SensorsX

SX-CTNMA Series

Low Range Turbidity Analyzer

Industrial Turbidity Sensor

0-10 NTU Measurement Range	**±0.01 NTU or ±2%** Accuracy	**0.001 NTU** Resolution
RS-485 / Modbus Digital Output	**DC 12-24 V, >1 A** Power Supply	**0.4 / 1 W** Power (idle / brushing)

Industrial Water Quality Measurement | Turbidity

■ PRODUCT OVERVIEW

The SX-CTNMA Series online turbidity analyzer is designed for low-turbidity water quality monitoring. It features ultra-low turbidity measurement capability, high-precision detection, extended maintenance intervals, water-saving operation, and digital communication. Remote monitoring is supported through cloud platforms and mobile devices. The analyzer is widely used for waterworks inlet/outlet monitoring, secondary water supply, pipe-network terminal water, direct drinking water, membrane-filtered water, swimming pools, and surface water monitoring.

■ KEY FEATURES

◆ Uses the ISO 7027-compliant 90° scattering measurement method	◆ optimized optical path and detection structure combined with a real-time compensation algorithm for high-precision turbidity measurement
◆ Built-in cleaning wiper/brush to meet long-term stable online monitoring needs	◆ integrated defoaming and measurement unit that reduces inlet-water bubble interference, improving measurement stability and accuracy

◆ Built-in calibration parameters, factory-calibrated for immediate installation and use	

■ TYPICAL APPLICATIONS

- Waterworks Inlet / Outlet Monitoring
- Direct Drinking Water
- Surface Water
- Secondary Water Supply
- Membrane-Filtered Water
- Pipe-Network Terminal Water
- Swimming Pools

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	Low-Range Turbidity Analyzer
Measurement Principle	90° light scattering method
Measurement Range	0-10 NTU, other ranges customizable
Accuracy	
Accuracy	±0.01 NTU or ±2% (whichever is greater)
Resolution	0.001 NTU

※ The technical specifications above are based on laboratory standard-solution conditions.

■ ELECTRICAL SPECIFICATIONS

Digital Communication	
Digital Interface	RS-485
Communication Protocol	Modbus
Power	
System Power Consumption	0.4 W (idle) / 1 W (while brushing)
Power Supply	DC 12-24 V, current > 1 A

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	0-50 °C (32-122 °F)
Mechanical & Environmental	
Required Flow Rate	180-500 mL/min (0.047-0.132 US gal/min)
Dimensions	Φ54.6 mm × 193.5 mm (Φ2.15 in × 7.62 in)
Maintenance	Self-cleaning optical-window wiper
Piping Connections	Inlet: 1/4 in (DN6) PE tubing; Overflow: 3/8 in (DN8) PE tubing
Housing Material	Sample chamber: PC + ABS; Sensor: 316L + POM

■ COMMUNICATION PROTOCOLS

Digital Interface	RS-485
Communication Protocol	Modbus

■ ORDERING INFORMATION

Complete model number reference: SX-CTNMA-11

Measurement Range	
1	0-10 NTU

Accuracy	
1	±0.01 NTU or ±2% (whichever is greater)

Customized	
D	Customized — specify requirements when ordering