Leadtec
Water Treatment Solution

FCLG6000 Controller With USB Feature

Free Chlorine Analyzer

High accuracy and reliable Free Chlorine analyzer providing better compliance and process control.

Flow cell with sampling valve

Digital Free Chlorine Sensor with Integrated Temperature

Applications

- **Power Industry**
- **Process Water**
- **Drinking Water**
- **Municipal Water**
- **Sewage Treatment**
- **Disinfection**

In A Glance...

Leadtec FCLG6000 controller offers an unrivalled user friendliness in measurement of Free Chlorine. Its minimalistic design offers the most convenient operation than any analyzers. The controller is well-equipped with analogue output and Field Bus Connection RS-485 communication.

Leadtec Digital Free Chlorine sensor consists of either two or three electrode sensor in which the measuring electrode is made of gold and the reference electrode is made of silver with a silver halide coating. For 3-electrode sensor, it has additional counter electrode is made of stainless steel.

The operation and calibration can be performed easily with a friendly step-by-step interface by using DPD method. The sensor has low maintenance cost and required no reagent for its operation.

Benefits

- Robust & Reliable: Highest level of waterproof and dustproof analyzer for site measurement and easy installation, while the sensor has long time stability with loss in slope ±3%.
- Intuitive Operation: Step-by-step navigation facilitates the user to configure the analyzer and calibrate the sensor.
- Low Maintenance Cost: The electrode system has a long lifetime, which the only part for wear and tear is the electrolyte and membrane cap.
- Clean-cut display: Neat and organized functions allow zero hassle operation.

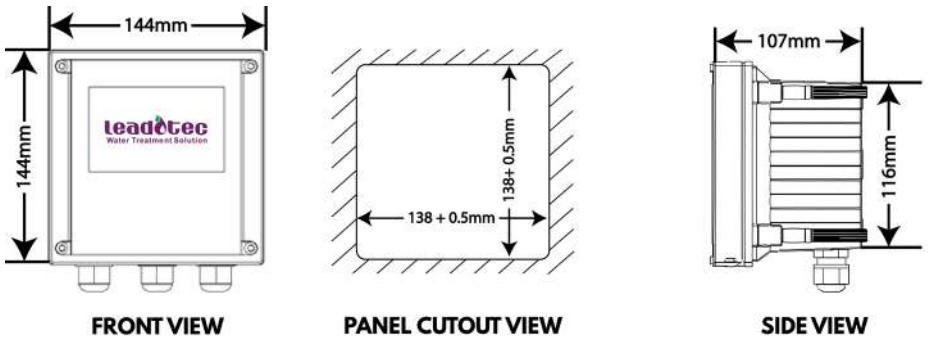
Specifications (Free Chlorine Analyzer)

Measuring Range	0.000 – 2.000 ppm 0.000 – 20.00 ppm 0 – 2000 ppm
Resolution	0.001 ppm 0.01 ppm 1 ppm
Accuracy	±3%
Temperature Range	-10.0°C to +130.0°C
Temperature Resolution	0.1°C
Temperature Accuracy	±0.2°C
Ambient Temperature	0°C to +70°C
Input Impedance	$>10^{12}\Omega$
Analogue Output	2 x 4-20mA electrically isolated, Max load 500Ω Current 1 Free Chlorine Current 2 Temperature
Control Outputs	2 x Relay Outputs 1 x Multifunctional Relay
Max. Relay Contacts Capacity	5A/250 VAC 5A/30 VDC
Cleaning Setting	ON : 1 to 1000 seconds OFF : 0.1 to 1000.0 hours
Multifunctional Relay	Clean / Period Alarm / Error Alarm

Relay Delay	0 to 120 seconds
Fieldbus Connection	RS-485 Modbus
Baud Rate	9600 / 19200 / 38400
Protection Class	IP65
Display	LCD dot matrix
Language Selection	English Others upon request
Electrical Connection	90 to 260 VAC or 24 VDC Power consumption <5W
Data Logging Capacity	500,000
USB Function (FCLG6000 only)	Data extraction Software update
Dimensions	**FCLG6000** 144(H) x 144(W) x 105(D) mm
Panel Cutout	**FCLG6000** 138 x 138 mm
Weight	**FCLG6000** 0.85 kg
Installation	**Panel / Wall / Pipe mount**

Dimensions

6000 Series



Design outlook subjected to change without prior notice.

Dimensions of FCLG6000

Specifications (Low Range Free Chlorine Sensor)

Measuring System	Amperometric Potentiostatic 3-Electrode System
Measuring Range	0.005 – 2.000 ppm
Electronic	Digital Modbus RTU
Slope Drift	Approx. <3% per month
Operating Temperature	0 – 45°C
Temperature Compensation	Automatically by an integrated temperature sensor
Operating Pressure	0.5 bar in the flow cell
Flow Rate	Approx. 15 – 30 L/h in flow cell
pH Range	pH 4 – 12, highly reduced dependence on pH value
Run-in Time	First start-up approx. 2 hours
Response Time	T90 approx. 2 minutes
Slope Calibration	DPD-1 Method
Interferences	Chlorine Dioxide (ClO_2) Ozone (O_3) Peracetic Acid
Power Supply	9 – 30 VDC
Dimension	Diameter : 25mm Length : 205mm
Material	Microporous Hydrophilic Membrane PVC-U PEEK Stainless Steel 1.4571

Specifications (Middle Range Free Chlorine Sensor)

Measuring System	Amperometric Potentiostatic 3-Electrode System
Measuring Range	0.05 – 20.00 ppm
Electronic	Digital Modbus RTU
Slope Drift	Approx. <3% per month
Operating Temperature	0 – 45°C
Temperature Compensation	Automatically by an integrated temperature sensor
Operating Pressure	0.5 bar in the flow cell
Flow Rate	Approx. 15 – 30 L/h in flow cell
pH Range	pH 4 – 12, highly reduced dependence on pH value
Run-in Time	First start-up approx. 2 hours
Response Time	T90 approx. 2 minutes
Slope Calibration	DPD-1 Method
Interferences	Chlorine Dioxide (ClO_2) Ozone (O_3) Peracetic Acid
Power Supply	9 – 30 VDC
Dimension	Diameter : 25mm Length : 205mm
Material	Microporous Hydrophilic Membrane PVC-U PEEK Stainless Steel 1.4571

Specifications (High Range Free Chlorine Sensor)

Measuring System	Amperometric Potentiostatic 2-Electrode System
Measuring Range	0 – 2000 ppm
Electronic	Digital Modbus RTU
Operating Temperature	0 – 45°C
Temperature Compensation	Automatically by an integrated temperature sensor
Operating Pressure	1.0 bar
Flow Rate	Approx. 15 – 30 L/h in flow cell
pH Range	pH 5 – 8
Run-in Time	First start-up approx. 11 hours
Response Time	T90 approx. 8 minutes
Slope Calibration	DPD-1 Method (up to 10 ppm)
Interferences	Chlorine Dioxide (ClO_2) Ozone (O_3) Peracetic Acid
Power Supply	9 – 30 VDC
Dimension	Diameter : 25mm Length : 205mm
Material	Semipermeable Membrane PVC-U PEEK

Dimensions

Diameter = 25mm
Length = 205mm

Design outlook subjected to change without prior notice.

Dimensions of FC1N sensor

Order Code

FCLG6000 Digital Free Chlorine Analyzer

Part No.	Description
FCLG6000	Digital Free Chlorine IP65 Panel / Wall / Pipe mounted base analyzer fitted with 2 x 4-20mA, 2 x relay outputs, 1 x multifunctional relay, RS-485 Modbus, and 1 x USB slot for data extraction and software update. Power supply: 90~260 VAC
FCLG6000-24VDC	Digital Free Chlorine IP65 Panel / Wall / Pipe mounted base analyzer fitted with 2 x 4-20mA, 2 x relay outputs, 1 x multifunctional relay, RS-485 Modbus, and 1 x USB slot for data extraction and software update. Power supply: 24 VDC

Free Chlorine Sensor

Part No.	Description
FC1N-2	Digital Free Chlorine - Amperometric sensor with integrated temperature sensor and 2-meter detachable cable. Membrane, amperometric potentiostatic 3-electrode system with built-in electronic & highly reduced dependence on pH-value. Measuring range: 0.005 – 2.000 ppm
FC1N	Digital Free Chlorine - Amperometric sensor with integrated temperature sensor and 2-meter detachable cable. Membrane, amperometric potentiostatic 3-electrode system with built-in electronic & highly reduced dependence on pH-value. Measuring range: 0.05 – 20.00 ppm
FC1N-2000	Digital Free Chlorine - Amperometric sensor with integrated temperature sensor and 2-meter detachable cable. Membrane, amperometric potentiostatic 2-electrode system. Measuring range: 0 – 2000 ppm

Mounting Kit

Part No.	Description
FL-006	Flow Cell for 25mm amperometric sensor with flow indicator and sample valve.

Spare Parts

Part No.	Description
FC1N-HEAD	Digital Free Chlorine FC1N-2 & FC1N membrane cap.
FC1N-ET	Digital Free Chlorine FC1N-2 & FC1N electrolyte 100ml.
FC1N-2000-HEAD	Digital Free Chlorine FC1N-2000 membrane cap.
FC1N-2000-ET	Digital Free Chlorine FC1N-2000 electrolyte 100ml.