YSI Environmental

YSI 6820 and 6920 Compact Sondes

Measure multiple parameters simultaneously

You can report sixteen parameters simultaneously with either sonde:

DO (% and mg/L)	ORP
Temperature	Depth or Level
Conductivity	Turbidity, Chlorophyll, or Rhodamine
Specific Conductance	Total Dissolved Solids
Salinity	Nitrate
Ammonia	Chloride
Ammonium-N	pH
Resistivity	

Data Analysis with Windows™

Data analysis from any YSI sonde is easy using EcoWatch™ for Windows™ for data quality review, statistical analysis, and preparation for easy importation to other data analysis packages.

Connect with Data Collection Platform

Either sonde can easily connect to the YSI 6200 DAS Data Acquisition System, or your own data collection platform, via SDI-12 for remote and real-time data acquisition applications.

Self-Cleaning and Stirring-Independent Probes

Both sondes feature YSI's self-cleaning turbidity, chlorophyll, or rhodamine sensor as well as YSI's Rapid Pulse™ stirring-independent oxygen sensor.

- **Self-cleaning turbidity, chlorophyll or rhodamine**
- **Stirring-independent Rapid Pulse™ dissolved oxygen system**
- **Field-replaceable sensors**
- **Easy connect to data collection platforms such as the YSI 6200 DAS**
- **Compatible with YSI 650 Multiparameter Display System**

In addition

The YSI 6920 is an economical logging system for long-term, *in situ* monitoring and profiling. It will log all parameters at programmable intervals, and store 150,000 readings. At 15-minute intervals, it will log data for about 30 days.

Pure Data for a Healthy Planet.™

Compact sondes for field sampling and data collection platforms.

Pure Data for a Healthy Planet.™

To order or for more information, contact YSI Environmental.

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ISO **14001**

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6820 & 6920 Sensor Specifications

Dissolved oxygen % saturation	Range Resolution Accuracy	0 to 500% 0.1% 0 to 200%: ±2% air sat; 200 to 500%: ±6% air sat
Dissolved oxygen mg/L	Range Resolution Accuracy	0 to 50 mg/L 0.01 mg/L 0 to 20 mg/L: ±0.2 mg/L; 20 to 50 mg/L: ±0.6 mg/L
Conductivity	Range Resolution Accuracy	0 to 100 mS/cm 0.001 to 0.1 mS/cm (range-dependent) ±0.5% of reading + 0.001 mS/cm
Temperature	Range Resolution Accuracy	-5 to +45°C 0.01°C ±0.15°C
pH, includes most low-ionic-strength measurements	Range Resolution Accuracy	0 to 14 units 0.01 unit ±0.2 unit
Non-vented depth, shallow	Range Resolution Accuracy	0 to 30 feet (0 to 9 m) 0.001 foot (0.001 m) ±0.06 foot (±0.02 m)
Non-vented depth, middle	Range Resolution Accuracy	0 to 200 feet (0 to 61 m) 0.001 foot (0.001 m) ±0.4 foot (±0.12 m)
Vented level	Range Resolution Accuracy	0 to 30 feet (0 to 9 m) 0.001 feet (0.0003 m) 0 to 10 feet (0 to 3 m): ±0.01 feet (0.003 m) 10 to 30 feet (3 to 9 m): ±0.06 feet (0.01 m)
ORP	Range Resolution Accuracy	-999 to +999 mV 0.1 mV ±20 mV
Salinity	Range Resolution Accuracy	0 to 70 ppt 0.01 ppt ±1% of reading or 0.1 ppt, whichever is greater
Nitrate–nitrogen	Range Resolution Accuracy	0 to 200 mg/L-N 0.001 to 1 mg/L-N (range-dependent) ±10% of reading or 2 mg/L, whichever is greater
Ammonium–nitrogen	Range Resolution Accuracy	0 to 200 mg/L-N 0.001 to 1 mg/L-N (range-dependent) ±10% of reading or 2 mg/L, whichever is greater
Ammonia	Range Resolution Accuracy	0 to 200 mg/L-N 0.001 to 1 mg/L-N (range-dependent) ±10% of reading or 2 mg/L, whichever is greater
Turbidity	Range Resolution Accuracy Depth	0 to 1,000 NTU 0.1 NTU ±5% of reading or 2 NTU, whichever is greater 61 m (200 feet)
Chlorophyll	Range Resolution Depth	0 to 400 µg/L; 0 to 100% FS 0.1 µg/L Chl; 0.1%FS 61 m (200 feet)
Rhodamine	Range Resolution Accuracy Depth	0 to 200 µg/L; 0 to 100% FS 0.1 µg/L; 0.1%FS ±1.0 µg/L; ±5% of reading 61 m (200 feet)
Chloride	Range Resolution Accuracy	0 to 1,000 mg/L 0.001 to 1 mg/L (range-dependent) ±15% of reading or 5 mg/L, whichever is greater

YSI 6820 sonde

Medium: Fresh, sea or polluted water
Temperature: -5 to +45°C
Computer interface: RS-232, SDI-12
Software: PC-compatible, Windows™ 95 or higher; 256K RAM minimum. Graphics card recommended.
Size: 2.86″ dia, 13.5″ long, 3.4 LBS (7.3 CM dia, 34.3 CM long, 2.3 KG)
External power supply: 12 VDC

YSI 6920 sonde

Medium: Fresh, sea or polluted water
Temperature: -5 to +45°C
Computer interface: RS-232, SDI-12
Logging memory: 384K flash ROM logs, 150,000 readings
Software: PC-compatible, Windows™ 95 or higher; 256K RAM minimum. Graphics card recommended.
Size: 2.85" OD x 18" long (7.24 x 45.7 cm)
Weight with batteries: 4 lbs (1.8 kg)
External power supply: 12 VDC

YSI Environmental

YSI 6820 and 6920 V2 Sondes

With 1 or 2 optical ports and new sensor options

The YSI 6820 V2-2 and 6920 V2-2 Sondes

Measure multiple parameters simultaneously including:

Temperature
Conductivity
Specific Conductance
Salinity
Resistivity
TDS
pH
ORP
Depth or Level
Nitrate, Ammonium or Chloride
Rapid Pulse™ DO (V2-1 only)

And 1 or 2 of the following optical sensors:

ROX™ Optical DO
Turbidity
Chlorophyll
Blue-Green Algae
(Phycocyanin or Phycoerythrin)
Rhodamine

- **Two bulkhead versions available:**
  - **The 6820/6920 V2-1 has one optical port, conductivity/ temperature port, Rapid Pulse™ DO port, pH/ORP port. and three ISE ports**
  - **The 6820/6920 V2-2 has two optical ports, conductivity/ temperature port, pH/ORP port. and one ISE port**
- **Self-cleaning optical sensors with improved wiping**
- **Field-replaceable sensors**
- **6920 V2 has a built-in battery compartment for long-term *in situ* monitoring**

Take Advantage of YSI's New Optical Sensors

In addition to turbidity, chlorophyll, and rhodamine, YSI now offers these optical sensors:

ROX Reliable Optical Dissolved Oxygen

The ROX sensor uses lifetime luminescence detection technology to offer the most reliable oxygen sensor with the lowest possible maintenance effort. Experience significantly less membrane maintenance while obtaining excellent accuracy, sensitivity, and range.

Blue-Green Algae (BGA)

YSI's fluorescence-based blue-green algae sensors will allow you to monitor blue-green algae populations where their presence is a concern. Whether providing an early warning to an algal bloom, tracking taste and odor-causing species in drinking water supplies, or conducting ecosystem research; YSI BGA sensors will provide sensitive and reliable *in situ* data.

6820 and 6920 Upgrades Available

YSI is committed to offering our customers reliable and cost-effective water monitoring solutions. To this end, we are offering V2-2 Upgrades for existing 6820/6920s. Upgrades will be available from YSI Authorized Service Centers and will include the new 6820/6920 V2-2 bulkhead, an Optical Dissolved Oxygen Sensor, and firmware/software upgrades. In addition, the sonde will be fully tested and calibrated by an experienced YSI service technician.

Pure Data for a Healthy Planet.®

Compact sondes for field sampling and data collection platforms

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*Sensors with listed with the ETV logo were submitted to the ETV program on the YSI 6600EDS. Information on the performance characteristics of YSI water quality sensors can be found at www.epa.gov/etv, or call YSI at 800.897.4151 for the ETV verification report. Use of the ETV name or logo does not imply approval or certification of this product nor does it make any explicit or implied warranties or guarantees as to product performance.

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YSI 6820 V2 & 6920 V2 Sensor Specifications

	Range	Resolution	Accuracy
ROX™ Optical Dissolved Oxygen• % Saturation	0 to 500%	0.1%	0 to 200%: ±1% of reading or 1% air saturation, whichever is greater; 200 to 500%: ±15% of reading, relative to calibration gases
ROX™ Optical Dissolved Oxygen• mg/L	0 to 50 mg/L	0.01 mg/L	0 to 20 mg/L: ± 0.1 mg/L or 1% of reading, whichever is greater; 20 to 50 mg/L: ±15% of reading, relative to calibration gases
Dissolved Oxygen•• % Saturation ETV 6562 Rapid Pulse™ Sensor*	0 to 500%	0.1%	0 to 200%: ±2% of reading or 2% air saturation, whichever is greater; 200 to 500%: ±6% of reading
Dissolved Oxygen•• mg/L ETV 6562 Rapid Pulse™ Sensor*	0 to 50 mg/L	0.01 mg/L	0 to 20 mg/L: ± 0.2 mg/L or 2% of reading, whichever is greater; 20 to 50 mg/L: ±6% of reading
Conductivity••• ETV 6560 Sensor*	0 to 100 mS/cm	0.001 to 0.1 mS/cm (range dependent)	±0.5% of reading + 0.001 mS/cm
Salinity	0 to 70 ppt	0.01 ppt	±1% of reading or 0.1 ppt, whichever is greater
Temperature ETV 6560 Sensor*	-5 to +50°C	0.01°C	±0.15°C
pH ETV 6561 Sensor*	0 to 14 units	0.01 unit	±0.2 unit
ORP	-999 to +999 mV	0.1 mV	±20 mV
Depth Medium Shallow Vented Level	0 to 200 ft, 61 m 0 to 30 ft, 9.1 m 0 to 30 ft, 9.1 m	0.001 ft, 0.001 m 0.001 ft, 0.001 m 0.001 ft, 0.001 m	±0.4 ft, ±0.12 m ±0.06 ft, ±0.02 m ±0.01 ft, 0.003 m
Turbidity• ETV 6136 Sensor*	0 to 1,000 NTU	0.1 NTU	±2% of reading or 0.3 NTU, whichever is greater**
Nitrate/nitrogen••••	0 to 200 mg/L-N	0.001 to 1 mg/L-N (range dependent)	±10% of reading or 2 mg/L, whichever is greater
Ammonium/ammonia/ nitrogen••••	0 to 200 mg/L-N	0.001 to 1 mg/L-N (range dependent)	±10% of reading or 2 mg/L, whichever is greater
Chloride••••	0 to 1000 mg/L	0.001 to 1 mg/L (range dependent)	±15% of reading or 5 mg/L, whichever is greater
Rhodamine•	0-200 µg/L	0.1 µg/L	±5% reading or 1 µg/L, whichever is greater

• Maximum depth rating for all standard optical sensors is 200 feet, 61 m.
•• Rapid Pulse is only available on the 6820/6920 V2-1 (one optical port version)
••• Report outputs of specific conductance (conductivity corrected to 25° C), resistivity, and total dissolved solids are also provided. These values are automatically calculated from conductivity according to algorithms found in *Standard Methods for the Examination of Water and Wastewater* (ed 1989).
•••• Freshwater only, Maximum depth rating of 50 feet, 15.2 m. 6820/6920 V2-1 have 3 ISE ports, 6820/6920 V2-2 have 1 ISE port.

**In YSI AMCO-AEPA Polymer Standards.

	Range	Detection Limit	Resolution	Linearity
BGA - Phycocyanin•	~0 to 280,000 cells/mL† 0 to 100 RFU	~220 cells/mL§	1 cell/mL 0.1 RFU	$R^2 > 0.9999$**
BGA - Phycoerythrin•	~0 to 200,000 cells/mL† 0 to 100 RFU	~450 cells/mL§§	1 cell/mL 0.1 RFU	$R^2 > 0.9999$***
Chlorophyll• ETV 6025 Sensor*	~0 to 400 µg/L 0 to 100 RFU	~0.1 µg/L§§§	0.1 µg/L Chl 0.1% RFU	$R^2 > 0.9999$****

• Maximum depth rating for all standard optical probes is 200 feet, 61 m.
BGA = Blue-Green Algae
RFU = Relative Fluorescence Units
~ = Approximately

† Explanation of Ranges can be found in the 'Principles of Operation' section of the 6-Series Manual, Rev D.

§ Estimated from cultures of *Microcystis aeruginosa*.
§§ Estimated from cultures *Synechococcus sp.*
§§§ Determined from cultures of *Isochrysis sp.* and chlorophyll *a* concentration determined via extractions.

**Relative to serial dilution of Rhodamine WT (0-400 ug/L).
***Relative to serial dilution of Rhodamine WT (0-8 µg/L).
****Relative to serial dilution of Rhodamine WT (0-500 ug/L).

YSI 6820 V2 & 6920 V2 Sonde Specifications

Medium		Fresh, sea or polluted water	Software		EcoWatch®
Temperature	Operating Storage	-5 to +50°C -10 to +60°C	Dimensions 6820 V2 I 6920 V2	Diameter Length Weight	2.86 in, 7.3 cm | 2.85 in, 7.24 cm 13.5 in, 34.3 cm | 18 in, 45.7 cm 3.4 lbs, 1.5 kg | 4 lbs, 1.8 kg
Communications		RS-232, SDI-12	Power	External Internal	12 V DC 8 AA-size alkaline batteries