



# Atlantic Monitor

## Fully Featured Dissolved Oxygen Measurement

PRODUCT DATASHEET

### APPLICATIONS

Aeration Control  
River Monitoring  
Filter Bed Health Check

### MEASUREMENT PRINCIPLE

Galvanic Cell  
Self Polarizing  
Self Temperature Compensating

### FEATURES

Self Cleaning Installation System  
No routine refurbishment  
Simple, effective calibration  
Fouling Tolerant  
Not effected by ambient light

### BENEFITS

Long term reliability  
Efficient Blower Control  
Reduced Energy Costs

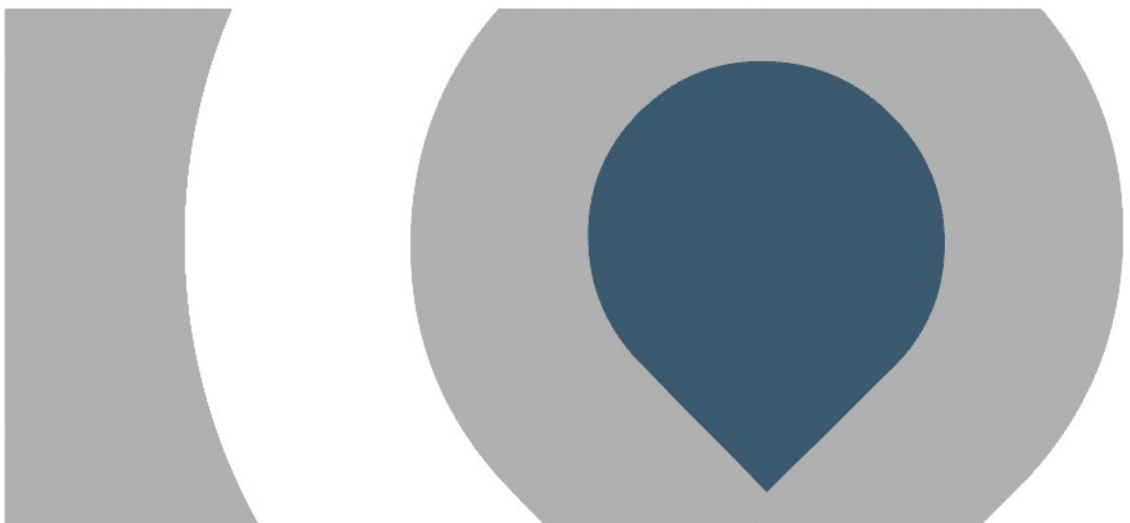


The Atlantic Monitor has been designed to provide accurate, highly reliable measurements in difficult highly fouling applications. The specifically designed sensor utilises a rugged, 100 micron membrane, in combination with a unique electrolyte to provide excellent long term stability, without the need for sensor replenishment or replacement.

The result is amazing - the output is so stable that it can measure accurately for years with practically no attention. Service intervals of five years have been reported! Maintenance is as simple as wiping the membrane clean and checking the calibration from time to time. If it should ever be necessary to replace the membrane, this can be done quickly, easily and at very little cost. When combined with the EasyCal calibration is carried out in 2 minutes with the probe in water. As the sensor does not need to acclimatise in air, errors do not occur by hurried calibrations.

In addition to a 4-20 mA output signal the Atlantic offers 4 relays which can be programmed by up to 6 set points and 4 timers.

To make installation as easy as possible and to help achieve the best possible results we recommend using the Pioneer Probe holder. This places the sensor approximately 300 mm below the surface away from the surface effects of rain, sunshine and fouling. The flexible joint in the mounting shaft allows the sensor to move, providing an anti-fouling and anti-ragging action.



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# Pioneer Mounting System

## Self Cleaning Mounting System

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### Why do DO sensors foul?

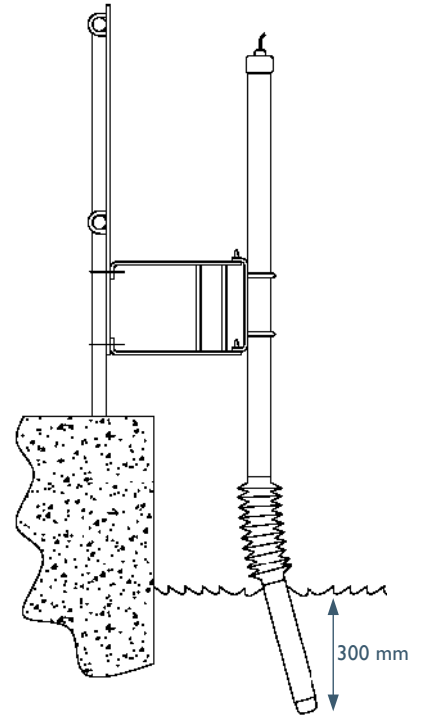
The most persistent problems effecting Dissolved Oxygen measurements relate to fouling caused by fats or grease in the effluent or by ragging. These problems create work for operators, reduce the accuracy and reliability of the measurement and ultimately damage sensors

### How the Pioneer works

The flexible joint in the Pioneer shaft allows the sensor to move in the process, this has two cleaning effects. Firstly the movement means that any ragging that tries to attach to the probe is swept away by the flow as the bottom section reacts to the weight of the rags. The second effect is the movement of the sensor in the process, this continuous motion reduces the amount of fat build up. Operational experience over many years demonstrates that in most application the sensor is only cleaned for calibration.

### Other benefits

By having the sensor approximately 300 mm below the surface of the tank the sensor is away from effects such as surface ripples and rain which can cause false high readings.



### Blower Control

The Atlantic has 4 relays, which can be controlled by 4 timers and 6 set points. This allows the user to locally control blowers or aerators when a site control system is not available or is difficult to adjust.

The same relays can be used to raise external alarms, activate an integrated buzzer to draw attention to a process problem or control additional cleaning devices. The front panel indicates the relay state and includes a key to silence the buzzer if necessary.

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# Calibration and Maintenance Atlantic Features

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## Is Calibration really necessary?

Many systems on the market are promoted with the message that calibration is not necessary. Operational experience is that like any device making measurements in wastewater they do. Unfortunately the electronics with the probes makes this difficult or impossible. This is not true of the Oxyguard Atlantic.

## Oxyguard make it easy

The Oxyguard Atlantic has a built in calibration routine that ensures the system operates as accurately as possible. All you need to do is clean the probe's membrane and press go. To get the most accurate results the probe must be allowed to stabilise at the air temperature, the panel below describes the EasyCal which makes the process even easier.

## Sensor Life

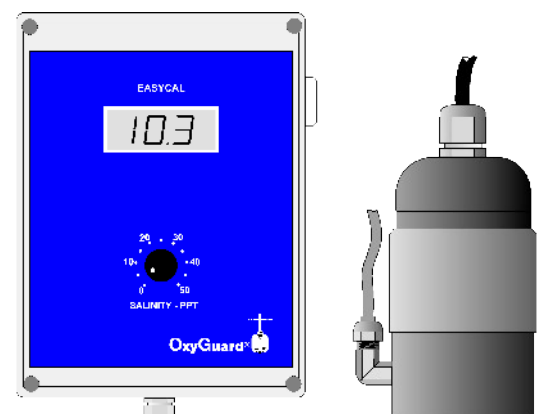
The Oxyguard probes have an exceptionally long life, there is no requirement to routinely replace the electrolyte, in fact the sensors work best when left alone. The only routine requirements is the removal of gross fouling which is normally carried out during the calibration process.

The unique combination of probe design, membrane material and electrolyte chemistry give the sensor a normal life of 5 years. Even when re-generation is required the process is simple to carry out and only requires a small amount of electrolyte and a membrane.

## EasyCal Calibration Device

Designed to improve the simplicity and reliability of Dissolved Oxygen calibration the EasyCal calibrates the probe at the point of measurement. This removes temperature as a variable which can have a very dramatic effect on the oxygen saturation in the air.

The EasyCal fits over the end of the probe, the probe is returned to the sample and air is blown across the membrane by a pump mounted in the EasyCal this is left running for 10 minutes to allow it to temperature equilibrate with the sample and then the calibration is performed by either setting the system to 100 % or to the mg/l setting as displayed on the EasyCal.



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#### Physical

Weight  
Dimensions (h x w x d)  
Enclosure Rating  
Enclosure Material  
Cable Entries  
Cable Type  
Cable Length

#### Environmental Data

Operating Temperature  
Storage Temperature  
Location

#### Power Supply

Voltage  
Power

#### Analogue Output

Number  
Type  
Max Load Resistance

#### Measurement Details

Response Time  
Accuracy  
Resolution  
Measurement Principle  
Flow Rate  
Range

#### Relay Outputs and Set Points

No

#### User Interface

Display  
Setup  
Units of Measurement

#### Software

Remote Programming

#### Mounting

Type  
Probe Mounting

#### Transmitter

1.2 kg  
185 x 213 x 95 mm  
IP65  
ABS  
8  
7 metres standard

-20 to 50°C  
-10 to 60°C  
Indoor or Outdoor

115, 230 VAC or 9-36 VDC  
10W

1  
4-20 mA, galvanically isolated  
820 Ω

90% of End Point in 2 minutes  
Better than +/- 1% FSD  
Better than +/- 0.5% FSD  
Galvanic Cell, Self Polarising, Self Temperature Compensating  
Typically > 10 m/sec  
0 – 20 mg/l or 200%Sat

4 Relays, 6 set points

Graphical LCD with 4 Digits, 13 mm height  
Membrane Keypad  
mg/l, ppm, %Sat

No

Transmitter Surface, Probe Dip or Flowcell  
Pioneer Probe Holder

#### Probe

0.4 kg (inc 5 metres of cable)  
58 mm diameter x 56 mm long  
IP68  
Polyoxymethylene (POM)  
Integral Cable Gland  
4 Core Polyurethane Coated

0 to 40°C  
-5 to 60°C

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