

Datalogging Water Quality Sensor

AquiStar® CT2X Submersible Smart Sensor Conductivity/Temperature with Depth/Level Option

The CT2X is a conductivity and temperature sensor with built-in datalogging. Incorporating a 4-pole epoxy and graphite electrode cell, it is extremely durable and resistant to data interferences — making it excellent for use in rugged field conditions.

The CT2X also comes with easy-to-use Aqua4Plus software, affording the user extensive control, including real-time monitoring, flexible programming, and versatile data display options.

FEATURES

- Measures and records conductivity, temperature, and time with depth/level option
- Low power — *field replaceable AA batteries*
- Modbus® RTU (RS485) and SDI-12 interface — *great flexibility*
- 10 – 100,000 microSiemens/cm — *200,000 or 300,000 optional*
- Also measures salinity and TDS
- Linear and nLFn temperature compensation
- Small diameter — *0.75" (1.9 cm)*
- 349,000 records in non-volatile memory — *no data loss in the event of a power failure*
- Wireless connectivity — *radios and/or cellular*
- Barometric compensation utility for use with absolute sensors
- Free, easy-to-use software

EASY-TO-USE SOFTWARE

- Easy, in-field calibration
- Flexible logging sequences
- Real-time viewing
- Easy export to spreadsheets and databases
- Firmware upgradable in the field



APPLICATIONS

- Wetland surveys
- Saltwater intrusion monitoring
- Agricultural runoff studies
- Discharge monitoring

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

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SPECIFICATIONS

General

Length	12.745" (32.37 cm) 16.395" (41.641 cm) w/pressure
Diameter	0.75" (1.9 cm)
Weight	1.0 lb. (0.5 kg)
Body Material	Acetal & 316 stainless steel or titanium
Wire Seal Materials	Fluoropolymer and PTFE
Submersible Cable	Polyurethane, polyethylene, or ETFE
Cable Weight	4 lbs./100 ft. (1.8 kg/30 m)
Protection Rating	IP68, NEMA 6P
Desiccant	1-3mm indicating silica gel (high or standard capacity)
Terminating Connector	Available
Communication	RS485 Modbus® RTU, SDI-12 (ver.1.3)
Recommended Operating Temp. Range³	-15°C to 55°C
Storage Temp. Range¹	-40°C to 80°C

Logging

Memory	4MB – 349,000 records
Log Types	Variable, User-Defined, Logarithmic, Profiled
Programmable Baud Rate	9600, 19200, 38400
Logging Rate	4x/sec maximum
Software	Complimentary Aqua4Plus or Aqua4Push
Networking	32 available addresses per junction w/batching capabilities (up to 255)
File Formats	.xls/.csv/.a4d

Power

Internal Battery	2x1.5V AA Alkaline ²
Auxiliary Power	12 VDC – <i>Nominal</i> , 6-15 VDC – <i>Range</i>
Expected Alkaline Battery Life	12 months at 15m polling interval ⁷

Temperature

Element Type	30K Ohm thermistor
Element Material	Epoxy bead/external housing
Accuracy	±0.25°C
Resolution	0.1°C
Range	-5°C to 40°C
Units	Celsius, Fahrenheit, Kelvin

Depth / Level

Transducer Type	Silicon strain gauge
Transducer Material	316 stainless steel or titanium
Pressure Ranges⁵	
<i>Gauge</i>	<i>FtH₂O</i> – 2.3, 5.8, 12, 35, 69, 231, 115, 692 <i>mH₂O</i> – 0.7, 1.75, 3.5, 10.5, 21, 35, 70, 210
<i>Absolute⁹</i>	<i>FtH₂O</i> – 12, 35, 81, 196, 658 <i>mH₂O</i> – 3.5, 10, 24, 59, 200
Units	PSI, FtH ₂ O, inH ₂ O, cmH ₂ O, mmH ₂ O, mH ₂ O, inHg, cmHg, mmHg, Bars, mBars, kPa
Static Accuracy	±0.05% FSO <i>typical</i> ±0.1% FSO <i>maximum⁸</i> (B.F.S.L. 20°C)
Resolution	0.0034% FS <i>typical</i>
Maximum Operating Pressure	1.1 x FS
Burst Pressure⁴	3.0 x FS
Compensated Range	0°C to 40°C

Conductivity

Probe Material	Epoxy/Graphite
Electrode	4-pole
Static Accuracy	±0.5% of measured value
Resolution	32 bit
Ranges	
<i>Conductivity⁶</i>	0-100,000 or 0-200,000 or 0-300,000 µS/cm
<i>TDS</i>	4.9-49,000 or 4.9-98,000 or 4.9-147,000 mg/L
<i>Salinity</i>	2-42 PSU
Units	µS/cm, mS/cm, mg/L, PSU
Resolution	0.1 µS/cm / 0.001 mS/cm / 0.1 mg/L (TDS) / 0.001 PSU
Warm-Up Time	200 msec
Thermal Compensation	None, Linear, or nLFn

1 Storage without batteries

2 Lithium available upon request

3 Requires freeze protection kit if using pressure option in water below freezing

4 Burst reduced at PSI>300

5 Higher pressure ratings available upon request

6 Accuracy reduced at levels <10 µS/cm

7 May vary due to environmental factors

8 ±0.25% FSO for 0-5 PSI, 0-12 FtH₂O, 0-3.5 mH₂O

9 Depth range for absolute sensors has 14.7 PSI subtracted to give actual depth allowed.

Information in this document is subject to change without notice.



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