Water Quality Analysers

OxySense - Dissolved Oxygen Meter

The OxySense range of online DO meters utilises the very latest and best optical DO sensor available in the world today. It is an optical luminescent device which is extremely resistant to abrasion, extremely stable, and has greatly reduced maintenance and whole life costs.

- **No chemicals or moving parts**
- **Optional self-cleaning sensor and self-verification**
- **Stable and reliable - excellent process control**
- **Suitable for all Dissolved Oxygen applications**
- **Up to 12 months between maintenance**
- **Up to 12 months between calibration**

"Simply the best DO sensor I've used"
Jon Shan, USA

The OxySense optical sensor is available with different controllers giving you the same great performance with different communication, display, and control options. With the OxySense range of online DO meters, you get everything that you need - and nothing that you don't.

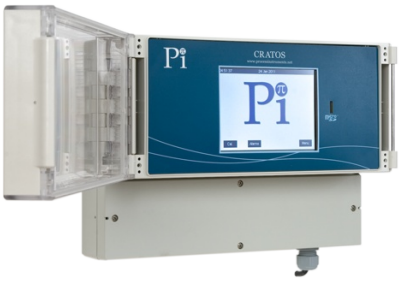
CRONOS® OxySense

- High Quality and Multilingual
- Lowest Purchase Cost
- Up to 3 sensors
- Options include:
  - up to 3 4-20mA outputs
  - up to 4 relays (solid state or mechanical)
  - modbus TCP
  - modbus ASCII/RTU
  - profibus
  - HART
  - flow switch input
  - PID control

CRIUS® OxySense

- High Quality and Multilingual
- Low Cost
- Colour Display and Keypad
- Sophisticated Comms and Control
- Datalogging
- Up to 6 sensors
- All CRONOS® options plus:
  - texting alarms
  - remote internet access
  - automatic cleaning
  - automatic calibration
  - integrated flow control

CRATOS OxySense



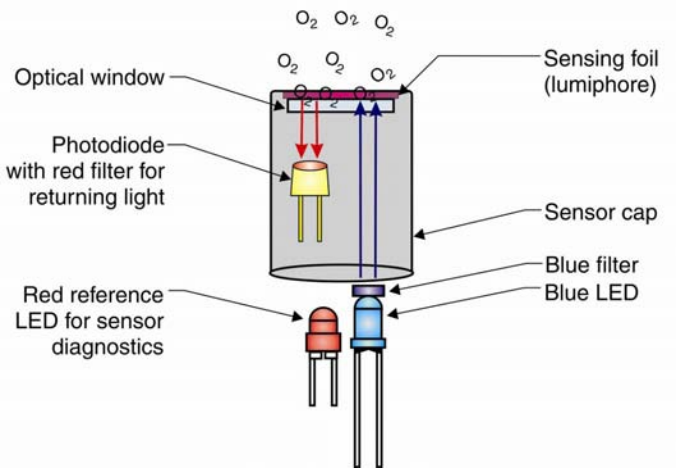
- High Quality and Multilingual
- Medium Cost
- Colour Touchscreen
- Up to 12 sensors
- Datalogging
- All CRONOS® and CRIUS® options plus:
  - lowest cost per point

For more information please see the individual brochure - CRONOS®, CRIUS® and CRATOS

find us at www.processinstruments.net

Principle of Operation

The sensing element (lumiphore) is activated, or excited when illuminated with a blue light. When activated, the lumiphore then emits blue light in an intensity that is inversely proportional to the amount of oxygen present in the water. There is also a time delay between the peak emission of blue light and peak response of fluoresced red light. The amount of delay is inversely proportional to the amount of oxygen present. This time delay can be expressed as a phase shift between the wave patterns of incident blue light and the fluoresced red light. This is in turn reported by the electronics into a ppm or mg/l reading of Dissolved Oxygen. The advantages of this technology are that it is more stable than traditional electrochemical devices and far more resistant to abrasion. By using the state of the art sensor and electronics together the reliability, accuracy, and flexibility of the OxySense Meter is far superior to that of its competitors.



Autoclean and Auto-verification

The OxySense Meter is the first of its kind in the world to offer automatic in situ sensor verification as an option. The OxySense is able to reduce maintenance by automatically checking it's sensor operation at user defined time intervals. Calibration on the In-Situ sensor is normally required only once per annum so with the automatic sensor verification option and the self clean option the sensor may not need to be inspected at all for a full year.

Specification

RDO® Rugged Dissolved Oxygen Sensor

Type:	Lumiphore Optical Dissolved Oxygen
Measurand:	Dissolved Oxygen
Range:	0-20mg/l or 0-450% Saturation
Resolution:	0.01mg/l
Accuracy and Precision:	±0.1mg/l from 0-8mg/l (1.25%) and ±0.2mg/l from 8-20mg/l
Stability:	Better than 1% per month (without calibration)
Temperature Range:	>0 up to 50°c
pH-range:	pH2 up to pH10
Salinity Range:	0-42ppt
Temperature Compensation:	Automatically by an integrated thermistor
Permissible Overpressure:	0.5 bar
Typical Response Limited:	>25mg/l
Response Time:	T90=30s, T95=37s
Zero-point Adjustment:	Not necessary
Calibration:	Manual using water saturated air
Material of Construction:	PVC, silicone, polycarbonate, stainless steel
Dimensions:	Diameter approx. 43.7mm OD, length 203mm
Maintenance intervals:	Manual calibration 3-12 months, lumiphore change 12 months
Warranty:	The shorter of 24 months from the date of manufacture or 12 months from date of first use
Interferences:	High levels of hypochlorite