

# Instruction Manual

## innoSens 815T

### Infrared Turbidity Sensor

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

#### Applications

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

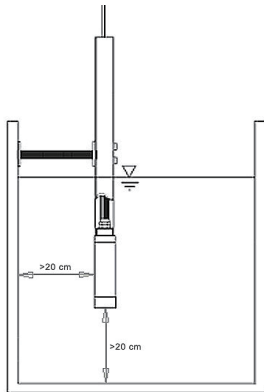
#### Features and benefits

- 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

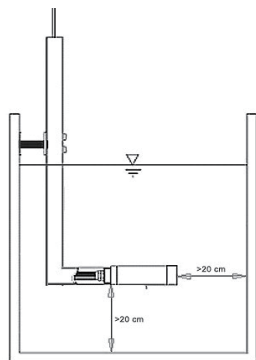
#### Turbidity measurement with the 90° scattered light method

By turbidity 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

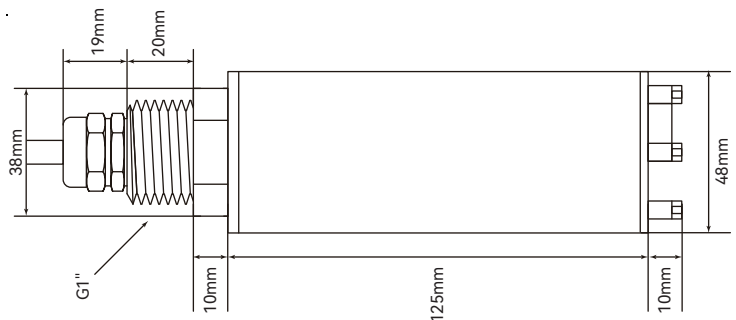
Install the sensor in the tank so that it is immersed for at least 10 cm and the distance from the walls and the bottom of the tank is not less than 10 cm.

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 Silicon O-Rings	
Thread: 1" GAS	
Measuring range: 0-4000NTU	
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: wiper	
Cable codes	
V+	24Vdc +
V-	24Vdc -
A	RS485 A
B	RS 485 B

#### DIMENSIONS



#### Order no.

35-0815-01 innoSens 815T Infrared Turbidity Sensor