

Installation and User's Manual

WF-9835, WF-9845, WF-9855, WF-9865, WF-9875

WFCO

for

Power Converter /Chargers



WORLD FRIENDSHIP CO., LTD.

Phone:(574) 294-8997 Fax:(574) 294-8698

For Warranty Service Contact: (877) 294-8997

Distributed by CHENG USA, Inc.



1. Power Converter Features

• **Clean, constant 12 volt DC power**

Nominal 13.6 VDC. Eliminates need “filtered” circuits whether or not the battery is installed in the RV.

• **Reverse battery protection**

Prevents permanent damage from incorrect battery hook-up

• **Automatically Cooling Fan**

Operates only under high load conditions-normally not during sleeping hours or when power demand is low. More sleeping comfort.

• **Electronic current limiting**

Automatically shuts down power during overload or short circuit conditions. Automatically returns to normal operation after condition is corrected. No more hassle replacing fuses or resetting circuit breakers.

• **Fast recharge rate**

Depending on battery condition and 12-volt load.

• **Light Weight**

- 35AMP unit weighs only 4.10kg
- 45AMP unit weighs 5.10kg
- 55AMP unit weighs 5.25kg
- 65AMP unit weighs 6.5kg
- 75AMP unit weighs 6.75kg

• That's 80% less weight than most older style linear converters.

Durable performance



2. Installation Instructions

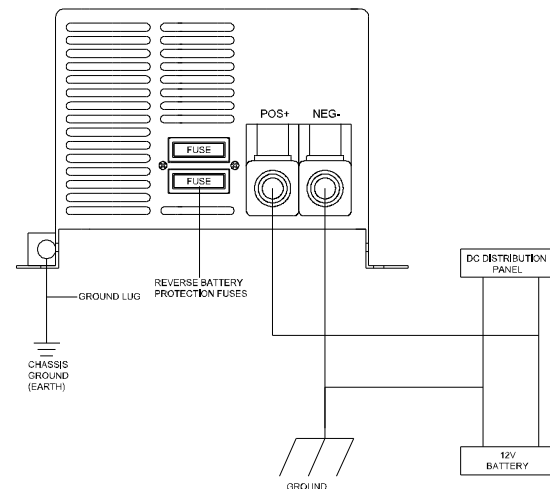
Horizontal mounting of the 9800 series is recommended although it can be mounted in any position that provides *unobstructed* ventilation for the fan and vent holes. Secure the converter firmly to the mounting surface using standard fasteners. For proper operation the converter must be grounded to the chassis or frame. A ground lug is provided on the side of the converter.

3. Caution

If the reverse battery protection fuses are blown during installation, check to see that the battery has been connected properly *before* replacing the fuses. Replace the fuses *only* with the same type and rating as original fuses. Using other fuses could result in the converter being damaged, vehicle damage, injury other consequence.

4. Attention

Use a 5/32” hex driver to tighten terminal output screws. Do not exceed 50 IN-LB Torque. Too much torque or use of a power tool, may result in stripped screws. The output terminals are rated for 2 to 14 gage, copper or aluminum wire. The 9800 series converter are not whether tight nor designed for wet location mounting. They must be protected from direct contact with water. During the manufacturing process avoid the introduction of foreign materials into the case as this could cause a malfunction of the converter.





Automatic Microprocessor Operation

Your WFCO power converter is equipped with a microcontroller mounted on the converter's PC board. The microcontroller is fully automatic and requires no additional equipment to operate. The microcontroller continuously monitors the battery condition and determines what mode the converter need to be in. Below are the function of the microcontroller.

- Our output voltage controlled microprocessor has been designed into the converter PC board to avoid the need for additional equipment when power is initially applied to the power converter, the microcontroller cycles through its mode to determine which mode it needs.
- After the test cycle the power switches to Absorption mode(13.6VDC) when power is on.
- When the output of the power converter is connected to a battery and the load is applied (anything in the RV) the microcontroller checks to see which mode it need to be in.
- If the output voltage drops to 13.2VDC, the converter automatically changes to Buck mode 14.4VDC. Normally when the output voltage drops to 13.2VDC it means that the battery energy is less than 50%.
- Under Buck mode when the power converter senses that output voltage is at 14.4VDC. It will change back to absorption mode. This is important to battery durability and battery life.
- After a period of sensing no load the microprocessor automatically places the converter in Float mode 13.2VDC.
- The design of our microcontroller is to sense the battery voltage then make a decision to select the proper mode automatically.

Storage Mode Status:

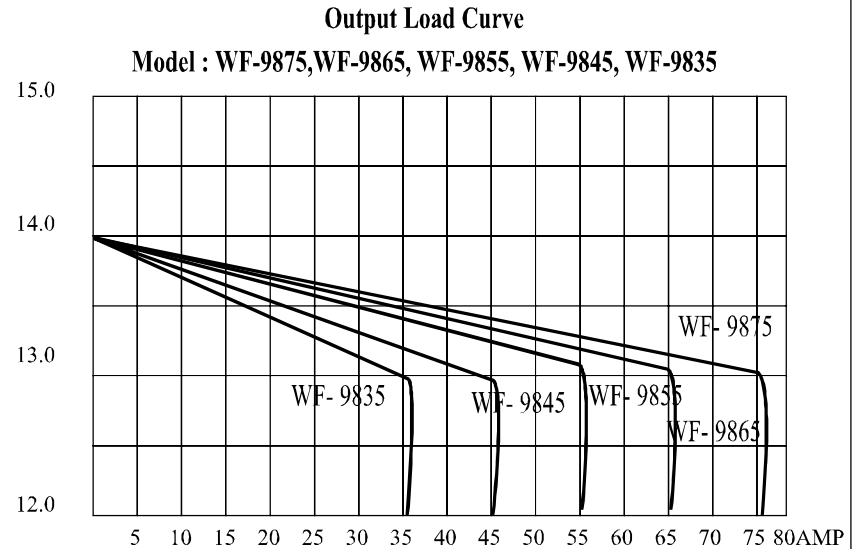
After a period of sensing no load or demand the microcontroller automatically places the converter into Float mode 13.2VDC

INSTALLATION INSTRUCTION

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9. WF-9800 Series Specifications :



Model No.	AC Input		DC Output		Dimensions			Weight	Fan Cooled
	Volts	AMP	Volts	Amps.	Height	Width	Length		
WF-9835	120V 60Hz	6.25	Bulk Charge Mode : 14.4V 4hr Max Absorption Mode:13.6V Float Mode : 13.2V	35	3.94" 100mm	145mm	190mm	4.10kg	Yes
WF-9845		7.93		45		151mm	220mm	5.10kg	
WF-9855		9.5		55		151mm	220mm	5.25kg	
WF-9865		11.3		65		160mm	261mm	6.50kg	
WF-9875		13.0		75		160mm	261mm	6.75kg	

INSTALLATION INSTRUCTION

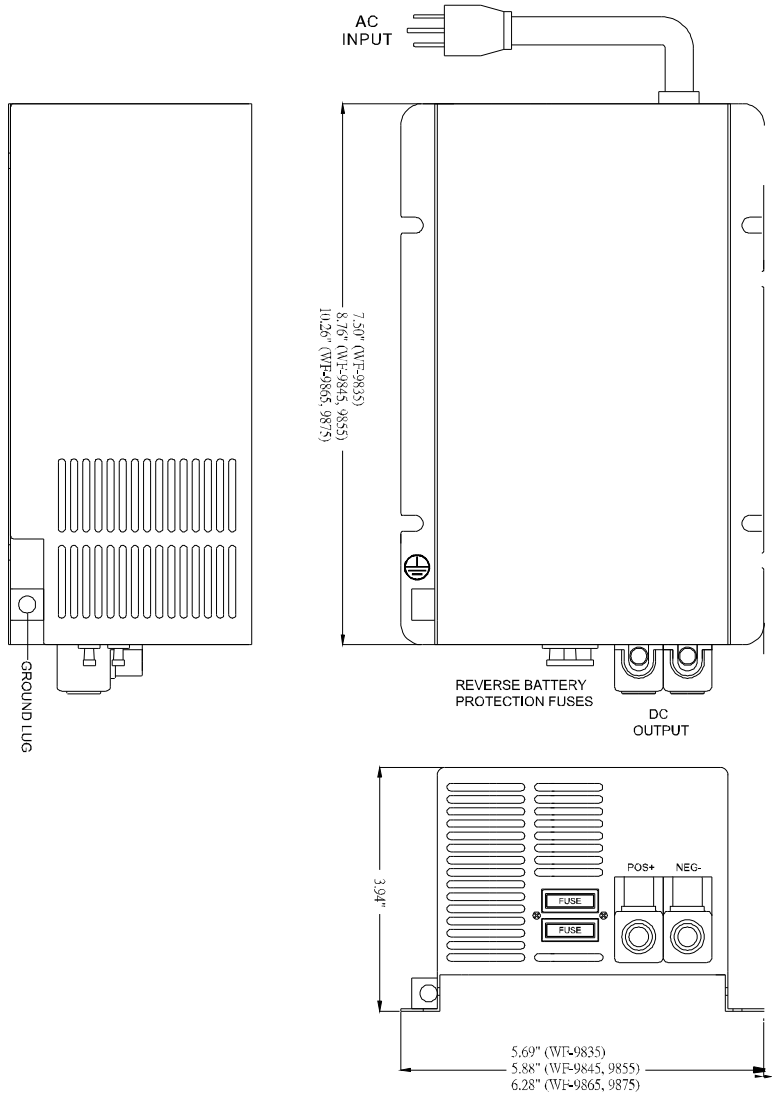
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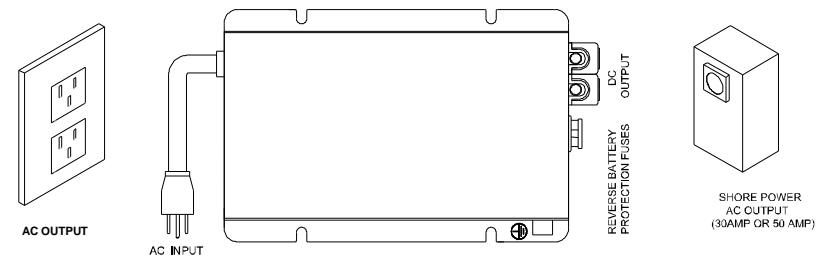
Model No.: WF-9800 SERIES

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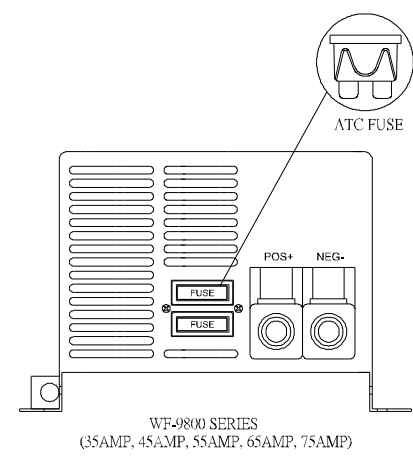
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Procedure#1 First to be sure to check that the converter is plugged in and that there is a good source of power (at the connection point for the shore power). Check the shore power with the voltmeter to be sure the output is between 105 VAC and 120 VAC. Then check the receptacle that the converter plugs into to see if there is 105 VAC to 120 VAC. If there is power to both the shore power and to the receptacle that the converter is plugged into then go to Procedure#2



Procedure#2 If there is power to the converter then check the reverse polarity fuses on the front plate of the WF-9800 series converters. First visually inspect the fuses for any breaks then if none are seen then using a continuity tester check for continuity. If fuse(s) are blown this means the RV Battery was accidentally connected in reverse either at the battery or at the converter. Connect properly then replace the fuse(s). If the fuses are good then go to Procedure #3



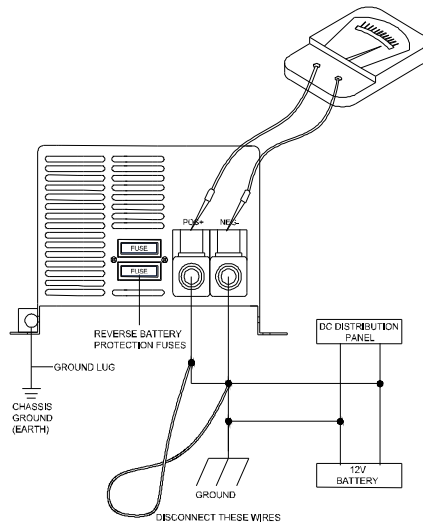
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IMPORTANT: The reverse protection fuses protect converter from damage in the event RV battery is accidentally connected in reverse. A reverse battery connection event for a second is the only thing that will blow these fuses.

Procedure #3 Before the converter output voltage can be checked, it is necessary to disconnect both of the wires on the front of the converter (as shown below). Using a 5/16 hex driver to disconnect the wires and cap each wire or wrap with tape. Then using a voltmeter check the converter output voltage. Place the **Positive**(red) probe in the **Positive** output(red) and place the **Negative**(black) test probe into the **Negative**(black) output terminals of converter. Be sure you have good connections at the terminals. If the voltage reads 13.6 volts (+/- .3volts) the converter is functioning properly.



Drawing 3

If converter output voltage reads 13.6 volts, but the battery is still not charging, check for an open automatic reset circuit breaker(if provide), or an open fuse. Their also could be a open between the converter and distribution panel or an open wire between converter and RV Battery.

If converter fuses check good and 120 V.A.C. and there is power at the outlet, but the converter output still reads zero volts, the converter is not functioning properly and must be replaced. For Warranty service contact 1-877-294-8997. If the RV is out of warranty contact 1-877-294-8997.



GENERAL INFORMATION

The 9800 series power converter, 12VAC to 13.6VDC are intelligent, reliable electronic switch mode converter / battery chargers. The 9800's are UL,cUL (Canadian) Listed. They meet FCC Class B requirements (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 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 only valid within the continental United States, Alaska, Hawaii and the provinces of Canada. WFCO warrants, to the owner, that it's 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 LIMITATION

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 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 to WFCO written instructions;
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;

CONSUMER WARRANTY CLAIM PROCEDURE

Upon determination and validation by an authorized OEM dealer that a WFCO product has a defect, the dealer shall contact the WFCO warranty service number (877) 294-8997 and obtain a return goods authorization (RGA) number. 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 must also 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 to cause a non-warrantable condition.

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28255 Charlotte Avenue
Elkhart IN 46517
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