

GE Infrastructure Sensing

Applications

This single-channel analyzer measures moisture in gases and non-aqueous liquids. Designed for permanent installations, it is used in conjunction with GE Panametrics M Series moisture probes for air/gas dryer OEM industries.

Features

- Low-cost, single-channel hygrometer for original equipment manufacturer applications
- Two Form C alarm relays, standard or hermetically sealed for hazardous areas
- M Series moisture probes with NIST-traceable moisture calibration
- Weatherproof membrane front panel display/keypad
- Built-in isolated analog output in current or voltage
- Panel-mount and PC-board configurations
- Fail-safe fault alarm



MTS 5 Moisture Target™ Series 5

Low Cost, Real-Time Moisture Measurement

The Moisture Target Series 5 is an economical, single channel, aluminum oxide hygrometer in the GE Panametrics Moisture Series line of analyzers. It is intended for original equipment manufacturer (OEM) applications requiring low-cost, accurate, real-time moisture measurement.

Improves OEM Product Performance

The Moisture Target Series 5 can significantly enhance the performance of OEM products by allowing closed-loop control of moisture. For example, in a regenerative dryer application it can improve efficiency by initiating desiccant bed regeneration when needed, rather than on an open-loop timed cycle.

Panel-Mount Version

The panel-mount version of the Moisture Target Series 5 comes in a compact DIN standard meter housing for applications where space is at a

premium. The case slides directly into the panel cutout, and is held in place from the rear by captive screws.

PC-Board Version


The Moisture Target Series 5 is also available in PC-board form for complete product design flexibility. The board is typically installed inside the cover of a product enclosure or cabinet, with the LCD and keypad visible through cutouts in the cabinet door.

Uses M Series Probes

Both versions of the Moisture Target Series 5 use GE Panametrics M Series aluminum oxide moisture sensor probes. M Series probes are rugged and accurate true absolute humidity sensors with calibration traceable to the National Institute of Standards and Technology (NIST). Exceptional dynamic range, speed of response and calibration stability have made the M Series probe the standard for performance and value in industrial moisture measurement for more than 40 years.

GE Panametrics has joined other GE high-technology sensing businesses under a new name —

GE Infrastructure Sensing

imagination at work 

Microprocessor-Based Electronics

The microprocessor-based Moisture Target Series 5 accurately tracks fast-changing process conditions and displays dew/frost point temperature in °C or °F on a six-digit LCD. Dew/frost point is also available as an analog voltage or current output, and the Moisture Target Series 5 features built-in isolation to ensure the integrity of signals to remote devices. The unit also features two optional Form C alarm relays for high and low dew/frost point limits. For applications in Division 2 hazardous areas, hermetically sealed relays are available. The microprocessor-based electronics and five-button keypad combine to make selection of analog output zero and span, and alarm set-points fast and easy.

Specifications Electronics

Intrinsic Safety

External safety barrier for moisture input (optional)

European Compliance

Complies with EMC Directive 89/336/EEC, 73/23/EEC LVD (Installation Category II, Pollution Degree 2) and PED 97/23/EC for DN<25

Input

Moisture signal from GE Panametrics M Series thin-film aluminum oxide moisture probe

Analog Output

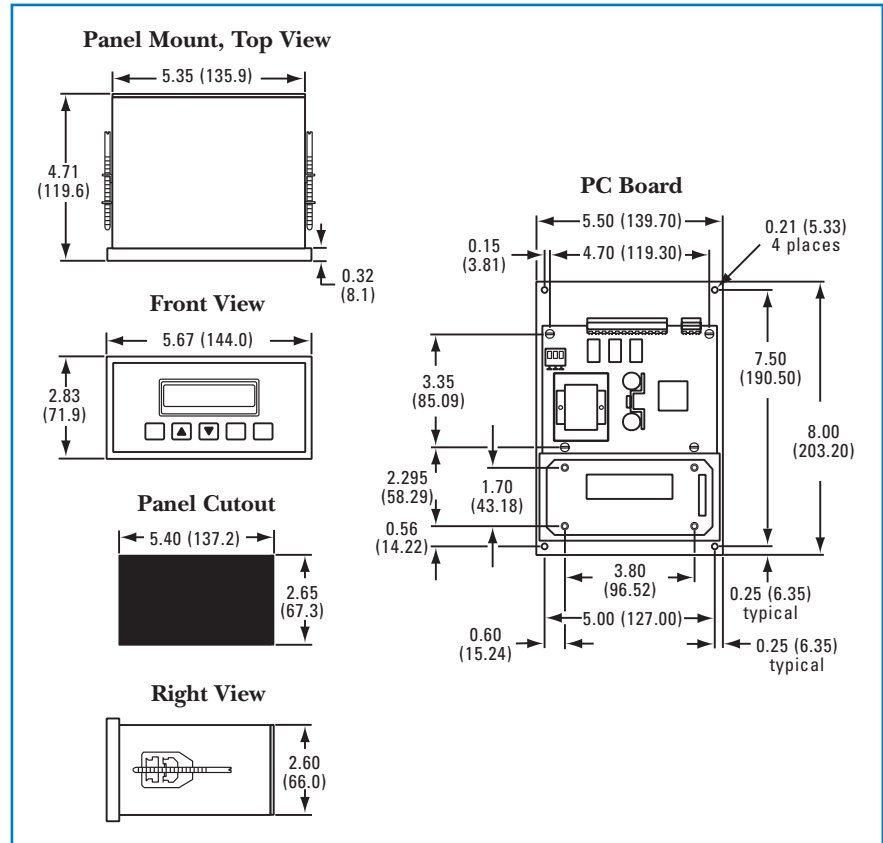
Single internal isolated recorder output for dew/frost point temperature; 10-bit (0.1%) resolution

Standard Switch-Selectable Outputs

- 0 to 2 V, 10-kΩ minimum load resistance
- 0 to 20 mA, 400-Ω maximum series resistance
- 4 to 20 mA, 400-Ω maximum series resistance
- Zero and span are user-programmable within the range of the instrument and the corresponding sensor

Alarm Relays

- One fail-safe fault relay
- Two standard Form C relays SPDT, rated for 2 A at 28 VAC/28 VDC
- Hermetically sealed relays available
- Set to any level within the range of the instrument; programmable from front panel



Left: Panel-mount model. Right: PC-board model. Dimensions in inches (mm).

Alarm Set Point Repeatability

±0.1°C dew point

Display

One-line, six-digit backlit LCD

Display Functions

Dew/frost point temperature °C or °F

Power Requirements

100/120/230/240 VAC, 50/60 Hz, 24 VDC

Temperature

- Operating: -20° to 60°C (-4° to 140°F)
- Storage: -30° to 70°C (-22° to 158°F)

Warm-Up Time

Meets specified accuracy within three minutes

Configurations

- Panel (front panel meets NEMA 4 and IP66 requirements)
- PC-board versions

Moisture Measurement

Sensor Type

Thin-film aluminum oxide moisture sensor probe

Moisture Probe Compatibility

Compatible with GE Panametrics M Series aluminum oxide moisture probes

Dew/Frost Point Temperature

- Overall calibration range capability: 60° to -110°C
- Available calibration range options: Standard 20° to -80°C with data to -110°C or extended high 60° to -80°C with data to -110°C

Accuracy

- ±2°C from 60° to -65°C dew/frost point
- ±3°C from -66° to -110°C dew/frost point

Repeatability

- ±0.5°C from 60° to -65°C dew/frost point
- ±1.0°C from -66° to -110°C dew/frost point