

# PPM1

## Low Cost, Trace Moisture Analyzer

### The Edgetech Instruments PPM1 is a trace moisture analyzer for monitoring dew/frost point and ppm<sub>v</sub> water vapor in gases.

The PPM1 delivers the Edgetech Instruments Advantage: an ideal system tailored to your application needs. It is a modular, remotely mounted hygrometer with an electrolytic sensor 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 9001:2008 registered, ISO/IEC 17025:2005 accredited facility. All calibrations and certifications are traceable to NIST.



The PPM1 Trace Moisture Analyzer

#### Features:

- Precise, trace moisture measurement
- Range: 0.1 to 1250 ppm<sub>v</sub>
- NIST traceability calibration certificate
- Primary method 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 transfill
- 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



 **Edgetech Instruments**

ISO/IEC 17025:2005 Accredited  
ISO 9001:2008 Registered

## Technical Specifications

### Sensor Type

Electrolytic phosphorous pentoxide sensor ( $P_2O_5$ )  
on ceramic wafer

### Measuring Range

Trace Moisture: 1250—0.1 ppm<sub>v</sub>  
Dew/Frost Point: -20°C to -95°C

### Accuracy

± 5% of ppm<sub>v</sub> reading

### Response Time

90% of step change, one minute, typical

### Hysteresis

None

### General

Display: 2 Line LCD backlit  
Operating temperature: 32° to 122°F (0° to 50°C)  
Sample connection: 1/4" compression fitting,  
standard model configured for positive pressure  
Sample Flow Rate: 0.5 - 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

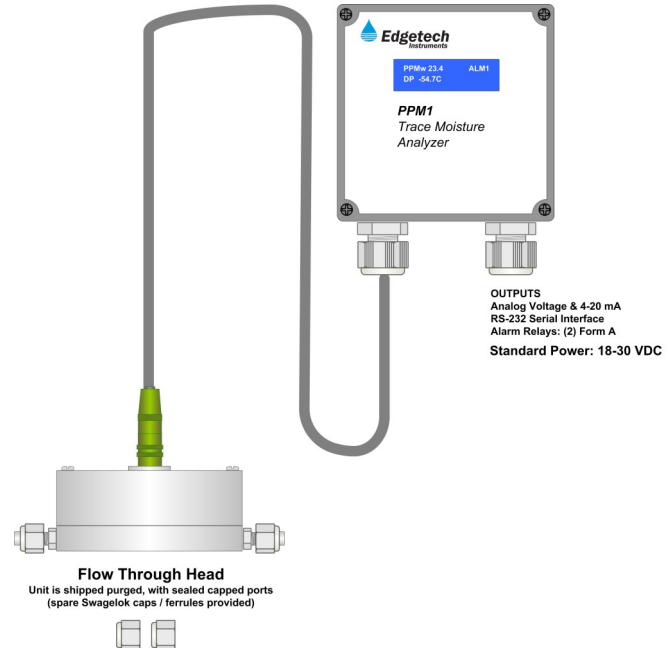
Power: 18 to 30Vdc, unregulated, 1A max

Outputs:

Analog: two, 4-20 mA, scalable by user

Alarm: two dry alarm relays, FORM A,  
adjustable by user

Digital: RS-232 serial, bi-directional



### Weights & Dimensions

Weight: 4 lbs. (1.81kg)

Environmental: Plastic IP66/67, NEMA  
4 case

Dimensions: 5.1" (13cm) L x  
3" (7.6cm) W x 5.1" (13cm) D

### Options

Vacuum pump for sample extraction

VCR male or female ports

Sensor mounting bracket for diffusion  
sampling



**Made in USA**