SPS-Cl Series Chlorine Sensor Datasheet

Product description

SPS-Cl series chlorine sensor is designed with amperometric potentiostat 3 electrode method and membrane covered method, which effectively reduces the interference of pH value on sensor measurement. SPS-Cl series chlorine sensors are widely used in tap water, pipe network, medical wastewater and other fields, and can provide customers with accurate and efficient monitoring.

Application

- Monitoring of tap water and pipe network
- Swimming pool total chlorine monitoring
- Medical wastewater, effluent monitoring after disinfection
- Other industrial water, cooling water and other total chlorine monitoring

Advantage

- Three-electrode coating method, stable and accurate measurement
- No chemical reagent consumption, environmentally friendly
- Long maintenance-free period and low maintenance cost
- The device is compact and easy to install

Specifications

Specification	Detail
Measurement method	fCl/tCl: Membrane covered, amperometric potentiostatic 3-electrode Temperature:
Parameter	Free chlorine, Total chlorine (optional)
Measuring range	fCl/tCl: 0-2mg/L(ppm), 0-20mg/L Temperature: 0-50 ℃
Resolution	fCl/tCl: 0.001 mg/L Temperature: 0.1 ℃
Accuracy	fCl/tCl: ±3% of the reading or ±0.02mg/L, the larger after calibration at repeatability conditions (25°C, pH 7.2 in drinking water) of the upper full scale Temperature: ±1 ℃
Dimensions	φ25×205mm
Weight	0.11kg
Power requirements	DC +12~+24V
Mounting	Flow-through installation
Operating temperature	2~45 ℃ (35.6~113℉)
Storage temperature	2~45 ℃ (35.6~113℉)
Sensor cable length	2m(6.56ft), Please contact us for other sizes
Protocol	Modbus RTU RS485
Sample requirements	Temperature:2~45 ℃（35.6~113℉） Flow rate:250-500 mL/min Pressure:0.5 bar (7.25 psi) maximum compared to air, 2 to 50 ℃ (35.6 to 122℉) sample
Certifications	CE
Warranty	One year

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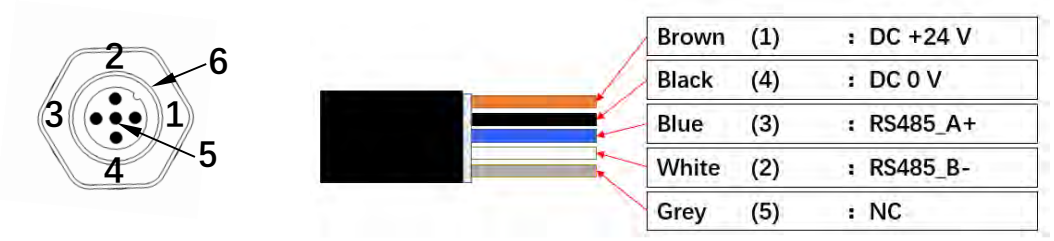
Equipment selection

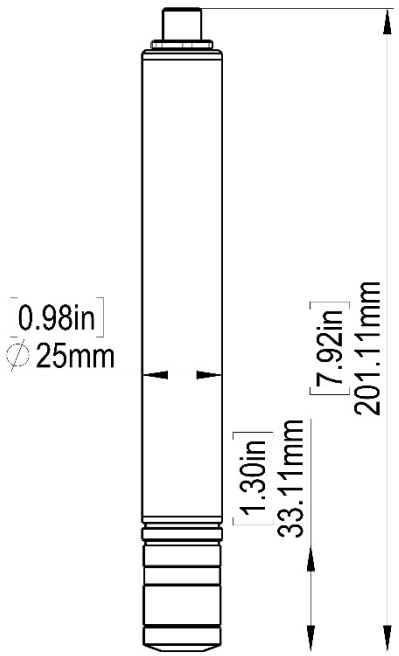
Model	Parameter
SPS-Cl-F	Free chlorine
SPS-Cl-T	Total chlorine

Interface definition

The sensor tail connection mode is 5-core M12 aviation connector (equipped with M12 shielded cable, standard 2m).



Dimensions



Sensor calibration instructions

Two-point calibration

It is recommended to use this calibration method first. The calibration is based on the raw total chlorine concentration fitted to the sensor current value.

The sensor has been zero-calibrated before leaving the factory, and users generally do not need to perform zero-point calibration.

Calculated as follows:

$$\mathrm{fCl} = \frac{\mathrm{CurrInA} - \mathrm{X\_Zero}}{\mathrm{X\_Kp}}$$

Note:

- fCl is the original value of total chlorine (mg/L);
- CurrInA is the sensor current value;
- X_Zero and X_Kp are calibration parameters, which are calculated using two points according to the formula. Generally, the default X_Zero is 0.
- When the measurement concentration is less than 0.1mg/L, to improve the measurement accuracy of low concentration. Two-point calibration method can be used (cannot be directly placed in pure water for zero-point calibration)

Note: During calibration, a valid slope (non-zero) and a valid date and time (non-zero) need to be written in the X_Kp register for successful calibration.