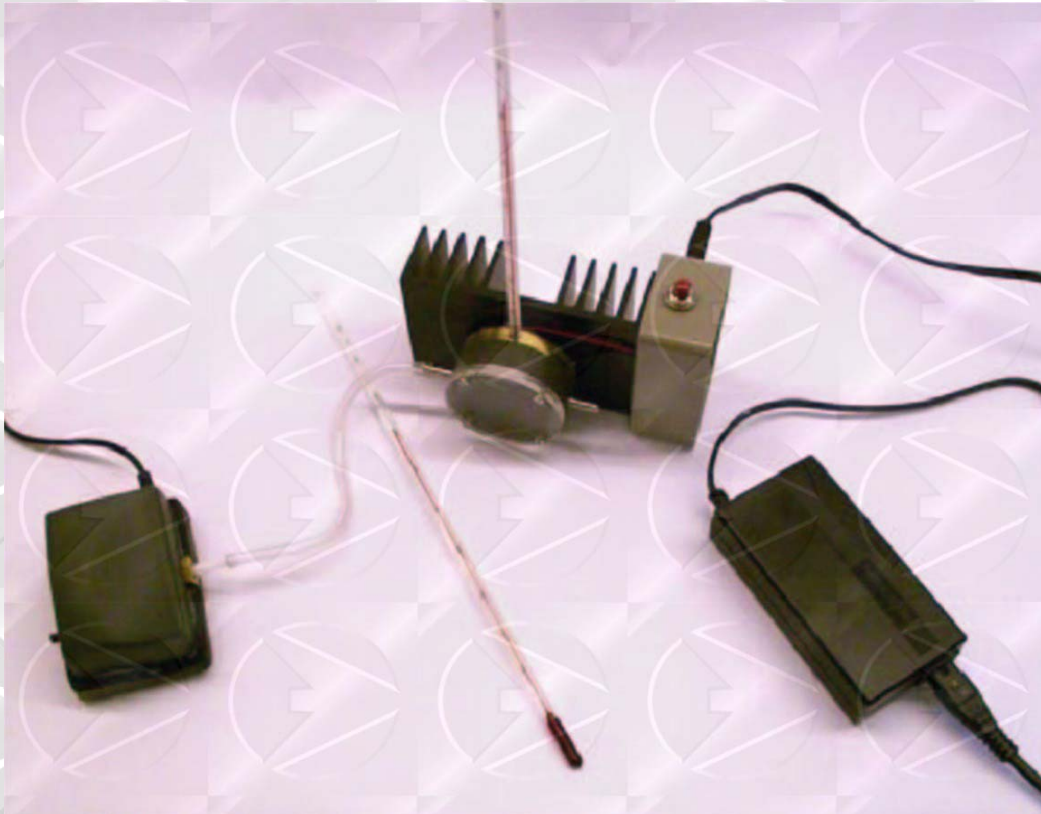




Dew Point Hygrometer H813



- *Direct Measurement of Ambient Dew Point*
- *Allows Sampling of Air From Remote Locations e.g. Air Ducts*
- *Rapid Operation and Reversibility. Allows Repeat Measurements by Many Students.*
- *Electrically Driven. No Flammable Solvents Required for Operation*



Introduction

The Hilton H813 Dew Point Hygrometer allows rapid demonstration and measurement of the ambient Dew Point by the chilled mirror principle. The unit is bench mounted and self-contained having its own low voltage electrically driven cooler and will provide interesting and instructive experimental work for all students studying psychrometry. The unit will be of particular interest to students in the following disciplines:

- **Thermodynamics**
- **Heat Transfer**
- **Chemical Engineering**
- **Mechanical Engineering**
- **Plant and Process Engineering**
- **Refrigeration**
- **Air Conditioning**

Experimental Capabilities

- Measurement of ambient dew point using the chilled mirror method.
- Measurement of dew point of air sampled from an air duct or other source.

Description and Operation

A circular polished and chrome plated mirror is enclosed on one face by a cylindrical tube with a clear window. Air is drawn into the enclosure by a small air pump either from the surrounding ambient or from another source.

The mirror is cooled electronically and its temperature is recorded by a close tolerance thermometer located at its geometric centre.

The operator controls the rate of cooling by pressing a switch on the unit. The temperature at which mist is seen on the mirror is the dew point and this temperature is recorded by the operator. A second identical thermometer for recording the dry bulb temperature is also supplied. These two values allow either direct calculation of the air condition or determination of the air condition from the charts supplied

As the mirror is electrically cooled, unlike the more traditional evaporative instruments, the process is quickly reversible allowing repeated measurements thereby maintaining a high degree of student interest.

Specification

Unit for the direct measurement of air dew point using the chilled mirror method.

Comprising :

Bench mounted chilled mirror dew point hygrometer with reversible electronic cooling.

Low voltage power supply and mains driven air sampling pump.

Mirror and dry bulb temperature sensing thermometers supplied.

Safety

Operates from a double insulated low voltage mains power supply..

Dimensions

(Hygrometer only)

Height: 75mm Depth: 60mm

Width: 120mm Weight: 0.2kg

Accessories and Spares

Unit supplied with:

One experimental operating and maintenance manual in English, Spanish, French or German.

Accessories and spares, suitable for 2 years normal operation. List available on request.

Services Required

Electrical: A: 10W 220-240 Volts,
Single Phase, 50Hz (With
earth/ground).

B: 10W 110-120 Volts,
Single Phase,
60Hz (With earth/ground).

Ordering Information

Order as: dew Point Hygrometer H813

Electrical Specification

Either: **A:** 220-240 Volts, Single Phase
50Hz (With earth/ground).

B: 110-120 Volts, Single Phase
60Hz (With earth/ground).

Language

Either: English, Spanish, French.

Also Available On Request

Further detailed specification.

Additional copies of instruction manual.

Recommended list of spares for 5 years operation.

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