ABQINDUSTRIAL
PRECISION. RELIABILITY. QUALITY.

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AQUAREAD
water monitoring instruments

AP-7000

Self cleaning multiparameter water quality probe

The AP-7000 Aquaprobe is our largest multiparameter water quality probe. The AP-7000 allows you to add up to 6 additional sensors alongside the standard parameters found on all of our Aquaprobes. The probe is designed for long periods of unmanned monitoring, facilitated by the integral self cleaning system that cleans all sensors installed on the probe.

Build

All Aquaprobes are made with the same marine grade aluminium, finished in black with hard anodising for excellent corrosion and biofouling resistance. The use of metal, as opposed to plastic, gives our products their characteristic weight and high quality look and feel.

Sensors

The AP-7000 comes with all of the common water quality testing sensors pre fitted to the probe:

pH • ORP • Conductivity • TDS • SSG • Resistivity • Salinity • Dissolved Oxygen • Depth • Temperature

Probes come with 6 empty sockets

The AP-7000 comes with six empty Aux sockets pre-fitted with removable blanking plugs. These sockets allow you to customise your probe by adding in additional sensors. Each socket can house either an Ion Selective Sensor (ISE) or any of our optical sensors:

ISE Electrode Options:
Ammonium / Ammonia,
Chloride,
Nitrate,
Fluoride,
Calcium.

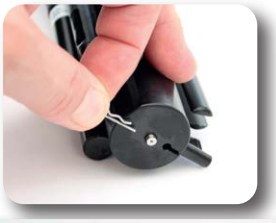
Optical Electrode Options:
Turbidity,
Chlorophyll,
Blue Green Algae,
Rhodamine,
Fluorescein,
Refined Oil,
CDOM / FDOM.

Self cleaning system

The AP-7000 uses a built in central cleaning system that will clean ALL installed sensors multiple times per cleaning cycle. Cleaning can also be triggered prior to calibration to remove any air bubbles from optical sensors.

Easy and cost effective to maintain

Over time the brushes can become fouled particularly during long deployments, so the wiper arm is designed to be easily removed for quick and simple brush replacement in the field:



Top: Remove the pin from the top of the cleaning arm
Middle: Slide out the cleaning arm
Bottom: Slide out the brushes and quickly replace.

The wiper brushes will keep all sensors clean during the deployment, this is paticularly important for the optical sensors that use lenses for measurement.

Cleaning control

The wiper cleaning frequency can be configured when used with an Aqualogger. When used with a telemetry system the wiper will run every 6 hours to reduce battery drain.

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Cables for the AP-7000

Various cable lengths are available; 10, 20 and 30m as standard. All cables 20m and over come on a winding reel making them much easier to operate, especially when profiling.

Logging options with the AP-7000

GPS Aquameter

The GPS Aquameter is a hand held device with a display for live data viewing and data recording. Data can be down-loaded into our AquaLink, software. GPS coordinates are recorded everytime you take a reading and can be plotted in Google Earth. It is designed to be very simple to use and to make your job easier in the field.

AquaLogger-7000

The AquaLogger is a rugged data logger designed for short – medium periods of unmanned monitoring. It features a large 15,000 data set memory, houses a pressure sensor for barometric pressure measurement and it is powered by Lithium batteries.

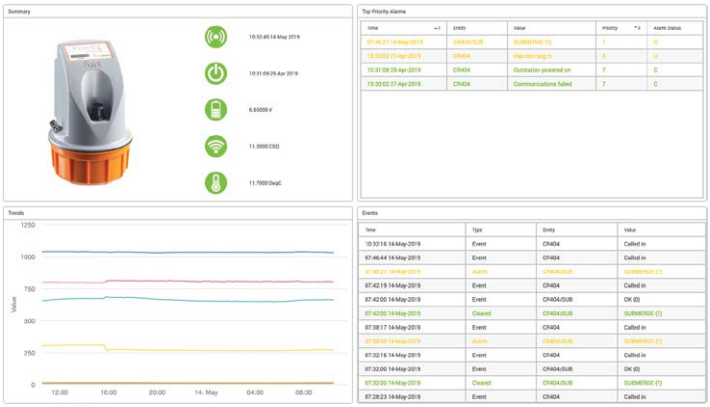
Aquaprobe PC KIT available

You can connect the AP-7000 direct to your PC Via the Aquaprobe PC-KIT's USB interface. Using the provided software you can take live readings, log data direct to your hard drive and calibrate probes with fully recorded calibration reports.

AP-7000 on Telemetry

The AP-7000 can be used with the Point Orange telemetry device to provide data viewable remotely online. The system is deployed with a solar panel and rechargeable battery for continuous power and low maintenance.

Data collected from the probe can be viewd online as trend lines or as a table, with full data export options for your own data manipulation. The online platform is called Palette and can be seen in the top right image.

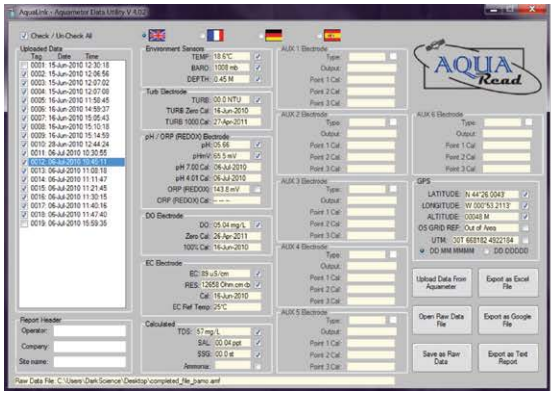


AquaLink

Our AquaLink software is free to download from our website's download section. Use this software to download recorded data from your Aquameter, for analysis, reporting and google map creation.

AquaLink Features

- Simple data download via button
- Tick and un-tick datasets to customise your outputs
- Output a text report for all highlighted data
- Output data as a CSV file that you can open in Excel
- Output data as a .KML file for use in Google Earth



Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. Max 100m*
Operating Temperature	-5˚C - +70˚C
Dimensions (L x Dia)	440mm x 77mm
Weight	1350g

*100m submersion for period of 12 hours, 30m submersion suitable for permanent deployment, depth measurement up to 100m.

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Aquaprobe Specifications

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Standard Parameters

Dissolved Oxygen	Range	0 – 500.0% / 0 – 50.00 mg/L
	Resolution	0.1% / 0.01mg/L
	Accuracy	0 - 200%: ± 1% of reading. 200% - 500%: ± 10%
Depth AP-2000/ AP-5000	Range	± 0 – 60.00 m (60m max displayed depth, max probe immersion 100m)
	Resolution	1cm
	Accuracy	± 0.5% FS
Depth AP-7000	Range	± 0 – 99.99 m
	Resolution	1cm
	Accuracy	± 0.2% FS
Conductivity (EC)	Range	0 – 200 mS/cm (0 - 200,000 µS/cm)
	Resolution	3 Auto-range scales: 0 – 9999 µS/cm, 10.00 – 99.99 mS/cm, 100.0 – 200.0mS/cm
	Accuracy	± 1% of reading
TDS*	Range	0 – 100,000 mg/L (ppm)
	Resolution	2 Auto-range scales: 0 – 9999mg/L, 10.00 – 100.00g/L
	Accuracy	± 1% of reading
Resistivity*	Range	5 Ω • cm – 1 MΩ • cm
	Resolution	2 Auto-range scales: 5 – 9999 Ω • cm, 10.0 – 1000.0 KΩ • cm
	Accuracy	± 1% of reading
Salinity*	Range	0 – 70 PSU / 0 – 70.00 ppt (g/Kg)
	Resolution	0.01 PSU / 0.01 ppt
	Accuracy	± 1% of reading
Seawater Specific Gravity*	Range	0 – 50 σt
	Resolution	0.1 σt
	Accuracy	± 1.0 σt
pH	Range	0 – 14 pH / ± 625mV
	Resolution	0.01 pH / ± 0.1mV
	Accuracy	± 0.1 pH / ± 5mV
ORP	Range	± 2000mV
	Resolution	0.1mV
	Accuracy	± 5mV
Temperature (non freezing)	Range	-5°C – +50°C (23°F – 122°F)
	Resolution	0.01°C / 0.1°F
	Accuracy	± 0.1 °C

* Readings calculated from EC and temperature electrode values

ISE

Ammonium	Range	0 – 9,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 8,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Ammonia†	Range	0 – 9,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 8,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Chloride	Range	0 – 20,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 19,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Fluoride	Range	0 – 1,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Nitrate	Range	0 – 30,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 29,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Calcium	Range	0 – 2,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 1,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)

† Ammonium electrode required. Readings calculated from ammonium, pH and temperature values.

Optical

Turbidity	Range	0 – 4000 NTU
	Resolution	2 Auto-range scales: 0.0 - 99.9 NTU, 100 - 4000 NTU
	Accuracy	± 5% of auto-ranged scale
Chlorophyll	Range	0 – 500.0 µg/L (ppb)
	Resolution	2 Auto-range scales: 0.00 - 99.99 µg/L, 100.0 - 500.0 µg/L
	Repeatability	± 5% of reading
Phycocyanin (freshwater BGA)	Range	0 – 300,000 cells/mL
	Resolution	1 cell/mL
	Repeatability	± 10% of reading
Phycerythrin (marine BGA)	Range	200,000 cells/mL
	Resolution	1 cell/mL
	Repeatability	± 10% of reading
Rhodamine WT Dye	Range	0 – 500 µg/L (ppb)
	Resolution	2 Auto-range scales: 0.00 - 99.99 µg/L, 100.0 - 500.0 µg/L
	Accuracy	± 5% of reading
Fluorescein Dye	Range	0 – 500 µg/L (ppb)
	Resolution	2 Auto-range scales: 0.00 - 99.99 µg/L, 100.0 - 500.0 µg/L
	Accuracy	± 5% of reading
Refined Oil	Range	0 – 10,000 µg/L (ppb) (Napthalene)
	Resolution	0.1 µg/L
	Repeatability	± 10% of reading
CDOM / FDOM	Range	0 – 20,000 µg/L (ppb) (Quinine Sulphate)
	Resolution	2 Auto-range scales: 0.0 – 9,999.9 µg/L, 10,000 – 20,000 µg/L
	Repeatability	± 10% of reading

The accuracy figures quoted throughout this document represent the equipment's capability at the calibration points at 25°C. These figures do not take into account errors introduced by variations in the accuracy of calibration solutions and errors beyond the control of the manufacturer that may be introduced by environmental conditions in the field. Accuracy in the field is also dependent upon full calibration and minimal time between calibration and use.