

Fiber Optic Online Turbidity Sensor

5-INCH COLOR TOUCHSCREEN

Intuitive operation, easily accessible with just one touch



Industrial-grade CPU
sensitive response
1 second startup
Smooth experience

AI Overview

Fiber optic online turbidity sensors provide real-time, accurate, and stable measurement of suspended particles in water using 90° scattered light detection. Working Principle Fiber optic turbidity sensors operate on the nephelometric principle, where an infrared or visible light beam is emitted into the water sample, and the intensity of light scattered at a 90° angle is measured. The scattered light intensity correlates with the concentration of suspended solids, which is then converted into turbidity units (NTU or FNU) (). Some advanced designs use multi-mode glass fibers to deliver and collect light through a single fiber, enhancing sensitivity and reducing noise (). Key Features High Accuracy and Stability: Fiber optic sensors provide highly linear responses and can detect turbidity as low as 0.1 NTU, with excellent reproducibility and stability against temperature changes (). Self-Cleaning Mechanisms: Many models, such as the DSS410 and KWS-900, include automatic cleaning brushes to remove bubbles and fouling, reducing maintenance and ensuring long-term stability (). Wide Measurement Range: Suitable for low-turbidity drinking water and high-turbidity wastewater, with ranges up to 5000 NTU (). Resistance to Ambient Light: Fiber-optic design effectively suppresses interference from external light sources, improving measurement reliability (). Compact and Flexible Installation: Fiber-based sensors can be installed in small pipeworks or submersible setups, making them suitable for distributed monitoring networks (). Applications Fiber optic turbidity sensors are widely used in: Drinking water production: Ensuring filtration efficiency and microbial safety (). Wastewater treatment: Monitoring effluent quality and process control (). Environmental monitoring: Real-time assessment of rivers, lakes, and reservoirs (). Industrial processes: Monitoring circulating water and process streams in chemical, food, and beverage industries (). Advantages Real-time, in situ monitoring without the need fo...

Article Content

(PDF) Turbidimeter Design and Analysis: A Review on

The discussion also focuses on the optical fiber sensor technologies that have been applied within the lab and field environment and have been

Water Turbidity Detection Methods and Online Sensor Selection for ...

Water turbidity detection method guide comparing visual, photometric, scattered light, laser, ultrasonic and online turbidity sensors, with selection notes for distributors, aquaculture users,

Integrated Online Turbidity Sensor: Core Optical Sensing Component

From the perspective of system integrators, this sensor is not merely a single optical probe but the sensing frontend for building highly reliable water quality continuous monitoring systems.

Fiber optic sensor | PDF

Fiber optic sensors have many advantages over traditional electronic sensors such as immunity to electromagnetic interference, small size, and ability to operate in

Design, Analysis, and Realization of a Turbidity Sensor

Abstract and Figures We propose a method for sensing the turbidity of a solution using a fiber-optic bundle probe in conjunction with a mirror.

A wide dynamic range and high resolution all-fiber-optic turbidity ...

As fiber-optic turbidity sensor has gradually become a popular technology, a compact FITP designed to transmit and collect optical signals is used in our detection system for better application

A Glass-Fiber-Optic Turbidity Sensor for Real-Time In Situ Water

In this paper, we report the demonstration of a fiber-optic turbidity sensor based on multi-mode glass fibers. The system uses a single fiber to both deliver laser light into the water sample and

A Glass-Fiber-Optic Turbidity Sensor for Real-Time In Situ Water ...

Fiber-optic measurement permits real-time, in situ turbidity monitoring. But the current technology is based on plastic fibers, which suffer from high optical attenuation and hence are

Turbidity Probe Sensor | Online Water Turbidity Measurement

This turbidity probe uses an infrared light source (860nm) and 90° scattering detection, ensuring reliable and standardized turbidity readings unaffected by water color.

High-Quality Turbidity Sensor | Kcsensor

KWS-900 Fiber Optic turbidity sensor Introduction Kacise applies fiber technology to the turbidity sensor to make the sensor has better repeatability and stability, not

A Glass-Fiber Optic Turbidity Sensor for Real-Time

Fiber-optic measurement permits real-time, in-situ turbidity monitoring. But the current technology is based on plastic fibers, which suffer from high

Capillary-based optical fiber sensor for turbidity measurement ...

This work introduces an innovative capillary (hollow core) optical fiber-based sensor designed to measure turbidity using light reflection along its cladding.

A Low-Cost Portable Optical Fiber-Based Sensor for Water Turbidity ...

This paper presents a low-cost portable turbidity sensor using optical fiber. The system composition is described in detail, including the design of the sensor probe, signal conditioning

Fiber Optic Turbidity Sensor for Water Quality

KWS-900 fiber optic turbidity sensor offers high-accuracy water quality monitoring for environmental, industrial, and municipal applications.

Heterogeneous Optical Fiber Sensor System for Temperature and Turbidity ...

This paper presents the development of an optical fiber sensor system for multiparametric assessment of temperature and turbidity in liquid samples. The sensors are based on the combination between

Turbidity Probe Sensor | Online Water Turbidity

Water Quality Sensors DSS410 Online Turbidity Probe Sensor for Water Quality Monitoring The self-cleaning turbidity sensor applies optical fiber technology to

Development of Innovative Online Modularized Device

Given progress in water-quality analytical technology and the emergence of the Internet of Things (IoT) in recent years, compact and durable

Heterogeneous Optical Fiber Sensor System for

This paper presents the development of an optical fiber sensor system for multiparametric assessment of temperature and turbidity in liquid samples. The

Fiber Optic Turbidity Sensor for Water Quality

The KWS-900 online turbidity sensor adopts the 90° scattered light measurement principle, complies with international standards, uses customized optical devices,

High-Quality Turbidity Sensor | Kcsensor

Kacise applies fiber technology to the turbidity sensor to make the sensor has better repeatability and stability, not susceptible to ambient light coordination. The

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