# Solinst® Cloud

## User Guide

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# 1.0 Introduction

The Solinst Cloud is a device and data-management tool that provides quick and secure access to all your critical water monitoring projects in one convenient spot. It allows the management of your remote monitoring sites using your web browser. It provides an intuitive interface to configure your LevelSender 5 telemetry systems and monitoring networks.

The purpose of this User Guide is to describe the functionality of the Solinst Cloud, from creating a login and configuring your account and settings, to adding and managing your project devices and data. The focus is on programming and data management for LevelSender 5 (4G) telemetry systems.

**For more information on the LevelSender 5, including specifications, battery installation, battery life estimates, datalogger connections and installation in the field, see the LevelSender 5 User Guide.**

## 1.1 Compatibility

The Solinst Cloud is compatible with the LevelSender 4G using firmware version 2.202 and above, with the following Solinst dataloggers:

**Note:** To determine what firmware version your LevelSender 5 is using, you can check using the Solinst Cloud, see Section 5.1.

| Datalogger | Firmware Version |
|---|---|
| Levelogger 5 | 1.006 |
| Barologger 5 | 1.006 |
| Levelogger 5 Junior | 1.006 |
| Levelogger 5 LTC | 1.006 |
| Rainlogger 5 | 1.006 |
| LevelVent 5 | 1.006 |
| AquaVent 5 | 1.006 |
| Levelogger Edge | 3.004 |
| Barologger Edge | 3.004 |
| Levelogger Junior Edge | 3.004 |
| LTC Levelogger Edge | 1.003 |
| Rainlogger Edge | 3.001 |
| LevelVent | 1.000 |
| AquaVent | 1.000 |

Table 1-1 Compatible Datalogger Firmware Versions

**Note**: See the Levelogger and Vented Dataloggers User Guides for more information on the dataloggers.

**Note**: See the LevelSender 5 User Guide for more information on the LevelSender System, connecting dataloggers and installation.

## 1.2 System Requirements

You will require a Chrome browser to access Solinst Cloud.

A PC running Windows 10 or 11 is required for using the Solinst Cloud LevelSender Field Utility (Section 8.0).

## 2.0 Getting Started with Solinst Cloud

To access Solinst Cloud, go to https://solinstcloud.com using your Chrome web browser. Solinst Cloud can be viewed using a mobile device or desktop computer, as it has a responsive design.

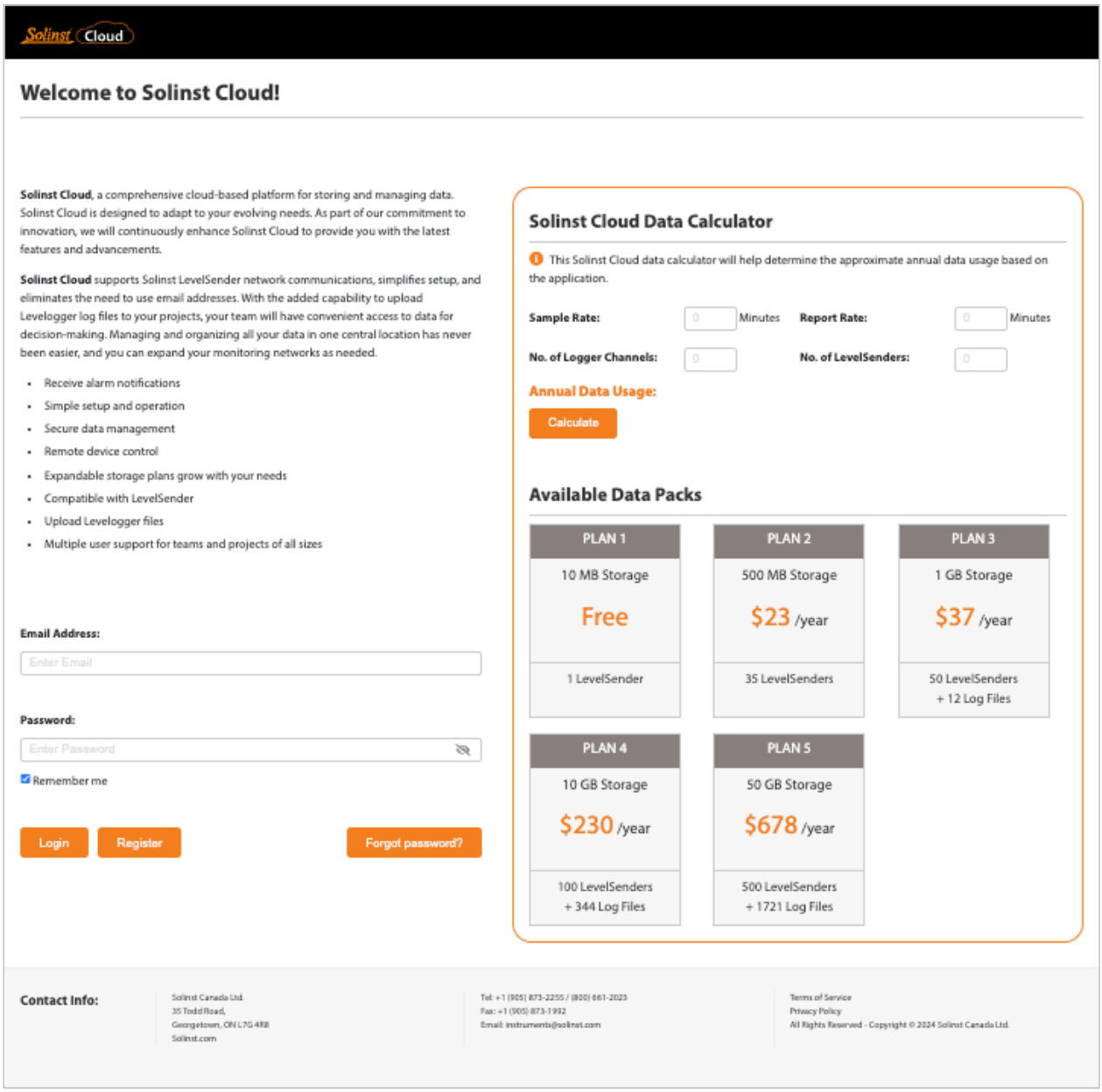



Figure 2-1 Solinst Cloud Login/Registration Page

The Solinst Cloud login page includes the pricing for each data storage plan and a calculator to help determine the plan that works best for you.

## 2.1 Registration

From the Solinst Cloud login page, click Register to begin your registration. To register, you will first need to fill out your contact information, and create a password for your account. In step 2 of the registration, you will enter your billing information. Read, and check to agree to the Terms and Conditions. Click Register.

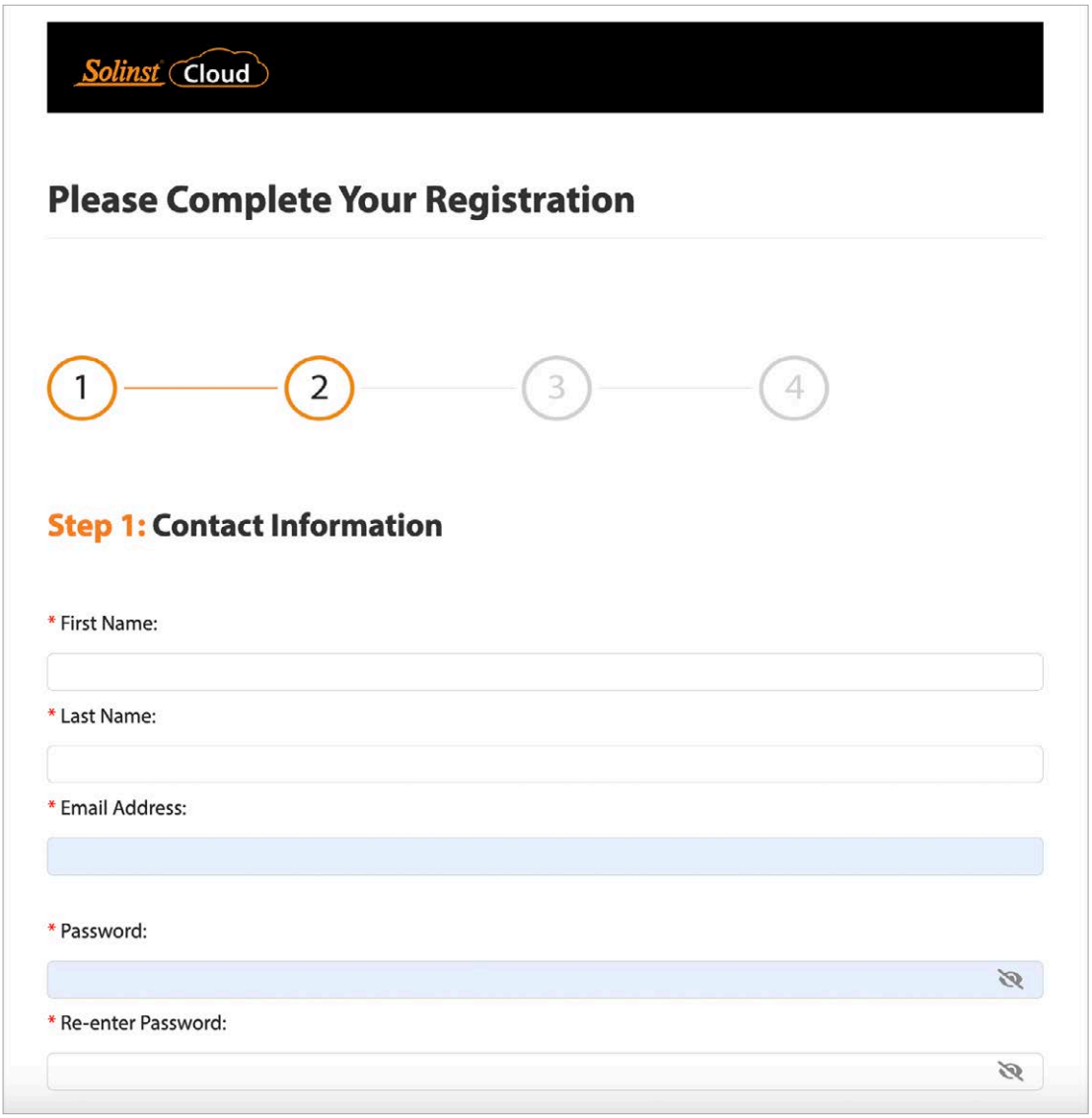



Figure 2-2 Registration – Contact Information

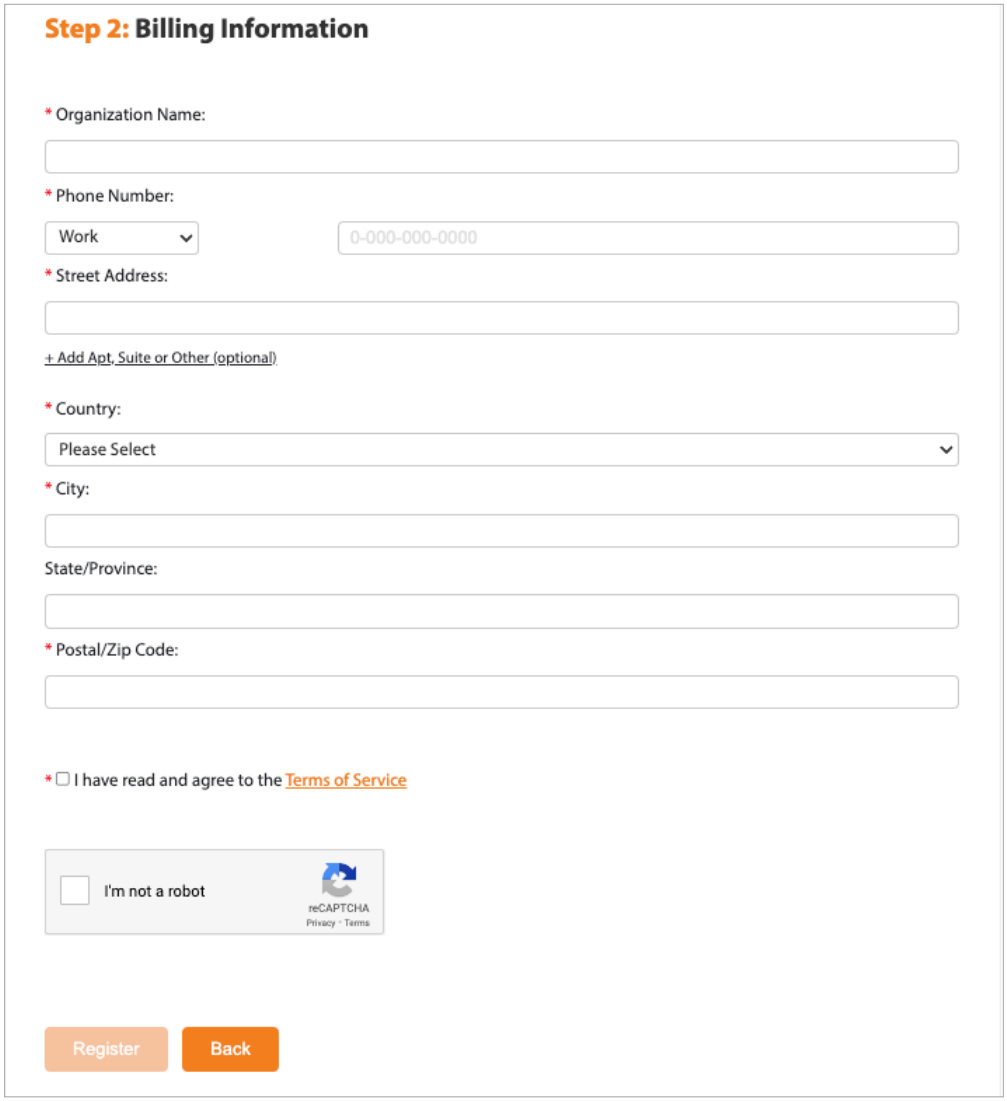



Figure 2-3 Registration – Billing Information

### 2.1.2 Select a Plan

In step 3 of the registration, use the Data Calculator to determine the amount of annual storage and data usage you will require, then select your data plan.

**Note:** The plans are billed in Canadian dollars (CAD).

Click Proceed to Checkout.

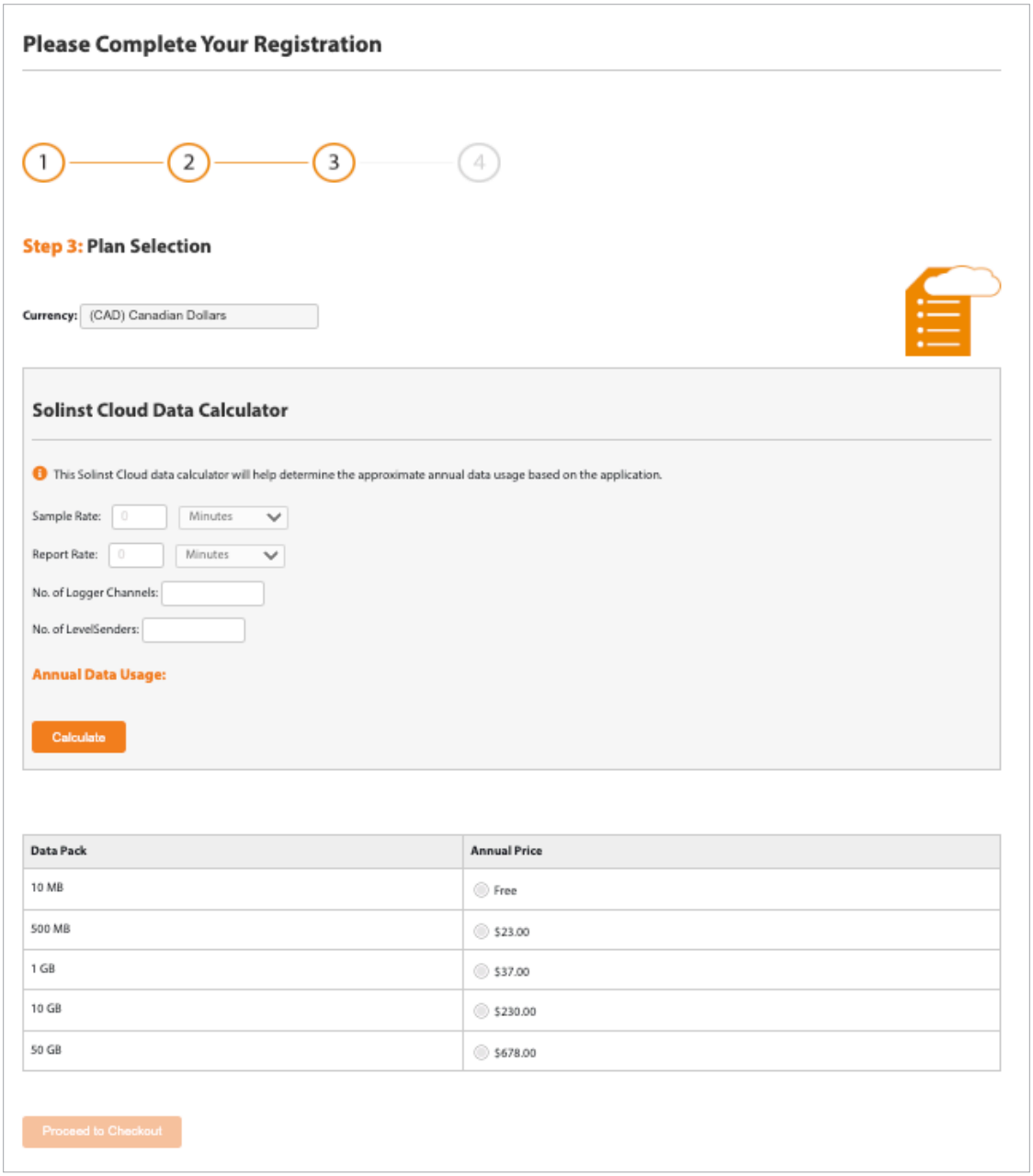



Figure 2-4 Registration – Data Plan Selection

**Note**: Plan pricing is subject to change.

### 2.1.3 Payment and Invoicing

Complete the registration by confirming your plan and entering your payment details (credit card). Click Pay Now.

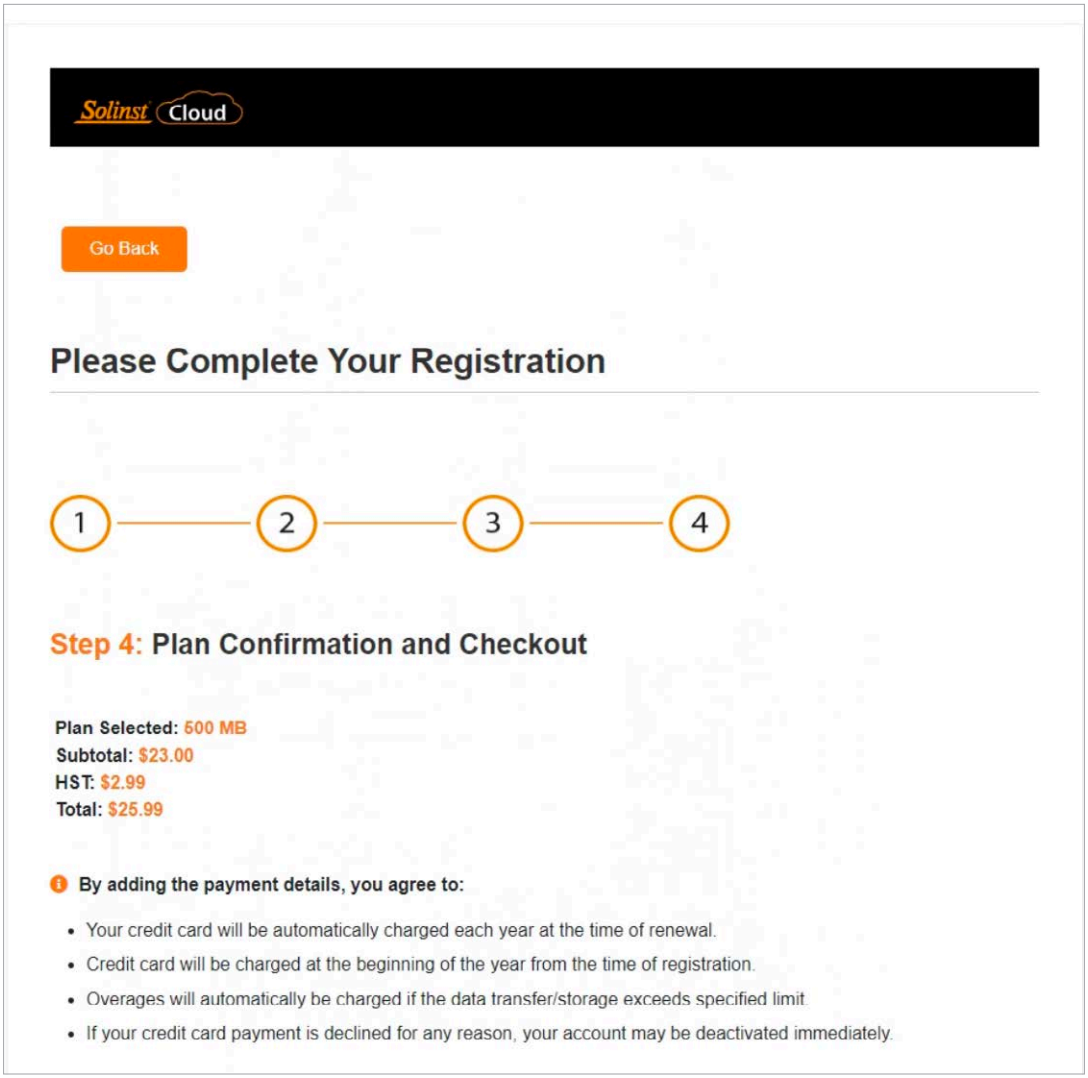



Figure 2-5 Registration – Plan Confirmation

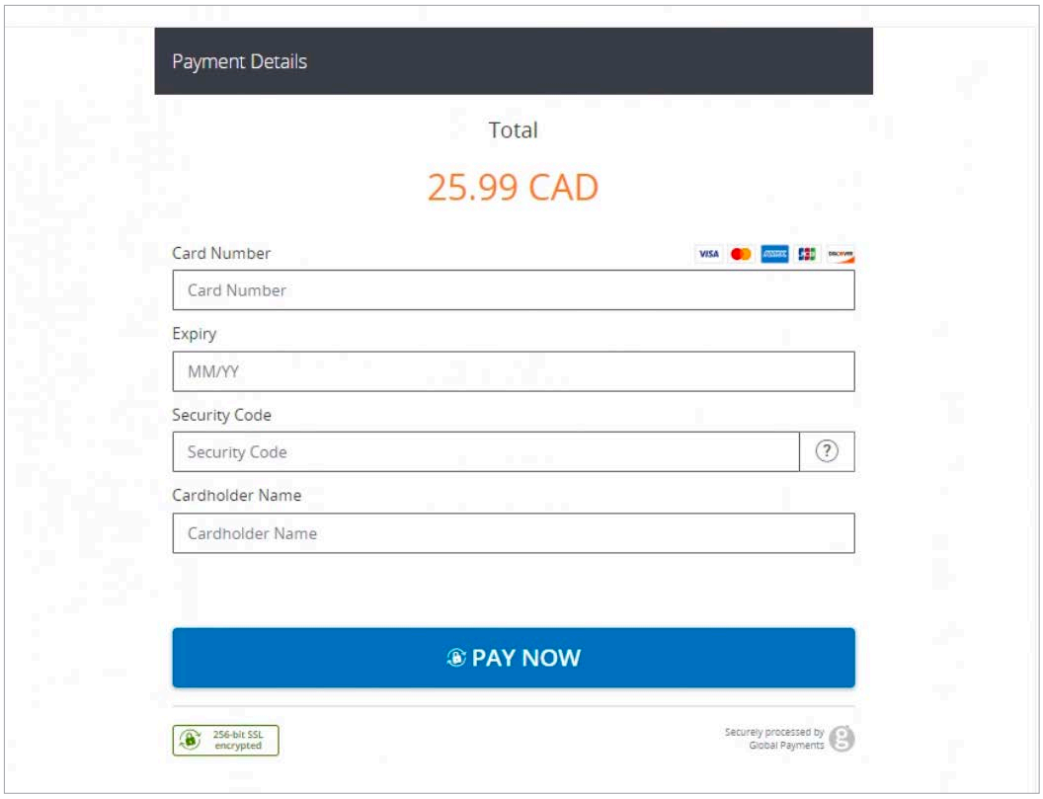



Figure 2-6 Registration – Payment Details

You will receive confirmation that your payment was successful and an email will be sent with a link to confirm your registration. You can now click Go back to home page to log-in to Solinst Cloud.

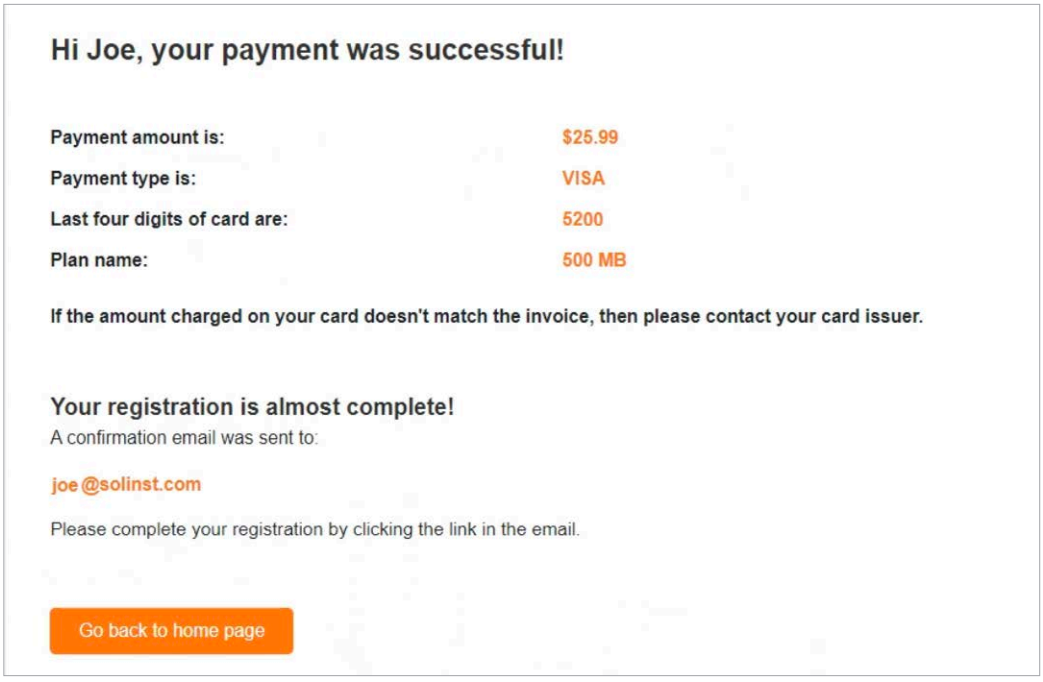


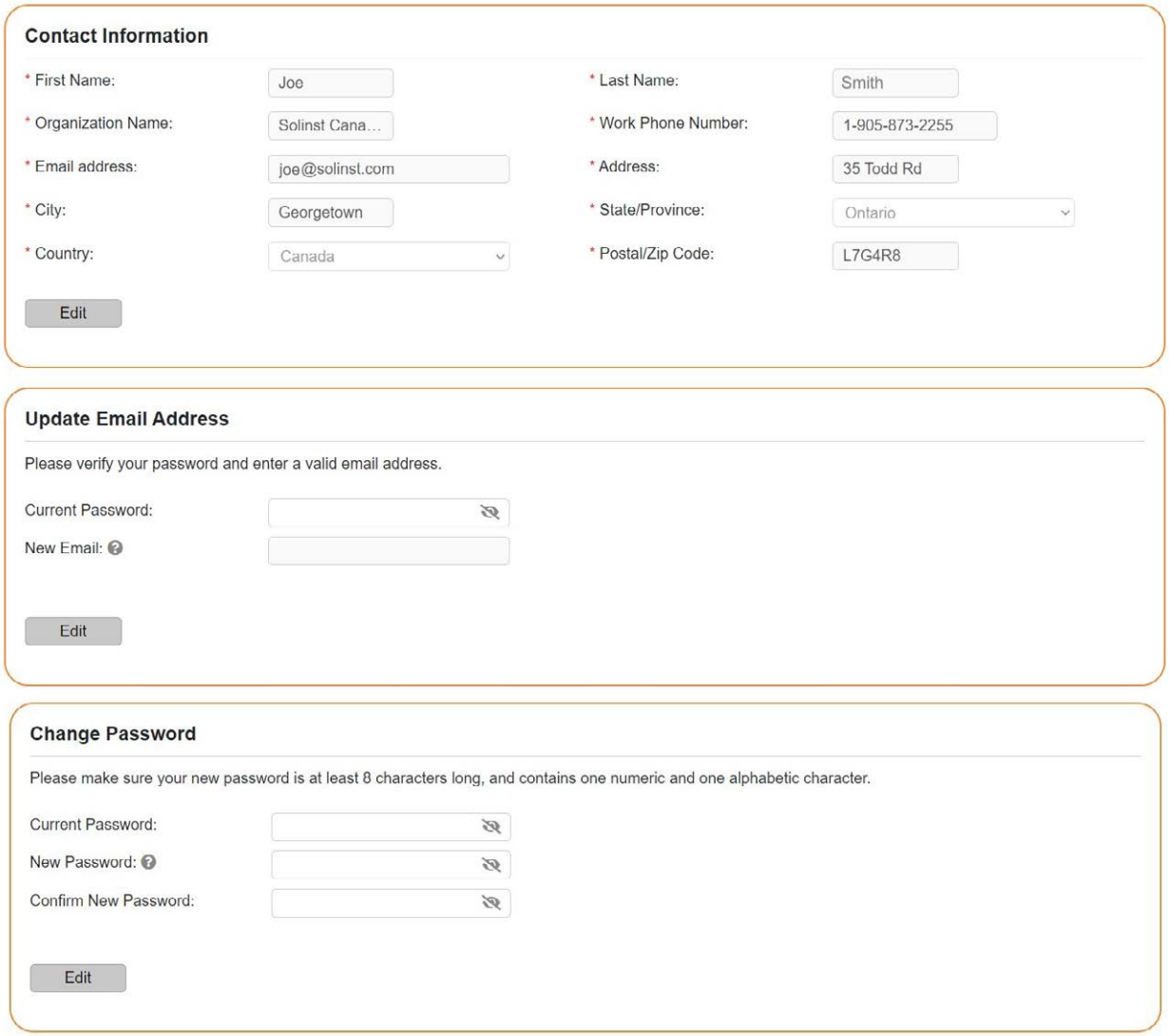

Figure 2-7 Registration – Payment Successful

## 2.2 Account Settings

Once registered and logged in to your Solinst Cloud account, you can make changes to your settings by going to **Account Settings** from the main menu.

From here, as an Account Manager/Owner, you can make changes to your contact information, email address, password, payment method, plan and download invoices. You can also change the Account Owner/Manager.

**Note:** Depending on the level of account access, the options available to you will differ (e.g. Account Editors can only make changes to their email address, name, password, and download invoices. Account Members can not make any changes to the account settings, other than update their password).



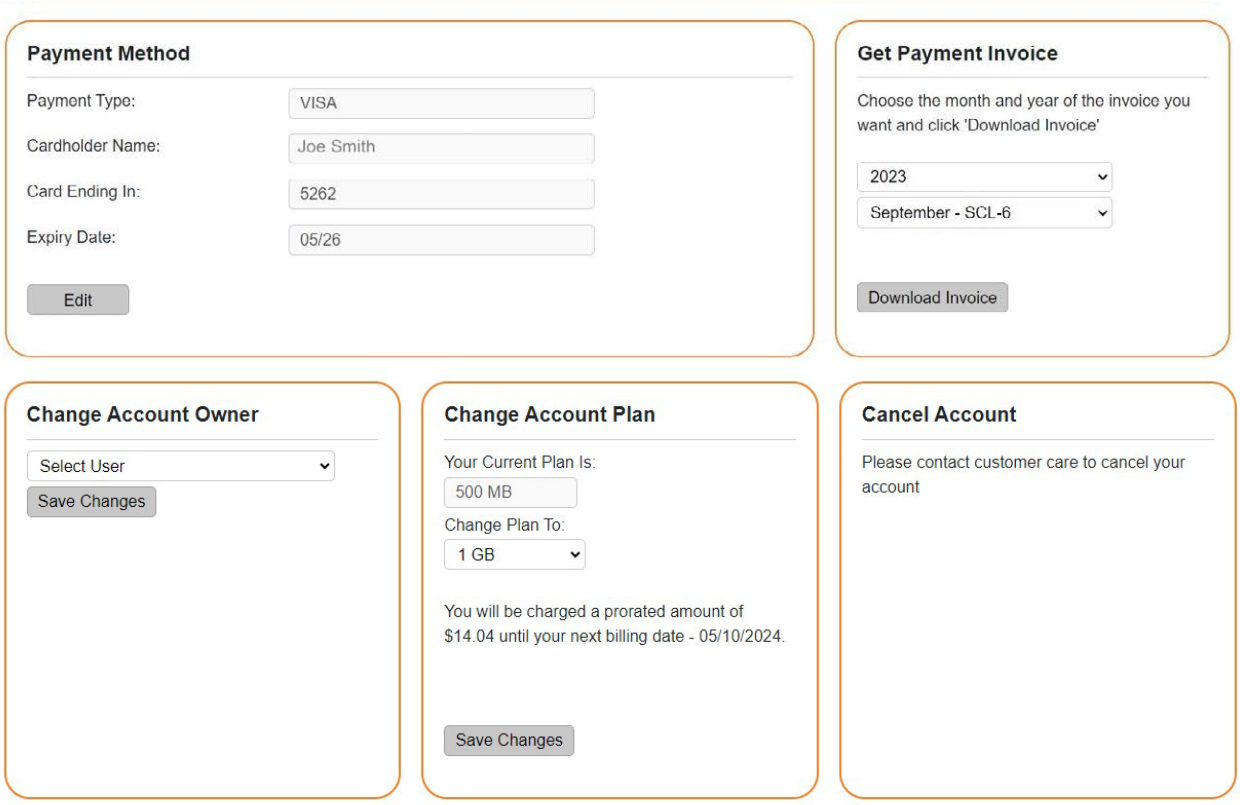



Figure 2-8 Account Settings

**Note:** To cancel your account, you must contact Solinst.

## 2.3 Members

To add other project collaborators to your Solinst Cloud account, from the Solinst Cloud main menu, go to **Members**.

The person who registered the account will automatically be the Account Manager/Owner. The Account Manager/Owner has a full view of all projects in the account and the ability to edit project details.

To invite new members, select the Organizational Access Level from the drop-down menu, enter their email address, then click Invite. They will need to create a login once they accept the invite in the email.

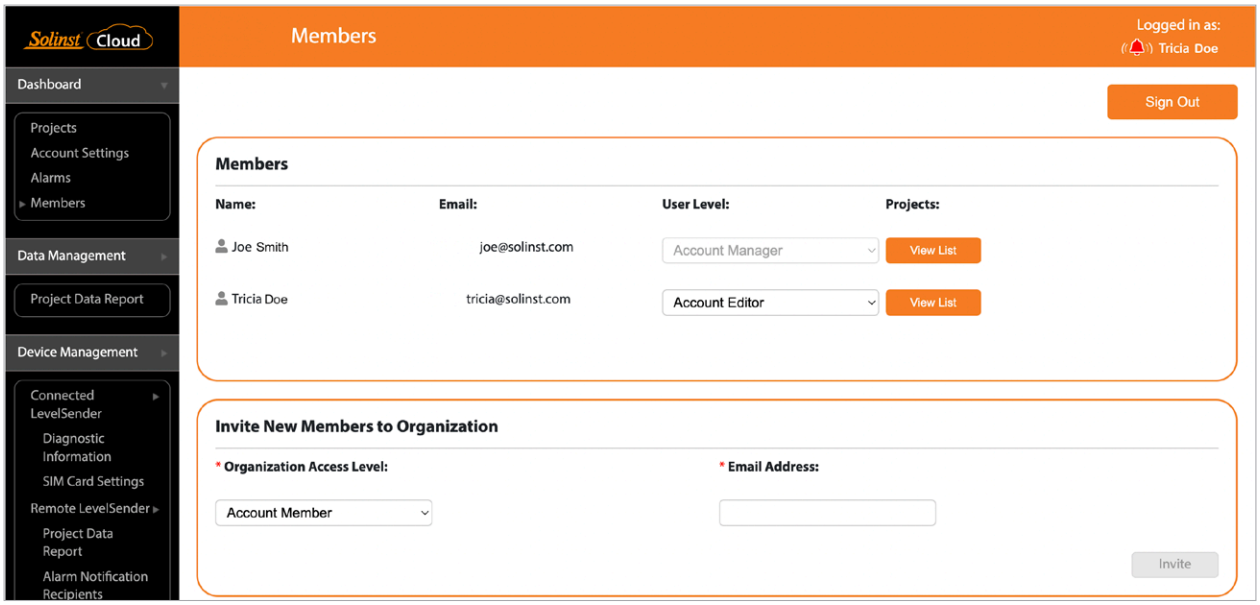



Figure 2-9 Solinst Cloud Members

The options for member levels are:

**Account Editor:** Full view of all projects in the account, but can only make edits to the projects they are Project Members/Managers of. Can invite account Members.

**Account Member:** Can only view projects that they are Project Members/Managers of. Can not approve uploaded data logs or add Account and Project Members. They have a limited Dashboard.

A list of all account Members will be displayed with their access level, as well as list of the projects they are members of.

## 3.0 Solinst Cloud Dashboard

The **Dashboard** will display after you have successfully logged in to Solinst Cloud. At any time in Solinst Cloud, you can access the Dashboard using the main menu on the left of the application or by clicking the Solinst Cloud logo at the top left.

The Dashboard provides a quick and organized overview of all your projects, including a list and map view, and alarm status. It displays the amount of data storage available and the annual data transfer of all the devices in your account. You can upload new data logs to add to projects, which will create a list of data logs that need approval. You can sign-out of Solinst Cloud using the button on the top right.

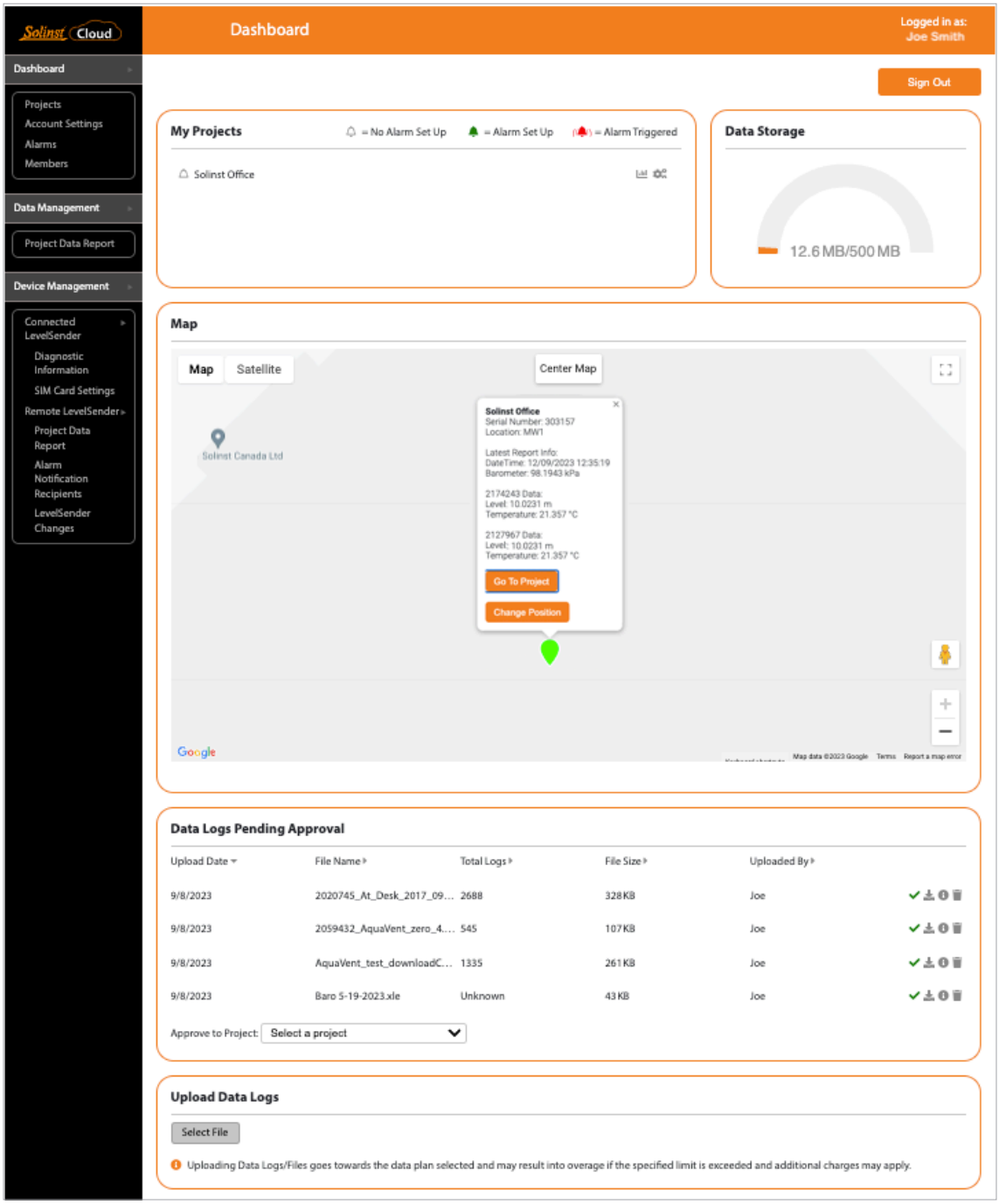



Figure 3-1 Solinst Cloud Dashboard (Account Manager/Editor View)

### 3.1 My Projects

The **My Projects** section of the Dashboard lists each project in your Solinst Cloud account alphabetically by name.

**Note:** If you are an Account Member or Editor, you will also see Other Organization Projects that you are not a member of, listed separately.

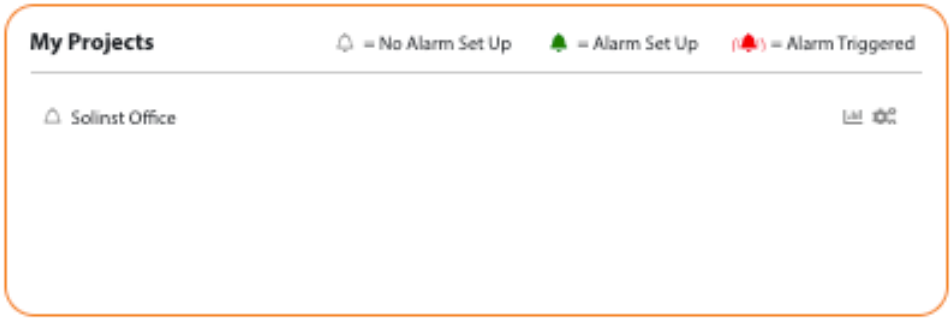



Figure 3-2 Solinst Cloud Dashboard – My Projects

The alarm icon beside each project name indicates if an alarm condition has been set and/or triggered in that project. See Section 4.3 for more on **Alarms.**

By clicking the View Project Reports icon you can view the **Project Data Report**. See Section 6.0.

By clicking the View Project Details icon or project name, you can view all the project details in **Project View**, where you can also make changes to the project, including devices. See Section 4.2.

### 3.2 Data Storage

Based on your data plan, the Dashboard will display how much **Data Storage** space you have remaining in your account and the annual data transfer of all the devices in your account.

**Note:** Contact Solinst for instructions on how to free-up storage space.

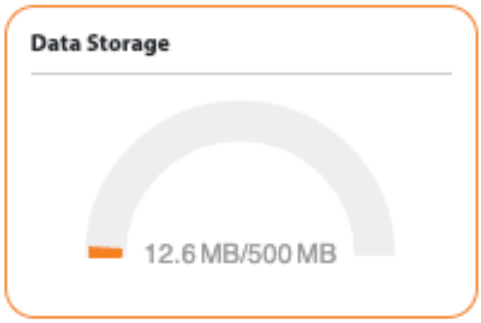



Figure 3-3 Solinst Cloud Dashboard – Data Storage

You can use data calculator on the Solinst website to see if you need to adjust your plan based on the sample and report rates of your LevelSender telemetry systems and number of attached dataloggers:

https://solinst.com/products/dataloggers-and-telemetry/solinst-telemetry-systems/9500-levelsender/levelsender.php

As an Account Manager/Owner, you can change your account plan by going to Account Settings (see Section 2.2). To downgrade your plan, contact Solinst.

### 3.3 Dashboard Map

Each LevelSender obtains GPS coordinates from the cellular network based on the location of the nearest cellular tower. From this, a **Map** is created which displays all device locations in your account. You can display in Map, Satellite or Street View. You can zoom in and out, and drag to different device locations. To re-center, click Center Map.

Selecting a device from the map will display a pop-up with information from that LevelSender, including the serial number, location, and the latest report information including the LevelSender time, internal barometer reading, and the data from the connected datalogger(s).

**Note:** The location icons on the map will indicate by colour if an alarm condition has been set and/or triggered for that device.

From the pop-up you can also Go To the Project to access the **Project View** for more details or make edits, or **Change Position** of the LevelSender by entering custom GPS coordinates, or manually dragging its position on the map.

**Note:** you can also override the LevelSender GPS coordinates and apply custom GPS coordinates to your LevelSender in the Remote LevelSender Changes Section 5.3.

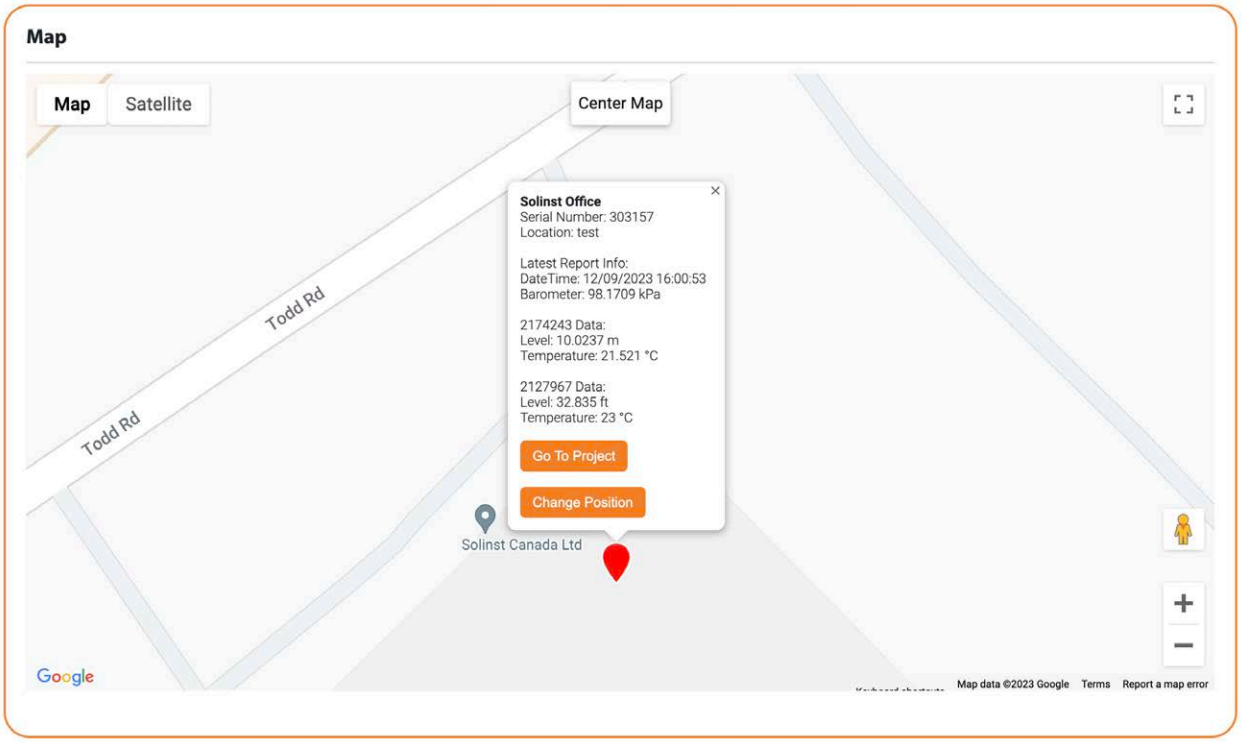



Figure 3-4 Solinst Cloud Dashboard – Map

### 3.4 Data Logs Pending Approval

This section displays any data logs that have been uploaded and need to be approved for addition to a project. Select the project from drop-down menu, then check the file from the list to approve the data file. The data will then be found in the **Project View** under Data Logs. See Section 4.2.4.

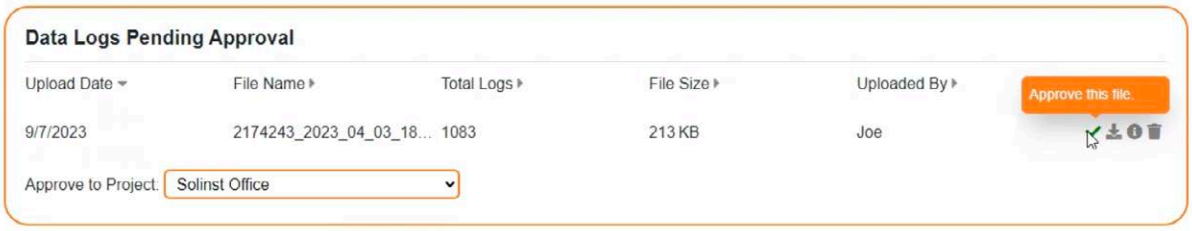



Figure 3-5 Solinst Cloud Dashboard – Data Logs Pending Approval

Before you approve a data log, you can view the file by clicking the View This File icon . The data will be shown in chart and list view for you to review. You can also download or delete the file.

| ID | DateTime | TEMPERATURE | LEVEL |
|---|---|---|---|
| 1 | 21/08/2017 20:15:39 | 10.0575 | 24.3 |
| 2 | 21/08/2017 20:30:39 | 10.056 | 24.3 |
| 3 | 21/08/2017 20:45:39 | 10.053 | 24.3 |
| 4 | 21/08/2017 21:00:39 | 10.053 | 24.3 |
| 5 | 21/08/2017 21:15:39 | 10.0515 | 24.3 |
| 6 | 21/08/2017 21:30:39 | 10.05 | 24.2 |
| 7 | 21/08/2017 21:45:39 | 10.05 | 24.1 |
| 8 | 21/08/2017 22:00:39 | 10.0515 | 24 |
| 9 | 21/08/2017 22:15:39 | 10.0515 | 23.9 |
| 10 | 21/08/2017 22:30:39 | 10.05 | 23.9 |
| 11 | 21/08/2017 22:45:39 | 10.05 | 23.8 |
| 12 | 21/08/2017 23:00:39 | 10.0515 | 23.9 |
| 13 | 21/08/2017 23:15:39 | 10.0485 | 23.9 |

Figure 3-6 Solinst Cloud Dashboard – View Data Logs

### 3.5 Upload Data Logs

This feature allows you to upload data logs from Solinst dataloggers that are not reporting to the Solinst Cloud, to help keep all your project data organized in one location.

Click the Select File button to browse and choose the file you want to upload. The file will be listed under the **Data Logs Pending Approval** section of the Dashboard. See Section 3.4.

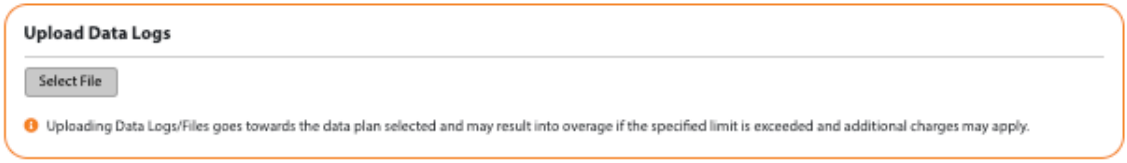



Figure 3-7 Solinst Cloud Dashboard – Upload Data Logs

# 4.0 Solinst Cloud Projects

Similar to the Solinst Cloud Dashboard, when **Projects** is selected from the main menu, a list of all your projects in Solinst Cloud will be displayed in alphabetical order.

The alarm icon beside each project name indicates if an alarm condition has been set and/or triggered in that project. See Section 4.3 for more on **Alarms.**

By clicking the View Project Details icon or the project name, you can view all the project details in **Project View**, where you can also make changes to the project, including devices. See Section 4.2.

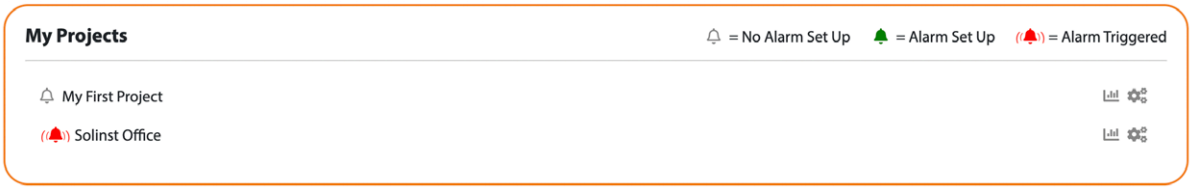



Figure 4-1 Solinst Cloud Projects – My Projects

## 4.1 Create a New Project

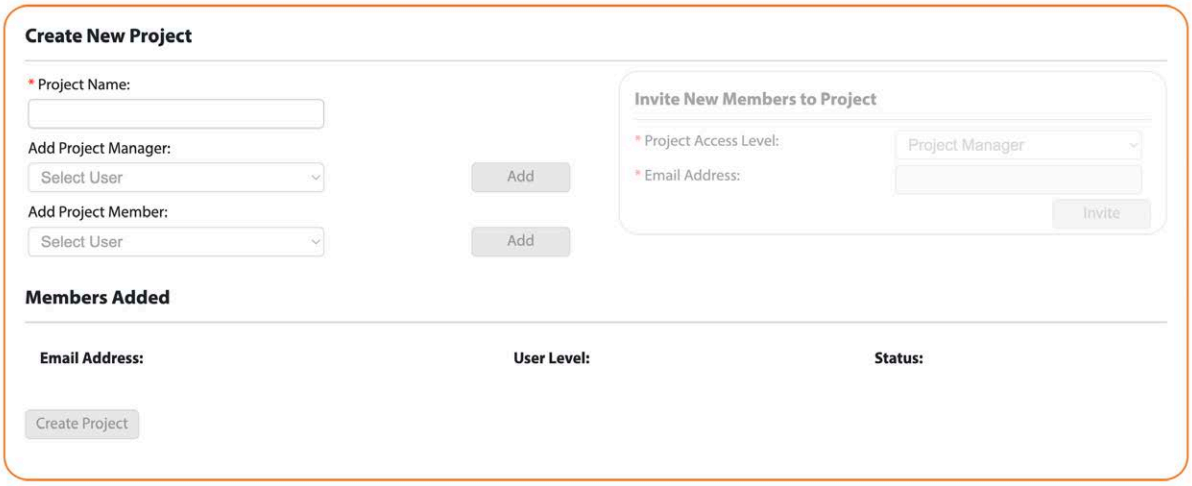



Figure 4-2 Solinst Cloud Projects – Create New Project

To Create a New Project, enter a Project Name.

Use the drop-down menus to select a Project Manager and add Project Members. You must have at least one Project Manager in each project.

The Users available in the drop-down menus will have been added to your account already using the **Members** section, see Section 2.3.

If a user is not available in the drop-down menu, you can Invite New Members to the Project by selecting the desired Project Access Level and entering their Email Address. Click Invite to send an email invitation.

View the differences between the two User Levels (Project Manager and Project Member) in Section 4.2.2.

Members Added will be listed, along with the Status of their invitation.

Click Create Project once you are finished adding members. You will automatically be taken to the **Project View**, see Section 4.2. See Section 4.2.3 for adding devices to your project.

## 4.2 Project View

**Project View** can be accessed by clicking the View Project Details icon beside any project name (or by clicking the project name) listed under My Projects in the Solinst Cloud Dashboard, or by going to the **Projects** section from the main menu.

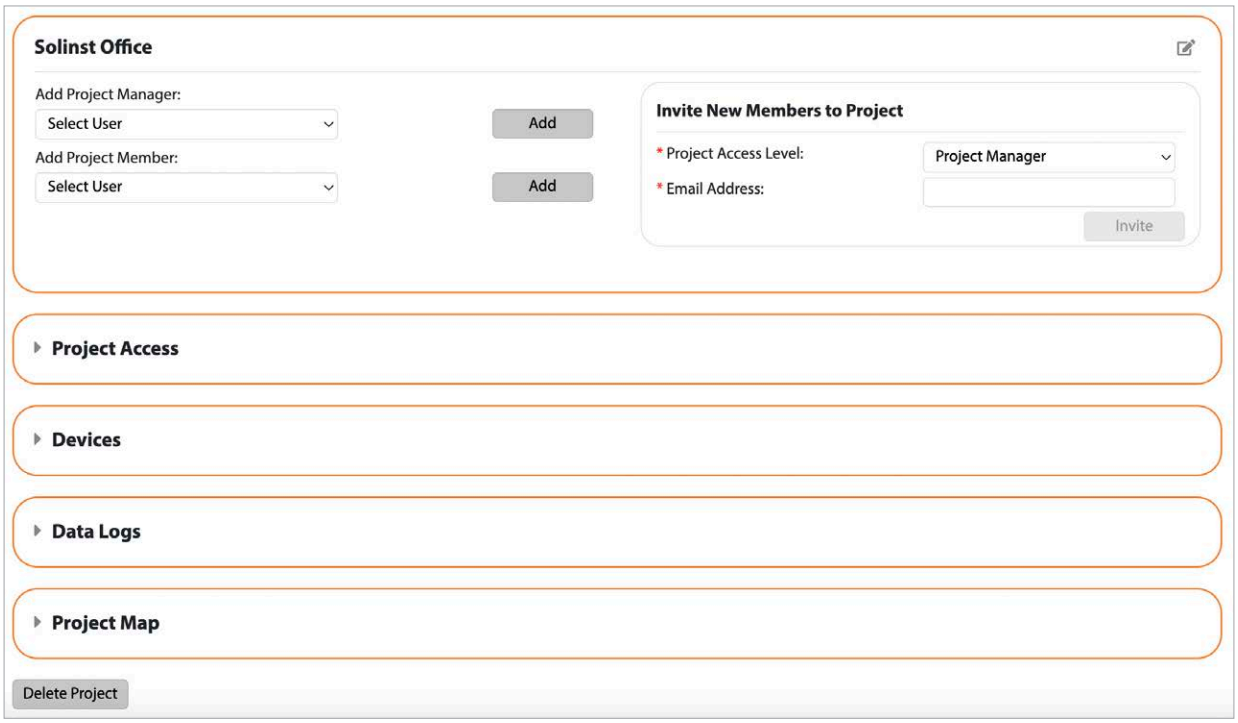



Figure 4-3 Project View

**Note:** You can also get to Project View by clicking Go To Project from a pop-up in the Dashboard or Project Maps.

In Project View, you can add new members to the project, view the member's access level and delete members, add devices to the project, and view data logs and the project map.

You can change the name of a project by using the edit icon at the top right of Project View.

You can delete a project by clicking Delete Project at the bottom of Project View.

### 4.2.1 Project Members

Similar to creating a new project, you can add members to a project in Project View, as well as invite new members. See Section 4.1.

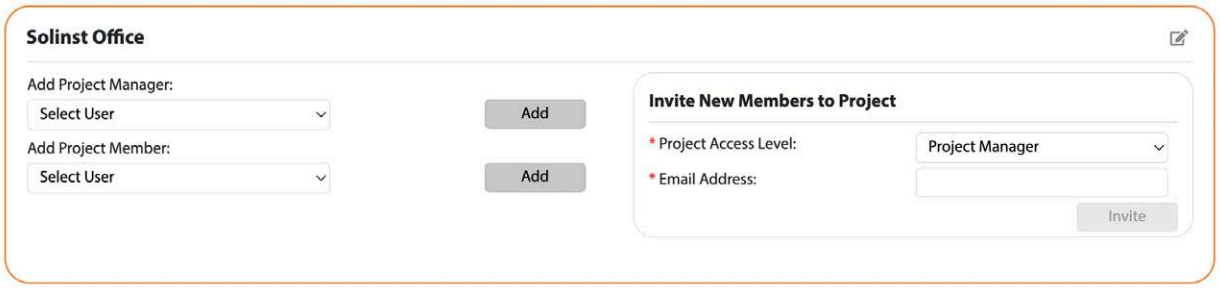



Figure 4-4 Project View – Project Members

### 4.2.2 Project Access

**Project Access** lists each member currently in the project and the access level they have, e.g., Project Manager or Project Member. You can Edit the Project Access Level using the drop-down menu.

Project Access determines the functions that members have available to them, including the ability to invite members to a project, upload data, and edit project devices.

The access that comes with each Project User Level is as follows:

**Project Manager:**

- can add/remove users to/from the project
- can edit all dataloggger and telemetry settings for the project, and project data stored in Solinst Cloud
- can delete the project, and all project data stored in Solinst Cloud

**Project Member:**

- can edit all datalogger and telemetry settings for the project, but not data stored in Solinst Cloud
- can view project data stored in Solinst Cloud

You can remove a member from a project by clicking the delete icon ⊖ beside their information.

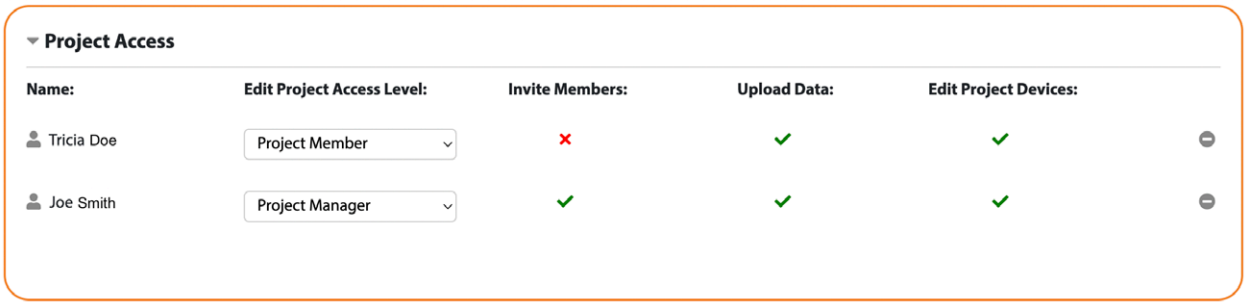



Figure 4-5 Project View – Project Members

### 4.2.3 Devices

**Devices** lists each LevelSender in your project by serial number, or the name given when programming it.

Figure 4-6 Project View – Devices

To view the device settings, click the Device Settings icon. This will take you to the LevelSender Settings page. See Section 5.2.1.

To delete a device from a project, click the Delete Device icon.

By clicking Add New Device, you will be taken to the LevelSender Setup Wizard to program a connected LevelSender. See Section 5.1.1.

### 4.2.4 Data Logs

Data logs uploaded and approved in the Dashboard will be listed under **Data Logs** in Project View. You can view the file by clicking the View This File icon . The data will be shown in chart and list view for you to review.

You can also download or delete the file, or send a link to the data file by clicking the Copy This Link icon .

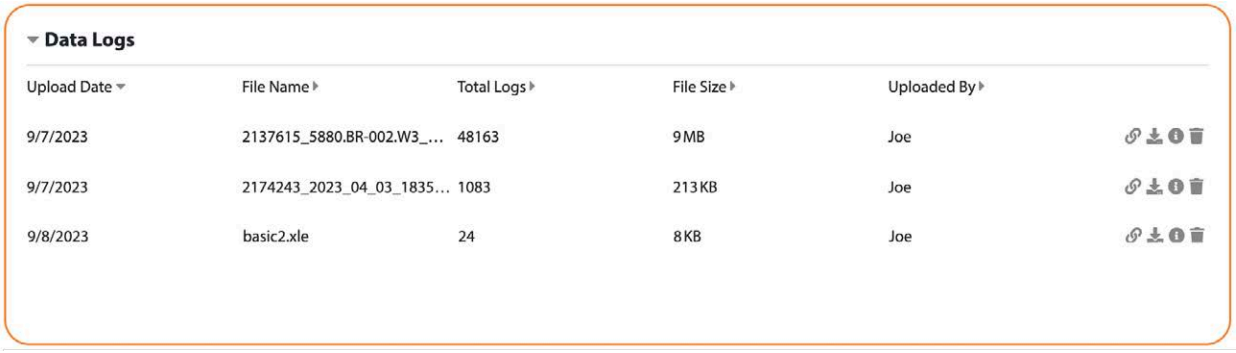



Figure 4-7 Project View – Data Logs

### 4.2.5 Project Map

Each LevelSender obtains GPS coordinates from the cellular network based on the location of the nearest cellular tower. From this, a **Project Map** is created which displays all device locations in your projects. You can display in Map, Satellite or Street View. You can zoom in and out, and drag to different device locations. To re-center, click Center Map.

By selecting a device from the map, a pop-up will display information from that LevelSender, including the serial number, location, and the latest report information including the LevelSender time, internal barometer reading, and the data from the connected datalogger(s).

From the pop-up you can also **Go To the Project** to view more details or make changes, or **Change the Position** of the LevelSender by entering custom GPS coordinates, or manually dragging its position on the map.

**Note:** You can also override the LevelSender GPS coordinates and apply custom GPS coordinates to your LevelSender using Remote LevelSender Changes, see Section 5.3.

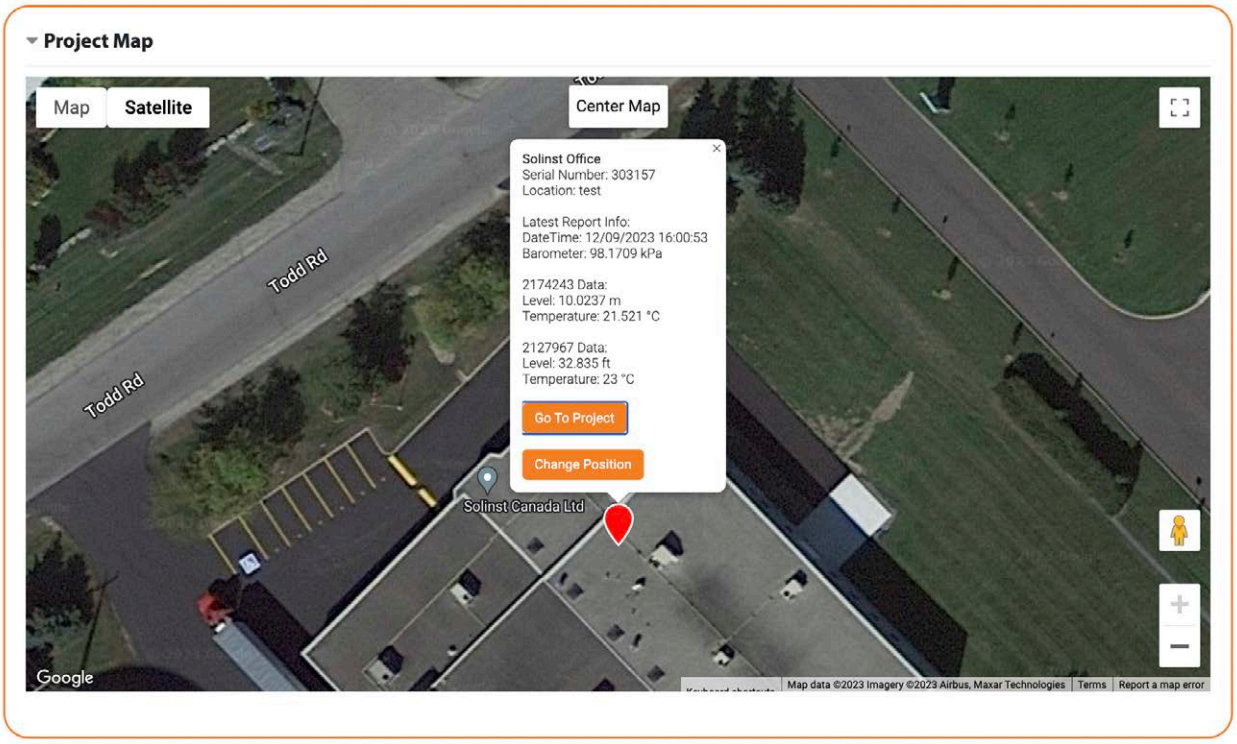



Figure 4-8 Project View – Project Map

### 4.3 Alarms

The **Alarms** section lists any alarms that have been triggered in your projects. The Alarm List can also be accessed by clicking the Alarm Triggered icon beside a project or device name, or in the top right corner of the Solinst Cloud Dashboard.

The Alarm Type, Value and Threshold (if applicable), and Date and Time of the alarm will be identified.

The different alarm types include communication errors and threshold alarms that are set when configuring your LevelSender. Account and Project Managers automatically receive email alerts; other alarm recipients can be set up using the Alarm Notification Recipients option in the main menu, see Section 5.2.2.

If an alarm has been dealt with, you can click Clear Alarm to remove it from the list.

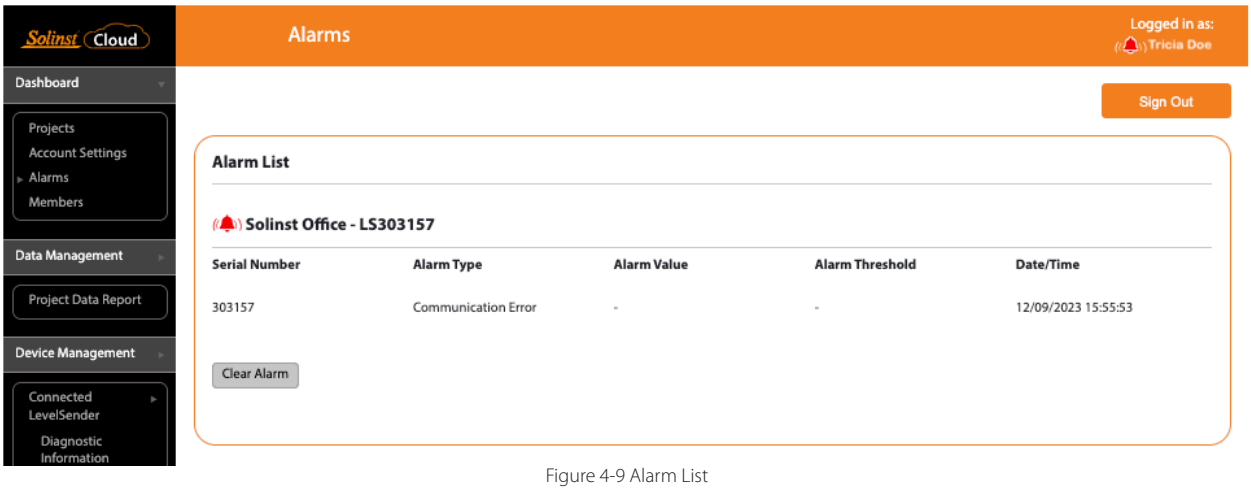



Figure 4-9 Alarm List

# 5.0 LevelSender Device Management

The LevelSender 5 is a simple, low cost device designed to wirelessly send data from Solinst dataloggers in the field, via 4G LTE cellular communication, to Solinst Cloud.

**Note**: For more information on the LevelSender, including battery installation, battery life estimates, datalogger connections and installation in the field, see the Levelsender User Guide.

## 5.1 Connected LevelSender Options

For initial setup and direct communication with Solinst Cloud, the LevelSender 5 must have three lithium batteries installed and be connected to the computer using a USB cable (available from Solinst). The connection is accessed by loosening the nut around the antenna and removing it along with the top cap (remove the three screws).

Figure 5-1 Connecting a LevelSender to a computer via USB cable

When connected to Solinst Cloud, a LevelSender can be programmed and added to a project, settings can be reviewed and edited including updating **SIM Card Settings** (see Section 5.1.1), and **Diagnostic Information** obtained (see Section 7.1).

Get to these options by clicking the **Connected LevelSender** options from the main menu.

### 5.1.1 Adding a LevelSender

You will be prompted to **Project View** when setting up a new project, where you can Add a New Device. See Section 4.1.

You can also add a device by going directly to Project View, under **Devices** (see Section 4.2.3) or **Connected LevelSender** from the main menu.

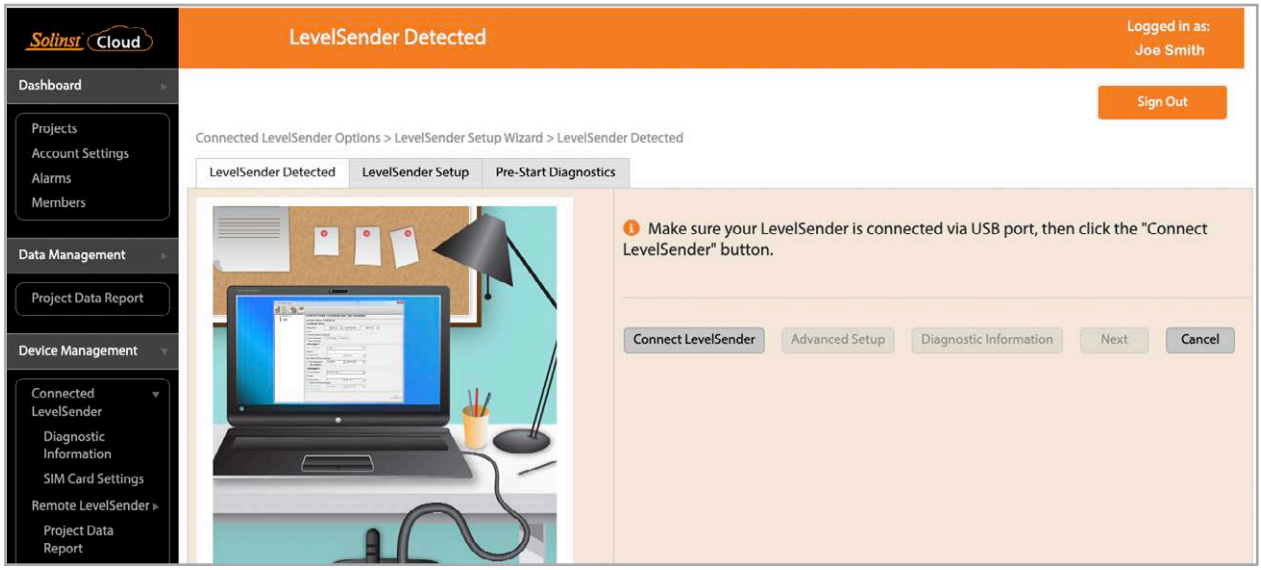



Figure 5-2 Connecting a LevelSender to Solinst Cloud

With your LevelSender connected to the USB port, click Connect LevelSender. This starts the LevelSender Setup Wizard.

**Note**: You can re-program a previously configured LevelSender by using the following steps, or if you just need to update the **SIM Card Settings**, go directly to that option in the main menu once the LevelSender is connected.

Once the connected LevelSender is detected by the Wizard (this may take a few seconds), click Next to continue the setup.

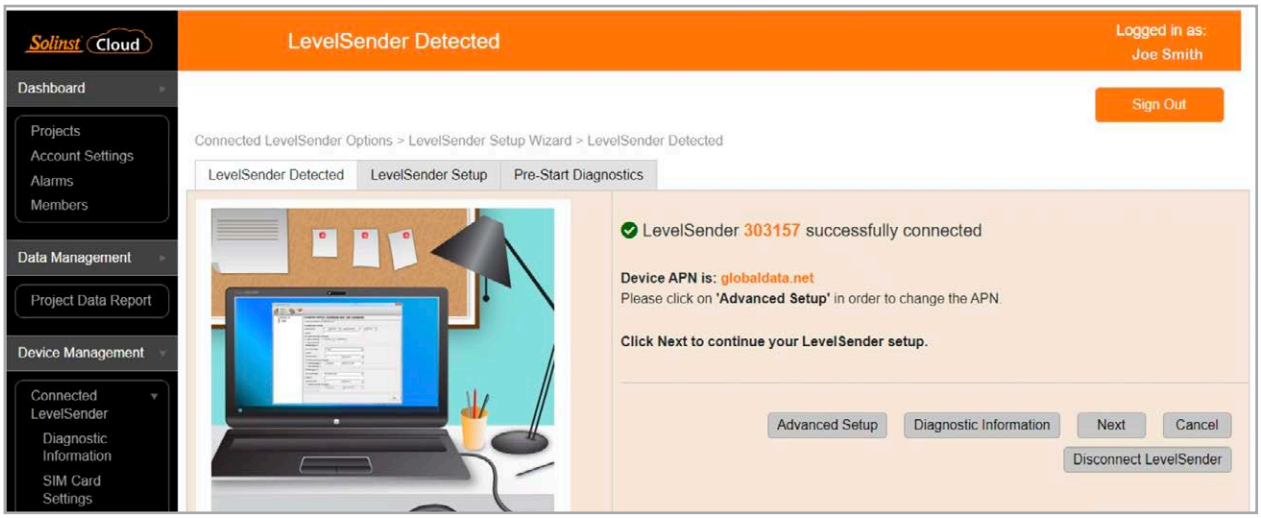



Figure 5-3 LevelSender Detected

Or if you have set up a data plan with a cellular service provider other than Solinst, for example, select **Advanced Setup** in order to change your APN/SIM Card Settings. You can test that the settings are correct by clicking Diagnostic Information and performing the tests. See Section 7.1 for more on diagnostics. Click Next when finished. Click Cancel to exit the Wizard at any time.

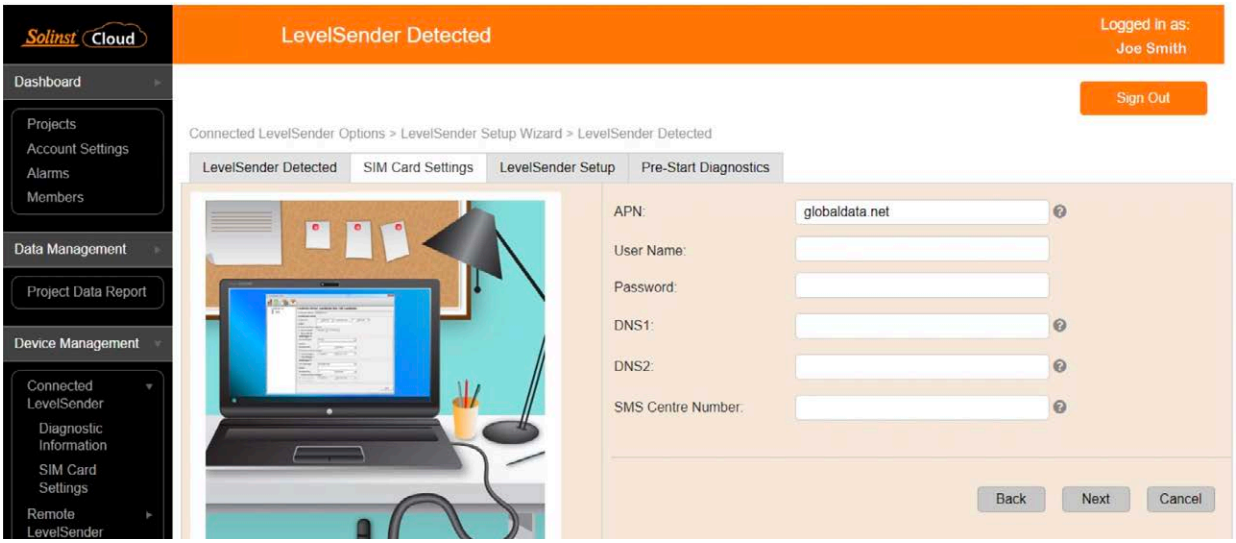



Figure 5-4 LevelSender APN/SIM Card Settings

## 5.1.2 LevelSender Setup

In this step you will enter your LevelSender Settings. Ensure the correct project is selected in the drop-down menu. Optionally, enter a name for the LevelSender (the serial number is the default).

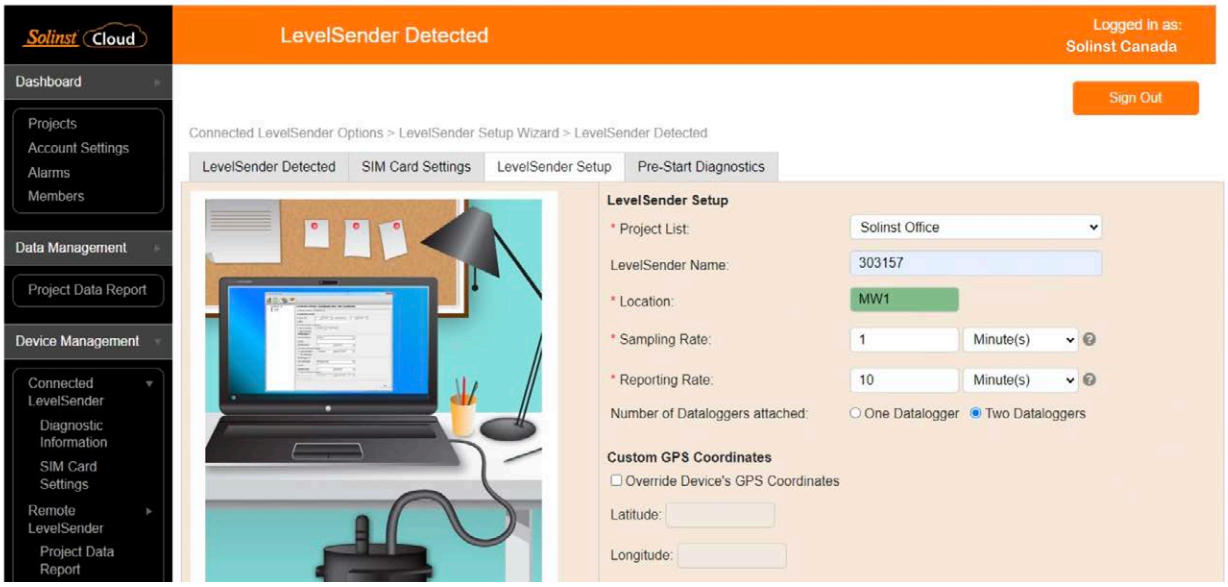



Figure 5-5 LevelSender Setup

Complete the following information for the LevelSender set up:

- **Location:** enter specific site / location information to identify each LevelSender.
- **Sampling Rate:** the rate that the LevelSender collects data from the connected datalogger(s). Sampling Rate can be set from 1 minute to 99 hours.
- **Reporting Rate:** the rate that the LevelSender reports collected data. Reporting rate can be set from 5 minutes to 99 hours. With each report, the LevelSender will also check for remote updates from the Solinst Cloud.

**Note:** The LevelSender will use battery power each time it samples, reports, and checks for updates. As such, more frequent intervals will drain the battery more quickly. See the LevelSender User Guide for more details.

- **Number of Dataloggers Attached:** select one or two dataloggers.
- **Custom GPS Coordinates:** each LevelSender obtains GPS coordinates from the cellular network based on the location of the nearest cellular tower. However, you can override the network information and enter your own coordinates to map the LevelSender location.

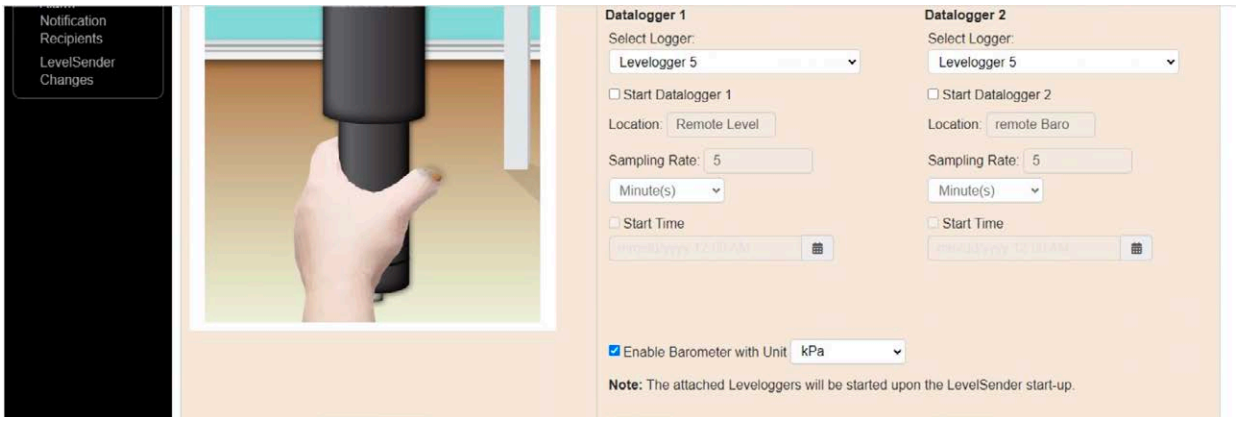



Figure 5-6 LevelSender Datalogger Settings

- **Select Logger:** select the type of datalogger connected, e.g. Levelogger 5, Barologger 5, etc.

You can optionally select and program the connected dataloggers to record simultaneously in there own internal memory as a back-up. Check the box to select independent logging and enter the following details:

**Note:** When using a Splitter, the number 1 or 2 will identify the Dataloggers in Solinst Cloud. The numbers are labeled directly on the Splitter.

- **Location:** specific site / location information that you input to identify each datalogger.
- **Sample Rate:** the rate at which the datalogger records in its internal memory. Sampling rate depends on the type of datalogger connected.
- **Start Time:** set a date and time for the datalogger to start independent logging.

**Note:** Programming independent logging in the dataloggers can also be done after setting up the LevelSender station, by sending a remote change via LevelSender Changes (Section 5.2.3).

**Note:** If the connected dataloggers are already logging, they will be stopped with the startup of the LevelSender, and restarted if you selected the option described above. It is recommended to download the data in the datalogger before connecting to the LevelSender. If you do not enter any settings for the loggers or select the "Start Datalogger" box, the datalogger will automatically be stopped with LevelSender startup and independent logging will not start.

Checking the **Enable Barometer with Unit** box provides both barometrically compensated water level data and a raw water level data. Units of measurement for the internal barometer pressure readings are available in psi, kPa, and mbar.

### 5.1.3 Alarm Setup

The alarm setup allows you to set specific alarm conditions for each of the dataloggers attached to the LevelSender. If an alarm condition has been met, notifications will be shown in various locations in the Solinst Cloud – the Dashboard, Project View, and Alarms.

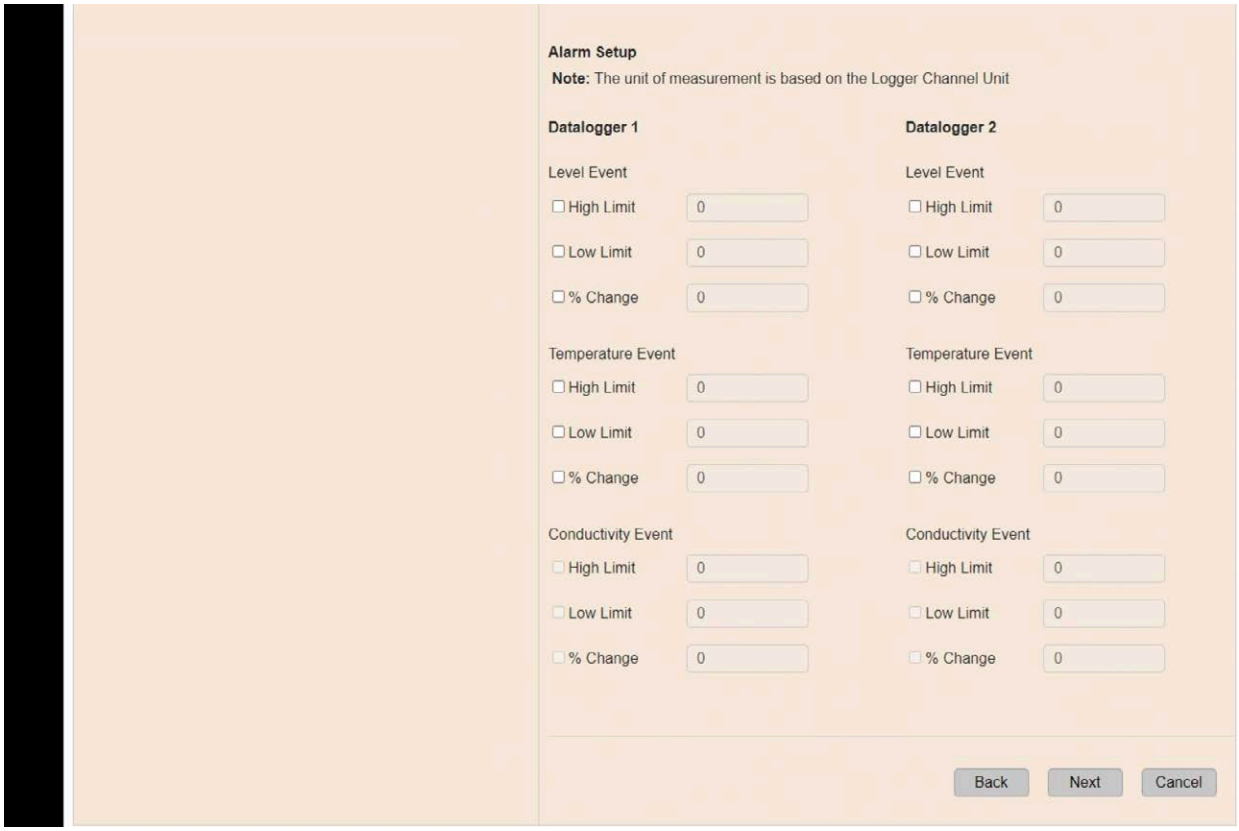



Figure 5-7 Alarm Setup

**Note: An automatic alarm will be triggered if the LevelSender battery falls below 60% (2.7 Volts).**

For each channel parameter (level, temperature, conductivity) you can set a "High Limit", "Low Limit", and "% Change" alarm event. The "High Limit" sets a value, that if exceeded by a datalogger reading, will result in an alarm condition being met. The "Low Limit" alarm condition is met when a reading taken by the datalogger goes below the set value. A "% Change" alarm condition is met when a reading taken by the datalogger changes by the set percentage, from the last recorded reading.

**Note:** Rainloggers only allow a "High Limit" alarm to be set.

**Note:** The frequency that alarm conditions can be reported is based on the Sampling Rate set for the LevelSender.

**Note:** Setting up alarms can also be done after setting up the LevelSender, and going to the LevelSender Changes (Section 5.2.3).

Click Next to continue the setup.

### 5.1.4 Pre-Start Diagnostics

The Pre-Start Diagnostic tests are done automatically when you reach this step.

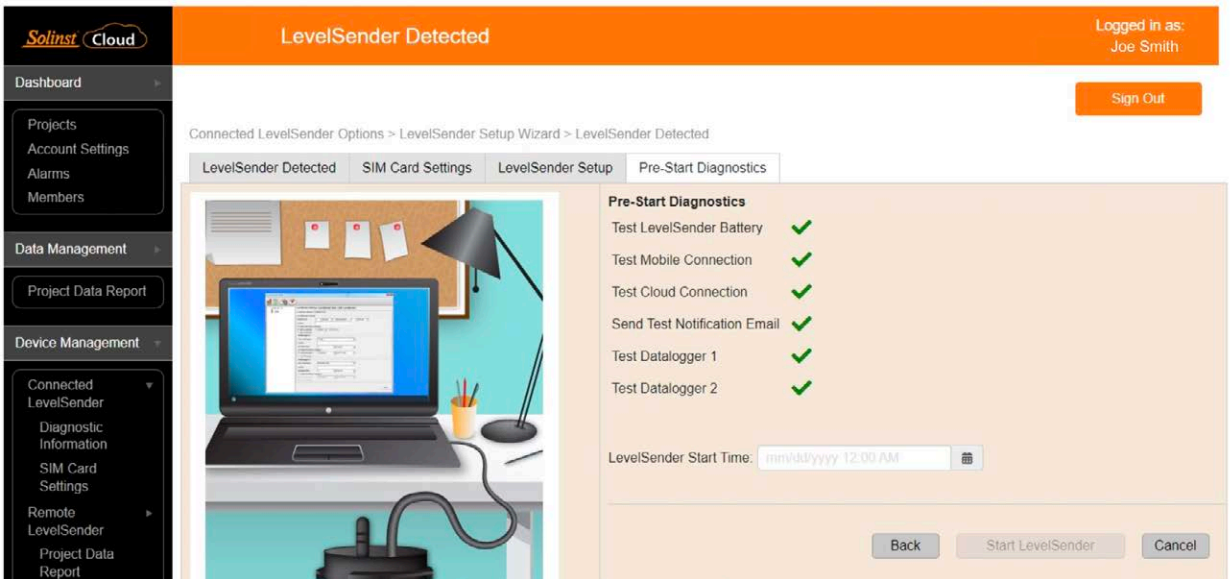



Figure 5-8 Pre-Start Diagnostics

**Test LevelSender Battery:** this test will fail if the LevelSender battery is below 2.5 volts.

**Test Mobile Connection:** checks if the LevelSender is connected to the mobile carrier. The possible causes of failure are: improperly inserted SIM Card, low signal strength or power failure.

**Test Cloud Connection:** checks if the LevelSender is connected to the Solinst Cloud.

**Send Test Notification Email:** sends a test email to project members.

**Test Datalogger:** tests the communication of the attached datalogger(s).

When all the tests are passed, select a LevelSender Start Time, then click **Start LevelSender** to complete the setup of your LevelSender. The LevelSender will start collecting data at programmed start time.

**Note:** The LevelSender will start working immediately if you set a start time earlier than the current time.

You can also start your LevelSender using the Remote LevelSender Changes options or the Solinst Cloud LevelSender Field Utility once in the field (see Section 8.0).

**Note:** A LevelSender can be stopped from sampling/reporting by running diagnostics (Section 7.1), or remotely using LevelSender Changes., see Section 5.2.3 (will still check for remote updates at the reporting interval) , or the Solinst Cloud LevelSender Field Utility (see section 8.0).

## 5.2 Remote LevelSender Options

From the main menu, click **Remote LevelSender**. Here you will have options to view the **LevelSender Settings, View the Project Data Report**, add **Alarm Notification Recipients,** and update the device with **LevelSender Changes**. See Section 6.1 for viewing the Project Data Report.

### 5.2.1 LevelSender Settings

Selecting the serial number or name of a programmed remote (or connected) LevelSender from the Project List will display the **LevelSender Settings**:

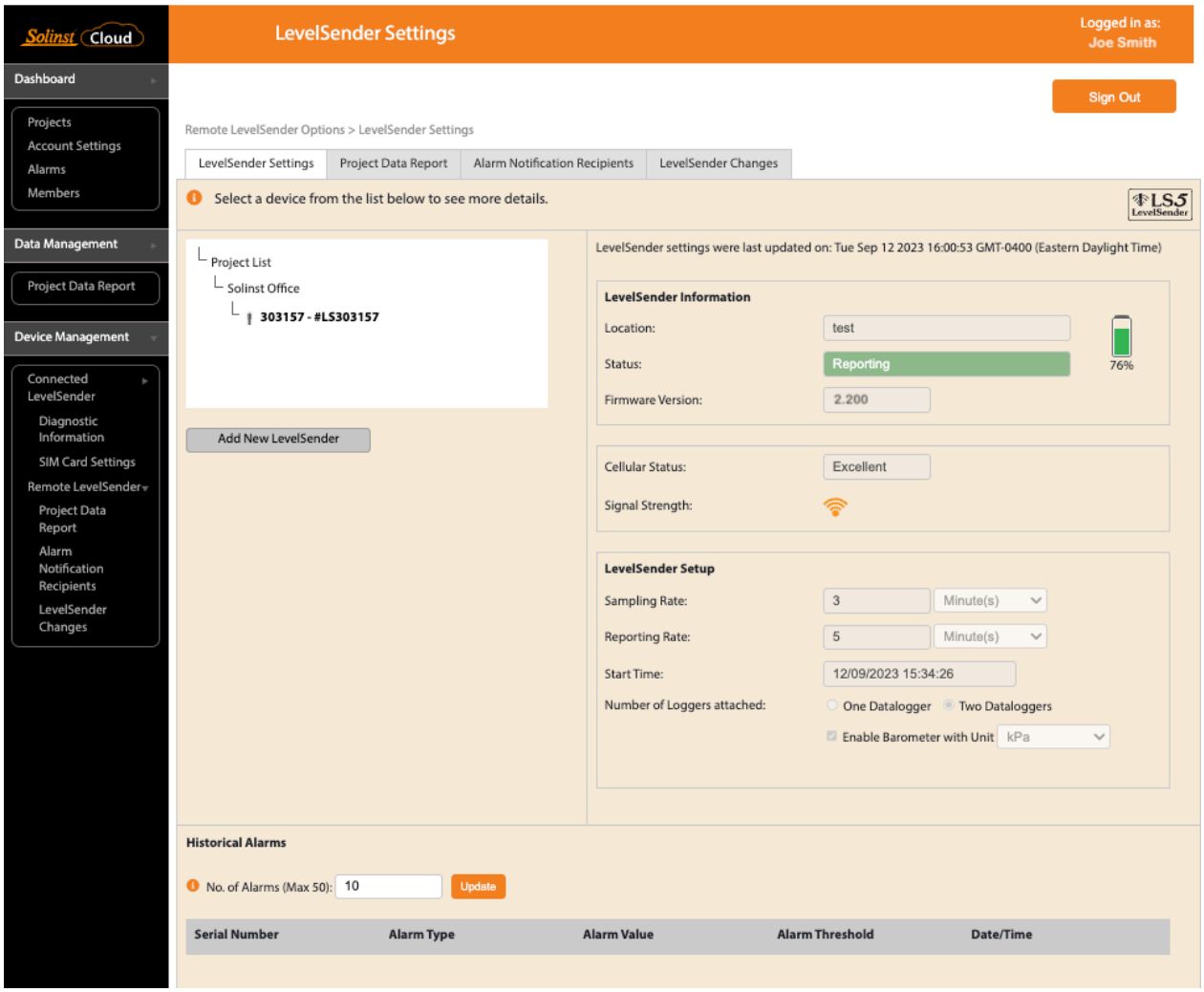



Figure 5-8 Remote LevelSender Settings

### LevelSender Information

- **Location:** specific site / location information that you input to identify each LevelSender.
- **Status:** the LevelSender will either be "Reporting" with a previously programmed data collection schedule, "Stopped", or "Waiting to Start" at a programmed future start time.

**Note**: The status will update after the first report. Before that, the status will be "Waiting to Start".

- **Firmware Version:** the firmware version of the LevelSender station will be displayed.

- **LevelSender Battery:** the percentage of battery level remaining in the LevelSender will be displayed.
- **Cellular Status:** the status of the cellular connection will displayed.
- **Signal Strength:** the signal strength of the LevelSender modem will be displayed.

### LevelSender Setup

- **Sampling Rate:** the rate that the LevelSender station collects data from the connected datalogger(s).
- **Reporting Rate:** the rate that the LevelSender station reports collected data to the Solinst Cloud.
- **Start Time:** the date and time the LevelSender started collecting data (or date and time the LevelSender is programmed to start).
- **Number of Dataloggers Attached:** either one or two dataloggers will be attached.
- **Enable Barometer with Unit:** if checked, indicates that the internal barometer is used to compensate water level readings in the units shown.

### Historical Alarms

This section will display information about any alarms that have been triggered for the LevelSender. You can also Update the number of historical alarms that are displayed, up to a maximum of 50.

**Note**: You can Add a New LevelSender to the same project in this window.

## 5.2.2 Alarm Notification Recipients

In addition to Account and Project Managers, you can add **Alarm Notification Recipients** that will receive an email alert when an alarm condition has been met.

To add an alarm notification recipient, enter the Email Address and Display Name of the recipient, then click Add. You can also Remove recipients from the list. Click Save Changes when you are finished adding or removing recipients.

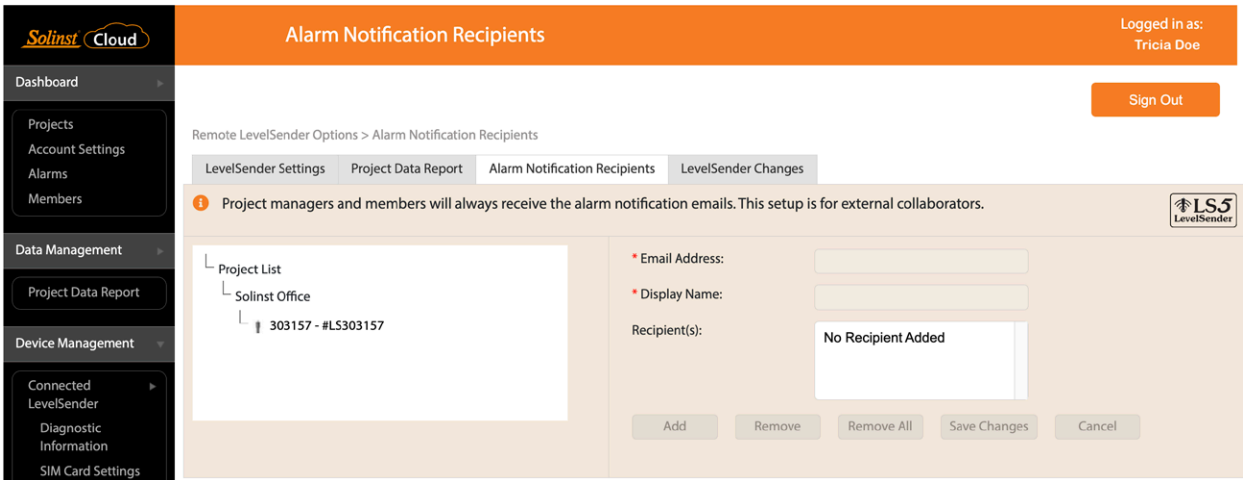



Figure 5-9 Alarm Notification Recipients

### 5.2.3 Remote LevelSender Changes

To make changes to a remote LevelSender, click **LevelSender Changes**, then select the device from the Project List.

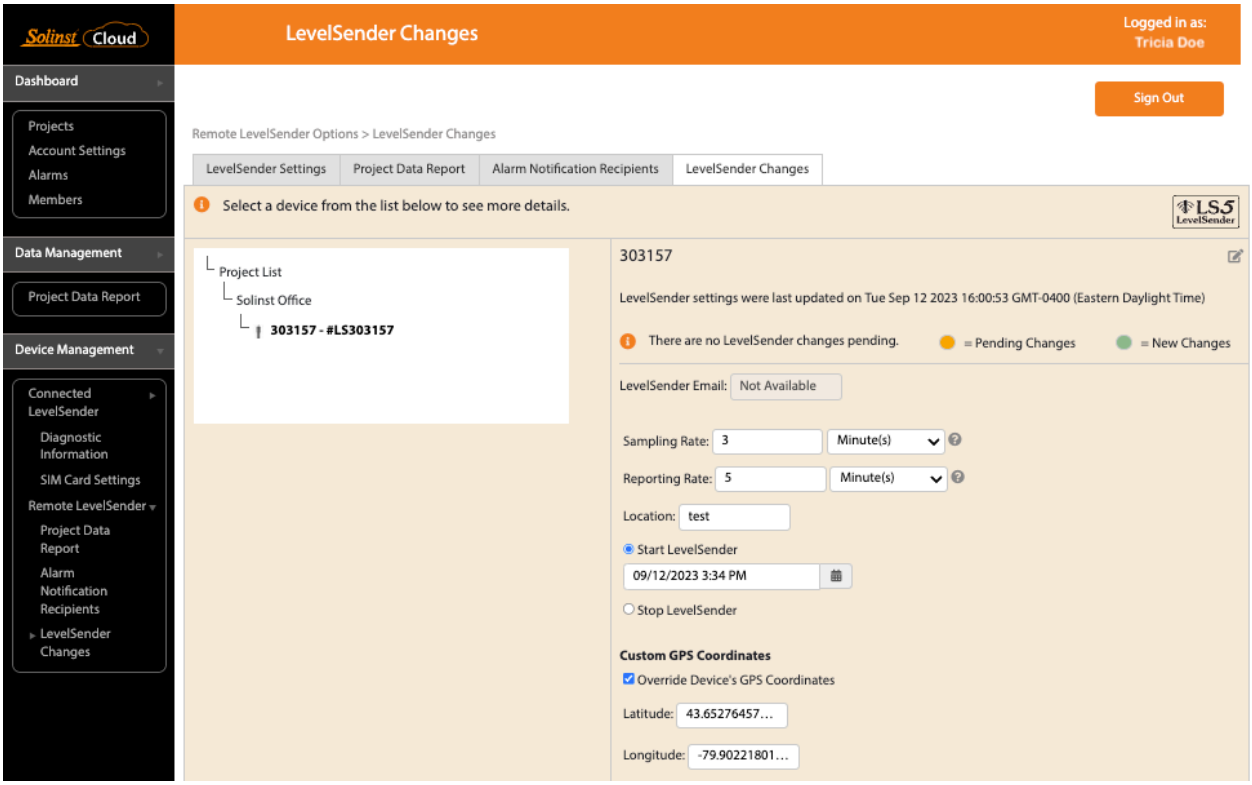



Figure 5-10 LevelSender Changes

You can change the name of the LevelSender device by using the edit icon at the top right of the screen.

The time and date that the LevelSender settings were last updated will be displayed.

If there are changes pending, or new changes applied, this will be indicated beside the setting by either a yellow or green circle, respectively.

The unique email that you may have set to be associated with the LevelSender will appear in the **LevelSender Email** field. This will only be set if you previously programmed the LevelSender using LevelSender Software (see the LevelSender 5 User Guide).

From here, you can edit the LevelSender Setup, including Sampling Rate, Reporting Rate, and Location.

You can set a new Start time for the LevelSender, or Stop a LevelSender from sampling/reporting.

**Note: If you Stop a LevelSender, it will stop sampling/reporting, but will continue to check for remote updates (e.g. a new start time) at the set reporting rate. It will use a small amount of battery and data during these checks.**

**Note:** To stop your LevelSender from reporting **and** checking for updates, it must be done with the LevelSender directly connected to the computer using the USB cable and the Diagnostics Information option (See Section 7.1), or the Solinst Cloud LevelSender Field Utility (see section 8.0).

**Note: Any changes made in this tab will not be applied to the remote LevelSender until after its next report (they will not occur right away). You should know your LevelSender schedule so you can apply changes at an appropriate time.**

You can override the default location coordinates of the LevelSender by adding Custom GPS Coordinates. Check to Override the Device's GPS Coordinates and enter the Longitude and Latitude values.

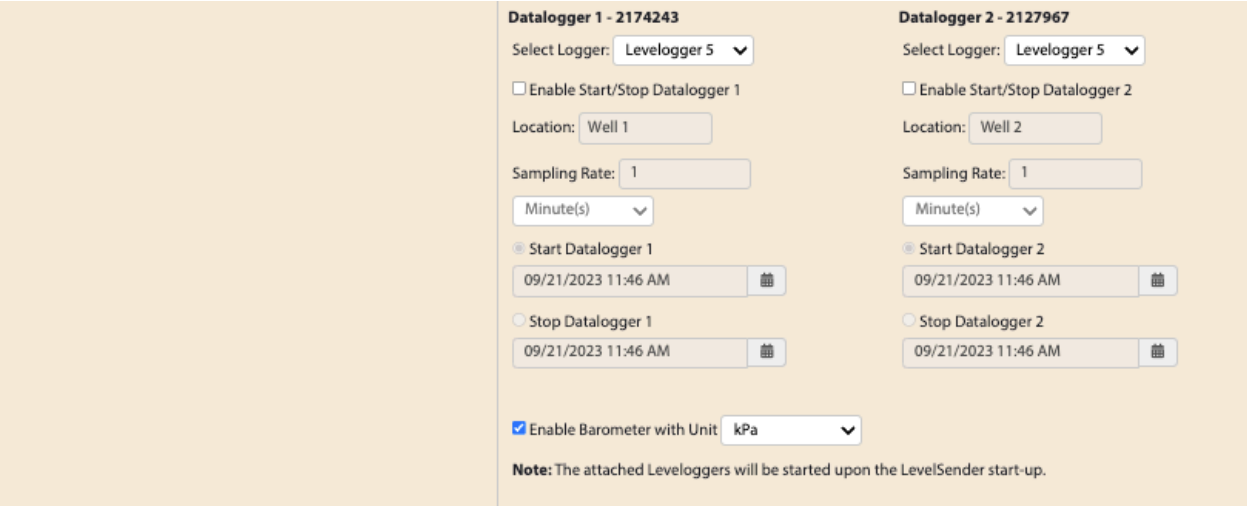



Figure 5-11 LevelSender Changes - Datalogger Setup

You can update or set the connected dataloggers to record independently in their own internal memory.

- **Select Logger:** select the type of datalogger connected, e.g. Levelogger 5, Barologger 5, etc.

**Note:** See the Levelogger and Vented Dataloggers User Guides for more information on each datalogger type, and their logging capabilities.

Check the box to enable updates to the datalogger. You can program the following for each connected datalogger:

- **Location:** specific site / location information that you input to identify each datalogger.
- **Sampling Rate:** the rate at which the datalogger records in its internal memory. Sampling rate depends on the type of datalogger connected.
- **Start Datalogger:** set a date and time for the datalogger to start recording, or select to **Stop** the datalogger from recording if it is already logging.

**Note:** When using a Splitter, the number 1 or 2 will identify the Dataloggers in Solinst Cloud. The numbers are labeled directly on the Splitter.

There is also the option to enable, or disable the internal barometer (see Section 5.1.2).

There is also the option to update or add alarm settings for the connected dataloggers (see Section 5.1.3).

Once you have finished editing the LevelSender settings, click Save.

These changes will be applied to the remote LevelSender at its next scheduled report interval.

# 6.0 Data Management

The Project Data Reports can be accessed in three ways:

- Going to **Project Data Report** from the main menu
- Going to **Remote LevelSender Options** from the main menu, then Project Data Report
- By clicking the View Project Reports icon beside a project's name in the Dashboard or Projects

## 6.1 Project Data Report

Use the drop-down menus to select the project and the report type (table or charts) that you want to view. Use the filters to view data with different units, time intervals, or isolate one datalogger or specific parameter. You can select to Refresh the Report at any time.

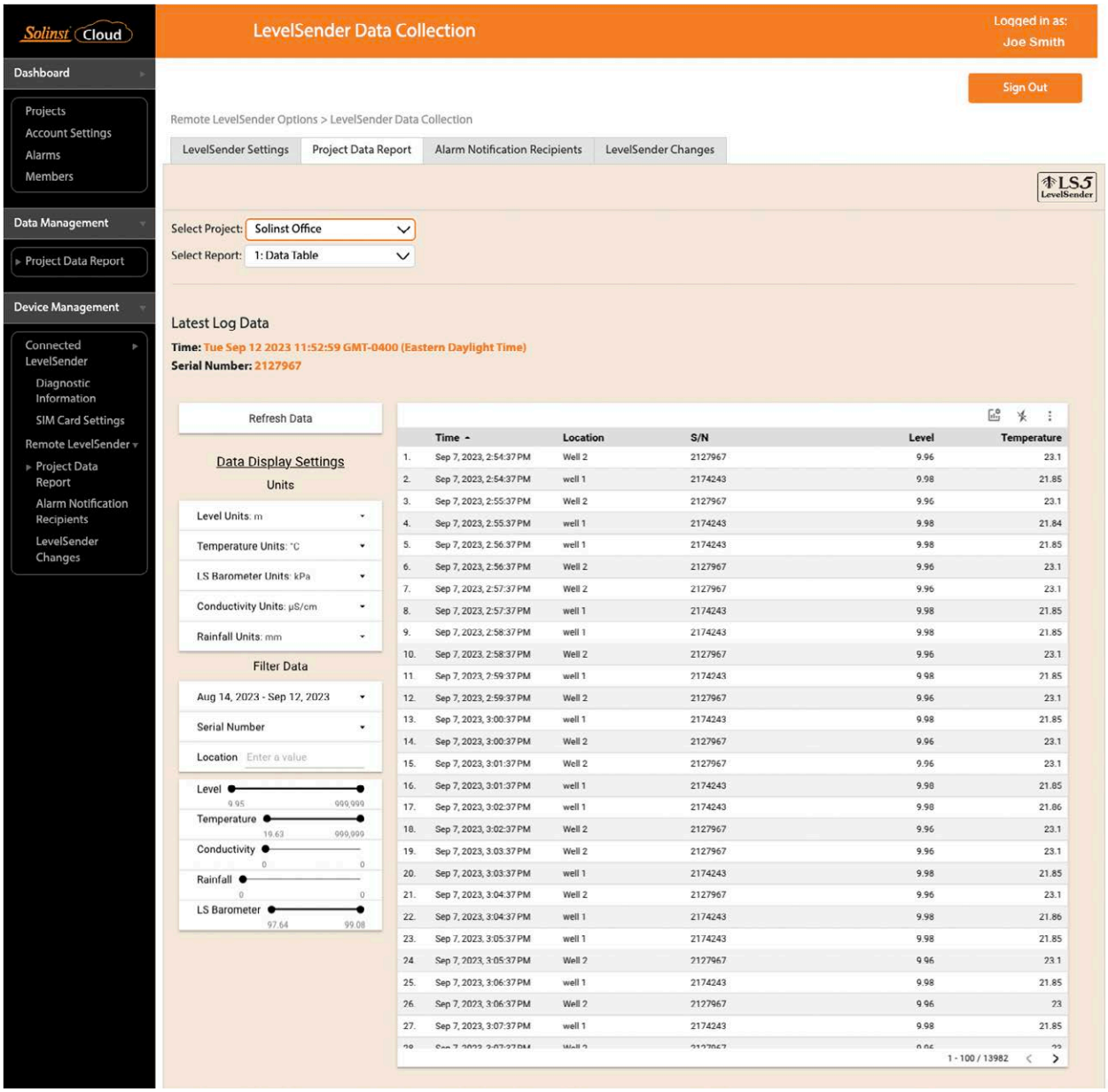



Figure 6-1 Project Data Report

The Report types available are:

- Data Table
- Level/Temperature/Conductivity Charts
- Rainfall/Barometer Charts
- Logger Comparison Chart
- Location-based Charts
- Metric Cards
- Map

### 6.1.1 Downloading Reports

Data reports from each connected datalogger can be downloaded to your computer as *.xle files. These data files can be opened using Solinst Levelogger PC Software. See the Levelogger User Guide for more information. Both the raw data and compensated data files will be downloaded.

You can select a number of reports at once, then click Download Selected Reports to download them all at once. You can download a single set of datalogger files by clicking the Download icon to the right of the file in the list.

Figure 6-2 Download Reports

# 7.0 Diagnostics and Troubleshooting

## 7.1 LevelSender Diagnostics

To perform diagnostic tests on a LevelSender, first connect it to your computer using a USB cable (see Section 5.1).

Select **Diagnostic Information** from the main menu under the Connected LevelSender options.

Click to perform the following tests:

**Test LevelSender Battery:** this test will fail if the LevelSender battery is below 2.5 volts.

**Test Mobile Connection:** checks if the LevelSender is connected to the mobile carrier. The possible causes of failure are: improperly inserted SIM Card, low signal strength or power failure.

**Test Cloud Connection:** checks if the LevelSender is connected to the Solinst Cloud.

**Note:** The Cloud connection can not be tested while the Levelsender is reporting.

**Test Alarm Notification Email:** Sends a test email to the alarm notification recipients.

**Test Datalogger:** tests the communication of the attached datalogger(s).

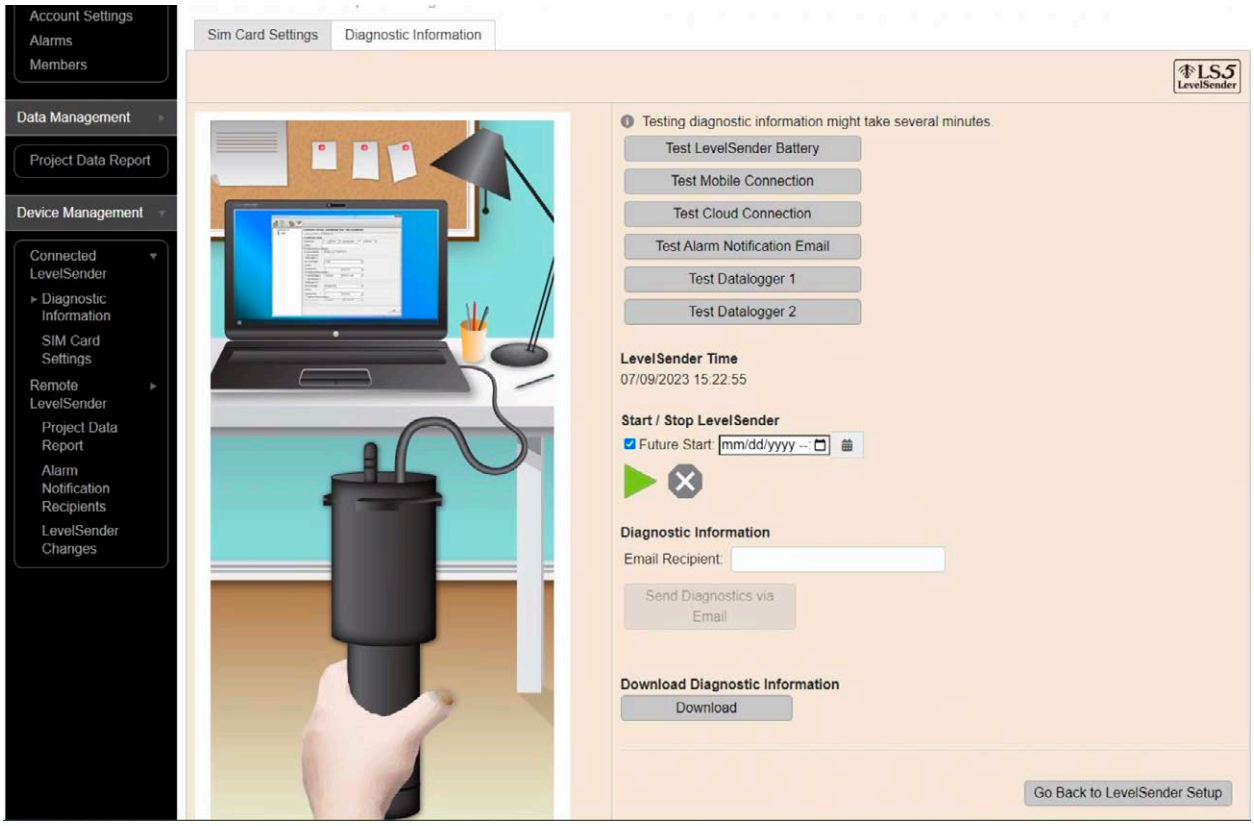



Figure 7-1 LevelSender Diagnostic Information

You can also stop or start a LevelSender immediately, or set a future start time by checking the box, setting the time, and clicking the start button.

**Note:** The only way to stop a LevelSender from sampling/reporting and checking for updates is to stop it while connected via USB.

After performing all of the desired tests, you can send a diagnostic report to an Email Recipient of your choice. You can also Download the report. The report can be used for your own purposes, or sent to Solinst for further assistance.

## 7.2 Troubleshooting

### 7.2.1 LevelSender 5 Troubleshooting

Solinst recommends performing a communication test in the office before heading out to the field to ensure the LevelSender is properly set up. Once the LevelSender is deployed in the field, it is suggested to perform a short communication test (e.g. Report Rate of 15 minutes) to check cellular reception.

When using a Solinst SIM Card, rebooting the LevelSender in the field is suggested to ensure the SIM Card will connect to the strongest signal in the area. To reboot the LevelSender, use the Solinst Cloud LevelSender Field Utility (see Section 8.0), then perform a diagnostic test using the Utility.

**Note:** See the LevelSender 5 User Guide for more troubleshooting information.

## 8.0 Solinst Cloud LevelSender Field Utility

The Solinst Cloud LevelSender Field Utility can be downloaded from https://downloads.solinst.com You will require a PC running Windows 10 or 11 to use the program.

The Field Utility provides a convenient way to connect to your LevelSender in the field for diagnostic purposes, or to start or stop your LevelSender.

To use the Field Utility, connect the LevelSender to your PC via a USB cable (see Section 5.1). Select the Com Port the LevelSender is connected to, or click Scan LevelSender to retrieve the proper Com Port information. Click Connect.

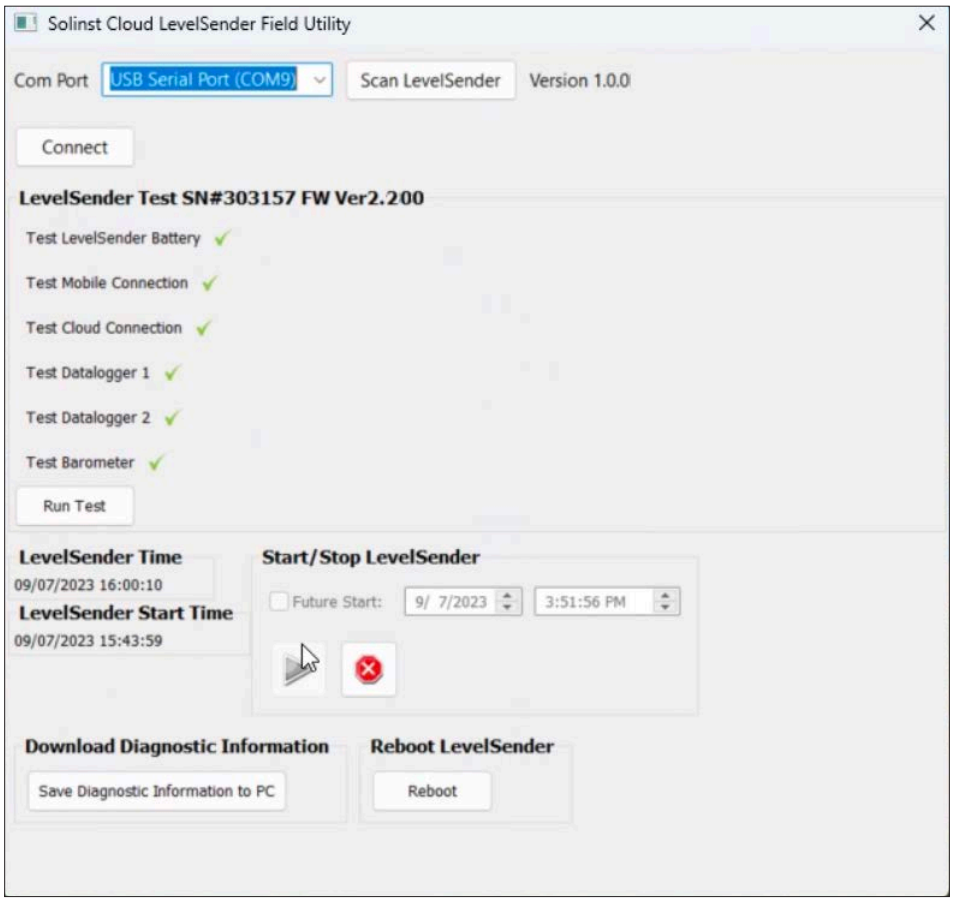



Figure 8.1 Solinst Cloud LevelSender Field Utility

**Note:** The Firmware Upgrade Utility is downloaded along with the Solinst Cloud LevelSender Field Utility, and a shortcut added to your desktop. See the LevelSender 5 User Guide for firmware update instructions.

Click Run Test to perform the diagnostic tests listed. Click Save Diagnostic Information to PC to create a report that you can then use for your own purposes, or send to Solinst for further assistance.

You can Stop or Start a LevelSender immediately, or select a Future Start time.

The **Reboot LevelSender** option can be used to reset a LevelSender before reprogramming, especially when connecting to a new service provider.

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