Oxygen Sensor 4500



Oxygen is involved in most of the biological and chemical processes in aquatic environments and in the process industry.

It is important to measure the oxygen content in environments where the oxygen concentration is critical, e.g. in:

- Process industry controllers
- Water and waste water systems
- Ships
- Ballast water
- Aquaculture
- · Fjords or other areas with limited exchange of water

The AADI oxygen sensor is based on the ability of selected substances to act as dynamic fluorescence quenchers.

The fluorescent indicator is a special platinum porphyrin complex embedded in a gas permeable foil that is exposed to the surrounding water.

A black optical isolation coating protects the complex from sunlight and fluorescent particles in the water.

OXYGEN SENSOR 4500

is designed for process control systems and aquaculture where the oxygen concentration is critical due to efficiency in the control system or for environmental reasons.

Features of the Oxygen Sensor 4500:

- Optical measurement principle
- Long time stability: typically 3-5 years between calibration
- Very low maintenance
- User friendly: Plug and Play Smart Sensor
- Output format: RS232, 0-5V, 0-10V or 4-20 mA
- Measurement parameter presented in %, μ M, or mg/l
- Customized cable length of 5, 10, 15, 25, 30, 40 or 50m

This sensing foil is attached to a window providing optical access for the measuring system from inside a watertight housing.

The foil is excited by modulated blue light, and the phase of a returned red light is measured (see illustration overleaf). By linearizing and temperature compensating, with an incorporated temperature sensor, the absolute O_2 concentration can be determined.

The lifetime-based luminescence quenching principle offers the following advantages over competing sensors:

- Not stirring sensitive (it consumes no oxygen)
- Unaffected by fouling
- Measures absolute oxygen concentrations without repeated calibrations
- Long-term stability: 3 to 5 years
- Not affected by pressure
- · Faster response time

The sensor is designed to operate down to 100 meters.



Specifications 4500

Air Saturation

0 - 120%

0.4%

< 5% 3)



* Oxyview[©] Program for direct reading

Oxyview[©] has been designed for use with AADI Oxygen Sensor. The program displays the Oxygen Concentration, Oxygen Saturation and Temperature both in tables and graphical forms. Oxyview[©] can also be used to configure the Oxygen Sensor.

– 40mm →



The measurement principle is based on the effect of dynamic luminescence quenching (lifetime based) by molecular oxygen.

Representative's Stamp



Post Box 34 SLÅTTHAUG 5851 BERGEN, NORWAY TEL. +47 55 60 48 00 FAX. +47 55 60 48 01

http://www.aadi.no e-mail: info@aadi.no _____