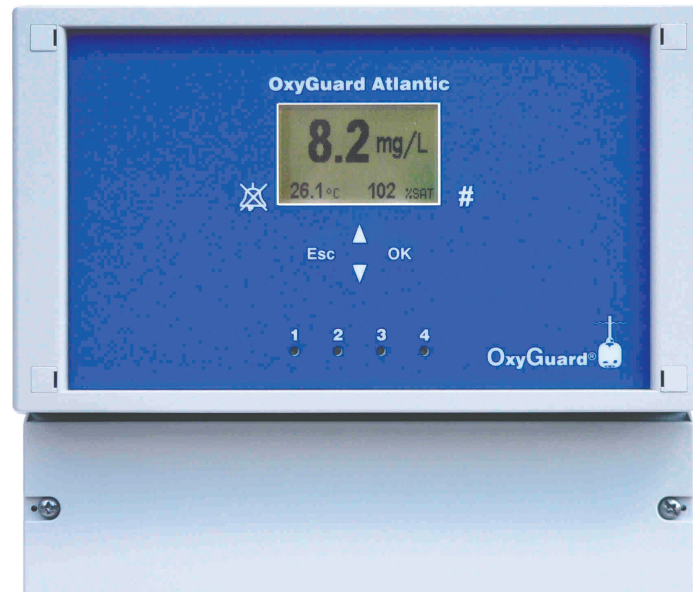


OxyGuard Atlantic

Advanced yet very easy to use!



Single Channel DO/temperature meter with advanced features

- Dissolved oxygen and temperature.
- Atmospheric pressure compensation.
- Analogue output.
- 4 relay outputs.
- 8 set points.
- 8 timers.
- Alarm buzzer.
- Logical linking.
- Can control aerators, stirrers etc.
- Easy set-up.
- Automatic self-check.
- Automatic probe check.
- Accurate, reliable probe.
- Long probe service intervals.
- Easy and inexpensive probe service.
- Anti-fouling cap available.

The **OxyGuard Atlantic** is an accurate, reliable and easy to use oxygen meter with features ideal for use in aquaculture facilities such as shrimp farms, carp farms and other installations with individual, large ponds. It measures both dissolved oxygen and temperature, and has 4 relay outputs. The dissolved oxygen measurement is compensated for atmospheric pressure, which permits accurate control of aerators.

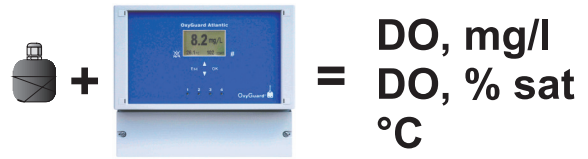
The user can link setpoints to parameters as desired. Setpoints can then be linked to output relays. It is also possible to link setpoints together. This permits, for example, an aerator to be started both from a DO setpoint and a temperature set point.

Let the Atlantic take care of your oxygen measurements!

The Atlantic for Aquaculture

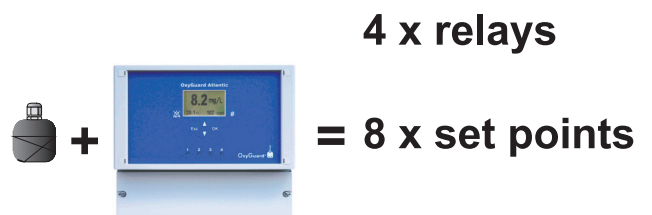
mg/l (ppm), % saturation and °C

Atlantic has a barometric pressure sensor, and the probe incorporates a temperature sensor. This gives you correct values of dissolved oxygen in both mg/l and % saturation. And you don't need a separate sensor to measure water temperature!



Safety First!

Atlantic has four relay outputs and 8 set points. There will always be at least one relay output that can be used to give alarm if the oxygen level goes too low or the temperature too high. And since Atlantic measures both parameters and has logical linking you only need to use one relay.



Timer functions

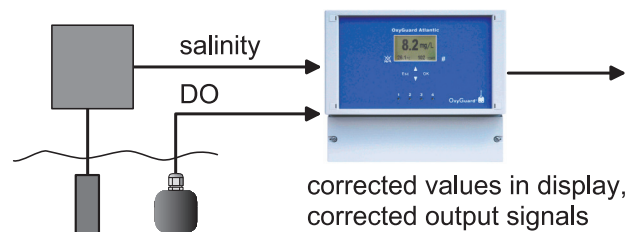
Atlantic has 8 timers that can be used for a number of purposes. For example, alarm can be delayed so that only a sustained fault results in alarm being given.

8 x timers

with Logical Linking!

Precise measurement in salt water

Often a fixed setting for salinity is sufficient. If measurements are made where the salinity changes then an OxyGuard salinity probe can be connected to give automatic compensation for the actual salinity.



Anti-Fouling cap

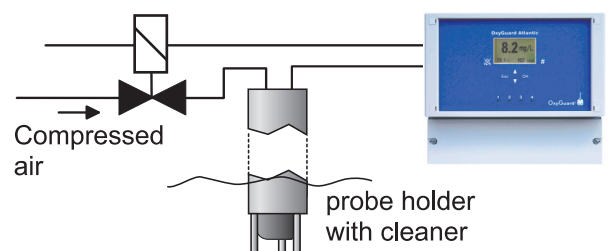
OxyGuard's Anti-Fouling Cap reduces membrane fouling significantly. This is specially useful when measuring in warm salt or brackish water, where fouling forms on most surfaces very quickly.



The Anti-Fouling Cap helps keep the membrane clean, even in a shrimp farm!

Probe cleaner control

Automatic probe cleaning is achieved using a timer function and relay output to activate a magnetic valve that sends compressed air to an OxyGuard probe cleaner. This is very effective. A second timer is used to "freeze" the output signal during cleaning.



The Atlantic for Aquaculture

Automatic Calibration

Just take the probe up, wipe the membrane, hang it in the air, select "Calibrate" and press "OK".

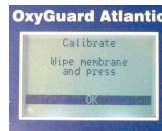
Atlantic does the rest.

Atlantic will tell you if conditions are unsteady, i.e. if the temperature or oxygen partial pressure is changing.

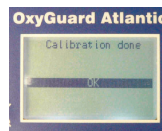
The OxyGuard probe has the longest possible calibration intervals - up to 3 years in clean air.



choose "Calibrate"



wipe the membrane and press "OK"



Atlantic will tell you when it has finished

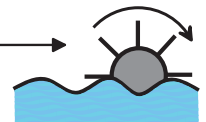
Aerator control saves energy

Let Atlantic control your aerators automatically. They will then only run when more oxygen is needed.

If you also use aerators to create circulation to cool the water you can link setpoints so that the aerator will run if the DO is too low or if the temperature is too high.



Low DO = start aerator



Water circulation control

This saves energy by ensuring that the water is only circulated when needed. You can add an extra temperature measurement and let Atlantic check that there is cooler water at depth to mix with the warmer water near the DO/temperature probe.

High temperature = start circulation

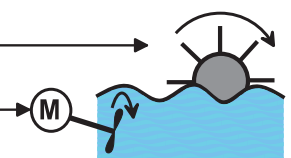


Link aeration and circulation

If surface DO levels are very high - above 100% sat, then propellers are the best choice to send some of this oxygen rich water to lower levels. Using aerators will blow the excess oxygen away. On the other hand, if DO levels are under 100% then aeration is sensible.

You only need one Atlantic to turn aerators on when the water is cool and the DO less than 100% sat, and control propeller circulation when the water warms and the oxygen level is pushed over 100%.

Atlantic can easily control both!



Specifications

OxyGuard Probe

Measurement principle:	Oxygen: Galvanic oxygen partial pressure cell, self polarizing, self temperature compensating. Temperature: Precision NTC
Dimensions:	Diameter = 58 mm, length = 59 mm.
Weight:	Probe alone 0.2 kg. Probe with 7m cable 0.5 kg.
Connections:	Cable, 4 lead, standard cable length = 7 m.
Measurement range:	DO 0-200% sat, 0-20 mg/l, O2 vol. 0-25%, other on request. Temp. from - 5°C.
Accuracy:	Depends on calibration and conditions. Typically better than +/-1% of value.
Output stability:	In air at constant temperature stable to within +/- 1% over 1 year.
Accuracy, temperature:	+/- 0.3°C.
Operating conditions:	0 to 40°C, pressure to 2 bar. Higher on request. Storage temp.: -5 to +60°C.

OxyGuard Atlantic Transmitter

Construction:	ABS enclosure with display, indicators, pushbuttons and alarm buzzer.
Dimensions & weight:	b x h x d: 213 x 185 x 95 mm, 1.2 kg.
Supply & consumption:	230 VAC, 115 VAC +/-10% or 9 to 36VDC. 10 W. Specify when ordering.
Operating conditions:	-10 to +50°C. Max. 90% humidity non-condensing. Enclosure IP65.
Storage conditions:	-10 to +60°. Max. 90% humidity non-condensing.
Probe inputs:	mV for oxygen, NTC for temperature. Scaleable. Choice of units.
Probe input units:	Oxygen: mg/l, PPM, % Sat, % Vol, mbar O2. Temperature: °C or °F.
Compensation input:	4-20 mA. Scaleable. Max voltage drop 5V at 20 mA. Can compensate for salinity, pressure, temperature or NTC temperature. Can be used for separate 0-20 or 4-20 mA measurement signal input with units mg/l, PPM, % Sat, % Vol, °C, °F, mmHg, inHg, mbar O2, PPT, pH.
Analogue output:	4-20 mA. Max. load 820 ohm (total). User selectable range & parameter. Fully galvanically isolated from all inputs.
Display:	Graphical LCD with backlight. Max 4 figures, 2 decimals, 13 mm height.
Conversion accuracy:	To display and analogue output < +/- 0.1%. Non-linearity and repeatability typically < +/- 0.1% of actual value.
Relay outputs:	4, with potential free changeover (SPDT) contacts. Selectable mode (direct or inverted), and linking to parameter or logical argument. Max load 200VA or 1A AC, recommended max 24 VAC (abs. max 250 VAC). 2A at 24 VDC.
Logical functions:	Direct, inverted, multiply. With "and" and "not and" linking.
Alarms:	8, variable hysteresis about set point. Selectable parameter, values & linking.
Timers:	8, from 1 second to 9999999 seconds (approx. 115 days). Selectable period, duty cycle and offset. Can activate or be activated by alarm. Can freeze the output. Can activate relays. Can be reset from front panel.

Ordering Information

B071:	OxyGuard Atlantic with probe. Please specify 230 VAC, 115 VAC or 24 VDC.
B071NP:	OxyGuard Atlantic without probe. Please specify desired operating voltage.
STXWOHR:	Configuration to customer specification per hour.
I01FS:	OxyGuard Salinity Probe with built-in transmitter.
D10CAFADD:	Anti-Fouling Cap fitted to probe.

Data subject to change without notice
B07 Atlantic Aquaculture folder GB 0611