EXO sensor overview

Sensor*	Parameter	Range	Accuracy	Response	Resolution
Barometer *(integral)*	**Barometric Pressure**	375 to 825 mmHg	±1.5 mmHg from 0 to 50˚C	-	0.1 mmHg
Conductivity / Temperature  *Part Number 599870*	**Conductivity**[1]	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)
	Temperature	-5 to 35˚C 35 to 50˚C	±0.01˚C[2] ±0.05˚C[2]	T63<1 sec	0.001 ˚C
Depth[3] *(integral; non-vented)*	**Shallow**	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)
	Medium	0 to 100 m (0 to 328 ft)	±0.04% FS (±0.04 m or ±0.13 ft)	T63<2 sec	0.001 m (0.001 ft) (auto-ranging)
	Deep	0 to 250 m (0 to 820 ft)	±0.04% FS (±0.10 m or ±0.33 ft)	T63<2 sec	0.001 m (0.001 ft) (auto-ranging)
Dissolved Oxygen *Optical*  *Part Number 599100*	**% air saturation**	0 to 500% air saturation	**0 to 200%:** ±1% of reading or 1% saturation, w.i.g.; **200 to 500%:** ±5% of reading [4]	T63<5 sec[5]	0.1% air saturation
	mg/L	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 [4]	T63<5 sec[5]	0.01 mg/L
fDOM  *Part Number 599104*	**fDOM**	0 to 300 ppb Quinine Sulfate equivalents (QSE)	**Linearity:** R2 > 0.999 for serial dilution of 300 ppb QS solution **Detection Limit:** 0.07 ppb QSE	T63<2 sec	0.01 ppb QSE
pH  *Part Numbers EXOISE01 guarded EXOISE02 unguarded*	**pH**	0 to 14 units	±0.1 pH units within ±10˚C of calibration temp; ±0.2 pH units for entire temp range[7]	T63<3 sec[8]	0.01 units
pH/ORP  *Part Numbers EXOISE05 guarded EXOISE06 unguarded*	**ORP**	-999 to 999 mV	±20 mV in Redox standard solution	T63<5 sec[6]	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[7]	T63<3 sec[8]	0.01 units

Total Algae  *Part Number 599102*	**Blue-green Algae, Phycocyanin**	0 to 100 µg/L; 0 to 100 RFU;	**Linearity:** R^2 >0.999 for serial dilution of Rhodamine WT solution from 0 to 100 µg/mL BGA-PC equivalents **Detection Limit:** 0.04 µg/L PC	T63<2 sec	0.01 µg/L; 0.01 RFU
	Chlorophyll	0 to 400 µg/L Chl; 0 to 100 RFU	**Linearity:** R^2 >0.999 for serial dilution of Rhodamine WT solution from 0 to 400 µg/L Chl *a* equivalents **Detection Limit:** 0.09 µg/L Chl	T63<2 sec	0.01 µg/L Chl; 0.01 RFU
Turbidity[9]  *Part Number 599101*	**Turbidity**	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[10]	T63<2 sec	0 to 999 FNU = 0.01 FNU; 1000 to 4000 FNU = 0.1 FNU
Calculated from Conductivity and Temperature[11]	**Salinity**	0 to 70 ppt	±1.0% of reading or 0.1 ppt, w.i.g.	T63<2 sec	0.01 ppt
	Specific Conductance	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)
	Total Dissolved Solids (TDS)	0 to 100,000 g/L Cal constant range 0.30 to 1.00 (0.64 default)	Not Specified	-	Variable
Calculated from Turbidity and TDS	**Total Suspended Solids (TSS)**	0 to 1500 mg/L	Not specified	T63<2 sec	Variable

*Specifications indicate typical performance and are subject to change. All sensors have a depth rating to 250 m (820 ft), except shallow and medium depth sensors. EXO sensors are not backward compatible with 6-Series sondes. Accuracy specification is attained immediately following calibration under controlled and stable environmental conditions. Performance in the natural environment may vary from quoted specification.
w.i.g. = whichever is greater
[1]Outputs of specific conductance (conductivity corrected to 25˚C) and total dissolved solids are also provided. See Calculated Parameters and footnote 11.
[2] Temperature accuracy traceable to NIST standards
[3]Accuracy specifications apply to conductivity levels of 0 to 100,000 µS/cm.
[4] Relative to calibration gases
[5] When transferred from air-saturated water to stirred deaerated water
[6] When transferred from water-saturated air to Zobell solution
[7]Within the environmental pH range of pH 4 to pH 10.
[8]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.
[9] Calibration: 1-, 2-, or 3-point, user-selectable
[10] Specification is defined in AMCO-AEPA Standards
[11] Values are automatically calculated from conductivity according to algorithms found in *Standard Methods for the Examination of Water and Wastewater* (Ed. 1989).

OBSERVATOR
instruments

We represent this supplier. For more information contact Observator Instruments:

T: +31 (0)180 463411
E: info@observator.com

Rietdekkerstraat 6
2984 BM Ridderkerk
The Netherlands

Welcome to the world of Observator

Since 1924 Observator has evolved to be a trend-setting developer and supplier in a wide variety of industries. Originating from the Netherlands, Observator has grown into an internationally oriented company with a worldwide distribution network and offices in Australia, Germany, the Netherlands, Singapore and the United Kingdom.

www.observator.com

The Observator range is in continuous development and so specifications may be subject to change without prior notice.