



**TURTLE  
TOUGH**

## The **SMART** Suspended Solid Sensor can be used in an array of water and wastewater treatment applications

### **SMART** Suspended Solid Sensor for Water Treatment Applications

Code: TT-SMART-TSS

#### **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).

#### **Digital Communication**

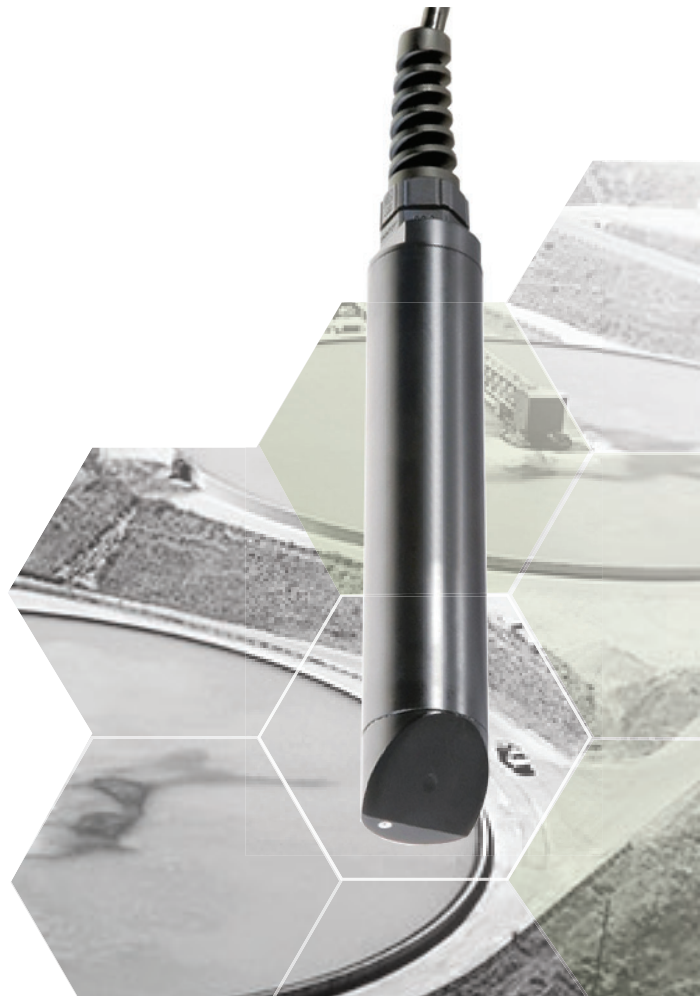
- The sensor connects to every type of recorder, transmitter, system of remote processing or automaton endowed with an entrance Modbus RS485.
- Thanks to the index on the sensor, more than 200 sensors can be connected on a recorder.

#### **Integrated Transmitter**

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

#### **Physical Characteristics**

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





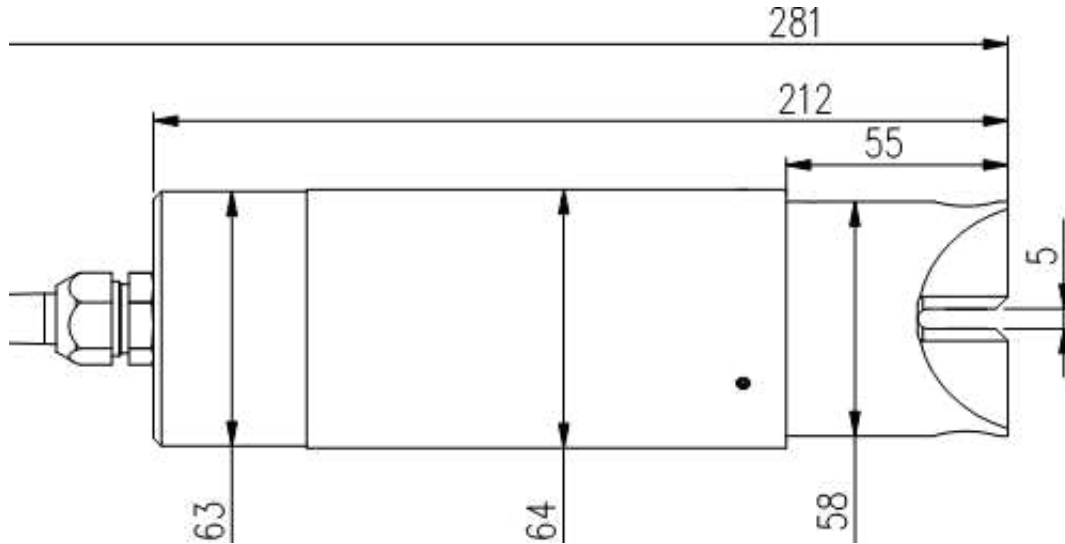
# Specifications

## SMART Suspended Solids Sensor

### Specifications:

Description	SMART Suspended Solid Sensor for Water Treatment Applications
Part Number	TT-SMART-TSS
Measurement Principle	Optical IR (870 nm) based on IR absorption
Measurement Ranges	<ul style="list-style-type: none"> <li>• SS : 0-50 g/L</li> <li>• Turbidity : 0-4000 FAU</li> <li>• Sludge blanket : 0-100 %</li> </ul>
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%
Working Temperature	0°C to + 60°C
Measure Of Temperature	Via NTC
Stocking Temperature	-10°C to +60°C
Signal Interface	Modbus RS-485 (standard) and SDI-12 (optional)
Maximum Refreshing	<1 second
Sensor Power-Supply	5 to 28volts
Electric 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
Dimensions	Diameter: 63mm; Length: 212mm
Weight	750g (sensor + 3m cable)
Material	DELRIN, Nickel-plated brass, EPDM
Maximum Pressure	72.5 PSIG (5 bar)
Connection	Quick Connect Plug or Tinned Leads
Protection Rating	IP68
Storage	Item should be kept at room temperature with closed protector cap to protect the optic. Shelf life warranted for 12 months from the date of purchase
Warranty	12 Month Conditional Warranty Please go to: <a href="http://www.turtletooughsensors.com/support/warranty-returns">www.turtletooughsensors.com/support/warranty-returns</a>

**DIMENSIONAL DRAWING:**



**WIRING SCHEMATIC:**

**CABLE LENGTH: 1 - 15M**

**CABLE LENGTH: 15 - 100M**

