

Water Quality Meters

Horiba W-22XD & W-23XD Multiparameter Meters

Years of Horiba sensor technology development have reached their culmination in the form of a 47mm diameter sensor probe: a compact monitoring solution offering high pressure tolerance, long-term continuous measurement capability and highly accurate, simultaneous analysis.

FEATURES

- Six sensors on the W-22XD for 2" wells, and up to 13 sensors on the W-23XD
- High precision Dissolved Oxygen using Galvanic Cell technology
- Built-in memory function enables continuous data logging for one month
- Kits include hard case, sensors as specified, batteries, solution and manual
- SDI compatible versions are available

W-22XD & W-23XD MEASUREMENT PARAMETERS

	W-22XD	W-23XD
Maximum Probe Size	47mm	97mm
pH	✓	✓
Dissolved Oxygen	✓	✓
Conductivity	✓	✓
Salinity	✓	✓
Total Dissolved Solids (TDS)	✓	✓
Seawater Specific Gravity	✓	✓
Temperature	✓	✓
Turbidity	✓	✓
Depth	✓	✓
Oxidation Reduction Potential (ORP)	✓	✓
Data Logging	✓	✓
100m Depth Measurement		✓
Nitrate Ion*		Option
Calcium Ion*		Option
Chloride Ion*		Option
Fluoride Ion*		Option
Potassium Ion*		Option
Ammonia*		Option

* Optional sensor (replacement with other ion sensors is possible).



W-22XD
Meter & Probe
with Detachable
Cable

W-23XD Probe

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

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Water Quality Meters

Horiba W-22XD & W-23XD Multiparameter Meters

SPECIFICATIONS

Control Unit

Water Proof Construction IP67

Multi-Probe¹

Measurement Temperature 0°- 55°C
Storage Temperature -5°- 60°C
Measurement Depth² to 100m
Maximum Probe Size 95mm
Probe Length 430mm
Continuous Use³ 30 days
Data Logging 0
Manual Data Memory (2880 items) 0
Automatic Calibration 0

pH

- Two-point calibration
- Automatic temperature compensation

Measurement Principle Glass electrode method
Range pH 0-14
Resolution 0.01 pH
Repeatability ±0.05 pH
Accuracy ±0.1 pH

Dissolved Oxygen

- Salt correction (0 to 40 ppt/automatic)
- Automatic temperature compensation

Measurement Principle Diaphragm galvanic battery method
Range 0-19.99 mg/L
Resolution 0.01 mg/L
Repeatability ±0.1 mg/L
Accuracy ±0.2 mg/L

Conductivity

- Auto range
- Automatic temperature conversion (25°C)
- SI units

Measurement Principle 4 AC electrode method
Range 0-9.99 S/m
Resolution 0.1% F.S.
Repeatability ±1%
Accuracy ±3%

Salinity

Measurement Principle Conductivity conversion
Range 0-4‰
Resolution 0.01‰
Repeatability ±0.1‰
Accuracy ±0.3‰

Total Dissolved Solids (TDS)

- Conversion factor setting

Measurement Principle Conductivity conversion
Range 0-100 g/L
Resolution 0.1% F.S.
Repeatability ±2 g/L
Accuracy ±5 g/L

Seawater Specific Gravity

- Display σ_t , σ_0 , σ_{15}

Measurement Principle Conductivity conversion
Range 0-50 σ_t
Resolution 0.1 σ_t
Repeatability ±2 σ_t
Accuracy ±5 σ_t

Temperature

Measurement Principle Thermistor method
Range 0°-55°C
Resolution 0.01°C
Repeatability ±0.3°C
Accuracy ±1.0°C

Turbidity

- Unit selection

Measurement Principle Penetration and scattering method
Range 0-800 NTU
Resolution 0.1 NTU
Repeatability ±3%
Accuracy ±5%

Water Depth

Measurement Principle Pressure method
Range (NTU or mg/L) 0-100m
Resolution 0.1m
Repeatability ±3%
Accuracy ±5%

Oxidation Reduction Potential (ORP)

Measurement Principle Platinum electrode method
Range ±1999 mV
Resolution 1 mV
Repeatability ±5 mV
Accuracy ±15 mV

Ion (W-23XD Option Only)

- Auto Range

Measurement Principle Ion electrode method
Resolution 0.1% F.S.
Repeatability ±5%
Accuracy ±10%
Range:
 Nitric Acid Ion NO₃⁻: 0.62-62,000 mg/L (pH 3-7)
 Chloride Ion Cl⁻: 0.4-35,000 mg/L (pH 3-11)
 Calcium Ion Ca²⁺: 0.4-40,080 mg/L (pH 5-11)
 Fluoride Ion F⁻: 0.02-19,000 mg/L (pH 4-10:20 mg/L)
 Potassium Ion K⁺: 0.04-39,000 mg/L (pH 5-11:3.9 mg/L)
 Ammonia NH₃: 0.1-1,000 mg/L (pH 12 or more)

Simultaneously Measurable Parameters

W-22XD 10
W-23XD 13

Nitrate Ion:

ClO₄ = 0.031 I⁻ = 0.1 Br⁻ = 2 NO₂ = 3 Cl⁻ = 40
 F⁻ = 200 CH₃COO⁻ = 300 SO₄²⁻ = more than 1000

Chloride Ion:

S₂O₃²⁻, S²⁻, I⁻, Ag⁺, Hg²⁺ = not possible SCN⁻ = 0.3 MnO₄⁻ = 0.1
 Br⁻ = 0.03

Calcium Ion:

Fe³⁺ = 0.1 Fe²⁺, Zn²⁺ = 1 Sr²⁺ = 50 Ni²⁺, Cu²⁺ = 70 Co²⁺ = 350
 Mn²⁺ = 500 Mg²⁺ = 1,000 NAB⁺, K⁺, Ba²⁺, NH₄⁺ = more than 1000

Fluoride Ion:

OH⁻ = 10, all negative ions except for OH⁻ is permissible

Potassium Ion:

Rb⁺ = 0.4 Cs⁺ = 3 NH₄⁺ = 70 Li⁺, NAB⁺, Mg²⁺, Ca²⁺,
 Ba²⁺ = more than 1000

Ammonia:

-

Note: The accuracy rating value is obtained from measurements at an intermediate point of the standard solution after two-point calibration (at room temperature and pressure). The repeatability and accuracy rating percentages are based on the full scale (except for salinity).

- Organic solvents, strong acids, and strong alkaline solvents cannot be measured.
 - The maximum depth for ion measurements are 100m for nitric acid ion, chloride ion, fluoride ion, 15m for calcium ion, ammonia, and 3m for potassium ion.
 - Based on the data measured automatically at 15 minute intervals. The battery life taken into account. Periodical maintenance and calibration is necessary when a lot of shellfishes and seaweeds exist at the measurement point.
- Influence of Hindering Ions, the values show permissible coexistence limits.

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