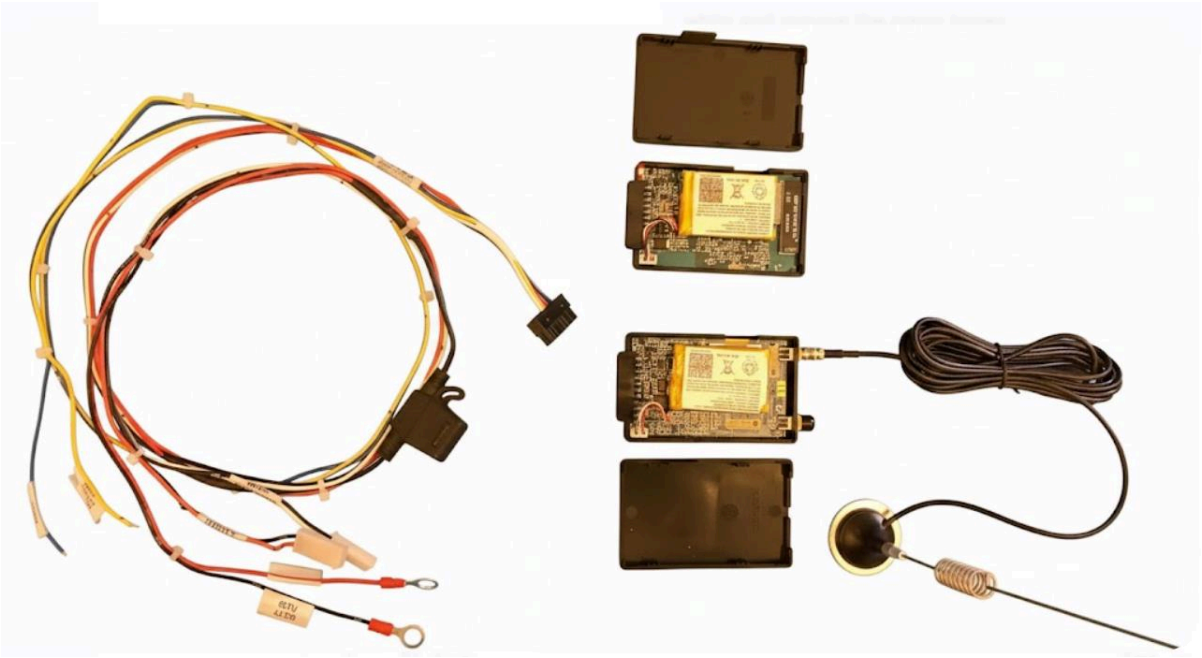
BRIGGS&STRATTON

InfoHub™ Universal 6574 Hardware Troubleshooting Guide

en Installation Instructions



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Revision A

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Introduction

This guide provides hardware-level troubleshooting procedures for the InfoHub Universal (6574) kit. These procedures require physical access to the generator and device, and may involve using a multimeter to verify connections.

Operator Safety

Safety Alert Symbol and Signal Words

The safety alert symbol  identifies safety information about hazards that could result in personal injury. A signal word (**DANGER**, **WARNING**, or **CAUTION**) is used to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol is used to represent the type of hazard.

DANGER indicates a hazard which, if not avoided, **will** result in death or serious injury.

WARNING indicates a hazard which, if not avoided, **could** result in death or serious injury.

CAUTION indicates a hazard which, if not avoided, **could** result in minor or moderate injury.

NOTICE indicates information considered important but not hazard-related.

Safety Messages

WARNING 

Failure to read and obey the operator's manual, all warnings, and operating instructions could result in death or serious injury.

CAUTION 

Installation of this product by qualified persons is highly recommended.

WARNING 

Electric Shock Hazard

Installation of this product involves potential exposure to electric shock, and could result in death or serious injury. Before installation:

- Make sure that the generator is shut down. See the generator operator's manual.
- Isolate the generator from utility power.
- Disconnect the negative (-) battery cable.

WARNING 

Electric Shock Hazard

The device contains a lithium-ion battery. Open the device case with caution.

WARNING 

Rotating parts could entangle hands, hair, clothing, or accessories resulting in death or serious injury.

- NEVER operate generator without protective housings, covers, or guards in place.
- DO NOT wear loose clothing, jewelry or anything that could be caught in rotating parts.
- Before servicing, stop the generator and disconnect the negative (-) cable at the battery.

WARNING 

Electric Shock Hazard

When you make an access hole in the generator housing, choose an access point where there are no wires or components. Failure to do so could result in death or serious injury.

NOTICE
If you make an access hole in the generator housing where there are wires or components, it could result in equipment damage.

Troubleshooting Tests

TEST	DESCRIPTION
TEST 1: CHECK DEVICE POWER	Battery voltage, fuse, harness verification
TEST 2: CHECK LED STATUS	LED pattern interpretation and actions
TEST 3: CHECK ANTENNA	Antenna positioning and replacement
TEST 4: CHECK VOLTAGE SENSORS	Contactless voltage sensor validation
TEST 5: CHECK FAULT SIGNAL	Generator fault detection verification
TEST 6: HARD RESET	Internal battery disconnect procedure

NOTE: Alternate Device Test: If a sealed **EnergyTrak Universal Kit** is available, power it up at the same site to compare LED patterns during network connection troubleshooting (TEST 2, TEST 3). If the EnergyTrak Universal Kit connects but the InfoHub Universal Kit does not, this indicates a potential AT&T coverage gap. Consider installing the **EnergyTrak Universal Kit (6943)** as a replacement.

TEST 1: CHECK DEVICE POWER

This test verifies the InfoHub Universal Module is receiving power and operating correctly. A lit LED on the module provides visual confirmation that it has power.

Required Tools

- Digital Multimeter (DMM)
- Visual inspection

Expected Power Status

Component	Expected Reading
LED Status	Solid or blinking amber / green (see *TEST 2: CHECK LED STATUS*)
Connector Voltage	10-12 Volts
Probe Connections	Red (+) → Red wire ('BATT POS' (+)), Black (-) → Black wire ('BATT NEG' (-))

Procedure

1. **Visual check:** Confirm LED(s) on the InfoHub Universal Module are lit. Are LEDs visible?
   - **Yes** - Go to Step 3.
   - **No** - Go to Step 2.
2. **If no LED:** Verify wiring harness is connected to the InfoHub Universal Module. Check the 5ATO fuse and verify continuity. Is the fuse intact and harness connected?
   - **Yes** - Go to Step 3.
   - **No** - Replace fuse or reconnect harness. Test again.
3. **Measure voltage:** Set multimeter to DC Voltage. Insert probes into the main connector (Red (+) probe to red wire ('BATT POS' (+)) , Black (-) probe to black wire ('BATT NEG' (-))). Is the voltage in the range of 10-12 Volts?
   - **Yes** - Device power is verified.
   - **No** - Go to step 4.
4. **Verify generator battery:** Confirm generator is fully turned on and verify generator battery:
   - Measure battery voltage with multimeter (should be 10V - 12V for a valid battery)
   - Verify correct polarity (Red (+) to positive terminal (+), Black (-) to negative terminal (-))
   - Clean cable clamps and battery terminals if corroded
   - Tighten all battery connections

   Is the generator on and battery properly connected with correct voltage?
   - **Yes** - Go to step 5.

- **No** - Charge battery, clean terminals, or correct connections. Test again.

5. **Verify harness wiring:** Verify red (+) ('BATT POS') and black (-) ('BATT NEG') harness wires are installed into a proper 12V source with correct polarity. Are connections correct?
   - **Yes** - Contact Support.
   - **No** - Correct wiring to proper 12V source. Test again.

TEST 2: CHECK LED STATUS

The LED indicators provide information about device power, GPS status, and cellular network status.

NOTE: The InfoHub Universal Modules use a SIM card that can only communicate with AT&T networks when their SIM Cards are enabled via an active subscription.

LED Pattern Reference

LED Condition	GPS (Green)	Cellular (Orange)
OFF	GPS OFF	Cellular Modem OFF
Slow Blink (1Hz, 1 blink per second)	Cannot acquire GPS signal	Cannot acquire cellular connection
Fast Blink (4Hz, 4 blinks per second)	Attempting to acquire GPS signal	Attempting to acquire cellular connection
3 Blinks with Pause	N/A	Connected to cellular, waiting for EnergyTrak cloud server
Solid	GPS Acquired	Connected to cellular and EnergyTrak cloud server

Procedure

1. **Verify device power:** Confirm LED(s) are lit. Are LEDs visible?
   - **Yes** - Go to step 2.
   - **No** - Go to *TEST 1: CHECK DEVICE POWER*.

2. **Check LED pattern:** Refer to LED Pattern Reference table above. What is the Orange (Cellular) LED status?
   - **Solid** - Device is connected.
   - **3 Blinks with Pause** - Device is connecting to cloud server. Wait 5 minutes. Test again.
   - **Fast Blink** - Device is attempting connection. Wait 5 minutes. Test again.
   - **Slow Blink** - Go to step 3.
   - **OFF** - Go to *TEST 1: CHECK DEVICE POWER*.

3. **If no connection (slow blink):** Move device OUTSIDE of the generator enclosure and wait up to 10 minutes. Did the LED become solid?
   - **Yes** - Signal may have been blocked. Consider an EnergyTrak Universal Sealed Kit installation or leave the InfoHub Universal Module outside of the enclosure. If you have an LMU2631LA (External Antenna) device (B, Figure 1), go to *TEST 3: CHECK ANTENNA*.
   - **No** - Go to step 4.

4. **Still no connection?** Perform a Hard Reset (*TEST 6: HARD RESET*) by power cycling the device. Wait 5 minutes. Check LED pattern. Did the device connect after reset?
   - **Yes** - Device recovered.
   - **No** - Possible ATT coverage gap at this location. Consider swapping with an EnergyTrak Universal Kit (6943) and Contact Support.

TEST 3: CHECK ANTENNA

This test applies only to the LMU2631 (External Antenna) device (B, Figure 1). Antenna positioning significantly affects cellular signal strength. If you have an LMU2630 (Internal Antenna) device (A, Figure 1), return to *TEST 2: CHECK LED STATUS*.

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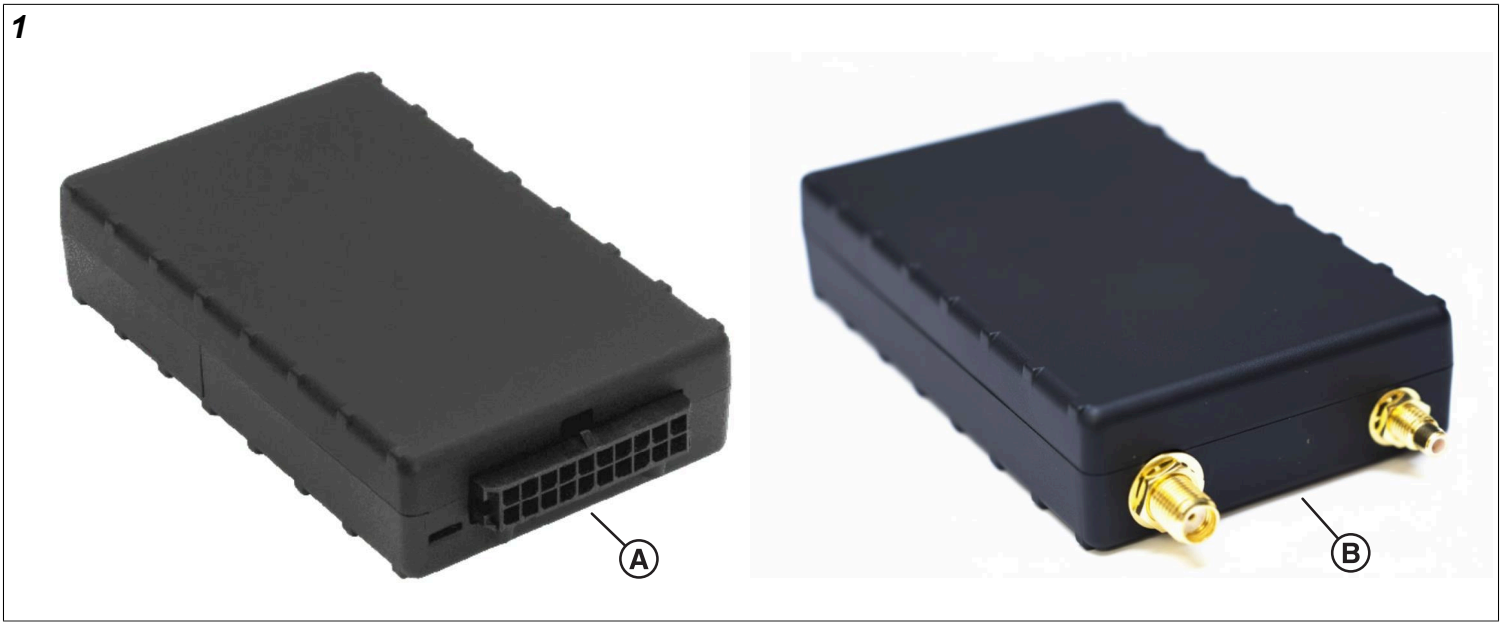

A	**LMU2630 (Internal Antenna)**
B	**LMU2631 (External Antenna)**

Procedure

1. Verify the external antenna is mounted outside the generator enclosure. Is the antenna outside?
   - **Yes** - Go to step 2.
   - **No** - Mount antenna outside the enclosure. Test again.
2. Check antenna cable connection at the device. Is the cable securely connected?
   - **Yes** - Go to step 3.
   - **No** - Reconnect antenna cable. Test again.
3. Inspect antenna and cable for physical damage. Is there visible damage?
   - **Yes** - Replace antenna. Test again.
   - **No** - Try repositioning antenna in different orientations. If issue persists, consider antenna replacement or Contact Support.

TEST 4: CHECK VOLTAGE SENSORS

This test verifies that the contactless voltage sensors are correctly installed and reporting the status of the generator and utility power. These sensors detect the presence of active AC voltage on their respective lines, allowing the system to know which power source is live.

WARNING
Electric Shock Hazard
Rotating Parts Hazard
Use extreme caution when turning on the generator for testing purposes. Exposed wires and components could cause death or serious injury.
Keep away from rotating parts. Rotating parts may cut or crush. Additionally, jewelry, loose clothing or hair may become entangled and draw the wearer into the machine.

Required Tools

- Digital Multimeter (DMM)

Voltage Sensor Installation Reference

Installing the Voltage Sensors:

1. Connect the voltage sensors to the connectors on the wiring harness (the two connectors by the fuse). Label each sensor based on which connector they are connected to:
   - **Utility Sensor (Orange + Black wires):** Monitors incoming power from the utility company on one of the input lines (L1 or L2). Detects power outages and confirms when grid power is restored.
   - **Generator Sensor (White + Black wires):** Monitors power produced by the generator. Attach to one of the generator's main output wires (L1 or L2) to verify the generator is running and producing power.
2. **Utility Sensor (A, Figure 2):** Attach to 'L1' or 'L2' utility wire (B) on generators.
3. **Generator Sensor (C, Figure 2):** Attach to the field installed wire (D, output wire of the generator circuit breaker on most generators).

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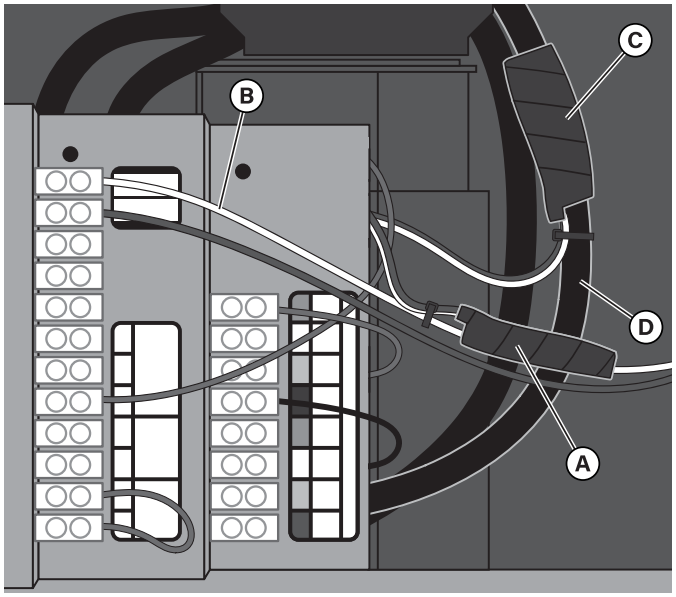

Attachment Notes:

- Make sure the sensor pad is flat against the wire (A, Figure 3).
- Make sure the sensor pad is parallel to the wire (B, Figure 3).
- Wrap the attachment point (C, Figure 3) with electrical tape (D) and secure the sensor wires with a zip tie (E).

NOTICE

To prevent breakage of the sensor, do not wrap the tape or fasten the zip ties too tight.

NOTE: Single Phase Only - Do not attach the voltage sensor(s) to both L1 and L2 wires. Each wire has a different phase, and the sensor can read only one phase.

NOTE: Physical distance between the L1/L2 wires and where the sensor is installed on one of those wires can affect reliability.

NOTE: These attachment points may come loose over time due to weather or vibrations from the generator. Do a regular check, and readjust zip ties and/or wrap with new tape as needed.

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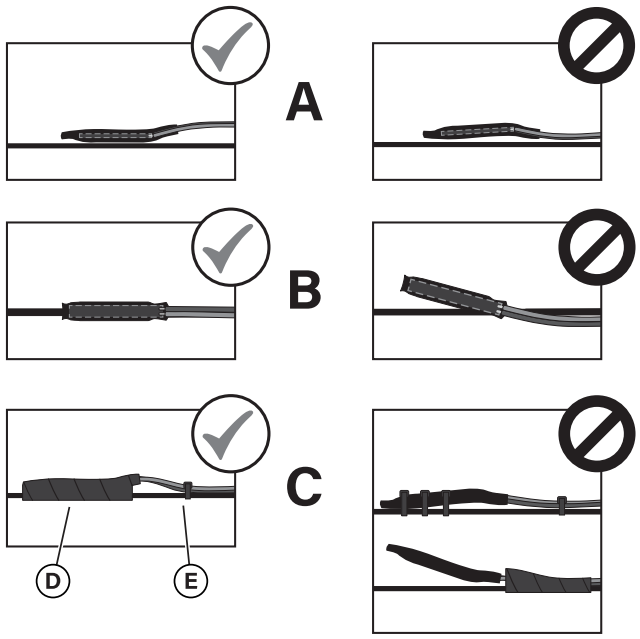

Voltage Sensor Validation Test
Procedure

1. Set the multimeter (A, Figure 4) to DC Voltage.
2. Insert probes (B, Figure 4) into the Voltage Sensor connector pins (C).

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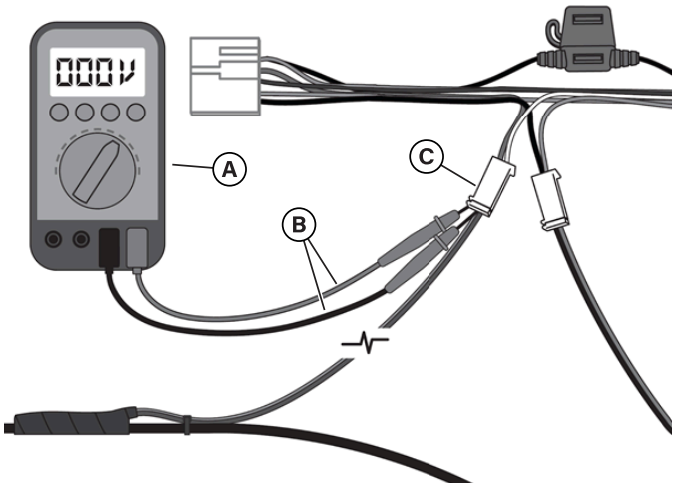

Expected Voltage Readings

Sensor	Probe Connections	Power OFF	Power ON
Generator (White + Black)	Black (-) → Black wire, Red (+) → White wire	> 1.7V	< 1.7V
Utility (Orange + Black)	Black (-) → Black wire, Red (+) → Orange wire	> 1.7V	< 1.7V

3. With power source OFF: Record voltage. Is voltage greater than 1.7V?
   - **Yes** - Go to Step 4.
   - **No** - Verify sensor is attached to the correct, singular power line. Check orientation (pad flat, parallel, and taped tightly enough to wire). Test again.

4. With power source ON: Record voltage. Is voltage less than 1.7V?
    - **Yes** - Voltage sensor is functioning correctly. Repeat for other sensor if needed.
    - **No** - Go to step 5.
5. Confirm power source is actually on. Verify sensor is attached to the correct, singular power line. Check orientation (pad flat, parallel, and taped tightly enough to wire). Did you find an issue?
    - **Yes** - Correct the issue. Test again.
    - **No** - If issue persists, Contact Support.

NOTE: Test Each Sensor Independently.
- **Generator Sensor:** Turn generator on/off while utility is disconnected.
- **Utility Sensor:** Restore/remove utility power while generator is off.

TEST 5: CHECK FAULT SIGNAL

This test verifies that the InfoHub Universal Module can detect a common fault condition from the generator controller by measuring its discrete fault signal.

NOTE: Fault Logic Type
Determine if your generator uses FAULT HIGH or FAULT LOW logic (see your generator's manual):
- **FAULT HIGH:** Signal goes to ***~12V*** during a fault
- **FAULT LOW:** Signal goes to ***~0V*** during a fault

Required Tools
- Digital Multimeter (DMM)

Expected Fault Readings

Measurement Points:
- **At InfoHub Universal Module harness** (Blue/Yellow wire to GND): Threshold is 1.7V
- **At generator controller** (Fault wire to GND): Threshold is 12V

Fault Type	Probe Connections	No Active Fault	Active Fault
Fault High	Red (+) → FAULT pin (Blue wire), Black (-) → GND	< 1.7V	> 1.7V
Fault Low	Red (+) → FAULT pin (Yellow wire), Black (-) → GND	> 1.7V	< 1.7V

Procedure
1. Set multimeter to **DC Voltage**.
2. Connect probes: Red (+) to the 'FAULT' pin (blue or yellow wire depending on fault type), Black (-) to ground (GND).
3. **With no fault active:** Record voltage. Does the reading match the "No Active Fault" column for your fault type?
    - **Yes** - Go to step 4.
    - **No** - Go to step 6.
4. **Create a generator fault:** (Example: start generator and shut off fuel supply. See Generator Manual.)
5. **With fault active:** Record voltage. Does the reading match the "Active Fault" column for your fault type?
    - **Yes** - Fault detection is functioning correctly.
    - **No** - Go to step 6.

NOTE: Fault Indicator
The generator controller should show an alarm or warning when a fault is active.

6. Verify the FAULT pin is correctly wired to the generator's fault signal output. Is the wiring correct?
    - **Yes** - Go to step 7.
    - **No** - Correct the wiring. Test again.

7. Check if generator uses opposite fault logic (HIGH vs LOW) than expected. Is the fault logic inverted?
    - **Yes** - Update EnergyTrak app configuration accordingly. Test again.
    - **No** - Contact Support.

TEST 6: HARD RESET

This test performs a hard reset on the InfoHub Universal Module by disconnecting the internal lithium-ion battery. Use this procedure as a last resort when a soft reset does not resolve the issue.

Please note that a hard reset may not permanently fix any issues. But it does reset the InfoHub Universal Module into a known state. If after continuous hard-resetting the issue persists, please call EnergyTrak Technical Support.

WARNING
Electric Shock Hazard
The device contains a lithium-ion battery. Open the device case with caution.

Procedure

1. Disconnect the InfoHub Universal Module from the wiring harness.
2. Pop open the back casing of the device.
3. Locate the internal 3-pronged battery connector (A, Figure 5) and unplug it.

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4. Wait **30 seconds** with the battery disconnected.
5. Reconnect the internal battery.
6. Close the back casing. Hard reset complete.

Contact Support

If you have completed the troubleshooting procedures and the issue persists, contact EnergyTrak Technical Support:

- Email: energytrak@basco.com
- Phone: (833) 463-6482

Please have the following information ready:

- Device model and serial number
- Site address or location
- Description of the issue
- Steps already attempted
- LED indicator status
- Multimeter readings (if applicable)
- Screenshots from the app (if applicable)

Additional Resources

- InfoHub Universal Installation Manual
- EnergyTrak Devices
- FAQ - Troubleshooting