

# FREE CHLORINE SENSOR

FC1000L



## FEATURES & BENEFITS

- Affordable, real-time free chlorine, chlorine dioxide and/or dissolved ozone measurement
- Potentiostatic sensor technology
- Range for wastewater to high purity applications
- Automatic temperature compensation
- Low maintenance requirements
- Simple to install and operate
- No reagents required

MUNICIPAL DRINKING WATER  
MUNICIPAL WASTEWATER  
INDUSTRIAL PROCESS WATER  
INDUSTRIAL WASTEWATER

WATER QUALITY  
MONITORING  
SOLUTIONS

## REAL-TIME MONITORING SOLUTION

### Free Chlorine Sensor

Real Tech's bypass style Free Chlorine sensor provides rapid real-time measurement of free chlorine, chlorine dioxide and/or dissolved ozone in water or wastewater. Ideal for pressurized applications, the monitoring solution has three measurement ranges.

### Controllers and Accessories

Our innovative modular product platform ensures our clients gain the real-time water quality monitoring system that meets their specific demands and budget. With multiple sensor, controller and accessory options available, Real Tech provides a total solution for all of your unique water quality needs.

### Liquid Ai Compatible

Our Liquid Ai data services complement our real-time water quality monitoring systems. Our Remote Monitoring platform is a powerful data management and visualization tool that enables access to data anywhere, anytime.

## MEASUREMENT PRINCIPLE

Real Tech's Free Chlorine potentiostatic sensor technology is an amperometric measurement with constant potential, made through two metal electrodes and a reference electrode. The electrodes potential is electronically controlled in relation to the liquid, providing a steady and accurate relationship between cell current and concentration. As a result, calibration is required less frequently in comparison to traditional amperometric measurements and a very stable zero value is achieved in oxidative absence. A temperature sensor performs automatic compensation in the case of significant temperature fluctuations.

**REALTECH**  
INC.



# FREE CHLORINE SENSOR SPECIFICATIONS

CHARACTERISTIC	TECHNICAL DATA
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## SENSOR

Parameters	Free chlorine, chlorine dioxide, and/or dissolved ozone
Free Chlorine Range	Selection of three measuring ranges: 0-2 mg/L , 0-20 mg/L or 0-200 mg/L
Resolution	0.001, 0.01 or 0.1
Units	ppm / mg/L
Sampling Time	0.5 seconds
Measurement Principle	Potentiostatic measurement technology
Electrodes	2 platinum rings
Reference	Gel with annular junction
Sensor Lifetime	Approximately 12-18 months. Depends on site and application
Calibration	Manual correction on the selected scale and sensor's current offset
Cleaning	Pressurized DI water only
Temperature Compensation	Automatic with RTD
Flow Rate	Constant flow required. ~150-500 mL/min
Fluid Connections	Inlet: 1/4" fitting. Outlet: fitting for 10x14 mm tubing
Dimensions	5.90"H x 3.54"W x 1.57"D

## TRANSMITTER

Interface	Four buttons to control set-up and configuration
Display	1 line x 8 character LCD
Output	Self-powered 4-20mA, RS485 serial to PC
Electrical	9-36 VDC
Operating Temperature	0 to 50°C (32 to 122°F)
Storage Temperature	-10°C to 60°C (14 to 140°F)
Weight	5 lb
Enclosure	IP40, wall mountable. IP65 / NEMA 4 optional.
Dimensions	2.79"H x 3.74"W x 2.28"D (Optional IP65/ NEMA 4 cabinet - 10.25"H x 10.25"W x 5.5"D)
Warranty	2-year limited warranty

\* Technical Specifications are subject to change without notice.

**Note:** The free chlorine sensor requires a constant flow for stable measurement, therefore an accompanying bypass manifold (chamber) is included. The bypass manifold and transmitter are both wall mountable.

## SENSOR MODEL & RANGE

Includes potentiostatic sensor, temperature sensor, transmitter and bypass chamber.

MODEL #	FREE CHLORINE (mg/L)
FC1000L	Three measuring ranges: 0-2 mg/L , 0-20 mg/L or 0-200 mg/L

\* Stated ranges approximate, dependent on industry, site and application

## CONTROLLERS

PRODUCT #	NAME	DESCRIPTION
S-169000	Real Controller	Wall mounted controller with 4-line x 20-character back lit LCD display
S-11TPC	Real Controller Pro	Wall mounted controller with touch panel PC interface (PC inside cabinet model)
S-11TPCD	Real Controller Pro	Wall mounted controller with touch panel PC interface PC external on door model)

\*FC1000L comes complete with transmitter for stand-alone operation or can be connected to any Real Tech controller for added functionality.

## ACCESSORIES

PRODUCT #	NAME	DESCRIPTION
S-211001	FC IP65 Enclosure	IP65 NEMA 4 enclosure upgrade for free chlorine sensor transmitter

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