh (30 to 70 %rh)
Battery & life	2 x 1.5 volt AAA - 10000 hours	
Display	Dual custom LCD	
Dimensions	20 x 100 x 110 mm	
Weight	142 grams	

## THERMA-HYGROMETER - ALARM

- Integral %rh & remote temperature probe
- Large LCD with max/min & alarm functions

This therma-hygrometer simultaneously displays both the humidity and temperature in addition to indicating and recording the maximum and minimum readings.

The instrument measures both humidity and temperature over the range of 0 to 49.9 °C and 20 to 99 %rh via the internal sensors. Using the external temperature sensor the temperature range is extended to -49.9 to 69.9 °C.

The unit features a temperature alert alarm that will sound when the external remote temperature probe indicates the temperature is 0 °C or below. This feature is ideal for frost/freeze alert in horticulture and similar.

The unit is housed in an ABS case, measuring 20 x 65 x 97 mm, that incorporates a useful foldaway stand and a keyhole slot for hanging on a wall.

Order code	Description	£ each
810-155	Therma-hygrometer - alarm	18.50
810-158	Replacement probe for 810-155	4.50



Remote probe

MAX/  
MIN



Specification	Temperature	Humidity
Range - internal	0 to 49.9 °C	20 to 99 %rh
Range - external	-49.9 to 69.9 °C	N/A
Resolution	0.1 °C/°F	1 %rh
Accuracy	±1 °C	±5 %rh (30 to 80 %rh)
Sensor type	Thermistor	Capacitance
Battery & life	1.5 volt AAA - 10000 hours	
Display	Dual custom LCD	
Dimensions	20 x 65 x 97 mm	
Weight	70 grams	



## THERMA-HYGROMETER

- Max/min temperature & humidity function
- Integral %rh & temperature sensor

This therma-hygrometer simultaneously displays both the humidity and temperature in addition to indicating and recording the maximum and minimum temperature and humidity readings.

The hygrometer measures both humidity and temperature over the range of 0 to 50 °C and 10 to 99 %rh utilising the internal sensors. A comfort icon is displayed to show if the surrounding atmosphere is dry, just right or too wet.

This therma-hygrometer is ideal for monitoring both temperature and humidity in rooms, offices, factories and similar to ensure optimum environmental conditions are maintained.

The unit is housed in an ABS case, measuring 20 x 100 x 110 mm, that incorporates a useful foldaway stand and a keyhole slot for hanging on a wall.

Order code	Description	£ each
810-145	Therma-hygrometer	12.50

MAX/  
MIN

Specification	Temperature	Humidity
Range	0 to 50 °C	10 to 99 %rh
Resolution	0.1 °C/°F	1 %rh
Accuracy	±1 °C	±5 %rh (30 to 70 %rh)
Battery & life	1.5 volt AAA - 10000 hours	
Display	Dual custom LCD	
Dimensions	20 x 100 x 110 mm	
Weight	135 grams	

## THERMA-HYGROMETER - PANEL MOUNTING

- Displays both humidity & temperature
- Easy panel-mounting installation

This panel-mounted therma-hygrometer simultaneously displays both humidity over the range of 20 to 99 %rh and temperature over the range of 0 to 49.9 °C with a resolution of 1 %rh and 0.1 °C. This instrument is ideal for OEMs for installing into equipment, i.e. vivariums, incubators and similar.

The therma-hygrometer is easily installed into a panel via a mounting hole with a minimum Ø33 mm cut-out. The unit incorporates a screw clamp with a maximum panel thickness of 7 mm.

The therma-hygrometer features a max/min memory function for both temperature and humidity. The unit is powered by a CR2032 coin cell battery with a life expectancy of 5000 hours continuous use.

Order code	Description	£ each
810-180	Therma-hygrometer - panel	19.00

MAX/  
MIN

Specification	Temperature	Humidity
Range	0 to 49.9 °C	20 to 99 %rh
Resolution	0.1 °C	1 %rh
Accuracy	±1 °C	±5 %rh (30 to 80 %rh)
Sensor type	Thermistor	Capacitance
Battery & life	3 volt CR2032 lithium coin cell - 5000 hours	
Display	Dual custom LCD	
Dimensions	Ø50 x 41 mm	
Weight	42 grams	

## THERMA-HYGROMETER - WITH PROBE

- Remote %rh & remote temperature probe
- Frost/freeze audible alarm feature

This therma-hygrometer simultaneously displays both the humidity and temperature in addition to indicating and recording the maximum and minimum readings.

Utilising the internal sensor the instrument measures temperature over the range of 0 to 49.9 °C. The external remote probe with integrated three metre lead measures both temperature and humidity over the range of -49.9 to 69.9 °C and 20 to 98 %rh.

The unit features a temperature alert alarm that will sound when the external remote probe indicates the temperature is 0 °C or below. This feature is ideal for frost/freeze alert in horticulture and similar.

The therma-hygrometer is housed in an ABS case measuring 18 x 41 x 76 mm, that incorporates a foldaway stand. Each unit is supplied with a probe wall bracket.

Order code	Description	£ each
810-195	Therma-hygrometer - with probe	20.00



Specification	Temperature	Humidity
Range - internal	0 to 49.9 °C	N/A
Range - external	-49.9 to 69.9 °C	20 to 98 %rh
Resolution	0.1 °C/°F	1 %rh
Accuracy	±1 °C	±5 %rh (30 to 80 %rh)
Sensor type	Thermistor	Capacitance
Battery & life	1.5 volt AAA - 10000 hours	
Display	Dual custom LCD	
Dimensions	18 x 41 x 76 mm	
Weight	90 grams	

## THERMA-HYGROMETER - WITH PROBE

- Save on energy bills
- Integral sensor & remote probe

The therma-hygrometer simultaneously displays both the humidity and temperature in addition to indicating and recording the maximum and minimum readings.

Using the external remote probe with integrated three metre lead the unit measures both temperature and humidity over the range of -20 to 70 °C and 10 to 99 %rh. Alternatively using the internal sensor the unit measures temperature over the range of 0 to 50 °C.

This therma-hygrometer is ideal for monitoring both temperature and humidity in rooms, offices, factories and similar to ensure optimum environmental conditions are maintained.

The unit is housed in an ABS case, measuring 20 x 100 x 110 mm, that incorporates a useful foldaway stand and a keyhole slot for hanging on a wall.

Order code	Description	£ each
810-140	Therma-hygrometer - with probe	14.00



Remote probe



Specification	Temperature	Humidity
Range - internal	0 to 50 °C	N/A
Range - external	-20 to 70 °C	10 to 99 %rh
Resolution	0.1 °C/°F	1 %rh
Accuracy	±1 °C	±5 %rh (30 to 70 %rh)
Battery & life	1.5 volt AAA - 10000 hours	
Display	Dual custom LCD	
Dimensions	20 x 100 x 110 mm	
Weight	170 grams	