

## Handheld Psychrometer with Enthalpy Measurement

### HHAQ-106



- ✓ **Integral 6" Long Sensor-Tipped Probe for Measuring Conditions Inside Ductwork**
- ✓ **Probe Swivels, Increasing Placement Options**
- ✓ **Choice of Imperial or Metric Units for All Measured Parameters Except Relative Humidity**
- ✓ **4-Digit LCD**
- ✓ **Low Battery Indicator and 2-Minute Auto Power Off**

TRODEX's HHAQ-106 handheld psychrometer with enthalpy can measure any environment's ambient temperature, relative humidity (RH), dew point and wet bulb temperatures, absolute humidity (mixing ratio) and enthalpy of vaporization. These measurements are typically made by three groups of users: Water damage restoration contractors, HVAC/R system installers and technicians and professionals charged with monitoring and maintaining the environment of facilities such as office buildings, greenhouses, food and equipment storage facilities, wineries, freezers, shipping containers, computer rooms, labs, libraries, museums and saunas.

The dew point is the temperature below which the water vapor in a volume of air at a given constant barometric pressure will condense into liquid water at the same rate at which it evaporates. Condensed water is called dew when it forms on a solid surface. Another way to think of dew point is as an air saturation temperature associated with relative humidity (RH). A high RH value indicates that the dew point is close to the current ambient air temperature. At 100% RH, the dew point temperature is equal to the ambient temperature because the air is completely saturated with water. The wet bulb temperature is the temperature that a volume of air would have if it were cooled to saturation (100% RH) by the evaporation of water into it, with the latent heat coming from the volume of air. It is the lowest temperature that

can be reached under current ambient conditions by the evaporation of water only. The wet bulb temperature is the temperature you feel when your skin is wet and exposed to moving air as opposed to the actual air temperature—the dry bulb temperature. An environment's absolute humidity level (or mixing ratio) can be measured and expressed in units of grains per pound (GPP) or g/kg. GPP is a more useful moisture metric than RH to water damage remediators. Using RH alone, a remediator might unknowingly introduce moist air—with a low RH but a high GPP—during a job's drying phase.

The sixth environmental parameter that the HHAQ-106 can measure is enthalpy. Enthalpy is a measure of the amount of energy needed to change the state of a substance from a solid to a liquid or from a liquid to a gas. The most common application for the HHAQ-106 enthalpy-calculating algorithm is measuring the enthalpy of vaporization of air in an HVAC/R system duct.



HHAQ-106

### SPECIFICATIONS

**Ambient Temperature Measurement**

**Range:** -20 to 70°C (-4 to 158°F)

**Ambient Temperature Measurement**

**Accuracy:** 0.5°C (±0.9°F) from -10 to 40°C (14 to 104°F); 1°C (±1.8°F) elsewhere in range

**Temperature Measurement**

**Resolution:** 0.1°

**RH Measurement Range:** 0 to 100%

**RH Measurement Accuracy:**

±3% from 20 to 80% RH;

±3.5% elsewhere

**RH Measurement Resolution:** 0.1%

**Probe Length:** 150 mm (6")

**Display Size:** 38 mm (1.5") diagonal

**Current Consumption:** <10 mA

**Battery Life:** 1000 hours (typical)

**Dimensions:** 209 L x 47 W x 47 mm D (8.23 x 1.85 x 1.85")

**Weight (Without Battery):** 63 g (2.2 oz)

**Power Source:** Three "AAA" batteries (included)

To Order	
Model No.	Description
HHAQ-106	Handheld psychrometer with enthalpy calculation

*Comes complete with rubber bushing for inserting the probe into ductwork, three "AAA" batteries and operator's manual.*