AQUALABO
CONTRÔLE

Digisens

DIGITAL MES5 / VB5 : MEASURE OF SUSPENDED SOLID, TURBIDITY AND SLUDGE BLANKET

- **Optical sensor based on absorptiometry**
- **Range of measure :**
  SS : 0-50 g/L
  Sludge blanket 0-100 %
  Turbidity 0-4000 FAU
- **Digital communication**
  Modbus RS-485 / SDI-12
- **Strong sensor**

DIGITAL TECHNOLOGY FOR RELIABLE MEASUREMENTS

APPLICATION:

- Urban Waste water treatment (Inlet/ sewage water (SS, Turbidity), Aeration basin (SS), Outlet (Turbidity).
- Treatment of industrial effluents (Aeration basin (SS)), Clarifier (Sludge blanket), Outlet (Turbidity)
- Sludge treatment (Centrifugation)
- Dredging site (turbidity)

MADE IN FRANCE

PONSEL
AQUALABO GROUP

ZA de Bellevue - 35 rue Michel Marion - 56850 CAUDAN - FRANCE

OPTICAL TECHNOLOGY:

The principle of measure is based on the mitigation of the Infra-Red signal in 870 nm through an optical path of 5mm. The sensor delivers measures in Suspended Solid (g/l), Turbidity (FAU) and Sludge Blanket detection in % of transmission IR. For a better precision, the optics of the sensor are regulated in temperature.

For a measure of Suspended Solid, the sensor is directly calibrated on the material to be measured (sample of sludge).

In Turbidimeter version the sensor delivers measures on a range 0-4000 FAU (Formazine Attenuation Unit) and is calibrated with solutions of Formazine.

Temperature: measure and regulation of optics via CTN.

DIGITAL COMMUNICATION / INTEGRATED TRANSMITTER:

The sensor PONSEL connects to every type of recorder, transmitter, system of remote processing or automaton endowed with an entrance **Modbus RS485.** Thanks to the indexation of the sensor, more than 200 sensors can be connected on a recorder.
Resisting the disturbances: pre-development integrated into the sensor and the digital treatment of the signals.

All the data concerning the calibration, the history and the users are directly recorded in the digital sensor MES5.

MECHANICS:

A handle in DELRIN material assures the mechanical dress of the sensor and the sealing seals of the cable.

Compact, strong and light, the sensor allows a use in portable version or fixed post.

TECHNICAL DATA :

Suspended Solid measure	
Principle of measure	Optical IR (870 nm) based on IR absorption
Range of measure	SS : 0-50 g/L Turbidity : 0-4000 FAU Sludge blanket : 0-100 %
Resolution	SS : 0.01 g/L Turbidity : 0.01 à 1 FAU Sludge blanket : 0.01 à 0.1 %
Accuracy	SS< 10 % Turbidity : +/- 5% (range 200-4000 FAU) Sludge blanket : +/- 2%
Response time	< 35 secondes
Temperature measure	
Principle of measure	NTC
Working temperature	-5.00 °C to + 60,00°C
Resolution	0,01 °C
Accuracy	+/- 0.5 °C
Storage Temperature	-10°C to + 60°C
Degree of protection	IP 68
Signal Interface	Modbus RS-485 or SDI-12
Refreshment of the measure	Maximum < 1 seconde
Power supply	5 to 28 volts
Consumption	Standby : 25 µA (5 V) Average RS485 (1 measure/seconde) : 4.5 mA (5V) Average SDI12 (1 measure/seconde) : 4.5 mA (5V) Curent Pulse : 100 mA during 30 mS Heating times : 100 ms
Sensor	
Weight	750 g (sensor)
Material	DELRIN, Nickel-plated brass, EPDM
Pressure max.	5 bars
Cable/ connexions	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector

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