

# Sensor Specifications\*

Sensor	Range	Accuracy*	Response	Resolution
Ammonium <sup>11</sup> (ammonia with pH sensor)	0 to 200 mg/L <sup>1</sup>	±10% of reading or 2 mg/L-N, w.i.g.	-	0.01 mg/L
Barometer	375 to 825 mmHg	±1.5 mmHg from 0 to 50°C	-	0.1 mmHg
Blue-green Algae Phycocyanin (PC) (part of Total Algae sensor)	0 to 100 RFU; 0 to 100 µg/L PC	Linearity: R <sup>2</sup> > 0.999 for serial dilution of Rhodamine WT solution from 0 to 100 µg/mL PC equivalents	T63<2 sec	0.01 RFU; 0.01 µg/L PC
Blue-green Algae Phycoerythrin (PE) (part of Total Algae sensor)	0 to 100 RFU; 0 to 280 µg/L PE	Linearity: R <sup>2</sup> > 0.999 for serial dilution of Rhodamine WT solution from 0 to 280 µg/mL PE equivalents	T63<2 sec	0.01 RFU; 0.01 µg/L PE
Chloride <sup>11</sup>	0 to 18000 mg/L-Cl <sup>2</sup>	±15% of reading or 5 mg/L-Cl, w.i.g.	-	0.01 mg/L
Chlorophyll (part of Total Algae sensor)	0 to 400 µg/L Chl; 0 to 100 RFU	Linearity: R <sup>2</sup> > 0.999 for serial dilution of Rhodamine WT solution from 0 to 400 µg/L Chl equivalents	T63<2 sec	0.01 µg/L Chl; 0.01 RFU
Conductivity <sup>3</sup>	0 to 200 mS/cm	0 to 100: ±0.5% of reading or 0.001 mS/cm, w.i.g.; 100 to 200: ±1% of reading	T63<2 sec	0.0001 to 0.01 mS/cm (range dependent)
Depth <sup>4</sup> (non-vented)	0 to 10 m (0 to 33 ft)	±0.04% FS (±0.004 m or ±0.013 ft)	T63<2 sec	0.001 m (0.001 ft) (auto-ranging)
	0 to 100 m (0 to 328 ft)	±0.04% FS (±0.04 m or ±0.13 ft)		
	0 to 250 m (0 to 820 ft)	±0.04% FS (±0.10 m or ±0.33 ft)		
Vented Level	0 to 10 m (0 to 33 ft)	±0.03% FS (±0.003 m or ±0.010 ft)		
Dissolved Oxygen Optical	0 to 500% air saturation	0 to 200%: ±1% of reading or 1% saturation, w.i.g.; 200 to 500%: ±5% of reading <sup>5</sup>	T63<5 sec <sup>6</sup>	0.1% air saturation
	0 to 50 mg/L	0 to 20 mg/L: ±0.1 mg/L or 1% of reading, w.i.g.; 20 to 50 mg/L: ±5% of reading <sup>5</sup>		0.01 mg/L
fDOM	0 to 300 ppb Quinine Sulfate equivalents (QSE)	Linearity: R <sup>2</sup> > 0.999 for serial dilution of 300 ppb QS solution Detection Limit: 0.07 ppb QSE	T63<2 sec	0.01 ppb QSE
Nitrate <sup>11</sup>	0 to 200 mg/L-N <sup>1</sup>	±10% of reading or 2 mg/L-N, w.i.g.	-	0.01 mg/L
ORP	-999 to 999 mV	±20 mV in Redox standard solutions	T63<5 sec <sup>7</sup>	0.1 mV
pH	0 to 14 units	±0.1 pH units within ±10°C of calibration temp; ±0.2 pH units for entire temp range <sup>8</sup>	T63<3 sec <sup>9</sup>	0.01 units
Salinity (Calculated from Conductivity and Temperature)	0 to 70 ppt	±1.0% of reading or 0.1 ppt, w.i.g.	T63<2 sec	0.01 ppt
Specific Conductance (Calculated from Cond. and Temp.)	0 to 200 mS/cm	±0.5% of reading or .001 mS/cm, w.i.g.	-	0.001, 0.01, 0.1 mS/cm (auto-scaling)
Temperature	-5 to 50°C	-5 to 35°C: ±0.01°C <sup>10</sup> 35 to 50°C: ±0.05°C <sup>10</sup>	T63<1 sec	0.001 °C
Total Dissolved Solids (TDS) (Calculated from Conductivity and Temperature)	0 to 100,000 mg/L Cal constant range 0.30 to 1.00 (0.64 default)	Not Specified	-	variable
Total Suspended Solids (TSS) (Calculated from Turbidity and user reference samples)	0 to 1500 mg/L	Not Specified	T63<2 sec	variable
Turbidity <sup>11</sup>	0 to 4000 FNU	0 to 999 FNU: 0.3 FNU or ±2% of reading, w.i.g.; 1000 to 4000 FNU: ±5% of reading <sup>12</sup>	T63<2 sec	0 to 999 FNU: 0.01 FNU; 1000 to 4000 FNU: 0.1 FNU

All sensors have a depth rating to 250 m (820 ft), except shallow and medium depth sensors and ISEs. EXO sensors are not backward compatible with 6-Series sondes.

\* Specifications indicate typical performance and are subject to change. Please check EXOwater.com for up-to-date information.

Accuracy specification is attained immediately following calibration under controlled and stable environmental conditions. Performance in the natural environment may vary from quoted specification.

<sup>1</sup> 0-30°C    <sup>2</sup> 0-40°C    w.i.g. = whichever is greater

<sup>3</sup> Outputs of specific conductance (conductivity corrected to 25°C) and total dissolved solids are also provided. The values are automatically calculated from conductivity according to algorithms found in *Standard Methods for the Examination of Water and Wastewater* (Ed. 1989).

<sup>4</sup> Accuracy specifications apply to conductivity levels of 0 to 100,000 µS/cm.

<sup>5</sup> Relative to calibration gases

<sup>6</sup> When transferred from air-saturated water to stirred deaerated water

<sup>7</sup> When transferred from water-saturated air to Zobell solution

<sup>8</sup> Within the environmental pH range of pH 4 to pH 10

<sup>9</sup> On transfer from water-saturated air to rapidly stirred air-saturated water at a specific conductance of 800 µS/cm at 20°C; T63<5 seconds on transfer from water-saturated air to slowly-stirred air-saturated water.

<sup>10</sup> Temperature accuracy traceable to NIST standards

<sup>11</sup> Calibration: 1-, 2-, or 3-point, user-selectable

<sup>12</sup> Specification is defined in AMCO-AEPA Standards