

SensorsX SX-COPNA Series

Digital ORP Sensor
Industrial ORP Sensor



±20 mV Accuracy	-1999 to 1999 mV Measurement Range	RS-485 / Modbus Digital Output
IP68 Ingress Protection	DC 12-24 V, ≥1 A Power Supply	0.3 W Power Consumption

Industrial Water Quality Measurement | ORP

■ PRODUCT OVERVIEW

The SX-COPNA Series online ORP sensor uses an industrial-grade in-line platinum electrode with long service life and a built-in temperature sensor for automatic temperature compensation. It supports RS-485 digital communication with Modbus protocol, enabling convenient networking and system integration without requiring an additional controller. The sensor is suitable for long-term online monitoring in water quality monitoring, wastewater treatment, chemical processing, and biological applications.



■ KEY FEATURES

◆ Digital sensor with RS-485 output, standard Modbus protocol	◆ Low maintenance design; High resistance to interference; reduced recalibration requirements
◆ Built-in temperature sensor with automatic temperature compensation	◆ Industrial-grade in-line platinum electrode for long-term stable operation
◆ Built-in calibration parameters, factory-calibrated for quick installation and commissioning	

■ TYPICAL APPLICATIONS

- Water Quality Treatment
- Chemical Processing
- Hydrological Monitoring
- Biological / Biotech Applications
- Wastewater Treatment

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	ORP Sensor
Measurement Principle	Platinum electrode method
Measurement Range	-1999 mV to 1999 mV
Accuracy	
Accuracy	±20 mV
Resolution	1 mV
Calibration	
Calibration	1-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	0.3 W
Power Supply	DC 12-24 V, ≥1 A

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	0-50 °C (32-122 °F)
Mechanical & Environmental	
Maximum Pressure	3 bar (43.5 psi)
Ingress Protection	IP68 (IEC 60529)
Dimensions	Φ28 mm × 194 mm (Φ1.10 in × 7.64 in)
Cable Length	10 m (32.8 ft) default, customizable
Housing Material	POM + Titanium Alloy

■ COMMUNICATION PROTOCOLS

Digital Interface	RS-485
Communication Protocol	Modbus

■ ORDERING INFORMATION

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

Measurement Range

1	-1999 mV to 1999 mV
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Accuracy

1	±20 mV
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Customized

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