

Instruction Manual

innoSens 810S

Infrared Suspended Solids Sensor

The sensor innoSens 810S is used for the optical measurement of suspended solids in industrial water and process up to 30 g/l. The probe uses the method of measuring light absorption.

Applications

- Measure of Suspended solids in wastewater
- Measure of Sludge and Staff concentration, industrial water

Features and benefits

- Reliable concentration measurement using optical measuring process
- Infrared light pulsing beams scattering method
- Stainless Steel sensor body (PVC optional)
- No mechanically moving parts
- Measured value pre-processing in sensor resulting in low signal transmission sensitivity
- Immediate installation and easy maintenance

Measurement of sludge concentration with the method of light absorption

Turbidity is a decrease of transparency of the water, due to the presence of suspended solids – that consist of very fine particles – unable to settle in a reasonably short time. The particles in suspension determine an absorption of the electromagnetic radiation depending on the number and size of the particles themselves. Comparing the absorption of the test sample with values derived from a well known calibration curve, it's possible to determine the value of the turbidity.

TECHNICAL DATA

Materials: Stainless Steel 1.4401 (316) body (PVC optional)
Special Epoxy windows
Viton O-ring

Thread: 1" GAS

Measuring range: 0-30 g/l

Measuring method: Light absorption

Accuracy: $\pm 3\%$ of f.s.

Repeatability: 98 %

Calibration: by steps

Working temperature: 0~60 °C

Max Working pressure: 4 bar

Maximum absorption: 3W

Mechanical Protection: IP68 – cable included

Cable: 10m integral

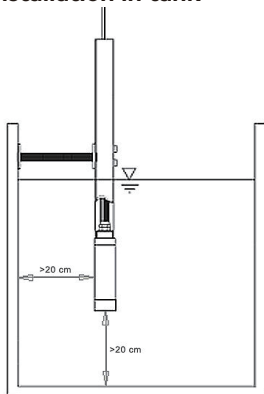
Power supply: 12~24Vdc

Outputs: RS485 (4-20mA optional)

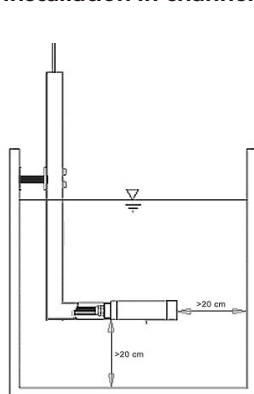
Cable color codes

RED	+24Vdc
BLACK	GROUND
YELLOW	A+ RS485
GREEN	B- RS 485

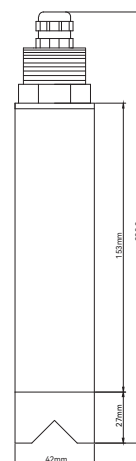
Installation in tank



Installation in channel



DIMENSIONS



Precautions and warnings

Install the sensor in the tank so that it is immersed for at least 20 cm and the distance from the walls and the bottom of the tank is not less than 20 cm.

Install the sensor in the channel so that it is immersed for at least 20 cm and the distance from walls and bottom of the channel is not less than 20 cm.

Order no.

35-0810-01 innoSens 810T Infrared Suspended Solids Sensor