

Remote Water Quality Monitoring made Hassle Free

The AquaStation independent monitoring station is a breakthrough in remote water quality monitoring. The AquaStation is able to independently collect data, keep its sensors clear of fouling, and calibrate its sensors remotely via its built in telemetry system.

“The AquaStation is set to revolutionise remote water quality monitoring by further increasing the duration of unmanned deployments thanks to its automated probe cleaning and, most importantly, its ability to be calibrated via the Internet automatically or by a user.”

Water quality monitoring in remote and isolated locations can be an expensive task. At its most basic form, an engineer is required to visit the site and manually monitor the water using a multiparameter water monitoring probe such as the Aquaread AP-5000. This is a costly approach due to the frequent site visits and constant traveling required.

A more advanced option is to install a self contained water monitoring station that pumps water into a flow cell across a multiparameter probe in order to take readings automatically. Data is then sent via mobile networks and can be viewed from your desk on a PC over the Internet. This approach does reduce the number of site visits required for taking measurements, but regular site visits are still required in order to clean and calibrate the water monitoring probes.

The AquaStation takes a large step in further reducing the number of site visits required by utilising a self cleaning probe and, more importantly, by allowing users to command individual sensor calibration from their desk via the built in telemetry system.

The AquaStation can be left monitoring whilst unattended for many months, without the need for regular cleaning and calibration. Regular automatic cleaning and calibration keeps the system recording accurately for longer than was previously possible.

Monitoring parameters such as ammonium or nitrate remotely was, until now, unfeasible because these sensors are liable to drift and require fortnightly calibrations. The ability of the AquaStation to hold calibration solution, pump it into the flow cell and calibrate the sensor without anyone on site means that using ISE electrodes in a remote monitoring station is now a reality.

Power is not an issue for the AquaStation thanks to the 12V, 115Ah battery that's installed in the unit; in addition, the battery is kept topped up using solar or wind power meaning you should never have to charge the battery.



An example remote monitoring site only accessible by helicopter

System features

- Fully automatic remote water quality analysis
- Self contained and self powered (solar / wind)
- Self-calibrating
- Self cleaning
- User configurable sampling times, cleaning intensity and calibration frequency
- Analysis results viewable 24/7 on line from any location
- Low maintenance
- Long, unattended deployment
- Various sample pump options to suit all applications
- Various telemetry options
- Configurable alarms with user-specified set points generate Email or SMS alerts
- Live data available on site with built-in Aquameter
- Measurement of up to 16 individual parameters simultaneously
- Secure, weatherproof, lockable enclosure

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Two Deployed AquaStations, featuring solar panels for long-term continuous use

The water monitoring is taken care of by the self cleaning AP-7000 Aquaprobe. The probe can measure up to 16 parameters at once - providing a staggering amount of information. The probe's basic sensor layout offers optical dissolved oxygen, pH, ORP, conductivity, resistivity, salinity, TDS, SSG, and temperature. The Aquaprobe then has 6 user configurable sensor ports that allow you to install any combination of our optical or ionic sensors, such as turbidity, chlorophyll, ammonium and nitrate to name a few.

Viewing the data is very straightforward. Data collected by the probe is sent via GPRS/3G to a secure server; it can then be accessed via Timeview online. This web-based application displays all of the data at a glance and allows you to drill down on each sensor's trace with increasing control and detail.

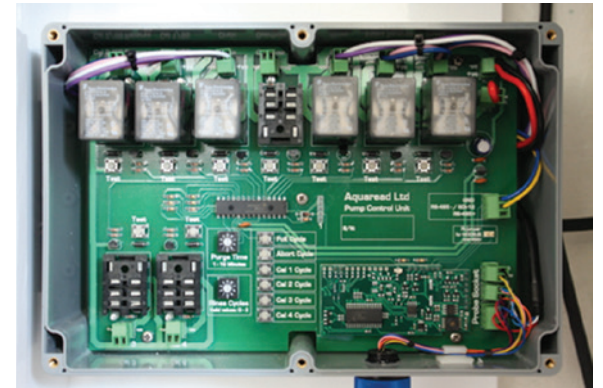


Timeview screen shows historic traces for each of the sensors installed on the AP-7000

This helpful application allows users to re-configure their logging intervals as they see fit as well as setting up alarm trigger points which can automatically increase logging rates and send out notifications as both email and sms. The AquaStation is set to revolutionise remote water quality monitoring by further increasing the duration of unmanned

deployments thanks to its automated probe cleaning and, most importantly, its ability to be calibrated via the Internet automatically or by a user.

Reducing site visits means reduced costs for any company looking to streamline their remote water monitoring régime. With a host of different pump and deployment options the AquaStation is suitable for many different applications and deployment locations.



Inside view of the cabinet showing AP-7000 probe secured within the flowcell, the pumping system, the controller box, battery and calibration solution. Above: detailed view of the sophisticated controller box that features 2 micro processors and direct pumping controls.

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Transform your Smart Devices into Portable pH, ORP, Conductivity and Temperature Meters



The SAM-1 Smart Aqua Meter from **Sensorex** (USA) harnesses the convenience of handheld smart devices to measure and record pH, ORP, conductivity and temperature values. Compatible with both Apple and Android smartphones and tablets, SAM-1 delivers accurate analytical measurements in the lab or field for use in environmental, education and industrial applications.

SAM-1 plugs into the headphone jack of a smartphone or tablet and connects to Sensorex smart analytical sensors for measurement. The SAM-1 App, available as a free download, instantly recognises the smart sensor type and calibration data. The interface makes taking measurements and managing data simple and error-free, eliminating handwritten logs and potential for transcription errors.

Time, date, and GPS location are automatically recorded with each reading and users may add location name and additional comments. Readings can be shared instantly via email or exported to a spreadsheet for analysis and record retention. SAM-1 is currently Apple iPad, iPhone and iPod compatible and will be available for Android devices in May 2014. Additional sensor types will be supported in the future with seamless software updates.

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New Series of Online Heavy Metal Analysers

DKK-TOA Corporation (Japan) has recently launched a new range of online heavy metal analysers, the HMA series. This new range of instruments has been specially developed for difficult industrial and waste water applications. There are five models in the series, providing measurements of Total Chrome, Hexavalent Chrome, Total Copper, Total Manganese and Total Nickel. The measurement method is based on the colorimetric method.

The HMA series has been specially developed to provide extremely high levels of accuracy. To achieve this, the measurement system features a specially designed high temperature digestion chamber. Conventional heavy metal analysers do not have this feature and typically use direct colorimetric methods. These conventional instruments are not capable of performing measurement of difficult heavy metal complexes in samples such as waste water. The high temperature digestion chamber of the HMA series with the addition of decomposing agents enables bonded metal components to be digested into the total metal content.

The HMA series also features low reagent consumption and reduced waste outflows. This helps to reduce both reagent costs and costs associated with waste solution handling and disposal.

The development of the HMA series has been based on previous, field proven instruments with more than 1,500 existing installations worldwide. Excellent reliability and performance are therefore assured.

For more information, please contact DKK-TOA Corporation.

For More Info, email: 31094pr@reply-direct.com



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