The Edgetech Instruments PPM1 is a trace moisture analyzer for monitoring dew/frost point and ppmv water vapor in gases.

The PPM1 is a modular, remotely mounted hygrometer configured to meet your moisture measurement application requirements. The PPM1 uses an electrolytic, phosphorus pentoxide sensor in combination with a proprietary semi permeable diffusion membrane. The principle of operation applies Faraday’s Law of Electrolysis to determine the water vapor content by measuring the dissociation current needed to electrolyze the water molecules in the sample.

The PPM1 is packaged in an IP66/67, NEMA 4 plastic enclosure and comes complete with two FORM A relay alarms, two analog current outputs and a RS-232 bi-directional serial interface.

All Edgetech Instruments hygrometers are manufactured and supported in the USA in a modern, ISO 9001:2015 registered, ISO/IEC 17025:2005 accredited facility. All calibrations and certifications are traceable to NIST.

Features:
- Precise, trace moisture measurement
- Range: 0.1 to 1250 PPMv
- NIST traceability calibration certificate
- Fundamental measurement principle
- Compact, low cost solution
- Remote sensor can be installed at process take-off point
- Standard sample ports are 1/4 inch compression fittings
- Optional VCR sample ports
- May be configured for flow-thru or diffusion sampling

Applications:
- Air separation and cylinder trans-fill
- Glove box/isolation chamber
- Semiconductor fabrication
- Pharmaceutical storage
- Pharmaceutical processes
- Inert gas purity
- MAP systems
- Power and energy systems

Click here for the PPM1 Application note
Technical Specifications

Sensor Type
Electrolytic phosphorous pentoxide sensor (P₂O₅) on ceramic wafer

Measuring Range
Trace Moisture: 1250 to 0.1 PPMv
Dew/Frost Point: -20°C to -95°C

Accuracy
±5% of PPMv reading

Response Time
90% of step change, one minute, typical

Hysteresis
None

General
Display: 2 Line LCD backlit
Operating temperature: 32°F to 122°F (0°C to 50°C)
Sample connection: 1/4” compression fitting, standard model configured for positive pressure
Sample Flow Rate: 0.5 to 5 SCFH, regulated
Sample Pressure: 0 to 200 psig, regulated
Sensor Housing: 316 SS, flow thru head, 1/4 Inch compression fittings, VCR optional
Sampling Options: May be configured for diffusion sampling for glove box or isolation chamber

Power & Outputs
Power: 18 to 30 Vdc, unregulated, 1 A max
Outputs:
  Analog: two, 4 to 20 mA, scalable by user
  Alarm: two dry alarm relays, FORM A, adjustable by user
  Digital: RS-232 serial, bi-directional

Weights & Dimensions
Weight: 4 lb. (1.81 kg)
Environmental: Plastic IP66/67, NEMA 4 case
Dimensions:
  5.1” L x 3” W x 5.1” D
  (13 cm L x 7.6 cm W x 13 cm D)

Options
Vacuum pump for sample extraction
VCR male or female ports
Sensor mounting bracket for diffusion sampling