

PCE-555 hydrometer

handheld, pocket-sized hydrometer, measures humidity, temperature, dew point and wet bulb globe temperature

This hydrometer has been developed to take quicker measurements of humidity and temperature. The PCE-555 hydrometer also offers a calculation of dew point and information about wet bulb globe temperature. This allows for the elimination of fungus in food storage, as well as in food transportation. It is also very useful in the construction industry for determine condensation in walls.

Thanks to its solid design, this hydrometer is ideal for taking measurements in situ, so long as the humidity sensor is not touched, not manipulated or not placed directly into liquid as it is a very sensitive component.



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Technical specifications

Measurement ranges	0 to 100% r.h. -30 to 100°C
Resolution	0.01% r.h. 0.01°C
Accuracy	±2.0% r.h. at 25°C ±0.5°C at 25°C
Display	dual LCD with 4.5 positions
Battery	9V battery (PP3)
Dimensions	225 x 45 x 34mm
Weight	200g

Examples of use for the PCE-555 hydrometer



With the PCE-555 hydrometer you can measure ambient conditions including humidity in the top portion of the LCD and temperature shown on the bottom and also calculates wet bulb temperature and dew point, which are useful for calculating thermal stress.

Dry bulb temperature is simply the environmental temperature. It's the temperature that is measured using any kind of thermometer.

Wet bulb temperature is determined by using a mercury thermometer which is situated in the shade with the bulb covered with a piece of wet fabric under a current of air, measuring, for example, a vent or a rotating electric fan. In this way, the evaporation of water absorbs heat lowering the temperature, reflecting the decrease in the temperature reading. The lower relative humidity is, the quicker the water in the fabric will evaporate and the further the resulting decrease with respect to the dry bulb temperature. (this is used to give an idea of thermal sensation)

Dew point is the temperature at which air vapour turns into condensation, producing dew or mist, or if the temperature is low enough, frost.

Contents

PCE-555 hydrometers, carrying case, battery and user's manual