



Michell Instruments releases the XZR250 zirconium-oxide analyser

The Dew-Point, Humidity and Oxygen Specialists

Michell Instruments has announced the launch of the XZR250 oxygen analyser for monitoring combustion control in industrial boilers. It was developed to meet customer demand for a cost-effective, easy to operate instrument with a probe designed to cope with the high temperatures in the flue. Effective combustion control has growing importance for operators as it not only helps increase fuel efficiency but also ensures compliance with legislation on allowable emissions.

The XZR250 uses a zirconium-oxide sensor with a life span of up to seven years (depending on the fuel used) to maintenance to a minimum. A key benefit of the sensor is its fast response of less than fifteen seconds to changes in oxygen concentrations of 90% of the range. It is also accurate to <0.25% O₂, allowing optimum combustion control.

The XZR250 is easy to install as it requires no specialised tools, it is also very light to handle and has a fast start-up routine. The probe can be inserted directly into boilers up to 700°C and uses the Pitot effect to ensure the sample gas is sufficiently cooled to protect the sensor from damage without the need for complex sample conditioning. As with any process instrument, regular calibration is necessary to ensure the accuracy of the measurements. The XZR250 can use air as a calibration gas, making calibration highly cost effective and simple to perform.

The XZR250 can use air as a calibration gas, making calibration highly cost effective and simple to perform. The robust sensor ensures maintenance is minimal, but when it does need replacing, this can be done with minimal process downtime. Michell has extended its popular sensor exchange programme for dew-point transmitters to customers of the XZR250. Under this scheme, operators order a new sensor block from Michell, which arrives ready to fit. Once fitted, the old sensor block can be returned to Michell in the same box and the customer receives a credit.

Typical applications for the XZR250 include oil, gas and biomass boilers.

Product Features

- Measures 0 - 25% O₂ in Flue Gas
- Sample temperature up to +700°C
- Barometric pressure and temperature sensors included
- MODBUS as standard
- Single or Dual 4-20 mA outputs
- User configurable relays
- Easy to swap sensor, requiring no special tools
- Sensor exchange program
- Total weight is less than 5kg

[More info.](#)

Lauris Technology Ultrasonic Gas Flow Meters

The FC1223 for flare gas and associated gas measurement



- Not affected by presence of liquids
- Reliable operation in short piping
- High tolerance to heavy deposits
- Volumetric and molecular & mass flow measurement
- No pressure drop
- Dry and wet gas (no limit on volume liquid as soon as it is mixed, no stratification)
- Removable transducers
- Minimum gas velocity 0.1m/s

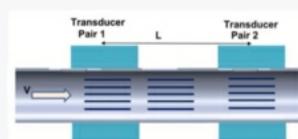
- Maximum gas velocity 175m/s
- Maximum pressure 64bar Pipe sizes from 3" to 24"

The FC1223 gas flow meter is specifically developed for flare gas and associated gas flow measurement where conventional ultrasonic gas flow meters are experiencing problems due to high turbulence or presence of liquids. The FC1223 is an efficient gas accounting system which brings together high performance, reliability, and low cost. The design is based on proprietary ultrasonic transit-phase measurement method with in-line positioning of transducers (no beam reflections). Besides volumetric flow, the "M" version, model FC1223-M, additionally offers molecular weight & mass flow measurement.

[More info.](#)

Ultrasonic Transit-Phase Measurement

The transit-phase measurement is accomplished by transillumination of the pipe with at least two pairs of ultrasonic transducers in which one is the emitter and another is the receiver. The identical pair of such transducers spaced at a distance L along the flow will operate similarly but with the phase shift which is proportional to flow velocity V. Transit-time and transit-phase are complimentary methods. If longer axial distances are available, the transit-time method is preferable as it offers better sensitivity for very low gas/liquid flows. The transit-phase method allows for building very compact meters that can be mounted between flanges similarly to vortex meters. While the record breaking velocity of 0.01 m/s is not achievable, the transit-phase method is advantageous for measuring wet gases. This method operates reliably at any liquid volume in the flow as soon as the two phases are mixed, i.e. no stratification occurs.





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10% Additional discounts offered on the range of ECD range of analytical instrumentation. Valid for order placement from October 1 till October 31. Available to customers within our sales territory.

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Electro-Chemical Devices (ECD) is a manufacturer of liquid analytical process instrumentation. Founded in 1977, for over 40 years ECD has built its industry leading reputation by our commitment to customers through this basic approach: Provide quality products, develop technical innovations and provide responsive, knowledgeable service. Technical innovation is the key to ECD's instrumentation and sensors. From the company's start, ECD developed the industry's first 2-wire conductivity transmitters, to microprocessor-based universal transmitters and sensors, to the newest innovation of the Sentinel Product Line with sensor diagnostics and predictive sensor replacement.



Electro-Chemical Devices (ECD), and AMS not only provide you access to a broad product line of application specific instruments and sensors..... you are also supported by a company with years of successful installations and application experience. This industry knowledge has been incorporated into each instrument and sensor design that ECD manufactures. The following guide is a partial list and provides as an overview to various industrial applications that utilise ECD's products for a solution. Contact our local sales people in your state for further information

Waste Water Treatment Applications

Application	Measurements	Recommended Products
Incoming Sample	pH, ORP AC10 Spray Cleaner	Biofilm coating – use the AC10 spray cleaner, T80, S80 sensor with 2005145 pH electrode
Primary Clarifier	Turbidity, Ammonium	Turbidity - Triton® - High Range Ammonium Measurement – HYDRA NH4-N
Biological Treatment (Aeration Basin)	Dissolved Oxygen, Nitrate, Suspended Solids, AC10 Spray Cleaner	Dissolved Oxygen - Triton®DO* with AC10 pH Measurement – T80 or C22 with S10 ph Sensor with 2005145 pH electrode Ammonium – Model HYDRA NH4-N Analyser with AC10, Nitrate – Model HYDRA NO3-N analyser Suspended Solids - Triton®TR8-High Range
Secondary Clarifier	Suspended Solids, Nitrate, Phosphate	Activated Sludge Return - Triton®TR8-High Range Effluent from overflow or centrifuge - Triton®TR8 Nitrate – HYDRA No3-N
Sludge Thickening	Suspended Solids	Sludge to Digester - Triton®TR8-High Range Effluent from overflow - Triton®TR8
Sludge Digester	Suspended Solids, pH, ORP	Feed from Sludge Thickening - Triton®TR8-High Range pH & ORP Sensors Model S10
Denitrification	Nitrate	Nitrate – Model HYDRA NO3-N Analyser with AC10
Chlorination and Dechlorination	Free Chlorine, Total Chlorine	FCA-22 Free Chlorine Analyser TCA-22 Total Chlorine Analyser
Effluent	pH, ORP, Conductivity, Dissolved Oxygen, Turbidity, Colorimetric	Ph& ORP Sensors Model S80 with T80 or C22 Toroidal Conductivity – S10 Sensors with T80 or C22 Dissolved Oxygen - Triton®DO80, CA-6 Total Nitrogen, CA-6 Total Phosphorous Turbidity, Suspended Solids - Triton®TR8

Beamex released upgrades to its software

Beamex have released new MC6 HART DD's, please update your MC6's with the HART DD's. Updates are available from the Beamex website.

[Beamex Download Ce](#)

Beamex Blog - Thermocouple Cold (Reference) Junction Compensation

In this blog post, Heikki Laurila (Product Marketing Manager) will take a short look on thermocouples and especially on the cold junction and the different cold junction compensation methods.

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Hawker Electronics Level Instrumentation

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[More info.](#)



AMS News

Welcome to the AMS September newsletter.

There were several IICA TechExpo's held during the last few months (Toowoomba, Devonport) and proved to be well attended. AMS is a keen supporter of these TechExpo's, as it gives the people in the more remote areas to view the latest in instrumentation.

AMS successfully passed the audits for ISO9001:2015 and are now certified after some hard work from the ISO9001 committee.

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