

# Multi-Parameter

## SMART SENSOR WITH DATA LOGGING

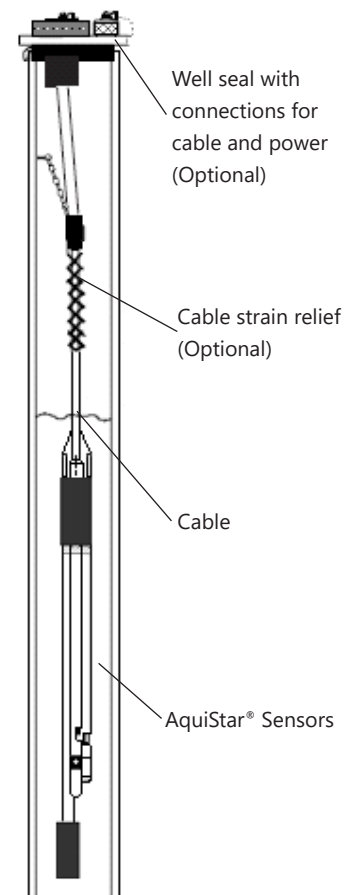


### APPLICATIONS

Surface water monitoring  
Groundwater monitoring  
Agricultural runoff studies  
Discharge monitoring  
Aquaculture  
Leachate monitoring  
Remediation performance monitoring  
Waste water treatment discharge

### Features

- Measures pH, ORP, temperature, conductivity, salinity, TDS, pressure level, and dissolved oxygen or turbidity (depending on configuration)
- Modbus® and SDI-12 interface for greater flexibility
- Non-volatile memory
- RS485 network — connect with other Seametrics AquiStar® Smart Sensors
- Wireless connectivity — radios and/or cellular
- Flexible, Windows®-based programming
- Real time viewing
- Easy export to spreadsheets and databases
- Direct read option — use with panel meters or RTU/PLC applications
- Polyethylene, polyurethane, and FEP cable options
- Fits in 2" (5.1 cm) well



TYPICAL INSTALLATION

**Contact Your Supplier**



# Multi-Parameter SMART SENSOR WITH DATA LOGGING



## MECHANICAL

### ADAPTER

Material	Acetal
Strain relief	Included

### SENSOR TUBES

Tube Material	316 stainless steel or titanium
Wire Seal Materials	Fluoropolymer and PTFE

### CABLE

OD	0.28" (0.7 cm) maximum
Break Strength	138 lbs. (62.7 kg)
Maximum Length	2000 feet (610 meters)
Weight	4 lbs. per 100 feet (1.8 kg / 30 m)

## GENERAL

### COMMUNICATION

Communication	RS485 Modbus RTU SDI-12 (ver.1.3)
Direct Modbus Read Output	32-bit IEEE floating point
SDI-12 Output	ASCII
Internal Math	32-bit floating point

### POWER

External	12 VDC nominal / 9-15VDC range
----------	--------------------------------

## RANGE, RESOLUTION, ACCURACY

	RANGE	RESOLUTION	ACCURACY
Level/Pressure		16 bit	± 0.05% FSO typical ± 0.1% FSO maximum (B.F.S.L. 20° C)
Absolute PSIA	100 PSI		
Absolute mH <sub>2</sub> O	70 mH <sub>2</sub> O		
Absolute FtH <sub>2</sub> O	231 FtH <sub>2</sub> O		
Conductivity	0-100 mS/cm	0.001 mS/cm	± 0.5% of measured value
Salinity	2-42 PSU	0.001 PSU	± 1% of reading or 0.1 PSU whichever is greater
TDS	4.9 - 147,000 mg/L	0.1 mg/L	± 0.5% of measured value
pH	1-14 pH units	0.01 pH units	± 0.2 pH units
ORP	± 1200 mV	0.01 mVH	0.1 mVH
Dissolved Oxygen	0-25 ppm	0.01 ppm when <4.00 ppm 0.1 ppm when >4.00 ppm	1% of reading or 0.02 ppm whichever is greater
Turbidity	0-400 or 0-3000 NTU	± 3 NTU	± 2% @ 25° C or ± 2 NTU whichever is greater
Temperature	-5° to 40°C (23° to 104°F)	0.1° C	± 0.5° C

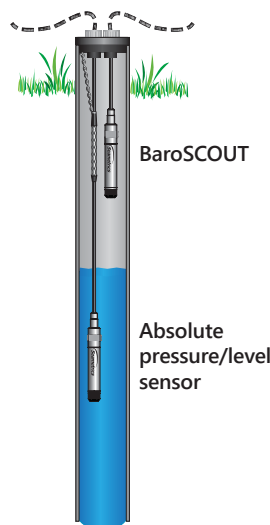
## CONFIGURATIONS - Available in five standard options.

	OPTION ONE P/N 2L31000	OPTION TWO P/N 2L31006	OPTION THREE P/N 2L31004	OPTION FOUR P/N 2L31002	OPTION FIVE P/N 2L31008
Level/Pressure	√	√	√	√	√
Conductivity/Salinity/TDS	√	√	√	√	√
pH/ORP			√	√	√
Dissolved Oxygen	√			√	
Turbidity		√	√		
Temperature	√	√	√	√	√

*User is responsible for reviewing end use application with their supplier for product suitability.*

# BaroSCOUT 2X

## BAROMETRIC PRESSURE/TEMPERATURE SMART SENSOR



### APPLICATIONS

Barometrically compensate absolute pressure sensors for level measurement—no desiccant tubes, bellows, or vent tubes needed!

Supplement aquifer test data in leaky or confined conditions

### Features

- Measures/Records barometric pressure and temperature
- Low power — 4.4 year battery life
- Replaceable battery
- Modbus® RTU (RS485) & SDI-12
- $\pm 0.05\%$  FS accuracy
- Small diameter — 0.875" (2.22 cm)
- 100,000 record non-volatile memory
- Barometric compensation utility
- Double O-rings for added protection
- Free new Aqua4Plus 2.0 software

The **Seametrics BaroSCOUT 2X** Smart Sensor is designed to measure barometric pressure, along with temperature. It is an ideal companion to our absolute pressure/level sensors and can be used to adjust their readings for atmospheric pressure.

This industry standard digital RS485 interface device records up to 100,000 records of pressure, temperature, and time data, operates with low power, and features easy-to-use Aqua4Plus 2.0 software with powerful features. Constructed with 316 stainless steel, acetal, and Viton®, this sensor provides high-accuracy readings in rugged and corrosive field conditions.

The BaroSCOUT 2X utilizes an extremely rugged and stable piezo-electric media-isolated pressure element combined with a 16-bit analog-to-digital converter. This provides extremely accurate and stable pressure input into the microprocessor on the circuit board that measures the pressure and stores the data in non-volatile memory.

A replaceable 2/3 AA 3.6v lithium battery powers the BaroSCOUT 2X. The unit is programmed using our easy-to-use control software. Once programmed the unit will measure and collect data at the time interval programmed.

While most will use the BaroSCOUT 2X with Seametrics' Aqua4Plus 2.0 software, it is by no means limited to that software. You can use your own software or logging equipment to read measurements via RS485 and/or SDI-12, tying into your existing telemetry and control systems.

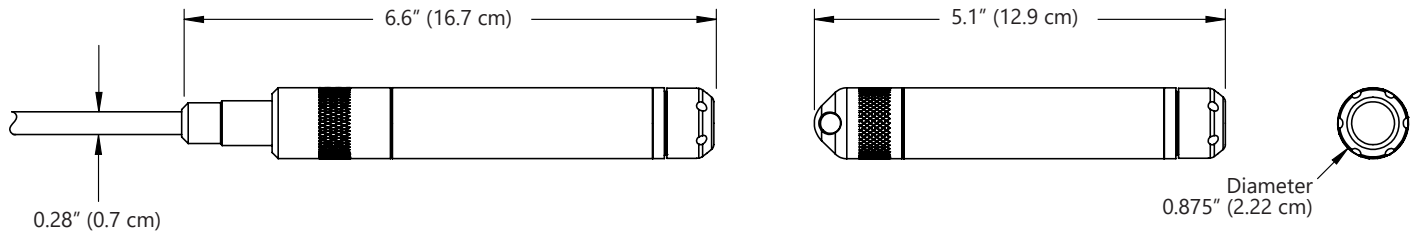
Note: The BaroSCOUT 2X is intended for use in atmosphere—not to be submerged.

### Contact Your Supplier



# BaroSCOUT 2X

## BAROMETRIC PRESSURE/TEMPERATURE SMART SENSOR



### GENERAL

<b>Length (cabled version)</b>	6.6" (16.7 cm)
<b>Length (cableless version)</b>	5.1" (12.9 cm)
<b>Diameter</b>	0.875" (2.22 cm)
<b>Body Material</b>	316 stainless steel
<b>Wetted Materials</b>	316 stainless steel, acetal, Viton®
<b>Communication</b>	RS485 Modbus® RTU & SDI-12
<b>Direct Modbus Read Output</b>	32-bit IEEE floating point
<b>Internal Math</b>	32-bit floating point
<b>SDI-12</b>	(ver.1.3) - ASCII
<b>Operating Temp. Range</b>	-20° C to 60° C
<b>Storage Temp. Range</b>	-40° C to 80° C
<b>Regulatory</b>	CE

### LOGGING

<b>Memory</b>	100,000 records
<b>Logging Rate</b>	Configurable down to 1/second
<b>Software</b>	Complimentary Aqua4Plus 2.0
<b>File Formats</b>	.csv / .a4d

### POWER

<b>Internal Battery</b>	One replaceable 2/3 AA 3.6V lithium battery
<b>Expected Battery Life</b>	4.4 years (at 4 readings per hour)

### TEMPERATURE

<b>Element Type</b>	Thermistor
<b>Accuracy</b>	± 0.1° C (from -20° C to 60° C)
<b>Resolution</b>	0.01° C
<b>Units</b>	Celsius, Fahrenheit, Kelvin

### PRESSURE

<b>Transducer Type</b>	Silicon strain gauge
<b>Transducer Material</b>	316 stainless steel
<b>Units</b>	PSI, FtH <sub>2</sub> O, inH <sub>2</sub> O, cmH <sub>2</sub> O, mmH <sub>2</sub> O, mH <sub>2</sub> O, inHg, cmHg, mmHg, Bars, mBars, kPa
<b>Accuracy</b>	± 0.008 PSI ( 0.55 mbar) (@ 20° C) ± 0.02 PSI (1.34 mbar) (@ -20° C to 60° C)
<b>Resolution</b>	0.01% FS (typical)

NOTE: Intended for use in atmosphere—not to be submerged.

**User is responsible for reviewing end use application with their supplier for product suitability.**