

Quick Start Guide

Solinst Cloud – LevelSender 5



1) Getting Started

Before you begin using your LevelSender 5 with Solinst Cloud, you need to do the following:

- Set up an account with Solinst, or a cellular service provider, to receive a SIM card and setup information for your LevelSender 5 (data usage service plan for a 4G LTE-M network, including text messaging)

Don't have a plan? Contact Solinst for low cost data plan options at instruments@solinst.com

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

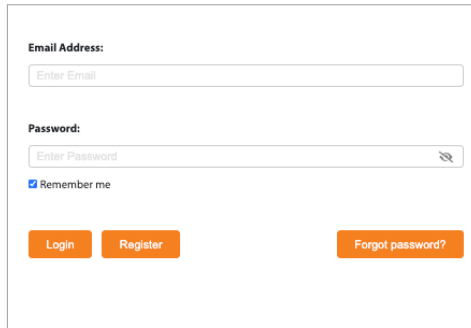
Note: Your LevelSender 5 (4G) must be using Firmware version 2.202 or higher to work with Solinst Cloud.

2) Register for Solinst Cloud

To access Solinst Cloud, go to:

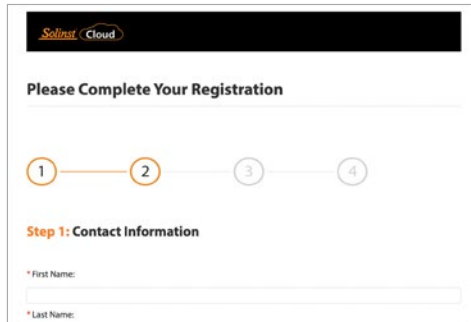
<https://solinstcloud.com> using your **Chrome browser**. Click Register.

1. Fill out your contact information and create a password for your account.
2. Enter your billing information. Read, and check to agree to the Terms and Conditions. Click Register.



The registration form contains the following elements:

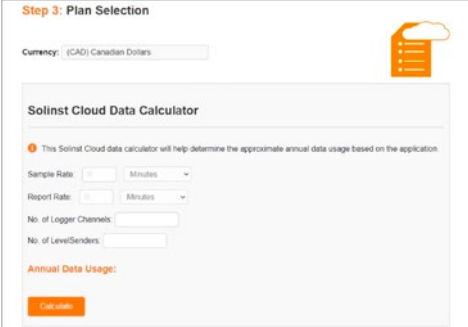
- Email Address:** A text input field with the placeholder text "Enter Email".
- Password:** A text input field with the placeholder text "Enter Password" and a toggle icon for password visibility.
- Remember me
- Login** button
- Register** button
- Forgot password?** button



The progress screen displays the Solinst Cloud logo and the title "Please Complete Your Registration". It features a progress indicator with four steps: 1, 2, 3, and 4. Step 2 is currently active and highlighted in orange. Below the progress indicator, the text "Step 1: Contact Information" is shown. The form includes two required fields: "* First Name:" and "* Last Name:", each with a corresponding text input field.

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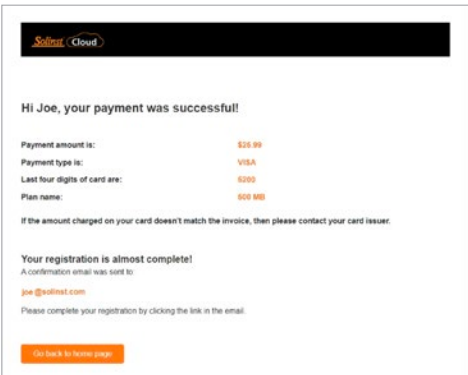
3. Use the Data Calculator to determine the amount of storage you will require, then select your data plan. Click Proceed to Checkout.



The screenshot shows the 'Step 3: Plan Selection' page. At the top, it says 'Currency: (CAD) Canadian Dollars'. Below that is the 'Solinst Cloud Data Calculator' section. It contains a message: 'This Solinst Cloud data calculator will help determine the approximate annual data usage based on the application.' There are four input fields: 'Sample Rate' (set to 15 Minutes), 'Report Rate' (set to 15 Minutes), 'No. of Logger Channels' (set to 1), and 'No. of LevelSenders' (set to 1). Below these fields, it says 'Annual Data Usage:' followed by a 'Calculate' button.

Note: There is also a data calculator and list of the available plans on the Solinst Cloud home page.

4. Complete the registration by confirming your plan and entering your payment details (credit card). Click Pay Now.
5. You will receive confirmation that your payment was successful and an email will be sent with a link to confirm your registration.



The screenshot shows a confirmation email from Solinst Cloud. The header says 'Hi Joe, your payment was successful!'. Below that, it lists payment details: 'Payment amount is: \$10.99', 'Payment type is: VISA', 'Last four digits of card are: 0200', and 'Plan name: 010 MB'. A note says 'If the amount charged on your card doesn't match the invoice, then please contact your card issuer.' Below that, it says 'Your registration is almost complete! A confirmation email was sent to: joe@solinst.com'. At the bottom, it says 'Please complete your registration by clicking the link in the email.' and there is a 'Go back to home page' button.

6. Now you can Login at solinstcloud.com. The **Dashboard** will display after you log in. It provides a quick and organized overview of all your projects, including a list and map view, and alarm status. It also 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 be added to projects, which will create a list of data logs that need approval. See the Solinst Cloud User Guide for more details.

The dashboard interface includes a left-hand navigation menu with the following items: Dashboard, Projects, Account Settings, Alarms, Members, Data Management, Project Data Report, Device Management, Connected LevelSender, Diagnostic Information, SIM Card Settings, Remote LevelSender, Report, Alarm Notification, Recipients, and LevelSender Changes. The main content area is titled 'Dashboard' and shows 'Logged in as: Joe Smith' with a 'Sign Out' button. The 'My Projects' section displays 'Solinst Office' with status indicators for alarm settings. The 'Data Storage' section shows a progress bar for 12.6 MB/500 MB. The 'Map' section features a Google Map with a pop-up for 'Solinst Office' containing details like Serial Number, Location, and latest report info. The 'Data Logs Pending Approval' table lists recent uploads with columns for Upload Date, File Name, Total Logs, File Size, and Uploaded By. An 'Approve to Project' dropdown is available below the table. The 'Upload Data Logs' section includes a 'Select File' button and a note about upload limits and charges.

Solinst Cloud Dashboard

Note: Selecting a device location from the map will display a pop-up with information from the device's latest report.

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3) Create a Project

1. To create a new project, go to **Projects** from the main navigation menu on the left.
2. Enter a Project Name.
3. Select a Project Manager and add Project Members. The other Users available in the drop-down menus will have been added to your account using the **Members** section. See the Solinst Cloud User Guide for adding members.
4. If a user is not available in the drop-down menu, you can Invite New Members to the project by selecting the Project Access Level and entering their Email Address. Click Invite to send an email invitation. Added Member information will be listed, along with the Status of their invitation.
5. Click Create Project once you are finished adding members. You will automatically be taken to **Project View**.

Create New Project

* Project Name:

Add Project Manager:

Add Project Member:

Invite New Members to Project

* Project Access Level:

* Email Address:

Members Added

Email Address:	User Level:	Status:
<input type="button" value="Create Project"/>		

Create a New Project

Solinst Office

Add Project Manager:

Add Project Member:

Invite New Members to Project

* Project Access Level:

* Email Address:

▸ **Project Access**

▸ **Devices**

▸ **Data Logs**

▸ **Project Map**

Project View

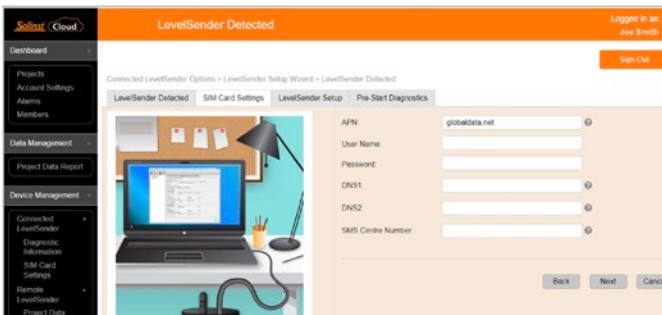
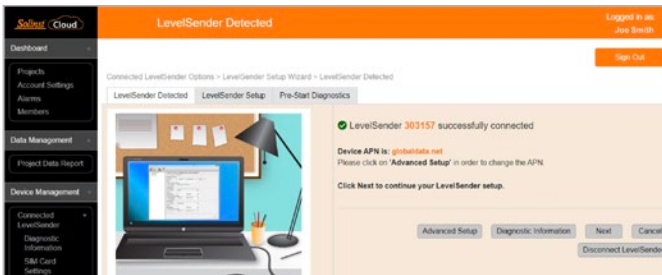
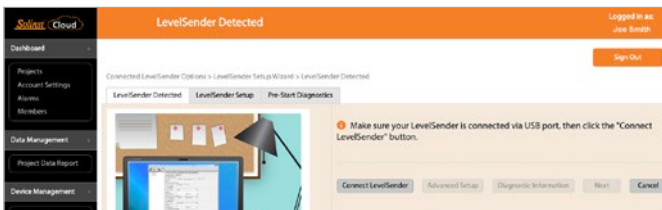
4) Connect LevelSender to Computer

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



5) Add a Device (LevelSender)

1. From Project View, under **Devices**, select Add New Device.
2. With your LevelSender connected to the USB port, click Connect LevelSender. Once the connected LevelSender is detected (this may take a few seconds), click Next to continue the setup, or select **Advanced Setup** in order to change your APN/SIM Card Settings (if you have set up a data plan with a cellular service provider other than Solinst).



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LevelSender Detected

Connected: LevelSender Options > LevelSender Setup Wizard > LevelSender Detected

LevelSender Detected SIM Card Settings LevelSender Setup Pre-Start Diagnostics

LevelSender Setup

Project List: Solinst Office

LevelSender Name: 303157

Location: MW1

Sampling Rate: 1 Minute(s)

Reporting Rate: 10 Minute(s)

Number of Dataloggers attached: One Datalogger Two Dataloggers

Custom GPS Coordinates

Override Device's GPS Coordinates

Latitude: _____

Longitude: _____

Note: Reported units will follow Levellogger units. To select the reported units, connect Levellogger to PC software and select the preferred units for each channel in the Levellogger settings. To apply settings, you must start and stop the logger.

Datalogger 1

Select Logger: Levellogger 5

Start Datalogger 1

Location: Remote Level

Sampling Rate: 5 Minute(s)

Start Time: _____

Datalogger 2

Select Logger: Levellogger 5

Start Datalogger 2

Location: Remote Baro

Sampling Rate: 5 Minute(s)

Start Time: _____

Important: If the attached Datalogger(s)/Levelloggers are already logging, they will be stopped and restarted according to the settings entered. Before starting the LevelSender, it is advisable to download any existing data from the Levellogger(s). If you choose not to start the Levellogger(s), independent logging will be prevented (Levellogger status: Stopped) after LevelSender startup.

Enable Barometer with Unit: kPa

Alarm Setup

Note: The unit of measurement is based on the Logger Channel Unit

Datalogger 1

Level Event

High Limit: 0

Low Limit: 0

% Change: 0

Temperature Event

High Limit: 0

Low Limit: 0

% Change: 0

Conductivity Event

High Limit: 0

Low Limit: 0

% Change: 0

Datalogger 2

Level Event

High Limit: 0

Low Limit: 0

% Change: 0

Temperature Event

High Limit: 0

Low Limit: 0

% Change: 0

Conductivity Event

High Limit: 0

Low Limit: 0

% Change: 0

BACK Next Cancel

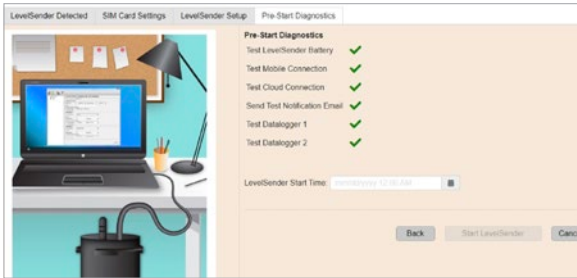
3. Ensure the correct project is selected in the drop-down menu. Optionally, enter a name for the LevelSender (the serial number is the default). Enter a Location for the LevelSender.
4. Enter the Sampling and Reporting Rate and select the number of dataloggers connected to the LevelSender.

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 Solinst Cloud. It also checks for remote updates.

5. 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.
6. Select the type of datalogger(s) connected and optionally set them to record independently in their memories. Optionally, enable the internal LevelSender barometer to compensate the reported water level readings.
7. Optionally, set up alarm conditions for each attached datalogger. Click Next.

Note: Alarm Notification Recipients can be added after the LevelSender is set up using the main menu. The Project Manager automatically receives any alarm notifications.



8. Diagnostic tests are automatically performed after you have entered all of the setup information.
9. When all the diagnostics tests are passed, enter a Start Time, then click Start LevelSender to complete the setup. It will start reporting at the set time, or right away if no future time is set.


Note: You can also start your LevelSender using the Remote Update options or the Solinst Cloud LevelSender Field Utility.

10. To view the LevelSender Settings of a programmed device, click **Connected LevelSender** or **Remote LevelSender** from the main menu and select the device from the list. Here, you can also view any Historical Alarms.

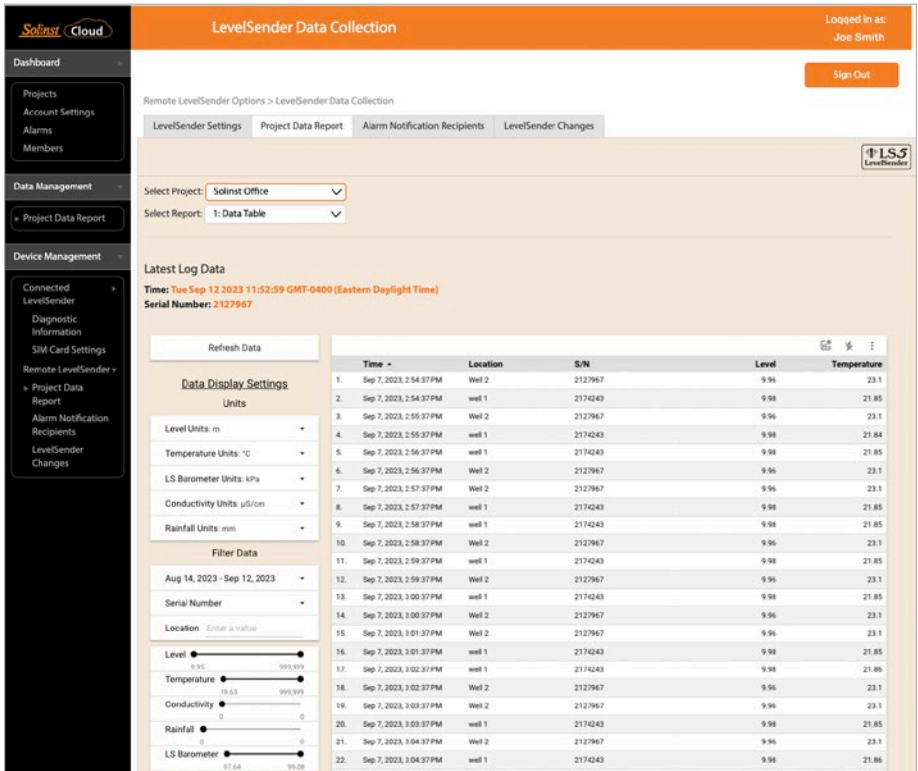
LevelSender Settings

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Data Collection

The data reported by your LevelSender is accessed by going to **Project Data Report** from the main menu (under Data Management and Remote LevelSender options), or by clicking the View Project Reports icon  beside a project's name in the Dashboard or Projects.

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.



The screenshot displays the Solinst Cloud LevelSender Data Collection interface. The top navigation bar includes the Solinst Cloud logo, the page title "LevelSender Data Collection", and the user "Joe Smith" logged in. A "Sign Out" button is visible in the top right.

The left sidebar contains a navigation menu with sections: Dashboard, Projects, Data Management, Project Data Report, and Device Management. The "Project Data Report" section is currently active.

The main content area shows the "Remote LevelSender Options > LevelSender Data Collection" page. It features tabs for "LevelSender Settings", "Project Data Report", "Alarm Notification Recipients", and "LevelSender Changes". The "Project Data Report" tab is selected.

Under "Project Data Report", there are two dropdown menus: "Select Project: Solinst Office" and "Select Report: 1: Data Table".

The "Latest Log Data" section displays the following information:

- Time: Tue Sep 12 2023 11:52:59 GMT-0400 (Eastern Daylight Time)
- Serial Number: 2127967

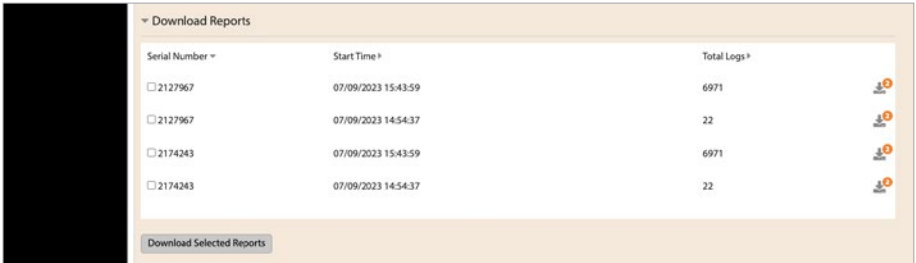
Below this information is a "Refresh Data" button and a "Data Display Settings" section. The "Data Display Settings" section includes several units and filter options:

- Level Units: m
- Temperature Units: °C
- LS Barometer Units: kPa
- Conductivity Units: µS/cm
- Rainfall Units: mm
- Filter Data: Aug 14, 2023 - Sep 12, 2023
- Serial Number: (dropdown)
- Location: Enter a value
- Level: (slider from 0.95 to 993.999)
- Temperature: (slider from 19.03 to 993.999)
- Conductivity: (slider from 0 to 0)
- Rainfall: (slider from 0 to 0)
- LS Barometer: (slider from 97.64 to 99.08)

The main data table displays the following columns: Time, Location, S/N, Level, and Temperature. The table contains 22 rows of data, showing time intervals from Sep 7, 2023, 2:54:37 PM to Sep 7, 2023, 10:43:37 PM. The locations are "Well 2" and "well 1". The S/N values are 2127967 and 2174243. The Level values range from 9.96 to 9.98. The Temperature values range from 21.86 to 23.1.

	Time	Location	S/N	Level	Temperature
1.	Sep 7, 2023, 2:54:37 PM	Well 2	2127967	9.96	23.1
2.	Sep 7, 2023, 2:54:37 PM	well 1	2174243	9.98	21.85
3.	Sep 7, 2023, 2:55:37 PM	Well 2	2127967	9.96	23.1
4.	Sep 7, 2023, 2:55:37 PM	well 1	2174243	9.98	21.84
5.	Sep 7, 2023, 2:56:37 PM	well 1	2174243	9.98	21.85
6.	Sep 7, 2023, 2:56:37 PM	Well 2	2127967	9.96	23.1
7.	Sep 7, 2023, 2:57:37 PM	Well 2	2127967	9.96	23.1
8.	Sep 7, 2023, 2:57:37 PM	well 1	2174243	9.98	21.85
9.	Sep 7, 2023, 2:58:37 PM	well 1	2174243	9.98	21.85
10.	Sep 7, 2023, 2:58:37 PM	Well 2	2127967	9.96	23.1
11.	Sep 7, 2023, 2:59:37 PM	well 1	2174243	9.98	21.85
12.	Sep 7, 2023, 2:59:37 PM	Well 2	2127967	9.96	23.1
13.	Sep 7, 2023, 3:00:37 PM	well 1	2174243	9.98	21.85
14.	Sep 7, 2023, 3:00:37 PM	Well 2	2127967	9.96	23.1
15.	Sep 7, 2023, 3:01:37 PM	Well 2	2127967	9.96	23.1
16.	Sep 7, 2023, 3:01:37 PM	well 1	2174243	9.98	21.85
17.	Sep 7, 2023, 3:02:37 PM	well 1	2174243	9.98	21.86
18.	Sep 7, 2023, 3:02:37 PM	Well 2	2127967	9.96	23.1
19.	Sep 7, 2023, 3:03:37 PM	Well 2	2127967	9.96	23.1
20.	Sep 7, 2023, 3:03:37 PM	well 1	2174243	9.98	21.85
21.	Sep 7, 2023, 3:04:37 PM	Well 2	2127967	9.96	23.1
22.	Sep 7, 2023, 3:04:37 PM	well 1	2174243	9.98	21.86

Select to download reports. Both the raw data and compensated data files will be downloaded.



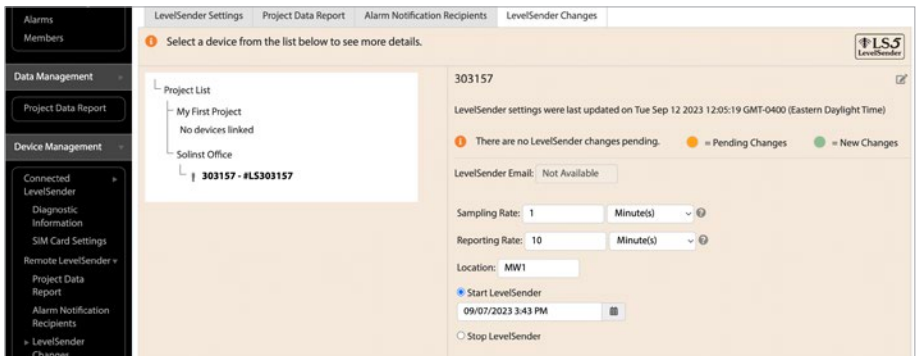
Download Reports

Serial Number	Start Time	Total Logs
<input type="checkbox"/> 2127967	07/09/2023 15:43:59	6971
<input type="checkbox"/> 2127967	07/09/2023 14:54:37	22
<input type="checkbox"/> 2174243	07/09/2023 15:43:59	6971
<input type="checkbox"/> 2174243	07/09/2023 14:54:37	22

Download Selected Reports

Remote Updates

To make changes to a remote LevelSender, use the **LevelSender Changes** option in the main menu. From here, you can change the device name, update the Sampling Rate, Reporting Rate, and Stop or Start a LevelSender. You can also update or set connected dataloggers to record independently in their internal memory, enable the internal barometer, and set alarms. Click Save. The changes will be applied to the remote LevelSender at its next scheduled report interval.



LevelSender Settings | Project Data Report | Alarm Notification Recipients | LevelSender Changes

Select a device from the list below to see more details.

Project List

- My First Project
 - No devices linked
- Solinst Office
 - 303157 - #LS303157

303157

LevelSender settings were last updated on Tue Sep 12 2023 12:05:19 GMT-0400 (Eastern Daylight Time)

There are no LevelSender changes pending. ● = Pending Changes ● = New Changes

LevelSender Email: Not Available

Sampling Rate: 1 Minute(s)

Reporting Rate: 10 Minute(s)

Location: MW1

Start LevelSender
09/07/2023 3:43 PM

Stop LevelSender

Note: If you Stop a LevelSender, it will stop sampling/reporting, but will continue to check for remote email updates (e.g. a new start time) from the Solinst Cloud at the set reporting rate.

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Diagnostics

Diagnostic Information (from the main menu) can be used to perform individual diagnostic tests when a LevelSender is connected to the PC with the USB cable.

Testing diagnostic information might take several minutes.

Test LevelSender Battery

Test Mobile Connection

Test Cloud Connection

Test Alarm Notification Email

Test Datalogger 1

Test Datalogger 2

LevelSender Time
07/09/2023 15:22:55

Start / Stop LevelSender

Future Start [mm/dd/yyyy - -] []

Diagnostic Information

Email Recipient: []

Send Diagnostics via Email

Download Diagnostic Information

Download

Go Back to LevelSender Setup

You can test the LevelSender battery, mobile connection, Cloud connection, alarm notification email, and dataloggers.

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

You can also Stop or Start a LevelSender immediately, or set a future start time.

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 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.

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.

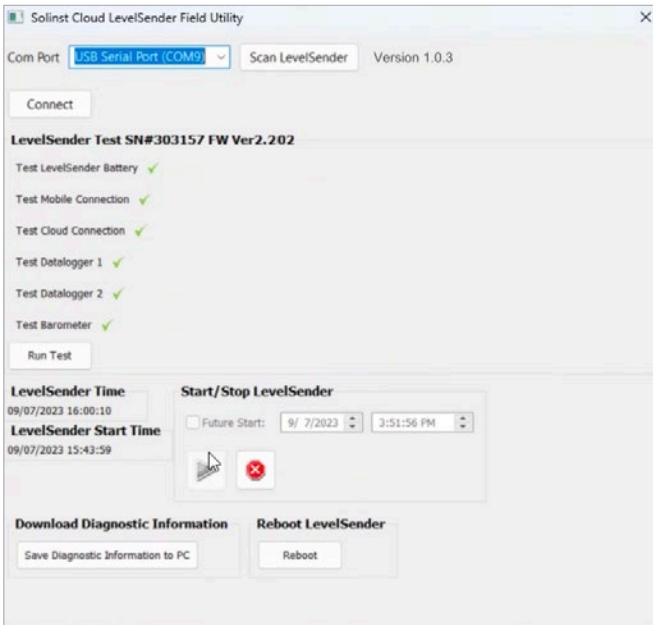
The Field Utility provides a convenient way to connect to your LevelSender in the field for diagnostic purposes, or to start or stop your LevelSender.

To use the Field Utility, connect the LevelSender to your PC via a USB cable as described in Step 4 of this Quick Start Guide. Select the Com Port the LevelSender is connected to, or click Scan LevelSender to retrieve the proper Com Port information. Click Connect.

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.



Note: The Firmware Upgrade Utility is downloaded along with the Solinst Cloud LevelSender Field Utility. See the LevelSender 5 User Guide for firmware update instructions.