

Applications

This portable, intrinsically safe, single-channel analyzer measures moisture in gases. Designed for portable installations, it is used in conjunction with M Series moisture probes for industries including:

- Petrochemical
- Industrial gas
- Furnace gas/heat treating
- Power generation
- Air dryer
- Pharmaceutical
- Aerospace

Features

- Portable hygrometers with CENELEC intrinsically safe certification
- Displays moisture content in dew/frost point and ppm_v
- Optional computer-enhanced response for abrupt dry-down applications
- Available with or without built-in sampling systems
- Optional data logging capability
- M Series moisture probes
- Calibrations traceable to National Institute of Standards and Technology (NIST)

Moisture Monitor™ Series 35IS

Panometrics Intrinsically Safe Monitor

Moisture Monitor Series 35IS is a Panometrics product. Panometrics has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



GE Sensing

Value Packed

The Moisture Monitor Series 35IS (MMS 35IS) is a value-packed addition to the Moisture Series Analyzers line. This economically priced portable analyzer has advanced features and is certified to be intrinsically safe to CENELEC requirements.

Advanced Moisture Probe Technology

The Moisture Monitor Series 35IS combines GE's technologically advanced M Series moisture probe with state-of-the-art software and electronics for unequalled overall performance. Measurement range is from ambient to ppb moisture concentrations.

Optional Computer-Enhanced Response

For use in abrupt dry-down conditions, such as spot-sampling applications, GE computer-enhanced response software is available for the ultimate in measurement response speed.

Portable Configuration

The Moisture Monitor Series 35IS is available in two battery-powered portable versions. One version is in a damage-resistant enclosure that uses an external moisture probe connected to the analyzer by a cable. The other version contains a sample system inside the analyzer enclosure that consists of a filter, moisture probe (sold separately), isolation valves and process connections, making it a completely self-contained hygrometer system. Both versions are available with an optional heavy-duty carrying case with space for additional accessories.

NIST-Traceable Calibration

The Moisture Monitor Series 35IS is compatible with GE M Series moisture probes. Superior sensitivity, speed of response, calibration stability, and wide dynamic range have made the M Series probes the standard of performance and value in industrial moisture measurement. They are suitable for laboratory and industrial moisture measurement applications in gases over a wide range of process conditions.

All moisture probe calibrations are traceable to the National Institute of Standards and Technology (NIST).

Series 35IS Specifications

Electronics

Intrinsic Safety

Certified for intrinsic safety when using battery power:
ISseP01ATEX035X ⓈII 1 G EEx ia IIC T4

European Compliance

Complies with EMC Directive 89/336/EEC and
PED 97/23/EC for DN<25

Functions

- Dew/frost point
- Ppm_v in gases at constant pressure (pressure by programmable constant)
- Sensor signal (MH)

Moisture Inputs

- Portable model with internal sample system has internal M Series moisture probe input only. Process connection is via tubing fittings.
- Portable model for use with external M Series probe/sample system has external terminal strip for M Series moisture probe. Probe may be remotely located up to 2000 ft (600 m) from electronic console.

Data Logger Functions (optional)

- Date, time, value, units
- Selectable sample interval
- Sequential log
- Simple communication protocol for data dump
- RS232 port for use in nonhazardous areas only

Computer-Enhanced Response Software

Optional: Software provides fast measurements in abrupt dry-down applications (3 to 5 minute speed of response)

Display Functions

- Dew/frost point temperature: °F (°C)
- Ppm_v
- Pressure: psi(g), bar, kPa(g), kg/cm²(g)
- Sensor signal (MH)

AC Power Supply

Specify as 100, 120, 230 or 240 VAC, 50/60 Hz

Rechargeable Battery Pack

Battery power for eight-hour operation

Operating Temperature

32°F to 140°F (0°C to 60°C)

Storage Temperature

-4°F to 158°F (-20°C to 70°C)

Configurations

- Battery-powered portable
- Battery-powered portable with internal sample system

Moisture Measurement

Sensor Type

GE M Series thin-film aluminum oxide

Traceability

Each sensor is individually computer-calibrated against known moisture concentrations. Calibrations are traceable to the NIST

Operating and Storage Temperature

-166°F to 158°F (-110°C to 70°C)

Operating Pressure

5 m Hg to 345 bar (5000 psig)

Dew/Frost Point Temperature

Overall Calibration Range Capability

140°F to -166°F (60°C to -110°C)

Series 35IS Specifications

Available Calibration Range Options

- Standard: 68°F to -112°F (20°C to -80°C) with data to -166°F (-110°C)
- Extended high: 140°F to -112°F (60°C to -80°C) with data to -166°F (-110°C)

Accuracy

- $\pm 3.6^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$) from 140°F to -85°F (60°C to -65°C)
- $\pm 5.4^{\circ}\text{F}$ ($\pm 3^{\circ}\text{C}$) from -87°F to -166°F (-66°C to -110°C)

Repeatability

- $\pm 0.9^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) from 140°F to -85°F (60°C to -65°C)
- $\pm 1.8^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$) from -87°F to -166°F (-66°C to -110°C)

Response Time

Less than five seconds for a 63% step change in moisture content in either wet-up or dry-down cycle

Gas Flow Range

From static to 10,000-cm/s linear velocity at 1 atm

Options

Heavy-duty carrying case with room for additional accessories



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