

# innoSens 815S Infrared Turbidity Sensor or TSS

The innoSens 815S probe is used for the optical measure of turbidity/TSS in pure and process waters up to 4000 NTU/2000 mg/l. The probe uses the 90° scattered light method.

## Applications

- Measure of turbidity/TSS in wastewater
- Measure of turbidity in primary, industrial, recirculating water

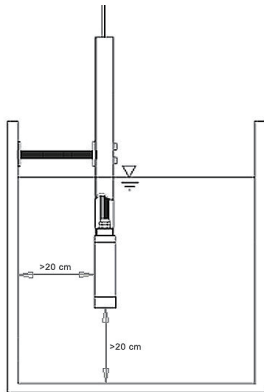
## Features and benefits

- Reliable concentration measurement using optical measuring process
- Infrared light pulsing beams scattering method
- SS304 sensor body
- No mechanically moving parts
- Measured value pre-processing in sensor resulting in low signal transmission
- Immediate installation and easy maintenance

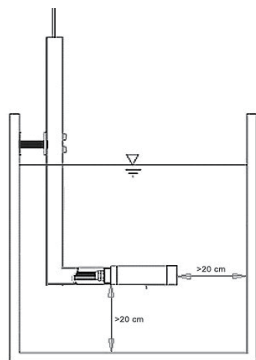
## Turbidity/TSS measurement with the 90° scattered light method

By turbidity/TSS we mean the scattered component of a light beam which is diverted away from its original course by optically denser particles in the medium e.g. solid matter particles. Measurements are made using the standardised 90° scattered light method in accordance with ISO 7027 / EN 27027. The measuring method is based on the Tyndall effect. The turbidity of the medium is determined from the amount of scattered light. The transmitted infra-red light beam is scattered by the particles in the medium. The scattered beams are measured by scattered light receivers which are fixed at an angle of 90° to the transmitted light. The measured scattered light signals are converted to frequency signals. The frequency signals are assigned to corresponding turbidity units and solid matter concentrations, and appear in the display.

### Installation in tank



### Installation in channel



## Precautions and warnings

Install the sensor in the tank so that it is immersed for at least 10 cm and the distance from the walls and the bottom of the tank is not less than 10 cm.

Install the sensor in the channel so that it is immersed for at least 10 cm and the distance from walls and bottom of the channel is not less than 10 cm.

## TECHNICAL DATA

Materials: SS304 Body  
Special Glass Optics  
NBR and Sylicon O-Rings

Thread: 1" GAS

Measuring range: 0-4000NTU / 0-2000 mg/l

Measuring method: 90° Scattered light

Accuracy: ± 5% of measuring value.

Repeatability: 98 %

Calibration: by 3 points

Working temperature: 0~45 °C

Max Working pressure: < 2 bar

Maximum absorption: 3W

Mechanical Protection: IP68 – cable included

Cable: 10m integral

Power supply: 12~24Vdc

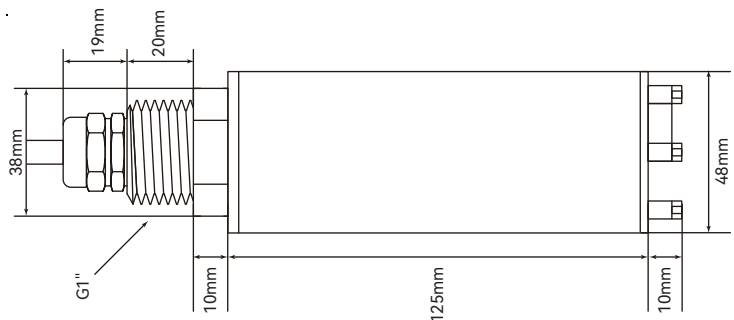
Outputs: RS485 Modbus RTU

Auto cleaning: wipper

### Cable codes

V+	24Vdc +
V-	24Vdc -
A	RS485 A
B	RS 485 B

## DIMENSIONS



## Order no.

35-0815-01 innoSens 815S Infrared Turbidity/TSS Sensor