

## A simple, high-performance instrument

- 2 in 1: measures hygrometry and ambient temperature
- Robust: shock-proof sheath



PHYSICS

Line

C.A 846

Thermo-  
Hygrometer

Hygrometry

	Temperature	Humidity
Measurement range	-20 °C to +60 °C	0 to 100 % RH
Resolution	0.1 °C	0.1 % RH
Accuracy	± 0.5 °C from 0 to 60 °C	± 2.5 % RH from 10 to 90 % RH
	± 1 °C from -20 °C to 0 °C	± 5 % HR from 0 to 10 % RH and from 90 to 100 % RH

- ✓ Choice of measurement unit: °C / °F
- ✓ MAX / Hold functions
- ✓ Backlighting
- ✓ 2000-count display
- ✓ Protective shock-proof sheath

### Operating conditions:

- Temperature: 0 to 50 °C
- Humidity: < 75 % RH

**Dimensions:** 173 x 60.5 x 38 mm

**Mass:** 185 g

### Storing conditions:

- Temperature: -20 °C to +60 °C
- Humidity: < 75 % RH

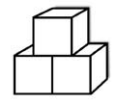
To order	
C.A 846 Thermo-hygrometer	P01.1563.01Z
To check your hygrometer's calibration, use salt cartridges at	
✓ 33 % HR	P01.1564. 02
✓ 75 % HR	P01.1564. 01



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# Why check the level of humidity?

- Maintaining an appropriate hygrometry is imperative, as much as for hygienic reasons as for energy efficiency. This is true even for a house located in an area with a dry climate due to air vapor emitted by the inhabitants: breathing and certain other activities.
- An excess of humidity in the air is easily identified by the apparition of mold in the hidden nooks and crannies, crinkling and peeling of wallpaper, rust on iron objects, and recurrent condensation on cold surfaces.
- Furthermore, even though the humidity level plays a very secondary role in times of cold weather, it becomes of increasing importance in function to ambient temperature. This is because the interchanges of evaporation decrease as the level of humidity increases (thus the "hot and muggy" sensation in very humid weather). By slowing down the evaporation of sweat, the hygrometry generates a thermal discomfort proportional to the surface of the skin wet with sweat.
- Different installations and equipment regulate the humidity level: air conditioning systems, controlled mechanical ventilation systems, dehumidifiers. In order to test their settings and good working order, it is important to periodically check the humidity level.

In general, it is acknowledged that the ideal, maximum comfort humidity level is between 30 and 40%.

## How to know if the humidity level is contributing to optimal comfort?

See diagram.

The ① zone corresponds to the comfort zone **with air movement**

The ② zone corresponds to the comfort zone **without air movement**

### Thermal Comfort Diagram

(source: diagram in Lavigne Pierre and Allii (1994).  
*Architecture climatique*, Aix-en-Provence: ed. Edisud, Vol. 1)

