X3 Sensor Family

Chemical Resistant Primary Method Chilled Mirror Dew/Frost Point Sensor

The Edgetech Instruments X3 Series of chemical resistant chilled mirror sensors exploits the latest advancements in optical sensing and is specifically designed for demanding process and laboratory applications. It is available in multiple configurations to accurately measure dew/frost point in aggressive background gases including ammonia, hydrochloric acid, peroxides, semiconductor process gases, medical gases, and other reactants.

The X3 primary method, chilled mirror technique directly measures dew/frost point. The sensor's minimized sample cavity results in rapid dry-down times, fast response and quick detection of upset process conditions. The X3 sensor may be air cooled or liquid cooled with a best-in-class range to –90°C frost point.

The X3 sensor is used with Edgetech Instruments' DewMaster and PDM 75-X3SF hygrometers for both fixed and field portable use, bringing chilled mirror technology to aggressive applications where drift free, high precision dew/frost point measurement was not previously possible.

Edgetech Instruments designs and manufacturers accurate and reliable absolute humidity hygrometers, relative humidity transmitters, humidity probes, moisture analyzers, relative humidity calibrators, dew point generators and oxygen measurement instrumentation. Edgetech Instruments products are manufactured and calibrated to the highest industry standards in a modern facility located in Hudson, Massachusetts.

Features:

- Chemically resistant sensor housing and mirror eliminate sensor failures when measuring dew/frost point in aggressive background gases.
- Chamber design and high efficiency heat exchanger result in the ability to measure very low dew points.
- Hinged cover plate allows easy access to the mirror for cleaning and inspection.
- Reduced cavity sample chamber speeds sample sweeping resulting in rapid dry-down after exposure to high moisture levels.
- Fast reaction time detecting upset conditions in dry atmospheres can improve product yields and eliminate process down-times.
- Rugged, industrial electrical connectors and easy access slim line signal harness simplify installation and maintenance.

The X3 Sensor

Applications:

Air separation operations
Compressed air monitoring
Engine test cells
Furnace control
Metrology
Pharmaceutical production
Plastics production
Power generation
Research and development
Test and measurement
Semiconductor manufacturing

Made in USA

Edgetech Instruments

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

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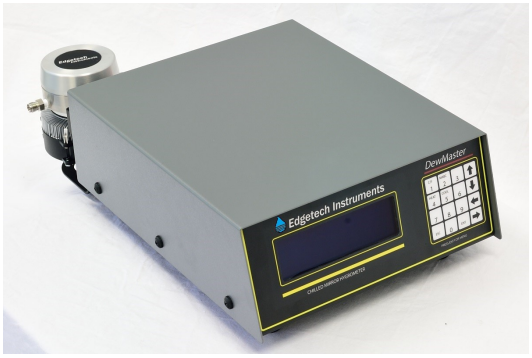
Technical Specifications

The X3 Sensor is available with the DewMaster and the PDM75-X3 hygrometers. See product datasheets for detailed specifications.

Chilled Mirror Sensor Heat Exchangers are available for:

- Air convection: 65°C depression
- Standard fan cooled: 85°C depression
- High efficiency fan cooled: 95°C depression
- Standard liquid cooled: 115°C depression
- Cryo-cooled: 125°C depression



DewMaster with X3SF Sensor

PDM75-X3SF with X3SF Sensor

Pressure Range:
0 to 200 PSIG

Temperature Range:
-40 to +125°C

Thermoelectric Cooler Type:
Three stage micro TEC

Environmental:
Dust and water resistant

Dew/Frost Point Range: (dependent upon Edgetech Instrument hygrometer model)

Sample Chamber Materials:
316 Stainless Steel, Teflon, Hastelloy

Sensor Mirror Materials:
Chrome Plated, 316 Stainless Steel, Platinum

Sensor Optical Windows:
Glass, TPX

Sample Fittings:
Compression Fittings, VCR or VCO, Stainless Steel, Hastelloy

Performance:

Model	Description	Max. Range, D/F Point at 25°C Ambient
X3SF	Active, High Efficiency Super Fan Cooled	-65°C to 75°C
X3LC	Active, Liquid Cooled at 0°C	-80°C to 75°C
X3LC	Active, Liquid Cooled at -20°C	-85°C to 75°C

Made in USA

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