



# Model 1500

## Portable Chilled Mirror Dew/Frost Point Hygrometer

**A self-contained portable, multi-function hygrometer that accurately and reliably measures the moisture content in gases, with the battery life and ruggedness required for field use.**

The Model 1500 is a drift-free, low maintenance hygrometer featuring high durability, NIST traceable certification and ease of use. Its primary method chilled mirror sensor provides precision dew/frost point temperature measurement in a robust, transportable package.

Simply attach the sample line, adjust the flow with the integral flow meter and turn on the power. Within minutes you will be collecting field dew/frost point data with the same chilled mirror accuracy of a laboratory standard hygrometer. With a nominal battery life of 12 hours, you will be able to collect data for the entire shift or spot check your processes for several days without recharging.

The Model 1500 is highly regarded by calibration technicians and manufacturing personnel for its quick dry down, fast response and long life. It can be fitted with a precision air temperature sensor and pressure transducer, and either locally or remotely mounted Edgetech Instruments D-Probe or S-Series chilled mirror sensors.

All Edgetech Instruments hygrometers are manufactured, calibrated and supported in the USA in a modern, ISO 9001:2015 registered facility and calibrated in an ISO/IEC 17025:2005 accredited calibration laboratory. All calibrations are traceable to NIST.

### Features:

- Primary method chilled mirror sensor provides high accuracy dew/frost point temperature measurement
- Automatic Balance Control mode provides automatic correction for optics contaminants
- Temperature measurement option for live relative humidity measurement
- Pressure measurement option for live parts per million by volume measurement
- Current or voltage outputs, RS-232 optional
- User programmable alarm functions
- Internal vacuum pump to pull sample



**The Edgetech Instruments Model 1500**

### Applications:

- Ambient air
- Glove boxes
- HVAC ducts
- Environmental test chambers
- Dry air circulation pipes
- Refrigerated storage rooms
- Engine test rooms



 **Edgetech Instruments**

ISO/IEC 17025:2005 Accredited  
ISO 9001:2015 Registered

## Technical Specifications

### Sensor Type:

Primary method chilled mirror dew/frost point sensor

### Sensor Options:

The remotely mounted D-Probe insertion sensors are air cooled with two stages.

The S-Series flow through sensors are available in both locally and remotely mounted configurations with either two or three stages. Note: Units fitted with S3 sensors are AC powered only.

### Measurement and Performance:

#### Dew/Frost Point Measurement Ranges:

Two-Stage DS2: -4°F to 122°F (-20°C to 50°C) air cooled  
Two-Stage DX2: -40°F to 122°F (-40°C to 50°C) air cooled  
Two-Stage S2SC: -40°F to 122°F (-40°C to 50°C) fan cooled  
Three-Stage S3: -76°F to 122°F (-60°C to 50°C) fan cooled  
Three-Stage S3: -103°F to 122°F (-75°C to 50°C) liquid cooled

Air/fan cooled sensor performance at 25°C ambient and 1 Atm.

#### Accuracy:

Dew/Frost Point:  $\pm 0.36^\circ\text{F}$  ( $\pm 0.20^\circ\text{C}$ )

### Functional:

#### Power Charger:

115-230 Vac, 50-60 Hz

#### Operating Temperature:

32°F to 122°F (0°C to 50°C)

#### Sample Connection:

1/4 inch compression fitting

#### Sample Flow Rate:

0.5 to 5 SCFH;  
Integral flow meter and control valve standard with S-Series sensors

#### Enclosure:

High impact plastic carrying case



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#### Sample Pressure:

0 to 150 psig;  
Higher pressures available, consult factory

#### Output: Digital:

RS-232, Optional

#### Output: Analog:

4 to 20 mA or 0-5 Vdc; -50 to 50°C or  
-75°C to 75°C dew/frost point span

#### Compliance:

9.0 Vdc, 450 ohms

#### Display:

Red LED, 0.5 in. tall; 8 digit alphanumeric

#### Alarm:

Visual: Flashing "ALARM" message

#### Relay:

1 Form C, non-latching  
10 A at 240 Vac, 8 A at 24 Vdc, 1/2 HP at  
240 Vac

#### Dimensions:

14.75" H x 18" W x 7" D

#### Weight:

24 lb.

