



# OxyGuard Atlantic *for the industry*

*Advanced Single Channel Oxygen Meter*



## **OxyGuard reliability, accuracy and ease of use with advanced facilities**

- Straightforward dissolved oxygen measurement
- Straightforward gaseous oxygen measurement
- Pressure compensated oxygen values
- Temperature measurement
- Alarm signals
- Delayed alarm signals
- Pulsed output for cleaner control
- 8 set points
- 8 timers
- 4 relays

The **OxyGuard Atlantic** is an accurate, reliable and easy to use oxygen meter with features that make it suitable for a large number of tasks. It measures both dissolved oxygen and temperature - you can choose which units are used.

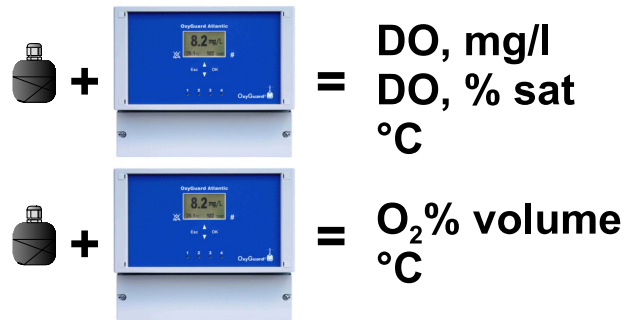
The Atlantic has 4 relays, a 4-20 mA output and a 4-20 mA compensation input. The Atlantic incorporates 8 alarm set points and 8 timers that can be logically linked to obtain a multitude of useful functions.

**Let the Atlantic take care of your oxygen measurements!**

# The Atlantic for the Industry

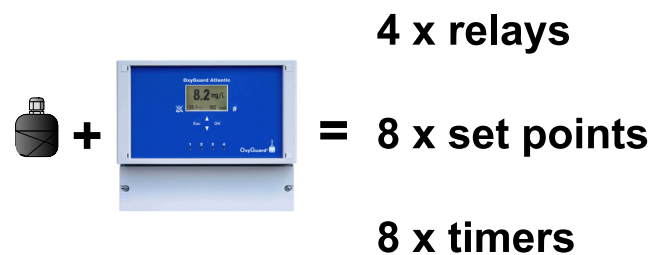
## mg/l (ppm), % saturation and °C or O<sub>2</sub>% by volume and °C

Atlantic has a barometric pressure sensor, and the probe incorporates a temperature sensor. This gives correct values of dissolved oxygen in both mg/l and % saturation. If you measure in air your % volume measurement will also be correct. And, of course, you don't need a separate temperature measurement.



## 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.



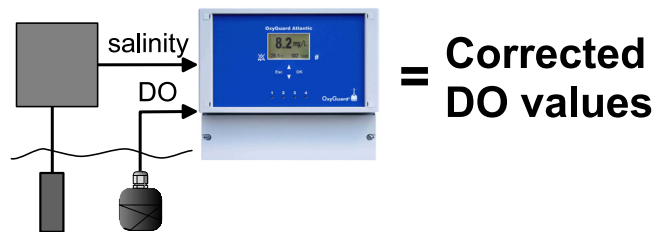
## Timer functions

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.

**with Logical Linking!**

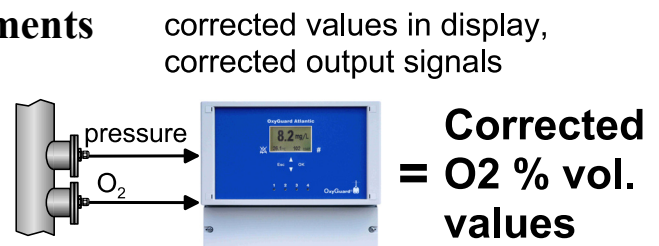
## Precise measurement in solutions

If the process fluid or water you measure in contains a constant concentration of salt or other dissolved solids you can set a constant compensation factor in Atlantic. If the salinity varies you can connect a 4-20 mA signal corresponding to the salinity and Atlantic will vary the compensation automatically.



## Pressure compensation in gas measurements

When measuring in a closed process a 4-20 mA process pressure signal can be connected to Atlantic. This pressure signal can then be used to compensate for pressure changes so that correct measurements are obtained. This is most useful when measuring % volume oxygen in gas.



# The Atlantic for the Industry

## Automatic Calibration

Calibration with Atlantic is easy. Just wipe the membrane, place the probe in the air and start the process. The probe, as with all such probes, should be in temperature equilibrium with the air. Atlantic issues instructions in the display and will warn you if conditions are too unsteady to obtain a good calibration.

The OxyGuard probe is designed to have the longest possible calibration intervals.



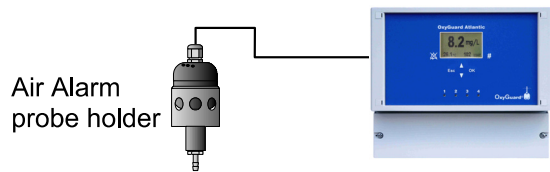
choose "Calibrate"

wipe the membrane and press "OK"

Atlantic will tell you when it has finished

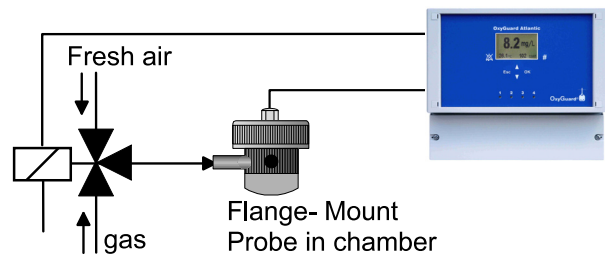
## Ambient Air Measurement

The Atlantic is ideal for monitoring air in rooms where other gases, for example nitrogen, are used. The Air Alarm probe holder is designed for this use.



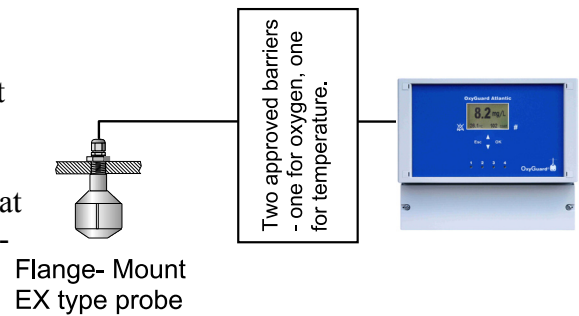
## Intermittent measurements in gas.

Some gases contain large concentrations of compounds that would pollute the probe if measurement was continuous. The timers and relays in Atlantic can control a magnetic valve so that the "poisonous" gas is only fed to the probe at intervals. The output signal is "frozen" between measurements.



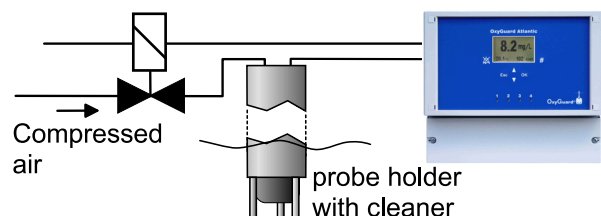
## Measurements in EX areas.

The OxyGuard probe is a simple apparatus and does not need ATEX approval. In fact, you cannot obtain approval for something that doesn't need it. There is, however, a limit to the non-conducting area that can be placed in classified areas, so you order the metal-clad EX version of the probe and place two approved barriers between the probe and the transmitter.



## Probe cleaner control

The OxyGuard Probe Cleaner uses compressed air, and has proved very effective. A timer and relay in Atlantic can control the compressed air, whilst a second timer "freezes" the output when cleaning.



## Anti-Fouling cap

If you measure in biologically active water membrane fouling can change the probe sensitivity. The OxyGuard Anti-Fouling Cap reduces such fouling significantly.



The Anti-Fouling Cap helps keep the membrane clean!

# Specifications

## 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:	0 to 20 mg/l (ppm)/ 0 to 200 % sat, higher on request. Temp. from -5°C.
Accuracy:	Depends on calibration and conditions. Typical 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 temperature:	-5 to +60°C.

## Specifications - 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.
Measurement inputs:	From probe: mV oxygen signal, resistance temperature signal. Scaleable ranges.
Compensation input:	4-20 mA. Scaleable. Max voltage drop 5V at 20 mA.
Parameters:	mg/l (ppm); % sat; % vol; mbar O2, temperature. Can be scaled and linked.
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 999999 seconds (11 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 operating voltage - 230 VAC, 115 VAC or 24 VDC. Please add -M18 to type number for probe with M18 threaded top for mounting in flange. Please add -EX to type number for EX version of probe, and -EXM18 for EX probe with threaded top. The barrier between the probe in the EX area and the transmitter in the safe area should be ordered separately.	
STXWOHR:	Configuration to customer specification per hour.	
D10CAFADD:	Extra for Anti-Fouling cap on probe.	E011: Air Alarm Probe Holder
D10JBX1:	Junction Box for extending probe cable.	D10CHBP: By-Pass chamber for probe (PVC).
Please see the Probe Accessories brochure		