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SPECIFICATIONS

DOCUMENT #E36

YSI 6820 and 6920 V2 Sondes

With 1 or 2 Optical Sensor Ports and Wide Range of Sensor Options

Measure a wide variety of parameters for long-term monitoring, profiling or sampling in fresh, sea or polluted water.

Two versions available for each sonde:

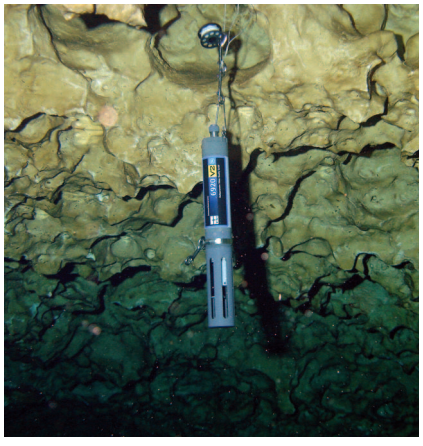
- The 6820/6920 V2-1 has one optical port, conductivity/temperature port, Rapid Pulse™ DO port, pH/ORP port, and three ISE ports
- The 6820/6920 V2-2 has two optical ports, conductivity/temperature port, pH/ORP port, and one ISE port

- Self-cleaning optical sensors with improved wiping
- Field-replaceable sensors
- 6920 V2 has a built-in battery compartment for long-term *in situ* monitoring

Parameters:

Measure multiple parameters simultaneously:
Ammonium, Chloride, or Nitrate (ISEs)
Conductivity
Depth/Level
Rapid Pulse™ Dissolved Oxygen (V2-1 only)
ORP
pH
Resistivity
Salinity
Specific Conductance
TDS
Temperature

Plus one or two of these optical sensors:
Blue-green Algae PC or PE
Chlorophyll
ROX™ Dissolved Oxygen
Rhodamine
Turbidity



YSI.com/sondes

YSI 6820 V2 & 6920 V2 Sensor Specifications

	Range	Resolution	Accuracy
ROX™ Optical Dissolved Oxygen• % Saturation 6150 Sensor	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 6150 Sensor	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 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 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••• 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 6560 Sensor	-5 to +50°C	0.01°C	±0.15°C
pH 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• 6136 Sensor	0 to 1,000 NTU	0.1 NTU	±2% of reading or 0.3 NTU, whichever is greater*
Ammonium/ammonia/ 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
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• 6130 Sensor	0-200 µg/L	0.1 µg/L	±5% reading or 1 µg/L, whichever is greater

• Max. depth rating for optical probes is 200 ft, 61 m; depth rating for anti-fouling optical probes is 656 ft, 200 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 ft, 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• 6131 Sensor	~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• 6132 Sensor	~0 to 200,000 cells/mL† 0 to 100 RFU	~450 cells/mL§§	1 cell/mL 0.1 RFU	$R^2 > 0.9999$***
Chlorophyll• 6025 Sensor	~0 to 400 µg/L 0 to 100 RFU	~0.1 µg/L Chl *a*§§§	0.1 µg/L Chl 0.1% RFU	$R^2 > 0.9999$****

• Max. depth rating for optical probes is 200 ft, 61 m; depth rating for anti-fouling optical probes is 656 ft, 200 m. RFU = Relative Fluorescence Units

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

§ 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	6820 V2 | 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

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