

# Installation Manual

## REbus™ Beacon

Part of the Pika Energy Island™





**REbus™ Beacon**

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Serial Number:

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RCP Number:

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# Section 1: Introduction

## About This Manual

This Installation Manual provides instructions for adding the REbus™ Beacon to a Pika Energy Island system. Use these instructions for retrofits or for new installations. If installing Beacon as part of a new Energy Island installation, install and commission all other parts of the system before attempting to use Beacon.

The companion document to this installation manual is the REbus Beacon Operation Manual. Please reference the Operation Manual for information on user configurable settings, including the Time of Use (TOU) Scheduler.

## Symbols used in this Manual

	<b>WARNING:</b> This indicates a fact or feature very important for the safety of the user to prevent injury or death and/or which can cause serious hardware damage if not applied appropriately.
	<b>CAUTION:</b> Presents information to prevent damage to this product
	<b>EARTH GROUND SYMBOL</b>

## **Section 2: Safety Information**

### **General Warnings**



**SHOCK RISK:** HIGH VOLTAGE ELECTRICITY

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**WARNING:** To reduce the risk of injury, read all instructions and caution markings before installing Beacon. Consult installation documentation for all other REbus devices on the system.

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**WARNING:** Beacon must be installed by trained and qualified technicians, and in accordance with all instructions.

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**WARNING:** Electrical installation in the United States shall be done in accordance with all local electrical codes and/or the National Electrical Code (NEC), ANSI/NFPA 70.

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**WARNING:** Electrical installation in Canada shall be done in accordance with all local electrical codes and/or the Canadian Electrical Code.

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**WARNING:** Connecting the Pika Energy Island to the electric utility grid must only be done after receiving prior approval from the utility company and installation completed only by qualified personnel/licensed electrician(s).

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**WARNING:** This equipment is NOT intended for use with life support equipment or other medical equipment or devices.

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**WARNING:** Disconnect all smart batteries and turn their Battery Disconnect switches to OFF before servicing the inverter or touching electrical terminals. Refer to smart battery documentation for complete safety instructions.

## Section 3: Installing Beacon

### Contents of Shipping Box

- New wiring compartment cover with REbus™ Beacon attached
- Ethernet and power cable assembly
- USB type-A to type-B cable
- ¾" plastic split-ring grommet
- Spare mounting screws for wiring compartment cover

### Tools needed

- #2 phillips screwdriver for wiring compartment cover
- #0 phillips screwdriver for screw terminals

## Instructions

### Power down the Energy Island system

1. Initiate a Safety Shutdown to de-energize the Energy Island system by holding the red "Shutdown" button on the inverter front cover. This will disable energy sources on the REbus DC nanogrid. The inverter screen will display the system DC voltage; wait until it falls to a safe level before proceeding.
2. Turn off the AC breaker feeding the inverter to disconnect AC power from the system.
3. Disconnect all DC power sources by turning off their breakers.



**WARNING:** Disconnect all smart batteries and turn their Battery Disconnect switches to OFF before servicing the inverter or touching electrical terminals. Refer to smart battery documentation for complete safety instructions.

4. Remove the wiring compartment cover.
5. Check that all terminals are de-energized before proceeding.

*Pro Tip: You no longer need the old wiring compartment cover. You can save it as a spare, recycle it, or hang it next to your desk for quick reference!*

## Install the ethernet and power cable assembly

1. Connect the power leads to the black 16-pin accessory terminal block.
  - i. Connect the red wire (labeled "5V") to the "5V" terminal on the accessory terminal block.
  - ii. Connect the black wire (labeled "GND") to the "GND" terminal of the accessory terminal block.

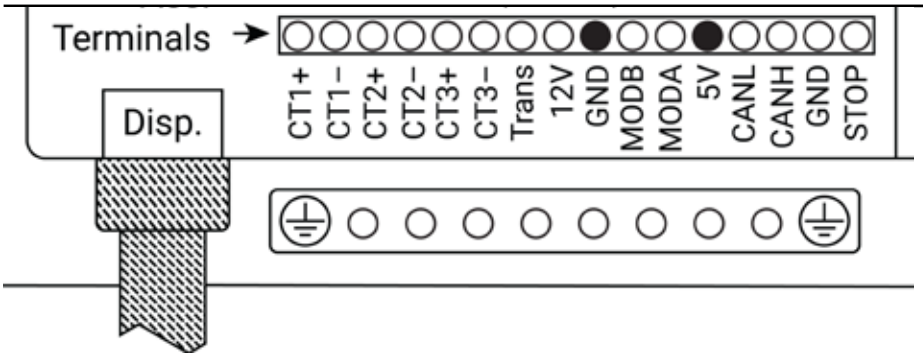


Fig 1. Connect the power leads to the GND and 5V terminals black 16-pin accessory terminal block.

2. Connect the female ethernet connector to the internet.
  - i. Locate the incoming ethernet cable that connects the inverter to the internet. It is connected to the ethernet port located behind the DC wiring terminals. Unplug the incoming ethernet cable from this location.
  - ii. Connect the incoming ethernet cable to the female ethernet connector at the end of the Beacon ethernet and power cable assembly.

## Install the new wiring compartment cover with Beacon attached

1. Pass the ethernet and power cable assembly through the passthrough opening at the top of the cover.
2. Attach the cover using the wiring compartment cover screws.

## Connect the ethernet and power cable assembly to Beacon

1. Connect the ethernet cable to the ethernet port on the top face of Beacon.
2. Connect the power cable to the micro USB port on the right-hand face of Beacon, near the bottom.
3. Feed any slack wire back through the passthrough into the wiring compartment. Keep all wires neatly managed.

## Connect the USB cable

1. The type-B (square shaped) connector plugs in to a port inside the inverter Power Core. Remove the black plastic plug from the  $\frac{3}{4}$ " hole in the bottom center of the Power Core cover to access the port and plug in the cable
2. Connect the type-A (rectangular shaped) connector to the back right-hand port on the top face of Beacon.
3. Slip the plastic split-ring grommet over the USB cable, then snap it into place in the Power Core cover.



## **Section 4: Commissioning Beacon**

*Note: If this is a new Energy Island installation, follow all commissioning procedures for the Islanding Inverter and all connected REbus devices before continuing.*

*For complete information on powering on and commissioning the inverter, using the inverter front control panel, and working safely with the Islanding Inverter, refer to the Islanding Inverter Installation and Operation Manuals. For information on commissioning and configuring other REbus devices, refer to individual device documentation.*

Commissioning Beacon consists of three steps:

1. Power on the system and verify connections
2. Enable all REbus devices
3. Configure Beacon

### **Step 1: Power on the system and verify connections**

1. Power on the Islanding Inverter by turning on the AC breaker.
2. If prompted, follow the on screen directions to exit the Safety Shutdown.
3. Use the left and right arrow buttons to scroll through the device pages. Verify that there is a Beacon device page.
4. Make sure the blue Internet LED on the front of the inverter is illuminated. If the LED is not illuminated, navigate to the inverter Ethernet Settings page and Disable ethernet.

### **Step 2: Enable all REbus devices**

1. Turn on the DC breakers for each connected device.
2. Enable the inverter, wait a few seconds for it to connect to the other devices, then enable each device.
3. Turn the front "Battery Disconnect" switch ON for each smart battery.

*Note: Refer to the Islanding Inverter Operation Manual for more information on enabling devices.*

4. Navigate to the Ethernet Settings page on the inverter control panel and disable Ethernet. Refer to the Islanding Inverter Installation Manual for more information on enabling and disabling ethernet.

## Step 3: Configure Beacon

1. Return to the Beacon device page.
2. Enter the Settings menu to access all settings, including the Time of Use (TOU) schedule and time zone.

*Note: Refer to the REbus Beacon Operation manual for complete instructions on navigating the menus and adjusting settings.*

3. Beacon will immediately enable and begin running the TOU schedule.

## **Section 5: Troubleshooting**

### **Problem: There is no REbus Beacon device page on the inverter front control panel.**

- Check that Beacon's power cable is plugged in to Beacon, the power wires are secure in their terminals inside the wiring compartment, and their polarity is correct. Check for voltage at the power terminals; verify there is 5V between them.
- The 16-pin accessory terminal block is removable. Push gently on the terminal block to make sure it is fully seated in its socket.
- Check that the USB cable is connected at both ends. Be certain that it is correctly connected to the port inside the Power Core.

### **Problem: The Inverter isn't connecting to the server.**

- Make sure the Ethernet Settings page on the inverter control panel reads "Disabled".
- Make sure all ethernet connections are secure. If using a field-built cable for your connection, check that the cable is made correctly.
- If your system requires manual DHCP setup, contact Pika Energy for assistance.

*Note: Pika Energy does not recommend or support connection to the internet using a wifi bridge or router set up in "bridge" mode. The Islanding Inverter does not communicate reliably through this type of device. Use these devices at your own discretion.*

## Technical Support Information

Support department hours: 9AM to 5PM Eastern Time, Monday – Friday (excluding holidays)

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