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.

**DewTrak II Hygrometer
With the DX Sensor**

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

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.
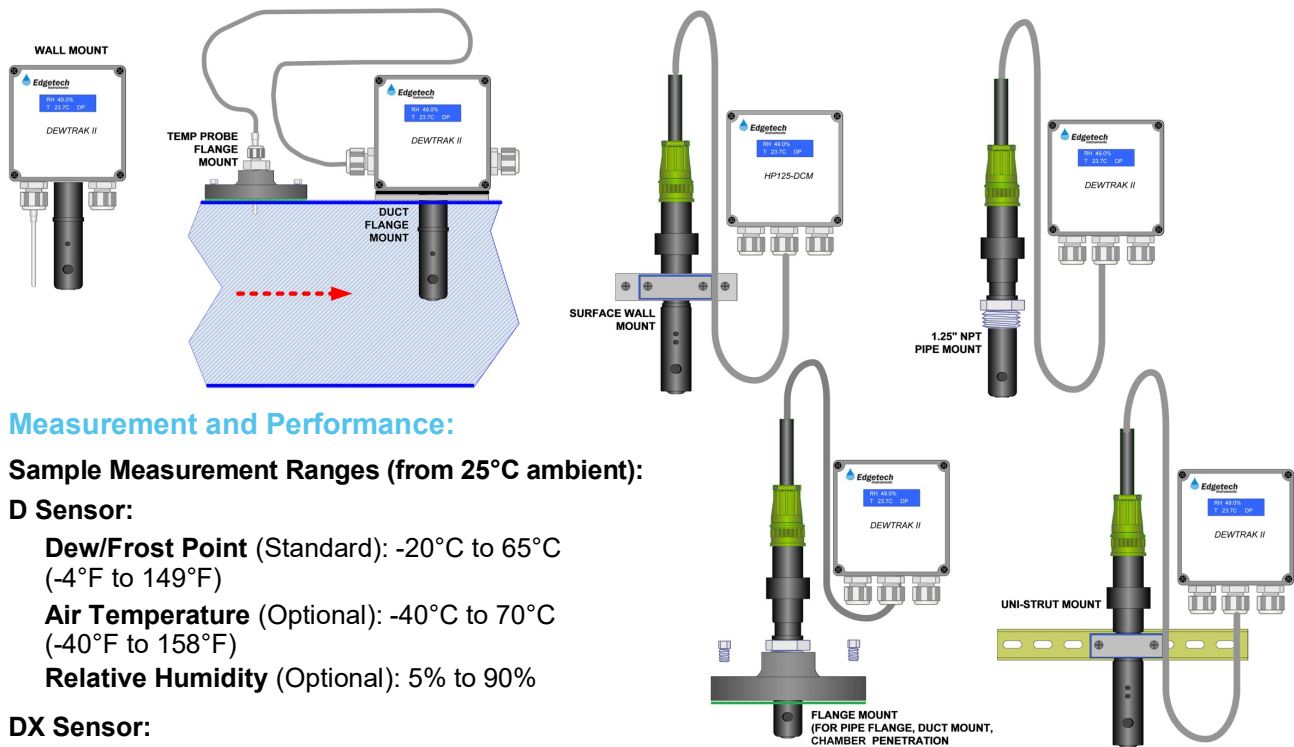Checking polymer and metal oxide probes

Made in USA

Edgetech Instruments

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

Technical Specifications

Measurement and Performance:

Sample Measurement Ranges (from 25°C ambient):

D Sensor:

Dew/Frost Point (Standard): -20°C to 65°C (-4°F to 149°F)

Air Temperature (Optional): -40°C to 70°C (-40°F to 158°F)

Relative Humidity (Optional): 5% to 90%

DX Sensor:

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

Air Temperature (internal DX AT sensor):
   -10°C to 60°C (-14°F to 140°F)

Relative Humidity: 5% to 90%

Accuracy (in Sample Measurement Range):
   Dew/Frost Point: ±0.2°C (± 0.5 gr/lb.)
   Temperature: ±0.1°C

Hysteresis:
   Negligible

Repeatability:
   ±0.05°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

Functional:

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

Power Supply:
   24 Vdc ±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. (10mm) Dia.