

Advanced Optical Technology for Accurate Turbidity Measurement

The probe employs advanced optical technology based on IR nephelometry at 850 nm. It offers a cost-effective solution with minimal maintenance and no consumables required.

Calibrated using a formazine standard solution, this compact and robust sensor supports digital communication via Modbus RS-485 or SDI-12, ensuring seamless integration with various transmitters, display units, controllers, or data loggers.



Applications



Drinking Water

- Source water monitoring



Waste Water

- Urban wastewater treatment (inlet/outlet controls)
- Sanitation network
- Industrial effluent treatment
- Surface water monitoring

Benefits

Fast, Accurate Results

- IR Nephelometry: Reliable turbidity measurements at 850 nm.
- Quick Calibration: Easy setup with formazine standard.
- Real-Time Data: Immediate monitoring and response.

Operational Efficiencies

- Low Maintenance: Minimal upkeep, no consumables.
- Energy Efficient: Ultra-low power consumption.
- Robust Design: Compact and durable PVC sensor.

Ease of Use

- Easy Integration: Connects to various systems effortlessly.
- Compact & Lightweight: Simple handling and installation.
- Waterproof & Durable: IP68-rated for reliable performance

Compliance

- Digital Communication: Modbus RS-485/SDI-12 compatibility.
- Integrated Transmitter: Stores calibration data for consistency.
- Secure Data: Reliable data processing and transmission.

Measure Principle	Diffusion IR at 90°
Measure Ranges	5 to 4000 NTU in 5 ranges: <ul style="list-style-type: none"> • 5 – 50 NTU • 5 – 200 NTU • 5 – 1000 NTU • 5 – 4000 NTU • AUTOMATIC • 0 to 4500 mg/L
Calibration	<ul style="list-style-type: none"> • Range 0-500 mg/L according to NF EN 872 • Range >500 mg/L according to NF T 90 105 2
Resolution	0.01 to 1 NTU - mg/L
Accuracy	< 5% of the reading
Working Temperature	0°C to +50°C
Measurement of Temperature	Via CTN
Stocking Temperature	-10°C to +60°C
Signal Interface	Modbus RS-485 (standard) and SDI-12 (optional)
Maximum Refreshing Time	< 1 second

Averaging	10s - 10min
Lamp Source	IR LED, 860nm
Electric Consumption	Standby: 40 µA Average RS485 (1 measure/second): 820 µA Average SDI12 (1 measure/second): 4.2 mA Current pulse: 500 mA
Sensor Dimensions	Diameter: 27 mm; Length: 170 mm
Weight	300 g (sensor + 3-meter cable)
Material	PVC, DELRIN, Quartz, PMMA, Polyamide
Maximum Pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
Degree of Protection	IP68

Optical Technology:

This sensor operates on the principle of IR nephelometry at 850 nm and can be calibrated using a formazine standard solution.

Digital Communication:

The sensor is compatible with various transmitters, display units, controllers, or data loggers via Modbus RS-485 or SDI-12 inputs.

The NTU sensor processes all calibration, historical, user, and measurement data internally and transmits this information through RS-485 or SDI-12 interfaces.

Physical Characteristics:

The PVC sensor is suitable for both handheld and fixed applications.

Issue Date: August 2024