

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 (3- to 5-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 of 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

- $\pm 1.1^\circ\text{F}$ ($\pm 2^\circ\text{C}$) from 140°F to -85°F (60°C to -65°C)
- $\pm 1.6^\circ\text{F}$ ($\pm 3^\circ\text{C}$) from -86°F to -166°F (-66°C to -110°C)

Series 35 Specifications

Repeatability

- $\pm 0.27^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) from 140°F to -85°F (60°C to -65°C)
- $\pm 0.5^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$) 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



©2005 GE. All rights reserved.
920-021B

All specifications are subject to change for product improvement without notice. Moisture Monitor™ is a trademark of GE. GE® is a registered trademark of General Electric Co. Other company or product names mentioned in this document may be trademarks or registered trademarks of their respective companies, which are not affiliated with GE.

