

SensorsX SX-CDRNA Series

Online Dissolved Oxygen Sensor
Industrial Dissolved Oxygen Sensor



0-20 mg/L Measurement Range	Fluorescence Method Measurement Principle	RS-485 / Modbus Digital Output
IP68 Ingress Protection	60 m Maximum Water Depth	0.1 W Power Consumption

Industrial Water Quality Measurement | Dissolved Oxygen

■ PRODUCT OVERVIEW

The SX-CDRNA Series fluorescence-method dissolved oxygen sensor uses fluorescence-lifetime measurement technology with high-performance fluorescent material. It does not consume oxygen, has no flow-rate limitation, and requires no electrolyte solution. The sensor requires minimal maintenance and calibration, is resistant to hydrogen sulfide interference, and provides high accuracy and stability. A built-in temperature sensor provides automatic temperature compensation. The digital RS-485 output enables convenient system integration.



■ KEY FEATURES

◆ Digital sensor with RS-485 output, Modbus protocol	◆ No electrolyte required; high resistance to interference; reduced recalibration requirements
◆ Zero oxygen consumption; no flow-rate limitation	◆ Built-in temperature sensor with automatic temperature compensation
◆ Built-in calibration parameters, factory-calibrated for immediate installation and use	

■ TYPICAL APPLICATIONS

- Online dissolved oxygen monitoring for water quality
- Wastewater treatment
- Aquatic environment monitoring

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	Dissolved Oxygen Sensor
Measurement Principle	Fluorescence method
Measurement Range	0-20 mg/L or 0-200% saturation
Accuracy	
Accuracy	±1% or ±0.3 mg/L (whichever is greater)
Calibration	
Calibration	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	0.1 W
Power Supply	DC 9-24 V, current > 50 mA

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	0-50 °C (32-122 °F)
Mechanical & Environmental	
Maximum Water Depth	60 m (196.9 ft)
Ingress Protection	IP68
Mounting	G3/4 thread, immersion mounting
Dimensions	Φ26 mm × 187 mm, with protective cover (Φ1.02 in × 7.36 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-CDRNA-11**

Measurement Range

1	0-20 mg/L or 0-200% saturation
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Accuracy

1	±1% or ±0.3 mg/L (whichever is greater)
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Customized

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