



Humidity

Humidity is defined as the amount of moisture in the air. The measurement and control of humidity is required in many industries such as heating and air conditioning, food processing and transportation, agricultural and industrial processes. The amount of water vapor in air is most commonly measured by the relative humidity (RH).

Relative humidity is the ratio of the quantity of water vapor in air to the quantity of water vapor required for saturation at the same temperature. The saturation point is the point at which condensation is formed. Relative humidity is affected by the temperature—as the temperature increases, the air is able to absorb more water prior to the formation of condensation.

One of the most common methods of measuring the relative humidity is the thin film capacitance sensor. Moisture sensitive film is placed between two electrodes. The humidity causes the dielectric constant of the film to change, thereby, changing the capacitance of the sensor. These sensors are combined with electronic conditioning circuitry to produce an analog signal output.

Another common indication of humidity is the dew point. The dew point is measured in °F or °C and is defined as the temperature to which a gas begins to form condensation. Dew point can be derived from the relative humidity and ambient temperature of a gas or measured directly with a chilled mirror hygrometer.

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Humidity Indicators

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Humidity Transmitters

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Series 485

Digital Hygrometer

Measures % RH and Temperature



SPECIFICATIONS

Service: Humidity & temperature detection in air.

Range: Relative Humidity: 0 to 100% (non-condensing); Temperature: -22 to 185°F (-30 to 85°C).

Accuracy: Relative Humidity: ±2%; Temperature: ±1°F (±0.5°C).

Display: Dual 4.5 digit LCD. Temperature 0.4" High, RH: 0.2" High.

Temperature Limits: Probe: -22 to 185°F (-30 to 85°C). Ambient: 32 to 104°F (0 to 40°C).

Resolution: Relative Humidity: 0.1%; Temperature: 0.1°.

Power Requirements: 9V alkaline battery (included).

Probe: 485-2 only 8-5/8" (219 mm).

Weight: 12 oz (340 g).

Model 485 Digital Hygrometer is a versatile, compact, hand-held instrument for measuring percentage of relative humidity and temperature in °F or °C. Dew point and wet bulb temperature is derived from relative humidity and temperature measurements and displayed on the 0.4" LCD display. Hold key freezes the current temperature and relative humidity readings for situations where readings fluctuate. Store up to 25 readings with the non-volatile memory function - ideal for technicians needing to take multiple readings for later analysis.

Model 485-1 Digital Hygrometer

Model 485-2 Digital Hygrometer w/Remote Probe

Accessory

A-402A Carrying Case - Tough grey nylon pouch protects Series 485 Digital Hygrometer. Double zippered for quick and easy access. With belt loop that snaps closed.
7-1/2H" x 3W" x 2-1/4D" (191x76x57 mm)

