GE Infrastructure
Sensing

Applications

VeriDri is a dew point temperature or PPMv moisture loop-powered transmitter intended for OEM applications such as:

- Desiccant regenerative air or gas dryers
- Drying application for plastics prior to injection/blow molding
- Dryers for medical air
- Glove boxes

Features

- Low-cost
- Thin-film aluminum oxide moisture sensor technology
- Microprocessor-based, all-digital technology for reliable operation
- Compact Size
- NEMA 4X/IP67
- Loop-powered 4 to 20 mA output
- -110° to +40°C dew point temperature/0 to 10,000 PPMv moisture (with constant pressure) overall range capability
- NIST-traceable calibration

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

GE Infrastructure
Sensing

VeriDri™

Moisture Transmitter

For OEM Applications

The GE VeriDri moisture transmitter provides dryer manufacturers and other OEMs with the means to make simple, accurate and reliable moisture measurement of their gas at a low price.

VeriDri is a loop-powered transmitter with a range proportional to 4 to 20 mA. It is offered in a number of factory-configured output ranges covering the overall moisture range of -110° to +40°C dew point temperature. It can also cover a number of PPMv moisture output ranges from the overall range of 0 to 10,000 PPMv moisture if it is intended to be operated at a constant pressure. This information must be provided to the factory at the time of order placement.

Improve Product Efficiency and Performance

VeriDri can be used to significantly improve the energy and efficiency of regenerative gas dryer systems. By monitoring the dryer outlet moisture content, desiccant bed regeneration can be initiated on demand, rather than on a timed cycle. This process has been adopted by many major dryer manufacturers, and has resulted in improved performance and significant savings in energy costs. In addition, VeriDri can be used to monitor overall dryer operations, determine regular maintenance intervals and detect faulty operation.

Advanced Moisture Sensor Technology

The VeriDri combines a technologically advanced aluminum oxide moisture sensor with state-of-the-art software and electronics for unequaled overall performance.

NIST-Traceable Calibration

Superior sensitivity, speed of response, calibration stability, and wide dynamic range have made GE aluminum oxide moisture 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.

imagination at work

920-056

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

Installation Flexibility for OEM Applications

The rugged, compact VeriDri transmitter is designed specifically for OEM installations where space is at a premium. It can be installed directly in the process stream or, if necessary, in a sample system. If required, GE can design and build a sample conditioning system to meet the unique application demands.

The VeriDri transmitter is available with OEM pricing for a minimum quantity of 10 units. Discounts on larger quantities are also available, and blanket orders are accepted.

Specifications

Moisture Ranges

- –110° to 20°C
- –110° to –50°C
- –80° to 20°C
- –80° to –30°C
- –30° to 20°C
- –60° to 40°C
- –150° to 70°F
- –150° to –40°F
- –40° to 70°F
- –100° to 0°F
- –50° to 50°F
- 0° to 100°F
- 0 to 10 PPMv
- 0 to 100 PPMv
- 0 to 1,000 PPMv
- 0 to 10,000 PPMv

Note: PPMv ranges based on constant pressure, provided at time of order placement.

Operating Temperature

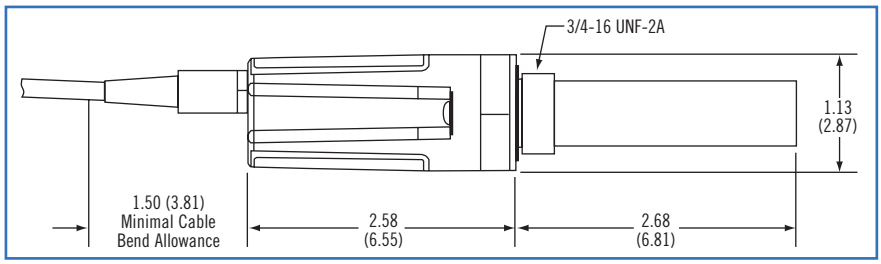
–40° to 60°C (–40° to 140°F)

Storage Temperature

70°C (158°F maximum)

Warm-Up Time

Meets specified accuracy in three minutes



VeriDri transmitter dimensions in inches (cm)

Accuracy

- ±2°C from –65° to 40°C dew/frost point
- ±3°C from –80° to –66°C dew/frost point

Repeatability

- ±0.5°C from –65° to 40°C dew/frost point
- ±1.0°C from –80° to –66°C frost point

Response Time

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

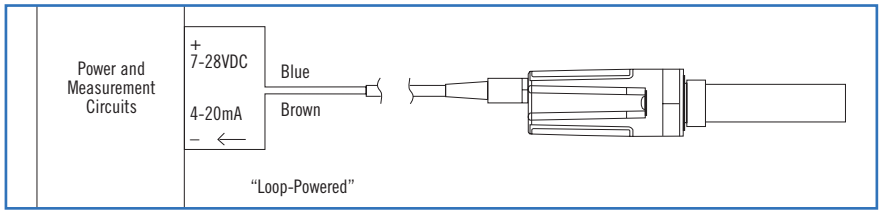
Electrical

Power

- 7 to 28 VDC (loop-powered, customer supplied)
- Output:
  4 to 20 mA
- Output Resolution:
  0.01 mA
- Max Loop R = 50x(PSV-7) ohms
  (Where: PSV = Power Supply Voltage)

  Example:
  Given a 24 VDC Power Supply,
  Max Loop R = 50 x (24 - 7)
  = 850 Ω
- Cable:
  2 m., standard (consult factory for custom lengths)

VeriDri wiring diagram



Mechanical

Sample Connection

¾-in. 16 straight male thread with O-ring

Operating Pressure

5 µ Hg to 5,000 psig (345 bar)

Enclosure

NEMA 4X/IP67

Dimensions

- Overall: 6.76 × 1.13 in. diameter
- Electronics with cable: 4.08 × 1.13 in. diameter
- Weight: 5 oz. (140 grams)

European Compliance

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

Moisture Sensor

Sensor Type

Thin-film aluminum oxide moisture sensor probe

Calibration

Each sensor is individually computer calibrated against known moisture concentrations, traceable to NIST

Calibration Interval

Sensor recalibration at GE Infrastructure Sensing is recommended every six to 12 months depending on application

Flow Rate

- Gases: Static to 10,000-cm/s linear velocity at 1 atm
- Liquids: Static to 10-cm/s linear velocity at density of 1 g/cc

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