

Applications

This single-channel analyzer measures moisture in gases and non-aqueous liquids. Designed for portable or permanent installations, it is used in conjunction with M Series moisture probes for industries including:

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

Features

- Calibrations traceable to National Institute of Standards and Technology (NIST)
- Rack, bench, panel, and weatherproof configurations available
- Displays moisture content in dew/frost point and ppmv
- 16-character alphanumeric backlit LCD front panel display
- Front panel membrane keypad with four control/programming keys and four mode keys
- Low profile design
- One isolated output (0/4 to 20 mA or 0 to 2 V)
- One fault alarm (either standard or hermetically sealed and normally energized)
- Watchdog timer to trigger fault alarm
- Two optional data alarms (standard or hermetically sealed for Class II, Division 2 areas)
- Optional computer-enhanced response software for dew point and ppmv

Moisture Monitor™ Series 35

Panametrics Moisture Analyzer

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



GE Sensing

Value Packed

The Moisture Monitor Series 35 (MMS 35) is a value-packed addition to the Moisture Series analyzers line. This economically priced analyzer has built-in quality and advanced design features.

Advanced Moisture Probe Technology

The Moisture Monitor Series 35 combines GE's technologically advanced M Series moisture probe with state-of-the-art software and electronics for unequaled overall performance. Measurement range is from ambient to parts per million (ppm) moisture concentrations.

NIST-Traceable Calibration

The Moisture Monitor Series 35 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 and non-aqueous liquids over a wide range of process conditions.

All moisture probe calibrations are traceable to the NIST.

Series 35 Specifications

Electronics

European Compliance

Complies with EMC Directive 89/336/EEC and 73/23/EEC LVD (Installation Category II, Pollution Degree 2)

Functions

- Dew point
- Ppmv in gases at constant pressure (pressure by programmable constant)

Inputs

- Moisture: Rack, bench, panel and weatherproof models have a single input for M Series probe connected to a terminal strip. Probe may be remotely located up to 600 m (2000 ft) from electronic console
- Auxiliary: 4 to 20 mA input

Recorder Output

0 to 20 mA, 4 to 20 mA or 0 to 2 V isolated analog, linear in parameter chosen

Current Output Load

- 500 Ω maximum for AC units
- 250 Ω maximum for portable units

Voltage Output Load

10 k Ω minimum

Computer-Enhanced Response Software

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

Alarm Relays

- Fault alarm
- Optional Standard Form C, 2 A at 120/250 VAC
- Optional hermetically sealed relay 0.3 A at 120 VAC

Display Units

- Dew/frost point temperature: °F (°C)
- Concentration: ppmv

Power Requirements

- AC power supply: Specify as 100, 120, 220 or 240 VAC, 50/60 Hz
- DC power supply: 24 VDC

Temperature

- Operating: 32°F to 140°F (0°C to 60°C)
- Storage: -4°F to 158°F (-20°C to 70°C)

Configuration Dimensions (h x w x d)

- Rack mount: 3.47 in x 19.00 in x 12.00 in (8.81 cm x 48.26 cm x 30.48 cm)
- Bench mount: 3.62 in x 10.98 in x 10.78 in (9.19 cm x 27.88 cm x 27.38 cm)
- Panel mount: 4.25 in x 11.00 in x 12.00 in (10.80 cm x 27.94 cm x 30.48 cm)
- Weatherproof: 13.56 in x 11.44 in x 5.22 in (34.44 cm x 29.06 cm x 13.26 cm)

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 μ Hg to 5000 psig (345 bar)

Dew/Frost Point Temperature

Overall calibration range capability: 140°F to -166°F (60°C to -110°C)

Calibration Ranges

- 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

- $\pm 3.6^\circ\text{F}$ ($\pm 2.0^\circ\text{C}$) from 140°F to -85°F (60°C to -65°C)
- $\pm 5.4^\circ\text{F}$ ($\pm 3.0^\circ\text{C}$) from -86°F to -166°F (-66°C to -110°C)

Series 35 Specifications

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 -86°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



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