

# TO<sub>2</sub> Luminescence

Measurement of dissolved oxygen concentration



## Applications

- Control of water / wastewater treatment
- Resource water quality
- Measurement in aquaculture and seawater

## Advantages

- No electrolyte consumption
- Very easy membrane change
- FlowCell for Bypass installation
- "Plug and play" equipment with TriBox transmitter

## Plug & play sensor with membrane

The T-O<sub>2</sub> probe uses the principle of luminescence to measure the dissolved oxygen concentration in water. Dissolved oxygen enters a phosphor whose radiation by excitation of light is measured. The dissolved O<sub>2</sub> molecules absorb this emitted light, the difference of intensity between the measurement and the reference point is proportional to oxygen concentration.

This measurement of dissolved gas using the luminescence method doesn't need of pre-calibration. There is no interference with H<sub>2</sub>S or reducing and oxidizing substances.

This technology allows reliable and precise measurements with a membrane replacement only every two years.

T-O<sub>2</sub> sensor works with TriBox 3 and TriBox Mini transmitters.

Available with fixed cable of 2 or 10 meters. Possible cable extensions, 0.3 m, 2 m, 10 m and 25 m, are available.



T-O<sub>2</sub> digital sensor works with TriBox Mini and TriBox transmitters.

Once the probe is connected, the transmitter powers the sensor, receives and uses the data. The measurements are displayed on the screen, recorded and can be converted to the 4-20 mA analog signal.

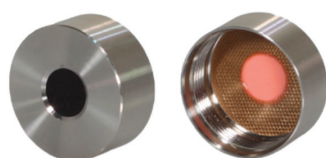
Wifi or Ethernet communication via web browser.

-TriBox mini

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## Technical specifications

Measurement technology	Optical
Measuring principle	Luminescence
Parameter	Dissolved oxygen
Measuring range	0 ... 20 mg/l
Measurement accuracy	+/- 0,1 mg/l
Temperature compensation	Via NTC
Response time	90% of a value <60 seconds
Measuring interval	> 5 seconds
Probe body materials	Stainless steel (316L) or titanium
Dimensions	Diameter 25 mm, length 146 mm
Weight	450 g stainless steel, 300 g titanium
Connector	8-pin M12 with fixed cable
Interface	RS-485 / Modbus RTU
Consumption	1 W
Power supply	12 VDC
Maintenance	<0.5 hour / month
Calibration interval	24 months
Compatibility	Modbus RTU - Transmitters TriBox, TriBox mini
Warranty	24 months in the European Union - (except spare phosphor membrane)
Maximum pressure	5 bar.
Protection type	IP68
Temperature of the medium / sample	0 ... + 50 °C
Ambient temperature	0 ... + 50 °C



Spare with cap phosphor membrane



Measuring cell for By-Pass installation