

Installation/Operators Manual
For use with WFCO Distribution Panels
Models WF-8935AN W/PLASTIC, WF-8945AN
W/PLASTIC, WF-8955AN W/PLASTIC



Distributed in the US by CHENG USA, Inc.
Sales (574) 294-8997
Warranty Service (877)294-8997



Installation/Operator's Manual

For use with WFCO ULTRA Models: WF-8935AN, WF-8945AN, WF-8955AN

INSTALLATION INSTRUCTION

Mounting:

Select the mounting location near the shore power inlet and batteries and cut a rough opening 1/8" wider than the box to allow the Distribution panel to slide in easily. The hole should be framed so that the box can be secured tightly.

Mount horizontally only. Not intended for vertical mounting.

Mount in such a way as to provide adequate ventilation to the converter ON ALL SIDES. The WF-8935AN, WF-8945AN, WF-8955AN should be mounted a minimum of 1" off the floor (2" to 3" would be preferred). Caution: Do not mount in an area where the owner may store items as this could effect the efficient operation of the converter.

When routing around the converter be sure that all openings are protected from debris falling into the WF-8900. Metal shavings and debris from the manufacturing process allowed to enter the converter may cause damage (this is a non-warranty item).

Use a slot driver to tighten terminal output screws. The tightening torque is Min. 20 IN-LB. Max. 40 IN-LB. Too much torque or use of a power tool, may result in stripped screws, The output terminals are rated to accept 2 to 14 gage, copper or aluminum wire.

Warning: DO NOT MOUNT THE WF-8935AN, WF-8945AN, WF-8955AN IN A BATTERY OR LP GAS COMPARTMENT.

The OEM may wish to pre-wire the box for ease of installation, Select the number of knockouts to be used and remove them. Two sizes have been provided, The 1 1/8" is for the 30 amp power cord. The 7/8" holes are for the romex on the 120VAC side and the wires on the 12VDC side. Remember to select the proper gauge wire for the load and distance. Leave the rest of the knock-outs in place. Be sure to use appropriate Romex connectors and strain reliefs to secure the wires to the box. (see wiring diagram)



Fuses and breakers:

Breakers

The WF-8935AN, WF-8945AN, WF-8955AN ULTRA Distribution Panel w/ 35,45,55Amp Power Converter was designed to use a 30 AMP main breaker with branch circuits (Cutler-Hammer and SIEMENS are recommended breakers). Double breakers may be used for the branch circuits. Should a breaker become faulty replace with the same type breaker as provided by the OEM. Use only approved circuit breakers and 12V fuses. IMPORTANT: When replacing circuit breakers replace with the same type and rating as the original.

AC Breaker Manufacturer:

1. Main Circuit Breaker-Listed, rated 120Vac, maximum 30 A

Cutler-Hammer: Type BR and C. T&B: Type TB. Siemens/ITE: Type: QP. Square D: Type: HOM

2. Branch Circuit Breaker-Listed, rated 120Vac, maximum 20 A

Cutler Hammer: Type BR and C, or BRD BD and A. T&B: Type: TBBD or TB. ITE/Siemens: Type QT or QP. Square D: Type HOM or HOMT

12 VDC Fuses

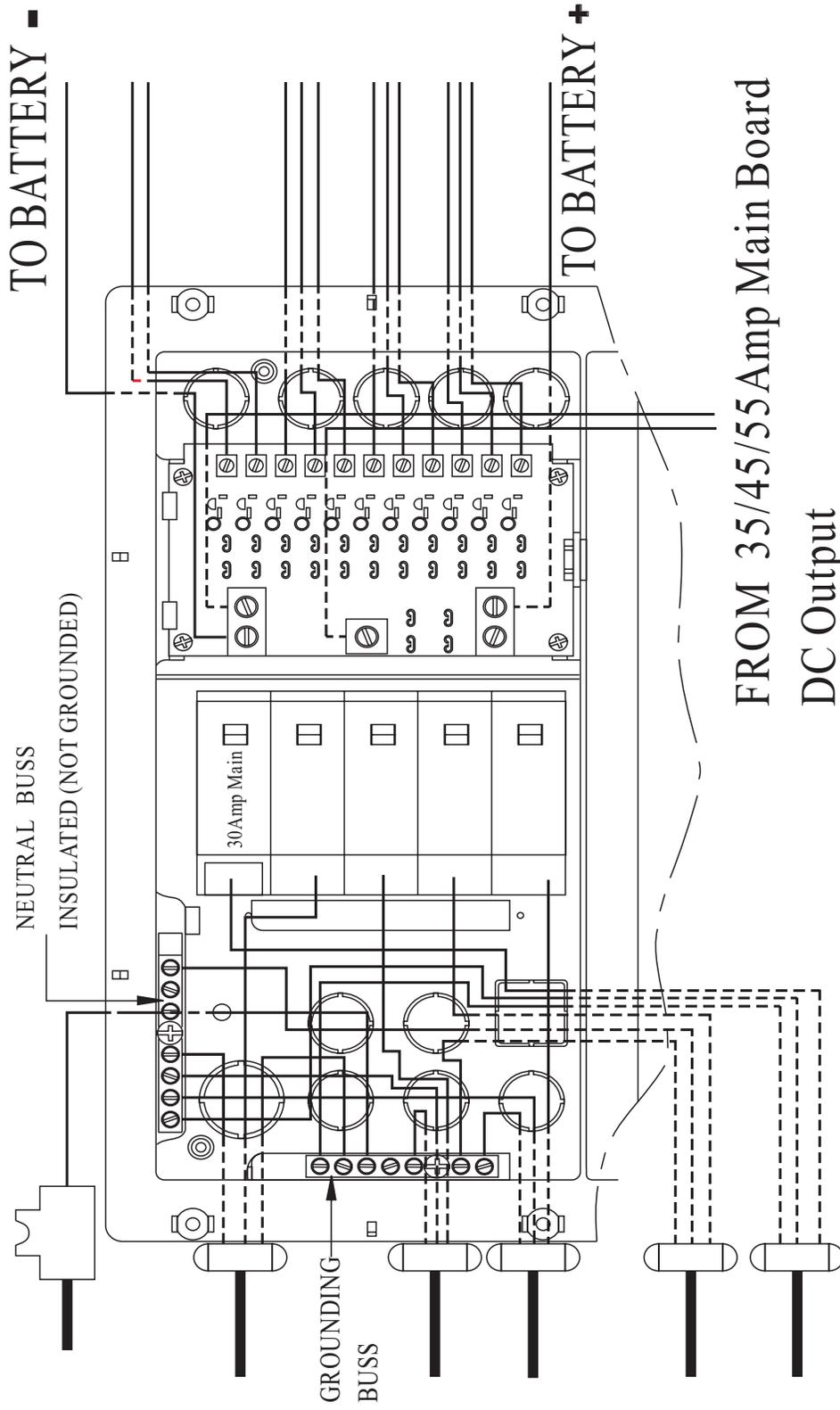
Each 12 VDC circuit in the WFCO Distribution panel was designed for a maximum of a 20 amp Little Type 257 automotive style fuse. Should one need to be replaced be sure to replace it with the same type and amp rating as originally supplied by the OEM. Replacing it with either a higher or lower amp fuse could result in the panel not functioning properly.

Each 12VDC circuit of the WFCO Distribution panel is provided with a LED indicator light. Should the fuse "blow" or an open be caused the LED will light up indicating which circuit is open and which fuse needs to be replaced.

REVERSE Polarity Fuses. The WF-8935AN, WF-8945AN, WF-8955AN is equipped with reverse polarity fuses, Should these fuses "blow" either during the manufacturing process or while connecting the batteries replace with the same type and rating fuse as originally provided with the equipment.

The WF-8900 Series is not weather resistant nor designed for installation in wet locations. The WF-8900 Series must be protected from direct contact with water.

WIRING DIAGRAM



FROM 35/45/55 Amp Main Board
DC Output



INSTALLATION INSTRUCTION



5. Automatic Microcontroller Operation

The WFCO series of 3-stage switch mode power converter are fully automatic. The converter senses which mode it needs to be in by checking the condition of the batteries.

The three modes include:

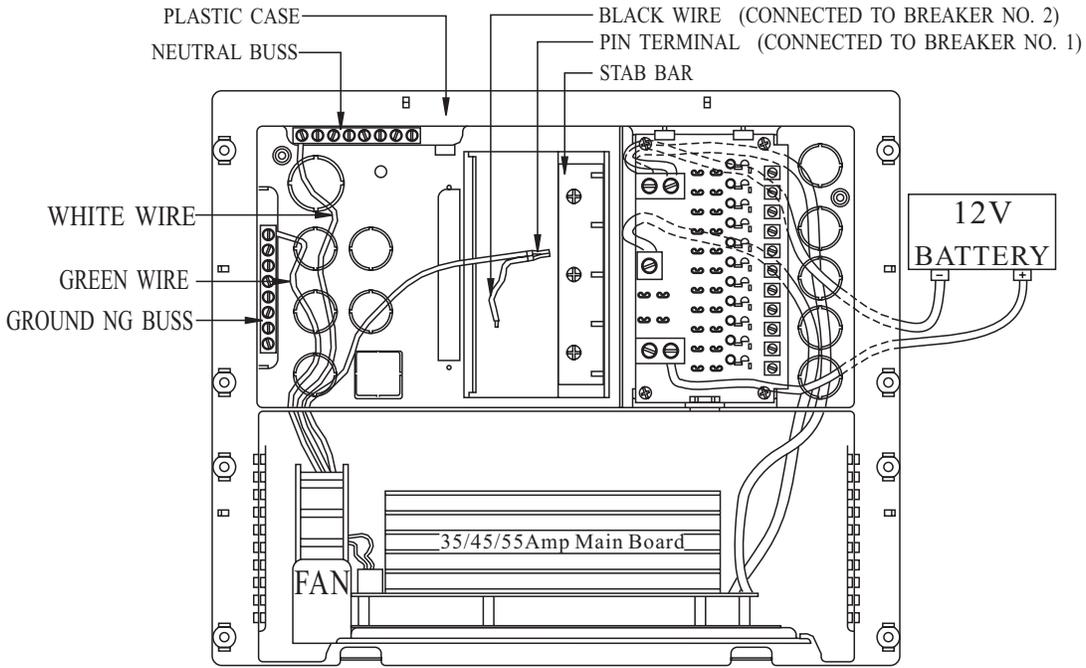
Absorption Mode: During this mode the converter output is at 13.6 VDC range. This is the mode that the converter will function at normally. This mode provides the 12 VDC and the current required by the RV.

Bulk Mode: When the converter senses that the battery voltage is less than 13.2 VDC the converter will automatically go into the Bulk Mode.

Float Mode: If the RV is not being used for a period of time and the shore power has been left plugged in, the converter will automatically go in to float mode. The converter senses if there has been any demand. If there is no activity for a period the converter will automatically go into float mode. When the converter senses a demand by turning on lights the converter automatically goes into buck mode and returns to absorption mode.

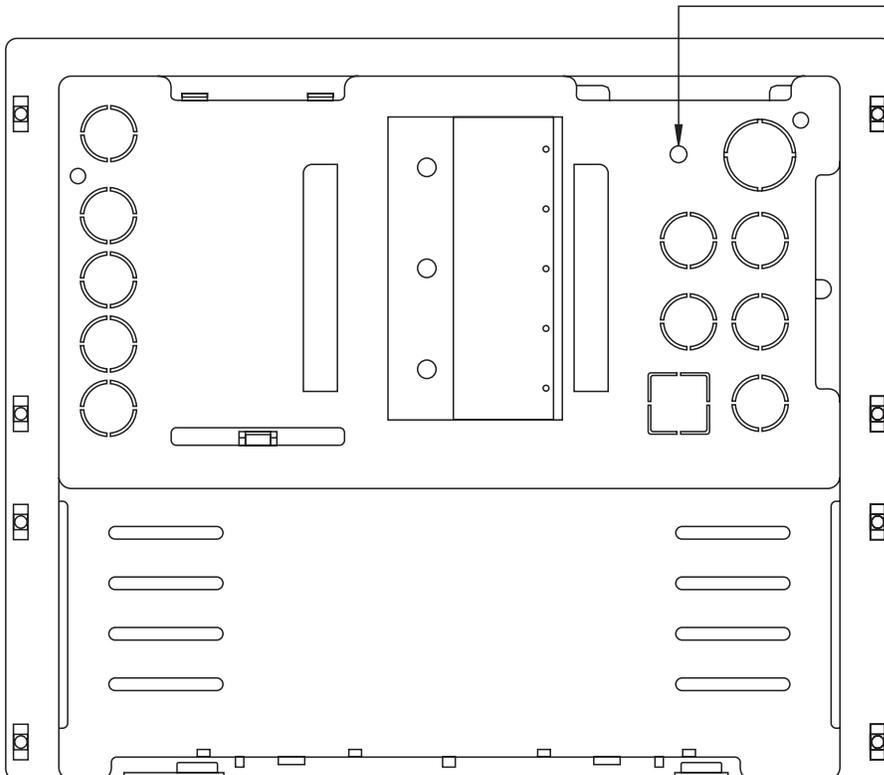
Front view

GROUND WIRE HOLE



Rear view

GROUND WIRE HOLE

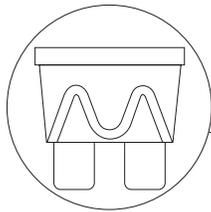


INSTALLATION INSTRUCTION



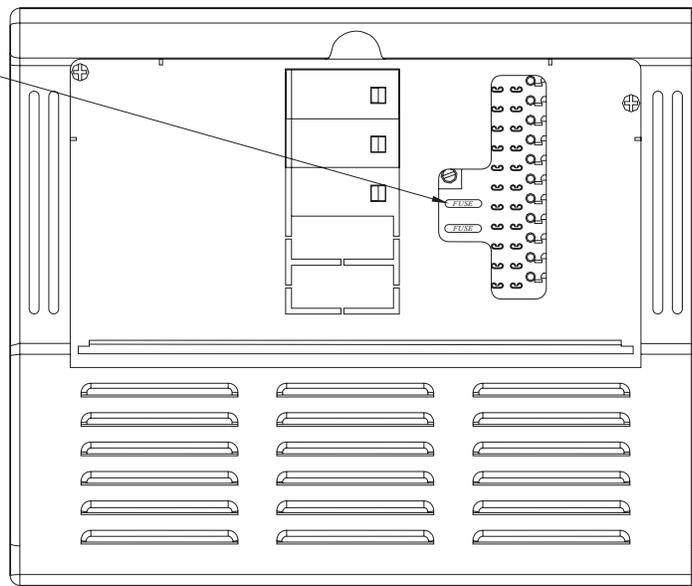
INSTALLATION INSTRUCTION

If there is power to the converter then check the reverse polarity fuses on the front panel of the WF-8900 series power converters. First visually inspect the fuses for any breaks then if none are seen then using a continuity tester check for continuity.



ATC FUSE

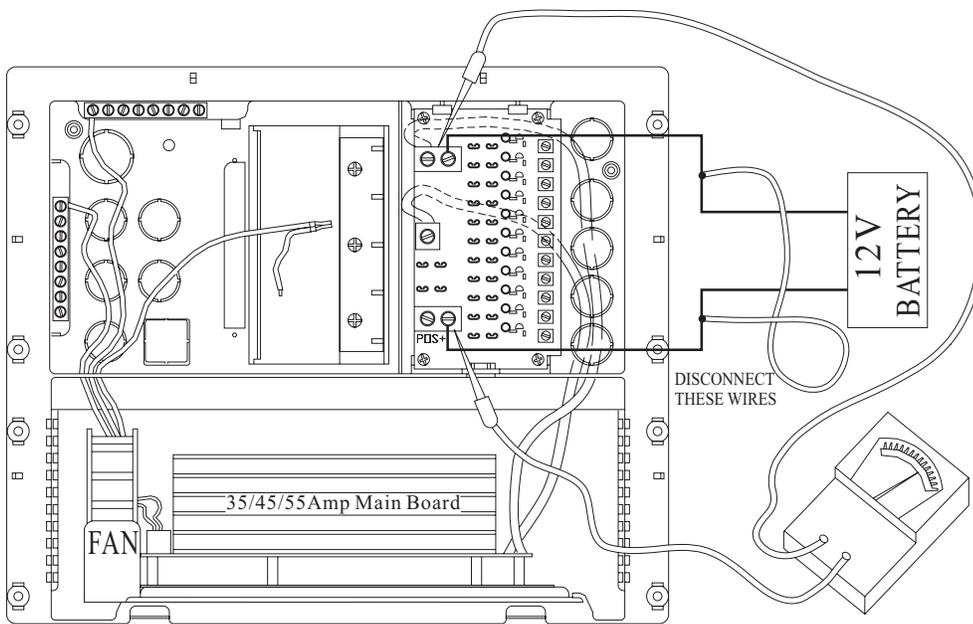
WF-9900 SERIES (35 AMP,45AMP,55AMP)



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).

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

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 slot hex driver disconnect the wires. 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.



If converter output voltage reads 13.6 volts, but the battery is still not charging, check for an open automatic reset circuit breaker(if provided), or an 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 8900 Series power converters, 120VAC to 13.6VDC are intelligent, reliable **electronic switch mode converter / battery chargers. The 8900'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 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 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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