

SensorsX SX-CRCNA Series

Residual Chlorine Sensor
Industrial Residual Chlorine Sensor



±0.02 mg/L Accuracy	0-20 mg/L Measurement Range	RS-485 / Modbus Digital Output
IP68 Ingress Protection	DC 9-27 V, >1 A Power Supply	~0.5 W Power Consumption

Industrial Water Quality Measurement | Residual Chlorine

■ PRODUCT OVERVIEW

The SX-CRCNA Series residual chlorine sensor uses a controlled negative-voltage pulse applied between the polarized electrode and reference electrode to selectively promote the electrochemical reaction of free chlorine. The resulting current signal is proportional to free chlorine concentration, enabling accurate measurement through signal acquisition and analysis. The sensor provides high selectivity, low maintenance requirements, long service life, and reliable performance.



■ KEY FEATURES

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| <ul style="list-style-type: none"> ◆ RS-485 transmission interface, Modbus-RTU communication protocol, two-channel communication ◆ Built-in protection circuit, enhancing anti-interference ability to suitable for harsh environments | <ul style="list-style-type: none"> ◆ Power supply and output isolation design to ensure electrical safety ◆ simple communication protocol that can output additional electrode diagnostic information |
| <ul style="list-style-type: none"> ◆ Built-in calibration parameters for easy on-site use and secondary calibration | |

■ TYPICAL APPLICATIONS

- Free (Residual) Chlorine Monitoring in Water Treatment
- Disinfection Process Monitoring

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	Residual Chlorine Sensor
Measurement Principle	Constant voltage method
Measurement Range	0-20 mg/L
Accuracy	
Accuracy	±0.02 mg/L
Resolution	0.01 mg/L
Calibration	
Calibration	Built-in calibration parameters; on-site secondary calibration supported

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

■ ELECTRICAL SPECIFICATIONS

Digital Communication	
Digital Interface	RS-485
Communication Protocol	Modbus-RTU
Power	
Power Consumption	About 0.5 W
Power Supply	DC 9-27 V, current > 1 A
Isolation Strength	2500 Vrms

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	-10.0 to +110.0 °C (14 to 230 °F)
Mechanical & Environmental	
Ingress Protection	IP68
Required Flow Rate	20-40 L/h (5.3-10.6 US gal/h)
Dimensions	Φ13 mm × 120 mm, no cable (Φ0.51 in × 4.72 in)
Housing Material	316L Stainless Steel

■ COMMUNICATION PROTOCOLS

Digital Interface	RS-485
Communication Protocol	Modbus

■ ORDERING INFORMATION**Complete model number reference: SX-CRCNA-11****Measurement Range**

1	0-20 mg/L
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Accuracy

1	±0.02 mg/L
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Customized

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