



# Athenea

## Chlorine analyser

Athenea is an autonomous chlorine analyser 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 device is developed for monitoring water quality in distribution networks of drinking water. It has been designed to work in confined spaces and battery operated.



### Key Features and Benefits

- **Telemetry data:** Consists of a logger with a GSM/GPRS integrated modem and a set of internal batteries
- **Electrode holder and sensors:** Free chlorine sensor, pH electrode, temperature, conductivity (optional) sensors and rotational flow detector placed in an electrode holder
- **Supply module:** Lithium batteries inside plastic capsules
- **Easy to use software:** Lithium batteries inside plastic capsules
- **Communication cable:** Cable with military connector at one end and a RS485 converter to a RS232 at the other end
- **Robust design:** The Athenea is durable and come in a robust carry case.
- **Long term monitoring:** Approximate battery life of 4 - 5 years (data logging section)

### Applications

Athenea is easy-to-use and solid device with IP68 protection whose assembly can be carried out both inside a manhole and in an exterior cabinet.

The wall based analyser works with external non rechargeable lithium batteries with a maximum voltage of 12 VDC.

The portable unit has rechargeable sealed lead batteries inside. These batteries can be recharged with the supplied adaptor. The data logging section has internal lithium batteries and have a life of approximately 4-5 years.

MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

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### Features

Physical characteristics	Approximate dimensions (mm) 460 x 360 x 200mm Weight 9 Kg Ingress protection- IP68 Working temperature range- 0 °C to 55 °C. Military connectors MIL-C-26482
Power	Lithium battery with 4 years life based on 3 GPRS communications per day for the data logger. 8 alkaline batteries type D 1,5Vdc for the quality electronics with 1 year battery life. Working temperature range of batteries: -20 to 70°C
Local communications	Communication software for data logger and view of data. Athenea LC - PC connection using serial RS232 (19200bps).
Data Logger inputs	Flow detection input and latch solenoid. Military connector for serial communication with PC. Male FME aerial connector. Connection cable between central unit and data logger.
Central unit	Polycarbonate and stainless steel housing. Dimensions 124mm x 124mm x 139mm Weight 450g Protection level NEMA 4 (>IP66) LED display with backlight for dark environments. Information: main reading, temperature, sensor loop current, sensor slope and offset, model and number. 4 buttons polycarbonate membrane keyboard UV protected. Working temperature range from -20°C to 60°C
pH sensor (optional)	Range 0-14 pH units Diaphragm ceramic electrode with gel padding Input impedance: 0.5 x 10 <sup>12</sup> ohms Resolution: 0.01 Repeatability: 0.1% of the reading Zero drift: 0.03%/°C Span drift: 0.03%/°C
Temperature	Sensor: PT100RTD 3 wires built in chlorine sensor Range: -5 a 55°C Resolution: 0.01°C Repeatability 0.03%
Rotational flow	Output: free voltage reed switch Maximum pressure: 1bar Minimum flow: (30l/h)
Data recording	Capacity for 179000 readings. 16 bits coding for every reading. Programmable sample rate from 1 minute to 24 hours. Continuous data logging cyclic or memory block.
Latch solenoid	Allows pre-set water flow for a few minutes before recording. The target is the reduction of water discharged to the minimum.



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