Type 2630 Amperometric Free Chlorine Electrode

Product Description

The type 2630 Amperometric Chlorine electrode is designed to measure free chlorine in fresh water treatment applications. The electrode is available with a measurement range of 0.02 to 2 ppm, 0.05 to 5 ppm or 0.1 to 20 ppm. This electrode requires the 2650 Amperometric Electronics to output a digital (S³L) signal to the 9950-3/-4 Chlorine Controller.

Utilizing smart-sensor technology, this electrode has a unique embedded memory chip and can communicate a wide variety of information to the 9950-3/-4 Chlorine Controller. The 9950-3/-4 can display the electrodes stored information which includes the serial number, electrode type, service time in hours, chlorine range, high and low temperatures, and the maximum and minimum pH detected over time.

The patented DryLoc® connector with its Gold plated contacts and O-ring seal ensure a waterproof and reliable interconnect to the 2650 electronics and allows quick assembly during system start up, while providing a easy way to service or replace the Amperometric electrode.

NOTE: This electrode is required to be in chlorined water at ALL times.

Features

- Embedded memory chip accessible via the 9950-3/-4 Chlorine Controller
- Quick assembly with GF 's patented DryLoc® connector
- Integrated temperature element for automatic temperature compensation
- Separate drive electronics (2650 Electronics), for easy servicing and electrode replacement

Applications

Residual Chlorine Monitoring:

- Water Distribution
- Ground Water
- Surface Water
- HVAC Applications (cooling water)
- Food and Beverage
- Swimming Pools
- Water Parks

*NOTE: The 9950-3/-4 Chlorine Controller is not compatible with the 3-9950-1 / -2 /-10 /-11 controller

U.S. Patent No.: 6,666,701

Technical Details

General			
Polarization Source	2650 Amperometric Electronics		
Compatibility	3-4630.392 (159 001 690)		
	3-3610-1 (159 001 683)		
	3-3610-2 (159 001 684)		
Mounting	DryLoc connection		
Materials	CPVC		
Free Chlorine			
Membrane Material	PTFE		
O-ring Material	FKM		
Working Electrode	Gold		
Counter Reference Electrode	Silver halide		

Wetted Material			
	PVC, PTFE, FKM, Nylon, Silicone		

Performance			
Electrode			
Repeatability	±0.08 ppm (mg/l) or 3% of selected range whichever is less		
Slope	15 to 60 nA/ppm (mg/l) @ 25 °C		
Response Time, T90	< 2 minutes		
System (including electronics and instrument)			
Accuracy	< ±3% of electrode signal after calibration		
Resolution	±0.5% of electrode range		
Sensor Conditioning			
New, first start-up	4 hours maximum before calibration		
Subsequent start-ups	2 hours maximum		
Temperature Element	Pt1000		
Operational Ranges and Limits			
Free Chlorine Range	0.02 to 2 ppm (mg/l)	0.05 to 5 ppm (mg/l)	0.1 to 20 ppm (mg/l)
Free Chlorine pH Operating	5.5 to 8.2 pH		
Operational Temperature	5 °C to 45 °C	41 °F to 113 °F	

Maximum Operating Pressure			
Membrane	0.48 bar @ 25 °C (7 psi @ 77 °F)		
Flow Velocity Across Membrane Surface			
Minimum	15 cm/s (0.49 ft/s)		
Maximum	30 cm/s (0.98 ft/s)		
Interferences	ClO_2, ozone, bromine		
Chemical Compatibility	< 50% ethanol/water, < 50% glycerol/water		

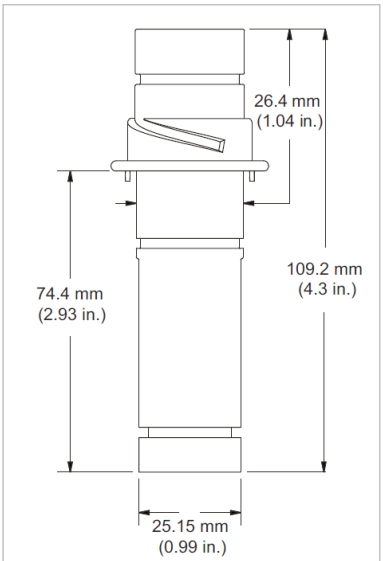
Environmental			
System Temperature	-10 °C to 60 °C	-4 °F to 140 °F	
Storage Temperature	-10 °C to 60 °C	-4 °F to 140 °F	
Relative Humidity	0 to 95% indoor/outdoor non-condensing to rated ambient		

Shipping Weight			
	0.14 kg	0.30 lb	

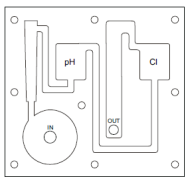
Standards and Approvals
UKCA, CE, FCC
RoHS compliant, China RoHS
Manufactured under ISO 9001 for Quality

Dimensions

3-2630-X



System Overview

Panel Mount		
GF Instrument 9950-3/-4 Chlorine Controller		
GF Amperometric Electronics 2650-7		
Type 2630-X Chlorine Electrode		
GF Flow Cell GF Fitting 3610		All sold separately

Application Tips

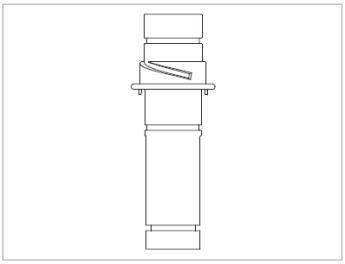
Amperometric sensors require the water to be chlorinated at ALL times.
The sensors should not be used in water containing surfactants, oils, organic chlorine or stabilizers such as cyanuric acid.

Ordering Information

Ordering Notes

The sensor must have a stable and constant flow of water past its membrane for accurate free chlorine measurement. Typical flow rate should be 30.24 - 45.36 lph (8 - 12 gph).

Mfr. Part	Code	Description
3-2630-1	159 001 746	Free Chlorine electrode, 0.02 to 2 ppm (mg/l)
3-2630-2	159 001 662	Free Chlorine electrode, 0.05 to 5 ppm (mg/l)
3-2630-3	159 001 747	Free Chlorine electrode, 0.1 to 20 ppm (mg/l)



Accessories

Mfr. Part	Code	Description
3-2630.398	159 310 166	Free Chlorine Sensor Maintenance Kit - (2) electrolyte and (2) PTFE membranes, (2) silicone bands, polishing papers
3-2630.391	159 001 674	Free Chlorine Electrolyte Kit, 30 ml (2) bottles with syringe and needle
3-2630.394	159 310 164	Free Chlorine and Chlorine Dioxide replacement PTFE membrane (1)
3-2600.510	159 500 422	Silicone Band, Chlorine Sensor
3-3610-1	159 001 683	Flow Cell, Clear PVC 1/2" Tee
3-3610-2	159 001 684	Flow Cell, Clear PVC 1/2" Tee, Barb Conn

3-2630.099 Rev S
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