

SensorsX

SX-CCFMA Series

Four-Electrode Conductivity (Salinity) Sensor

Industrial Conductivity / Salinity Sensor



0-200 mS/cm Conductivity Range	0-175 ppt Salinity Range	0-128,000 mg/L TDS Range
IP68 Ingress Protection	DC 9-24 V, >500 mA Power Supply	0.2 W Power Consumption

Industrial Water Quality Measurement | Conductivity / Salinity

■ PRODUCT OVERVIEW

The SX-CCFMA Series online conductivity/salinity sensor uses advanced four-electrode measurement technology with an RS-485 digital interface and Modbus protocol support. Compared with traditional two-electrode sensors, it provides higher accuracy, a wider measurement range, and improved stability. The probe includes a built-in temperature sensor, and automatic temperature compensation helps maintain measurement accuracy across varying temperatures.



■ KEY FEATURES

◆ RS-485 communication interface, standard Modbus protocol, for easy integration	◆ Simultaneous output of conductivity, salinity, TDS, and temperature
◆ Corrosion-resistant housing, IP68 waterproof rating, suitable for long-term submersible operation	◆ Built-in temperature sensor with automatic temperature compensation
◆ Built-in calibration parameters, factory-calibrated for quick installation and commissioning	

■ TYPICAL APPLICATIONS

- Water quality monitoring
- Conductivity / salinity / TDS measurement
- Industrial and environmental water monitoring

■ PERFORMANCE SPECIFICATIONS

Measurement	
Product Type	Conductivity (Salinity) Sensor
Measurement Principle	Four-electrode technology
Conductivity Range	0-200 mS/cm (0-2 mS/cm, 2-20 mS/cm, 20-200 mS/cm sub-ranges)
Salinity Range	0-175 ppt
TDS Range	0-128,000 mg/L
Accuracy	
Conductivity Accuracy	±1% or 0.01 mS/cm (whichever is greater)
Salinity Accuracy	±1 ppt
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	0.2 W
Power Supply	DC 9-24 V, >500 mA

■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature Range	0-50 °C (32-122 °F)
Mechanical & Environmental	
Ingress Protection	IP68
Dimensions	Φ22 mm × 175.5 mm (Φ0.87 in × 6.91 in)
Cable Length	10 m (32.8 ft) default, customizable
Housing Material	PEEK + Titanium Alloy

■ COMMUNICATION PROTOCOLS

Digital Interface	RS-485
Communication Protocol	Modbus

■ ORDERING INFORMATION

Complete model number reference: **SX-CCFMA-11121**

Conductivity Measurement Range

1	0-200 mS/cm
2	0-2 mS/cm
3	2-20 mS/cm
4	20-200 mS/cm

Conductivity Accuracy

1	±1% or 0.01 mS/cm (whichever is greater)
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Salinity (SAL) Measurement Range

1	0-175 ppt
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Salinity (SAL) Accuracy

2	±1 ppt
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TDS Measurement Range

1	0-128,000 mg/L
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Customized

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