Aqua-Check™ Water Analyzer



Description

To ensure accuracy in dissolved oxygen and other analyte measurements, water must be analyzed "on-site" to acquire the true water quality characteristics of the sample being tested. The hand-held Aqua-Check™ Water Analyzer can go anywhere and will operate at depths up to 200 feet. It operates on an 8-hour* rechargeable battery, automobile cigarette lighter, or AC line voltage adapter.

The Aqua-Check Probe™ , a small multi-sensor probe, provides accurate on-site water measurements. You can now make reliable measurements of all important water parameters, quickly, conveniently, and simultaneously at the test site--even in deep wells.

Signal-conditioning electronics that are normally relegated to the meter housing are inside the probe body and as close as possible to the sensing elements. This close proximity allows their signals, including field effect measurements, to be sensed and transmitted over long cable lengths to the main electronics. The Aqua-Check microprocessor examines and compares all incoming signals from the sample, the ambient conditions, and the sensor field effects. It determines what corrections need to be made, applies them, then displays and/or stores the corrected results.

Principle of Operation: pH can be defined as the negative base-ten logarithm of the hydrogen ion concentration. This meter measures pH by determining the potential between an external electrode and an electrode inside a hydrogen ion permeable glass sensor. As hydrogen ions diffuse through the glass, the difference is measured and reported. Dissolved oxygen is determined by the measurement of oxygen ions that have passed through an oxygen-selective membrane. The sensor is a polarographic, two-sectioned cavity filled with oxygen electrode filling solution. Conductivity is measured as the reciprocal of resistance between two electrodes. Temperature measurement is performed by a thermistor by measuring a change in resistance with change in temperature.

* Up to 8-hours without RS232 and barometer option.

Advantages/Benefits

- **Simultaneous water measurements - pH, dissolved oxygen, conductivity, and temperature.**
- **Leak-resistant double o-ring sensors that are easily identified and field interchangeable.**
- **Readings can be displayed in all customary units, plus their variations.**
- **Readings are automatically compensated for the effects of temperature, barometric pressure, and sensor "field effects".**
- **Data logging, storage, and retrieval.**
- **Calibration and operation are as simple as placing the probe in a series of solutions and pushing a button.**
- **Probe fits easily down a 2" monitoring well but is tough enough for ocean monitoring at depths up to 200 feet.**
- **Splash-proof membrane keypad protects the Aqua-Check Water Analyzer from spills and the environment.**

Applications

- **Lake water**
- **Well water**
- **Seawater**
- **Drinking water**
- **Ground water**

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Aqua-Check™ Water Analyzer

Technical Data

General Specifications

Dimensions
- Aqua-Check Water Analyzer
  7.5" H x 4.15" W x 1.5" D
  (19 cm H x 10.5 cm W x 3.8 cm D)
- Aqua-Check Probe
  12" H x 1.5" OD
  (30.5 cm H x 3.8 cm OD)

Weight
- Meter
  1 lb
- Probe
  1-20 lbs (0.5-10 kg), depending on cable length

Performance Specifications

Temperature
- Operating: 1º - 50º C,
  non-condensing atmosphere
- Storage: 5º - 55º C, non-condensing atmosphere

Data Storage
- Up to 199 complete sets of readings including calibration constants and instrument setup features

Power Requirements
6 volt Battery Charger
- 110 (±10%) VAC 60 Hz (standard)
- 220 (±10%) VAC 50 Hz (optional)

Operational Depth
- Up to 200 feet

Options

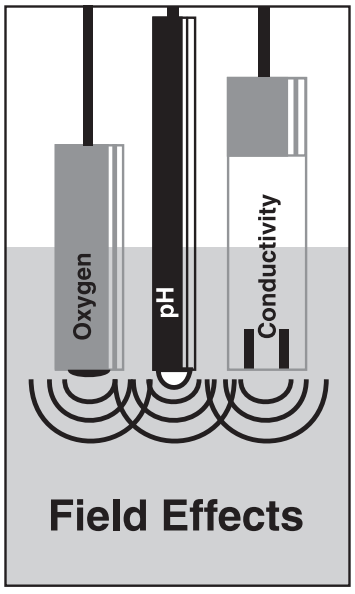
- Automobile cigarette lighter adapter



Aqua-Check Probe Sensors

Model 51500	pH	Conductivity/TDS	DO	Temperature
Range	0-14 pH	10-99 mS/5-49 ppm 100-999 mS/50-499 ppm 1-9.99 mS/500-4,990 ppm 10-99.9 mS/5,000-49,900 ppm (4 ranges)	0-20 ppm 0%-120% Sat.	1º - 50º C 34º -122º F
Resolution	0.01 pH	0.1% of range	0.1 ppm	0.1º
Accuracy	±0.02 pH	±3% FS	2%-5% FS[1]	1º C/1.8º F

[1] Accuracy is ±5% from 1º - 50º C (±2% within 5º C of calibration temperature)



When grouped closely to one another, sensors can produce "field effects" that alter the readings of other nearby sensors. The Aqua-Check Water Analyzer and its probe solve these field effect problems using patented technology.

The Aqua-Check™ Probe is Y2K compliant.
* The Aqua-Check™ Probe is protected under U.S. Patent

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* NOT TESTED ON ANIMALS