

SensorsX SX-CDRCA Series

Self-Cleaning Dissolved Oxygen Sensor
Industrial Dissolved Oxygen Sensor



0-50 mg/L Measurement Range	Fluorescence Method Measurement Principle	RS-485 / Modbus Digital Output
IP68 Ingress Protection	30 m Maximum Water Depth	0.1 / 0.8 W Power (idle / brushing)

Industrial Water Quality Measurement | Dissolved Oxygen

■ PRODUCT OVERVIEW

The SX-CDRCA Series self-cleaning 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 integrated self-cleaning brush helps prevent microbial fouling, extends maintenance intervals, and improves operational reliability.



■ 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	◆ 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

- Dissolved oxygen monitoring in water and wastewater treatment
- Aquaculture

- Environmental water quality monitoring

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	Self-Cleaning Dissolved Oxygen Sensor
Measurement Principle	Fluorescence method
Measurement Range	0-50 mg/L or 0-500% saturation
Accuracy	
Accuracy	0-20 mg/L: $\pm 1\%$ or ± 0.2 mg/L; >20 mg/L: $\pm 5\%$ or ± 0.6 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 (idle) / 0.8 W (while brushing)
Power Supply	DC 6-24 V, ≥ 1 A

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	0-50 °C (32-122 °F)
Mechanical & Environmental	
Maximum Water Depth	30 m (98.4 ft)
Ingress Protection	IP68
Mounting	3/4 NPT thread, immersion mounting
Dimensions	$\Phi 48$ mm $\times$ 197.1 mm ($\Phi 1.89$ in $\times$ 7.76 in)
Cable Length	10 m (32.8 ft) default, customizable
Housing Material	316L Stainless Steel (titanium alloy customizable)

■ COMMUNICATION PROTOCOLS

Digital Interface	RS-485
Communication Protocol	Modbus

■ ORDERING INFORMATION

Complete model number reference: **SX-CDRCA-111**

Measurement Range

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Accuracy

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Housing Material

1	316L Stainless Steel
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Customized

D	Customized — specify requirements when ordering
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