



## **HYDRACLAM® AND CHLOROCLAM® WATER QUALITY MONITORS**

### **WALLACE & TIERNAN® SMART NETWORK SOLUTIONS**

The Hydraclam® and Chloroclam® Water Quality Monitors are battery powered purpose-built systems for monitoring water quality parameters within the potable water distribution system. The system is designed to monitor turbidity, conductivity, pressure and chlorine. Remote communication is via a secure website. It can be used for targeted water monitoring within identified problem areas or more ideally, located throughout the distribution network to provide a comprehensive view of water quality.

#### **Sensing**

The Water Quality Monitors utilise an optical turbidity sensor to ensure accurate and reliable results. For turbidity (particulate) analysis water is purged before each measurement to give a fresh sample for continued accurate and representative readings. Chlorine sensing utilises industry standard, high accuracy membrane sensing which does not require the addition of any reagents and is housed in an innovative cartridge system, including the replacement of membrane and electrolyte solution.

#### **Communication**

Remote communications are integrated within the Water Quality Monitors. Automatic data upload, via the GPRS network, is carried out multiple times per day, potentially allowing real-time data acquisition and analysis. The user can access the data via a web based system to view and retrieve information as and when required. This information is available for download in CSV format. Alarms can be set, via the web based system, to inform the user of events.

#### **Installation**

The Clam units are designed to be installed at any strategic point where connection to the potable water main is possible and the pressure is between 1 and 10 bar. The logger should be mounted in a position to allow optimal chance of GPRS network connection. Installation points include hydrants, flow meter chambers, boundary boxes, or stand alone fully secure enclosures.

#### **Benefits**

- Remote monitoring of chlorine, temperature, turbidity, conductivity and pressure
- Quick and easy installation
- Wireless communications and alarms
- Data accessed via a secure Web Portal
- Identification of network problems; leakage or low pressure
- Provision of targeted network planning data for strategic decision support
- Operational data for rezoning of distribution networks and valve adjustment
- Enables monitoring of water quality problems in specific zones

## TECHNICAL DATA

### MEASUREMENTS AND SYSTEM CONFIGURATIONS

MEASUREMENT	METHOD	RANGE	ACCURACY	RESOLUTION	SYSTEM CONFIGURATIONS		
Turbidity	IR, nephelometric	0.1 - 10 NTU	± 5% of reading ± 0.1 NTU	0.05 NTU	✓	✓	
Pressure	Silicon micro machined element	0 - 10 bar (0 - 140 psi)	± 1.25% of full scale	0.01 bar	✓	✓	
Conductivity	4 pole	20 - 3500 µS	± 2% of range	1 µS	✓	✓	
Chlorine, free or total	Potentiostatic membrane sensor	free: 0.05 - 3.0 mg/l total: 0.1 - 3.0 mg/l	± 5% of full scale or ± 0.05 mg/l	0.01 mg/l	✓		✓
Temperature	PT100	0 - 45 °C	+/- 1°C	0.1 °C	✓	✓	✓

### SAMPLING FREQUENCY

### TYPICAL BATTERY LIFE

5 minutes	8 weeks*
15 minutes	22 weeks

\* BASED ON FOUR DAILY UPLOADS.

### ENVIRONMENTAL

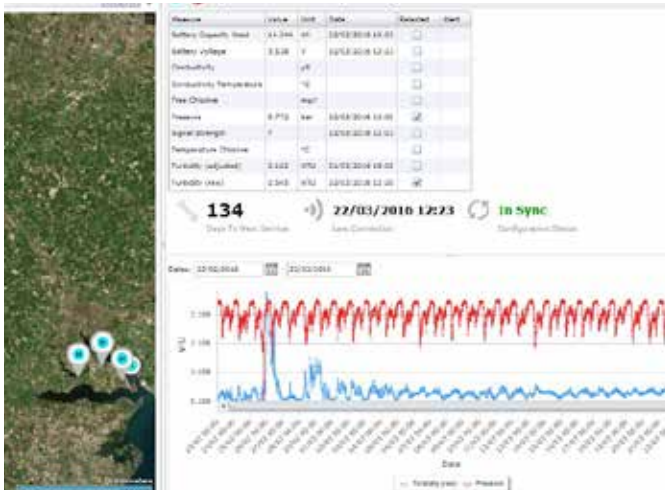
Enclosure rating	IP 68 (1 m for 48 hours)
Water temperature	0 to + 45 °C, depending on sensing option taken*
Storage temperature	-5 to + 65°C

\* 40°C FOR TURBIDITY/CONDUCTIVITY

### SERVICE INTERVAL

6 to 12 month

- Recommended calibration and service intervals is 6 months
- The actual interval is dependent on sampling intervals and operating conditions



Auf der Weide 10, 89312 Günzburg, Germany

+49 (8221) 904-0 [www.evoqua.com](http://www.evoqua.com)

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#### Wallace & Tiernan® Products worldwide

**Australia**  
+61 3 8720 6597  
info.au@evoqua.com

**Canada**  
+1 905 944 2800  
canadainfo@evoqua.com

**China**  
+86 10 57076305  
sales.cn@evoqua.com

**France**  
+33 1 41 15 92 20  
wtfra@evoqua.com

**Germany**  
+49 8221 9040  
wtger@evoqua.com

**Singapore**  
+65 6830 7165  
sales.sg@evoqua.com

**UK**  
+44 1732 771777  
info.uk@evoqua.com

**USA**  
+1 856 507 9000  
wt.us@evoqua.com