Aqua4Plus

Control Software for Seametrics Smart Sensors

General Information

Getting Started

Operation

Calibration

What is Aqua4Plus?

Aqua4Plus is an all new control software for Seametrics Smart Sensors. Aqua4Plus features an easy-to-use interface and updated communication driver. Our software can automatically detect your communication port and baud rate settings for a faster and more streamlined connection in the field with the use of Modbus communication protocol, an industry standard. Simply connect your sensor and USB/RS485 cable, open Aqua4Plus, and you will be connected and ready to go.

Use Aqua4Plus control software to configure your Seametrics Smart Sensor for data logging, real-time data monitoring (now with a live graphing feature), and custom calibration setups. Our new software features an all new Reports section to manage your downloaded data, perform barometric compensations for PSIA sensors, and export your data (.csv or .a4d format). Aqua4Plus is built on a platform that allows for automatic software updates so you always have the latest version on hand.

System Requirements

- Windows 7, 8, 8.1, 10 or later
- Screen capable of at least 1366x768 resolution
- 2GHz Dual Core Processor with SSE2 Support
- 2GB RAM System Memory
- 2GB of Hard-Drive Space

Installation

Aqua4Plus is available to download from www.seametrics.com and is also provided on a USB stick with our USB/RS485 communication kits. After downloading, or opening the USB stick, run the installation file. If installing on a PC with existing Aqua4Plus software be sure to specify an installation directory other than the default before proceeding with installation. Multiple versions of Aqua4Plus can be installed on one PC but must be located in separate directories. If you have never used our USB/RS485 communication cable make sure your PC is connected to the internet before plugging the cable in. As long as your PC is online it will load the necessary drivers automatically. USB to serial drivers are also available on the USB stick provided with the communication kit.

Connecting to Sensors

Aqua4Plus is designed to automatically detect your communication cable and scan for sensors. It is recommended you connect your USB/RS485 cable to your PC and have the sensor connected before opening Aqua4Plus.
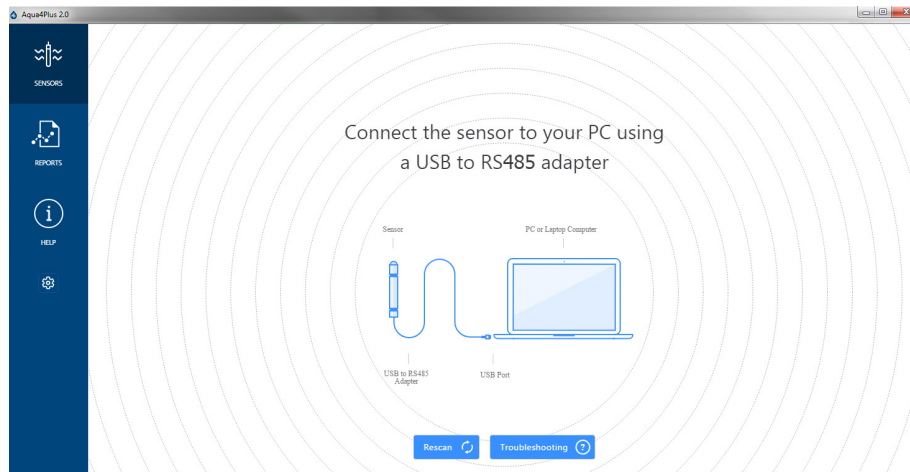
If your cable and sensor were not connected before opening Aqua4Plus simply connect and click Rescan. While scanning is active you'll see a green dot flash in the upper right corner of the program. Scanning is complete when this dot stops flashing.
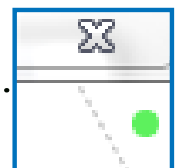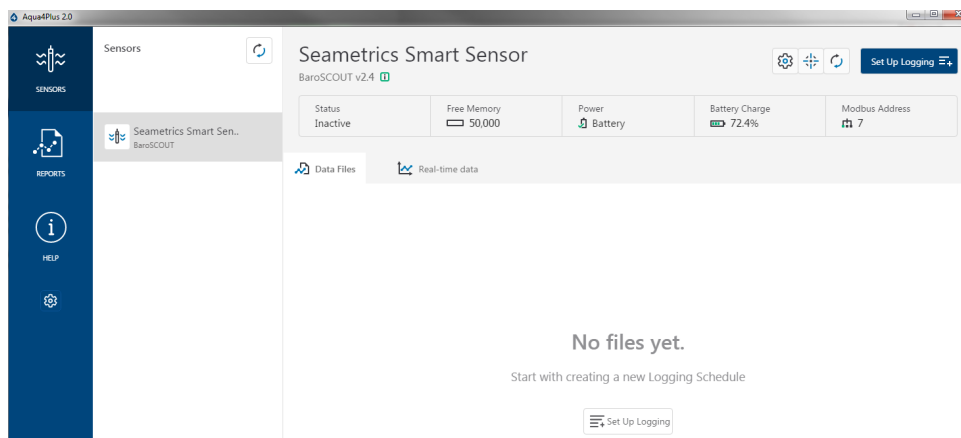
If your sensor still won't connect you can expand the Modbus address range under program settings here:
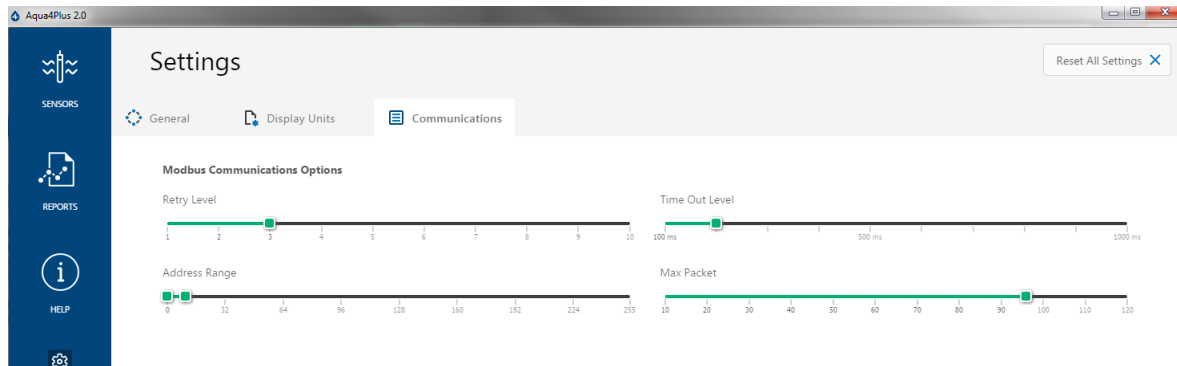
Simply drag the Address Range slider higher up to increase the maximum Modbus address scanned. If you've scanned all the way up through address 255 and still have no connection click Troubleshooting for further troubleshooting or contact Seametrics Tech Support for assistance.

Click ⟳ at any time to refresh sensor information.

Sensor Settings

Once connected you'll see the Sensor screen appear and display the connected sensor(s) details. Mousing over icons will provide tool-tips, mouse over ⓘ to view sensor firmware and serial number details.

To change general sensor settings click ⚙ in the sensor screen. This allows you to change the following:

Click ✎ to rename the sensor

To change Modbus address and/or Baud Rate simply select the desired address and/or Baud Rate from the drop down menus. Sensor will automatically reconnect at new address and/or Baud Rate

To change the Direct Read output units (for direct Modbus or SDI12 integration) simply select the desired output units from the drop down menus. To change Aqua4Plus display units scaling see Program Settings.

Sensor Clock can be synced with your PC time or set manually if desired. To set manually enter your desired date/time and click Set Time.

When batteries are changed out make sure to reset the battery information here, simply check the I have just put in new batteries box and select the battery type that was installed from the drop down menu.

Program Settings

To view/change Aqua4Plus settings click ⚙ in the blue side-bar menu.
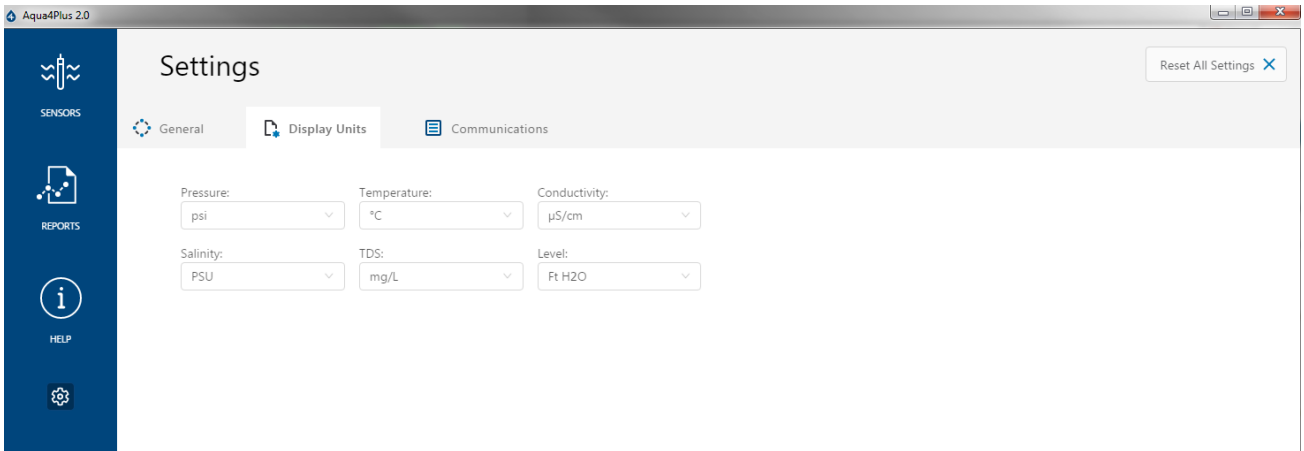
Under the General Settings tab you can change the default data folder location. This is where your Reports are saved to on your PC.

The Zoom Factor slider can be used to adjust the font size within Aqua4Plus.

Uncheck the Allow app to collect anonymous usage statistics box if you would like to opt out. This information is used to track Aqua4Plus reliability across different system configurations.
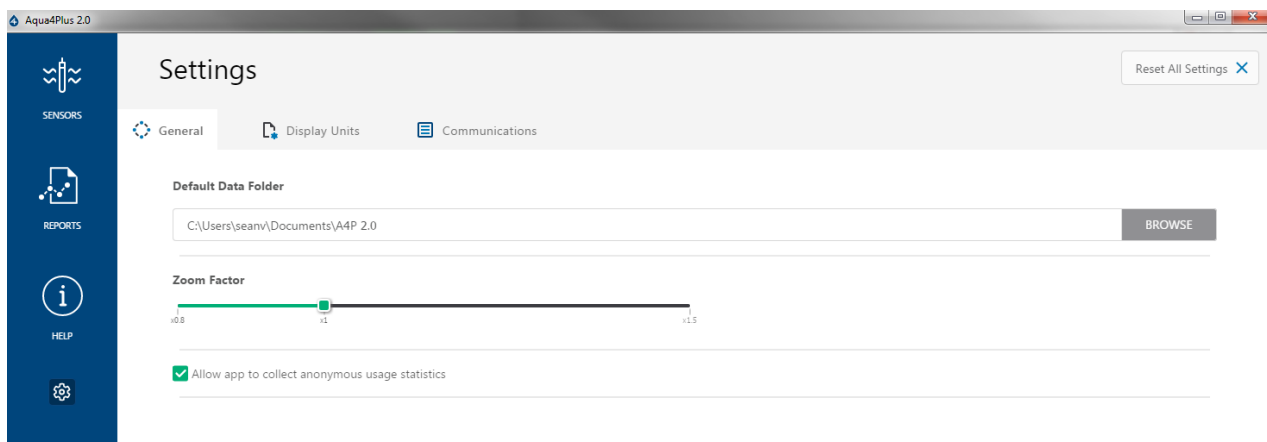
Under the Display Units tab you can select your desired display units for the supported channels. These may be changed at any time and associated Real-Time readings and Reports will rescale to the currently selected display unit. To change Direct Read units scaling see Sensor Settings.

Under the Communications tab you can change your Modbus communication settings. Typically you will only need to change the address range to connect to sensors outside of Modbus address 1-10. In certain cases we may need to change the Retry and Timeout settings to overcome communication issues on very long, or corroded cabling. See Troubleshooting section or contact Seametrics Tech Support for details.
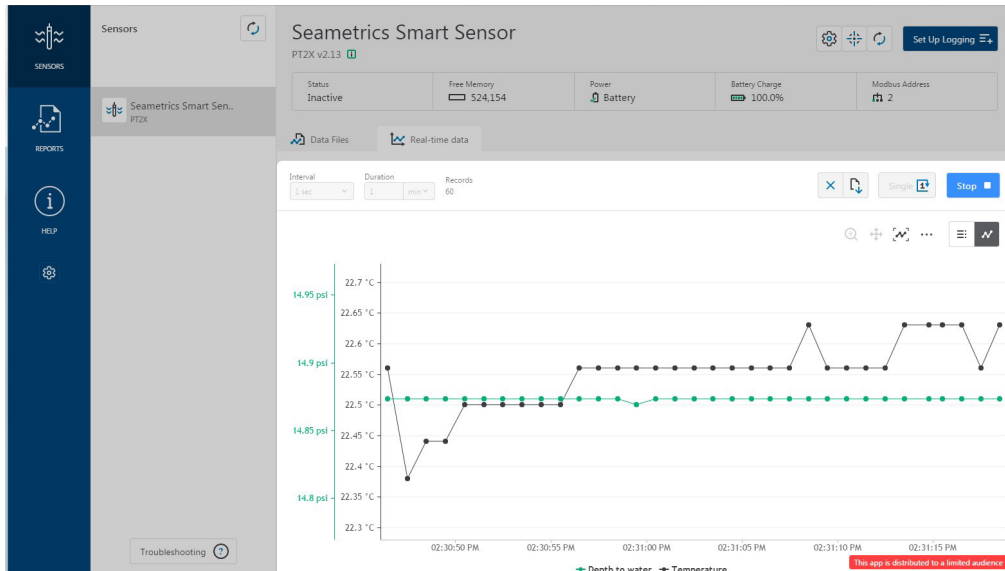

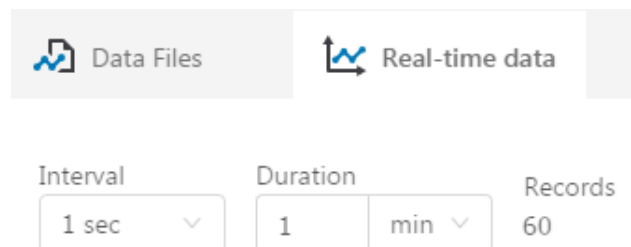To restore factory default settings click

Real-time Data

Connect to sensor and select the Real-time data tab
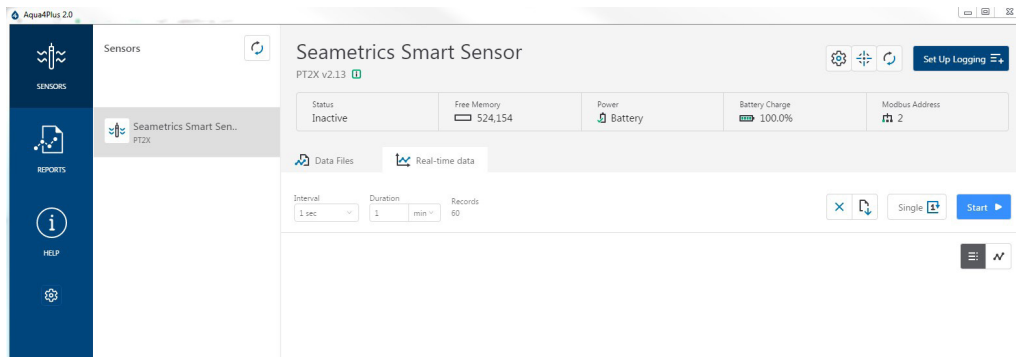
To start real-time readings click Start, readings default to table view. To switch to Real-time graphing view click the graph icon


Real-time readings default to a 1 second interval for 1 minute, to adjust enter your desired settings here:

To save this data to the Reports section click the ⬇ button located next to the Single button in the Real-Time tab. This will permanently save this real-time data set to your Reports database.

Data Logging

Select Set Up Logging from the sensor screen. If there are no files currently on the sensor you'll see the Set Up Logging button active under the Data Files tab as well as in the upper menu. Once files have been started/logged on the sensor they will be displayed under the Data Files tab.
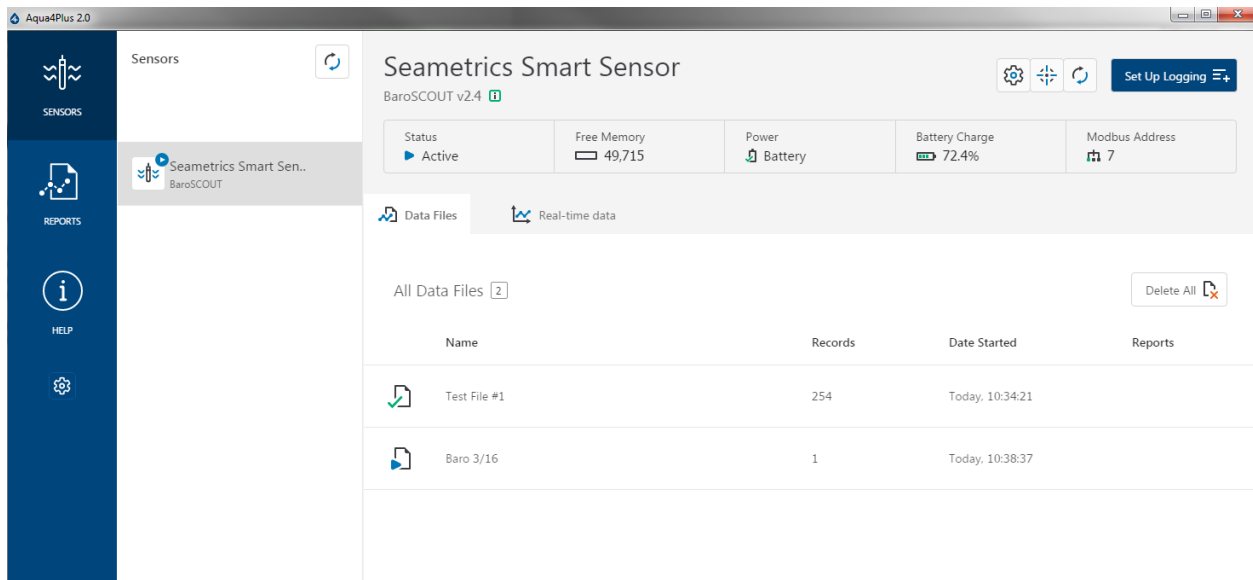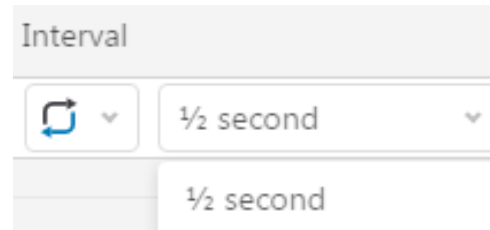

Set Up Logging Window

Here you will name your data file and set up the recording interval and duration of each logging phase. Select your desired recording interval and duration for each phase, Aqua4Plus will display the available memory at the bottom of the window.
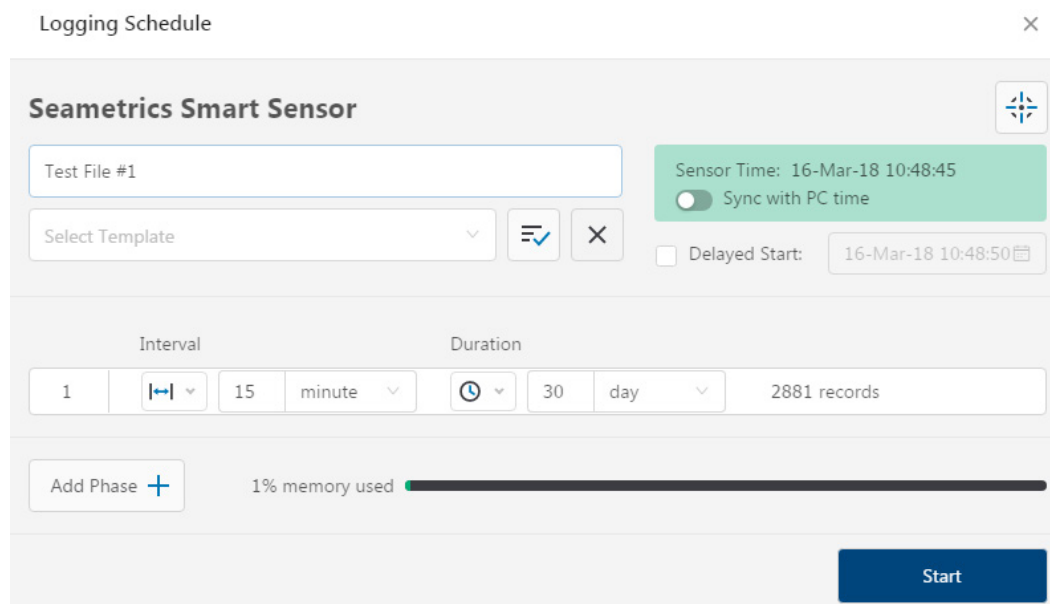
Click �⟩ ˅ to switch between interval and continuous data recording (supported sensors only) Select your continuous rate from the drop down box (on the right).
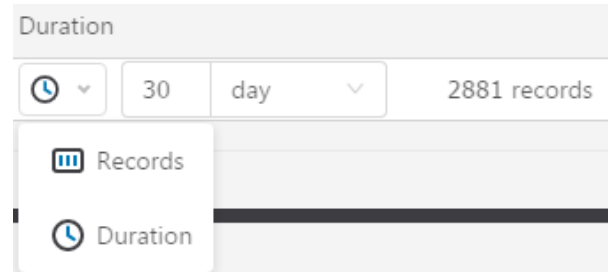
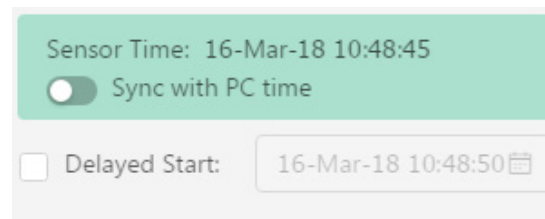Duration can be set by either number of records or by setting a duration time, as shown on the right.

When set by number of records the time of the recording phase will be displayed detailing how long that phase will run. When set by time, the total number of records for that phase will be displayed.

If you need to check settings or perform a calibration click ⟨icon⟩ before proceeding with logging setup to switch to the Settings and Calibration screen.

You may sync the sensor clock with the PC clock when starting logging by clicking the slider shown on the right.

Check the Delayed Start box and enter the desired date/time you would like logging to start. This is useful for syncing data when setting up multiple sensors on a site. Data will start logging at the set date/time rather than immediately when Start is pressed.
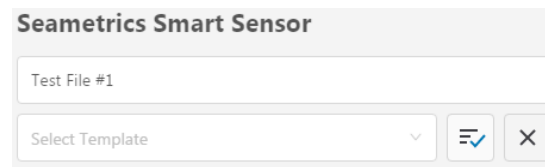
Data file name defaults to Test File # and may be re-named here, like on the right.

The 3 previous Logging Schedules that were programmed to a sensor will be listed under the Select Template drop down menu. There you will also find pre-programmed logging schedules such as 24 hour pump test, along with any custom logging schedules saved by the user.

To save a logging schedule as a template enter desired settings and click ⊟✓ This will add your custom schedule to the Select Template menu.

Once all the desired settings are made simply click Start to begin logging.

This will return you to the Sensor screen and your status will change to Active with the data file displayed under the Data Files tab. Mouse over an active file to pause, terminate, download, or view logging setup details.

Data files already downloaded will show ⬚ in the Reports column, clicking here will bring you to the reports screen to view the data. See Reports section for details.

You may only have 1 active data file recording on each sensor, however you can store multiple files in memory if desired.
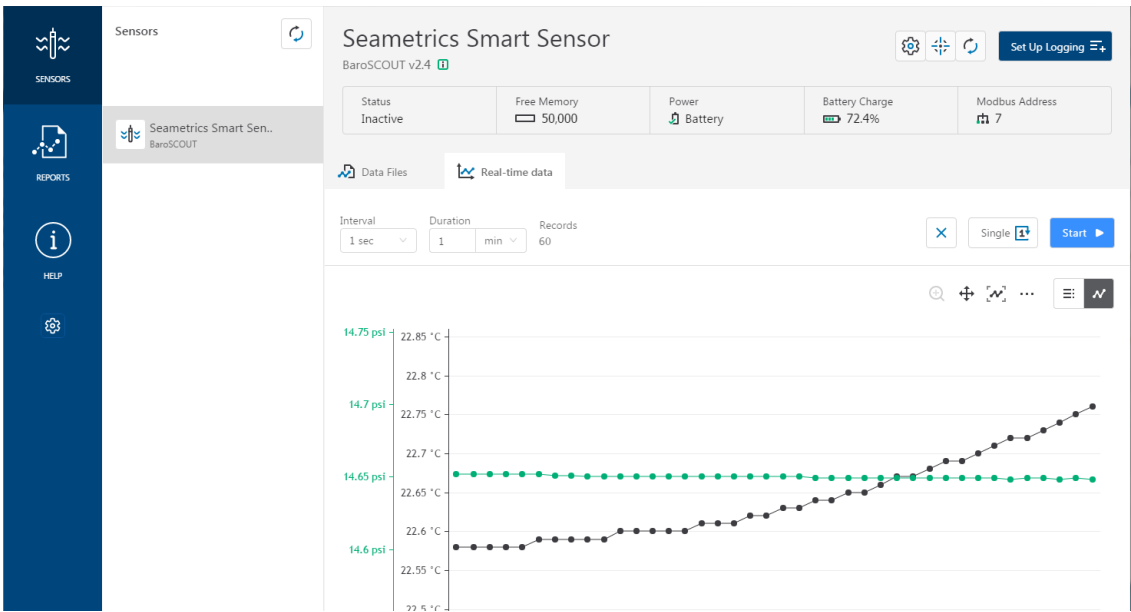
Starting a new file will automatically terminate the active logging and begin the new logging schedule. Real-time data is available during active logging.

To delete files from memory make sure they have all been downloaded to Reports. Files are removed from memory all at once rather than individually.

Once confirmed files are permanently deleted from the sensor memory.

Reports

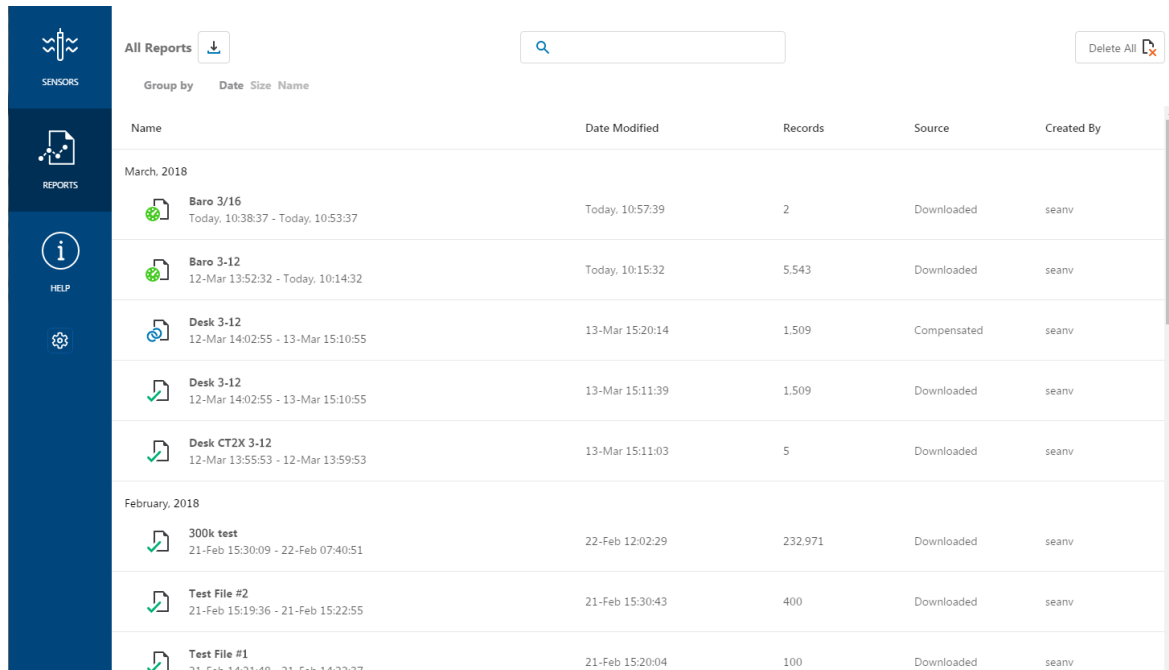Data downloaded from your sensor is stored in the Reports section of Aqua4Plus for viewing and editing. The files will be saved to default data folder on your PC as well. See Program Settings for default data folder location.

In the main view you'll see a list of reports sorted by date, size, or file name as selected here
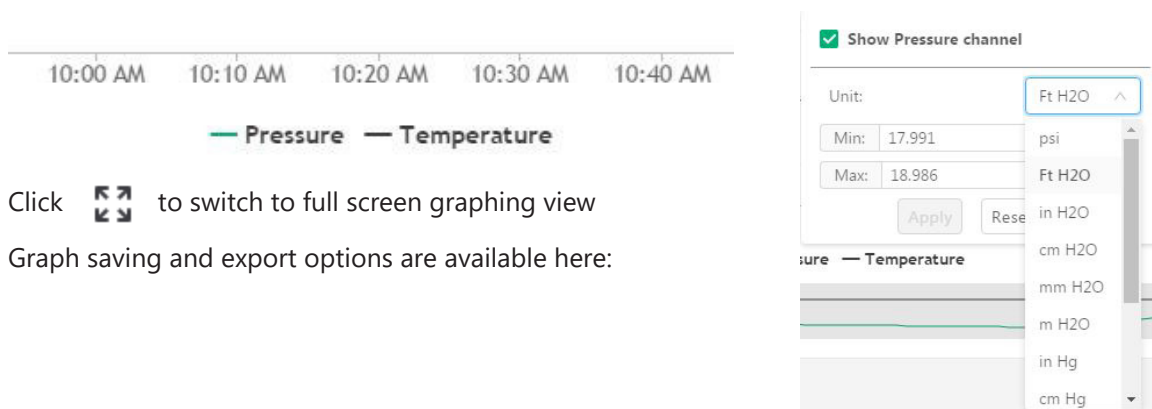
You can also search reports by keyword using the search box

Click on a report to bring up the report details.

Reports are displayed in graphing view by default. You can zoom to specific sections by selecting a section with you mouse or by adjusting the slider below the graph.

You may change the display units within the graph view by selecting the appropriate channel here:

Click to switch to full screen graphing view

Graph saving and export options are available here:

Click ☰: to view data as a table

Click Σ to view data statistics

Report Details

Desk 3-12

	Status	Records	Date Started
	Incomplete	1,509	🕐 12-Mar-18 14:02:55

ⓘ Information　　🔁 Data　　☰₊ Schedule

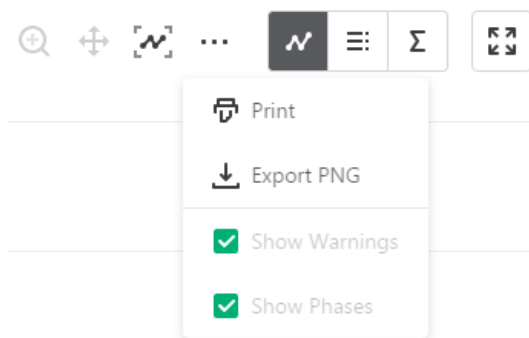| Name	Temperature °C	Conductivity µS/cm	Pressure psi	Salinity PSU	TDS mg/L
Sensor Range	150K ohm	0-300 mS/cm	500 psia	unknown	unknown
Min	21.02	337.8	14.535	0.1626	165.5
Max	23.45	360.0	14.700	0.1725	176.4
Mean	22.51	346.4	14.632	0.1664	169.7
Variance	0.54	38.4	0.002	0.0000	9.2
Deviation	0.74	6.2	0.045	0.0028	3.0
Calibration Date	unknown	19-Feb-18 12:48:12	21-Feb-18 14:22:57	unknown	unknown

The Information tab is a new feature allowing users to add metadata to their reports such as site location, field notes, or comments. The Schedule tab will display the logging setup details for the report

Report Details

Desk 3-12

	Status	Records	Date Started
	Incomplete	1,509	🕐 12-Mar-18 14:02:55

ⓘ Information　　🔁 Data　　☰₊ Schedule

Report Name

Desk 3-12

Location(GPS or Job Site)

Comment

Sensor name
Seametrics Smart Sensor

Sensor type
CT2X

Serial number
0021746043

Last modified
🕐 13-Mar-18 15:11:39

Downloaded
🕐 13-Mar-18 15:11:39
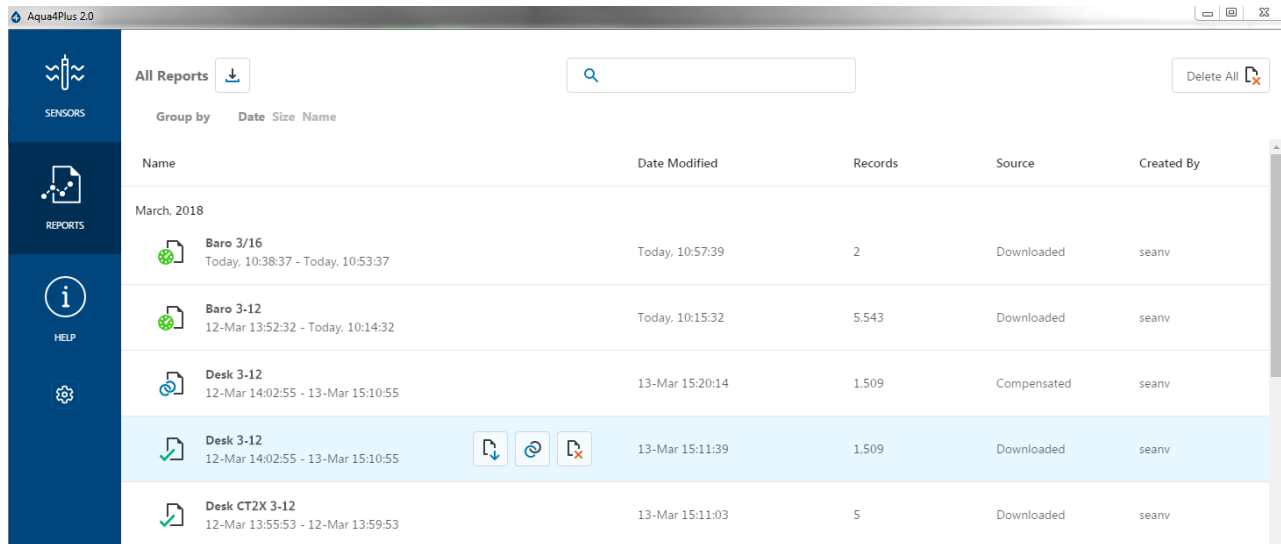
Click Export to export the report as a .csv file or .a4d file for distribution or use in 3rd party software.

Click Delete to delete the report from Aqua4Plus.

You can also import .a4d files from compatible sensors into Aqua4Plus by clicking [↓] top of the Reports screen.
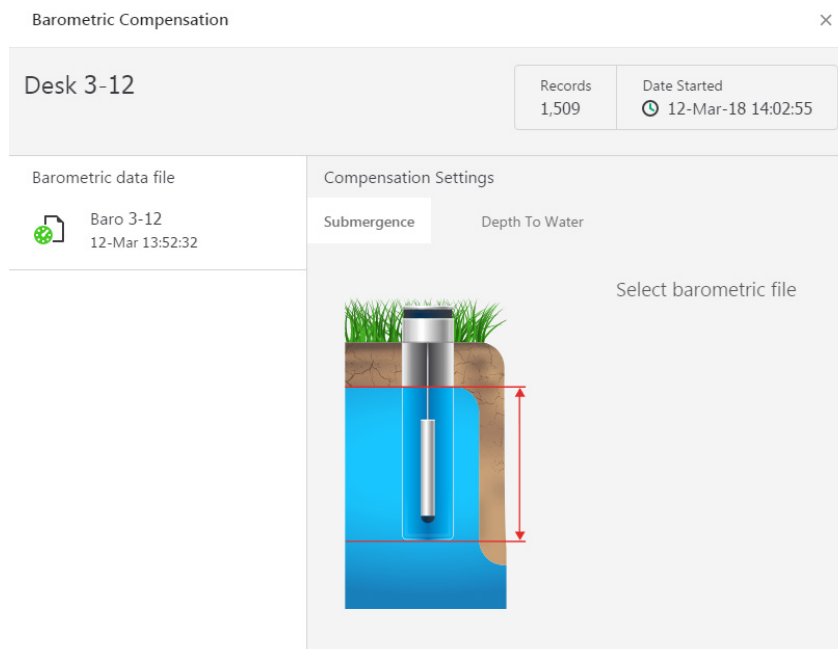
Barometric Compensation

For PSIA sensors we've built a new barometric compensation utility into the Reports section. Click [⊘] on a report to compensate the data for barometric pressure.

Corresponding barometric files are filtered by date/time and displayed to the left. Select the barometric file you would like to use to compensate the report, select either the Submergence or Depth To Water tab, then click Continue.

If compensating for Depth to Water enter your depth to water reference measurement and the date/time the measurement was taken (typically taken with a water level indicator before data is uploaded from the sensor) before clicking Continue.

Aqua4Plus will perform the barometric compensation and create a new compensated report. Original reports are retained as uploaded.
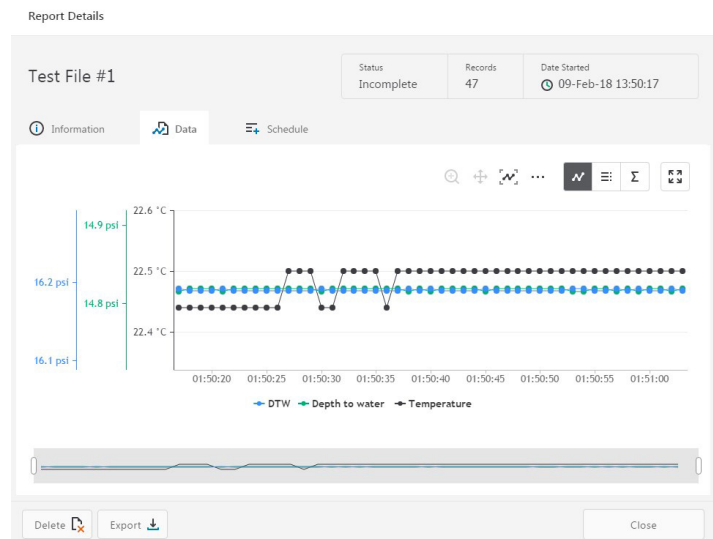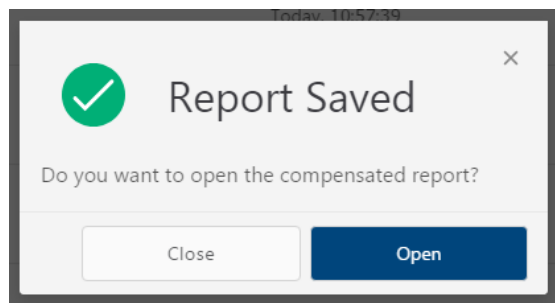
Compensated report can then be viewed and exported as needed.

Pressure Calibration

To perform a calibration setup on the pressure channel first connect to the sensor and ensure all data has been uploaded and erased from the sensor. Next select the calibration button

Next select the calibration setup you'd like to perform:
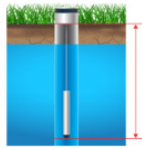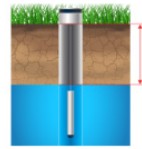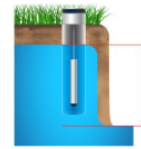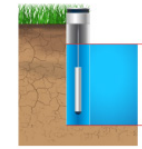
Confirm desired measurement units and click Continue.

Submergence:

One Point/Zero Point Calibration:

To zero pressure output to atmospheric pressure position the sensor in air in its desired installation position (typically vertical, if sensor will be installed horizontally position as such during 0 point calibration). Select 1 point Calibration under Calibration Type.

For PSIG sensors use 0 as the reference value and click Measure.

For PSIA sensors enter current barometric pressure from a known accurate barometer set to matching units. Enter your reference value in the Ref. Point box and click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration.

Click Ok to accept the reading and Aqua4Plus will calculate a new pressure offset. Click Apply to confirm the new offset value and Aqua4Plus will provide a real time reading to verify calibration was successful:
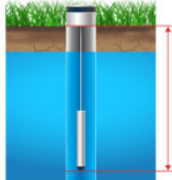
2 Point submergence calibration **ONLY RECOMMENDED IF YOU HAVE AN ACCURATE PRESSURE REFERENCE.** Our Smart Sensors rarely change slope during normal use, however if you have an accurate pressure source it is possible to perform a 2 point calibration on the pressure channel.

Select 2 point Calibration under Calibration Type

Perform first point calibration as listed above and click Next

Enter known pressure value in matching units in the Ref. Point box for second point measurement
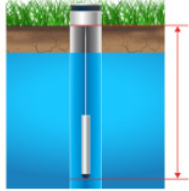
Aqua4Plus will take 10 measurements and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration.

Click Ok and Aqua4Plus will calculate the new slope and offset values. Click Apply to confirm the new slope and offset values and Aqua4Plus will provide a real time reading to verify calibration was successful.

Groundwater Elevation

Position the sensor in its desired location and ensure all data has been uploaded and erased from the sensor before proceeding with calibration.

Once positioned connect to sensor and select the calibration button, followed by selecting the Groundwater Elevation option. Double check measurement units selection before proceeding.

Enter your current Groundwater Elevation reading in the Ref. Point box, making sure to match measurement units.

Click Measure and Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration.

Click Accept and Aqua4Plus will calculate a new offset, click Apply to accept the new offset and Aqua4Plus will provide a real time reading to verify calibration was successful.

Staff Gauge

Position the sensor in its desired location and ensure all data has been uploaded and erased from the sensor before proceeding with calibration.

Once positioned connect to sensor and select the calibration button, followed by selecting the Staff Gauge option. Double check measurement units selection before proceeding.

Enter your current Staff Gauge reading in the Ref. Point box, making sure to match measurement units.

Click Measure and Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration.

Click Accept and Aqua4Plus will calculate a new offset, click Apply to accept the new offset and Aqua4Plus will provide a real time reading to verify calibration was successful.

Removing calibration setup values

To return to factory default simply enter an offset of 0 and slope of 1 in the Offset and Slope boxes:

Click Apply to confirm settings and Aqua4Plus will provide a real time reading to confirm.

Adjusting for specific gravity

You may enter the specific gravity of your fluid as an inverse multiplier (1/SG) in the Slope field to adjust for specific gravity when needed. Click Apply to confirm settings and Aqua4Plus will provide a real time reading to confirm.

Conductivity Calibration

To perform a Conductivity Calibration, first connect to your CT2X and ensure all data has been uploaded and erased from the sensor.

Prepare your calibration standard(s) and place the sensor in your first point calibration standard, allow a few minutes for the temperatures to equalize. Check for stable temperature readings under Real-time Data and note the current temperature value. Next select the calibration button.

To calibrate Conductivity select Depth/Submergence, confirm your measurement units, then click Continue.

The calibration screen will default to the conductivity channel, you may also switch to the Pressure channel if you need to perform a pressure calibration setup.

Make sure the Non-linear box is NOT checked during calibration. If you plan to record data after calibration using the Non-linear temperature compensation option come back after calibration is complete and select the Non-linear box.

Select one or two point calibration from the Calibration Type drop down box. Seametrics recommends performing a two point calibration that brackets your expected conductivity range in the field for best accuracy.

Enter the RAW conductivity value of your standard at the temperature noted above (consult conductivity standards temperature reference chart) and enter it in the Ref. Point box. Next click Measure.

Note: If your conductivity values appear to drift slightly try stirring your standard with the sensor. If the standard has been sitting for a time the solution can begin to settle out affecting the readings.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the first point reading click Ok.

If you've selected one point calibration next click Apply to apply the new offset value, confirm other settings as needed, then close the calibration window.

If you've selected two point calibration place the sensor in your second point standard and enter the RAW conductivity value of the standard at the temperature noted above (consult conductivity standards temperature reference chart) and enter it in the Ref. Point box. Next click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the second point reading click Ok. Your new offset and slope values will appear to the right, confirm other settings as needed and click Apply to confirm your new slope and offset values. Aqua4Plus will provide a real time reading to verify calibration was successful.

Before closing the calibration screen make sure your settings are correct for temperature compensation as desired. Use the non-linear box for low conductivity natural water applications. This will disable the Ref. Temp and Temp Coef settings and use the nLFn function to temperature compensate the conductivity channel. This method meets the DIN EN 27888 standards.

For linear temperature compensation set the temperature you'd like your conductivity corrected to in the Ref. Temp C box, and the appropriate temperature coefficient you'd like to use in the Temp Coef %/C box. Seametrics defaults the conductivity to a Ref Temp of 25 and 2.1 %/Deg C for the Temp Coef.

TDSfctr is the multiplier applied to the conductivity readings to provide TDS output. Seametrics defaults to 0.49, change as necessary to fit your TDS multiplier.

Confirm any changes by clicking Apply. Once calibration setup is complete click Close. You may now close the calibration window and proceed with deployment.
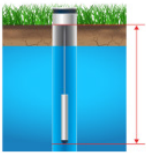
pH Calibration
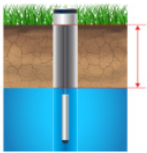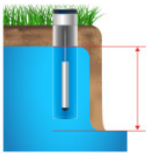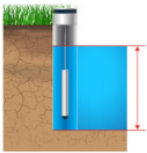
To perform a pH calibration, first connect to your TempHion and ensure all data has been uploaded and erased from the sensor. Seametrics recommends pH buffers of 4, 7, and 10 for calibration. For a one-point calibration, select the buffer closest to the expected values in your samples. For a two point calibration, select the two buffers that most closely bracket the expected values in your samples. Seametrics recommends a 2 point calibration that brackets the expected pH range of your site.

Note: If your TempHion has been stored dry, a 4 hour to overnight soak in pH 4 buffer is needed to recondition the pH bulb.

Prepare your pH buffer(s) and place the sensor in your first point calibration standard, ensure that that the pH bulb is fully submerged, than allow a few minutes for the temperatures to equalize. Check for stable readings under Real-time Data.

Next select the calibration button.

Enter your first point pH value in the Ref. Point box, next click Measure. Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the first point reading click Ok. If only performing a 1 point calibration click Apply to save new calibration values then close the calibration window, otherwise proceed to the 2nd point by clicking Next.

Place the sensor in your second point buffer and allow a few minutes for it to acclimate. Enter the pH value of the buffer in the Ref. Point box and click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the second point reading click Ok. Your new offset and slope values will appear to the right, click Apply to confirm your new slope and offset values. Aqua4Plus will provide a real time reading to verify calibration was successful. You may now close the calibration window and proceed with deployment.

Redox/ORP Calibration

Note on units: The display unit "Eh" refers to readings in millivolts referenced to a hydrogen electrode. In other words, Eh represents millivolt readings that would have been obtained if using a hydrogen electrode and will apply the needed offset to the readings after calibration. The units "mV" are raw millivolt readings from the sensor and will not apply any calibration offsets. From the program settings, set the display units to either mV or Eh, whichever you will be using.

DO NOT USE ZOBELL SOLUTION!

Zobell solution and other Redox standards may foul the TempHion's electrodes. For Redox/ORP calibration a secondary meter should be used to obtain the reference point value. Use a Redox/ORP meter that is calibrated to your desired Redox/ORP scale to obtain this value.

Place both the TempHion and the reference meter into your sample (ideally the waters the TempHion will be installed in). Once readings have stabilized note the value on the reference meter. Open the calibration window and select the ORP tab, then enter reference meter reading in the Ref. Point box. Next click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the reading click Ok, your new offset value will appear to the right. Click Apply to confirm your new offset value and Aqua4Plus will provide a real time reading to verify calibration was successful. You may now close the calibration window and proceed with deployment.

ISE-Bromide Calibration

Seametrics recommends using the "known addition method" for preparing calibration solutions. Using this method, the sensor is placed in 100 mL of distilled or deionized water (depending on the container used, more DI water may be needed. Simply scale the following measurements up as needed to fully submerge the electrode). A small amount of standard is added to create a known concentration. The first point is measured. An additional amount of the same standard is added to create a second known concentration. The second point is measured. Seametrics recommends 0.1 Molar NaBr (equates to 7990 ppm). The following instructions are based on using this standard. If you use a different standard, or prefer not to use the known addition method, you must use some other method to determine the concentration used for the first and second point when calibrating. Seametrics recommends performing a 2 point calibration for Bromide.

Prepare your first point standard by adding 1mL of 0.1 Molar NaBr standard per 100 mL of DI water to your container. Accurate measurement of both the DI water and NaBr solution are extremely important for Bromide calibration, Seametrics recommends using a lab grade 100 mL flask for DI water and pipette for the NaBr solution.

Place the TempHion in the standard and use it to stir the solution well. Allow a few minutes for temperature to equalize and readings to stabilize.

Note: If your TempHion has been stored dry you will want to leave it to soak in the first point for about 30 minutes to recondition the Bromide electrode.

Once temperature and readings appear stable enter your first point value in the Ref. Point box, for 0.1 Molar NaBr this equals 79.1 ppm. Next click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the reading click Ok, your new offset value will appear to the right. Click Next to continue on to the 2nd point. If only performing a 1 point calibration click Apply to confirm your new offset value and Aqua4Plus will provide a real time reading to verify calibration was successful.

To prepare the second point standard simply add an additional 10 mL of 0.1 Molar NaBr per 100 mL of DI water to your first point solution. Stir well using the TempHion to ensure the solution is fully mixed. Allow a few minutes for the TempHion to acclimate to this solution then enter your reference value in the Ref. Point box, for 0.1 Molar NaBr this equals 791.8 ppm. Next click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the reading click Ok, your new slope and offset values will appear to the right. Click Apply to confirm your new slope and offset values and Aqua4Plus will provide a real time reading to verify calibration was successful. You may now close the calibration window and proceed with deployment.

Turbidity Calibration

The Turbo ships calibrated from Seametrics, however calibration should be checked after shipping as the 0 point may shift. Normal wear and tear of the optical window will also cause the 0 point to shift over time, the exact timing will depend on installation environment and wiper maintenance schedule. In most cases a 1 point calibration in a 0 standard (or DI water) is sufficient to re-zero the output.

Note: When using NTU standards ensure your standard is rated Amco Clear for ISO 7027 infrared turbidity sensors. The calibration container should be dark and non-reflective for the most accurate results. Make sure the bottom face of the turbidity probe is submerged about 0.5" (12mm) into the calibration standard, and at least 2" (50mm) from the bottom of the container to avoid interference with the infrared signal.

Generally we will use 0 NTU, or DI water, as the first calibration point or 1 point 0 offset adjustment point. If deploying in higher turbidity sites use your lower NTU standard for the first point and bracket your expected range with the 2nd point standard.

Place the Turbo in your first point standard and enter the standards value in the Ref. Point box, next click Measure.

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the first point reading click Ok.

If you've selected one point calibration next click Apply to apply the new offset value, Aqua4Plus will provide a real time reading to verify calibration was successful.

If you've selected a two point calibration thoroughly rinse and dry the first point standard from the probe, then place it in the 2nd point standard and click Next.

Enter the value of your 2nd point standard and click Measure

Aqua4Plus will take 10 readings and display the average. Watch for stability while Aqua4Plus is measuring to ensure an accurate calibration. To accept the second point reading click Ok. Your new offset and slope values will appear to the right, confirm other settings as needed and click Apply to confirm your new slope and offset values. Aqua4Plus will provide a real time reading to verify calibration was successful. You may now close the calibration window and proceed with deployment.

DO Calibration
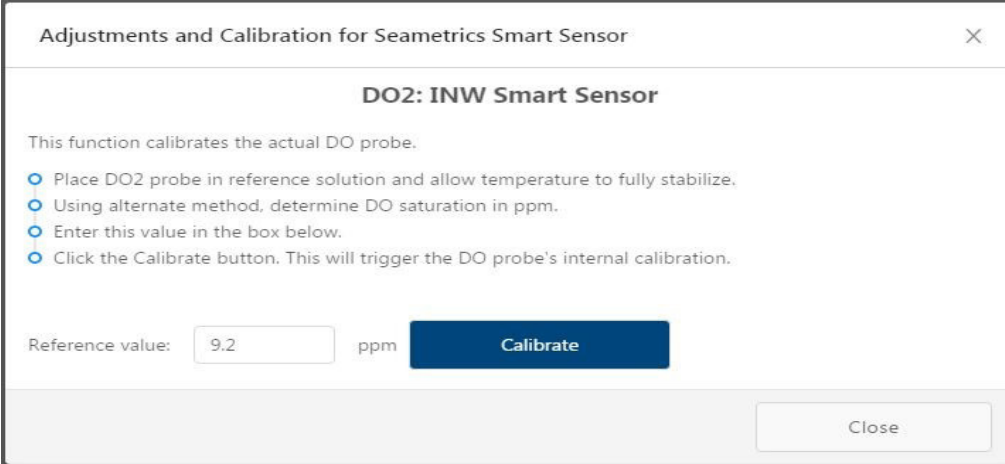
Place the DO2 sensor in your reference solution, allow a few minutes for temperature to stabilize.

Obtain the DO saturation using an alternate method, then select the calibration button.

Enter the saturation in the reference box, next click Calibrate.

While the DO2 is calibrating you'll see this:

Once complete close the calibration window and check readings in the real-time data section.

SOFTWARE LICENSE & LIMITED WARRANTY/DISCLAIMER - AQUA4PLUS

SOFTWARE LICENSE. The seller grants the user a non-exclusive license to use Aqua4Plus (hereafter known as the software), according to the following limitations and conditions.

The user may install Aqua4Plus on one or more desktop or laptop computers. All title and intellectual rights to the software are owned by the seller. No copies may be made or distributed except as described above. The user may not modify or reverse engineer the software.

A.   LIMITED WARRANTY. Seller warrants that the software will substantially perform the functions described in the accompanying written materials for a period of ninety (90) days from the date of receipt. If the software does not conform to the foregoing warranty, Seller shall, at Seller's sole and exclusive option, repair or replace the software or refund to the user a prorated portion of the license fee paid.

Seller warrants that any hardware accompanying the software will be free from defects in materials and workmanship under normal use and service for a period of one (1) year from the date of receipt. Seller's obligation under this warranty shall be limited to replacing or repairing the part or parts or, at Seller's option, the products which prove defective in material or workmanship within ONE (1) year from the date of delivery, provided that Buyer gives Seller prompt notice of any defect or failure and satisfactory proof thereof.   Any defective part or parts must be returned to Seller's factory or to an authorized service center for inspection.   Buyer will prepay all freight charges to return any products to Seller's factory, or any other repair facility designated by Seller.   Seller will deliver replacements for defective products to Buyer (ground freight prepaid) to the destination provided in the original order.   Products returned to Seller for which Seller provides replacement under this warranty shall become the property of Seller.

Seller's obligations under this warranty shall not apply to any product with (a) is normally consumed in operation, or (b) has a normal life inherently shorter than the warranty period stated herein.

In the event that equipment is altered or repaired by the Buyer without prior written approval by the Seller, all warranties are void.   Equipment and accessories not manufactured by the Seller are warranted only to the extent of and by the original manufacturer's warranty.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY.   IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY SHALL NOT APPLY.   SELLER'S WARRANTY OBLIGATIONS AND BUYER'S REMEDIES THEREUNDER (EXCEPT AS TO TITLE) ARE SOLELY AND EXCLUSIVELY AS STATED HEREIN.   IN NO CASE WILL SELLER BE LIABLE FOR CONSEQUENTIAL DAMAGES, LABOR PERFORMED IN CONNECTION WITH REMOVAL AND REPLACEMENT OF THE SENSOR SYSTEM, LOSS OF PRODUCTION OR ANY OTHER LOSS INCURRED BECAUSE OF INTERRUPTION OF SERVICE.   A NEW WARRANTY PERIOD SHALL NOT BE ESTABLISHED FOR REPAIRED OR REPLACED MATERIAL, PRODUCTS OR SUPPLIES.   SUCH ITEMS SHALL REMAIN UNDER WARRANTY ONLY FOR THE REMAINDER OF THE WARRANTY PERIOD ON THE ORIGINAL MATERIALS, PRODUCTS OR SUPPLIES.

SOFTWARE LICENSE & LIMITED WARRANTY/DISCLAIMER - AQUA4PLUS CONT..

B.   With respect to products purchased by consumers in the United States for personal use, the implied warranties including but not limited to the warranties of merchantability and fitness for a particular purpose, are limited to twelve (12) months from the date of delivery.

Some states do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you.   Similarly, some states do not allow the exclusion or limitation of consequential damages, so the above limitation or exclusion may not apply to you.   This limited warranty gives you specific legal rights; however, you may also have other rights which may vary from state to state.