

# Maximum safety, optimum efficiency

Oxygen sensor technology calibrated  
to improve your process

# Maximizing safety and efficiency in high risk environments demands sensor technology you can rely on.

**Our oxygen analyzers have been ensuring the safety of our customers and their processes for decades.**










As a recognized leader in gas analyzers, you can be confident knowing that our solution will have the best combination of technology and expertise to guarantee your process measurements. With no moving parts, our analyzers are designed for the toughest applications. Partnering with Panametrics doesn't just bring you reliability and consistency in measurements though, it offers fully customized solutions unique to your process and supported by local technical teams.

Our technology and application specialists are experts in designing the best solutions in gas analysis for the petrochemical, pharmaceutical, energy, steel, food & beverage and industrial gas industries. Our global network ensures our partners get first class local support for all aftermarket needs such as start-up commissioning, calibration services and product training.

# Panametrics

a Baker Hughes business

## Market Matrix

	XMO2	XMTC	oxy.IQ	DeltaF	CGA351	XDP	TMO2D
 Power Plant	✓	✓	✓			✓	✓
 Refinery	✓	✓	✓	✓	✓	✓	✓
 Petrochemical Plant	✓	✓	✓	✓	✓	✓	✓
 Natural Gas	✓	✓	✓	✓	✓	✓	✓
 Steel Plant	✓	✓	✓	✓		✓	✓
 Industrial Gases	✓	✓		✓	✓	✓	✓
 Pharmaceutical	✓		✓	✓	✓	✓	✓
 Food & Beverages	✓	✓	✓			✓	✓
 Water / Waste Water	✓					✓	✓

# XMO2pro

## Proven robustness in hazardous area oxygen analysis

The XMO2pro with optional SIL 2 certification was developed for stability and longevity when measuring oxygen content in the percentage range, can easily recover from process failures and delivers highly accurate measurements, especially in explosion-hazard areas.

### APPLICATIONS



#### Power Plant

H<sub>2</sub> (cooling generator)



#### Refinery / Petrochemical Plant / Natural Gas Application



Hydrocarbon gas feed



Hydrogen recycle gas



Liquid HC storage tanks



Natural gas pipelines

Ethylene/polyethylene plant

Biogas upgrading



#### Steel Plant

Annealing furnaces



#### Pharmaceutical

Liquid HC storage tanks

Centrifuges

Reactors

Ambient monitoring

Reactivation of carbon



#### Industrial gases application

Percent oxygen



#### Food and Beverage

Oxidization prevention of dry powders



#### Waste Water

Oxygen measurement in waste water  
digester gas



### KEY FEATURES

- Background gas compensation
- Intuitive Operator Interface on a Multiparameter Display
- No moving parts assuring trouble-free operation
- Class 1 Div 1/ATEX and IECEx zone 1 as standard
- SIL 2 by Design (Optional)

# XMTCpro

## High accuracy analysis in a compact binary gas analyzer

The XMTCpro with optional SIL 2 certification is a compact, reliable and field proven thermal-conductivity analyzer, best used when safety is a priority. Configured for Class 1 Div 1/ zone 1 environments and with solvent resistant versions, the XMTCpro is a highly versatile and cost effective analyzer used for percent measurement in known gas compositions.

### APPLICATIONS



**Power Plant**

H2 (cooling generator)



**Refinery / Petrochemical Plant /  
Natural Gas Application**



Biogas upgrading



Catalytic reformer for recycle hydrogen



Isomerization unit for recycle hydrogen



Butamer unit off-gas

Hydrotreater for recycle hydrogen

Fuel gas/Off gas



**Industrial Gases**

Air separation units (N2/Argon/O2/H2)

Cylinder filling



**Food and beverages**

CO2-purity (breweries)



### KEY FEATURES

- Class 1 Div 1/ATEX and IECEx zone 1 as standard
- IP66/4X rated for internal/external use
- No moving parts assuring trouble-free operation
- Push button field calibration

# oxy.IQ

## Highly reliable and cost effective oxygen measurement, all in a compact intrinsically safe package

Designed with usability and customer integration as a priority, the oxy.IQ is a two wire loop powered transmitter with 17 different percent and ppm scales for oxygen analysis. Leveraging proven sensor technology, the oxy.IQ combines all of these features in an intrinsically safe package perfect for oxygen measurement in a variety of background gases.

### APPLICATIONS



#### Power Plant

Oxygen measurement H<sub>2</sub>  
cooled generators



#### Refinery / Petrochemical Plant / Natural Gas Application



Biogas upgrading



Catalytic reformer for recycle hydrogen



Isomerization unit for recycle hydrogen

Butamer unit off-gas

Hydrotreater for recycle hydrogen

Fuel gas/off gas



#### Steel Plant

Annealing furnaces



#### Industrial Gases

Nitrogen generators  
Oxygen impurities



#### Pharmaceutical

Glovebox applications



#### Food and beverages

CO<sub>2</sub>-purity (breweries)



### KEY FEATURES

- Intrinsically safe option for Class 1 Div 1 / ATEX and IECEx zone 0 locations
- Low maintenance, economical and compact
- Flameproof option available
- Non-incendive without Zener barriers for class 1 Div 2, US only
- Sensor lifetime indicator
- Display Auto ranging

# DeltaF

## Delivering ultra stable oxygen analysis across the full measurement range and optimized for industrial gas applications

The DeltaF non-depleting coulometric cell provides ultra stable oxygen measurement and requires only an annual span calibration. Combined with Panametrics Moisture.IQ, this offers a cost effective six channel solution for multi point oxygen measurement covering the full span of ppm and percentage measurements. The DeltaF is particularly suited to applications requiring process and quality control.

### APPLICATIONS



#### Refinery / Petrochemical Plant / Natural Gas Application



Natural gas pipelines  
Ethylene plant – oxidization prevention



#### Steel Plant

Annealing furnaces



#### Industrial Gases

Air separation units (N<sub>2</sub>/Argon/O<sub>2</sub>/H<sub>2</sub>)  
Cylinder filling



#### Pharmaceutical

Glovebox applications



### KEY FEATURES

- Ultra stable coulometric measurement technology
- Low cost of ownership with span calibration
- Fast response times
- Combined with the moisture.IQ offers a 6 channel analyzer and intrinsically safe DeltaF
- Class 1 Div 1/ATEX and IECEx zone 1

# XDP

## Offering added functionality to Panametrics transmitters, the XDP is more than just a fully certified Ex Proof display

In addition to offering a local display, the auto-calibration and verification functionality of the XDP compliments the XMO2 and XMTC transmitters with even lower maintenance and calibration requirements, offering a full solution package. The advanced micro-processor control compares calibration readings with factory settings to verify calibration. Corrections are automatic with user notification.

### APPLICATIONS



#### Power Plant

Hydrogen cooled generators  
custom software



#### Refinery / Petrochemical Plant / Natural Gas Application

Hydrocarbon gas feed  
Hydrogen recycle gas  
Liquid HC storage tanks  
Natural gas pipelines  
Ethylene/polyethylene plant  
Biogas upgrading  
Catalytic reformer for recycle hydrogen  
Isomerization unit for recycle hydrogen  
Butamer unit off-gas  
Hydrotreater for recycle hydrogen  
Fuel gas/off gas



#### Steel Plant

Annealing furnaces



#### Industrial Gases

Air separation units (N<sub>2</sub>/Argon/O<sub>2</sub>/H<sub>2</sub>)  
Cylinder filling



#### Pharmaceutical

Liquid HC storage tanks  
Centrifuges  
Reactors  
Ambient monitoring



#### Food and beverages

CO<sub>2</sub>-purity (breweries)



### KEY FEATURES

- Full solution enabler to compliment the XMO<sub>2</sub>, XMTC and oxy.iQ with added functionality
- 4 relay output for solenoid control
- Very low maintenance requirement and reduced touch time of other transmitters
- Class 1 Div 1/ATEX and IECEx zone 1 as standard



# TMO2D

## Added functionality in a cost effective package, this safe area display compliments the Panametrics analyzers with increased functionality and control

The TMO2D offers auto-calibration and verification control to support the XMO2, XMTC and oxy.IQ analyzers. This package comes in user selectable form factors which offers reduced maintenance and alarm outputs.

### APPLICATIONS



#### Power Plant

Hydrogen cooled generators  
custom software



#### Refinery / Petrochemical Plant / Natural Gas Application



Hydrocarbon gas feed  
Hydrogen recycle gas



Liquid HC storage tanks  
Natural gas pipelines  
Ethylene/polyethylene plant

Biogas upgrading  
Catalytic reformer for recycle hydrogen  
Isomerization unit for recycle hydrogen  
Butamer unit off-gas  
Hydrotreater for recycle hydrogen  
Fuel gas/off gas



#### Steel Plant

Annealing furnaces



#### Industrial Gases

Air separation units (N<sub>2</sub>/Argon/O<sub>2</sub>/H<sub>2</sub>)  
Cylinder filling



#### Pharmaceutical

Liquid HC storage tanks  
Centrifuges  
Reactors  
Ambient monitoring



#### Food and beverages

CO<sub>2</sub>-purity (breweries)



### KEY FEATURES

- Single or dual isolated 4-20mA outputs
- Up to four field-configurable process alarms
- Automatic calibration relays for auto-calibration of XMO2 and XMTC

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.

Join the conversation and follow us on LinkedIn  
[linkedin.com/company/panametricscompany](https://www.linkedin.com/company/panametricscompany)

Copyright 2024 Baker Hughes Company. All rights reserved.

BHMABR02V1 (12/2024)

**Baker Hughes** 

[panametrics.com](https://www.panametrics.com)