DIGITAL SENSORS

ODOT : OPTICAL DISSOLVED OXYGEN TEMPERATURE

Optical technology for optimized measures

- Optical technology : No membrane nor electrolyte
- No drift : no calibration
- Digital output : Modbus RS-485 or SDI-12
- Stainless steel body : robust

Application field :

- Urban wastewater treatment (network control, entrance, aeration pool for the nitrification / denitrification process)
- Industrial effluent treatment
- Surface water monitoring
- Fish farming
- Drinking water

Optical Technology :

The ODOT sensor with an integrated temperature sensor is based on optical measure : a diode emitting blue light is directed to an oxygen light-sensitive layer. The sensitive material reacts emitting a red light (luminescence) which emission depends on oxygen concentration

This innovative method assures reliable, precise and driftless measures, calibration is no longer necessary.

Without consumable, calibration and maintenance, the ODOT sensor leads to a rapid return on investment. Only the DOdisk is to be changed once every two years.

Oxygen-free consumption, the ODOT sensor is adapted to any fields, including those with very low water circulation.

Digital communication :

The PONSEL sensor can be connected to any types of transmitters, display units, controllers or data loggers with Modbus RS-485 or SDI-12 inputs. Thanks to the sensor indexation, over 200 sensors can be connected on a data logger.

Disruption-resistant : Integrated preamplification and digital treatment of signals.

The optical sensor saves its calibration data for better measures management.

Integrated transmitter :

All data concerning calibration, history, users and measures are directly treated within the ODOT sensor and transmitted via RS-485 or SDI-12.

physical characteristics :

Compact, **robust** and **light**, the stainless steel sensor allows a handheld or fixed unit application.

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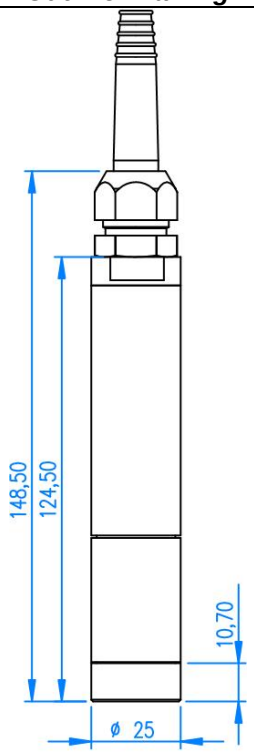
Technical characteristics:

Measures	
Measure principle	Optical measure by luminescence
Measure ranges	0,00 to 20,00 mg/L 0-200%
Resolution	0,01
Accuracy	+/- 0,1mg/L or +/- 1 %
Response time	90% of the value in less than 60 seconds
Water move	No necessary move
Temperature compensation	Via CTN
Stocking temperature	- 10°C to + 60°C
Signal interface	Modbus RS-485 (standard) and SDI-12 (option)
Maximum refreshing time	< 1 second
Sensor power-supply	5 to 12 volts

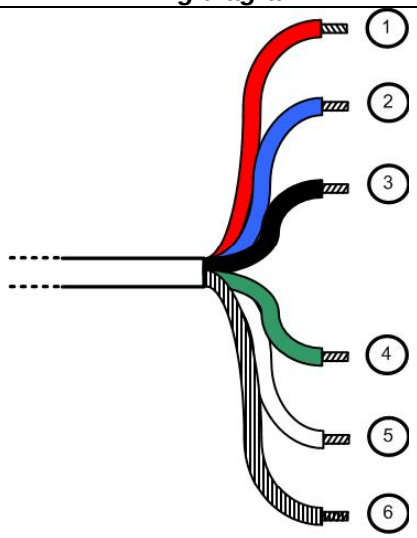
Technical specifications	
Cleaning system	Unnecessary for most applications. Air or water cleaning option.
Membrane	No membrane
Electrode	No electrode
Electrolyte	No electrolyte

Sensor	
Dimensions	Diameter : 25 mm ; length : 146 mm
Weight	450g (sensor + cable 3 meters)
Material in contact with the environment	Stainless steel 316L
Maximum pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
Degree of protection	IP68

Outline Drawing



Wiring diagram



1	Power supply V+
2	SDI-12
3	Power supply V-
4	B " RS-485 "
5	A " RS-485 "
6	Cable shield

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