



Serving the market for more than 30 years,
as EG&G Moisture and Humidity Systems.

Model 2002 Hygrometer: DP, RH, AT

Install Reliability
Install EdgeTech Dew Point/RH/AT Measurements

Benefits

- **Capable of measuring** Dew Point, % Relative Humidity, Ambient Temperature, and other psychrometric variables
- **Primary** chilled mirror measurement of water vapor content of gas
- **Field proven** sensing technology from EdgeTech
- **Wide** measurement range (-50 to 100°C)
 - **Automatic** correction for mirror contaminants
- **Certified** measurement against NIST traceable standards
 - **Standard features**, where others charge extra



The image shows the EdgeTech Model 2002 Hygrometer, a rectangular device with a black front panel and a white top. The front panel features a digital display, a keypad, and several control buttons labeled 'POWER', 'ON', 'OFF', 'ALARM 1', 'ALARM 2', 'CONTINUED', and 'ARC'. The text 'EG&G MOISTURE AND HUMIDITY SYSTEMS' is visible at the top of the panel, and 'DEW PRIME II' is printed on the right side.

- Annealing Furnaces
- Process Dryers
- Clean Rooms
- Curing Ovens
- Environmental Chambers
- Emission Testing
- Continuous Industrial Processes
- Plant Air
- Metrology
- Lab Calibration Standards

ALPHANUMERIC DISPLAY

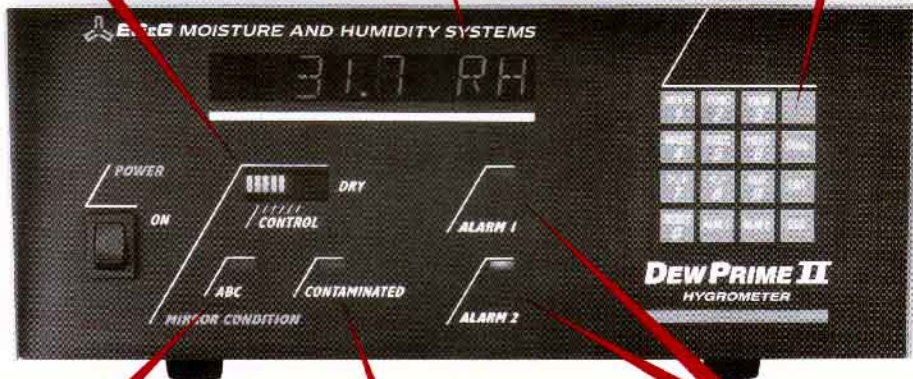
- Illustrates dew point measurement (in your choice of °C or °F)
- Time and date
- Analog output ranges, "sample and hold" status
- Serial protocol
- Dual alarm set points

CONTROL CONDITION INDICATOR

- Indicates dew point control loop stability
- Indicates mirror condition

TACTILE FEEDBACK KEYPAD

- Set control parameters



ABC INDICATOR

- Shows when mirror contamination correction is in progress

MIRROR CONTAMINATION INDICATOR

- Illustrates when process contaminants are beyond ABC correction

ALARM INDICATORS

- LED indication of alarm set point condition

Features

- Primary Dew Point, Relative Humidity and Ambient Temperature measurement
- Other psychrometric variables available (i.e., ppm, grains per pound, etc.)
- Programmable menu, via front panel
- Depression range choice of either 45 or 60°C (one- or two-stage cooling)
- Standard features that others charge extra:
 - two alarms (Form C), Automatic Balance Control, Scalable Analog Outputs, etc.
- Automatic Balance Cycle (ABC)
 - automatically corrects for most mirror contaminants
 - automatically restandardizes the instrument
 - you choose time and interval of restandardization, for best convenience
 - increases the length of unattended operation

AMBIENT TEMPERATURE

- You can get an RH (GR/lb, ppm, etc.) output derived from a primary measurement.

RS232 SERIAL PORT

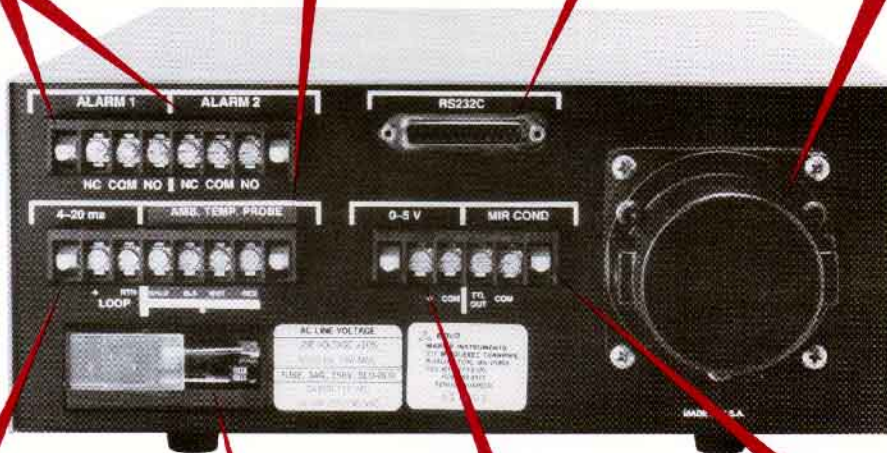
- Remote programming
- Data output such as dew point and alarm status

DUAL ALARM RELAYS

- Form C for greater versatility

DEW POINT SENSOR

- The heart of EdgeTech sensing reliability



4-20 mA CURRENT OUTPUT

- Scalable to drive peripheral devices

0-5 VDC OUTPUT

- Scalable to drive peripheral devices

MIRROR CONDITION

- Digital check of mirror condition

POWER

- Easy switch selection 115/220 VAC

Features

- EdgeTech field-proven, chilled mirror technology
 - one- or two-stage sensors available
 - NIST certified calibration (certificate provided)—integral or remote from controller
- Dual alarm capability
 - can be set for latching or auto-reset modes, your choice
- Serial and analog outputs
 - RS232 communication, with terminal, printer, or computer
 - 0-5 VDC and 4-20 mA
 - available simultaneously, one output per measurement parameter
 - scalable throughout the entire operating range of Dew Point, RH, or AT
 - program via front panel or remote serial port, your choice
 - isolated 4-20 mA option available

Specifications, Model 2002

Measurement Performance

Dew/Frost Point and RH Ranges

- 40 to +60°C (-40 to +140°F)
- 50 to +100°C (-58 to +212°F)
- 5 to 95% RH with S1
- 1 to 95% RH with S2

Accuracy

- ±0.2°C (0.36°F) Dew/Frost Point,
- Ambient Temperature, ±0.5% RH

Dew/Frost Point Temperature Sensor

- 3-wire Platinum Resistance Thermometer (PRT), 100 ohms at 0°C

Depression

- 45°C (81°F), S1
- 65°C (117°F), S2

Depression Slew Rate

- 1.7°C (3°F)/second maximum, above 0°C

Remote Sensors

- Up to 75 meters (250 feet)

Resolution

- 0.1°C or °F

Functional

Power Requirements

- 100/115/230 VAC ±10%, 50-60 Hz,
- 75 watts maximum

Operating Temperature

- Control Unit: 0 to +50°C (+32 to +122°F)
- DP Sensors: -40 to +100°C (-40 to +212°F)
- AT Sensor: -50 to +130°C (-58 to +266°F)

Auxiliary Coolant

- Water (or other)—2 liters/minute (0.5 gallon/minute) at 100 psig maximum, to augment depression capability of sensor when necessary

Sample Pressure

- 0 to 14 kg/cm² (0 to 200 psia)

Sample Flow Rate

- 0.25 to 2.4 liters/minute (0.5/5.0 SCFH)

Outputs

- 4-20 mA, 0-5 VDC, RS232

Track and Hold

- Outputs, analog, digital, alarms can be set to Track or Hold while in Auto Balance or Programming mode

Packaging

Alarms

- Two Form C, SPDT alarm relays rated for 3 amps at 24 VDC, 120 VAC
- Alarm mode (high or low) programmable from keyboard or RS232
- Alarm set points programmable from -99.99 to +99.99°C (-148 to +212°F) from keyboard or RS232
- Alarm can be latched or unlatched

Display

- 4-digit LED data display
- 0.6 in. high digits
- 0.1°C/0.1°F resolution, (-)xxx.x C/F

Weight

- 7.0 kg (15.5 pounds), bench-top

Dimensions

- 28.2 (W) × 13.0 (H) × 45.7 (D) cm, (11.1 (W) × 5.2 (H) × 18 (D) in.), bench-top with S2 mounted

Mounting

- Bench-top (standard)

Sensor Materials

- Rhodium mirror, glass, epoxy, and anodized aluminum

Sensor Selections

- S1, S2 are one- and two-stage flow-through dew point (DP) sensors, respectively



Specifications are nominal and subject to change without notice.

Accessories

- REMOTE MOUNTING KIT
 - For remoting the sensor 10 feet from the control unit
 - Extension cable is available for up to 250 feet
 - System is NIST-certified with selected cable length
- PANEL/RACK MOUNTING KIT
- SAMPLING MODULE
 - Consists of a vacuum pump, 0.75-1.35 kg/cm² (10.7-19.2 psia) variable area flowmeter. Assembled in a weathertight enclosure, with bulkhead fittings. Specify 115 V or 230 VAC, 50 or 60 Hz.
- EXPLOSION-PROOF SENSOR HOUSING
- NEMA-4 WALL MOUNT ENCLOSURE
 - For industrial applications
- IN-LINE PARTICULATE/COALESCING FILTER
- GR/LB, PPM_v (FIXED PRESSURE)

INSTALL RELIABILITY—INSTALL EDGETECH

For a **Quotation** or to **Order**, contact your Local Representative.

For a list of Local Representatives, please call, fax, or write:



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Printed in U.S.A. 10/96