

INDUSTRIAL PRODUCT DATASHEET

# Industrial Turbidity Sensor MODBUS-RTU RS485 for Water Quality Monitoring

This IP68 turbidity sensor with RS-485 Modbus-RTU and 0-1000 NTU range enables precise water quality monitoring for wastewater, environmental, and industrial applications, seamlessly integrating with SenseCAP data loggers.

SKU

101990793

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PRICE

\$249.00(Excl. VAT)



# Overview



The Industrial Turbidity Sensor provides accurate measurements from 0 to 1000 NTU with 0.1 NTU precision, utilizing 90° scattering light technology and featuring IP68 durability, RS-485 Modbus-RTU communication, and automatic temperature compensation. It is designed for water treatment, environmental monitoring, industrial processes, aquaculture, and hydrological studies, and integrates with SenseCAP S2100 LoRaWAN datalogger and SenseCAP Sensor Hub 4G Data Logger.

# Key Features

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- **Wide Measurement Range & High Precision:** Measures turbidity from 0 to 1000 NTU with 0.1 NTU precision, ensuring reliable water quality monitoring for wastewater treatment, environmental monitoring, and water purification.
- **Advanced Scattering Light Technology:** Utilizing 90° scattering light, it provides stable and accurate turbidity readings even in challenging conditions.
- **Robust and Durable Design:** With an IP68 rating, it is built to withstand harsh environments, ideal for long-term use in water treatment and environmental applications.
- **Seamless Integration and Easy Calibration:** Supports RS-485 Modbus-RTU communication for easy integration with industrial systems, featuring automatic temperature compensation and simple calibration for consistent performance.
- **Versatile and User-Friendly:** Designed for a variety of water quality applications, this sensor ensures easy installation and maintenance in both industrial and environmental settings.
- **Easy Integration and Versatile Application:** This sensor can be seamlessly integrated with the [SenseCAP S2100 LoRaWAN datalogger](#) and

[SenseCAP Sensor Hub 4G Data Logger](#) for efficient data collection and management.

Monitor key indicators of water quality with our advanced IP68 RS485 turbidity sensor designed for applications such as industrial wastewater treatment, environmental monitoring and water purification. The sensor provides accurate turbidity measurements to ensure reliable performance for water quality management in industrial and natural water systems. It can be used in a variety of RS 485 systems to provide the accuracy required for efficient monitoring and management.

We offer the [SenseCAP S2100 - LoRaWAN® Data Logger](#) and [SenseCAP Sensor Hub 4G Data Logger](#) suitable for RS485 sensors, you can transmit the sensor data to public LoRaWAN® network servers(Helium, TTN, etc.,) or MQTT private servers.

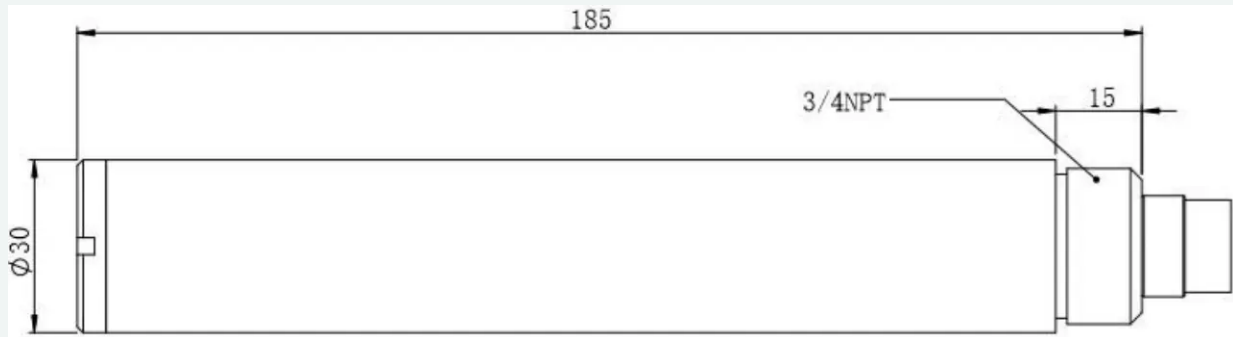
# Product Gallery



## Specification

|                          |                                             |
|--------------------------|---------------------------------------------|
| Model                    | S-DTS210-01                                 |
| Power                    | 12 ~ 24 V/DC (Typical 12 V/DC) 0.3W @ 12V   |
| Measurement Principle    | Scattering light                            |
| Measurement Range        | 0~1000.0NTU                                 |
| Resolution               | 0.1NTU/0.1°C                                |
| Accuracy                 | ±5% F.S, ±0.3°C                             |
| Calibration Method       | Two-point calibration                       |
| Temperature Compensation | Automatic temperature compensation (Pt1000) |
| IP Ratings               | IP68                                        |
| Operating Temperature    | 0 ~ 50°C, < 0.2 MPa                         |
| Storage Temperature      | -5 ~ 65°C                                   |
| Installation             | Immersion installation, 3/4" NPT thread     |
| Cable Length             | 10 meters                                   |
| Dimension                | 185*Φ30mm                                   |

# Hardware Overview



## Applications

- **Water Treatment:** Used in wastewater treatment plants to monitor water quality and ensure that effluent meets regulatory standards before discharge.
- **Environmental Monitoring:** Ideal for monitoring water bodies such as rivers, lakes, and reservoirs, providing real-time data on turbidity levels to assess water quality and pollution.
- **Industrial Applications:** Integrated into industrial processes to measure the turbidity of water used in manufacturing, ensuring clean and safe water for operations.
- **Aquaculture:** Used to monitor water quality in fish farming, where turbidity levels can affect the health of aquatic life.
- **Hydrological Studies:** Used in scientific research for studying sediment levels and water clarity in different environmental conditions, such as wetlands and watersheds.

## Compliance & Logistics



|          |            |
|----------|------------|
| HSCODE   | 9031809090 |
| USHSCODE | 9031808085 |
| UPC      |            |
| EUHSCODE | 9013101000 |
| COO      | CHINA      |

## Resource Links

- <https://www.seeedstudio.com/RS485-p-5102.html>
- [Industrial Turbidity Sensor User Manual](#)

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