Datalogging Water Quality Sensor

Seametrics CT2X Submersible Smart Sensor
Conductivity/Temperature with Depth/Level Option

The CT2X Smart Sensor is a pressure, conductivity, and temperature sensor with internal data logger. Constructed with rugged 316 stainless steel or titanium, the CT2X is ideal for monitoring groundwater level, saltwater intrusion, and discharge monitoring. The CT2X is a gauged sensor that can be operated independently or networked with other Seametrics Smart Sensors. The sensor is easily programmed and monitored using the included Aqua4Plus software.

FEATURES

- Measures and records conductivity, temperature, salinity, and TDS 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 Aqua4Plus 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

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## SPECIFICATIONS

### Housing & Cable

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>1.0 lb. (0.5 kg)</td>
</tr>
<tr>
<td>Body Material</td>
<td>Acetal &amp; 316 stainless or titanium</td>
</tr>
<tr>
<td>Wire Seal Material</td>
<td>Fluoropolymer and PTFE</td>
</tr>
<tr>
<td>Cable</td>
<td>Submersible: polyurethane, polyethylene, or ETFE (4 lb./100 ft., 1.8 kg/30 m)</td>
</tr>
<tr>
<td>Desiccant</td>
<td>1-3 mm indicating silica gel</td>
</tr>
<tr>
<td>Field Connector</td>
<td>Standard</td>
</tr>
</tbody>
</table>

### Temperature

- **Operating Range**: Recommended: -5° to 40°C (23° to 104°F) Requires freeze protection kit if using pressure option in water below freezing.
- **Storage Range**: Without batteries: -40° to 80°C (-40° to 176°F)

### Power

- **Internal Battery**: Two lithium 'AA' batteries – Expected battery life: 12 months at 15 min. polling interval (may vary do to environmental factors)
- **Auxiliary**: 12 VDC – Nominal, 6-16 VDC – range

### Communication

- **Modbus**¹: RS485 Modbus RTU, output = 32-bit IEEE floating point
- **SDI-12**: SDI-12 (ver. 1.3) – ASCII

### Logging

- **Memory**: 4MB – 349,000 records
- **Logging Types**: Variable, user-defined, profiled
- **Logging Rates**: 4x/sec maximum, no minimum
- **Baud Rates**: 9600, 19200, 38400
- **Software**: Complimentary Aqua4Plus
- **Networking**: 32 available addresses per junction (Address range: 1 to 255)
- **File Formats**: .a4d and .csv

### Output Channels

<table>
<thead>
<tr>
<th>Element</th>
<th>Temperature</th>
<th>Depth/Level¹</th>
<th>Conductivity²</th>
</tr>
</thead>
<tbody>
<tr>
<td>30K ohm thermistor, epoxy bead/external housing, Pyrex® glass</td>
<td>Silicone strain gauge transducer, 316 stainless or Hastelloy</td>
<td>Epoxy/Graphite – 4-pole</td>
<td></td>
</tr>
</tbody>
</table>

- **Accuracy**:
  - ±0.25°C
  - ±2.0°C – below 0°C (32°F)

- **Resolution**: 0.1°C

- **Units**: Celsius, Fahrenheit, Kelvin

### Range

- **Temperature**: -5° to 40°C (23° to 104°F)
- **Gauge Pressure**: PSI: 0.1 to 500, 1000
- **Conductivity**: 0-300,000 μS/cm

### Environmental

- **IP-68, NEMA 6P**

### Software

- **Complimentary Aqua4Plus**

### Specifications subject to change.

¹ Higher pressure ranges available upon request

² Accuracy reduced at levels <10 μS/cm and >100,000 μS/cm

³ ±0.25% accuracy FSO (max) at this range

⁴ Depth range for absolute sensors has 14.7 PSI subtracted to give actual depth allowed.

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