

SensorsX SX-CTNCA Series

Self-Cleaning Turbidity Sensor
Industrial Turbidity Sensor



0.1-4,000 NTU Measurement Range	±5% or 0.3 NTU Accuracy	RS-485 / Modbus Digital Output
IP68 Ingress Protection	DC 12-24 V, >500 mA Power Supply	0.2 / 0.6 W Power (idle / brushing)

Industrial Water Quality Measurement | Turbidity

■ PRODUCT OVERVIEW

The SX-CTNCA Series online turbidity sensor uses the 90° scattering method compliant with ISO 7027. A sapphire optical window with a customized optical filter provides stable measurement performance with resistance to ambient light and sample-color interference. The integrated self-cleaning brush reduces bubble formation and fouling effects, extending maintenance intervals during long-term online monitoring.



■ KEY FEATURES

◆ Digital sensor with RS-485 output, standard Modbus protocol	◆ 90° scattering method principle, compliant with the ISO 7027 international standard
◆ Sapphire optical window with customized optical filter, resistant to interference from ambient light and sample color	◆ Equipped with self-cleaning brush to prevent microbial fouling, extending maintenance interval
◆ Built-in calibration parameters, factory-calibrated for immediate installation and use	

■ TYPICAL APPLICATIONS

- General water-quality turbidity monitoring
- Food & beverage and industrial process water
- Environmental water monitoring

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	Turbidity Sensor (with brush)
Measurement Principle	90° scattering method
Measurement Range	0.1-1,000 NTU or 0.1-4,000 NTU
Accuracy	
Accuracy	±5% or 0.3 NTU (whichever is greater)
Calibration	
Calibration	0-point, 1-point, or 2-point calibration

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

■ ELECTRICAL SPECIFICATIONS

Digital Communication	
Digital Interface	RS-485
Communication Protocol	Modbus
Power	
Power Consumption	0.2 W (idle) / 0.6 W (while brushing)
Power Supply	DC 12-24 V, >500 mA

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	0-50 °C (32-122 °F)
Mechanical & Environmental	
Maximum Pressure	3 bar (43.5 psi)
Ingress Protection	IP68
Mounting	NPT 3/4 thread, immersion mounting
Dimensions	Φ36 mm × 198.2 mm (Φ1.42 in × 7.80 in)
Cable Length	10 m (32.8 ft) default, customizable
Housing Material	Titanium Alloy

■ COMMUNICATION PROTOCOLS

Digital Interface	RS-485
Communication Protocol	Modbus

■ ORDERING INFORMATION

Complete model number reference: **SX-CTNCA-11**

Measurement Range

1	0.1-1,000 NTU
2	0.1-4,000 NTU

Accuracy

1	±5% or 0.3 NTU (whichever is greater)
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Customized

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