




# Product Tutorial

# Using Agent Software with Vibrating Wire Sensors



# Before Continuing


 Prior to viewing this tutorial, please watch the Using Agent Software with LC-2 Dataloggers tutorial and familiarize yourself with the basics of how to use the Agent program

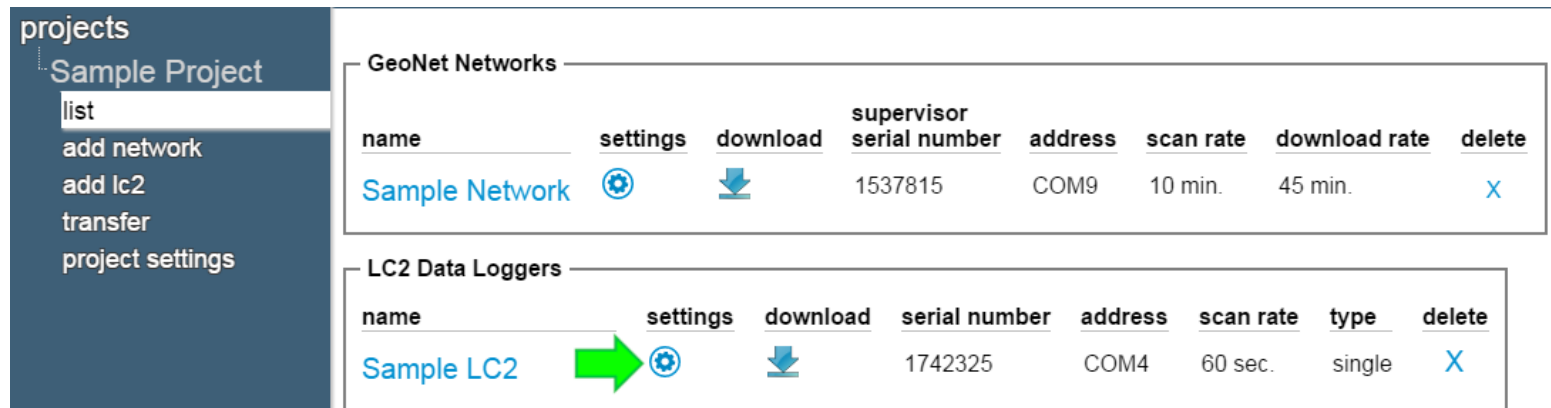
If you have not already done so, create a Project in the Agent program and add an LC-2 that is reading vibrating wire sensor(s), then perform a data download

# Adding Sensors



# Adding a Reading Sensor

- To view the data collected from a vibrating wire sensor:
  1. Select a Project, then click the  icon that corresponds with the desired LC-2

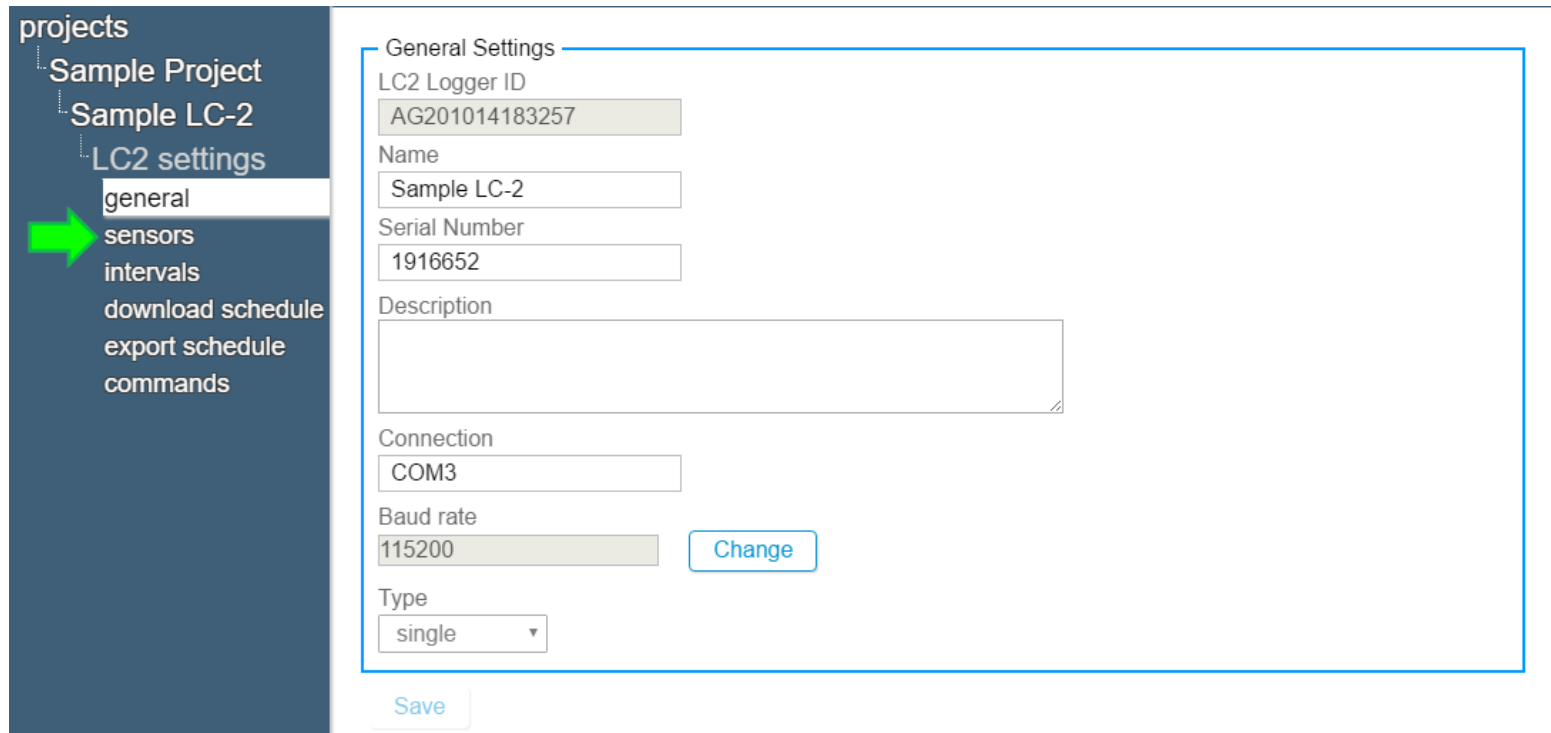


The screenshot displays a web interface for managing projects. On the left, a sidebar titled 'projects' contains a dropdown menu for 'Sample Project' with options: 'list', 'add network', 'add lc2', 'transfer', and 'project settings'. The main content area is divided into two sections:

- GeoNet Networks:** A table with columns: name, settings, download, supervisor serial number, address, scan rate, download rate, and delete. It contains one entry: 'Sample Network' with a settings icon (gear), a download icon, serial number 1537815, address COM9, scan rate 10 min., download rate 45 min., and a delete icon (X).
- LC2 Data Loggers:** A table with columns: name, settings, download, serial number, address, scan rate, type, and delete. It contains one entry: 'Sample LC2' with a green arrow pointing to its settings icon (gear), a download icon, serial number 1742325, address COM4, scan rate 60 sec., type single, and a delete icon (X).

# Adding a Reading Sensor (Continued)

2. Agent will navigate to the “general” LC-2 settings; click “sensors” on the left side of the screen



The screenshot displays a web application interface. On the left is a dark blue sidebar with a tree view of navigation items: 'projects', 'Sample Project', 'Sample LC-2', and 'LC2 settings'. Under 'LC2 settings', 'general' is highlighted with a white background, and a green arrow points to 'sensors'. Other items in the sidebar include 'intervals', 'download schedule', 'export schedule', and 'commands'. The main content area on the right is titled 'General Settings' and contains a form for 'Sample LC-2'. The form fields are: 'LC2 Logger ID' (AG201014183257), 'Name' (Sample LC-2), 'Serial Number' (1916652), 'Description' (empty text area), 'Connection' (COM3), 'Baud rate' (115200) with a 'Change' button, and 'Type' (single dropdown). A 'Save' button is located at the bottom left of the form area.

# Adding a Reading Sensor (Continued)

3. Select the model of sensor being read from the drop-down list

The screenshot displays a web interface for configuring a sensor. On the left, a dark sidebar contains a navigation menu with the following items: 'projects', 'Sample Project', 'Sample LC-2', 'LC2 settings', 'general', 'sensors' (highlighted), 'intervals', 'download schedule', 'export schedule', and 'commands'. The main content area is titled 'Sample LC-2' and includes the following information:

- Name: Sample LC-2
- Serial number: 1916652
- Device type: single
- A 'Save' button is located below the device type.

Below this information are two sections:

- Logger Sensors:** A table with three rows: 'AuxBat', 'Battery', and 'Logger Temp'. Each row has 'edit' and 'alerts' links.
- Readings Sensors:** A table with one row. The 'Sensor' column has a dropdown menu open, showing a list of sensor models: '<none>', 4000, 4100, 4200, 4400, 4420, 4450, 4500 (highlighted with a green arrow), and 4600. The 'Thermistor' column has a 'Standard' dropdown menu. The row also has 'edit' and 'alerts' links.

# Adding a Reading Sensor (Continued)

## 4. Click "edit"

The screenshot displays a web interface for configuring a sensor. On the left, a dark sidebar contains a navigation menu with the following items: 'projects', 'Sample Project', 'Sample LC-2', 'LC2 settings', 'general', 'sensors' (highlighted), 'intervals', 'download schedule', 'export schedule', and 'commands'. The main content area is titled 'Sample LC-2' and shows the following configuration details:

- Name: Sample LC-2
- Serial number: 1916652
- Device type: single
- A 'Save' button is located below the device type information.

There are two sections for sensor configuration:

- Logger Sensors:** This section contains three entries: 'AuxBat', 'Battery', and 'Logger Temp'. Each entry has 'edit' and 'alerts' links next to it. The 'Battery' entry is highlighted with a grey background.
- Readings Sensors:** This section contains one entry for a 'Thermistor' sensor. The entry is numbered '1' and has a dropdown menu set to '4500'. It has 'edit' and 'alerts' links next to it. A green arrow points to the 'edit' link.



# Adding a Reading Sensor (Continued)

5. The edit sensor dialog box will open

**Edit Sensor**

**Sensor**

Name:  Serial Number:  [Get Calibration](#)

Type:  Category:  Calibration Units:  Output Units:

Multiplier:  Offset:

Description/Notes:

Start Date: 2016-08-22 End Date: None [Change](#)

Choose a color:

**Calculations (ftH2O)**

Calculation:  $[G \cdot (R_1 - R_0) + K \cdot (T_1 - T_0)] \cdot \text{Multiplier} + \text{Offset}$

Output =  $[ 1 \cdot (R_1 - 0) ] \cdot 1 + 0$

Linear Gage Factor(G):  Zero Reading(R0):  [Pick Zero...](#)

Polynomial Factors A:  B:  C:  [Calculate C](#)

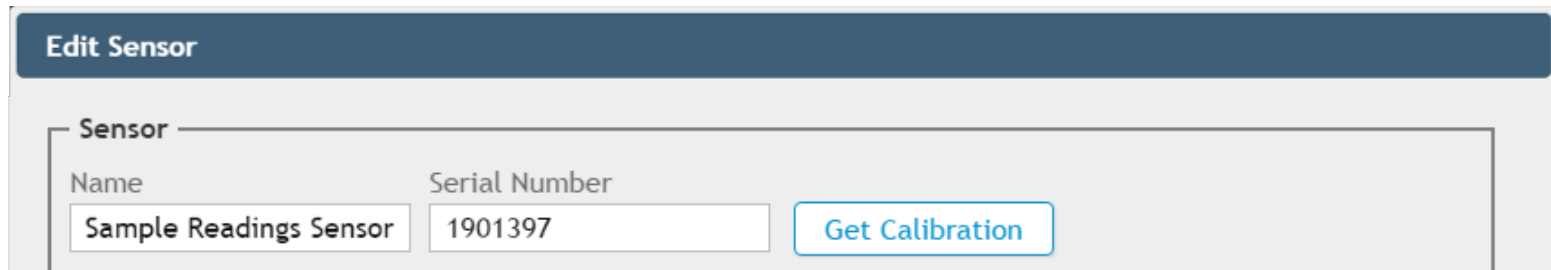
Temperature Correction

Thermal Factor(K):  Zero Temperature(T0):

[Save](#) [Cancel](#)

# Adding a Reading Sensor (Continued)

6. Enter a descriptive name for the reading sensor, and the serial number of the VW sensor attached to the LC-2



The screenshot shows a software interface titled "Edit Sensor". It features a "Sensor" section with two input fields: "Name" (containing "Sample Readings Sensor") and "Serial Number" (containing "1901397"). A blue button labeled "Get Calibration" is positioned to the right of the "Serial Number" field.

7. Clicking "Get Calibration" will retrieve the calibration factors for the specified serial number from the GEOKON calibration database and populate them into the Edit Sensor dialog (Only available for VW sensors manufactured after 2016)

# Adding a Reading Sensor (Continued)

8. Select the "Category" that matches the type of VW sensor being read (Choose "Load" for load cells, "Strain" for strain gauges, "Pressure" for pressure transducers, etc.)

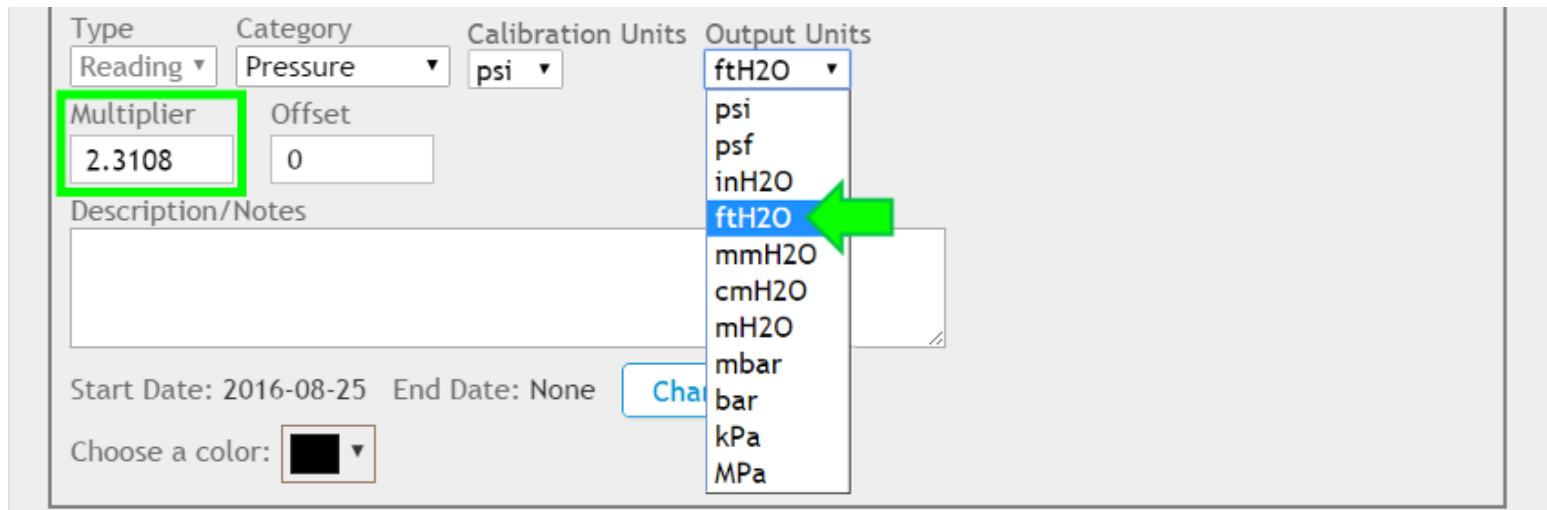
The types of "Calibration Units" and "Output Units" available are determined by the category that is chosen

The screenshot shows a "Sensor" configuration window. At the top, there are input fields for "Name" (S.E. well piezo) and "Serial Number" (1901397), along with a "Get Calibration" button. Below these are dropdown menus for "Type" (Reading), "Category" (Pressure), "Calibration Units" (psi), and "Output Units" (psi). A green box highlights the "Calibration Units" and "Output Units" dropdowns. The "Category" dropdown menu is open, showing options: Default, Pressure (highlighted with a green arrow), Load, Distance, Strain, Temperature, and Tilt. The "Multiplier" is set to 1, and there is a "Description/" field at the bottom.

# Adding a Reading Sensor (Continued)

9. Click "Output Units" to select the type of engineering units the data from the VW sensor will be displayed in

The "Multiplier" field will automatically be populated with the factor needed to convert the Calibration units to the selected Output units

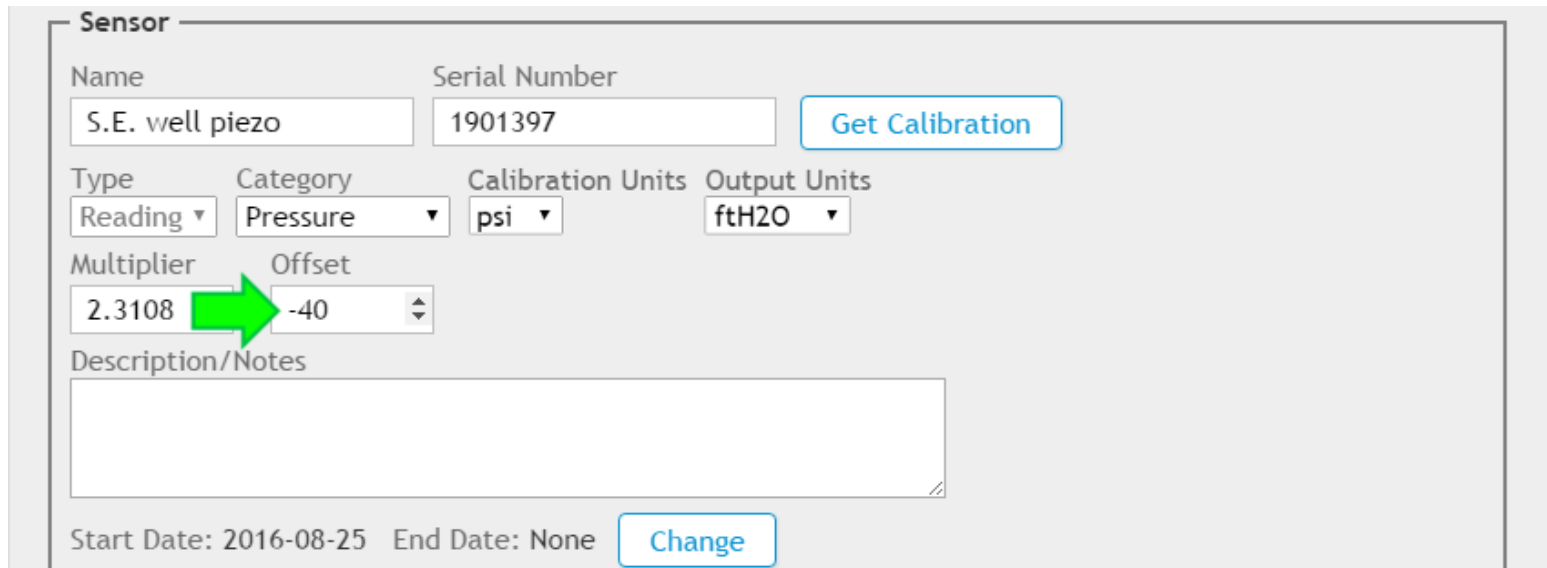


The screenshot shows a configuration form for a sensor. The form includes several fields and a dropdown menu:

- Type:** Reading (dropdown)
- Category:** Pressure (dropdown)
- Calibration Units:** psi (dropdown)
- Output Units:** ftH2O (dropdown menu is open, showing options: psi, psf, inH2O, ftH2O, mmH2O, cmH2O, mH2O, mbar, bar, kPa, MPa). A green arrow points to the 'ftH2O' option.
- Multiplier:** 2.3108 (text input field, highlighted with a green box)
- Offset:** 0 (text input field)
- Description/Notes:** (text area)
- Start Date:** 2016-08-25
- End Date:** None
- Choose a color:** (color picker showing black)

# Adding a Reading Sensor (Continued)

10. "Offset" is an optional constant that can be added to the sensor output to adjust the data. For example: If a piezometer installed at a site elevation of -40 feet is reading +2 feet of water, entering an offset of -40 would adjust the reading to -38 feet, the actual water elevation of the sensor

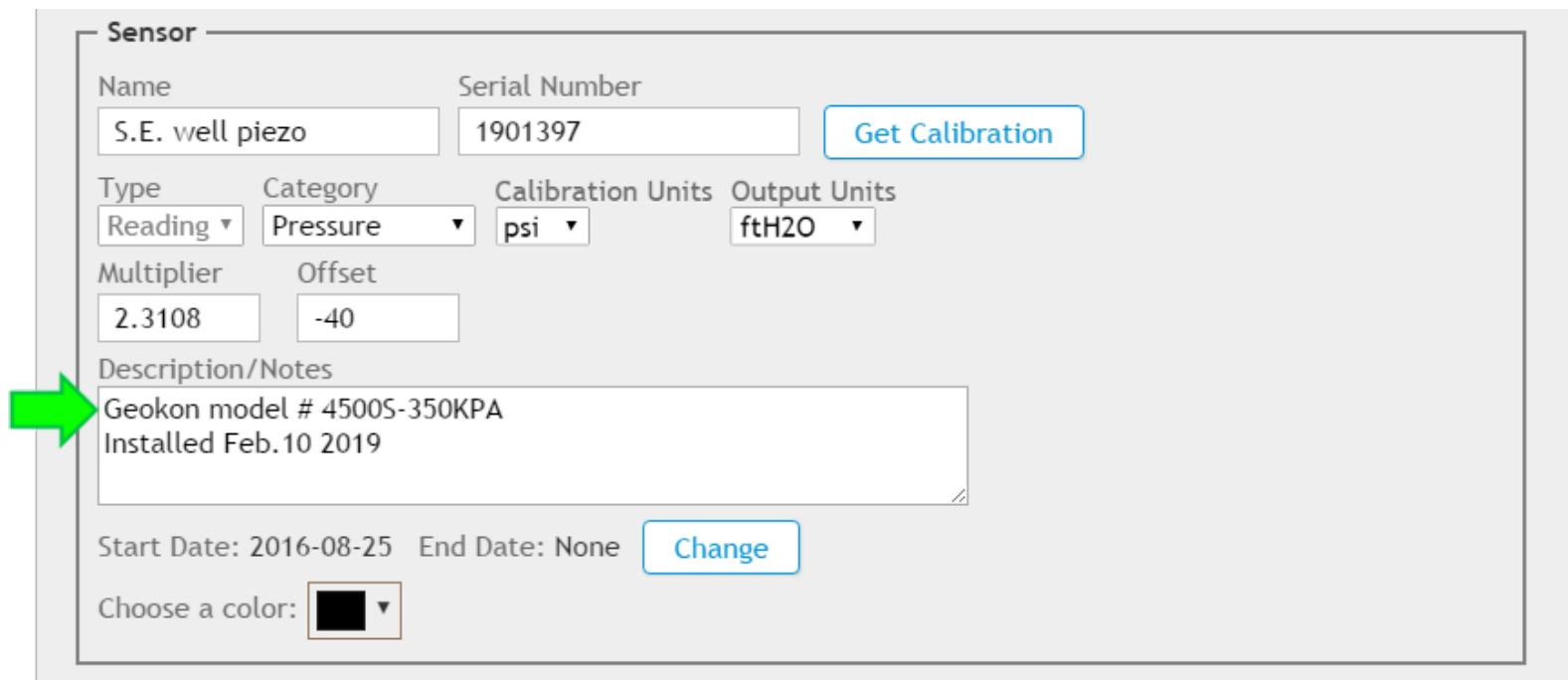


The screenshot shows a web-based form for configuring a sensor. The form is titled "Sensor" and contains the following fields and controls:

- Name:** S.E. well piezo
- Serial Number:** 1901397
- Get Calibration:** A blue button.
- Type:** Reading (dropdown menu)
- Category:** Pressure (dropdown menu)
- Calibration Units:** psi (dropdown menu)
- Output Units:** ftH2O (dropdown menu)
- Multiplier:** 2.3108
- Offset:** -40 (dropdown menu, highlighted with a green arrow)
- Description/Notes:** A large empty text area.
- Start Date:** 2016-08-25
- End Date:** None
- Change:** A blue button.

# Adding a Reading Sensor (Continued)

11. The Description/Notes field is provided for the user to record any additional information about the VW sensor

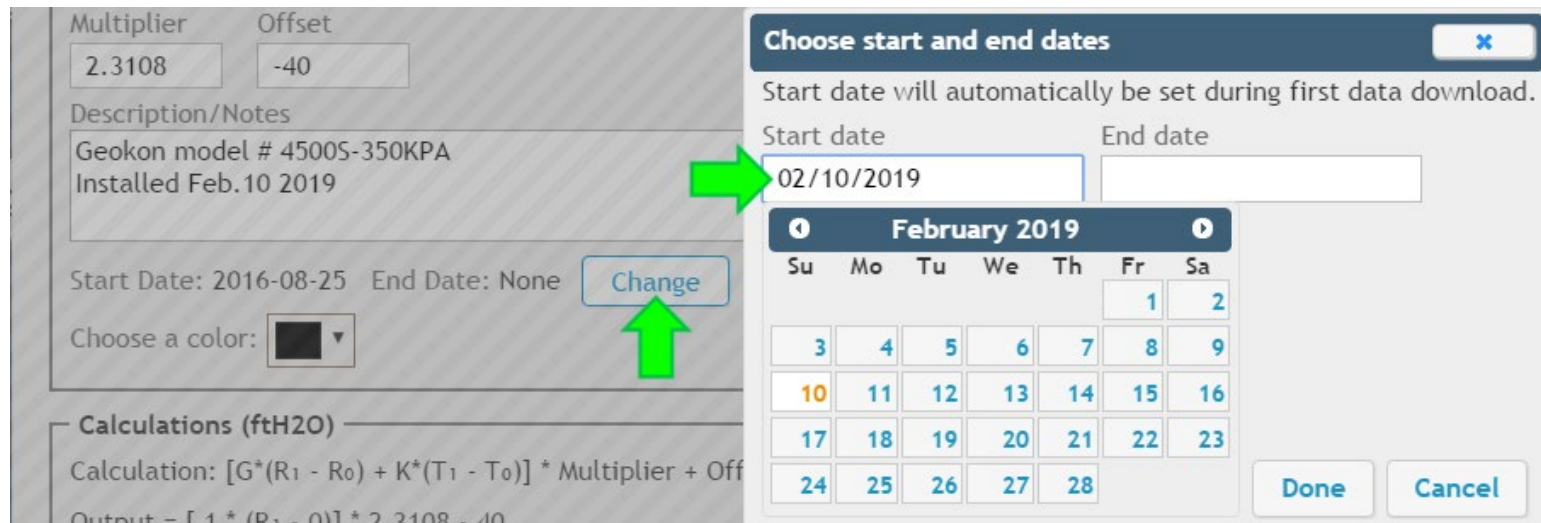


The screenshot shows a 'Sensor' configuration form with the following fields and values:

- Name: S.E. well piezo
- Serial Number: 1901397
- Get Calibration: Button
- Type: Reading (dropdown)
- Category: Pressure (dropdown)
- Calibration Units: psi (dropdown)
- Output Units: ftH2O (dropdown)
- Multiplier: 2.3108
- Offset: -40
- Description/Notes: Geokon model # 4500S-350KPA  
Installed Feb.10 2019 (highlighted with a green arrow)
- Start Date: 2016-08-25
- End Date: None
- Change: Button
- Choose a color: [Black color swatch]

# Adding a Reading Sensor (Continued)

- The Start/End dates determine the range of data that will be displayed on charts. To change the dates, click, "Change" (The Start Date should be set to the day the VW sensor was installed. The End Date should only be entered if the VW sensor is removed from the LC-2)

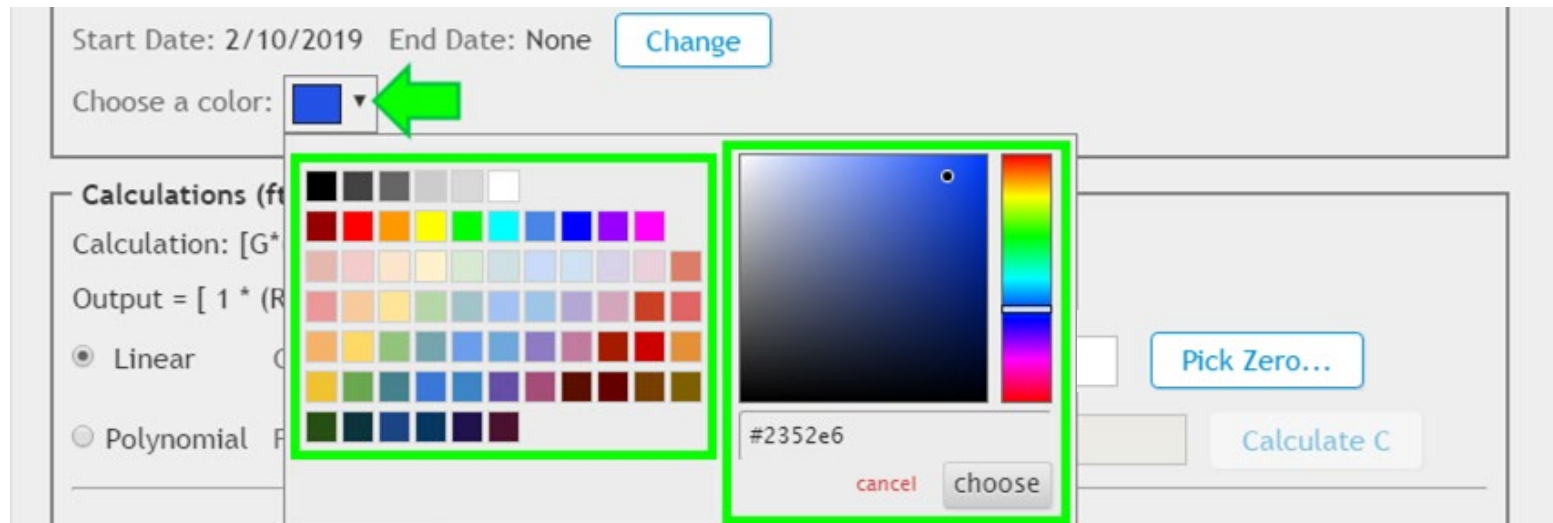


The screenshot shows a software interface for configuring a sensor. The main window has a 'Multiplier' field with the value '2.3108' and an 'Offset' field with the value '-40'. Below these is a 'Description/Notes' field containing 'Geokon model # 45005-350KPA' and 'Installed Feb.10 2019'. The 'Start Date' is set to '2016-08-25' and the 'End Date' is 'None'. A 'Change' button is visible next to the 'End Date' field. A 'Choose a color' dropdown menu is also present. Below the main window, there is a 'Calculations (ftH2O)' section with a calculation formula:  $[G^+(R_1 - R_0) + K^+(T_1 - T_0)] * \text{Multiplier} + \text{Offset}$  and an output field showing  $[1 * (R_1 - 0)] * 2.3108 - 40$ .

Overlaid on the main window is a 'Choose start and end dates' dialog box. It contains the text 'Start date will automatically be set during first data download.' and two input fields for 'Start date' and 'End date'. The 'Start date' field is currently set to '02/10/2019'. Below the input fields is a calendar for 'February 2019'. The calendar shows the days of the week (Su, Mo, Tu, We, Th, Fr, Sa) and the dates (1 through 28). The date '10' is highlighted in orange. The dialog box has 'Done' and 'Cancel' buttons at the bottom right. A green arrow points from the 'Change' button in the main window to the 'Start date' field in the dialog box. Another green arrow points from the bottom of the main window to the 'Change' button.

# Adding a Reading Sensor (Continued)

13. Click "Choose Color" to select the color that will represent the VW sensor data on charts. Select a standard color from the left side of the menu, or use the color palette on the right to create a custom color






# Adding a Reading Sensor (Continued)

14. The default gauge factor of 1 can be used to output the data from the vibrating wire sensor as digits. To output the data in other engineering units, the gauge factors found on the GEOKON Calibration Report provided with the vibrating wire sensor must be entered

**Calculations (ftH2O)**

Calculation:  $[G \cdot (R_1 - R_0) + K \cdot (T_1 - T_0)] \cdot \text{Multiplier} + \text{Offset}$

Output =  $[1 \cdot (R_1 - 0)] \cdot 2.3108 - 40$

Linear    Gage Factor(G):      Zero Reading(R0):     [Pick Zero...](#)

Polynomial    Factors    A:     B:     C:     [Calculate C](#)

---

Temperature Correction

Thermal Factor(K):     Zero Temperature(T0):

# Adding a Reading Sensor: A Note on Gauge Factors

 Most GEOKON calibration reports provide gauge factors in metric and imperial units. When entering gauge factors in Agent, make sure to use the factors that match the selected "Calibration Units"

## Imperial Example

Agent: 

Type	Category	Calibration Units	Output Units
Reading ▾	Pressure ▾	psi ▾	ftH2O ▾

Calibration Report: **(psi)** Linear Gauge Factor (G): -0.01596 (psi/ digit)

Polynomial Gauge Factors: A: -1.366E-08 B: -0.01577 C:           

## Metric Example

Agent: 

Type	Category	Calibration Units	Output Units
Reading ▾	Pressure ▾	kPa ▾	ftH2O ▾

Calibration Report: **(kPa)** Linear Gauge Factor (G): -0.1100 (kPa/ digit)

Polynomial Gauge factors: A: -9.418E-08 B: -0.1087 C:

# Adding a Reading Sensor: Linear Calculations

15. Enter the Linear Gauge Factor from the calibration report

## Imperial Example

Calibration Report: (psi) Linear Gauge Factor (G): -0.01596 (psi/ digit)

Agent:  Linear Gage Factor(G): -0.01596  Zero Reading(R0): 0

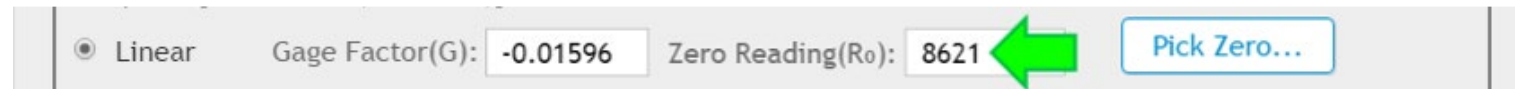
## Metric Example

Calibration Report: (kPa) Linear Gauge Factor (G): -0.1100 (kPa/ digit)

Agent:  Linear Gage Factor(G): -0.1100  Zero Reading(R0): 0

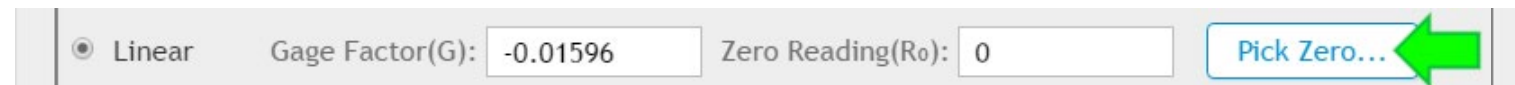
# Adding a Reading Sensor: Linear Calculations (Continued)


16. Enter the initial zero reading taken onsite with the VW sensor

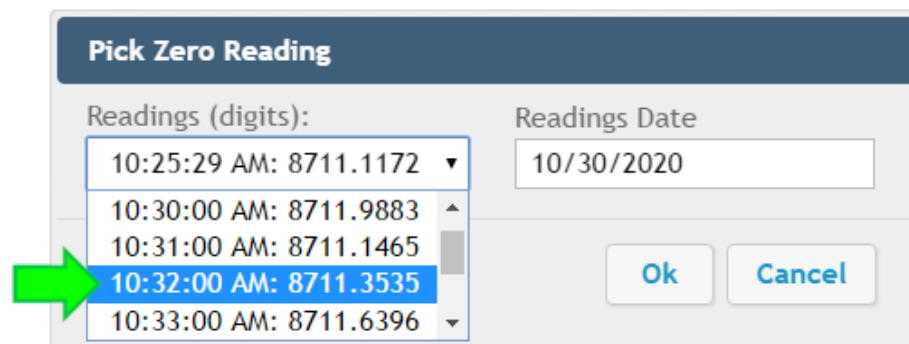


Linear Gage Factor(G): -0.01596 Zero Reading(R0): 8621  Pick Zero...


16a. If using the LC-2 to take the initial zero, click “Pick Zero...” then select the relevant reading



Linear Gage Factor(G): -0.01596 Zero Reading(R0): 0  Pick Zero...



**Pick Zero Reading**

Readings (digits):  
10:25:29 AM: 8711.1172  
10:30:00 AM: 8711.9883  
10:31:00 AM: 8711.1465  
 10:32:00 AM: 8711.3535  
10:33:00 AM: 8711.6396

Readings Date: 10/30/2020

Ok Cancel

# Important Notes on Initial Zero Readings

- It is essential that an accurate onsite zero reading is entered; it will be used for all subsequent data reduction
- Prior to taking the reading, make sure the sensor is prepared as described in the sensor manual
- Consult the sensor manual for more information

# Adding a Reading Sensor: Polynomial Calculations

17. The polynomial equation can be used for greater accuracy. To utilize the polynomial equation, click the corresponding button

Calculations (ftH2O)

Calculation:  $[A \cdot R_1^2 + B \cdot R_1 + C + K \cdot (T_1 - T_0)] \cdot \text{Multiplier} + \text{Offset}$

Output =  $[0 \cdot R_1^2 + 1 \cdot R_1 + 0] \cdot 2.3108 - 40$

Linear    Gage Factor(G):     Zero Reading(R<sub>0</sub>):    

Polynomial    Factors A:     B:     C:    

Temperature Correction

Thermal Factor(K):     Zero Temperature(T<sub>0</sub>):

# Adding a Reading Sensor: Polynomial Calculations (Continued)

18. Enter the polynomial gauge factors from the calibration report

## Imperial Example

Calibration Report: **(psi)** Linear Gauge Factor (G): -0.01596 (psi/ digit)

Polynomial Gauge Factors: **A: -1.366E-08 B: -0.01577** C: \_\_\_\_\_

Agent:  Polynomial Factors A:   B:   C:

## Metric Example

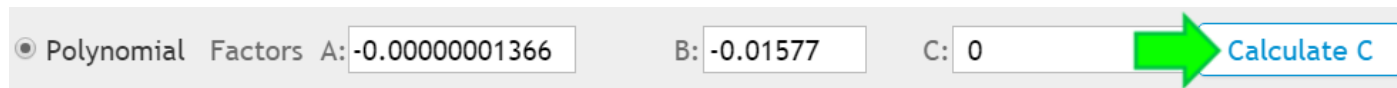
Calibration Report: **(kPa)** Linear Gauge Factor (G): -0.1100 (kPa/ digit)

Polynomial Gauge factors: **A: -9.418E-08 B: -0.1087** C: \_\_\_\_\_

Agent:  Polynomial Factors A:   B:   C:

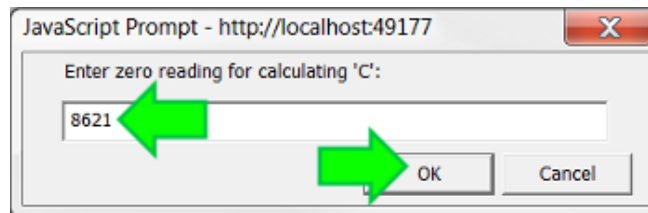
# Adding a Reading Sensor: Polynomial Calculations (Continued)

19. Click "Calculate C"



Polynomial Factors A:  B:  C:

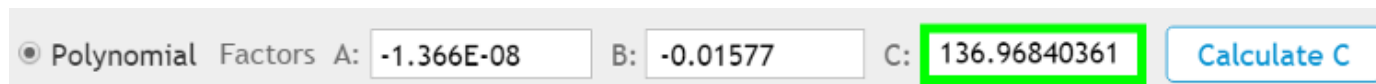
20. Enter the initial zero reading taken onsite with the VW sensor then click "OK"



JavaScript Prompt - http://localhost:49177

Enter zero reading for calculating 'C':

21. Agent will calculate and display the value of Factor "C" based on the information entered

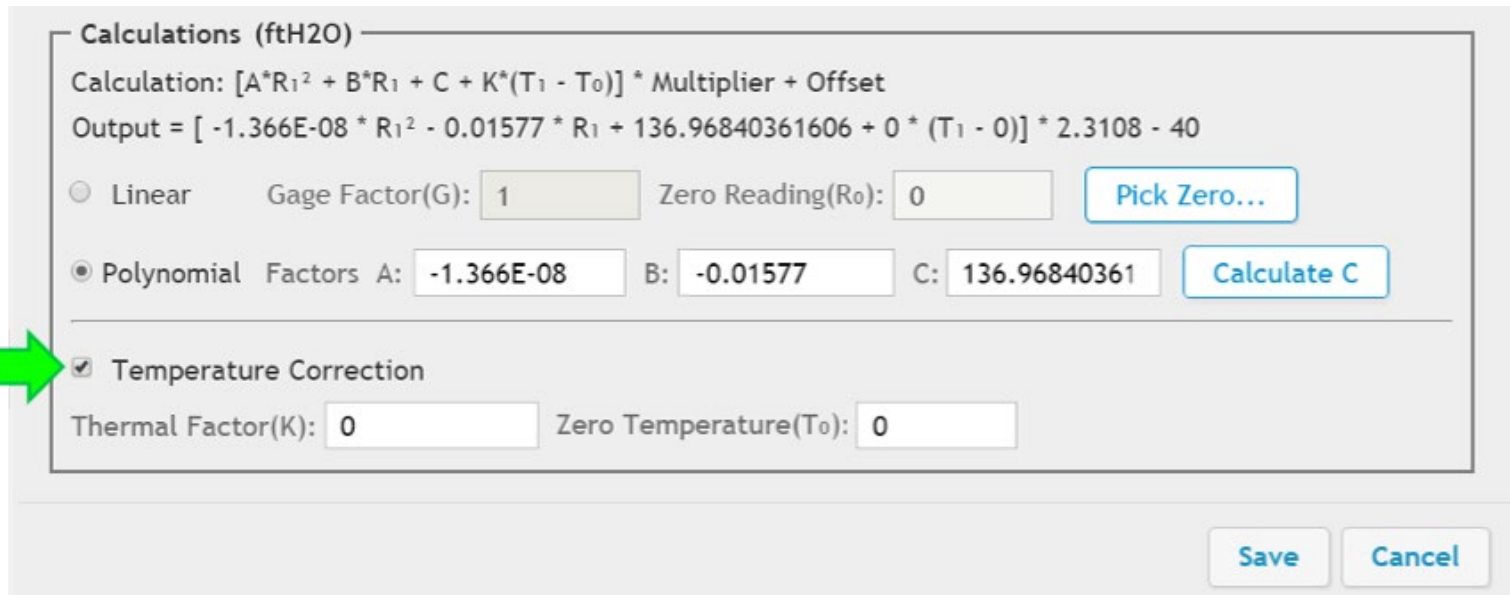


Polynomial Factors A:  B:  C:



# Adding a Reading Sensor: Temperature Correction

22. For optimum accuracy, or if ambient temperature changes are large, a temperature correction can be applied. To factor changes in temperature into the selected equation, check the “Temperature Correction” box



Calculations (ftH2O)

Calculation:  $[A \cdot R_1^2 + B \cdot R_1 + C + K \cdot (T_1 - T_0)] \cdot \text{Multiplier} + \text{Offset}$

Output =  $[-1.366\text{E-}08 \cdot R_1^2 - 0.01577 \cdot R_1 + 136.96840361606 + 0 \cdot (T_1 - 0)] \cdot 2.3108 - 40$

Linear    Gage Factor(G):     Zero Reading(R<sub>0</sub>):    

Polynomial    Factors A:     B:     C:    

Temperature Correction

Thermal Factor(K):     Zero Temperature(T<sub>0</sub>):

# Adding a Reading Sensor: Temperature Correction (Continued)

23. Enter the Thermal Factor from the calibration report

## Imperial Example

Calibration Report: **Thermal Factor (K): -0.0004642 (psi/ °C)**

Agent:  Temperature Correction  
Thermal Factor(K):  Zero Temperature(T<sub>0</sub>):

## Metric Example

Calibration Report: **Thermal Factor (K): -0.003200 (kPa/ °C)**

Agent:  Temperature Correction  
Thermal Factor(K):  Zero Temperature(T<sub>0</sub>):

# Adding a Reading Sensor: Temperature Correction (Continued)

24. Enter the temperature recorded when the onsite zero reading was taken (must be entered as degrees Celsius)

**Calculations (ftH2O)**

Calculation:  $[A \cdot R_1^2 + B \cdot R_1 + C + K \cdot (T_1 - T_0)] \cdot \text{Multiplier} + \text{Offset}$


Output =  $[-1.366\text{E-}08 \cdot R_1^2 - 0.01577 \cdot R_1 + 136.96840361606 + 0 \cdot (T_1 - 0)] \cdot 2.3108 - 40$

Linear    Gage Factor(G):     Zero Reading(R<sub>0</sub>):     [Pick Zero...](#)

Polynomial    Factors A:     B:     C:     [Calculate C](#)

---

Temperature Correction

Thermal Factor(K):     Zero Temperature(T<sub>0</sub>):  

[Save](#)    [Cancel](#)

# Adding a Reading Sensor: (Continued)

25. Once all pertinent information had been entered, click "Save"

The screenshot displays the 'Edit Sensor' interface. On the left is a navigation menu with the following items: projects, Sample Project, Sample LC-2, LC2 settings, general, sensors (highlighted), intervals, download schedule, export schedule, and commands. The main panel is titled 'Edit Sensor' and contains the following fields and controls:

- Sensor Section:**
  - Name: Sample Reading Sensor
  - Serial Number: 1901397
  - Get Calibration button
  - Type: Reading 1 (dropdown)
  - Category: Pressure (dropdown)
  - Calibration Units: psi (dropdown)
  - Output Units: ftH2O (dropdown)
  - Multiplier: 2.3108
  - Offset: -40
  - Description/Notes: Geokon model # 4500S-350KPA Installed Feb. 10 2019
  - Start Date: 2016-08-22, End Date: None, Change button
  - Choose a color: Blue (dropdown)
- Calculations (ftH2O) Section:**
  - Calculation:  $[A * R_1^2 + B * R_1 + C + K * (T_1 - T_0)] * \text{Multiplier} + \text{Offset}$
  - Output =  $[-1.366E-08 * R_1^2 - 0.01577 * R_1 + 136.96840361 - 0.0004642 * (T_1 - 20.8)] * 2.3108 - 40$
  - Linear:  Gage Factor(G): 1, Zero Reading(R0): 0, Pick Zero... button
  - Polynomial:  Factors A: -1.366E-08, B: -0.01577, C: 136.96840361, Calculate C button
  - Temperature Correction:  Thermal Factor(K): -0.0004642, Zero Temperature(T0): 20.8

At the bottom right, there are 'Save' and 'Cancel' buttons. A green arrow points to the 'Save' button.

# Adding a Reading Sensor (Continued)

26. The edit sensor dialog box will close, and a message will appear at the top of the screen. Changes made in the sensor screen will not take effect until they are uploaded to the LC-2

The screenshot displays a web interface for configuring a sensor. On the left is a dark blue sidebar with a menu containing: 'projects', 'Sample Project', 'Sample LC-2', 'LC2 settings', 'general', 'sensors' (highlighted), 'intervals', 'download schedule', 'export schedule', and 'commands'. The main content area has a white background. At the top, a red message box with a green border states: 'There are pending setting changes to upload to the logger.' Below this, the sensor details are listed: 'Name: Sample LC-2', 'Serial number: 1916652', and 'Device type: single'. A blue 'Save' button is positioned below the details. The interface is divided into two sections: 'Logger Sensors' and 'Readings Sensors'. The 'Logger Sensors' section contains three entries: 'AuxBat' with 'edit' and 'alerts' links, 'Battery' with 'edit' and 'alerts' links, and 'Logger Temp' with 'edit' and 'alerts' links. The 'Readings Sensors' section contains one entry with two columns: 'Sensor' and 'Thermistor'. The 'Sensor' column has a table with one row: '1' in the first column, '4500' in a dropdown menu, and 'edit alerts' links. The 'Thermistor' column has a table with one row: 'Standard' in a dropdown menu, and 'edit alerts' links.

There are pending setting changes to upload to the logger.

Name: Sample LC-2  
Serial number: 1916652  
Device type: single

Save

Logger Sensors

AuxBat	edit	alerts
Battery	edit	alerts
Logger Temp	edit	alerts

Readings Sensors

	Sensor		Thermistor	
1	4500	edit alerts	Standard	edit alerts

# Uploading Sensor Settings

1. Click "commands" on the left side of the screen, then click "upload settings"

The screenshot displays a web interface for managing sensor settings. On the left, a dark sidebar contains a navigation menu with the following items: 'projects', 'Sample Project', 'Sample LC-2', 'LC2 settings', 'general', 'sensors', 'intervals', 'download schedule', 'export schedule', and 'commands'. A green arrow points to the 'commands' item. The main content area is divided into three sections: 'Upload Settings to Logger', 'Status', and 'Set Time on Logger'. The 'Upload Settings to Logger' section shows the following details: Name: Sample LC-2, Serial number: 1916652, Device type: single, and Connection: COM3. Below these details is a blue 'Upload settings' button, which is highlighted by a green arrow. To the right of this button is a red text notification: 'There are pending Logger setting changes'. The 'Status' section contains several buttons: 'Get Status', 'Start Logging', 'Stop Logging', and 'Get Battery Status'. Below these are 'Get Trap Count' and 'Clear Trap Count' buttons. The 'Set Time on Logger' section shows the 'Logger time' and 'Server time: Mon Oct 26 2020 13:52:46 GMT-0400 (Eastern Daylight Time)'. There are also two empty input fields at the bottom of this section.

# Adding a Thermistor Sensor

- Most GEOKON vibrating wire sensors include a built-in thermistor
  - The thermistor settings can be edited in a similar manner to those of the VW sensor
1. Select a thermistor type, then click “edit”

The screenshot displays the software interface for configuring a sensor. On the left is a dark sidebar with a tree view containing: 'projects', 'Sample Project', 'Sample LC-2', 'LC2 settings', 'general', 'sensors' (highlighted), 'intervals', 'download schedule', 'export schedule', and 'commands'. The main area shows configuration details for 'Sample LC-2' (Serial number: 1916652, Device type: single) with a 'Save' button. Below this are two sections: 'Logger Sensors' and 'Readings Sensors'. The 'Logger Sensors' section lists 'AuxBat', 'Battery', and 'Logger Temp', each with 'edit' and 'alerts' links. The 'Readings Sensors' section has a table with one row: '1' | '4500' | 'edit' | 'alerts'. A dropdown menu is open for the 'Thermistor' column, showing options: 'Standard' (selected), 'High-Temp 8.2k', and 'High-Temp 10k'. Green arrows point from the 'edit' link to the dropdown and from the 'Standard' option to the 'edit' link.

Logger Sensors			
AuxBat	edit	alerts	
Battery	edit	alerts	
Logger Temp	edit	alerts	

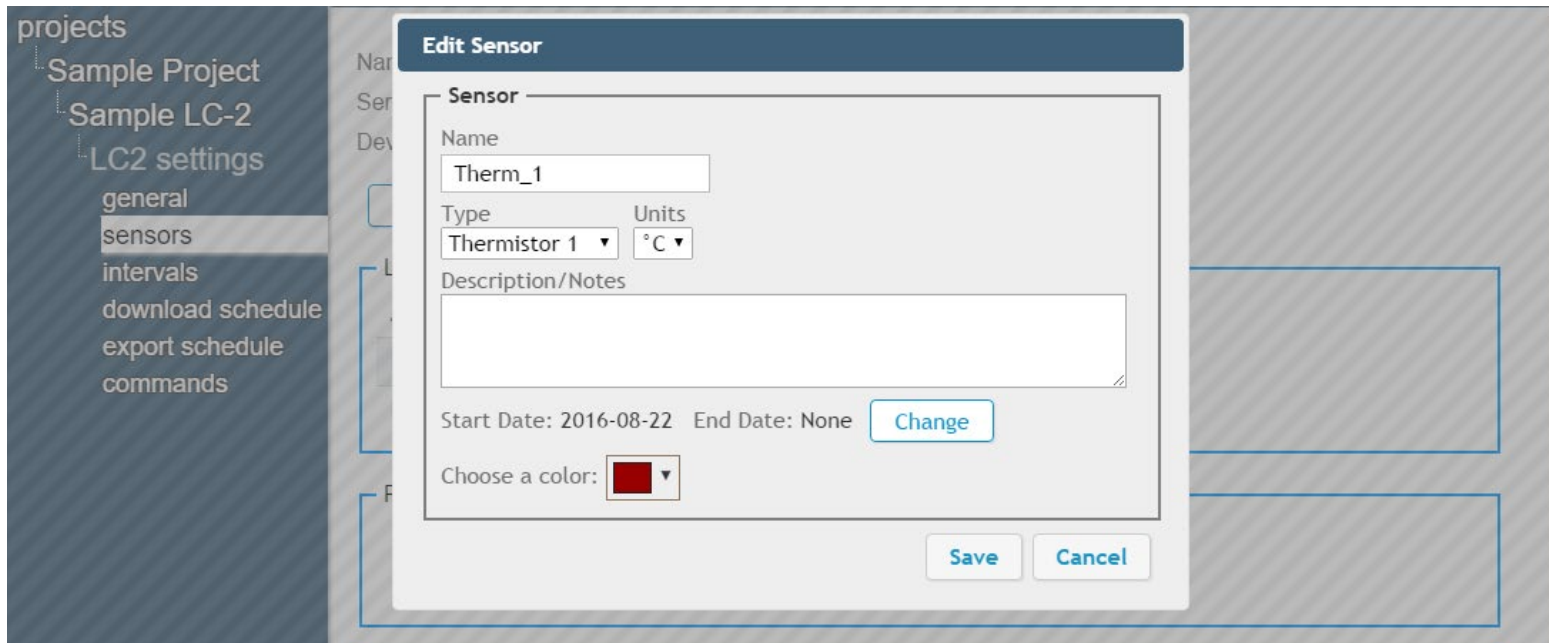
  

Readings Sensors			
Sensor	Thermistor		
1	4500	edit	alerts

Thermistor options: Standard, High-Temp 8.2k, High-Temp 10k

# Adding a Thermistor Sensor (Continued)

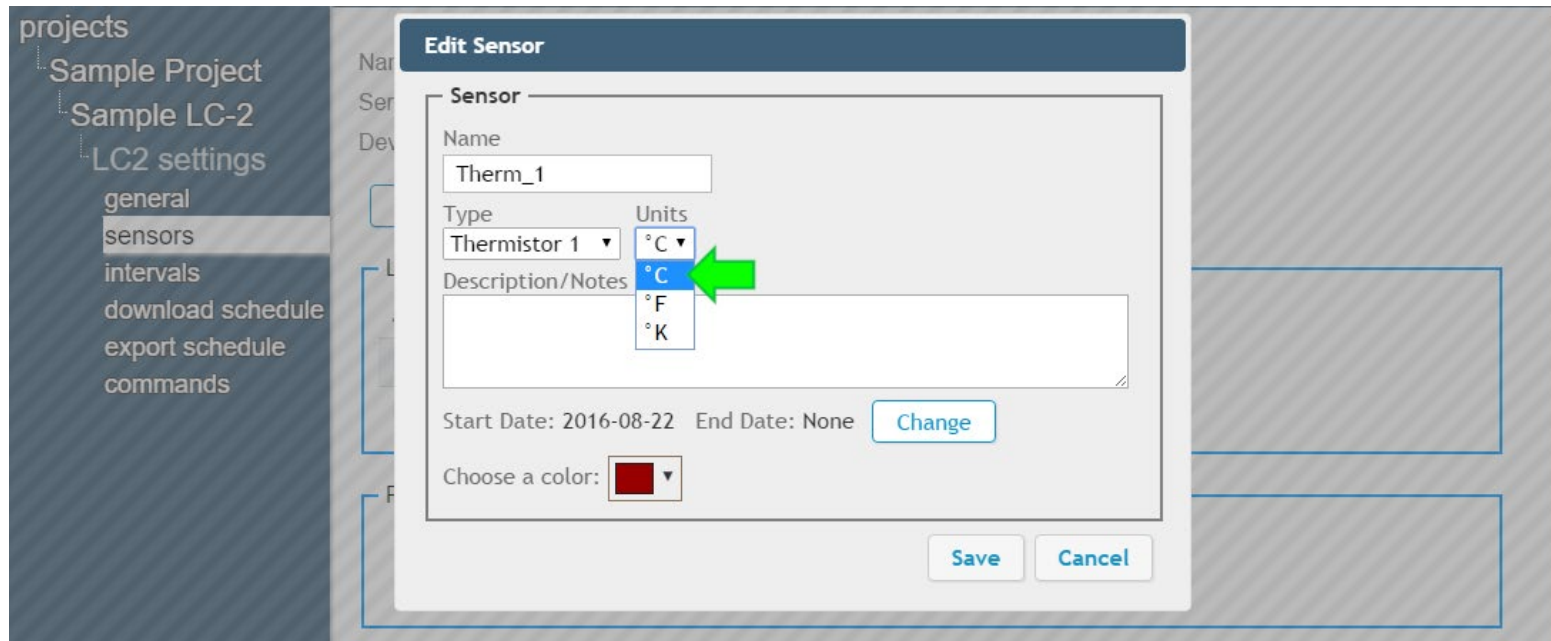
2. The edit sensor dialog box will open





# Adding a Thermistor Sensor (Continued)

3. Click "Units" to determine the type of engineering units the thermistor data will be displayed in



Note: The Type field should not be changed; it is used to differentiate readings in thermistor strings

# Adding a Thermistor Sensor (Continued)

4. The remainder of the fields function as previously described; edit them as desired. Once all pertinent information has been entered, click "Save"

The screenshot shows a software interface with a sidebar on the left containing a tree view of projects and settings. The main area displays an 'Edit Sensor' dialog box. The dialog box has a title bar 'Edit Sensor' and a 'Sensor' section. The 'Name' field contains 'Sample Thermistor'. The 'Type' dropdown is set to 'Thermistor 1' and the 'Units' dropdown is set to '°C'. The 'Description/Notes' text area contains 'Internal thermistor 4500S-350KPA S/N 1901397'. Below this, the 'Start Date' is '2016-08-22' and the 'End Date' is 'None', with a 'Change' button next to it. At the bottom, there is a 'Choose a color' dropdown set to a red color. A green arrow points to the 'Save' button, which is next to a 'Cancel' button.

# Adding a Reading Sensor (Continued)

5. The edit sensor dialog box will close and the “Pending setting changes” message will appear at the top of the screen
6. Upload the settings to the LC-2 in the same manner as for the VW sensor

The screenshot displays a web interface for managing a device. On the left is a dark sidebar with a tree view of navigation options: 'projects', 'Sample Project', 'Sample LC-2', 'LC2 settings', 'general', 'sensors', 'intervals', 'download schedule', 'export schedule', and 'commands'. A green arrow points to the 'commands' option. The main content area is divided into two sections. The top section, titled 'Upload Settings to Logger', contains a form with the following fields: 'Name: Sample LC-2', 'Serial number: 1916652', 'Device type: single', and 'Connection: COM3'. Below the form is a blue 'Upload settings' button, which is highlighted by a green arrow. To the right of the button is a red text message: 'There are pending Logger setting changes'. The bottom section, titled 'Status', contains several buttons and input fields: 'Get Status' (with 'Status: [input]', 'Firmware version: [input]', and 'ID: [input]'), 'Start Logging', 'Stop Logging', 'Get Battery Status', 'Get Trap Count' (with 'Trap Count: [input]'), and 'Clear Trap Count'.

# Charts

**AGENT** ?

projects

- Sample Project
  - Sample LC-2
    - view charts**
    - download
    - export
    - chart settings
    - summary
    - lc2 settings
    - sensor summary

Show tooltips on charts

**Sample Chart**

25.550 ftH2O  
25.500 ftH2O  
25.450 ftH2O  
25.400 ftH2O

24.0 °C  
21.0 °C  
18.0 °C  
15.0 °C

Click to hide or display

- Sample Reading Sensor
- Sample Thermistor Sensor

Jun 3 Jun 4 Jun 5 Jun 6 Jun 7

Jul '19 Jan '20

**Sample Chart 2**

4.0 V  
50.000 %

Click to hide or display

**Start:** Jan 25, 2015 12:00 am **Stop:** none

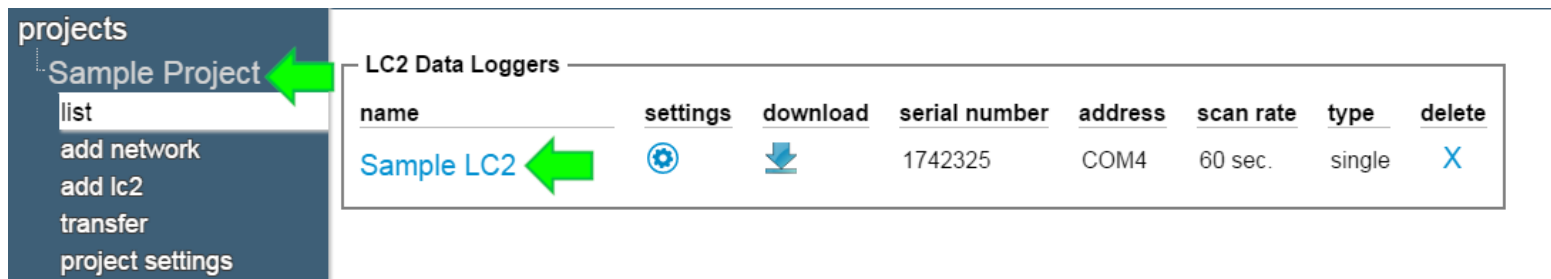
Jan 25, 2015 12:00 am May 11, 2020 12:22 pm

# Charts

- Charts display data imported by sensors as a graph; therefore, sensors must be added to a chart before it will display any data
- Only data that has been downloaded from the LC-2 will be displayed (For information on how to download data, view the [Using Agent Software with LC-2 Dataloggers](#) or refer to the product manual)
- If automatic download is enabled, new data will be added to charts automatically each time data is downloaded from the datalogger
- If automatic download is disabled, charts will not update until a manual download is performed

# Creating Charts

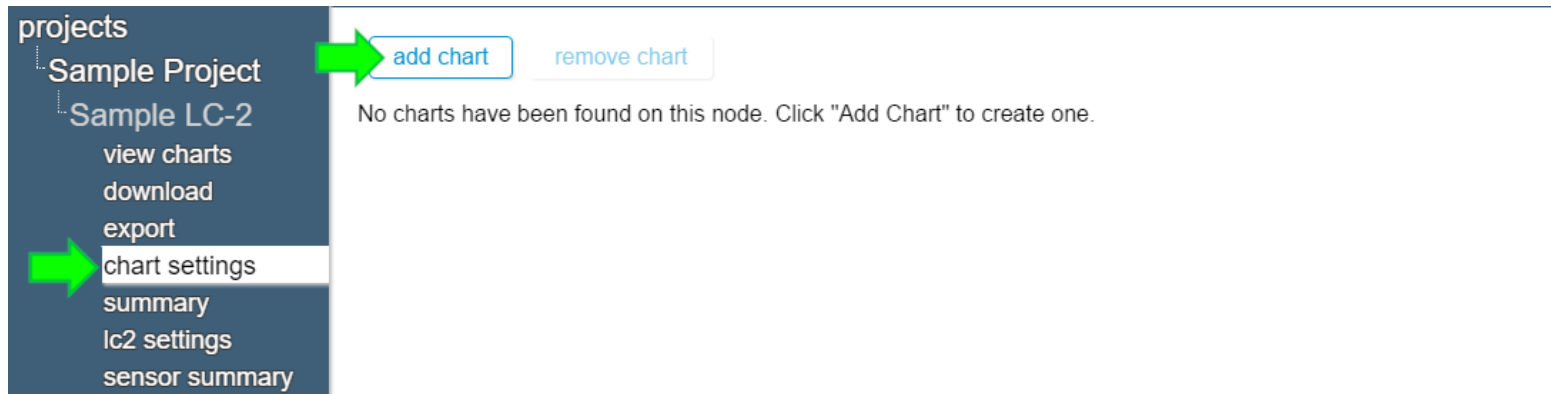
1. Select a project, and then the LC-2 the chart will be added to



The screenshot shows a sidebar on the left with the following items: projects, Sample Project, list, add network, add lc2, transfer, and project settings. A green arrow points to 'Sample Project'. To the right, a table titled 'LC2 Data Loggers' is displayed. The table has the following columns: name, settings, download, serial number, address, scan rate, type, and delete. The first row contains the following data: Sample LC2, a settings icon (gear), a download icon (downward arrow), 1742325, COM4, 60 sec., single, and a delete icon (X). A green arrow points to 'Sample LC2' in the table.

name	settings	download	serial number	address	scan rate	type	delete
Sample LC2			1742325	COM4	60 sec.	single	

2. Click "chart settings" then "add chart"



The screenshot shows the same sidebar as in the previous image, but with 'Sample LC-2' selected. The sidebar items are: projects, Sample Project, Sample LC-2, view charts, download, export, chart settings, summary, lc2 settings, and sensor summary. A green arrow points to 'chart settings'. To the right, there are two buttons: 'add chart' and 'remove chart'. A green arrow points to the 'add chart' button. Below the buttons, the text reads: 'No charts have been found on this node. Click "Add Chart" to create one.'

# Creating Charts (Continued)

3. Give the chart a name, and then click "Ok"

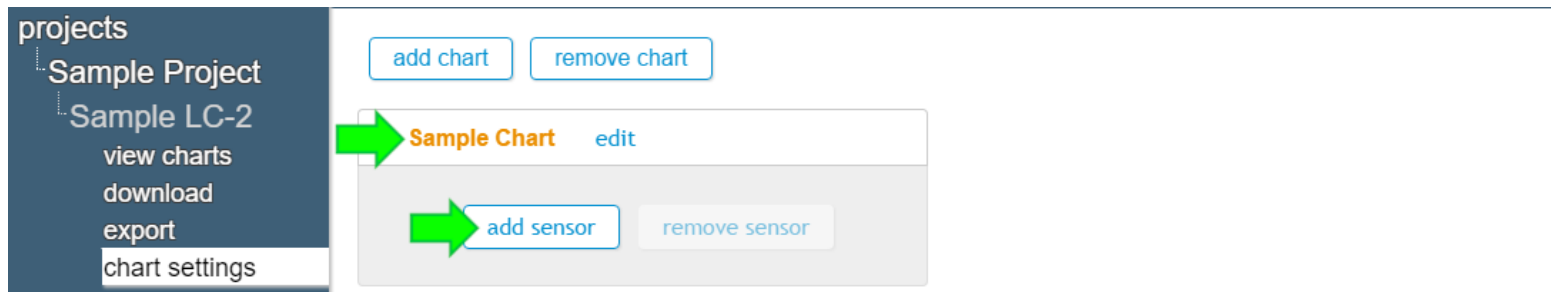


4. Charts that have been added to the LC-2 will be shown in the "chart settings" screen

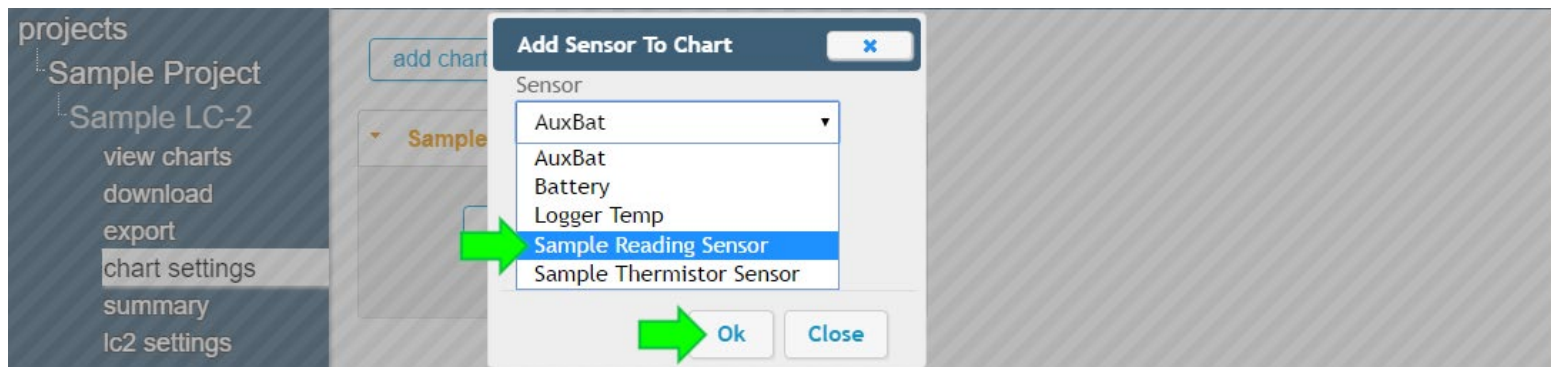


# Adding Sensors to Charts

1. Click on a chart name, and then click "add sensor"



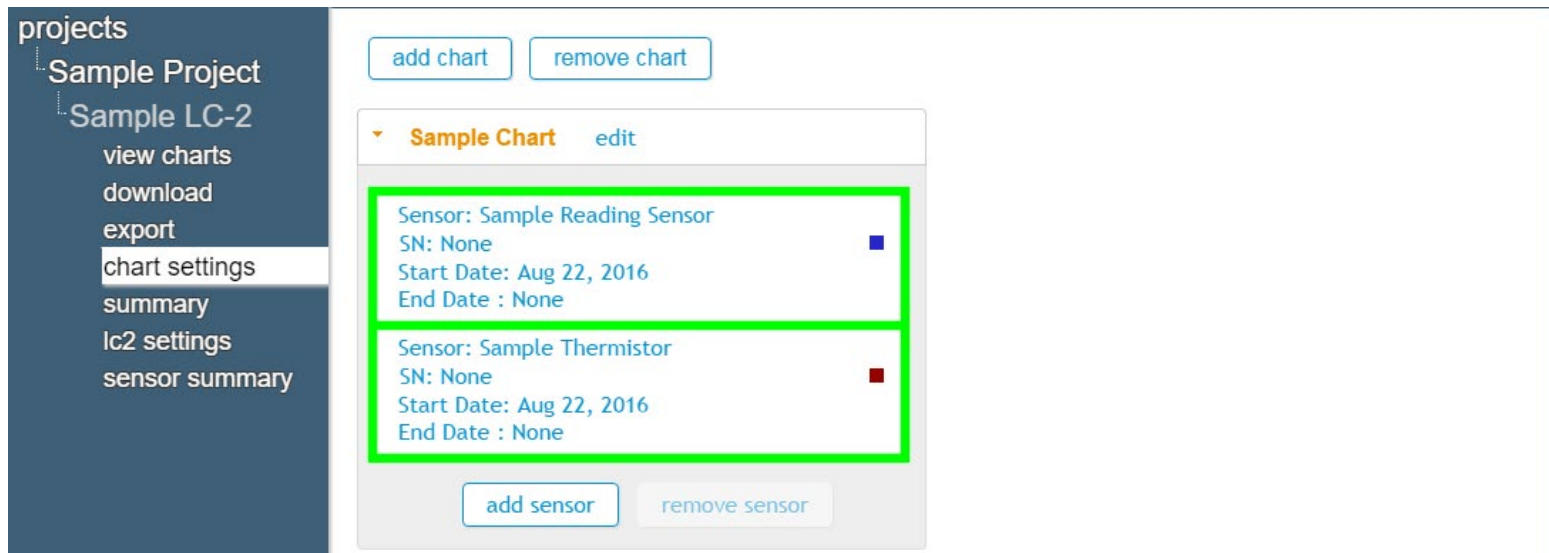
2. Select a sensor to add, and then click "Ok"





# Adding Sensors to Charts (Continued)

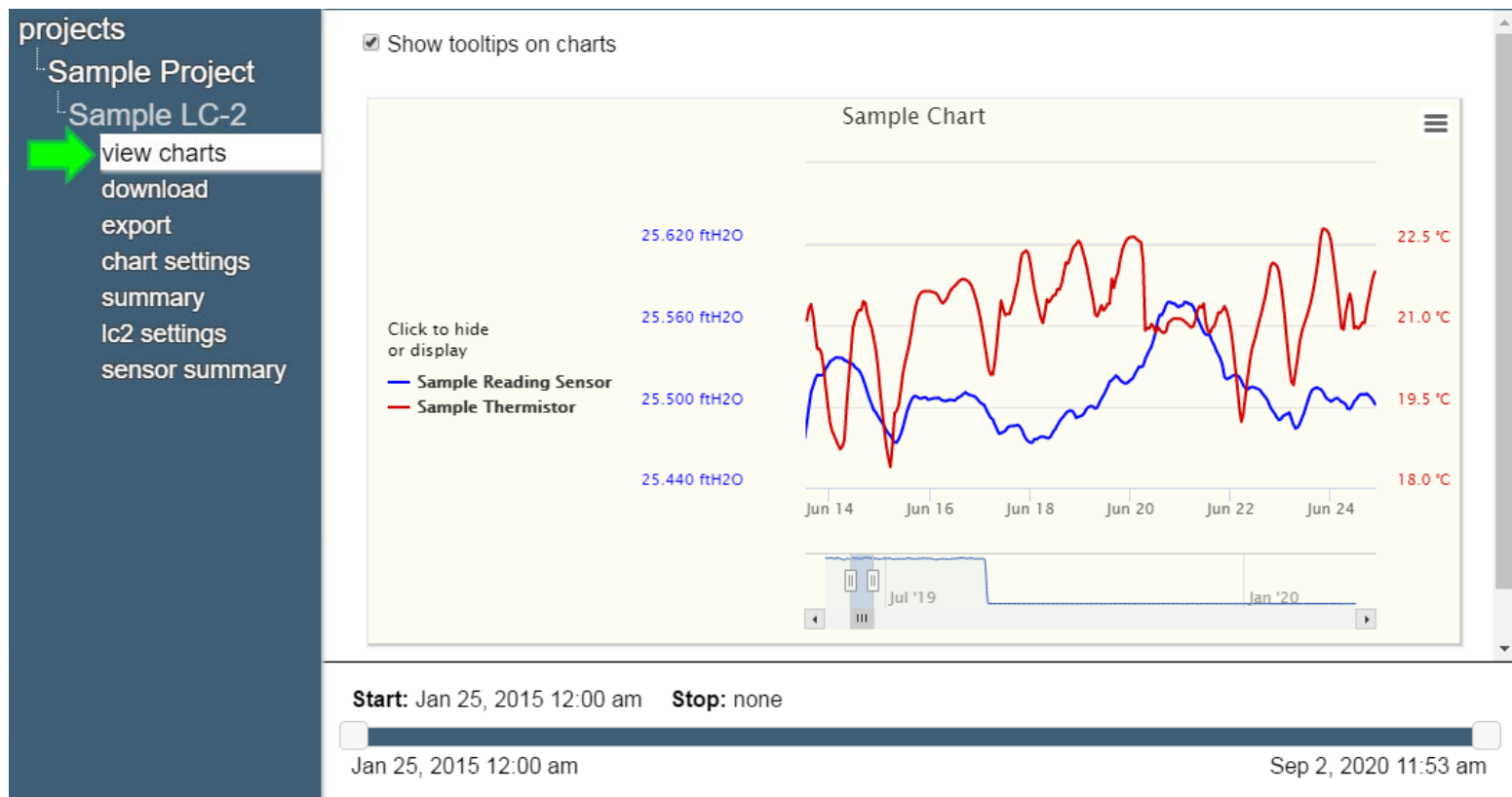
3. Repeat steps one and two until all desired sensors have been added to the chart
4. Sensors that have been added to a chart will be shown below the chart name



The screenshot displays a web interface for managing charts. On the left is a dark blue sidebar with a 'projects' menu containing 'Sample Project' and 'Sample LC-2'. Under 'Sample LC-2', there are options for 'view charts', 'download', 'export', 'chart settings' (highlighted), 'summary', 'lc2 settings', and 'sensor summary'. The main content area has 'add chart' and 'remove chart' buttons at the top. Below them is a dropdown menu for 'Sample Chart' with an 'edit' link. A green box highlights two sensor entries: 'Sample Reading Sensor' and 'Sample Thermistor'. Each entry shows 'SN: None', 'Start Date: Aug 22, 2016', and 'End Date: None'. At the bottom of the sensor list are 'add sensor' and 'remove sensor' buttons.

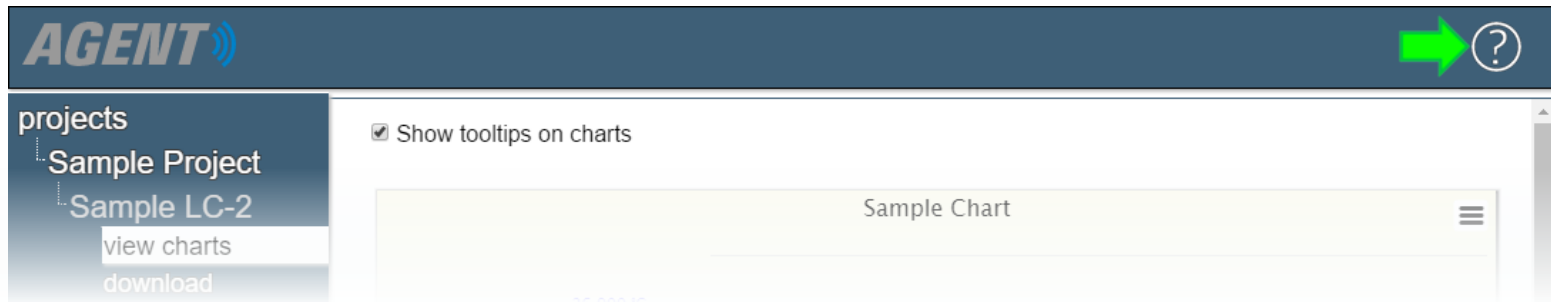
# Viewing Charts

1. Click "view charts" to display all charts on the device



# For more information...

- The LC-2 instruction manuals, which can be accessed at any time by clicking on the question mark at the top of the screen



- Instruction manuals are available for download at: [www.geokon.com/Manuals](http://www.geokon.com/Manuals)
- Please visit <https://www.geokon.com/Tutorials> for more tutorials