



# LUCENT WATER

Made in the USA

2024







# PROBLEM WITH CHLORINE SENSORS

High cost of ownership and reliability issues are generating a rapidly expanding market for a better sensor system. Incumbent, outdated chlorine sensor technology is more costly and less reliable than advertised.



Use of tubing as small 1mm (ID) which has a tendency to clog (Via dried reagents or biofouling)



Filtration of the sample (Increase turbidity causes inaccuracies)



Filter cleaning



Consumption or replacement of expensive and hazardous chemical reagents every 30 days



Cleaning of the colorimeter with acid every 60 days



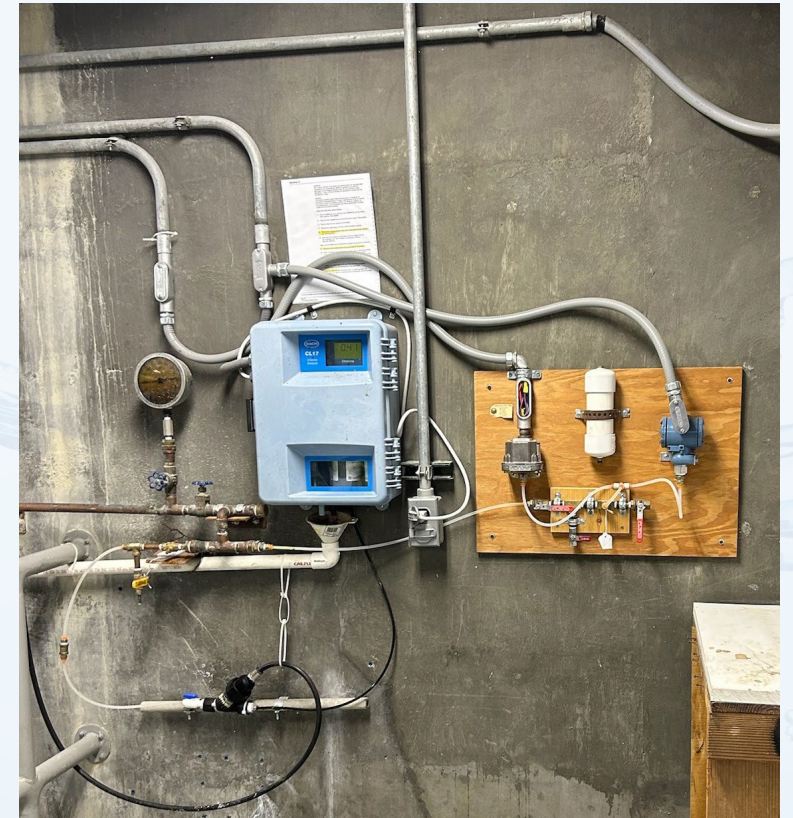
Disposal of a waste stream



Higher installation costs due to plumbing, pumps, and drains

Wastes 65,000 gallons of water annually per sensor system

Costs up to \$200/month in chemical consumption



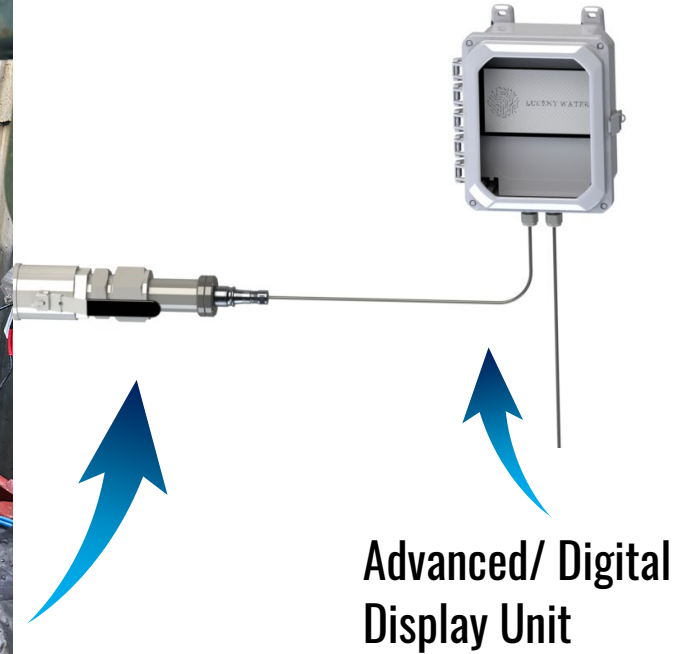




# LUCENT'S SMART OXIDANT SENSOR SOLUTION



**Direct In-Line Insertion**



**Advanced/ Digital Display Unit**

## The Lucent Smart Oxidant Sensor System

An accurate and reliable Total/Free Chlorine sensor system designed to automate and simplify operation of water treatment systems.

- ✓ Simple, Direct In-line Installation
- ✓ Low Maintenance, Self Cleaning
- ✓ No Chemicals
- ✓ No Fragile Membranes
- ✓ Rugged Design
- ✓ No Waste Stream
- ✓ Insensitive to Flow & Pressure
- ✓ Long-Term, Easy Calibration



Designed along side the US Navy, our sensor system is a revolutionary breakthrough in automated water treatment that is self-cleaning and requires little to no maintenance. Lucent's direct-insertion Smart Oxidant Sensor System does not require expensive reagents, frequent recalibration, or fragile membranes.



# THE TECHNOLOGY



### Multi-Parameter

Measures Choice of Oxidant such as Total Chlorine, Free Chlorine, Bromine, Monochloramines, Chlorine Dioxide or Ozone. While also, measuring Conductivity, Temp, with optional pH and ORP all in a single probe.



### Low Maintenance

Self-cleaning technology; no costly periodic maintenance.



### Superb Accuracy

Capable of detecting ALL oxidant species ranging from 0 ppm to 15 ppm across various salinities.



### Solid State Electrodes

Allows for Direct-Line Insertion Does not require waste stream disposal. Flow Insensitive and Pressure Insensitive



### 7" Digital Touchscreen Display

Records data for over 2 years showing historical trends, Wi-Fi capability for remote operation via Mobile or PC and POE (power over ethernet) to enable operation up to 200" away.

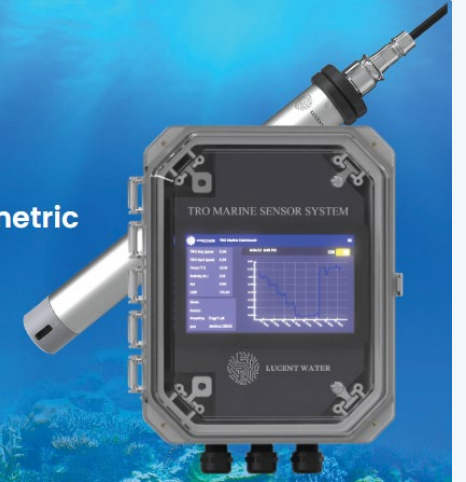


### Remote data and operation

Real-time measurements transmitted via 4-20mA or Modbus TCP/IP and displayed locally or remotely.



## The Next Generation of Amperometric TRO Monitoring



Range	0 to 15 ppm (mg/L)
Resolution	0.01 ppm
Repeatability	± 0.05 ppm
Operating Temperature	0 to 50 °C (32 to 122 °F)
Operational Life	2 years
Pipe Penetration	1.25" Diameter x 1.0 to 1.5" Insertion
Temperature Resolution	0.1°C/°F
Temperature Accuracy	± 0.5°C (± 1°F)
Maximum Pressure	150 psi
Input Power	12 to 35 Vdc, 8 Wpp
Local Display	7" Touchscreen LCD
Maximum Operating Temperature	0 to 50 °C (32 to 122 °F)
Isolated Output	4-20mA, 0-24Vp
Units of Measure	TRO - ppm; Temperature - °C, °F
Operating Humidity	0 to 95% non-condensing
Enclosure Rating	NEMA 4X, 1P65
Optional Communication	Modbus / Ethernet TCP/IP / W





# EXISTING CHOICES ARE LIMITED



## DPD LEGACY TRO SENSORS

- ✗ High CAPEX
- ✗ Flow & Pressure Sensitive
- ✗ Costly Hazardous Chemicals (\$2,400/yr)
- ✗ High OPEX - Waste Stream Disposal (\$1,600-\$6,000)
- ✗ Complex Operation
- ✗ Frequent Maintenance
- ✗ Manual Calibration



## LUCENT SENSORS

- ✓ Cost Effective Direct In-Line Installation
- ✓ Insensitive to Flow or Pressure Changes
- ✓ Amperometric Solid State Technology
- ✓ No Hazardous Chemicals, No Waste Stream
- ✓ Multi-Parameter
- ✓ Simple, Low Maintenance Operation
- ✓ Automatic Calibration



# LUCENT IS THE ONLY CHOICE FOR MONITORING & COMPLIANCE



LUCENT WATER

# EXISTING CHOICES ARE LIMITED



## DPD LEGACY TRO SENSORS

- ✗ Requires HAZMAT Storage
- ✗ No Data History
- ✗ Wastes 65,000 gallons of water annually
- ✗ No Wi-Fi or IoT Capabilities
- ✗ Obsolete Technology
- ✗ Not User Friendly
- ✗ PPE Required for Handling Chemicals

**scientific**  
A WATTS Brand



LUCENT WATER

## LUCENT SENSORS

- ✓ Self-cleaning, electrochemical and mechanical
- ✓ Patented Micro-Wire electrode measures low-ranges accurately
- ✓ Advanced Touch Screen Display for lab-grade calibration, diagnostics, and historical data up to 2 years proving compliance.
- ✓ Capable of measuring a variety of oxidants such as TRO, chlorine dioxide, ozone, etc. .
- ✓ Multi-Parameter with advanced AI algorithms helping customer analyze health of water treatment systems
- ✓ WI-FI and Ethernet Ready for long-range IOT



# LUCENT IS THE ONLY CHOICE FOR MONITORING & COMPLIANCE





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