

# DIGISENS RANGE

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## OPTOD : OPTICAL DISSOLVED OXYGEN

Digital technology for optimized measures

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- Optical Technology without calibration
- Digital Technology (Modbus RS-485)
- No drift, Reduced maintenance
- Body in Stainless steel (316 L) or **Titanium**

### Applications :

- Urban wastewater treatment
- Industrial effluent treatment
- Surface water monitoring,
- Sea water monitoring, fish farming, aquarium
- Drinking water



### Optical technology :

The **OPTOD**<sup>®</sup> (Optical Dissolved Oxygen technology) is based on luminescent optical technology. The OPTOD sensor is approved by the ASTM International Method D888-05.

Without calibration requirements and thanks to an ultra low power technology, the OPTOD sensor meets the demands of field works and short or long term campaigns.

Without oxygen consumption, this technology allows you an accurate measure in all situation and especially in very low oxygen concentrations

### Digital Technology :

The “smart” OPTOD sensor stores calibration and history data within the sensor. This allows you a “plug and play” system without re-calibration.

Thanks to the Universal Modbus RS485 protocol, the PONSEL OPTOD can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System...).

### Mécanique :

**Compact, strong and light**, the sensor allows a portable or in fixed/permanent use.

Body in **Stainless steel 316 L** (passivation treatment) or in **Titanium** for applications in corrosive environment.

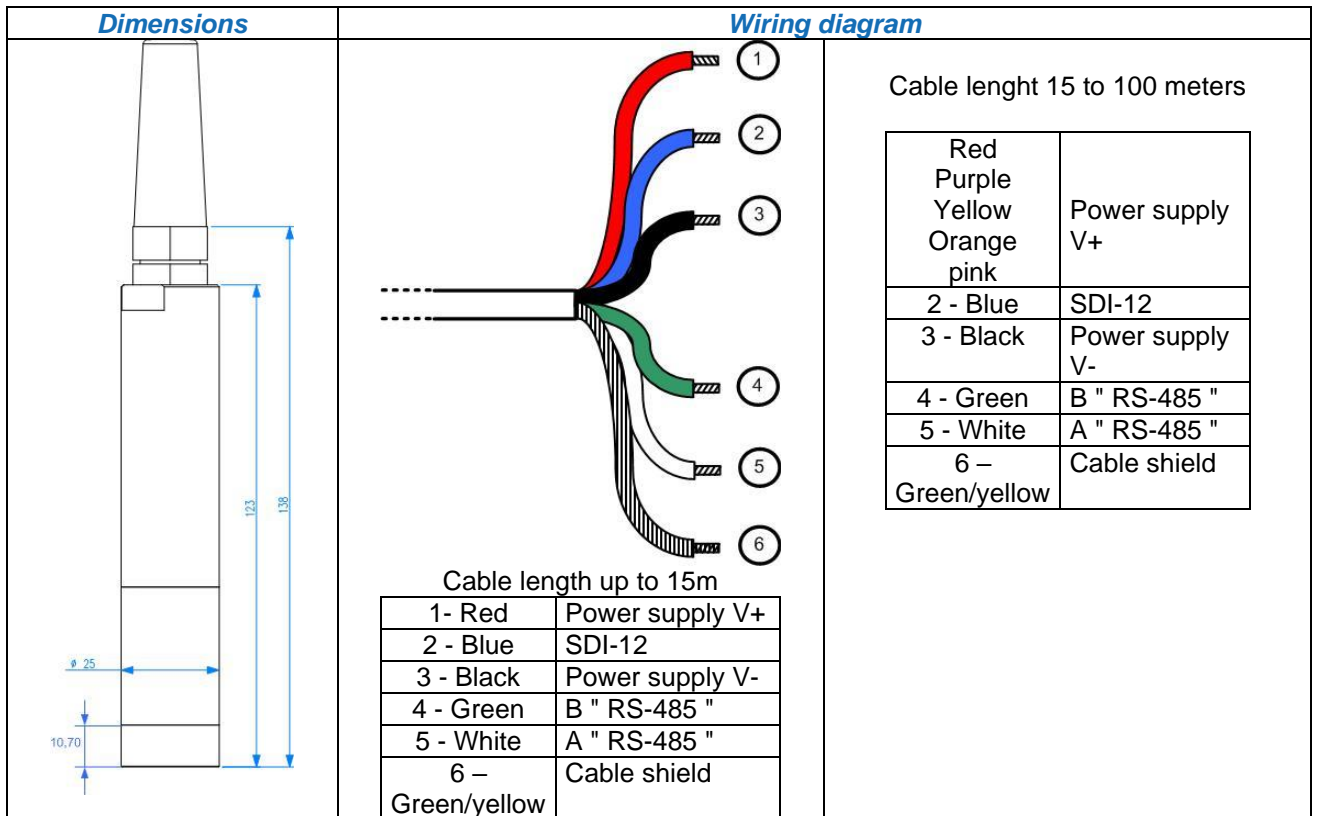
**Ponsel OPTOD specifications :**

<b>Measures</b>	
<b>Measure principle</b>	Optical measure by luminescence
<b>Measure ranges</b>	0,00 to 20,00 mg/L 0,00 to 20,00 ppm 0-200%
<b>Resolution</b>	0,01
<b>Accuracy</b>	+/- 0,1mg/L +/- 0,1 ppm +/- 1 %
<b>Response time</b>	90% of the value in less than 60 seconds
<b>Frequency of recommended measure</b>	>5 s
<b>Water move</b>	No necessary move
<b>Temperature compensation</b>	Via NTC
<b>Stocking temperature</b>	- 10°C to + 60°C
<b>Signal interface</b>	Modbus RS-485 (standard) and SDI-12 (option)
<b>Sensor power-supply</b>	5 to 12 volts
<b>Consumption</b>	Standby 25 µA Average RS485 (1 measure/ seconde) : 4,4 mA Average SDI12 (1 measure/ seconde) : 7,3 mA Current pulse : 100 mA
<b>Sensor</b>	
<b>Dimensions</b>	Diameter : 25 mm ; length : 146 mm
<b>Weight</b>	Stainless steel version 450g (sensor + cable 3 m) Titanium version 300 g (sensor + cable 3 m)
<b>Material</b>	Stainless steel 316L, <b>New : body in Titanium</b>
<b>Maximum pressure</b>	5 bars
<b>Connection</b>	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
<b>Protection</b>	IP68

**New : Protection strainer**



The protective nylon strainer is positioned on the sensor head to protect the active membrane (DODisk) of the OPTOD sensor.



**Note :**

**Never exceed a voltage of 10VDC (absolute maximum rating) on communication lines RS485, A or B, under penalty of irreversible destruction of the transceiver component RS 485.**

**SDI-12: respect the voltage value described in the associated standard (nominal: 5 VDC)**

**Always connect ground + shield first.**