

Moisture Analyzers Family Product Guide

Precision moisture control with advanced measurement technology to safeguard quality and improve process performance across industries.



Industry applications

Panametrics' process measurement solutions cover a wide range of industries and applications.

									
moisture.IQ	✓	✓	✓	✓	✓		✓		✓
dew.IQ	✓	✓		✓	✓	✓	✓		✓
PM880	✓	✓	✓	✓	✓	✓	✓		✓
HygroPro ^{II}	✓	✓	✓	✓	✓		✓		✓
HygroPro XP	✓	✓	✓	✓	✓		✓		✓
MMY30	✓	✓	✓	✓	✓	✓	✓		✓
MMY31						✓			
Aurora		✓	✓	✓	✓				
Optica				✓	✓	✓	✓	✓	
OptiSonde				✓	✓	✓	✓	✓	
MMR30	✓					✓	✓	✓	
MMR31						✓	✓	✓	
MMR101				✓		✓	✓	✓	

 Power Plant

 Refinery / Petrochemical Plant

 Natural Gas

 Steel Plant

 Industrial Gases

 Pharmaceutical

 Food and Beverages

 Quality, Test and Calibration

 Hydrogen

moisture.IQ

Multi-channel moisture analyzer for measurement in gases and liquids

The flagship analyzer of the IQ series is designed for installation in a control room or field setting, providing complete functionality where single or multiple measurements are required, for both moisture and oxygen analysis.

APPLICATIONS



Power Plant

H₂ (cooling generator)
Instrument Air lines
SF₆ gas
Transformer oil



Refinery / Petrochemical Plant

Hydrocarbon Liquids
Hydrogen recycle gas
Utility gas/Instrument air
Ethylene
Polyethylene plant feeds



Natural Gas

Natural gas pipelines
LNG, LPGs, NGLs
Biogas upgrading



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Food & beverages

CO₂ gas



Hydrogen

Steam Methane Reformers
Electrolyzers
Pipeline & Storage



FEATURES

- 1 to 6 channels of moisture and oxygen measurement
- Touch screen display
- Analog and digital outputs
- Compatible with MISP2 and M series aluminum oxide moisture probes
- 19" rack, panel, weatherproof wall-mount and explosionproof versions available

dew.IQ

Single-channel moisture analyzer for measurement in gases

An economical, single-channel, aluminum oxide hygrometer in the IQ Series line of analyzers. It is intended for industrial applications requiring accurate, real-time moisture measurement.

APPLICATIONS



Power Plant

H₂ (cooling generator)
Instrument Air lines
SF₆ gas



Refinery / Petrochemical Plant

Utility gas / Instrument air



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Pharmaceutical

Utility air
Instrument calibration



Food & beverages

CO₂ gas



Hydrogen

Steam Methane Reformers
Electrolyzers
Pipeline & Storage



FEATURES

- Rack, bench, panel and wallmount versions available
- Displays moisture content in dew / frost point and ppmv
- M Series or IQ.probe moisture probe compatible
- Intrinsic safe operation of M Series probe with external zener barrier

PM880

Rugged intrinsically safe portable moisture meter for gases and liquids

The PM880 is the number one hazardous area rated portable moisture meter on the market. It is designed to measure moisture in gases and hydrocarbon liquids across a broad spectrum of applications and industry segments. The compact and rugged design makes it suitable for use in the toughest of environments.

APPLICATIONS



Power Plant

H₂ (cooling generator)
Instrument Air lines
SF₆ gas
Transformer oil



Refinery / Petrochemical Plant

Hydrocarbon Liquids
Hydrogen recycle gas
Utility gas/Instrument air
Ethylene
Polyethylene plant feeds



Natural Gas

Natural gas pipelines
LNG, LPGs, NGLs
Biogas upgrading



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Pharmaceutical

Utility air



Industrial Gases

Air Separation Units
Cylinder filling



Food & beverages

CO₂ gas



Hydrogen

Steam Methane Reformers
Electrolyzers
Pipeline & Storage



FEATURES

- Intrinsically safe in a rugged compact package
- Measures moisture in gases and hydrocarbon liquids
- Internal data logger
- Lightweight handheld sample system
- Large graphic display
- Compatible with MISP2 and M series aluminum oxide moisture probes

HygroPro^{II}

Intrinsically safe moisture transmitter for use in gas and liquid applications

The intrinsically-safe **HygroPro^{II}** moisture transmitter measures the moisture content of gases and non-aqueous liquids in pipelines, natural gas, petrochemical, power generation, pharmaceutical, process and industrial applications.

APPLICATIONS



Power Plant

H₂ (cooling generator)
Instrument Air lines
SF₆ gas
Transformer oil



Refinery / Petrochemical Plant

Hydrocarbon Liquids
Hydrogen recycle gas
Utility gas/Instrument air
Ethylene
Polyethylene plant feeds



Natural Gas

Natural gas pipelines
LNG, LPGs, NGLs
Biogas upgrading



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Food & beverages

CO₂ gas



Hydrogen

Steam Methane Reformers
Electrolyzers
Pipeline & Storage



FEATURES

- Intrinsically safe
- Ambient to ppb moisture levels using aluminum oxide moisture sensor
- Built-in temperature and pressure sensors
- Gas and liquid applications
- HART communication

HygroPro XP

Explosionproof aluminum oxide moisture transmitter for gas and liquid applications

HygroPro XP measures moisture concentration in gases and non-aqueous liquids in natural gas, petrochemical, refinery, hydrogen, industrial gas, and power generation applications.

APPLICATIONS



Power Plant

H₂ (cooling generator)
Instrument Air lines
SF₆ gas
Transformer oil



Refinery / Petrochemical Plant

Hydrocarbon Liquids
Hydrogen recycle gas
Utility gas/Instrument air
Ethylene
Polyethylene plant feeds



Natural Gas

Natural gas pipelines
LNG, LPGs, NGLs
Biogas upgrading



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Food & beverages

CO₂ gas



Hydrogen

Steam Methane Reformers
Electrolyzers
Pipeline & Storage



FEATURES

- Explosionproof
- Ambient to ppb moisture levels using aluminum oxide moisture sensor
- Built-in temperature and pressure sensors
- Gas and liquid applications
- HART communication

DewPro MMY30

Loop powered moisture transmitter for measurement in gases

The MMY30 is designed to measure dew point or ppm in gases at line or atmospheric pressure. An integral flow cell with filtration and flow regulation allows for easy implementation.

APPLICATIONS



Power Plant

H₂ (cooling generator)
Instrument Air lines
SF₆ gas



Refinery / Petrochemical Plant

Utility gas / Instrument air



Natural Gas

Natural gas pipelines
LNG, LPGs, NGLs
Biogas upgrading



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Pharmaceutical

Utility air
Instrument calibration



Food & beverages

CO₂ gas



Hydrogen

Steam Methane Reformers
Electrolyzers
Pipeline & Storage



FEATURES

- Loop powered, 4-20mA transmitter
- Integral filtering and flow regulation
- Hazardous area configurations available

DewPro MMY31

Loop powered moisture transmitter for measurement in gases

The MMY31 is designed for inline installation in clean applications where trace moisture measurement is required and a bypass or extractive installation is not appropriate.

APPLICATIONS



Pharmaceutical

Utility air
Instrument calibration
Environmental chambers
Glove boxes



FEATURES

- Loop powered, 4-20mA transmitter
- Hazardous area configurations available

Aurora

Laser based moisture analyzer for gases

The Aurora uses tunable diode laser absorption spectroscopy (TDLAS) to quickly and accurately measure moisture in gases, with speed of light response and minimum maintenance requirements.

APPLICATIONS



Refinery / Petrochemical Plant

Hydrogen recycle gas
Utility gas/Instrument air



Natural Gas

Natural gas dehydration
Natural gas pipelines and storage
LPGs, NGLs
Biogas upgrading



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling
CO₂



FEATURES

- Rated for installation directly in a hazardous area
- Optical response <2 seconds
- Integrated sample system for measurement integrity
- Patented temperature and pressure compensation
- Optional safe area 19" rack mount and portable configurations available

Optica

Chilled mirror based hygrometer for high accuracy moisture measurements in gases

The Optica is a primary standard measurement device designed for industrial and laboratory applications requiring high precision without long term drift. It may be used with a number of chilled mirror sensors providing a wide measurement range.

APPLICATIONS



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Pharmaceutical

Utility air
Instrument calibration
Clean Room



Food & beverages

Utility air
Instrument calibration
Clean Room



Quality, Test & Calibration

Environmental test chambers
Engine test cells
Air conditioning and heat exchange
coil testing
Metrology labs



FEATURES

- Measurements traceable to national standards
- 1/4 color VGA display
- Built-in data logger
- Multiple measurement units can be displayed and transmitted
- Patented PACER® cycle automatically cleans mirror to ensure measurement integrity

OptiSonde

Economical chilled mirror based hygrometer for high accuracy moisture measurements in gases

The OptiSonde is a primary standard device designed for process and laboratory measurements requiring high precision without long term drift. It may be used with a number of chilled mirror sensors providing a wide measurement range.

APPLICATIONS



Steel Plant

Annealing Lines
Galvanisation Lines
Utilities



Industrial Gases

Air Separation Units
Cylinder filling



Pharmaceutical

Utility air
Instrument calibration
Clean Room



Food & beverages

Utility air
Instrument calibration
Clean Room



Quality, Test & Calibration

Environmental test chambers
Engine test cells
Air conditioning and heat exchange coil testing
Metrology labs



FEATURES

- Measurements traceable to national standards
- Built-in data logger
- Multiple measurement units can be displayed and transmitted
- Patented PACER® cycle automatically cleans mirror to ensure measurement integrity

MMR30

Loop powered mid-range moisture transmitter

The MMR30 is designed for mid-range (5°F to 185°F/-15°C to 85°C) moisture applications such as refrigerated compressed air dryers. It is compact and can be easily installed in indoor or outdoor environments.

APPLICATIONS



Power Plant

Gas Turbine inlet air



Pharmaceutical

Drying applications
Product Validation
Tablet coating
ETO Sterilisation



Food & beverages

Dehydration applications
Fruit Ripening
Coating



Quality, Test & Calibration

Weather Stations



FEATURES

- Loop powered 4-20mA transmitter
- Proven Polymer Capacitive sensor
- Integral filtering and flow regulation
- Optional integral display with user interface

MMR31

Loop powered mid-range moisture transmitter

The MMR31 is designed for relative humidity measurement (0-100%) applications. It is compact and can be easily installed in indoor or outdoor environments.

APPLICATIONS



Pharmaceutical

Drying applications
Product Validation
Tablet coating
ETO Sterilisation



Food & beverages

Dehydration applications
Fruit Ripening
Coating



Quality, Test & Calibration

Humidity control
sterilization chambers



FEATURES

- Loop powered 4–20mA transmitter
- Proven Polymer Capacitive sensor
- Simple field recalibration with salt bottles
- Optional integral display with user interface
- Hazardous area options available

MMR101

Loop powered high temperature relative humidity transmitter

The MMR101 is designed for high temperature relative humidity (0-100%) applications. It's rugged design is suitable for the harshest installations.

APPLICATIONS



Steel Plant

Blast gas humidification



Pharmaceutical

High temperature drying applications



Food & beverages

High temperature drying applications



Quality, Test & Calibration

High temperature drying applications



FEATURES

- Loop powered 4-20mA transmitter
- Proven Polymer Capacitive sensor
- Optional integral display with user interface
- Hazardous area options available
- Operating temperature up to 300°F (150°C)

Panametrics, a Baker Hughes business, provides solutions in the toughest applications and environments for moisture, oxygen, liquid and gas flow measurement.

Experts in flare management, Panametrics technology also reduces flare emissions and optimizes performance.

With a reach that extends across the globe, Panametrics' critical measurement solutions and flare emissions management are enabling customers to drive efficiency and achieve carbon reduction targets across critical industries including: Oil & Gas; Energy; Healthcare; Water and Wastewater; Chemical Processing; Food & Beverage and many others.

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