

PDM75-X3

Portable, Precision Chilled Mirror Hygrometer

The Model PDM75-X3 chilled mirror hygrometer features drift-free accuracy, NIST traceability, low maintenance, high durability and ease of use in a portable package, resulting in a system ideally suited for the demands of field use.

The Model PDM75-X3 has all the standard features of the well known Edgetech Instruments DewMaster Hygrometer in a portable package, with a modular chilled mirror sensor that is chemically resistant to background gases, configured to meet your dew/frost point measurement requirements.

Whether you use it as a field transfer standard, to spot check your process air dryness or to measure endo gas dew/frost point, you will find the PDM75-X3 delivers the Edgetech Instruments Advantage: an ideal system tailored to your application needs. Choose the customized sampling system designed to match your measurement requirements. Configure it for positive pressure sample gas or to extract a gas sample using an integrated vacuum pump. Select the best user interface options to meet your needs. The PDM75-X3 will be ready to use, right out of the box.

All Edgetech Instruments dew/frost point hygrometers are manufactured and supported in the USA in a modern, ISO 9001:2015 registered facility with ISO/IEC 17025:2017 accredited calibration laboratory. The PDM75-X3 is delivered with a NIST traceability certificate.

Features:

- Chemically resistant, primary method dew/frost point sensor
- Drift free and certified against NIST traceable standards
- Best in class air cooled temperature depression
- Wide measurement ranges from -70°C to +70°C dew/frost point temperature
- Remotely or locally mounted sensor options
- Automatic Balance Control mode provides automatic correction for optics contaminants
- Rugged, high impact portable case
- Multiple interface options
- Choice of sampling systems



The PDM75-X3 Portable Hygrometer

Applications:

- Compressed air
- Furnace/heat treating
- Fluidized bed dryers
- Metrology
- Plastic molding
- Pharmaceutical
- Laboratories
- Clean rooms
- Power and energy systems
- Air brake dryer monitoring

[Click here](#) for the PDM75-X3 application note.



 **Edgetech Instruments**

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

Technical Specifications

Sensor Type:

Primary method, chemically resistant, chilled mirror dew/frost point sensor

Sensor Construction:

Wetted materials-Standard X3: 316 stainless steel, Teflon, Viton seals

Mirror: chrome (platinum or 316 SS optional)

Easy access flip top mirror access

Measuring Range:

Dew/Frost Point Temperature:

X3 Standard:

65°C depression, +75°C to -45°C

X3F Fan Cooled:

85°C depression, +75°C to -65°C

X3SF High Efficiency:

97°C depression, +75°C to -70°C

No liquid cooling required.

Other ranges available, consult factory.

Accuracy:

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

General:

Display: 8 Line LCD. Graphic data display, backlit, 3 parameters display simultaneously

Operating Temperature: 32°F to 122°F (0°C to 50°C)

Sample Connection: 1/4" compression fitting, configured for positive pressure sample gas standard

Sample Flow Rate: 0.5 to 5 SCFH with integral flow meter

Sample Pressure: 0 to 150 psig, higher pressures available, consult factory

Power & Outputs:

Power: 90-230 VAC $\pm 10\%$, 50 to 400Hz

Analog Outputs: 0 to 5 Vdc, 4 to 20 mA, 0 to 10 Vdc or 0 to 20 mA. User scalable, to drive peripheral devices.

Available simultaneously, one output per measurement parameter. Scalable throughout the entire operating range of psychrometric variables. Programed via front panel or serial port

Serial Output: RS-232

Relay Alarms: Two, user configurable, 1 FORM C, 10A @ 240 Vac, 8A @ 24 Vdc, 1/2 HP @ 240 Vac. Can be set for latching or auto-reset mode.



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Weights & Dimensions:

Weight: 24 lb.

Enclosure Dimensions: 14.75" H x 18" W x 7" D

Plastic carrying case.

Options:

Vacuum pump for sample extraction

Pressure transducer for automatic pressure compensation

Serial to Blue Tooth data acquisition

Remote sensor mounting kit

[Click here](#) for the X3 Chilled Mirror Sensor Brochure

