Smart ABCL

Chlorine Sensor

The Advantage

- For no reagent and membrane in the Chlorine probe, this sensor significantly lowers the operating cost and maintenance
- The sensor can work with all terminals that can receive the RS485 signals.
- Dust and Water Proof Structure
- Temperature and pH Compensation
- Factory pre-calibration for easy setup and field calibration for more accuracy

Introduction

The ABCL is an electrode Amperometric sensor that operates on the Potentiostatic Amperometry method. This digital sensor comprises integrated electronic circuits and microprocessors housed within its structure.
The ABCL housing is a robust Dust and Waterproof enclosure. Its design incorporates power and output isolation to guarantee electrical safety. Additionally, it features an in-built protection circuit, enhancing its resistance to interference and enabling adaptation to complex environments.
Facilitating communication through an RS-485 transmission interface, the sensor employs the MODBUS-RTU communication protocol. This protocol, known for its simplicity and user-friendly nature, enables the sensor to output extensive electrode diagnostic information, showcasing its intelligence.
With a low power consumption design, the sensor is suitable for a variety of usage scenarios. Furthermore, its internal memory serves to store calibration and setting information, ensuring data preservation in the event of a power failure.

Principle

This sensor utilizes the amperometric principle with a constant potential made through the two annular bands and a reference electrode.
This chlorine sensor operates by electronically regulating the potential between the measuring electrodes and the reference electrode, a task overseen by the connected Chlorine Controller. This electronic potential control is crucial, as it ensures a consistent and linear relationship between current and concentration in the measured solution. This precision in potential management enhances the accuracy and reliability of the sensor's readings.
When the sensor is installed the installation type must ensure that a constant flow is present to ensure precision measurements, We strongly recommend installing the sensor in a sample line where a constant flow can be guaranteed.

Application Areas

- Chlorination System
- Swimming Pool
- Monitoring Conditioning Agents
- Monitoring Disinfectant dosing
- Drinking Water

Specifications

Measuring Principle	Three electrode Amperometric free chlorine sensor. It operates based on the principle of Potentiostatic amperometry.
Measuring Range	0 to 20 mg/L
Unit	mg/L
Accuracy	<±3%FS
Resolution	0.01 mg/L
Source Voltage	+10 - 27 VDC
Consumption	At regular operation: 20 mA
Pressure	Max. 6 bar
Optimum flow rate	25 – 100 LPH
Operate Temp.	-10 to 60 degree C
Temperature Compensation	Automatic/Manual
pH Compensation	Yes
Interface	Modbus RS485
Material	Glass + POM
Cable & Length	Polyurethane jacket, bare wires or waterproof Fisher 1 meter(standard), higher length on request
Weight	Approx. 0.4 Kg (sensor + cable 1 meters)
Isolation Strength	2500 Vrms

Sales & Service Support

- Factory Acceptance Test (FAT)
- Site Acceptance Test (SAT)
- Site Commissioning
- After Sales Service backup
- Guaranteed spare parts availability for a maximum of 10 years of instrument life.

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