

DewTrak II

Chilled Mirror Dew Point Hygrometer

A Precision Dew Point Hygrometer for Industrial and Process Applications.

The Edgetech Instruments DewTrak II Dew/frost Point/Humidity Transmitter is a compact, cost effective, primary method chilled mirror hygrometer designed to continuously measure the moisture content of gases. Housed in a weatherproof enclosure, its modular design is available in a variety of mechanical configurations to accommodate a wide array of applications.

The DewTrak II provides high accuracy with long term stability and repeatability. It uses the chilled mirror dew/frost point temperature condensation principle to accurately determine the water vapor concentration in gas mixtures. The result is a highly precise yet durable moisture measurement device with a very long life cycle.

The DewTrak II is available with either the Edgetech Instruments D Sensor or the higher performance DX sensor. Either may be mounted directly to the hygrometer's chassis for ambient air monitoring or they may be mounted remotely for insertion into glove boxes, HVAC ducts, environmental test chambers, circulation pipes, refrigerated storage rooms, engine test chambers and many other environments.

Features:

- Precision dew/frost point or relative humidity transmitter
- Primary method chilled mirror sensor requires no calibration
- Provides high accuracy
- Long life, easily serviceable sensor
- Rapid response that quickly detects any change of conditions
- No false readings or accuracy drift
- Low cost of ownership
- Remote insertion or local wall mount sensor
- Flexible installation options
- Available with or without display
- Configurable analog outputs and alarm relay options
- Bi-directional serial interface
- Communications adaptable to user requirements

Multiple display parameters:

- Dew/Frost point temperature in °C or °F
- Percent relative humidity
- Parts per million by volume
- Parts per million by weight
- Grams per kilogram
- Grams per cubic meter
- Grains per pound
- Wet bulb temperature



**DewTrak II Hygrometer
With the DX Sensor**

Applications include:

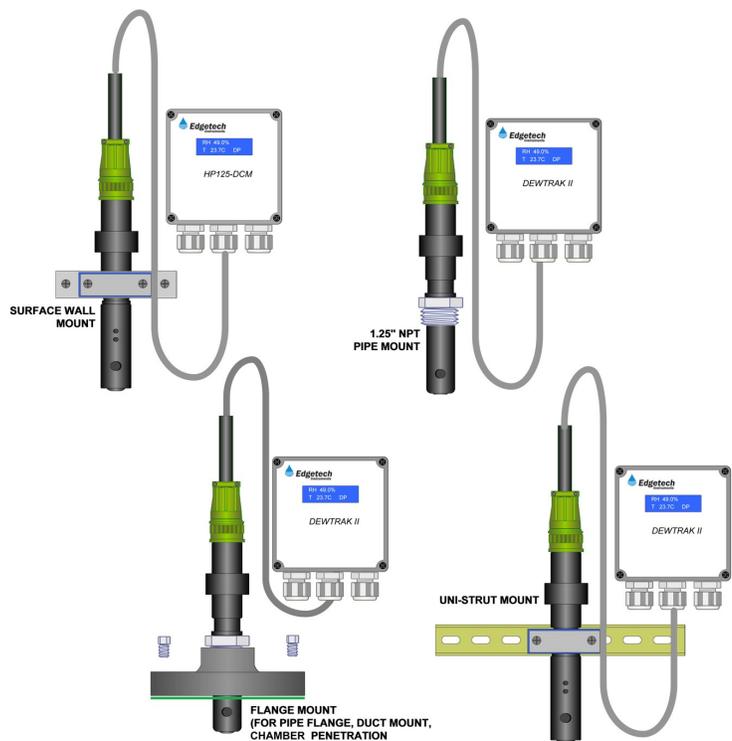
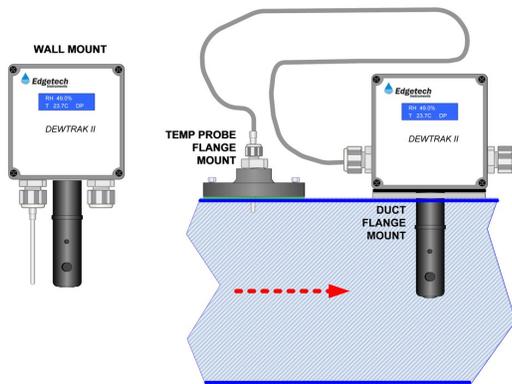
- HVAC duct systems
- Critical purged atmospheres
- Glove box environmental chambers
- Pharmaceutical testing and isolation chambers
- Engine air intake and exhaust testing
- Modified atmosphere packaging
- Semiconductor manufacturing furnace and lithography
- Medical packaging
- Dryer efficiency
- Biologics and cell culture
- Fluidized beds
- Food storage and packaging
- Air make-up for clean rooms and data centers.
- Checking polymer and metal oxide probes



 **Edgetech Instruments**

ISO/IEC 17025:2017 Accredited
ISO 9001:2015 Registered

Technical Specifications



Measurement and Performance:

Ranges at 25°C ambient:

D Sensor:

Dew/Frost Point (Standard) -40°C to 60°C
(-40°F to 140°F)

Air Temperature (Optional) -40°C to 60°C
(-40°F to 140°F)

Relative Humidity (Optional) 1% to 95%

DX Sensor:

Dew/Frost Point (Standard) -40°C to 95°C
(-40°F to 195°F)

Air Temperature (Optional) -100°C to 250°C
(-148°F to 482°F)

Relative Humidity (Optional) 1% to 95%

Accuracy:

Dew/Frost Point: $\pm 0.2^\circ\text{C}$ (± 0.5 gr/lb.)
Temperature: $\pm 0.1^\circ\text{C}$

Hysteresis:

Negligible

Repeatability:

$\pm 0.05^\circ\text{C}$ dew/frost point (± 0.1 gr/lb.)

Response:

1°C/sec (2.7 gr/lb./sec) not including settling time

Flow Rate:

Static to 3,000 linear ft./min

Pressure:

D Sensor: 100 psig maximum

DX Sensor: 50 psig maximum

Consult Edgetech Instruments for elevated pressure

Functional:

Outputs:

Analogue: 2; 4 to 20 mA, 0 to 5 Vdc or, 0 to 10 Vdc

Serial: 1; RS-232

Load:

4 to 20 mA: 0 to 250 ohms

0 to 5/10 Vdc: 1 k ohm or higher

Relay Outputs:

2 programmable alarm relays:

K1: clean mirror / alarm 1

K2: servolock / alarm 2

Contact rating: normally open (NO) 3A at 25 Vac,
or 30 Vdc

Remote Cable:

Dew/frost point: 10 ft. standard, 50 ft. maximum

Air temperature (Optional): 10 ft. standard, 50 ft.
maximum

Mirror:

Standard, chrome plated

Optional, platinum or stainless steel

2 stages of cooling (TEC) with a depression of 60°C

Power Supply:

24 Vdc $\pm 20\%$, 1 A maximum

EPA Noise Level:

< 0.02 K

Weight:

3 lb. (1.4 kg)

Dimensions:

Controller: 5 in (130 mm) W x 5 in (130 mm) H x 4 in (99 mm) D

Dew point probe: 9 in. (230 mm) L x 3 in. (80 mm) Dia.

Temperature probe: 10 in. (250 mm) L x 0.4 in. (10 mm) Dia.