

# Quick Start Guide

## TROLL Link 101 and 201 Setup

The TROLL Link 101 and 201 systems connect to the In-Situ Data Center, and arrive pre-configured to your settings. Access the Data Center to view your site.

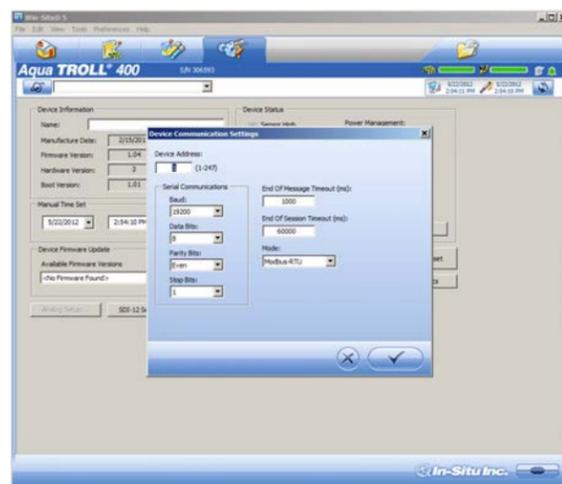
To change settings or learn more about the Data Center, see the **In-Situ Data Center** section.

## Changing the Device Address

When networking multiple Level TROLL, Aqua TROLL, Rugged TROLL, or RDO PRO Instruments, each device requires a unique device address.

Complete the following steps with the instrument connected to the software.

1. Click the **Device Setup** tab.
2. Click the **Modbus Setup...** button.
3. Select the **Device Address** box and change the number to the desired value, making sure to not duplicate an address within the network.



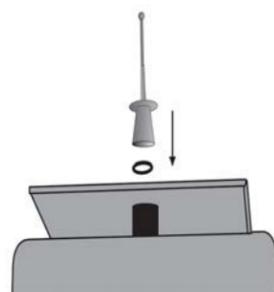
4. Click the **check mark** to save changes. Click **Yes** when asked to proceed.
5. Click **No** when prompted to save the changes as the new default settings.

✓ You must change Win-Situ Software communication settings to match the device address next time you connect the instrument.

## Field Installation

### Connecting the Antenna - TROLL Link 101 Only

1. Screw the antenna and gasket onto the antenna connector, located on the top of the enclosure mounting bracket.



### Connecting and Deploying Instruments

Ensure data-logging capable instruments have been programmed with a data log before completing the following steps. Refer to the instrument manual for instructions on programming a data log. Ensure alarm conditions have been programmed (if applicable).

Ensure all instruments have been properly, uniquely addressed in Win-Situ Software with the correct Modbus settings.

**Perform the following steps for each instrument. Ensure you are installing the instrument in its proper location.**

1. Connect the instrument to the RuggedCable using the twist-lock connector. The twist-lock connector clicks when the connection is tight.
2. Remove the red dust cap from the bulkhead connector of the enclosure.

3. Connect the up-hole end of the cable to the bulkhead connector of the enclosure.
4. Install the instrument in its deployment location. Refer to the instrument Operator's Manual for any questions regarding proper connection or deployment.
5. Ensure the cable does not apply excessive weight on the enclosure by securing the cable grip.

### Installing the TROLL Link Telemetry System

To mount the enclosure, you may obtain a mounting tripod or install your own pole. Install the pole before proceeding.

1. Hold the enclosure to the pole at the desired height (be sure to leave room at the top of the pole for the solar panel).
2. Place a hose clamp or U-bolt into the two cutouts of the top bracket of the enclosure and around the pole.
3. For hose clamps tighten the clamp until the enclosure does not move. Attach the second hose clamp to the bottom of the enclosure.  
For U-bolts Place the smaller bracket over the open ends of the bolt. Use split-lock washers and nuts to tighten the assembly to the pole. Repeat for any remaining open brackets.
4. Remove the two yellow caps from the vent tube inside the enclosure. Attach the desiccant tube to the vent tube.

### Installing a 1 W Solar Panel

A solar panel must be installed with the communication system. It can be installed on the same pole.

1. Hold the solar panel near the top of the pole. Point the panel towards the equator. Adjust the panel angle for optimum sunlight reception.
2. Thread the U-bolt through the solar panel bracket. Place the smaller bracket over the open ends of the bolt. Use the split-lock washers and nuts to tighten the assembly to the pole. Repeat for any remaining open brackets.

Trim the solar panel wire before inserting it into an enclosure.

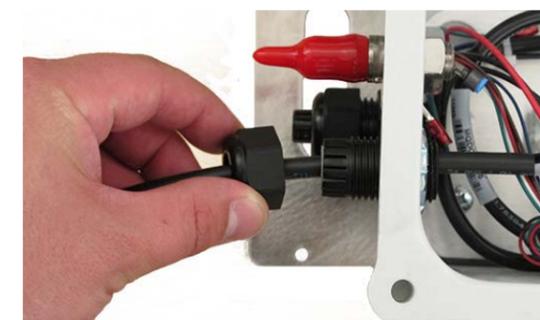


Do not cut through the entire solar panel wire. The blade creates a current loop when in contact with both leads and shorts the solar panel.

Instead, trim off the insulation, then cut one wire at a time.

### Connect a solar panel.

1. Cover the solar panel so it will not receive any sunlight.
2. Remove one of the dome connector caps on the outside of the enclosure. Remove the port plug. Save the plug for later use (you can store the plug inside the enclosure).
3. Insert the solar panel cable into the dome connector cap, and then through the enclosure.



4. Strip the cable ends to 1.3 cm (0.5 inches).
5. Connect the black lead (negative) from the solar panel to open screw terminal SOL-. Tighten the screw terminal.
6. Connect the white lead (positive) from the solar panel to open screw terminal SOL+. Tighten the screw terminal.
7. Tighten the dome connector cap so the port with the cable will be watertight.

## Installing a 10 or 20 W Solar Panel and External Battery Kit

Please refer to the TROLL Link Manual for instructions on installing a 10 or 20 W Solar Panel and External Battery Kit.

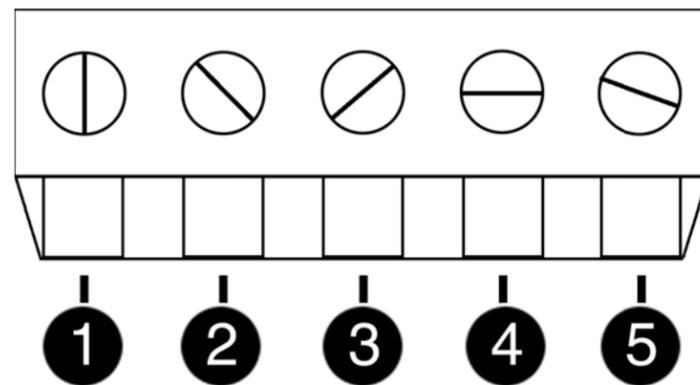
### Installing a Battery

1. Install batteries with the terminals oriented toward the top of the enclosure.
2. Plug the black (negative) leads into the black terminals of the batteries first. Ensure that the terminal does not sit between the lead clip and the plastic sheath, but that the lead clip encompasses the battery terminal.



3. Plug the red (positive) leads into the red battery terminals. Ensure that the terminal does not sit between the lead clip and the plastic sheath, but that the lead clip encompasses the battery terminal.

### TROLL Link 101 and 201 Wiring Diagram



Number	Function	Wire
1	DC Com (-)	Bulkhead black wire; solar panel black wire
2	RS485 (-)	Bulkhead green wire
3	RS485 ground	
4	RS485 (+)	Bulkhead blue wire
5	DC (+)	Bulkhead red wire; fuse blue

Number	Function	Wire
		wire

### Accessing the Data Center

Note that it may take up to an hour for data to be transmitted to the Data Center, depending on the data service package you have.

1. Open a Web browser.
2. Enter the URL:  
*http://www.isi-data.com*
3. Enter your User ID and Password supplied by In-Situ. Click **Login**.
4. The Site Index appears. The Site Index displays the site name, most recent message received date, number of devices at the site, and the alarm status.
5. Click a site name to view more data from that site.
6. Select a Device to view more data from that device.

***If the next transmission interval has not occurred, you should confirm that communication from all devices in the network has been successful.***

1. Ensure all components of the TROLL Link Telemetry System have power applied.
2. From the Site Index, click the site name.
3. Click the first device listed.
4. Select **Manage Device** under the **Site Management** heading in the left navigation bar.
5. Select **View Config Messages** under the **Device Config** heading in the left navigation bar.

If data does not refresh at the expected rate or the site does not display the network, contact technical support.

### Maintenance

#### Fuse Replacement

Two fuses are located on the left edge inside of the enclosure. The left fuse connects to the internal battery, the right fuse connects to the charger/external power. The fuses are 2 amp, time-delay, speed-type fuses rated for 250 VAC. Replace as needed.

### Enclosure Desiccant

It is **extremely important** to use a properly-sized desiccant for your deployment, and to **change desiccant before the entire volume has turned pink**. Use enough desiccant to effectively keep electronics dry until your next scheduled maintenance. Desiccant life span is dependent on site conditions.

The enclosure contains one tube of desiccant that absorbs moisture as it enters the enclosure through the vent tube. Keep the vent tube clear of obstructions. Replace as needed. An additional desiccant pack may be located at the top of the enclosure. Replace or dry as needed.

### Cleaning

Clean the outside of the enclosure with a soft, damp cloth. Do not use ammonia or other harsh chemicals.