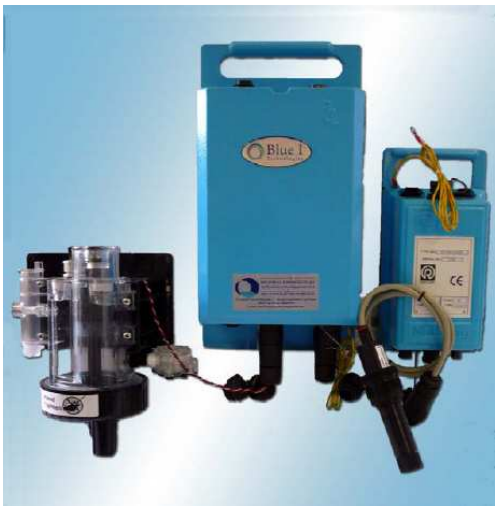
Athenea

Autonomous Chlorine Analyzer

FLOW MEASUREMENT DATA LOGGING LEAK DETECTION PRESSURE CONTROL ENVIRONMENTAL MONITORING



KEY BENEFITS

- Enables continuous chlorine monitoring at specific points in the distribution network without the requirement for electrical power.
- Integrated pH and temperature monitoring gives greater accuracy for amperometric technology.
- Minimal calibration required with long term reliability.
- Easy to use graphic calibration interface via PC.
- Low power consumption electronics optimizing battery life.
- GSM/SMS communication.
- Transmits and generates data and alarms.
- Open protocol that can be integrated into any Scada system.
- IP68 rating.

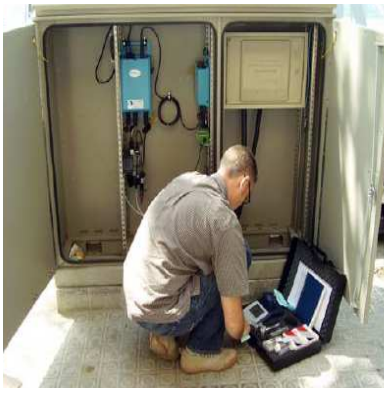
Athenea is an autonomous chlorine analyzer for the Water Distribution network. It provides regular continuous monitoring and sends automatically via GSM telemetry, thereby reducing the need for time consuming and costly on site “spot” testing. The amperometric chlorine analyzer allows continuous chlorine monitoring at specific points in the distribution network without the need for external electrical power, and the system uses low power consumption electronics in order to optimize battery life.

The unit makes use of sophisticated pH and temperature monitoring devices integrated within the Athenea to attain greater accuracy levels than other systems employing amperometic technology alone. It has also been configured so that it requires minimal calibration with long term reliability. Calibration of the unit can be made via a PC with an easy to use graphical interface.

Athenea is connected to a MultiLog Datalogger to provide GSM/SMS communication capabilities. This enables the user to receive early warning of dosage problems between scheduled spot tests, thereby improving response times.

Additional telemetry options are available upon request.

Athenea is IP68 submersible and comes equipped with military connectors, making it suitable for a cabinet installation.



AUTOMATIC · SMS/GSM · EASY TO INSTALL · RUGGED DESIGN

Fluid Conservation Systems

For more information call (513) 831-9335
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Athenea

Autonomous Chlorine Analyzer

Physical	Dimensions of analyzer 250 x 175 x 90 mm Dimensions of datalogger 190 x 115 x 75mm
	Cable inputs – IP68 military connectors
	Construction – Aluminium case IP 68
	Operating Temperature - -10 º C to 55 º C
	Weight of analyzer/datalogger 3kg approx/ 2kg approx
Power	Power (analyzer) 12VDC by external battery minimum 6 months Power (datalogger) Replaceable lithium batteries – 4 to 5 years
Comms	Analyser – PC Serial port RS485
	Datalogger – Analyzer – PC RS 232 , 19200 baud rate
pH Measurement	Range – 0 to 14
	Electrode – with ceramic diaphragm and gel filling
	Impedance input – 0,5 x 10 Resolution – 0,01 Repeatability – 0.1%
	Zero drift – 0.03%/ degrees C Span drift – 0.03%/degree C
Chlorine Measurement	Measurement Principles – Amperometric selective membrane
	Electrode – Passive sensor with gold cathode and silver silver/silver chloride anode
	PH level – 4 to 8
Measurement	Measurement range 0 – 5 . 0 – 10 , 0 – 20 ppm Resolution – 0.01 ppm
	Repeatability - +/- 0.1% of the span
	Operation time of electrode – 12 months Minimum flow velocity – 15cm/s
	Increasing response – 90% <2min , 99%<5min Decreasing response – 90%<0.5min, 99%>3 min
	Body material = PVC Membrane material – PTFE Membrane plug material – PDT(GF 30) PVDF
Temperature Range	Sensor – PT 100
	Measurement range – 0 – 50 º C (32 – 158 ºF)
	Resolution – 0.01 º c Repeatability – 0,03%
Water Flow	Sensor – Flow rotational switch
	Output signal – tension free contact
	Operating pressure – 0,3 to 1 bar Minimum flow – 30 l/h Memory – Cyclical or block
Logging Features	Capacity – 49,152 readings Logging modes – Count or Event
	Sampling – 1 second to 1 hour
	Alarms – By SMS
Software	Radwin (datalogger) - Programming , data analysis and download of data
	Low Energy (analyzer) Online view and calibration

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