
TECHNICAL BRIEF

IIS-350-U TROUBLESHOOTING STEPS

The following steps will help verify the operational status of the IOTA **IIS-350-U**. Servicing of the **IIS-350-U** should only be performed qualified personnel. Always follow all cautions and safeguards when working with electrical equipment. Refer to the **IIS-350-U** manual for complete details. The **IIS-350-U** manual is available on-line at http://www.iotaengineering.com/Inverter/iis350u_manual.pdf.

1. De-energize utility power, then disconnect the **Install Wires** (the two white/black wires that plug together) inside the IIS-350-U.
2. Disconnect the load wires (**Violet** and **Gray**) and disconnect the incoming primary AC circuit (**Black** and **White** leads).
3. Verify that all three LED lights (**Yellow**, **Red**, and **Green**) are off.
4. Confirm that the battery is connected, then check the battery voltage. If the battery is charged, the voltage should be **>12.5VDC**. If discharged, it may be as low as 12VDC. If the battery voltage is too low, the output may not energize.
5. Reconnect the **Install Wires**. The **Green** LED indicator ('Inverter On') should be lit and the **Yellow** ('Ready') and **Red** ('Alarm') LED indicators should be off. **DANGER:** The **Violet** and **Gray** leads are now hot!
6. Check the output voltage on the **Violet** and **Gray** leads. The voltage should be **120VAC**. This will confirm that the IIS-350-U is properly inverting the DC output of the battery.
7. Connect the primary circuit (**Black** and **White** leads) and turn the AC power on. Both the **Yellow** ('Ready') LED and **Green** ('Inverter On') LED should be on and the **Red** ('Alarm') LED should be off.
8. Check that the output voltage of the **Violet** and **Gray** leads is still **120VAC**.
9. Check the battery voltage. It should now be **13.6VDC**. This indicates that the IIS-350-U is properly charging the battery.

The steps above would indicate that the IIS-350-U is working properly. Following the steps below to determine if there is a problem with the load.

1. With the inverter disconnected, check the load wires with a volt meter to make sure there is no back-feed voltage of any type. In some instances, the circuit has been accidentally tapped 'downstream' of the inverter.
2. Disconnect the primary AC circuit from the IIS-350-U and connect the load wires directly to the primary AC circuit. This will bypass the IIS-350-U.
3. Confirm that all emergency lights come on. Check the amperage on the circuit. The amperage should not exceed 3.2 amps.
4. If less than 3.2 amps, reconnect the load and primary AC circuit to the IIS-350-U. Test the IIS-350-U by pressing the Test Switch. All lights on the circuit should remain lit and the **Yellow** ('Ready') LED should turn off.
5. The **Green** ('Inverter On') LED indicator should be on all the time. The **Yellow** ('Ready') LED indicates the battery charger is operating. The **Red** ('Alarm') LED indicator will only be lit if there is a problem with the unit.

If problems persist, contact IOTA Customer Service for further review of the application.