

Operator Manual  
For use with WFCO Deckmount Converter  
WF-68100



Distributed in the U.S.A. and Canada by  
Arterra Distribution  
Warranty Service (877) 294-8997  
Fax (574) 294-8698  
[www.wfcoelectronics.com](http://www.wfcoelectronics.com)



## ⚠ CAUTION ⚠

CAUTION and care must be taken when servicing this equipment. To prevent severe shock or electrocution consult your servicing dealer. No serviceable parts.

## OPERATIONAL FEATURES

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### General Consumer Information

- **Power Factor Correction**  
This feature causes the unit to consume less power, which reduces electric cost or allows more AC devices to be used.
- **Reverse Battery Protection**  
This feature prevents permanent damage to the converter from an incorrect battery connection. Replace only with “ATC-style” fuses.
- **Automatic Cooling Fan**  
The fan is variable speed and current controlled.
- **Electronic Current Limiting**  
Automatically shuts down power during overload or short-circuit conditions. Automatically returns to normal operation after conditions are corrected. If the unit shuts off from an overload condition, the user needs to reduce the load below 50% in order for the unit to come back on.
- **Over-Temperature Protection**  
Unit will shut down if temperature is too high.
- **Battery Type Selection Switch**  
For increased battery life span, you can select battery type between AGM/Lead-Acid and Gel-Cell type of batteries. Gel-Cell type of batteries requires lower output voltage and there is no need for bulk mode. Default setting is (up) AGM/Lead-Acid type of batteries.
- **Manual Bulk Charging Switch**  
For AGM/Lead-Acid type of batteries, with a push of a button on the front cover you can manually bring the converter to bulk charge mode.
- **LED Indicators**  
Lights show operating status of the converter:
  - Green LED: converter powered up
  - Amber LED: On when unit is turned off and the connected battery is full, flickering occurs when battery is approaching low voltage.
  - Red LED: converter is overloaded



## Converter Operation Modes

All WFCO power converters are automatic three-stage switching power supplies. The converter senses which mode it needs to be in by checking the RV system voltage.

### The three modes/stages of operation include:

#### **Absorption mode/Normal operation**

Nominal battery charge and supplies power to appliances

#### **Bulk mode/Charge mode**

Fast battery charge and supplies power to appliances

#### **Float mode/Trickle charge**

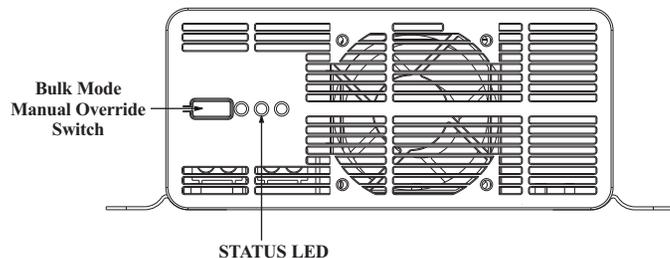
Trickle battery charge during storage

**Absorption Mode:** During this mode, the converter output is in the 13.7 Vdc range. This is the normal operation mode. This mode provides the 12 Vdc and current required by the 12 Vdc RV appliances, as well as slow charging the battery.

**Bulk Mode:** In this mode, the output voltage of the converter will switch to 14.4 Vdc range for a maximum of four hours (not applicable to Gel-Cell type of batteries). If the converter cycles between “Absorption and Bulk mode,” there could be a shorted battery cell or other issues.

**Float Mode:** In this mode, the converter is charging the battery with a trickle voltage in the 13.2 Vdc range. When the converter senses a demand (by turning on lights), the converter automatically returns to the “Absorption mode.”

### WF-6800 Series Converter - Front View



OPERATIONAL FEATURES

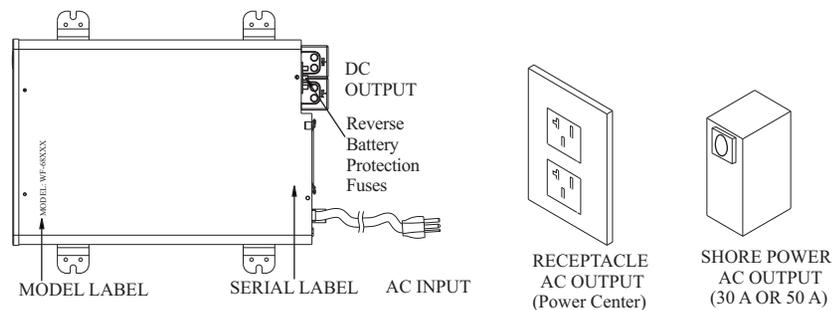
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TROUBLESHOOTING INSTRUCTIONS

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## Troubleshooting WF-6800 Series Converter

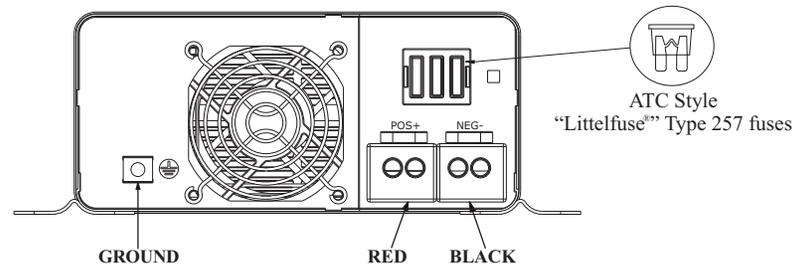
If there is no DC output, first check the reverse polarity fuses on the back of the WF-6800 Series deckmount converter. Then, visually inspect the fuses for any breaks; if none are found, use a continuity tester to check for continuity.



If the reverse polarity fuses are blown, it means the RV battery was accidentally connected in reverse, either at the battery or at the converter. Reconnect properly, then replace the fuse with the same type and amp rating as the original “Littelfuse®” Type 257 automotive-style fuse.

**IMPORTANT:** These fuses protect the converter from damage in the event that the RV battery is accidentally connected in reverse. A reverse battery connection, even for a second, is the reason that these fuses will blow.

### WF-6800 Series Converter - Back View

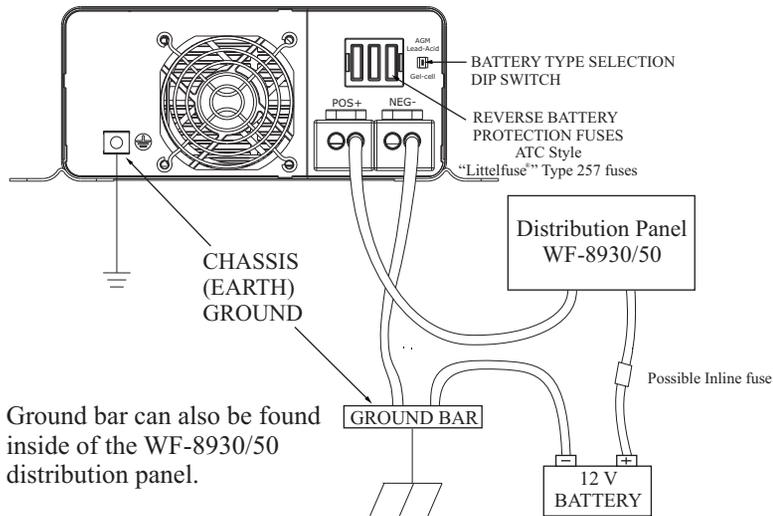




## Troubleshooting WF-6800 Series Converter

Before the converter output voltage can be checked, it is necessary to disconnect battery output wires from the battery terminals. Insulate each wire to prevent shorts. Plug the converter into a 120 VAC source. Using a voltmeter, check the converter output voltage.

Place the **Positive +** (red) probe in the **POS +** output (red) and place the **Negative -** (black) test probe into the **NEG -** (black) output terminal of converter. Be sure you have good connections at the terminals. If the voltage reads in the 13.2 Vdc-14.4 Vdc range, the converter is functioning properly. Add more load to make sure converter is able to keep the output voltage between 13.2 Vdc-14.4 Vdc range.



Ground bar can also be found inside of the WF-8930/50 distribution panel.

If the converter output voltage reads in the 13.2 Vdc-14.4 Vdc range and the battery is not charging, check for:

- an open inline fuse in the battery wire (if provided)
- an open wire between the converter and the RV battery
- loose ground
- improper torques

If the converter fuses and AC voltage are good, but the converter output still reads zero volts, the converter is not functioning properly. Contact WFCO Tech Support at (877) 294-8997.

TROUBLESHOOTING INSTRUCTIONS

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COMPLIANCE

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## GENERAL COMPLIANCE INFORMATION

The WF-6800 Series units are UL<sup>®</sup>-Listed, and cUL<sup>®</sup>-Listed (Canadian). They comply with FCC Class B requirement (see below).

### FCC Compliance Class B

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



**Consumer Limited Warranty  
For  
WFCO Electronic Products**

WFCO extends to the original owner a Two-Year Limited Product Warranty. This Warranty is in effect from the date of the original purchase for a period of two (2) years. This Limited Warranty is extended specifically for and is limited to recreational vehicle application and is valid only within the continental United States, Alaska, Hawaii and the provinces of Canada. WFCO warrants to the owner that its products are free from defects in material and workmanship under normal use and service, based on its intended use and function. This Warranty is limited to the repair or replacement, at WFCO's discretion, of any defective parts or defective assembly. Any implied warranties of merchantability or fitness for intended use are limited in duration unless applicable State Law provides otherwise. You may have other rights as specified by each individual State.

**EXCLUSIONS and LIMITATIONS**

The OEM Warranty specifically does not apply to the following:

Any WFCO product that has been repaired or altered by any unauthorized person. Any damage caused by misuse, faulty installation, testing, negligence or accident or any WFCO product that has been installed in a commercial vehicle. Any WFCO product whose serial number has been defaced, altered or removed. Any WFCO product whose installation has not been in accordance with the WFCO written instruction. Any consequential damages arising from the loss of use of the product including, but not limited to, inconvenience, loss of service, loss of revenue, loss or damage to personal property and cost of all services performed in removing or replacing the WFCO product. Specifications are subject to change without notice or obligation.

**CONSUMER WARRANTY CLAIM PROCEDURE**

Upon determination and validation by an authorized OEM dealer that a WFCO product has a defect, a Return Goods Authorization (RGA) number will be required before it can be returned. The RGA number can be requested by completing the **Warranty Information Fax Sheet** found at [www.wfcoelectronics.com](http://www.wfcoelectronics.com). Once the form has been completed, email this form along with Proof of Purchase to [warranty@wfcoelectronics.com](mailto:warranty@wfcoelectronics.com) or fax both forms to the Warranty Department at (574) 294-8698. After receipt of the forms, an RGA number will be issued. This number shall appear on all correspondence with warranty service. Upon validation of the warranty, WFCO shall replace or repair the product with a like product. The RGA number shall be placed on the outside of the carton used to return the product, for ease of identification. Do not mark directly on the product. The product must be packaged properly to avoid further damage to the product, which could cause a non-warrantable condition.

**LIMITED WARRANTY**