

# PT2X Smart Sensor

## PRESSURE/TEMPERATURE WITH DATA LOGGING



### APPLICATIONS

Pump and slug tests

Stormwater runoff monitoring

Well, tank, tidal levels

River, stream, reservoir gauging

Wetland monitoring

Resource administration

### Features

- Measures & records pressure/level and temperature
- Low power
- Modbus® RTU (RS485) and SDI-12
- $\pm 0.05\%$  FSO typical accuracy
- Thermally compensated
- Small diameter — 0.75" (1.9 cm)
- 520,000 records in non-volatile memory
- Barometric compensation utility for use with absolute sensors
- Free, easy-to-use Aqua4Plus 2.0 software

The **Seametrics PT2X** Smart Sensor is an integrated data logger and pressure/temperature sensor and is ideal for monitoring groundwater, well, tank, and tidal levels, as well as for pump and slug testing. This sensor networks with all of the Seametrics Smart Sensor family.

This industry standard digital RS485 interface device records up to 520,000 records of pressure/level, temperature, and time data, operates with low power, and features easy-to-use software with powerful features. Constructed with 316 stainless steel or titanium, PTFE, and fluoropolymer, this sensor provides high-accuracy readings in rugged and corrosive field conditions.

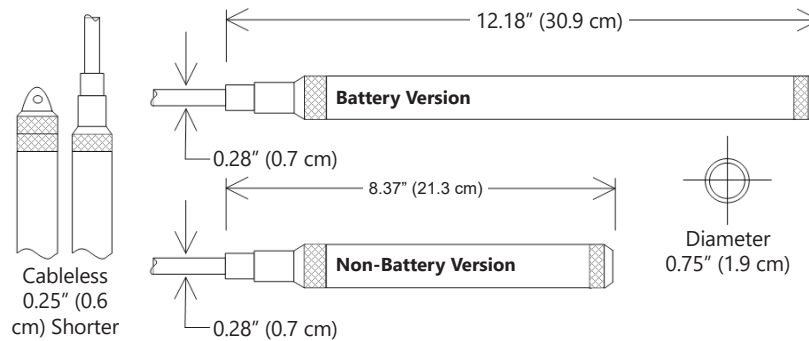
Two internal AA batteries power the PT2X. (Auxiliary power supplies are available for data intensive applications.) The unit is programmed using Seametrics' easy-to-use Aqua4Plus 2.0 control software. Once programmed the unit will measure and collect data on a variety of time intervals.

Several PT2Xs, or a combination of PT2Xs and other Seametrics Smart Sensors, can be networked together and controlled directly from a single computer.

While most will use the PT2X with our free, easy-to-use Aqua4Plus 2.0 software, it is by no means limited to that software. You can use your own Modbus® RTU or SDI-12 software or logging equipment to read measurements, thus tying into your existing telemetry and control systems.

### Contact Your Supplier

## Dimensions



## Specifications\*

|                                 |   |  |  |
|---------------------------------|---|--|--|
| <b>Housing &amp; Cable</b>      | <b>Weight</b>   | 0.8 lb. (0.4 kg)   |  |
|                                 | <b>Body Material</b>  | Acetal & 316 stainless or titanium   |  |
|                                 | <b>Wire Seal Material</b>   | Fluoropolymer and PTFE   |  |
|                                 | <b>Cable</b>  | Submersible: polyurethane, polyethylene, or ETFE (4 lb./100 ft., 1.8 kg/30 m)  |  |
|                                 | <b>Desiccant</b>  | 1-3 mm indicating silica gel   |  |
|                                 | <b>Field Connector</b>  | Standard   |  |
| <b>Temperature</b>              | <b>Operating Range</b>  | Recommended: -15° to 55°C (5° to 131°F) Requires freeze protection kit if using pressure option in water below freezing.         |  |
|                                 | <b>Storage Range</b>  | Without batteries: -40° to 80°C (-40° to 176°F)  |  |
| <b>Power</b>                    | <b>Internal Battery</b>   | Two lithium 'AA' batteries - Expected battery life: 18 months at 15 min. polling interval (may vary do to environmental factors) |  |
|                                 | <b>Auxiliary</b>  | 12 Vdc - Nominal, 6-16 Vdc - range   |  |
| <b>Communication</b>            | <b>Modbus®</b>  | RS485 Modbus® RTU, output=32bit IEEE floating point  |  |
|                                 | <b>SDI-12</b>   | SDI-12 (ver. 1.3) - ASCII  |  |
| <b>Logging</b>                  | <b>Memory</b>   | 4MB - 520,000 records  |  |
|                                 | <b>Logging Types</b>  | Variable, user-defined, profiled   |  |
|                                 | <b>Logging Rates</b>  | 8x/sec maximum, no minimum   |  |
|                                 | <b>Baud Rates</b>   | 9600, 19200, 38400   |  |
|                                 | <b>Software</b>   | Complimentary Aqua4Plus 2.0  |  |
|                                 | <b>Networking</b>   | 32 available addresses per junction (Address range: 1 to 255)  |  |
|                                 | <b>File Formats</b>   | .a4d and .csv  |  |
| <b>Output Channels</b>          | <b>Temperature</b>  |  | <b>Depth/Level<sup>1</sup></b>   |
|                                 | <b>Element</b>  | Digital IC on board  | Silicon strain gauge transducer, 316 stainless or Hastelloy  |
|                                 | <b>Accuracy</b>   | ±0.5°C — 0° to 55°C (32° to 131°F)<br>±2.0°C — below 0°C (32°F)  | ±0.05% FSO (typical, static)<br>±0.1% FSO (maximum, static)<br>(B.F.S.L. 20°C)   |
|                                 | <b>Resolution</b>   | 0.1°C  | 0.0034% FS (typical)   |
|                                 | <b>Units</b>  | Celsius, Fahrenheit, Kelvin  | PSI, FtH <sub>2</sub> O, inH <sub>2</sub> O, mmH <sub>2</sub> O, mH <sub>2</sub> O, inH <sub>2</sub> O, cmHg, mmHg, Bars, Bars, kPa  |
|                                 | <b>Range</b>  | -15° to 55°C (5° to 131°F)   | Gauge<br>PSI: 1 <sup>2</sup> , 5, 7, 15, 30, 50, 100, 300<br>FtH <sub>2</sub> O: 2.3 <sup>3</sup> , 12, 35, 69, 115, 231, 692<br>mH <sub>2</sub> O: 0.7 <sup>2</sup> , 3.5, 5, 10.5, 21, 35, 70, 210<br>Absolute <sup>3</sup><br>PSI: 30, 50, 100, 300<br>FtH <sub>2</sub> O: 35, 81, 196, 658<br>mH <sub>2</sub> O: 10, 24, 59, 200 |
|                                 | <b>Compensated</b>  | ---  | 0° to 40°C (32° to 104°F)  |
| <b>Max operating pressure</b>   | 1.1 x full scale  |  |  |
| <b>Over pressure protection</b> | 3x full scale up to 300psi - for > 300psi (650 ft or 200 m) contact factory |  |  |
| <b>Burst pressure</b>           | 1000 psi (approx. 2000 ft or 600 m)   |  |  |
| <b>Environmental</b>            | IP68, NEMA 6P   |  |  |

\*Specifications subject to change. Please consult our web site for the most current data (seametrics.com). Modbus is a registered trademark of Schneider Electric.

<sup>1</sup> Higher pressure ranges available upon request

<sup>2</sup> ±0.25% accuracy FSO (max) at this range

<sup>3</sup> Depth range for absolute sensors has 14.7 PSI subtracted to give actual depth allowed.