

Aqua4Plus Lite

Control Software for Seametrics Smart Sensors



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What is Aqua4Plus Lite?

Aqua4Plus Lite is an easy-to-use Windows-based software for communicating with and controlling Seametrics' state-of-the-art Smart Sensors.

Aqua4Plus Lite is designed to control a number of separate sensors. Aqua4Plus Lite communicates with Seametrics Smart Sensors using the industry standard Modbus® communication protocol.

Smart Sensors collect and store data internally as user-programmed in Aqua4Plus Lite. The Aqua4Plus Lite software is also used to view, retrieve, and export the collected data.

Aqua4Plus Lite is a simplified version of Aqua4Plus, limited to the most common functions and sensors.

For more in-depth sensor control and for control of a wider variety of sensors, contact your Seametrics representative for information on the standard version of Aqua4Plus.

System Requirements

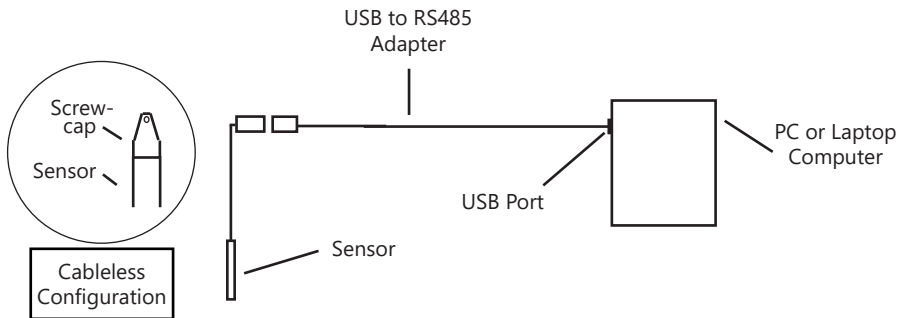
- Desktop or laptop computer running WinXP(SP3) or higher
- 20 MB free hard drive space
- USB port for installing the program and for communicating with sensors. (The program can also be installed over the Internet.)
- NOTE: The software may not work reliably on ultra-high definition (4K) laptops and monitors.

About this Manual

This manual contains in-depth instructions on basic aspects of using Aqua4Plus Lite, including initial setup, controlling the sensors, and retrieving data.

Connecting the Sensor to a Computer

In its cabled configuration, the sensor cable is terminated with a weather-resistant connector. In its cableless configuration, the sensor is terminated with a weather-resistant connector inside a screw-cap. Connect the weather-resistant connector to your computer's USB port as shown below.



Connect the sensor to your PC using a USB to RS485 adapter.

Aqua4Plus Lite communicates from the computer to your sensor using Seametrics' USB/RS485 cable. This cable requires drivers to be installed on your computer. If you are connected to the Internet when you first plug in the cable, it will normally obtain and install the correct drivers automatically. If this does not happen or if you do not have Internet connection, you can use Aqua4Plus Lite to install the drivers. Under the Configure Menu, click on Program Configuration, and then select Install USB/RS485 Drivers. Select your Windows operating system, and then click Install.

Installing the Aqua4Plus Lite Software


If your software is supplied on USB stick:

1. Insert the USB stick into PC or laptop.
2. Using Windows Explorer, navigate to the Aqua4Plus Lite folder on the USB stick.
3. Double-click on setup.exe.
4. The installation program will guide you through the installation process.

From the Internet:

5. Download Aqua4Plus Lite from www.seametrics.com
6. Unzip the file onto your computer.
7. Double click setup.exe
8. The Installation program will guide you through the installation process.

Once the software has successfully completed installation, you can remove the USB stick from your computer and store it in a safe place.

To start the Aqua4Plus Lite software, use the Start Menu to navigate to the program group you selected during installation (typically this will be Aqua4Plus Lite), and then click the Aqua4Plus Lite  icon.

If you have just installed Aqua4Plus Lite, please take a few minutes to go through the setup options and configuration.







Program Configuration

From the Configure Menu, select Program Configuration.


- | | |
|----------------------------|--|
| Set Computer Display Units | - Use this option to select the units in which to display your data. This will control how data is represented on the Real Time Monitor, the File Display Window, the Graph Window, and for exported data. |
| Set Scan Range | - Set the Lowest and Highest sensor address you will be scanning. |
| Set Default Folder | - Aqua4Plus Lite saves and looks for files in a default folder. Use this option to select a default folder location. |

Tool Button Bar

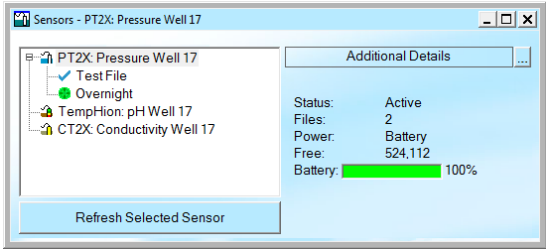
Aqua4Plus Lite has a “floating” tool button bar for access to most common functions. The tool bar may be moved wherever you want on the screen and it will always stay on top in easy reach. When you close Aqua4Plus Lite, it will remember the last location and return there once the program is reopened.

 Scan	Scan for any connected sensors
 Logging	Set up a logging schedule
 Retrieve	Retrieve data from a sensor
 Settings	Change settings and/or calibration on a sensor
 Open	Open a data file from the computer
 Export	Export a data file to .csv or .xls format

Finding, Selecting, and Viewing Sensors

Open the Sensor Window by clicking the  tool button. The software will scan for any connected sensors. A list of connected sensors will appear on the Sensor Tree.

On the Sensor Tree, double-click to select a sensor. A list of data files stored on the sensor will be displayed below the sensor. Information regarding the selected sensor will display in the Sensor Information Panel to the right of the Sensor Map.




Click here to get additional details, as shown below.

Additional Details	
Sensor Desc:	Pressure Well 17
Sensor Type:	PT2X
Modbus	2
Serial Number:	0021304156
Firmware	2.13
Temperature Range: -40 - +125 degC	
Pressure Range: 15 psig	






Sensor Tree and Sensor Information Panel

Note that the information shown on the Sensor Tree and the Sensor Panel is static information. In other words, the program looks at the sensor and displays the information, but it does not keep going back to the sensor and getting the newest information. This is to save battery life on the sensor. To update the information on the Sensor Tree and the Sensor Panel, click on the "Refresh Selected Sensor" button below the Sensor Tree. This will re-query that particular sensor and update the display.

Sensor Tree:

The Sensor Tree displays a list of all sensors connected to the selected port. If no port is selected or no sensors are connected to that port, this tree will be empty. The Sensor Tree is an expanding tree display. Double-click on a sensor to expand the display to show data files, if any, currently stored on that sensor. Click on the  to the left of a sensor to hide the display of files for that sensor.


The different icons in front of each file indicate the current status, as follows:

-  Completed - has run to completion or has been terminated.
-  Paused - has been paused by operator.
-  Pending - awaiting a delayed start time.
-  Active - currently logging.
-  Configuring data area

Sensor Information Panel:

The top right portion of the Sensor Window displays information pertaining to the sensor that is selected on the Sensor Tree. This information will vary, depending on the type of sensor selected. Typical information may include:

<i>Status:</i>	Active - sensor is currently logging. Paused - logging has been paused. Pending - logging is awaiting a delayed start time. Inactive - no active, paused, or pending logging. Configuring... - configuring data area
<i>Files:</i>	Number of data files stored on selected sensor. Maximum of 60.
<i>Power:</i>	Battery or Auxiliary.
<i>Free:</i>	Approximate number of records that can be stored before the sensor memory is full. Total number of records varies by sensor type.
<i>Battery:</i>	Battery indicator - if Green, the battery is good, if Yellow, it is low, if Red, it is critically low.

To view further details, click the ellipsis  in the upper right corner for a drop-down information panel. Typical information for this drop-down panel may include:

<i>Sensor Description:</i>	User assigned description. (Set this description on the Configure Menu Sensor Configuration Set Sensor Description Option.)
<i>Sensor Type:</i>	Factory assigned sensor type.
<i>Modbus:</i>	This is the assigned Modbus address for the sensor. Each connected sensor must have a unique Modbus address. This address must be between 1 and 255. (Set this address on the Configure Menu Sensor Configuration Set Sensor Address.)
<i>Serial Number:</i>	Factory set sensor serial number.
<i>Firmware Revision:</i>	Sensor firmware revision number.
<i>Range/Element:</i>	Sensor range and element information may also be displayed.

Sensor Configuration

Use the Sensor Configuration on the Configure Menu to set options on individual sensors. Note that not all options will be available on all types of sensors. The program determines what sensor you are connected to and lists configuration items available for that sensor. In order to access items on the Sensor Configuration Menu, click on the sensor in the Sensor Map on the left panel.

- | | |
|-----------------------------|--|
| Erase All Data | - Erases ALL data in the currently selected sensor. |
| Set Sensor Address* | <ul style="list-style-type: none">- If you are connecting to several sensors, each sensor must have a unique address. This is also known as the Modbus address. Use this option to set the address.- Addresses must be between 1 and 255. Be sure to set the Lowest and Highest Sensor Addresses to include all addresses that you are using (see Configure Menu Program Configuration Set Scan Range.) |
| Set Sensor Clock* | - A popup box displays the time currently in the sensor and on your computer. To set from the computer's clock, click "Set from Computer Clock" and then click the Set Clock button. To specify a time, click "Set to Selected Time." Select the date and time, and then click the Set Clock button. |
| Set Sensor Description* | - Use to enter a description for a particular sensor. This information is displayed on the Sensor Window and is recorded with the collected data. |
| Battery Information Reset** | - See Appendix B |
| Set Direct Read Units** | - Use to set engineering units when not using Aqua4Plus or Aqua4Plus Lite. |

**Available to view but not change if there are any files stored on the sensor.*

***Not available on all sensors.*

Using the Real Time Monitor

Date / Time	Temperature(degC)	Pressure(psi)		Start
1-Apr-15 08:40:02	24.00	8.070		Single
1-Apr-15 08:40:03	24.00	8.071		Clear
1-Apr-15 08:40:04	24.00	8.080		
1-Apr-15 08:40:05	24.06	8.091		
1-Apr-15 08:40:06	24.06	8.101		
1-Apr-15 08:40:07	24.06	8.111		
1-Apr-15 08:40:08	24.00	8.122		
1-Apr-15 08:40:09	24.06	8.132		

Real Time Monitor

Use the Real Time Monitor (lower part of Sensor Window) to view live readings from the sensor that is selected on the Sensor Tree. These readings are not being recorded in the sensor, but only displayed for real time viewing. The Real Time Monitor can be used whether or not the sensor is actively recording.

To obtain and display a single reading, click the *Single* button.

To obtain and display readings continuously for 60 readings, click the *Start* button.

To stop the monitor, click the *Stop* button.

The Monitor displays a column for the sensor date/time and for each parameter being collected. Use the horizontal and vertical scroll bars as needed to adjust the view. Readings are displayed in the units selected from the Program Configuration Menu. For example, pressure might be displayed in psi or in Ft H2O, or something else. (See earlier section for Program Configuration.)

Logging

The Smart Sensor collects and stores data. A series of steps is programmed describing the number of samples to record and the sampling intervals. Several files can be in the Smart Sensor memory at any one time, several *completed* files (along with their data) and one *active* file. An active file can be either logging, paused, or pending (waiting for a delayed start time). The maximum number of records that can be stored depends on the type of sensor. Check your sensor documentation for details.

The Logging Schedule Window is used to create and/or view logging schedules. A schedule is a description of the test steps necessary for a particular test. Schedules can be saved to disk for later use or sent to a sensor. Note: There can only be one active schedule on a sensor. Once a new schedule is sent to a sensor, any currently active logging is terminated and the new schedule begins. All previous logs on the sensor are retained, along with their data, until erased, but cannot be run again.

Logging Schedule

File Name: TempHion: pH Well 17

☒ Delayed Start ☐ Set Sensor Clock

Phase	Logging Interval dd/hh:mm:ss	# Records	Phase Duration dd/hh:mm:ss
1	00/00:01:00	100	00/01:39:00
2	00/00:30:00	10	00/05:00:00
3	00/01:00:00	10	00/10:00:00
4			

Start

Open

Save As


Clear

Delete

Logging Duration:

Logging Schedule Window

Creating Logging Schedules:

1. Create a new schedule by clicking the  tool button. A Logging Schedule Window will open.
2. If you want to open a previously saved schedule, click the Open button, and then select the schedule you want. If you are satisfied with this schedule, skip to step 8. Otherwise, continue with the following steps.
3. Name your file by entering a name in the File Name box.
4. Describe test phases. Each schedule consists of up to 10 test phases. During data collection, these phases will be executed one after the other in sequence. Each phase can have different polling intervals and/or number of records. For example, you might want to record a reading every five seconds for 100 records, every 30 seconds for 100 records, and then every five minutes for the next 1000 records. The length of each phase shows in the right-hand column. The entire recording length shows at the bottom of the window.

To describe a test phase:

- Click in the Polling Interval column for the first phase.
- Enter your polling interval for this phase as dd/hh:mm:ss, where “dd” is number of days, “hh” is number of hours, “mm” is number of minutes, and “ss” is number of seconds between recordings. You only need to enter the smallest time interval you are using. For example, if you want a sample recorded every 10 seconds, you only need to enter 10 and then press the Tab key. The days, hours, and minutes will default to zero. Likewise, if you want a sample recorded every hour, you would enter 01:00:00, and the days would default to zero.



Some sensors can take readings more often than once per second. This is known as a “continuous rate.” Different sensors have different available rates.


To use the continuous rate for a particular phase, enter the letter ‘c’ in the polling interval rather than a specific time interval. The sensor will then use the rate that had been saved on the sensor. (Note: Use the standard version of Aqua4Plus to change the continuous rate, if needed.)

- Enter the number of records to record at this polling interval.
 - Press the Tab key and continue entering phases, as desired. (Note: some sensors can only record one phase.)
5. If desired, select Delayed Start: Click the Delayed Start checkbox. Enter the date and time to start. Time is in 24 hour format. This option is especially useful when you want to collect and compare data from several sensors. Create a schedule; save it to disk. Connect to each sensor in turn and send the schedule to that sensor by clicking the start button. Note: For accurate data, be sure the clocks in all the sensors have been set to the same time. To do this automatically, checkmark the Set Sensor Clock on this window. (Alternately, see the Sensor Configuration Menu for details on setting the clock).
- Entering Date: Click on the day, month, and year and enter the desired start date. To select from a calendar, click on the down-arrow next to the date and time. Select your start date from the calendar.
 - Entering Time: Click on the hours, minutes, and seconds and enter the desired start time.
- Note on Date:** Internally in the sensor, only the day of the month is stored. Logging will start the next time the day of the month matches the day of the month you selected - regardless of the month! For example: Suppose you select January 8th as your start date. The sensor will start the first time the day of the month is equal to 8. If today is January 5th, then it will start on January 8th. If today is January 20th, it will start on February 8th.
6. If desired, checkmark Set Sensor clock: If this is checked, the program will set the sensor clock to match the computer clock when sending the schedule information to the sensor. (Note: If this is not checked and the program detects that the sensor clock is more than five minutes different than the computer clock, it will give you the option of setting the clock.)





7. If desired, save the schedule to disk for future use: Click the Save As button, enter a file name or leave as is to accept the current file name, then click the Save button.
8. Send schedule to the sensor: Once you are satisfied with the schedule, you must send the it to the sensor. To do this, click the Start button. If you selected a delayed start time, the sensor will wait until the specified time and then begin collecting data, otherwise data collection will begin immediately.
(Note: Sending a schedule to the sensor will terminate any active, paused, or pending schedules - it will not erase any data.)

Pausing and Resuming:

You can manually pause and resume the logging on the sensor. To pause, right-click on the active file on the sensor map. (The active file will have a green icon  in front of the name.) Select Pause from the pop up menu. A hand icon  will display in place of the green icon.

To resume right-click on the paused file and select Resume. The hand icon will once again change to a green icon. Note: you cannot resume a terminated or finished file, one with a blue checkmark .


Terminating:

Active logging (running , paused , or pending ) can be terminated manually at any time. Right-click on the file and then select Terminate. The icon will be replaced by a blue checkmark .

Erasing Data:

To erase all data from the Smart Sensor, select Sensor Configuration from the Configure Menu, and then select Erase All Data. Alternately, you can right-click on the sensor. You cannot erase individual files. Erasing deletes ALL data on the sensor. Be sure you have retrieved all important data before erasing.

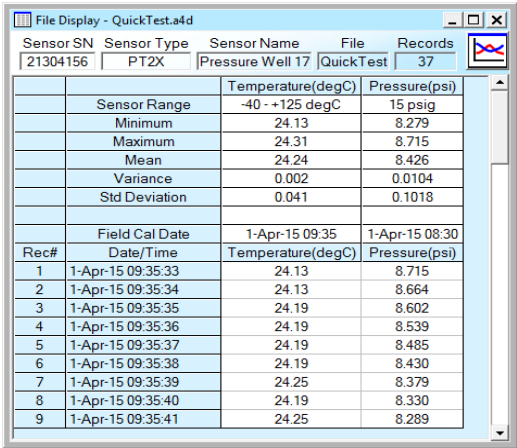
Retrieving Data

- If the data files are not displayed on the Sensor Tree, double click on the sensor from which you will be retrieving.
- Click on the file you want to retrieve.
- Click the  tool button. The Save dialog box displays.
- Enter a file name or leave as is to save with the current file name.
- Select a file type (optional). Retrieving always saves the data in the Aqua4Plus Data File (.a4d) format. Files can additionally be saved in alternate formats.
- Click the Save button.
- Click Start.
- When retrieval is complete:
 - If you retrieved only the Aqua4Plus Data File (.a4d), you can now click on the Done button, or you can click on the View button to view the data in the File Display window. (See more details on the File Display window in the next section.)
 - If you retrieved in Text (.csv) format, the file will automatically be opened in the File Display window, and you will also be given the option of viewing it in Excel. (Note: You must have Excel installed on your machine in order to make use of this option.)

Viewing Data

Aqua4Plus Lite displays collected data in both a tabular format and a graphing format.

Displaying Data in Tabular Format:




The screenshot shows a window titled "File Display - QuickTest.a4d". It contains a summary table at the top and a detailed data table below. The summary table lists Sensor SN (21304156), Sensor Type (PT2X), Sensor Name (Pressure Well 17), File (QuickTest), and Records (37). The detailed data table has columns for Rec#, Date/Time, Temperature(degC), and Pressure(psi), showing 9 rows of data from 1-Apr-15 09:35:33 to 1-Apr-15 09:35:41.

Sensor SN	Sensor Type	Sensor Name	File	Records
21304156	PT2X	Pressure Well 17	QuickTest	37

	Temperature(degC)	Pressure(psi)
Sensor Range	-40 - +125 degC	15 psig
Minimum	24.13	8.279
Maximum	24.31	8.715
Mean	24.24	8.426
Variance	0.002	0.0104
Std Deviation	0.041	0.1018

Rec#	Date/Time	Temperature(degC)	Pressure(psi)
1	1-Apr-15 09:35:33	24.13	8.715
2	1-Apr-15 09:35:34	24.13	8.664
3	1-Apr-15 09:35:35	24.19	8.602
4	1-Apr-15 09:35:36	24.19	8.539
5	1-Apr-15 09:35:37	24.19	8.485
6	1-Apr-15 09:35:38	24.19	8.430
7	1-Apr-15 09:35:39	24.25	8.379
8	1-Apr-15 09:35:40	24.19	8.330
9	1-Apr-15 09:35:41	24.25	8.289

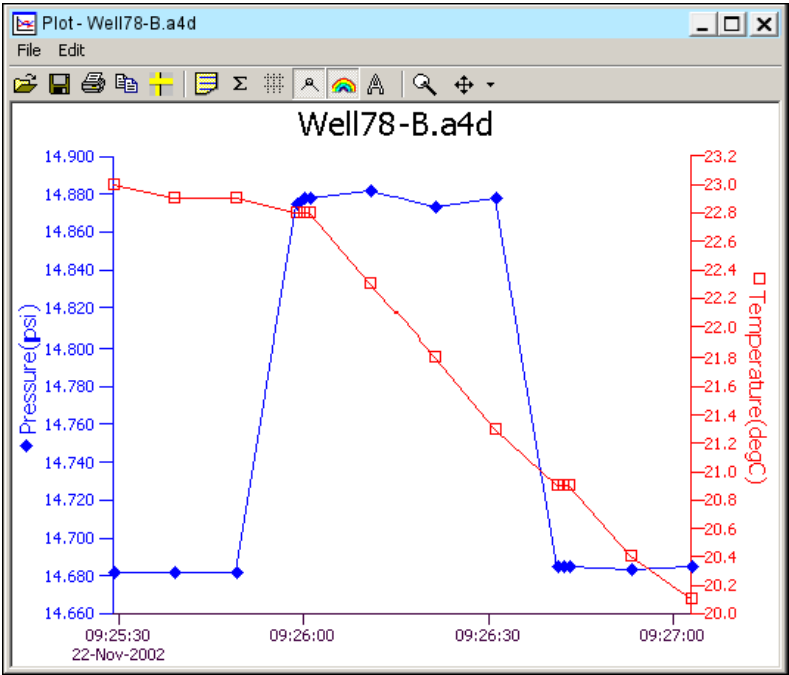
File Display Window

Click on the open button . Navigate to the desired file, and then click the Open button.


The File Display Window consists of two panels. The top panel displays various information about your data, such as number of records, file name, sensor name, etc.


The lower panel displays the actual data. The first few rows display statistical data about your records, including minimum, maximum, and mean values, as well as the variance and standard deviation. The remaining rows display the actual data.






Displaying Data in Graphing Format:

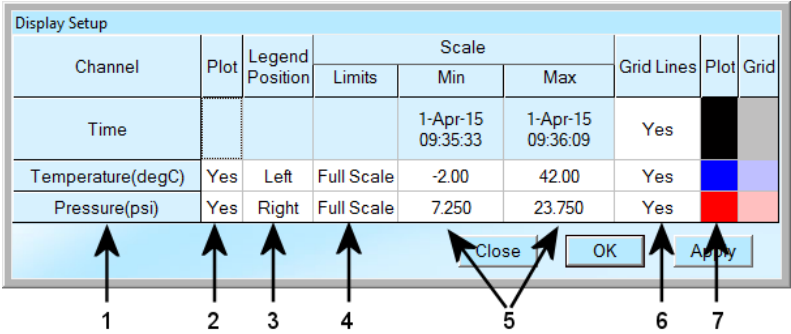


Graphing Window

Click on the graphing button  to open the Graphing Window. This window displays data that has been saved on your computer (files with an extension of .a4d). Navigate to the desired file, and then click the Open button.

The graphing window is a free-floating window and can be placed outside the main Aqua4Plus Lite window frame. It is often easier to view the graph with the graphing window maximized. Click the maximize button  in the upper right corner of the graphing window to view in maximized mode.

-  Click to open a new file. (Alternate = File Menu | Open)
-  Click to export the graph as a graphic file (.jpg, .gif, .bmp, or .png). (Alternate = File Menu | Export Graph)
-  Click to print the graph. What is seen on the screen will be printed – i.e., if notes or statistics are turned on, they will print. If the graph is zoomed in, it will print only the area showing on the screen.
-  Click to copy and paste to the Window's clipboard. Only the graph will be copied. To copy the Notes, highlight the notes and then click copy.
-  Click to open the Display Setup dialog box and change various display attributes.



Graph Display Setup

- Channel*
 - Lists all channels available to be plotted for the particular data file.
- Plot*
 - Click to toggle whether or not to plot any particular parameter. (Note: Time is always plotted and is always along the bottom of the graph.)
- Legend Position*
 - The legend for any parameter (except Time) can be displayed either to the left or to the right of the graph. Click here to toggle between left and right.
- Scale Limits*
 - Click to rotate among the following options:
 - Full Scale
 - Minimum and Maximum scales set to full scale for that channel on the sensor whose data is being displayed.
 - Data
 - Minimum and Maximum scales set to minimum and maximum data values for that channel in the displayed data file.
 - User
 - Set your own Minimum and Maximum scales.

- Scale Min/Max* - Displays current Minimum and Maximum scale values. Click and type in these boxes to change values for User defined scales.
- Grid Line* - Enable grid lines for any particular channel.
Note: Grid lines only show on the graph when the grid lines tool button is depressed.
- Plot Color* - Click to change color for any particular channel. Click the color under grid to change the grid line color for that parameter.



Click to add notes to your graph. You can add up to 500 words below the graph.



Click to display statistics below the graph (min, max, mean, variance, standard deviation, and field calibration values).



Click to turn grid lines on or off. Only grid lines enabled on the display setup will show.



Click to turn discrete points on or off.



Click to change from color to black and white. Some printers print better in plain black and white.






Click to change the size, color, and style of the font. Note that size and style affect all fonts on the graph, while color affects only the title.




Click to zoom in. Cursor will change to an arrow with an attached box. Click and drag to enclose the area you want to zoom.



Click the down arrow to right of icon to select scale:

- Full Scale** - Minimum and Maximum scales set to full scale for ALL channels on the sensor whose data is being displayed. (Set individual channels, if desired, under Display Setup )
- Data** - Minimum and Maximum scales set to minimum and maximum data values for ALL channels in the displayed data file. (Set individual channels, if desired, under Display Setup )
- User** - Select the user defined Minimum and Maximum scales specified under Display Setup .

Exporting Data

- Using the File Display window, open the file you want to export.
- Click on the  tool button.
- Select a file type, either the default Text (.csv) or Excel (.xls).
- Select a file location and enter a name for the file or leave as is to accept the current file name.
- Click Save. You will be given the option of viewing it in Excel*. (Note, you must have Excel installed on your machine in order to make use of this option.)

** If you are using Windows 10, you will not be given the option of exporting to .xls or to open the file in Excel. It will simply export the data to a .csv (comma separated values) file. See Importing Data Into a Spreadsheet, below, on how to import the .csv file into Excel.*


Importing Data Into a Spreadsheet

To import data to a spreadsheet or database, you must first Retrieve and Export the data to a .csv or .xls file. (See previous sections on retrieving and exporting.) Most spreadsheets and databases can readily import .csv files. Microsoft® Excel can import either .csv or .xls files. Following are instructions for importing a data file into Excel. For importing into other programs, see documentation with the particular program.

- Open Excel.
- Click on the File menu, and then select Open.
- On the Open dialog box, click the down-arrow to the right of the File Types dropdown box.
- Click the option All Files.
- Navigate to the saved file, and then click the Open button in the lower right corner of the dialog box.

The data will be opened in Excel. (Note: While Aqua4Plus Lite can handle over 500,000 records, Excel versions prior to version 2007 were limited to approximately 65,000 records.)

Appendix A: Sensor Settings and Calibration

To adjust sensor channel offsets, calibration, depth-to-water or elevation, and other various settings, click the Settings tool button . In the Settings and Calibration window, click on the channel you want to adjust. Specific instructions for each channel are displayed in the right panel. Different sensors have different available settings. Refer to the specific sensor manual for further details.

Settings and Calibration

PT2X: Pressure Well 17

Channels

1: Temperature

2: Pressure

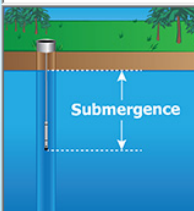
Channel Label: Pressure

Cal Date: 1-Apr-15 08:30

slope: 1.000000

offset: 8.0000 psi

Comment:



Select Setting Type

Depth/Submergence

First Point

Second Point

Ref. psi:

Measured:

Measure

Measure

Apply

Step-by-Step Instructions

Submergence

One-Point Calibration:

-- Computing Offset --

- Place sensor in the fluid you are measuring at a precise known level.
- In the **Ref** box for the first point, enter this level or pressure.
- Click first **Measure** button.
- When readings have stabilized, click the **Accept** button in the pop-up box.

-- Applying Offset --

- Click the **Apply** button to apply calculated offset.
- The calculated offset will be transferred to the offset field near the top of the window.
- Click **OK** to save the value to the sensor!!!

Two-Point Calibration:

-- Compute First Calibration Point --

- Place sensor in the fluid you are measuring at a precise known level.
- In the **Ref** box for the first point, enter this level or pressure.
- Click first **Measure** button.

OK

Cancel

Settings and Calibration Window

Appendix B: Battery Information and Reset

Some sensors have an internal battery life calculator based on usage and type of batteries. If your sensor supports this feature, it will be available from Sensor Configuration under the Configure Menu - Battery Information and Reset. **Whenever you change batteries in your sensor, you should open this window, checkmark the box that says you have just put in new batteries, and select the battery type.** Once this has been done, the battery level displayed on the main sensor panel will show the estimated life remaining as a percentage*. If your sensor does not have this feature the battery level on the sensor panel will show the actual battery voltage rather than percent of life remaining.

Battery Information and Reset

PT2X: Pressure Well 17

Checkmark the box below if you have just put in fresh batteries. Be sure the correct battery type is selected below.

☒ I have just put in fresh batteries.

Battery Type:

"Alkaline AA (Long-Life)"

Percent Battery Life Remaining: 100 %

Current Battery Voltage: 2.6 V

Date Batteries Last Changed: 01-Apr-2015

Save and Redisplay

Save and Close

Cancel

Battery Information and Reset Window

* If your sensor has this feature but it has not been set, then the battery life bar may not display on the sensor panel.

Appendix C: Regional Considerations

Window's regional settings control such things as how dates are formatted and whether a comma or a period is used as a decimal symbol.

Date Formats

Aqua4Plus Lite does not use the regional settings when displaying dates. All dates are displayed as d-mmm-yy, for example, 8-Oct-14. This applies to all Aqua4Plus Lite windows and to the exported .csv file. If you open the .csv file in Excel or export in the Excel format, dates may be formatted differently, depending on the settings in Excel.

Comma vs. Period

In the United States, a period is used, for example, 12.458. In some countries, a comma is used, for example, 12,458. If your computer is set to use the comma, then the Settings and Calibration fields in Aqua4Plus Lite will truncate anything after the comma. To work around this, you will need to change the Decimal symbol and Digit grouping symbol setting in Windows. You should only have to do this during calibration and can change back to your normal settings after calibration is complete.

To change these settings:

- Access the Regional and Language settings from Control Panel.
- On Windows 7, click the Additional Settings button; on XP, click the Customize button.
- Click the Numbers tab.
- Change the settings as shown below, and then click Apply.

The screenshot shows the 'Numbers' tab in the Windows Regional Settings. The 'Example' section shows 'Positive: 123,456,789.00' and 'Negative: -123,456,789.00'. The 'Decimal symbol' is set to '.' and the 'Digit grouping symbol' is set to ','. Two callouts with yellow arrows point to the dropdown arrows for these settings, with text boxes saying 'Click the dropdown arrow and select the period in this box.' and 'Click the dropdown arrow and select the comma in this box.'

Before changing Settings and Calibration values, select a period as the decimal symbol and a comma as the digital grouping symbol. After you are done changing the Settings and Calibration values, you can return these settings to your normal settings.

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