

WFCO

TECHNOLOGIES

Innovating the future of **RV POWER.**



WFCO TECHNOLOGIES
574-294-8997
wfcoelectronics.com

WARRANTY
574-294-8997
warranty@wfcoelectronics.

Distributed by WFCO Technologies in the U.S.A. and Canada

PRODUCT CATALOG

Right now,
they're not
thinking
about their
battery
system.

Good.

WFCO
TECHNOLOGIES

Innovating the future of RV POWER.

WFCO's Auto-Detect delivers peace of mind and simplified delivery for dealers.

Auto-Detect is a patent-pending intelligent battery detection system that automatically selects the correct charging profiles for both lead acid and lithium ion batteries. Standard on all WFCO Converters, Power Centers and MBAs, Auto-Detect provides a long list of value-added features:

- Streamlines battery system selection/ installation for dealers and customers
- Optimizes batteries without new converter or manual switch
- Charges batteries accurately, maximizing battery system life
- Innovative processor controls charging based on need of battery
- Eliminates the need to change converter when changing or upgrading your battery

To learn more visit
wfcoelectronics.com





TABLE OF CONTENTS

WFCO Success Built on Innovation and Quality	2	Troubleshooting - WF-8500 Power Center Series	44
WFCO's Valued OEMs.....	3	Troubleshooting - WF-8700 Power Center Series	45
Electricity and Switch Mode Converter Basics	4	Troubleshooting - WF-8900 Power Center Series	46
Automatic Smart Charging	5-7	Troubleshooting - WF-9500 Power Center Series	47
WFCO Electronics Product List	8-9	Troubleshooting - WF-9800 Deck Mount Series.....	48
WFCO Doors & Door Assemblies	10-11	Troubleshooting - WF-5110 Inverter Series.....	49
WF-8500-AD Power Center Series	12-13	Troubleshooting - WF-5220 Inverter Series.....	50
WF-8700-AD Power Center Series	14-15	Torque Values for WFCO Products	51
WF-8900-AD Power Center Series	16-17	Frequently Asked Questions	52-55
WF-9500-AD Power Center Series	18-19	Quick Function Diagnosis	56
Transfer Switches 30/50 Amp.....	20-21	WFCO Warranty	57
WF-8900-AD-REP Converter Replacement Kit Series	22-23	Warranty Submittal Instructions	58
WF-68100AD Deck Mount Converter Charger Series	24-25	Labor Rates and Freight Reimbursement	59
WF-9800-AD Deck Mount Converter Charger Series.....	26-27	Warranty Information Submittal Form	60
WF-8800 Deck Mount Converter Charger Series.....	28-29	WF-8700 Series Troubleshooting Form	61
WF-8930/50 Distribution Panel Series	30-31	WF-8500, WF-8900 & WF-9500 Series Troubleshooting Form	62
WF-5110RS Inverter Series 1000-Watt	32-33	WF-9800, WF-8900-REP & WF-68100 Series Troubleshooting Form	63
WF-5220 Inverter Series 2000-Watt.....	34-35	WF-5110 Series Troubleshooting Form	64
EM-15 & EM-20 Energy Management Switch.....	36-37	WF-5220 Series Troubleshooting Form	65
WF-8900-AD-MBA Main Board Assembly Series.....	38	Power Pros Technical Support	66
WF-9500-AD-MBA Main Board Assembly Series.....	39	Notes.....	67
Four Sku's For Your Dealership.....	40		
WFCO Online 'Toolbox'	41		
Select WFCO Products As Your Replacement Choice.....	42-43		





WFCO Success Built on Innovation and Quality



WF-8500 Series
The WF-8500 Power Center is the most advanced RV power center ever made and it has the smallest footprint in its class.

WFCO TEchnologies is the most trusted name in the RV industry for power centers and converters, with its products featured in four out of five RVs built today. This market leadership is built on 40 years of innovations, many of which have become the industry's standards for converters and power centers. Innovations over the years have ranged from multiple 30-amp DC fuse positions to help power slide-outs directly, LED blown fuse indicators, and lightweight high-temperature plastic power center cases.

For more information, see "20 WFCO Firsts" wfcoelectronics.com/20-wfco-firsts-5/.

WFCO products are all designed and developed by WFCO's Product Development Teams in Elkhart, Indiana, the industry's manufacturing hub.

By working with the OEM's management, product managers, engineers, and purchasing and service teams, WFCO's Product Development Teams have continuously helped introduce new solutions to meet customer needs as the market has evolved.



Three-Stage Charging Standard

An important example of intelligent product development can be found in WFCO's AutoDetect multi-stage

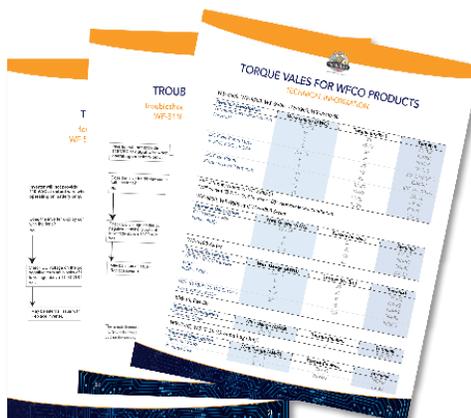
charging system — a standard feature on all WFCO products. WFCO's battery-detecting converter/charger technology automatically applies the optimum charging profile for either lead-acid or lithium-iron-phosphate RV batteries. This assures the maximum charge cycles and the longest possible battery life for either type of battery.

WFCO's multi-stage charging technology provides Charge Mode to recharge partially or entirely discharged batteries of either type as quickly as possible. Then, Power Mode maintains its full charge for lithium batteries while continuing to operate all DC appliances.

Power Mode provides absorption charging for lead-acid batteries while supplying all DC appliances. Then after 48 hours, the converter will go into Storage Mode, which maintains the lead-acid batteries optimally at full charge while continuing to supply all DC appliances with power.

This multi-stage AutoDetect Battery Guardian™ system optimizes your battery or battery bank while also providing DC power to your RV.

For more detailed information, go to wfcoelectronics.com/support/.



WFCO provides helpful dealer resources on its website (wfcoelectronics.com) in the Support tab.

Resources for Dealer Assistance

WFCO innovation also includes exceptional dealer support. Dealer Tools are found online at website.wfcoelectronics.com. Including a cross-reference converter/power center guide, a handy torque chart, and installation videos for specific products.

40 years of continuous product development means WFCO has the widest selection of converters and power centers in the RV market. With the help of its cross-reference guide, service centers can easily find a suitable replacement from the WFCO portfolio for almost any brand of converter.

WFCO has researched the aftermarket converter market and identified four SKUs that satisfy most replacement needs for on-the-go customers. The result is a stocking program that helps dealers save on inventory costs. High-quality products in such replacement situations also allow service centers to offer their customers converter/power center technology that can significantly upgrade the customer's RV, rather than simply replacing existing parts with the old technology.

WFCO strives to help RV service centers with features that make installation easier, such as zero clearance, space-saving designs, and steel-reinforced mounting holes. Fast and expert tech support by phone or email is provided by the WFCO Power Pros, a team of experts with more than 50 years of combined experience in industry and converter technology. The Power Pro Technicians at WFCO don't read the answer to your questions out of a book but know from experience what works and the best solutions to

common and unusual problems. Innovation and quality infuse every part of WFCO's operation, making it the market leader for power products now and in the future.

Quality at a Competitive Price

Even with such technological advancements, WFCO offers very competitive pricing. Accordingly, dealers can offer their customers higher value for aftermarket installations by using exceptional reliable and quality products, as reflected in WFCO's low warranty claims.

How can WFCO compete in terms of both quality and price? It starts with a vertically integrated company structure. This commitment enables the WFCO team to control quality at every step of the manufacturing supply chain, from design to raw materials and specialized components to finished products and distribution. Such integration cuts out supplier markups which helps to reduce costs. Also, RV OEMs choose WFCO products four times more than other brands, so economies of scale help keep WFCO products very competitive.



WF-68100 Deck Mount Converter
The WF-68100 deck mount converter/charger offers both the highest output (100 amps) and the most high-end features in the RV industry, including Power Factor Correction.



WFCO's VALUED OEMs

Contribute to our approximate 80% Market Share

Airstream Inc.	Lakota Horse Trailers
All RV Manufacturing	Lance Campers
Aluminum Trailer Co.	Liberty Outdoors, LLC
American Surplus & Mfg., Inc.	Logan Coach
Bison Coach, LLC	Merhow Industries
Class A Customs	Nelson Industries
Columbia Northwest, Inc.	Northwood MFG
CrossRoads RV	Omega RV
Cruiser RV Corp.	Outback Customs, LLC
Dutchmen	Outdoors RV Manufacturing
Escape Trailer Industries	Pleasant Valley Tear Drop Trailers
Exis/Sooner	R.C. Willett Co. Inc.
Featherlite, Inc.	Recreation by Design, LLC
Forest River	Rev. Group
Genesis Supreme RV Inc.	Riverside RV
Grand Design RV	Riverside Travel Trailers, Inc.
Gulfstream Coach	Roulottes Prolite, Inc.
Heartland RV	Sierra Motor Coach
Hercules Manufacturing	Southern Dimensions Group
Highland Ridge RV	Starcraft Division
Indiana Custom Trucks	Taxa LP/Cricket Trailer
Interstate Manufacturing	THOR Motor Coach
Jayco	Travel Lite, Inc.
Keystone RV	Triple E RV
KZ	Winnebago



ELECTRICITY AND SWITCH MODE CONVERTER BASICS

THE RV HAS FIVE ELECTRICAL SOURCES:

- Automotive (12 V DC)
- Battery (12 V DC)
- Solar (12 V DC)
- Generator (120 V AC)
- Shore Power (120 V AC)

Shore Power is supplied through the distribution panel, much like a breaker box at home. However, there is a big difference. Most parks and resorts provide 30 amp or 50 amp service, unlike your home, where you may have up to 200 amp service. Shore Power supplies 120 V AC for A/C, microwaves, refrigerators, and the converter. The converter changes the 120 V AC to 13.6 V DC for charging the batteries and providing 13.6 V DC to the low voltage appliances/devices, such as lighting, furnace, pumps, power jacks, monitor panels, radios, etc.

The amount of either 120 V AC or low voltage appliances that can run is governed by the amount of power available from the five electrical sources above. It may not be possible to run many appliances, etc. at the same time because the electrical power from the five sources may be insufficient, causing the main AC breaker to trip or the converter to shut down.

HOW OEMS DETERMINE THE SIZE OF THE CONVERTER/CHARGER

- Provide sufficient power for 100% of the connected load with consideration given for momentary loads.
- Provide sufficient power for normal use by the "average person" (up to 2/3 of the connected load) with consideration given to momentary loads.
- As a minimum, manufacturers use the "ANSI/RVIA LV Standard-Load Calculation" formula, which includes:
 - Adding up all continuous loads, such as ceiling lights, water pump, furnace.
 - Excluding any intermittent loads, such as slide-outs, electric steps.

1st 20 amps of load calculate @ 100% add	20 amps
2nd 20 amps of load calculate @ 50% add	10 amps
All remaining load calculate @ 25% add	?? amps
<hr/>	
Minimum converter size required by industry standards:	Total

Note: Low voltage aftermarket accessories added to the RV by the dealer or consumer or the desire to operate all low voltage continuous load devices may necessitate up-sizing replacement of the converter/charger.



AUTOMATIC SMART CHARGING

BATTERY CHARGING

Batteries like to be charged in a specific way, depending on how deeply discharged they are. In addition to converting 120 V AC to 12 V DC to operate low voltage appliances, the converter/charger charges the RV battery(s) when connected to shore power. The three steps of regulated charging for lead-acid batteries are called "Three-Stage." A two-step process ("Two-Stage") is preferred for lithium batteries. WFCO converters with AutoDetect will determine, after a complete charge cycle, which type of battery is connected (lead-acid or lithium iron phosphate) and apply the correct charge system accordingly.

WFCO converters of every style have become the favored brand for power conversion and electric distribution in the RV industry. They provide RV owners with an efficient and cost-effective method to use an AC power source and power to DC components inside the RV while simultaneously charging accessory batteries.

SMART ENGINEERING: MULTI-STAGE CHARGING IS BETTER

WFCO's automatic converters provide optimized charging for RV batteries while extending their life. Lightly used batteries will only need the standard operating voltage provided in Power Mode to restore full charge. Charge Mode is used when a battery is depleted and needs extra power for fast charging.

RVs are frequently sold with at least one 12 V accessory battery installed. This is usually a deep-cycle battery that can sustain a slower power drain. As soon as the RV is connected to AC power, the converter begins charging the battery as needed while simultaneously providing DC power for all the appliances. RV owners find this practical when powering loads such as lights, radios, and refrigerators without being connected to AC power or running the motorhome engine.

When the RV is connected to AC power, users frequently use the lights, refrigerators, fans, and other electronics as they would in their homes. RV users also expect the battery to be fully charged when they want to disconnect from power and move the RV or when they are dry camping and turn off their generator.

CHARGE MODE

Charge Mode uses the charge a significantly discharged battery quickly and safely, using the charger's maximum capability. WFCO converters continuously monitor the DC voltage and the output current. When a sustained high current is detected, indicating that the battery needs a significant charge, it will maintain the converter's DC output voltage at 14.4 volts for lead-acid batteries or 14.6 volts for lithium batteries. The increased voltage will charge the battery faster while still providing power to all the DC appliances in the RV.

In Charge Mode, observing the 14.4 volts DC output might not be possible initially if the battery is heavily discharged. This is because the converter may be in current limiting, which is accomplished by dropping the voltage slightly. As the battery charges, the voltage will soon rise to 14.4 volts at the charger's output terminals. It may take longer for the battery terminals to read 14.4 volts as well since there is always some voltage drop in the battery cables by the current draw.



As the battery charges, the current drawn by the battery will gradually decrease. WFCO converters are designed to end Charge Mode when the total current drawn from the converter drops to a threshold that indicates the battery is mostly (with lead-acid) or completely (with lithium) charged. If the current draw stays above the preset threshold, the converter will remain in Charge Mode for a maximum of four hours for lead-acid batteries or ten hours for lithium batteries. The time limit is to protect and extend the battery's life. If a large battery bank needs additional fast-charge time, the AC power can be cycled to reset the timer.

In most cases, a completely discharged battery connected to a WFCO converter can be charged in less than three hours. In some cases, adding more DC loads may reduce the current available for charging and lengthen the time needed to charge the battery. Batteries with damaged cells will also require additional time to charge and may never reach a full charge voltage.

POWER MODE

Because RVs today are designed with converters sized to provide ample DC output power for all DC loads in everyday use, an RV will usually operate in Power Mode. Power mode provides an output of 13.6 volts DC.

In this mode, power is available for operating the DC appliances and simultaneously topping off the charge level of the battery.

STORAGE MODE

Storage mode is the third stage of converter operation for lead-acid batteries. This mode provides a trickle charge to the battery and maintains a full charge. If the converter is supplied with continuous AC power for 48 hours, its output will drop from 13.6 to 13.2 volts. This lower voltage will keep the battery charged while not in use and still provide power to operate all DC appliances.

While in Storage Mode, the AC-powered converter will continue to supply a low-current trickle charge to the battery, enough to keep it at full charge with minimum electrolyte loss.

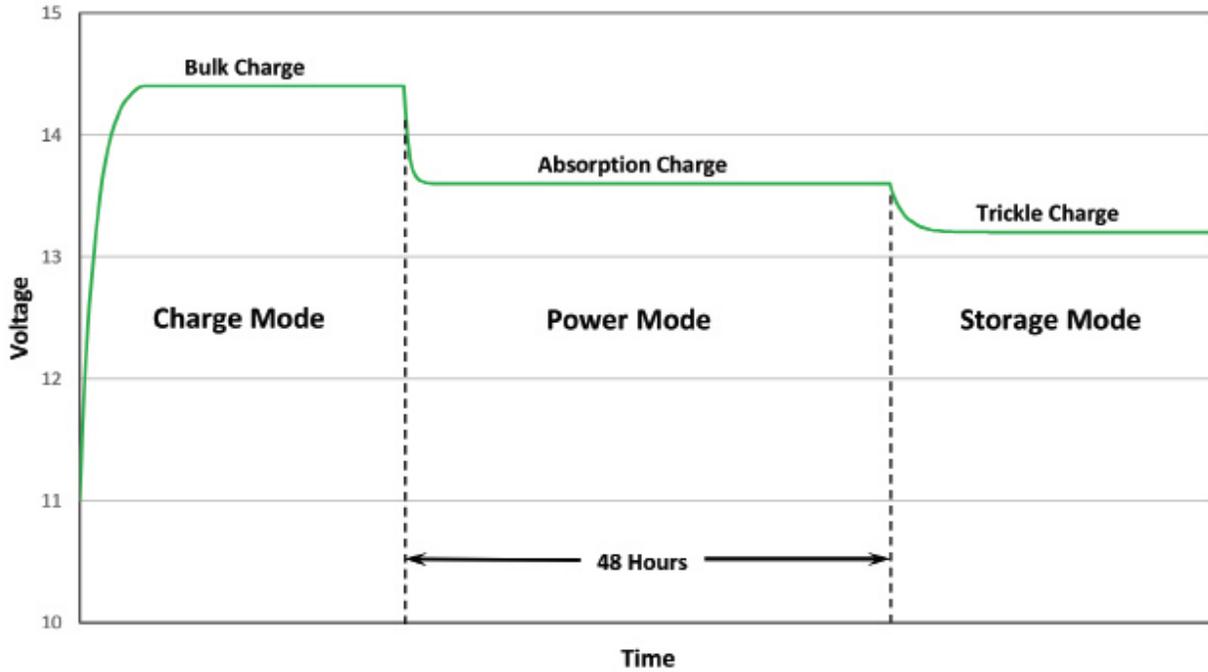
Cycling or interrupting AC power will cause the converter to exit Storage Mode and return to Power Mode. This allows lead-acid batteries to regain any charge lost due to self-discharge, typically about 5% per month when there is no AC power.

Check the battery fluid levels periodically if the RV is in storage for thirty days or more. It is recommended to check the battery level at least every four weeks.

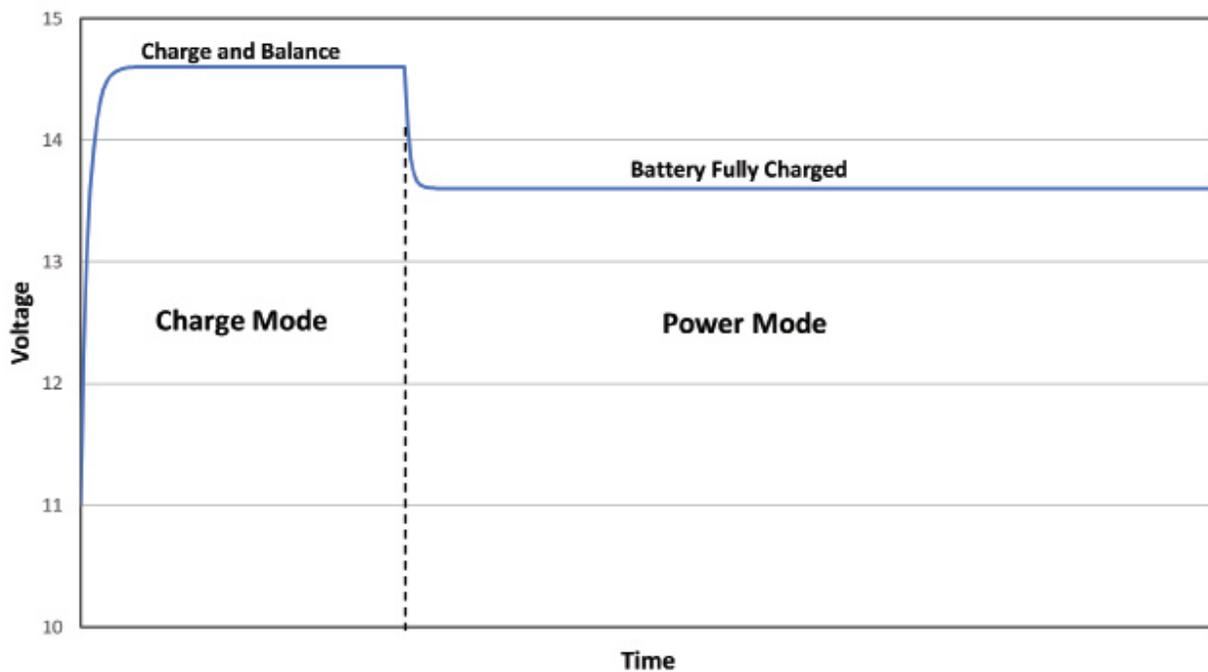
LITHIUM-ION BATTERIES

After every Charge Mode cycle that exceeds the programmed threshold, the AutoDetect system will detect whether the battery is lead-acid or lithium-type. After that, the optimum profile will be used for the battery. In addition to lead-acid batteries, WFCO converter/chargers are optimized for lithium-iron-phosphate batteries used in RV applications. Lithium batteries do not need Storage Mode since they do not lose electrolytes. Therefore with a lithium battery, the converter will stay in Power Mode as long as AC is connected to keep the battery fully charged.

Lead-Acid Battery Charger/Converter Operation



Lithium Battery Charger/Converter Operation





WFCO TECHNOLOGIES PRODUCT LIST

WF-8500 POWER CENTER SERIES - 40 AND 60 AMPS DC

WF-8540-AD-S	30 amp AC service, Main and 9 branch AC circuits, 13 DC branch circuits, 40 amps, Screw Terminals - Auto-Detect
WF-8540-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect
WF-8540-W	30 amp AC service, Main and 9 branch AC circuits, 13 DC branch circuits, 40 amps, Pig Tail Wires
WF-8540-AD-J	30 amp AC service, Main and 9 branch AC circuits, 13 DC branch circuits, 40 amps, Screw Terminals - Modified Board - Auto-Detect
WF-8560-AD-S	30 amp AC service, Main and 9 branch AC circuits, 13 DC branch circuits, 60 amps, Screw Terminals - Auto-Detect
WF-8560-Q	30 amp AC service, Main and 9 branch AC circuits, 13 DC branch circuits, 60 amps, QC Terminals
WF-8560-W	30 amp AC service, Main and 9 branch AC circuits, 13 DC branch circuits, 60 amps, Pig Tail Wires

WF-8700 POWER CENTER SERIES - 12 TO 40 AMPS DC

WF-8712-P	30 amp AC service, Main and 3 branch AC circuits, 4 DC branch circuits, 12 amps - Brown
WF-8712-PB	30 amp AC service, Main and 3 branch AC circuits, 4 DC branch circuits, 12 amps - Black
WF-8725-AD	30 amp AC service, Main and 3 branch AC circuits, 4 DC branch circuits, 25 amps - Black - Auto-Detect
WF-8735-AD	30 amp AC service, Main and 5 branch AC circuits, 6 DC branch circuits, 35 amps - Auto-Detect
WF-8735-AD-GE	30 amp AC service, Main and 5 branch AC circuits, 6 DC branch circuits, 35 amps - GE - Auto-Detect
WF-8735-AD-J-GE	30 amp AC service, Main and 5 branch AC circuits, 6 DC branch circuits, 35 amps - Modified Board - GE - Auto-Detect
WF-8735-AD-J	30 amp AC service, Main and 5 branch AC circuits, 6 DC branch circuits, 35 amps - Modified Board - Auto-Detect
WF-8740-AD	30 amp AC service, Main and 5 branch AC circuits, 6 DC branch circuits, 40 amps - Black - Auto-Detect

WF-8935 POWER CENTER SERIES - 35 AMPS DC

WF-8935-AD	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits - Black - Auto-Detect
WF-8935-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect

WF-8945 POWER CENTER SERIES - 45 AMPS DC

WF-8945-AD	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits - Black - Auto-Detect
WF-8945-AD-B/T30	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits with T-30 - Black - Auto-Detect
WF-8945-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect

WF-8955 POWER CENTER SERIES - 55 AMPS DC

WF-8955-AD	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits. New Generation - Black - Auto-Detect
WF-8955-AD-B/T30	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits. New Gen. - Black with T-30 - Auto-Detect
WF-8955-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect

WF-8965 POWER CENTER SERIES - 65 AMPS DC

WF-8965-AD	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits - Black - Auto-Detect
WF-8965-AD/T30	30 amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits - Black with T-30 - Auto-Detect
WF-8965-MBA	Replacement Converter - Main Board Assembly
WF-8965-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect

WF-8975 POWER CENTER SERIES - 75 AMPS DC

WF-8975-AD	30 Amp AC service, Main and 5 branch AC circuits, 11 DC branch circuits - Black - Auto-Detect
WF-8975-MBA	Replacement Converter - Main Board Assembly
WF-8975-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect

WF-9500 POWER CENTER SERIES - 40 TO 80 AMPS DC

WF-9540-AD-S-B	50 amp AC service, 2 Main and up to 12 branch AC circuits, 17 DC branch circuits, 40 amps - Auto-Detect
WF-9540-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect
WF-9560-AD=S	50 amp AC service, 2 Main and up to 12 branch AC circuits, 17 DC branch circuits, 60 amps - Auto-Detect
WF-9560-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect
WF-9580-AD-S	50 amp AC service, 2 Main and up to 12 branch AC circuits, 17 DC branch circuits, 80 amps - Auto-Detect
WF-9580-AD-MBA	Replacement Converter - Main Board Assembly - Auto-Detect

TRANSFER SWITCHES

T-30	30 amps Automatic Power Transfer - Shore to Generator
T-57-R	50 amps Automatic Power Transfer - Shore to Generator



UNIVERSAL REPLACEMENT KITS FOR NON-WFCO POWER CENTERS

WF-8935-AD-REP	Converter/Charger 35 amps DC Output, includes 11 branch circuit fuses, using WF-9835 - Auto-Detect
WF-8945-AD-REP	Converter/Charger 45 amps DC Output, includes 11 branch circuit fuses, using WF-9845 - Auto-Detect
WF-8955-AD-REP	Converter/Charger 55 amps DC Output, includes 11 branch circuit fuses, using WF-9855 - Auto-Detect

WF-6800AD DECKMOUNT CONVERTER/CHARGER SERIES - 100 AMPS DC

WF-68100AD	100 amps DC Output with Power Factor Correction, reverse polarity fuses (15 amps AC Power Cord) - Auto-Detect
------------	---

WF-9800 SERIES DECKMOUNT CONVERTER/CHARGER SERIES - 35 TO 75 AMPS DC

WF-9835-AD-CB	35 amps DC Output, reverse polarity fuses (15 amps AC Power Cord) - Auto-Detect
WF-9845-AD-CB	45 amps DC Output, reverse polarity fuses (15 amps AC Power Cord) - Auto-Detect
WF-9855-AD-CB	55 amps DC Output, reverse polarity fuses (15 amps AC Power Cord) - Auto-Detect
WF-9865-AD-CB	65 amps DC Output, reverse polarity fuses (20 amps AC Power Cord) - Auto-Detect
WF-9875-AD-CB	75 amps DC Output, reverse polarity fuses (20 amps AC Power Cord) - Auto-Detect

220V AC MODELS (USED IN EUROPE, AUSTRALIA OR WHEREVER 220V AC IS AVAILABLE)

WF-8725E	Power Center for 220 V AC service, Main and 3 branch circuits, 25 amps DC Output with 4 circuits
WF-8725EB	Power Center for 220 V AC service, Main and 3 branch circuits, 25 amps DC Output with 4 circuits - Black
WF-8735E	Power Center for 220 V AC service, Main and 3 branch circuits, 35 amps DC Output with 4 circuits
WF-8735EB	Power Center for 220 V AC service, Main and 3 branch circuits, 35 amps DC Output with 4 circuits - Black
WF-8955E	Power Center for 220 V AC service, Main and 5 branch circuits, 55 amps DC Output with 11 circuits
WF-8955EB	Power Center for 220 V AC service, Main and 5 branch circuits, 55 amps DC Output with 11 circuits - Black
WF-8855E	Converter/Charger Deckmount for 220 V AC, 55 amps DC Output (15 amps power cord)

WF-7900 DISTRIBUTION PANEL SERIES

WF-7910	12 V DC Distribution Panel, 20 DC Circuits, Screw Terminals
WF-7910-WAGO	12 V DC Distribution Panel, 17 DC CIRCUITS, WAGO TERMINALS
WF-7925-S	120 V AC Distribution Panel, 50 A Main and 12 banch circuits with sub-panel
WF-7925-S-GE	120 V AC Distribution Panel, 50 A Main and 12 banch circuits with sub-panel - GE

WF-8930/50 DISTRIBUTION PANEL SERIES

WF-8930/50NPB	30 amp or 50 Amp AC service, Main and 12 branch AC circuits, 15 DC circuits - Black
WF-8930/50NPB-30	30 amp AC service, Main and 5 branch AC circuits, 15 DC circuits - Black
WF-8930/50NPB-50	30 amp AC service, Main and 5 branch AC circuits, 15 DC circuits - Black - Extended Door

WF-5100 PURE SINE WAVE POWER INVERTER SERIES

WF-5110RS	1000-Watt Pure Sine Wave Inverter
WF-5100-RM	Remote Switch & 20' Cable

WF-5220 PURE SINE WAVE POWER INVERTER SERIES

WF-5220	2000-Watt Pure Sine Wave Inverter
WF-5220-RM	Remote Switch & 20' Cable

ENERGY MANAGEMENT SWITCHES - 15 AMPS & 20 AMPS

EM-15	15 amp Energy Management Branch Circuit Expander
EM-20	20 amp Energy Management Branch Circuit Expander

FUSE BOARDS & DOOR LATCHES

WF-87/8900-DL	Door Latch for all WFCO Power Centers & Distribution Panels Excluding the WF-8712 & WF-8725 Power Centers
8500-PCB	Fuse Board for WF-8500 Series Power Centers with Screw Output Terminals
8500-PCB-J	Fuse Board for WF-8500 Series Power Centers with Screw Output Terminals and an Additional Battery Output Terminal
8930/50N-PCB	Fuse Board for WF-8930/50 Distribution Panels with Screw Output Terminals
8935/45/55-PCB	Fuse Board for WF-8935, WF-8945, & WF-8955 Power Centers with Screw Output Terminals
8935/45/55-PCB-J	Fuse Board for WF-8935, WF-8945, & WF-8955 Power Centers with Screw Output Terminals and an Additional Battery Output Terminal
9500-W-PCB	Fuse Board for WF-9500 Series Power Centers with Hard Wired Pigtail Outputs
9500-S-PCB	Fuse Board for WF-9500 Series Power Centers with Screw Output Terminals

DOORS & DOOR ASSEMBLIES

WF-8700 SERIES



Part # WF-8700-PDOB, Door Only for WF-8712-PB & WF-8725-PB-Black (5-1/2" H x 10-1/8" W)



Part # WF-8712-PDA, Door Assembly for WF-8712-P Brown

Part # WF-8712-PB-DA, Door Assembly for WF-8712-PB Black

Part # WF-8725-PDA, Door Assembly for WF-8725-P Brown

Part # WF-8725-PB-DA, Door Assembly for WF-8725-PB Black (7-1/4" H x 11-3/4" W)



Part # WF-8735/40-PDO, Door Only for WF-8735-P Brown

Part # WF-8735/40-PB-DO, Door Only for WF-8735-PB Black (6/3/4" H x 10-1/4" W)



Part # WF-8735-PDA, Door Assembly for WF-8735-P or WF-8740-P-Brown

Part # WF-8735-PB-DA, Door Assembly for WF-8735-PB Black

Part # WF-8740-PDA, Door Assembly for WF-8740-P Brown

Part # WF-8740-PB-DA, Door Assembly for WF-8740-PB Black (8-1/4" H x 11-3/4" W)

WF-8900 SERIES



Part # WF-8910PEC-DO, Brown Door Only for WF-8935PEC, WF-8945PEC, WF-8955PEC

Part # WF-8965/75-PDO, Brown Door Only for WF-8965AN-P and WF-8975AN-P

Part # WF-8910PEC-DOB, Black Door Only for WF-8935PEC-B, WF-8945PEC-B, WF8955PEC-B

Part # 8965/75-PDOB, Black Door Only for WF-8965AN-PB and WF-8975AN-PB (5-7/8" H x 11-15/16" W)



Part # WF-8935PEC-DA, Door Assembly for WF-8935PEC-Brown

Part # WF-8935PEC-B-DA, Door Assembly for WF-8935PEC-B-Black

Part # WF-8945PEC-DA, Door Assembly for WF-8945PEC--Brown Part # WF-8945PEC-B-DA, Door Assembly for WF-8945PEC-B-Black

Part # WF-8955-PEC-DA, Door Assembly for WF-8955PEC-Brown

Part # WF-8965-PDA, Door Assembly for WF-8965AN-P-Brown

Part # WF-8965-PDAB, Door Assembly for WF-8965AN-PB-Black Part # WF-8975-PDA, Door Assembly for WF-8975AN-P-Brown

Part # WF-8975-PDAB, Door Assembly for WF-8975AN-PB-Black (11-3/4" H x 14" W)



Part # WF-8910-PDO, Door Only for WF-8935AN-P, WF-8945AN-P & WF-8955AN-P-Brown

Part # WF-8935-PDA, Door Assembly for WF-8935AN-P-Brown

Part # WF-8935-PDAB, Door Assembly for WF-8935AN-PB-Black Part # WF-8945-PDA, Door Assembly for WF-8945AN-P-Brown

Part # WF-8945-PDAB, Door Assembly for WF-8945AN-PB-Black Part # WF-8955-PDA, Door Assembly for WF-8955AN-P-Brown

Part # WF-8955-PDAB, Door Assembly for WF-8955AN-PB-Black (11-1/2" H x 13-3/4" W)

DOORS & DOOR ASSEMBLIES

WF-8930/50 SERIES



Part # WF-8930/50-PDA, Door Assembly for WF-8930/50-Brown Three Tabs on Bottom (9-1/8" H x 14-3/4" W)

Part # WF-8930/50NNP-DO-P, Door Only for WF-8930/50NP- Brown

Part # WF-8930-50NNPB-DO-P, Door Only for WF-8930/50NPB-Black Paddle Fins (8" H x 12-1/2" W)

Part # WF-8930/50NNPB-DO-B, Door Only for WF-8930/50NPB-Black Bottom Hinge (8" H x 12-1/2" W)

Part # WF-8930/50NNP-DA, Door Assembly for WF-8930/50NP-Brown

Part # WF-8930/50NNPB-DA, Door Assembly for WF-8930/50NPB-Black

Note: This door assembly can also replace the door assembly with no window and 2 tabs on the bottom,

Part number WF-8930/50NP-DA-Brown or WF- 8930/50NPB-DA Black (9-1/2" H x 13-3/4 W)

Part # WF-8930/50NNPB-50-PDA, Extended Door Assembly for WF-8930/50NP-50-Black



WF-8500 SERIES



Part # WF-8500-PDOB, Black Door Only for WF-8540, WF-8550 and WF-8560 (7-7/8" H x 7-5/8" W)

Part # WF-8540-PB-DA, Black Door Assembly for WF-8940

Part # WF-8550-PB-DA, Black Door Assembly for WF-8950

Part # WF-8560-PB-DA, Black Door Assembly for WF-8960 (13" H x 9-1/2" W)

WF-9500 SERIES



Part # WF-9500PB-DO, Black Door Only for WF-9540, WF-9560 and WF-9580 (7-7/8" H x 7-5/8" W)

Part # WF-9540PB-DA, Black Door Assembly for WF-9540 Part # WF-9560PB-DA, Black Door Assembly for WF-9560

Part # WF-9580PB-DA, Black Door Assembly for WF-9580 (14-1/2" H x 11-7/8" W)

WF-9900 SERIES



Part # WF-9900PB-DO, Black Door Only for WF-9960 and WF-9990 (9" H x 12-3/8" W)

Part # WF-9990PB-DA, Black Door Assembly for WF-9990PB (14-9/16" H x 14-38" W)

WF-8500-AD POWER CENTER SERIES



AUTO-DETECT:

Two Battery Options in One Space

Model WF-8540-AD- Output: 40 amps DC - Input: 105-130 V AC, 60 Hz, 685 W

Model WF-8560-AD- Output: 60 amps DC - Input: 105-130 V AC, 60 Hz, 1030 W

With future RV development in mind, WFCO has developed the WF-8500-AD Series, an advancement to the most forward-thinking power center available today that includes an industry-first, Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type.

No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-8500-AD will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

PRODUCT FEATURES

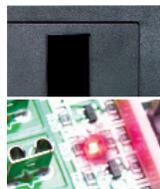
These WFCO exclusives provide more safety and diagnostic information to technicians and RV owners.

Zero clearance design is a space - saving WFCO exclusive.

The airflow system draws cool air in from the front and expels warm air out through the front as well. Space is not needed behind the converter for warm air exhaust. Cooling fans operate only when the electric load requires it, avoiding temperature spikes and providing quieter operation.

OTHER EXCLUSIVE WFCO FEATURES

- Ultra-high power density, which provides more power in a small space.
- 13 DC circuits, including three 30 amp, for design flexibility.
- 30 amp main application with 9 AC branches.



Every DC circuit has a blown-fuse indicator that can be seen through our exclusive viewing window.



Optional AC Reverse Polarity Detection meets RVIA and NEC requirements with audible alarm notification. No additional wiring or hookup required and accepts hi-pot testing.



Three AC LEDs inside the door indicate the status of incoming voltage. Green is normal, yellow is low, and red is too high of a voltage.



THE BATTERY GUARDIAN™

The WF-8500-AD Series is designed with optimized charging for battery chemistry in the unit. For Lead-Acid batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion batteries, the multi-stage process ensures a safe operating voltage for all loads, replaces energy, and assures the Lithium-Ion cells remain balanced.

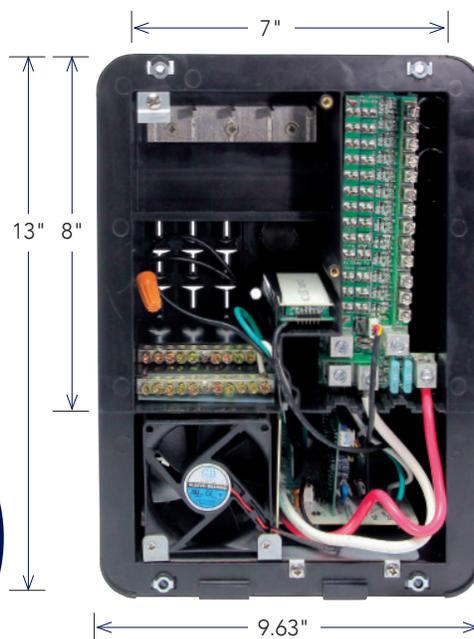
See wfcoelectronics.com/product/wf-8500-ad-series.com for details.



Optional GE model compatible with GE THQP slimline breakers.

EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time.



Exclusive choice of four DC circuit connection modes allows customers to select their preferred wiring connection mode for speed and ease.



Quick Connect Terminals



Screw Terminals



Wire Pigtails



WAGO Connectors

Compact size makes installation in tight spaces easier, while providing plenty of hand room for installers to work.

SPECIFICATIONS	WF-8540-AD	WF-8560-AD
Power Input	685 W	1030 W
Input Voltage	105 V AC - 130 V ac / 60 Hz	
Output Current	40A / 37 A	60A / 5 5A
Converter Type (LA/LI)	3 Stage Intelligent Charge / 2 Stage Intelligent Charge	
Voltage Output (LA/LI)	13.2 - 14.4 V DC / 13.6 - 14.6 V DC	
Normal mode	13.6 V DC	
Trickle charge mode (LA Only)	13.2 V DC	
Bulk charge mode	14.4 V DC / 14.6 V DC	
Outer Dimensions	9 1/2"W x 8 1/2"L x 13"H	
Rough Opening	7 3/4"W x 7 7/16"L x 11 1/8"H	
Weight	5.9 lb	6.12 lb
Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.		

ALL MODELS

STANDARD SAFETY FEATURES/PROTECTIONS

Over Current, Over Temperature, Over Voltage, Reverse Polarity and Short Circuit

INSTALLATION

AC Circuits: One 30 amp 120 Volt Main with up to 9 AC Branch Circuits

DC CIRCUITS

13 DC, ten 20 amp and three 30 amp

CASE MATERIAL

Plastic

COLORS

Black



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

WF-8700-AD POWER CENTER SERIES

WF-8700-AD Series 35/40 amps
Zero Clearance Design



Battery Flexibility for Smaller RVs

Model WF-8725-AD - Output: 25 amps DC - Input: 105-130 V AC, 60 Hz, 425 W

Model WF-8735-AD - Output: 35 amps DC - Input: 105-130 V AC, 60 Hz, 595 W

Model WF-8740-AD - Output: 40 amps DC - Input: 105-130 V AC, 60 Hz, 680 W

WFCO's proven WF-8700-AD Series offers an industry-first, Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type.

No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-8700-AD will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

PRODUCT FEATURES

LED Warning Lights - WFCO was the first to use LED alerts for open 12V circuits. The exclusive viewing design in our WF-8700-AD models lets RV owners easily see when there's a problem.



OTHER WF-8700-AD FEATURES

- WF-8725-AD has three AC circuits, one 30 amp primary circuit, and four DC circuits for design flexibility in the smallest RVs.
- WF-8735/40-AD has five AC circuits in addition to one 30 amp primary circuit and six DC circuits for the needs of larger campers and small travel trailers.

Zero clearance design is a space-saving WFCO exclusive. The airflow system draws cool air in from the front and also expels warm air through the front. Space behind the converter for warm air exhaust is not needed. Cooling fans operate only when the electric load requires it, avoiding temperature spikes and providing quieter operation.

EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time.



THE BATTERY GUARDIAN™

The WF-8700-AD Series is designed with optimized charging for battery chemistry in the unit. For Lead-Acid Batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion batteries, the multi-stage process ensures a safe operating voltage for all loads, replaces energy, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcoelectronics.com for details.



Pigtails are included for each DC circuit for easier and faster installation.

Insulated connectors may be used with tools pre-set to the proper torque settings for a positive connection and speedy installation.



Our Power Pros provide expert technical support for everything the RV industry needs. Visit wfcoelectronics.com/support.

Optional GE model compatible with GE THQP slimline breakers.



SPECIFICATIONS	WF-8725-AD	WF-8735-AD	WF-8740-AD
Power Input	425 W	595 W	680W
Input Voltage	105-130 V AC/60 Hz		
Output Current (LA/LI)	25A / 23 A	35 A / 32.5 A	40 A / 37 A
Converter Type	3 Stage Converter Charger / 2 Stage Converter Charger		
Voltage Output	13.2 - 14.4 V DC / 13.6 - 14.6 V DC		
Normal mode	13.6 V DC		
Trickle charge mode (LA Only)	13.2 V DC		
Bulk charge mode (LA/LI)	14.4 V DC / 14.6 V DC		
Outer Dimensions	11 7/8"W x 5"L x 7 5/16"H	11 7/8"W x 5 5/16"L x 8 1/4"H	
Rough Opening	10 3/8"W x 4"L x 6"H	10 3/8"W x 4 1/8"L x 7"H	
Weight	4.75 lb	5.5 lb	

Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.
 ALL MODELS: Standard Safety Features/Protections: Over Current, Over Temperature, Over Voltage, Reverse Polarity
 Installation: WF-8725-AD: AC Circuits: 4 (1 Main and 3 Branch Circuits); DC Circuits: 4 (3 Branch and 1 Battery); WF-8735-AD, WF-8740-AD: AC Circuits: 6 (1 Main and 5 Branch Circuits); DC Circuits: 6 (5 Branch and 1 Battery) Case Material: Plastic, Color: Black

WF-8900-AD POWER CENTER SERIES



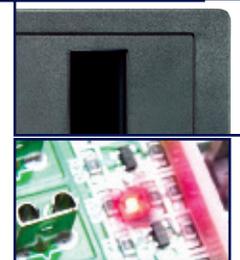
AUTO-DETECT: ONE UNIT WITH BATTERY RECOGNITION

- Model WF-8935-AD - Output: 35 amps DC - Input: 105-130 V AC, 60 Hz, 600 W
- Model WF-8945-AD - Output: 45 amps DC - Input: 105-130 V AC, 60 Hz, 770 W
- Model WF-8955-AD - Output: 55 amps DC - Input: 105-130 V AC, 60 Hz, 940 W
- Model WF-8965-AD - Output: 65 amps DC - Input: 105-130 V AC, 60 Hz, 1110 W
- Model WF-8975-AD - Output: 75 amps DC - Input: 105-130 V AC, 60 Hz, 1280 W

Our WF-8900-AD Power Center Series has been the RV industry's preferred power center for years, outselling all other power centers combined. Building on this success, the WF-8900-AD Power Center Series includes an industry-first, Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type. No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging. The WF-8900-AD will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

PRODUCT FEATURES

LED Warning Lights - WFCO was the first to use LED alerts for open 12 V circuits. The exclusive viewing design, lets RV owners easily see when there's a problem.



The WF-8900-AD Series features eleven DC circuits which include two 30 amp DC circuits, allowing manufacturers to install more high power consuming appliances like slide-out motors, electric awnings and beds.



Zero clearance design is a space-saving WFCO exclusive. The airflow system draws in cool air and expels warm air from the front. The cooling fan operates only when the electric load requires it, avoiding temperature spikes and providing quieter operation. For warm air exhaust, space behind the WF-8965/75-AD models is unnecessary.



EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time.



Integrated transfer switch mount allows the WFCO T-30 transfer switch to be easily installed directly to the back of the power center.



Thumb Tab design permits easy removal of DC fuse panel for out of box work and easy wire routing.

Optional GE model compatible with GE THQP slimline breakers.



THE BATTERY GUARDIAN™

The WF-8900-AD Series is designed with optimized charging for battery chemistry in the unit. For Lead-Acid Batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion Batteries, the multi-stage process ensures a safe operating voltage for all loads, replaces energy, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcocoelectronics.com for details.



Our Power Pros provide expert technical support for everything the RV industry needs. Visit wfcocoelectronics.com/support.

SPECIFICATIONS	WF-8935-AD	WF-8945-AD	WF-8955-AD	WF-8965-AD	WF-8975-AD
Power Input	600 W	770 W	940 W	1110 W	1280 W
Input Voltage	105-130 V AC/60 Hz				
Output Current (LA/LI)	35A / 32.5 A	45A / 41.5 A	55 A / 50 A	65 A / 60 A	75 A / 70 A
Converter Type (LA/LI)	3 Stage Intelligent Charge / 2 Stage Intelligent Charge				
Voltage Output	13.2 - 14.4 V DC Range / 13.6 - 14.6 V DC				
Normal mode	13.6 V DC				
Trickle charge mode (LAOnly)	13.2 V DC				
Bulk charge mode (LA/LI)	14.4 V DC / 14.6 V DC				
Outer Dimensions	12"W x 7"L x 10 3/4"H				
Weight	7 lb	7.75 lb	7.75 lb	9.75 lb	10 lb
Rough Opening	12 3/16"W x 10 7/8"L x 7 1/4"H				

Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.

ALL MODELS: Standard Safety Features/Protections: Over Current, Over Temperature, Over Voltage, Reverse Polarity

Installation: AC Circuits: 1 Main with 9 Branch Circuits; DC Circuits: 11 DC, nine 20 amp and two 30 amp

Case Material: Plastic, Color: Black

WF-9500-AD SERIES POWER CENTER



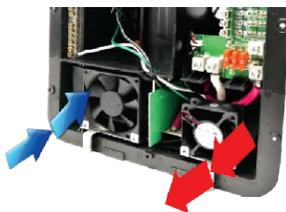
INCREASE YOUR OPTIONS WITH **AUTO-DETECT**

Model WF-9540-AD - Output: 40 amps DC - Input: 105-130 V AC, 60 Hz, 685 W
 Model WF-9560-AD - Output: 60 amps DC - Input: 105-130 V AC, 60 Hz, 1030 W
 Model WF-9580-AD - Output: 80 amps DC - Input: 105-130 V AC, 60 Hz, 1370 W

As Lithium-Ion batteries increase in popularity, WFCO knows that our customers want flexibility. The WF-9500-AD Series includes an industry-first, Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type.

No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-9500-AD will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

Zero clearance design is a space-saving WFCO exclusive. The airflow system draws cool air in from the front and expels warm air through the front. Space behind the converter for warm air exhaust is unnecessary. Cooling fans operate only when the electric load requires it, avoiding temperature spikes and providing quieter operation.



PRODUCT FEATURES

These WFCO exclusives provide more safety and diagnostic information to technicians and RV owners.

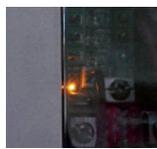
Zero clearance design is a space-saving WFCO exclusive. The airflow system draws cool air in from the front and expels warm air out through the front. Space is not needed behind the converter for warm air exhaust. Cooling fans operate only when the electric load requires it, avoiding temperature spikes and providing quieter operation.

OTHER EXCLUSIVE WFCO FEATURES

- Ultra-high power density, which provides more power in a small space.
- 7 DC circuits, including three 30 amp and fourteen 20 amp, for design flexibility.
- Two 50 amp main breakers with up to 12 AC circuits when using duplex



Every DC circuit has a blown-fuse indicator that can be seen through our exclusive viewing window.



Technicians benefit from an amber LED showing battery connectivity as well as bulk mode status.

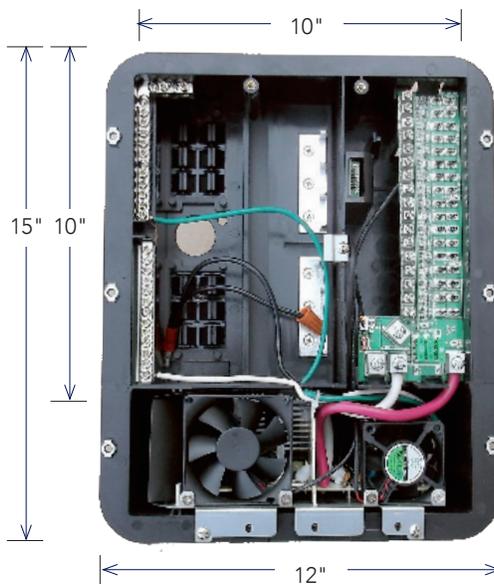


Three AC LEDs inside the door indicate the status of incoming voltage. **Green** is normal. **Yellow** is low. **Red** is too high.



THE BATTERY GUARDIAN™

The WF-9500-AD Series is designed with optimized charging for battery chemistry in the unit. For Lead-Acid batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion batteries, the multi-stage process ensures a safe operating voltage for all loads, replaces energy, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcoelectronics.com for details.



Optional GE model compatible with GE THQP slimline breakers.

EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time.

Exclusive choice of four DC circuit connection modes allows customers to select their preferred wiring connection mode for speed and ease.



Quick Connect Terminals



Screw Terminals



Wire Pigtails



WAGO Connectors

Zero clearance design makes installation in tight spaces easier, while providing plenty of hand room for installers to work.

SPECIFICATIONS	WF-9540-AD	WF-9560-AD	WF-9580-AD
Power Input	685 W	1030 W	1370 W
Input Voltage	105 V AC - 130 V AC / 60 Hz		
Output Current	40 A / 37 A	60 A / 55 A	80 A / 75 A
Converter Type (LA/LI)	3 Stage Intelligent Charge / 2 Stage Intelligent Charge		
Voltage Output (LA/LI)	13.2 - 14.4 V DC / 13.6-14.6 V DC		
Normal mode	13.6 V DC		
Trickle charge mode (LA ONLY)	13.2 V DC		
Bulk charge mode (LA/LI)	14.4 V DC / 14.6 V DC		
Outer Dimensions	11 7/8"W x 9 7/8"L x 14 3/4"H		
Rough Opening	10"W x 8 5/8"L x 13"H		
Weight	7.7 lbs	7.9 lbs	9.3 lbs
Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.			

ALL MODELS STANDARD SAFETY FEATURES/PROTECTIONS

Over Current, Over Temperature,
Over Voltage, Reverse Polarity

INSTALLATION

AC Circuits: Two 50 amp Main with
up to 12 AC Branch Circuits when
using Duplex Breakers

DC CIRCUITS

17 DC, fourteen 20 amp
and three 30 amp

CASE MATERIAL

Plastic

COLORS

Black

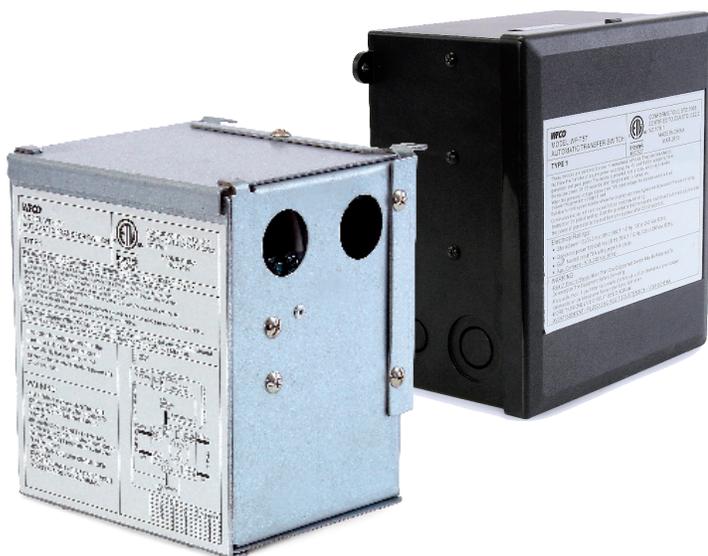


EXPERT PRODUCT SUPPORT

Our Power Pros provide expert
technical support for everything
the RV industry needs.

Visit wfcoelectronics.com/support.

TRANSFER SWITCHES 30/50 AMP



Providing **TROUBLE-FREE** Power Source Changeover

Model T-30 - Output: 30 amps AC - Input: 120 V AC, 60 Hz

Model T-57 - Output: 50 amps AC - Input: 120/240 V AC, 60 Hz

Reliability. Vertically integrated, WFCO has total supply chain control, ensuring quality materials, parts and processes at each stage. Components are quality tested at critical manufacturing stages, helping keep warranty claims below 1%. ETL listed to UL1008 and CSA C22.2.

WFCO transfer switches provide trouble-free changeover between shore power and the generator. The T-30 is for the 30 amp service, and the T-57 is for the 50 amp service.

With 40 years of power equipment experience, WFCO knows what is essential. These engineered transfer switches are safe and reliable, and the unit's DC coil prevents AC "chatter" noise and drop-out in low-voltage conditions. A transfer delay feature also prevents power crossover and arcing for additional safety.

PRODUCT FEATURES

- Time delay for gensets to complete self-diagnostics.
- WFCO's "break before make" configuration prevents accidental coupling of power from, or to, the shore line and generator.
- Microsecond time delay switches provide a safety feature by not allowing power crossover or "arcing".
- Shore power is always available (Pass-Through) without having to energize the relays.
- Easy ground bar accessibility is built-into the T-30.



Any-direction wall mounting is made easy with the T-30WM model.



The T-57 mounts easily onto a flat surface and is engineered for safe, reliable performance. Its thoughtful design allows the label to be easily readable no matter how the box is installed.

EASY INSTALLATION

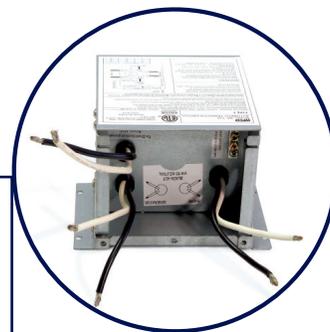
WFCO works with installers every day to streamline installation and reduce time.



The T-57 offers plenty of internal space for easier installation and convenient terminal bar access.



The T-30 is designed to conveniently install onto the back of WF-8900 Power Center Series power centers. No need to find wall space for installation



Pigtail connections on the T-30 provide easy, fast installation.

SMART ENGINEERING

SPECIFICATIONS	T-30	T-57
Input Voltage	120 V AC / 60 Hz	120/240 V AC / 60 Hz
Switching Capacity	30 amps	50 amps
Knockout Holes	3	10
Knockout Sizes	1 x 1/2"	4 x 1/2"
	2 x 3/4"	4 x 3/4"
		1 x 3/4" & 1-1/4 Concentric
Outer Dimensions:	5 1/8"W x 6"L	7 7/8"W x 4 3/4"L
	x 5"H	x 8 7/8"H
Weight	4.24 lb	5 lb
Certifications: ETL listed to UL1008 and CSA C22.2.		
Specifications are subject to change without notice or obligation.		

**ALL MODELS
 STANDARD SAFETY FEATURES
 PROTECTIONS**

Break before make configuration



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcocoelectronics.com/support.



THE BATTERY GUARDIAN™

The WF-8900-AD-REP Series is designed with optimized charging for battery chemistry in the unit. For Lead-Acid batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion batteries, the multistage process ensures a safe operating voltage for all loads, replaces energy, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcoelectronics.com for details.



EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time.



The kit consists of the converter/charger mounted into a metal bracket to make installation easy as an upgrade or replacement for multiple brands of power converters.

All fasteners are included.

SPECIFICATIONS	WF-8935-AD-REP	WF-8945-AD-REP	WF-8955-AD-REP
Power Input	600 W	780 W	950 W
Input Voltage	105 V AC - 130 V AC / 60 Hz		
Output Current (LA/LI)	35 A / 32.5 A	45 A / 41.5 A	55 A / 50 A
Converter Type	3 Stage Converter Charger / 2 Stage Converter Charger		
Voltage Output	13.2 - 14.4 V DC / 13.6 14.6 V DC		
Normal mode	13.6 V DC		
Trickle charge mode (LA Only)	13.2 V DC		
Bulk charge mode	14.4 V DC / 14.6 V DC		
Kit Size:	11 7/8"W x 7 5/8"L x 5 3/4"H		
Outer Dimensions	13 1/4"W x 7 7/8"L x 5 1/4"H		
Fuse Board Dimensions	2 7/8"W x 7/8"L x 5 1/4"H		
Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.			

ALL MODELS STANDARD SAFETY FEATURES PROTECTIONS

Over Current, Over Temperature,
Over Voltage, Reverse Polarity

INSTALLATION

Case Material: Metal
Color: Gray



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

WF-68100AD DECK MOUNT CONVERTER CHARGER SERIES



Eco-Friendly POWER with AUTO-DETECT

Model WF-68100AD - Output: 100 amps DC - Input: 105-130 V AC, 60 Hz, 1710W

The WF-68100AD Deck Mount Converter charger now includes an industry-first Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type. Power Factor Correction requires 30% less input, making the WF-68100AD an eco-friendly 12 Volt system.

No more buttons. No more switches.

An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-68100AD will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

PRODUCT FEATURES



LED Performance Lights allow RV owners to easily see when the converter is operating correctly or when there's a problem, providing more safety and diagnostic information to technicians and RV owners.

- **Red** - lights up when your converter is overloaded.
- **Green** - lights up when your converter is in charging mode.
- **Amber** - lights up when your unit is off and connected to full battery/flickers when approaching low charge.



Power Factor Correction reduces the amount of input power by up to 30% for total output, making this one of the most energy-efficient converters available.



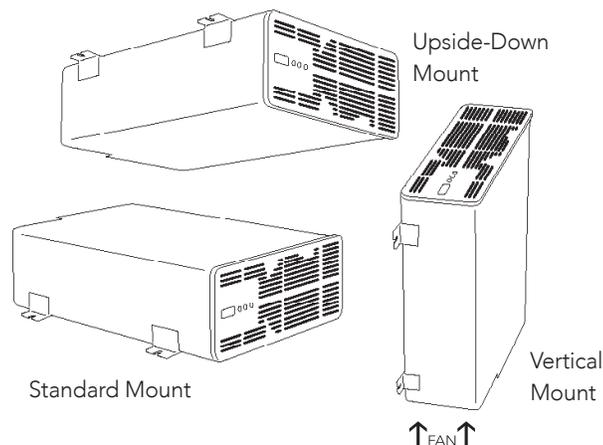
THE BATTERY GUARDIAN™

The WF-68100AD Series is designed with optimized charging for battery chemistry in the unit. For Lead-Acid Batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion Batteries, the multistage process ensures a safe operating voltage for all loads, replaces energy in the battery, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcoelectronics.com for details.



EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time



WFCO recommends horizontal mounting of the WF-68100AD series. You can mount it in any position that provides unobstructed ventilation for the fan and vent holes.

WFCO makes fully insulated connections for protection with an open-top design for ease of use for fast and nearly effortless installation.

SPECIFICATIONS	WF-68100AD
Power Input	1710 W
Input Voltage	105 V AC - 130 V AC / 60 Hz
Output Current (LA/LI)	100 A
Power Factor Correction	Unity (0.99)
Efficiency	84% (VA value under full load)
Converter Type (LA/LI)	3 Stage Converter Charger / 2 Stage Converter
Voltage Output (LA/LI)	13.2 - 14.4 V DC / 13.6-14.6 V DC
Normal mode	13.6 V DC
Trickle charge mode (LA Only)	13.2 V DC
Bulk charge mode	14.4 V DC / 14.6 V DC
Outer Dimensions	9 3/4"W x 13 1/2"L x 3 3/4"H
Weight	10.25 lb
Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.	

ALL MODELS STANDARD SAFETY FEATURES PROTECTIONS

Over Current, Over Temperature,
Over Voltage, Reverse Polarity

INSTALLATION

Case Material: Metal
Color: Two-tone Gray and Orange



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

WF-9800-AD DECK MOUNT CONVERTER CHARGER SERIES



AUTO-DETECT Power Choices that Fit EVERYWHERE



- Model WF-9835-AD - Output: 35 amps DC - Input: 105-130 V AC, 60 Hz, 600 W
- Model WF-9845-AD - Output: 45 amps DC - Input: 105-130 V AC, 60 Hz, 770 W
- Model WF-9855-AD - Output: 55 amps DC - Input: 105-130 V AC, 60 Hz, 940 W
- Model WF-9865-AD - Output: 65 amps DC - Input: 105-130 V AC, 60 Hz, 1110 W
- Model WF-9875-AD - Output: 75 amps DC - Input: 105-130 V AC, 60 Hz, 1280 W

The WF-9800-AD Series now includes an industry-first, Patent Pending Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type.

No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-9800-AD will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

PRODUCT FEATURES



Quiet operation is assured as the cooling fan runs only when needed.



WFCO Technologies is the leader in the RV industry's manufacturing, distribution, and servicing of power conversion products preferred more than 4-to-1 by RV manufacturers.



WF-9800-AD converters are available in more size and power choices than other brands. Manufacturers can match the exact needs of every RV, saving space and cost.



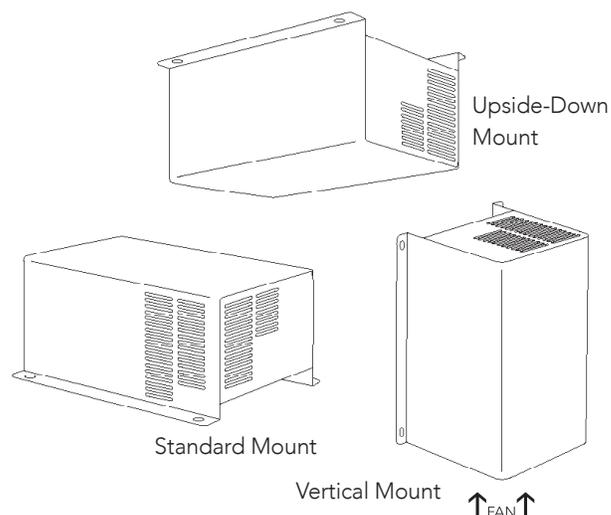
THE BATTERY GUARDIAN™

The WF-9800-AD Series has optimized charging for battery chemistry in the unit. For Lead-Acid Batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion Batteries, the multi-stage process ensures a safe operating voltage for all loads, replaces energy in the battery, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcoelectronics.com for details.



EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time



This versatile deck mount converter can be installed in any position, making RV design more flexible for manufacturers. Mount the converter vertically with the fan at the bottom to enhance cooling. WF-9800-AD Series converter features easy horizontal installation and can install upside down. WFCO makes fully insulated connections for protection with an open-top design for ease of use for fast and nearly effortless installation.

SPECIFICATIONS	WF-9835-AD	WF-9845-AD	WF-9855-AD	WF-9865-AD	WF-9875-AD
Power Input	600 W	770 W	940 W	1110 W	1280 W
Input Voltage	105 V AC - 130 V AC / 60 Hz				
Output Current (LA/LI)	35 A / 32.5 A	45 A / 44.5 A	55 A / 50 A	65 A / 60 A	75 A / 70 A
Converter Type (LA/LI)	3 Stage Converter Charger / 2 Stage Converter Charger				
Voltage Output (LA/LI)	13.2 - 14.4 V DC / 13.6 - 14.6 V DC				
Normal mode	13.6 V DC				
Trickle charge mode (LA Only)	13.2 V DC				
Bulk charge mode (LA/LI)	14.4 V DC / 14.6 V DC				
Outer Dimensions	4 5/8"W x 7 1/2"L x 4"H	4 3/4"W x 8 3/4"L x 4"H	5 1/8"W x 10 1/4"L x 4"H		
Weight	4 lb	5.25 lb	5.5 lb	6.25 lb	6.75 lb

Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.
ALL MODELS: Standard Safety Features/Protections: Over Current, Over Temperature, Over Voltage, Reverse Polarity
Installation: Case Material: Metal, Color: Gray



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

WF-8800 DECK MOUNT CONVERTER CHARGER SERIES



DESIGNED FOR
RV EXPORTS



POWER

That Fits - Across the Globe

Model WF-9855E - Output: 55 amps DC - Input: 190-260 V AC, 50/60 Hz, 950 W



WFCO Technologies is the leader in the RV industry's manufacturing, distribution, and servicing of power conversion products preferred more than 4-to-1 by RV manufacturers.

Reliability. Vertically integrated, WFCO has total supply chain control, ensuring quality materials, parts, and processes at each stage. Components are quality tested at critical manufacturing stages resulting in zero faults at the final 4-hour burn-in test, helping keep warranty claims below 1%.

All models are FCC Class B compliant.

This world-traveling converter charger is ideal for a wide array of recreational vehicles. The WF-8800 Series is designed specifically for manufacturers that export RVs, meeting your needs for amps and power requirements ranging from 190 to 260 volts and 50 or 60 Hz.

The WF-8800 Series converters designed with an advanced 3-stage charger provide a unique power source solution and clean power wherever needed, built with years of RV power equipment experience.

PRODUCT FEATURES

WFCO provides complete safety and diagnostic information to technicians and RV owners.



Quiet operation is assured as the cooling fan runs only when needed.



Electronic current limiting automatically shuts down the power during overload or short-circuit conditions.



SMART ENGINEERING: THREE-STAGE CHARGING IS BETTER.

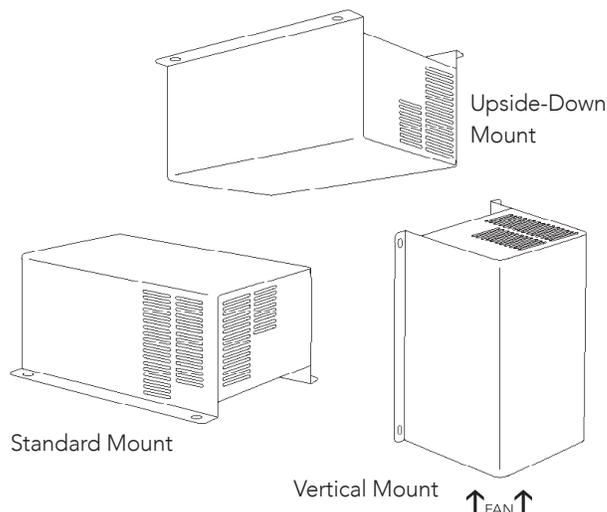
WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. Well-maintained batteries should never need more than two-stage (Normal and Trickle) charging. The third stage (Bulk) is for the rare times a battery needs extra power for charging. See wfcoelectronics.com for details.

WFCO makes fully insulated connections for protection with an open-top design for ease of use for fast and nearly effortless installation.



EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time



This versatile deck mount converter can be installed in any position, making RV design more flexible for manufacturers. Mount the converter vertically with the fan at the bottom to enhance cooling. WF-8800 Series converter features easy horizontal installation and can install upside down.

SPECIFICATIONS	WF-8855E
Power Input	950 W
Input Voltage	190-260 V AC, 50 / 60 Hz
Output Current	55 A
Converter Type	3 Stage Converter Charger
Voltage Output	13.2 - 14.4 V DC
Normal mode	13.6 V DC
Trickle charge mode	13.2 V DC
Bulk charge mode	14.4 V DC
Outer Dimensions	5 7/8"W x 9 5/8"L x 4"H
Weight	5.25 lb
FCC Class B compliant. Specifications are subject to change without notice or obligation.	

ALL MODELS
STANDARD SAFETY
FEATURES/PROTECTIONS
 Over Current, Over Temperature,
 Over Voltage, Reverse Polarity

CASE MATERIAL
 Metal
COLORS
 Gray



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

WF-8930/50 DISTRIBUTION PANEL SERIES

The FLEXIBILITY of a Two-Piece System

Model WF-8930/50-NPB-30 (Black) - AC Service: 30 amps - Input Voltage: 120 V AC

Model WF-8930/50-NPB (Black) - AC Service: 30/50 amps - Input Voltage: 120/240 V AC

Model WF-8930/50-NPB-50 (Black) - AC Service: 30/50 amps - Input Voltage: 120/240 V AC (Extended Door)



Reliability. Vertically integrated, WFCO has total supply chain control, ensuring quality materials, parts and processes at each stage. Components are quality tested at critical manufacturing stages, helping keep warranty claims below 1%. All models are UL® and cUL® listed.

The WF-8930/50 Distribution Panel teams up with any of WFCO's deck mount converters to give engineers extra flexibility in product design. The two-piece system enables the panel to fit a smaller wall area, providing more RV design options.

With 40 years of power equipment experience, WFCO has developed a distribution solution based on the real needs of RV manufacturers. Deck mount converters plug into the AC receptacle on the distribution center's back to receive power. The WF-8930/50 is famous for its 50 amp AC service but is also available with 30 amp service.



WFCO was the first to utilize LED warning lights as an alert for open 12V circuits with a viewing window in the door.

PRODUCT FEATURES

WFCO provides complete safety and diagnostic information to technicians and RV owners.

The 12V fuse panel quickly and easily snaps into place. No time-consuming screws are needed.



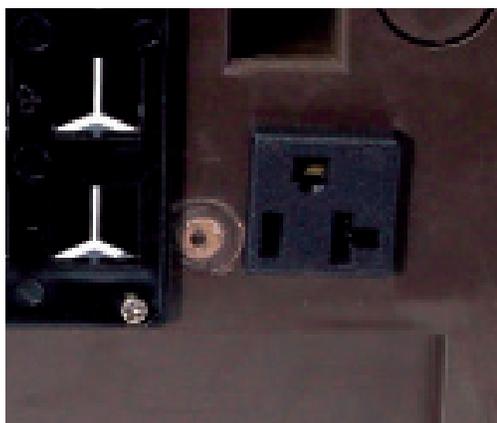
- Primarily designed for 50 amp main, with 12 AC branch circuits and 15 DC circuits.
- The DC compartment is equipped with Negative DC terminal bars.
- The WF-8930/50-50 is the WF-8930/50 panel board equipped with a larger door assembly, permitting manufacturers to standardize installation cutouts when offering 30 amp service as standard and 50 amp service as an option. Contact our Power Pros for more information at 877-294-8997, Option 1.



Optional Reverse Polarity Detection meets new RVIA and NEC requirements with audible alarm notification. No additional wiring or hookup is required, and it accepts hi-pot testing.



Strain relief is built into the back of the WF-8930/50 cabinet, making installation of wiring fast and easy.



EASY INSTALLATION

WFCO works with installers every day to streamline installation and reduce time.

All WFCO converters come standard with 15 or 20 amp plugs for easy power supply connection. The WF-8930/50 has an AC receptacle rated for 15 or 20 amps and is located on the back, allowing easy convert-er plug-in for power.

Optional GE model compatible with GE THQP slimline breakers.



Built-in terminal bars for the negative DC wiring eliminate the time and cost of installing a separate negative DC bar.

INSTALLATION

AC Circuits: 30 amp main with 7 Branch Circuits, 50 amp main with 12 Branch Circuits
 DC Circuits: 15 DC, Thirteen 20 amp and two 30 amp

Case Material: Plastic

Color: Black

SPECIFICATIONS	WF-8930/50
Input Voltage	120 V AC or 240 V AC
Input Current	30 amps or 50 amps
AC Breakers Setup	30 amps: Main + 7 Branch circuits 50 amps: Main + 12 Branch circuits
Outer Dimensions	13 3/4"W x 4"L x 9 1/2"H
Rough Opening	12 1/8"W x 2 7/8" L x 8 1/4"H
Larger Door Assembly	13 7/8"W x 11 3/4"H
Weight	3.75 lb
Certifications: UL® and cUL® listed. Specifications are subject to change without notice or obligation.	



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

WF-5110 INVERTER SERIES | 1000-WATT

Intelligent Features & Technology

Model WF-5110 Series - Output: 120 V AC - Pure Sine Wave, 60 Hz, 1000 W - Input: 10-15 DC



Reliability. Vertically integrated, WFCO has total supply chain control, ensuring quality materials, parts and processes at each stage. Components are quality tested at critical manufacturing stages resulting in zero faults at the final 4-hour burn-in test, helping keep warranty claims below 1%. All models are UL® and cUL® listed and FCC Class B compliant.

WFCO's 1000-watt WF-5110 Inverter Series delivers outstanding performance for multiple lower-power appliances. WF-5110 exclusive internal transfer system automatically allows the AC input to bypass the inverter when connected to an AC power source. The automatically resettable Reverse Polarity protects the WF-5110 should the battery be connected backward. Once the battery connections are corrected, the unit will operate normally.

With over a decade of inverter manufacturing, WFCO knows what is essential. Reliability, clean signal, easy installation, and intelligent power management make the WF-5110 the best choice RV inverter.

PRODUCT FEATURES



Three status indicators, a voltage indicator with a message panel and a selection button, communicate helpful information to the owner or technician:

- **Green** - Indicates AC input status.
- **Amber** - Indicates unit is in invert mode (the inverter is creating 110 V power).
- **Red** - Indicates inverter failure status.
- LCD Message Panel - Indicates operation status.
- Selection Button lets users choose the display's screen - Battery input voltage, AC output amps, and voltage.



Circuit Breaker to protect outlet from shore power shorts and overloads.

- Remote control.
- Built-in circuit protection on the DC side.
- Pure sine wave output with THD <3%.
- Built in <50 millisecond transfer time. This allows the transfer from utility power to inverted power to be interruption free, protecting sensitive equipment.

EASY INSTALLATION

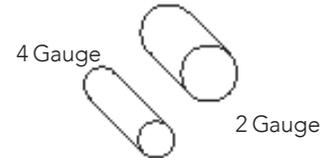
WFCO works with installers every day to streamline installation and reduce time



The WF-5110 Series features a time-saving plug-and-play design that allows it to be simply plugged into an AC outlet to connect directly to the RV's AC



The WF-5110 Series remote includes an ON/OFF button and a 20-ft cable. The switch on the face of the inverter must be in the "out" position for the remote to work.



The WF-5110 Series allows manufacturers the use of more cost effective 4-gauge wiring versus the 2-gauge wire specified by competitors.



No crimping required for 4-gauge wire terminal connections, reducing installation time and fatigue.

SPECIFICATIONS	WF-5110
Power Output	1000 W
Input Voltage	10.5 - 15 V DC
Output Waveform	Pure Sine Wave
Voltage Output	120 V AC / 60 Hz
Efficiency Load	>86% at Full Load
Transfer Switch	8.5 A
Transfer Time	20 milliseconds
AC Output Breaker	16 A
Dimensions	11 1/8" W x 14 3/4" L x 4" H
Weight	11.5 lb

Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.

ALL MODELS
STANDARD SAFETY
FEATURES/PROTECTIONS:
Overload, Short Circuit,
Over/Under Input
Voltage, Over Temperature,
Automatic Reverse Polarity,
AC Output Breaker



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/

WF-5220 INVERTER SERIES | 2000-WATT



Intelligent Features and TECHNOLOGY

Reliability. Vertically integrated, WFCO has total supply chain control, ensuring quality materials, parts and processes at each stage. Components are quality tested at critical manufacturing stages resulting in zero faults at the final 4-hour burn-in test, helping keep warranty claims below 1%. All models are UL® and cUL® listed and FCC Class B compliant.

WFCO's 2000-watt WF-5220 Inverter Series delivers outstanding performance. The internal transfer system automatically allows the AC input to bypass the inverter when the inverter is connected to an AC power source. Other essential features include pure sine wave output, providing the hi-tech filtering needed for premium electronics and refrigerators, plus an easy hi-pot testing design that allows hi-potting output circuits through the inverter.

With over a decade of inverter manufacturing, WFCO knows what is essential. Reliability, clean signal, easy installation, and intelligent power management make the WF-5220 Inverter Series the best choice in RV inverters.

PRODUCT FEATURES

REMOTE DISPLAY PANEL

The included LED/LCD display provides status indication as well as inverter readings.

LED DISPLAY

- Blue - Indicates unit is on and normal
- Red - Indicates error status

LCD SCREEN

- DC voltage
- Inverter temperature
- Grid input voltage, amperage, frequency and watts
- Inverter output voltage, amperage, frequency, and watts
- Fault codes
- Inverter settings

ADDITIONAL SERIES FEATURES

- 30A Pass-Thru with AC Auto-Reset Fuse
- Programmable over/under DC voltage protection
- Reverse Polarity with Light Indicator
- High-frequency switching mode power topology for a smaller, lighter, quieter and more-efficient unit.
- THD < 3% ; Pure Sine Wave output waveform supplies you with higher quality power than the electric company provides.
- Convenient WAGO AC Hookup
- Mount in Any Position
- Brushless fans
- Automatic transfer switch with 100% default to utility power.



The WF-5220 Inverter remote includes an LCD display and a 32-ft cable. Display includes On/Off button, Battery Voltage status, Grid Input Voltage and amperage status and settings for Battery Under (UVP) and Over (OVP) Voltage Protection.



A remote cable comes standard for all WF-5220 models and is designed for ease of installation.

SPECIFICATIONS	WF-5220
Power Output	2000 W
Input Voltage	10-15 V DC
Output Waveform	Pure Sine Wave
Voltage Output	120 V AC / 60 Hz
Efficiency Load	>88%
Transfer Switch Rating	30 A
Transfer Time	<20 milliseconds
AC Output Circuit Breaker	30 A
Dimensions	8"W x 14 3/8"L x 4"H
Weight	20 lb

Certifications: UL® and cUL® listed and FCC Class B compliant.
 Specifications are subject to change without notice or obligation.

**ALL MODELS
 STANDARD SAFETY FEATURES
 PROTECTIONS**

Overload, Short Circuit, Over/Under Input Voltage, Over Temperature, AC Output Circuit Breaker, Battery Input Reverse Polarity Protection



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

EM-15 & EM-20 | ENERGY MANAGEMENT SWITCH

More POWER for the RV Lifestyle

Model EM-15 - Output: 15A - Input: 120V AC, 60 Hz

Model EM-20 - Output: 20A - Input: 120 V AC, 60 Hz



Reliability. Vertically integrated, WFCO has total supply chain control, ensuring quality materials, parts and processes at each stage. Components are quality tested at critical manufacturing stages.

As RV designs get more and more like home life, so does the demand on their electrical infrastructure. RVers want to enjoy the comforts and luxuries at home while on the road, and with this in mind, WFCO has developed the cost-efficient EM-20 Energy Management Series switches.

- EM-15 for 15A applications
- EM-20 for 20A applications

PRODUCT FEATURES

- Smart Load Detection allows the device to switch from two power loads to one load (the designated priority load) when the total current exceeds a pre-determined trip level based on the model.
- The EM-20 can eliminate the need for 50 A service with two air conditioners by operating one at a time.
- Designed to manage two mid to heavy loads, such as microwaves and fireplace/water heaters, the EM-15 seamlessly switches power between appliances.
- The Energy Management Series Switches feature three possible mounting positions for flexible design and quick installation: wall/ floor mount, back of WF-8500 Power Center Series power center, or back of 8900 Series power center.



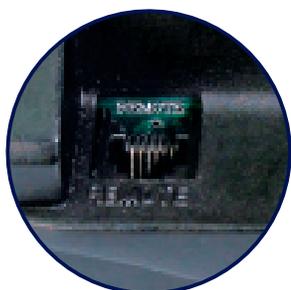
These features provide more safety and ease to technicians and RV owners.



Remote control panel, available with the EM-20 so end-users can manually choose the branch circuit with priority operation.

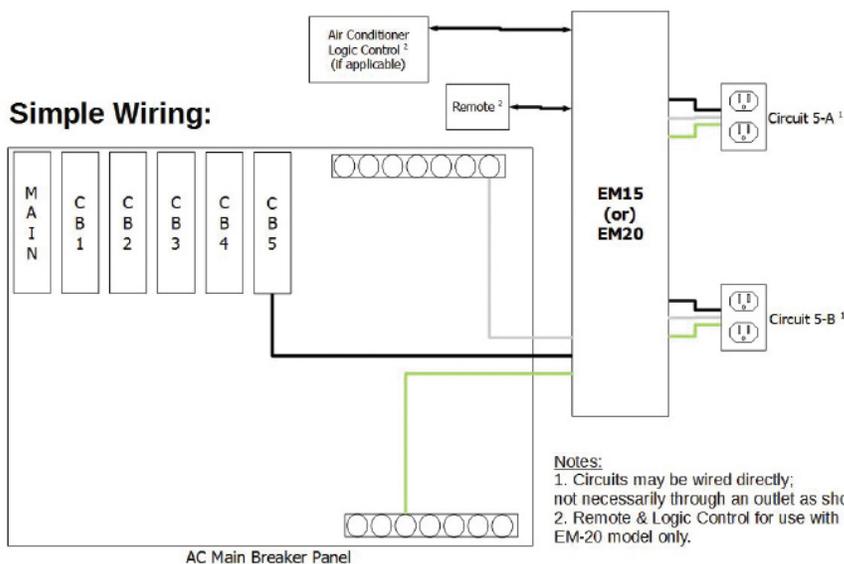
EASY INSTALLATION

All WFCO products meet RV owners' needs better while making the job more straightforward for the installer and production line. Both the EM-15 & EM-20 offer flexible mounting options. At the same time, the EM-20 also provides several unique features – like a remote panel for manual energy management and four power modes – that make it easy for RV owners to assign energy to the circuit they need.



The EM-20 allows a simple remote control hook up for convenient end-user power management.

Simple Wiring:



Notes:
1. Circuits may be wired directly; not necessarily through an outlet as shown.
2. Remote & Logic Control for use with EM-20 model only.

ENERGY MANAGEMENT SWITCH

SPECIFICATIONS	EM-15	EM-20
Power	120 V / 60 Hz	
Power Relay	2; Contact Rating: 30A/250 V AC; Coil Rating: 12 V DC	
Logic Control Rating	2; SPDT Contact Rating: 3 A/250 V AC; Coil Rating: 12 V DC	
AC Connections	9P terminal block for 14 AWG wire; suggested 7 in-lbs torque	9p terminal block for 12 AWG wire; suggested 7 in-lbs torque
Remote Switch	12 ft. long wire and RJ11 connector; one switch to set circuit priority; 2 LEDs to indicate which circuit is priority	
MECHANICAL		
Enclosure	Fire-retardant reinforced plastic	
Mounting	Wall/floor mounting or mount directly to the back of WFCO Power Centers (WF-8900 or WF-8500 Series)	
Dimensions	Enclosure: 4 1/4"W x 5"L x 2 3/4"H / With Wall Mount: 4 7/16"W x 6 1/2"L x 3"H	
Weight	0.55 kgs / 1.21 lb	
Safety	CETL / UL 916 + CSA C22.2 NO. 205	

Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.
Case Material: Plastic, Color: Black



EXPERT PRODUCT SUPPORT

Our Power Pros provide expert technical support for everything the RV industry needs.

Visit wfcoelectronics.com/support.

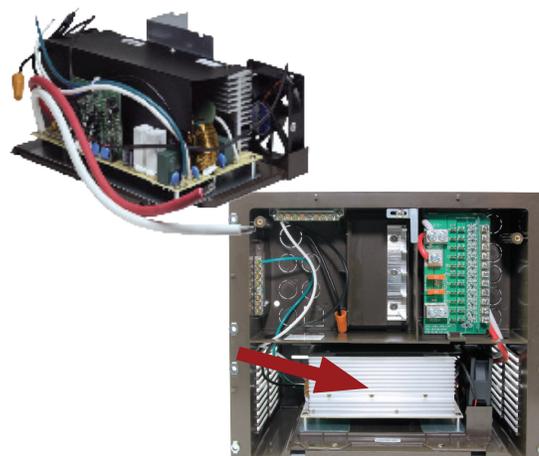
WF-8900-AD-MBA MAIN BOARD ASSEMBLY SERIES

Easy BATTERY FLEXIBILITY

- Model WF-8935-AD-MBA - Output: 35 amps DC - Input: 105-130 V AC, 60 Hz, 600 W
- Model WF-8945-AD-MBA - Output: 45 amps DC - Input: 105-130 V AC, 60 Hz, 780 W
- Model WF-8955-AD-MBA - Output: 55 amps DC - Input: 105-130 V AC, 60 Hz, 950 W
- Model WF-8965-AD-MBA - Output: 65 amps DC - Input: 105-130 V AC, 60 Hz, 1260 W
- Model WF-8975-AD-MBA - Output: 75 amps DC - Input: 105-130 V AC, 60 Hz, 1300 W

Our WF-8900-AD-MBA Series is a quick, easy replacement part for all power centers that now includes an industry-first, Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type. No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-8900-AD-MBA will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

It installs easily with only two screws, three AC, and two DC wires. With no need to re-wire, installation is only 10 minutes! No additional wiring or hookup is required, and it accepts hi-pot testing. Customers also have the option for Reverse Polarity Detection that meets new RVIA & NEC requirements with audible alarm notification.



THE BATTERY GUARDIAN™

The WF-8900-AD-MBA Series is designed with optimized charging for the battery chemistry in the unit. For Lead-Acid Batteries, WFCO's automatic three-stage converter handles every charging need for the RV while extending the battery's life. For Lithium-Ion Batteries, the multi-stage process ensures a safe operating voltage for all loads, replaces energy in the battery, and assures the Lithium-Ion cells inside the battery remain balanced. See wfcoelectronics.com for details.

SPECIFICATIONS	WF-8935-AD-MBA	WF-8945-AD-MBA	WF-8955-AD-MBA	WF-8965-AD-MBA	WF-8975-AD-MBA
Power Input	600 W	780 W	950 W	1260 W	1300 W
Input Voltage/Current	7.65 amps	105-130 V ac/60 Hz	11.45 amps		15.16 amps
Output Current (LA / L2)	35 A/32.5 A	45 A/41.5 A	55 A/50 A	65 A/60 A	75 A/70 A
Converter Type	3 Stage Converter Charger / 2 Stage Converter Charger				
Voltage Output	13.2 - 14.4 V DC / 13.6 - 14.6 V DC				
Normal mode	13.6 V DC				
Trickle charge mode (LA Only)	13.2 V DC				
Bulk charge mode	14.4 V DC / 14.6 V DC				
Dimensions	11 7/8"W x 7 5/8"L x 5 3/4"H				
Weight	4 lb	5 lb	5 lb	8 lb	8 lb

Certifications: UL® and cUL® listed and FCC Class B compliant.

ALL MODELS: Standard Safety Features/Protections: Over Current, Over Temperature, Over Voltage, Reverse Polarity

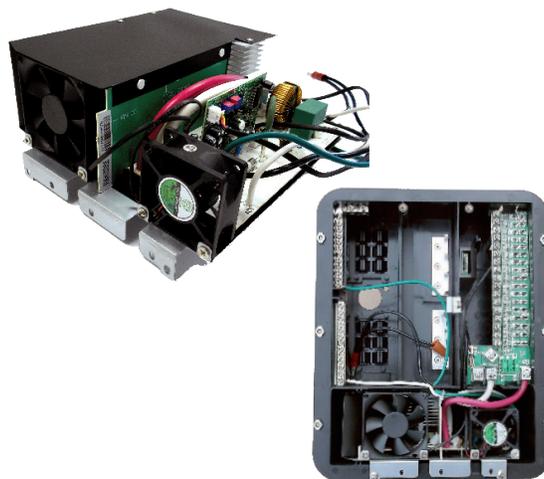
WF-9500-AD-MBA MAIN BOARD ASSEMBLY SERIES

Quick, Easy & FLEXIBLE

Model WF-9540-AD-MBA - Output: 40 amps DC - Input: 105-130 V AC, 60 Hz, 685 W
 Model WF-9560-AD-MBA - Output: 60 amps DC - Input: 105-130 V AC, 60 Hz, 1030 W
 Model WF-9580-AD-MBA - Output: 80 amps DC - Input: 105-130 V AC, 60 Hz, 1370 W

Our WF-9500-AD-MBA Series is a quick, easy replacement part for all power centers that now includes an industry-first, Patent Pending Auto-Detect technology. This new microprocessor-driven technology will recognize Lithium-Ion and Lead-Acid battery chemistries and automatically adjust the charging profile to match the battery type. No more buttons. No more switches. An accurately charged battery gives RV owners peace of mind. Eliminating the risk of over and under-charging the WF-9500-AD-MBA will maximize your battery life with multi-stage charging and current monitoring in both Lead-Acid and Lithium-Ion profiles.

It installs easily with only two screws, three AC wires, and two DC wires. With no need to re-wire, installation is only 10 minutes! Customers also have the option for Reverse Polarity Detection that meets new RVIA & NEC requirements with audible alarm notification. No additional wiring or hookup is required, and it accepts hi-pot testing.



THE BATTERY GUARDIAN™

The WF-9500-AD-MBA Series is designed with optimized charging for either lead-acid or lithium-iron-phosphate batteries. For lead-acid batteries, WFCO's automatic three-stage converter/charger provides power for the RV while charging the battery and maximizing its life. For lithium-ion batteries, the converter/charger will provide full charge as quickly as possible, allow for cell balancing, and meanwhile assure safe operation of all DC loads. See wfcoelectronics.com for details.

SPECIFICATIONS	WF-9540-AD-MBA	WF-9560-AD-MBA	WF-9580-AD-MBA
Power Input	685 W	1030 W	1370 W
Input Voltage	105-130 V AC/60 Hz	105-130 V AC/60 Hz	105-130 V AC/60 Hz
Output Current	40 A	60 A	80 A
Converter Type (LA/LI)	3 Stage Converter Charger / 2 Stage Converter Charger		
Voltage Output (LA/LI)	13.2 - 14.4 V DC / 13.6 - 14.6 V DC		
Normal mode	13.6 V DC		
Trickle charge mode (LA ONLY)	13.2 V DC		
Bulk charge mode (LA/LI)	14.4 V DC / 14.6 V DC		
Dimensions	7 1/16"W x 9 1/2"L x 3 7/8"H		
Weight	4 lb	5 lb	5 lb

Certifications: UL® and cUL® listed and FCC Class B compliant. Specifications are subject to change without notice or obligation.
ALL MODELS: Standard Safety Features/Protections: Over Current, Over Temperature, Over Voltage, Reverse Polarity



4 SKUs are All You Need

WFCO's AUTO-DETECT is a patent-pending intelligent battery detection system that automatically selects the correct charging profiles for both lead acid and lithium ion batteries in your RV.

Auto-Detect streamlines the battery selection and installation process by providing 4 WFCO SKUs that solve most converter or power center needs, eliminating the need to stock multiple products and reducing inventory costs.

To learn more visit: WFCOelectronics.com

WFCO has a cross-reference guide available to help you choose the right replacement product for any obsolete or current converter at: www.wfcoelectronics.com/wfco-cross-reference-guide/



WF-8955-AD

A power center that allows you to satisfy most of your power center needs. More RVs are equipped with the WF-8955 power center that any other options.



WF-9855-AD

Our 55-amp deck mount converter with 3-stage charging will handle most deck mount replacement needs.



WF-8955-AD-MBA

An easy-to-install main board assembly that replaces the lower section in any WF-8955 Series power center and upgrades other select converter brands.



WF-8955-AD-REP

This universal converter replacement kit can upgrade power centers with removable converter sections, resulting in a high-performance three-stage charging powerhouse.

WFCO ONLINE 'TOOLBOX': Valuable Resources for RV Service Centers

WFCO Technologies' Power Pros have beefed up WFCO's new website with several helpful resources for RV technicians, including how-to videos and a handy

online "Toolbox" of information. Such resources enable RV service centers to troubleshoot RVs effectively and to easily upgrade converters and power centers with the latest WFCO technology.

"From a new product standpoint, our Auto-Detect converter technology is a project we're very excited to have in the market," said Bobby Raatz, VP of US Operations at WFCO Technologies. "This technology provides a simple, automatic method for RV OEMs, dealers, and owners to manage Lead-Acid and Lithium-Ion batteries efficiently."

"We've also created several informational resources accessed online. The videos can be helpful, like having a Power Pros expert in the shop with you."

WFCO's online "Toolbox" and helpful resource charts are under the "Support" tab on the company website.

- An extensive cross-reference chart that provides an equivalent WFCO product for obsolete brands and out-of-date or current converters and power centers. Millions of RVs are on the road with outdated converter brands and older technology products. WFCO has the most extensive portfolio of power products in the industry, from which service centers can find a match for those brands that no longer exist and older and current power products.
- Troubleshooting guides provide an efficient sequence of step-by-step analysis that allows technicians to diagnose and fix any problem quickly.
- A torque chart that provides proper torque values for WFCO converters, power centers, inverters, and transfer switches, thus helping technicians avoid problems with over-torqued or under-torqued electrical connections.

WFCO provides product information and previews of new products on the website. Personnel can subscribe on the WFCO site for these periodic, information-laden bulletins to stay up-to-date with the latest products and services from WFCO. "The Toolbox and videos are a few communication channels we have created to amplify our support for those providing service for RV owners," said Raatz. "As with our product lines, you can expect continuous improvement in these resources." For more about WFCO products and services, visit wfcoelectronics.com.



Visit the support section on our website for a growing library of helpful resources.



Select WFCO PRODUCTS as your Replacement Choice

You can easily upgrade the obsolete or defective converters and electrical components in your RV by installing one of WFCO's high performance replacement products. Take the guesswork out of choosing the right replacement by selecting the WFCO products identified in the charts below. Dimensions are provided to assist you with proper form and fit. Use our convenient crossover charts located on the reverse side of this page to replace other manufacturers' products with high performance WFCO products.

POWER CENTERS

WFCO	DESCRIPTION	DIMENSIONS/CUTOUT W x L x H
WF-8540-AD	40 amp DC	7 3/4 x 7 7/16 x 11 1/8
WF-8560-AD	60 amp DC	7 3/4 x 7 7/16 x 11 1/8
WF-8712	12 amp DC	10 3/8 x 4 x 6
WF-8725-AD	25 amp DC	10 3/8 x 4 x 6
WF-8735-AD	35 amp DC	10 3/8 x 4 1/8 x 7
WF-8740-AD	40 amp DC	10 3/8 x 4 1/8 x 7
WF-8935-AD	35 amp DC	12 x 7 x 10 3/4
WF-8945-AD	45 amp DC	12 x 7 x 10 3/4
WF-8955-AD	55 amp DC	12 x 7 x 10 3/4
WF-9540-AD	40 amp DC	10 x 8 5/8 x 13
WF-9560-AD	60 amp DC	10 x 8 5/8 x 13
WF-9580-AD	80 amp DC	10 x 8 5/8 x 13

DECK MOUNT CONVERTERS

WFCO	DESCRIPTION	DIMENSIONS/CUTOUT W x L x H
WF-9835-AD	35 amp DC	4 5/8 x 4 x 7 1/2
WF-9845-AD	45 amp DC	4 3/4 x 4 x 8 3/4
WF-9855-AD	55 amp DC	4 3/4 x 4 x 8 3/4
WF-9865-AD	65 amp DC	5 1/8 x 4 x 10 1/4
WF-9875-AD	75 amp DC	5 1/8 x 4 x 10 1/4
WF-68100AD	100 amp DC	9 3/4 x 13 1/2 x 3 3/4

ENERGY MANAGEMENT

WFCO	DESCRIPTION	DIMENSIONS W x L x H
EM-15	15 amp	5 1/8 x 3x 3 1/8
EM-20	20 amp	5 1/8 x 3x 3 1/8

MAIN BOARD ASSEMBLIES (MBA)

WFCO	DESCRIPTION	DIMENSIONS W x L x H
WF-8935-AD-MBA	35 amp DC	7 1/16 x 9 1/2 x 3 7/8
WF-8945-AD-MBA	45 amp DC	7 1/16 x 9 1/2 x 3 7/8
WF-8955-AD-MBA	55 amp DC	7 1/8 x 9 1/2 x 3 3/4
WF-8975-AD-MBA	75 amp DC	10 5/8 x 8 3/4 x 4 1/2
WF-9560-AD-MBA	60 amp DC	6 3/4 x 7 14 x 3
WF-9580-AD-MBA	80 amp DC	8 5/8 x 9 x 3

UNIVERSAL REPLACEMENT KIT (REP)

WFCO	DESCRIPTION	DIMENSIONS W x L x H
WF-8935-AD-REP	35 amp DC	11 7/8 x 7 5/8 x 5 3/4
WF-8945-AD-REP	45 amp DC	11 7/8 x 7 5/8 x 5 3/4
WF-8955-AD-REP	55 amp DC	11 7/8 x 7 5/8 x 5 3/4

DISTRIBUTION CENTER

WFCO	DESCRIPTION	DIMENSIONS/CUTOUT W x L x H
WF-8930/50	30/50 amp service	12 1/8 x 2 7/8 x 8 1/4
WF-7910	DC 12 V	3 1/4 x 1 7/8 x 7

INVERTER

WFCO	DESCRIPTION	DIMENSIONS W x L x H
WF-5110RS	1000 W Pure Sine Wave	11 x 14 x 4
WF-5220	2000 W Pure Sine Wave	8 x 14 3/8 x 4

TRANSFER SWITCHES

WFCO	DESCRIPTION	DIMENSIONS W x L x H
WF-T-30	30 amp	5 1/8 x 6 x 5
WF-T-57R	50 amp	7 7/8 x 4 3/4 x 8 7/8

MAGNETEK

WFCO	MAGNETEK
WF-8712	6712
WF-8725-AD	6720
WF-8935-AD	6335
WF-8945-AD	6345, 7345
WF-8955-AD	6355, 7355
WF-9835-AD	7240X
WF-9855-AD	7255X
WF-8945-AD-REP	6345, 7345
WF-8955-AD-REP	6355, 7355

FURRIION

WFCO	FURRIION
T-30	F30-ATS
T-57R	F50-ATS

POWER MAX

WFCO	POWER MAX
WF-8935-AD	PPC-35
WF-8945-AD	PPC-45
WF-8955-AD	PPC-55
WF-8975-AD	PPC-75
WF-9835-AD	PM3-35, PM4-35
WF-9845-AD	PM3-45, PM4-45
WF-9855-AD	PM3-55, PM4-55
WF-9865-AD	PM3-65, PM4-65
WF-9875-AD	PM3-75, PM4-75
WF-68100AD	PM3-100 PFC
T-30	PMTS-30
T-57R	PMTS-50
WF-8935-AD-MBA	PM3-35-MBA
WF-8945-AD-MBA	PM3-45-MBA
WF-8955-AD-MBA	PM3-55-MBA
WF-8975-AD-MBA	PM3-75-MBA

PARALLAX

WFCO	PARALLAX
WF-8735-AD	6730
WF-8935-AD	7335
WF-8945-AD	7345, 7145, 6345, 8345
WF-8955-AD	7355, 7155, 6355, 8355, 5355
WF-8965-AD	5365, 8365
WF-8975-AD	5375, 8375
WF-9835-AD	7340, 7440, 4435
WF-9845-AD	7445, 4445
WF-9855-AD	7455, 4455
WF-9865-AD	7465, 5465
WF-9875-AD	5475
WF-68100AD	5490
T-30	ATS30, ATS301
T-57R	ATS501, ATS503
WF-8945-MBA	7145
WF-8955-MBA	7155

GO POWER

WFCO	GO POWER
WF-9835-AD	GPC-35-MAX
WF-9845-AD	GPC-45-MAX
WF-9855-AD	GPC-55-MAX
WF-9875-AD	GPC-75-MAX
WF-68100AD	GPC-100-MAX
T-30	TS-30
T-57R	TS-50
WF-5110RS	GP-ISW1000
WF-5220	GP-ISW2000

PROGRESSIVE DYNAMICS

WFCO	PROGRESSIVE DYNAMICS
WF-8540-AD	PD4045
WF-8560-AD	PD4060
WF-8735-AD	PD4135
WF-8740-AD	PD4045, PD4135
WF-8855E	PD9260-230
WF-9540-AD	PD4545
WF-9560-AD	PD4560
WF-9580-AD	PD4575
WF-9835-AD	PD9130, PD9140A, PD9230, PD9240
WF-9845-AD	PD9140/45A, PD9240, PD9245
WF-9855-AD	PD9160A, PD9260
WF-9865-AD	PD9160A, PD9260, PD9270
WF-9875-AD	PD9170A, PD9180A, PD9270, PD9280
WF-68100AD	PD9180A, PD9280
T-30	PD5110010, PD5110610
T-57R	PDS5121010, PD52, PD52DCS, PD52S
WF-8935-AD-MBA	PD4635V

XANTREX

WFCO	XANTREX
WF-5220	PROwatt SW-1800, Freedom X 2000
WF-5110RS	PROwatt SW-900, Freedom X 1000

IOTA

WFCO	IOTA
WF-8855E	DLS-240-55
WF-9835-AD	DLS-30, DLS-30-X
WF-9845-AD	DLS-45, DLS-45-X
WF-9855-AD	DLS-55, DLS-55-X
WF-9875-AD	DLS-75, DLS-75-X
WF-68100AD	DLS-90, DLS-90-X
T-30	ITS-30R
T-57R	ITS-50R

MAGNUM

WFCO	MAGNUM
WF-5110RS	CSW1012

PRECISION CIRCUITS

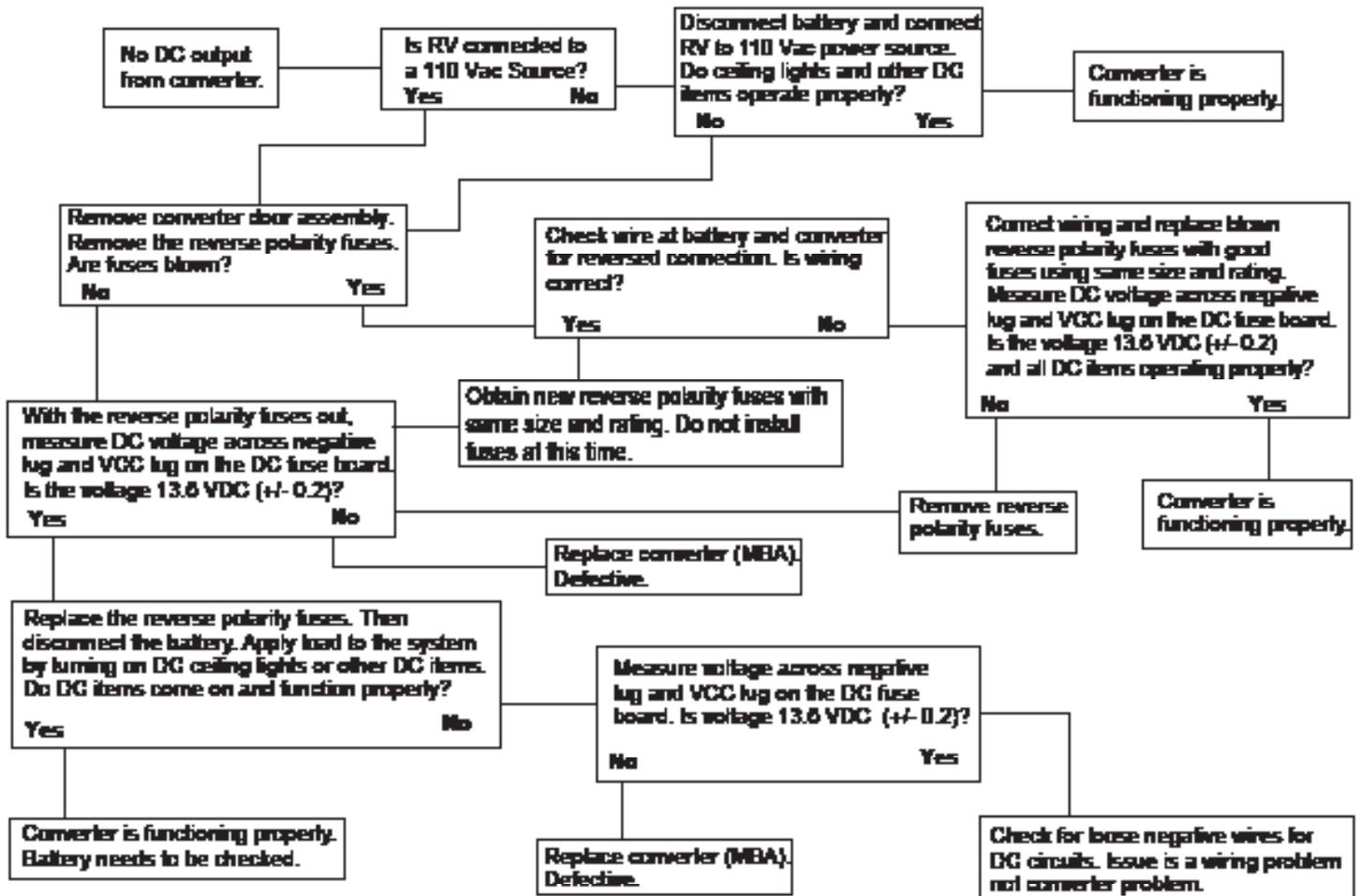
WFCO	PRECISION CIRCUITS
EM-20	00-10031-000

INTELLITEC

WFCO	INTELLITEC
EM-20	AESS

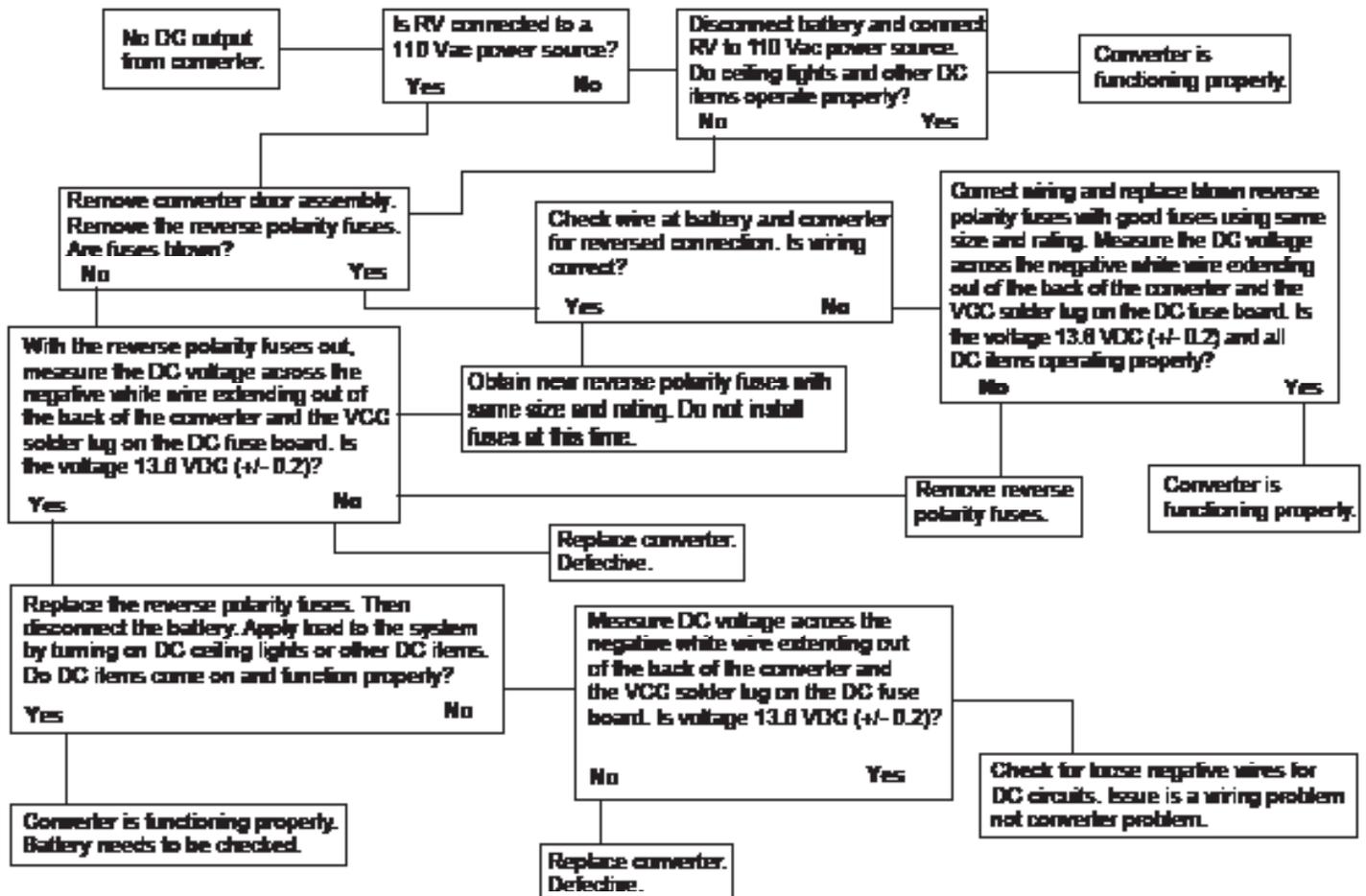
TROUBLESHOOTING MADE EASY

WF-8500 Power Center Series



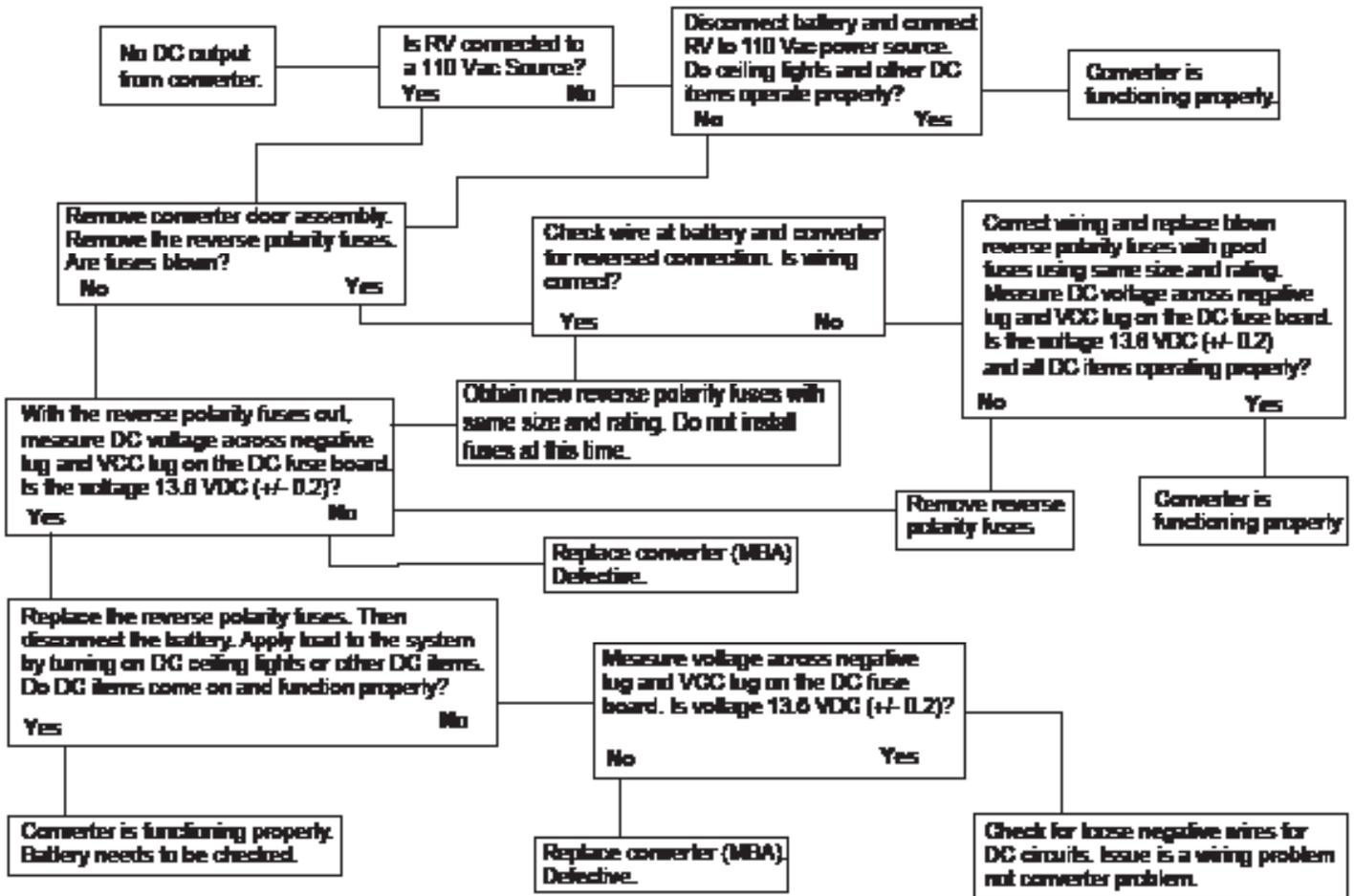
TROUBLESHOOTING MADE EASY

WF-8700 Power Center Series



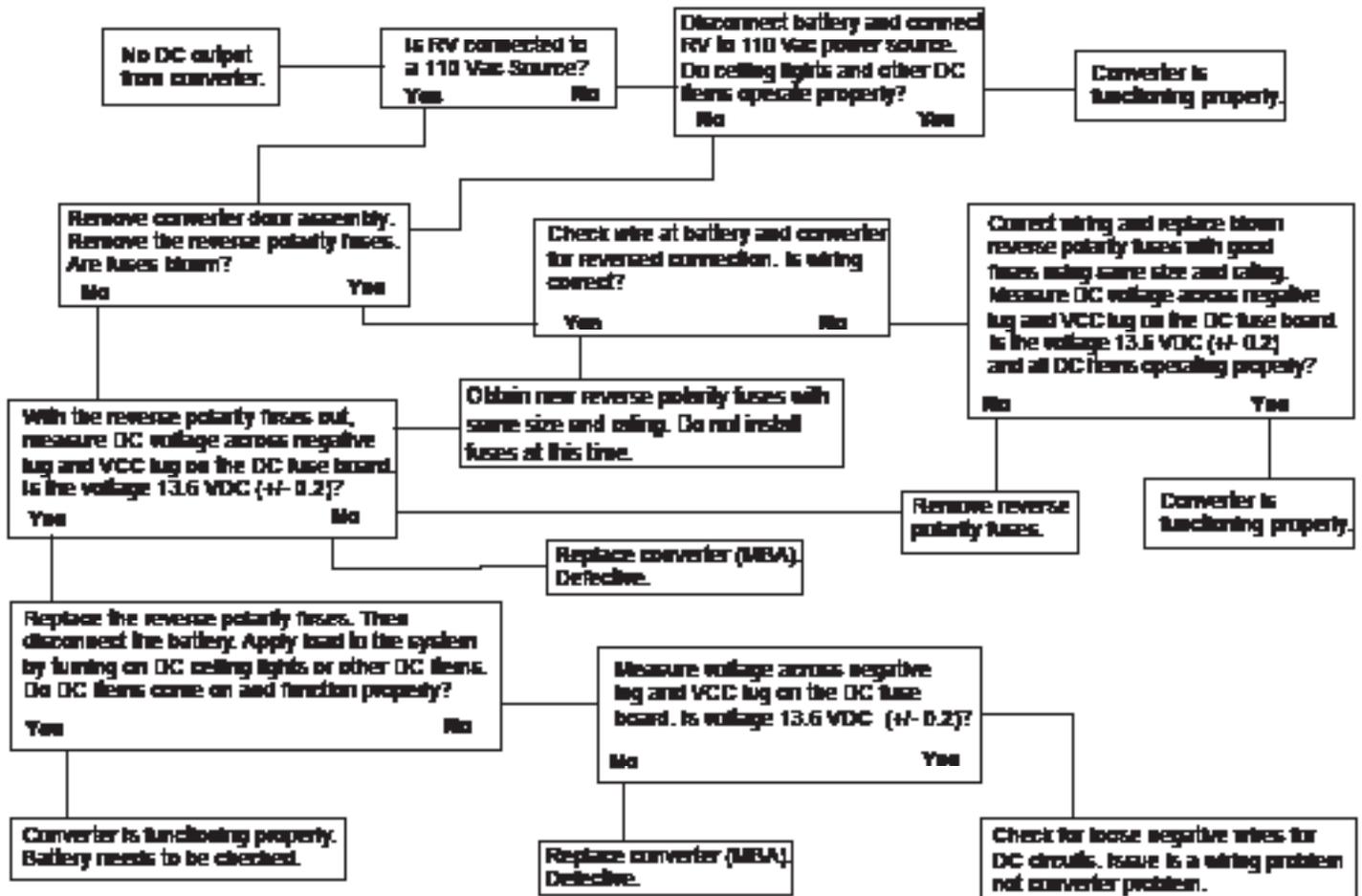
TROUBLESHOOTING MADE EASY

WF-8900 Power Center Series



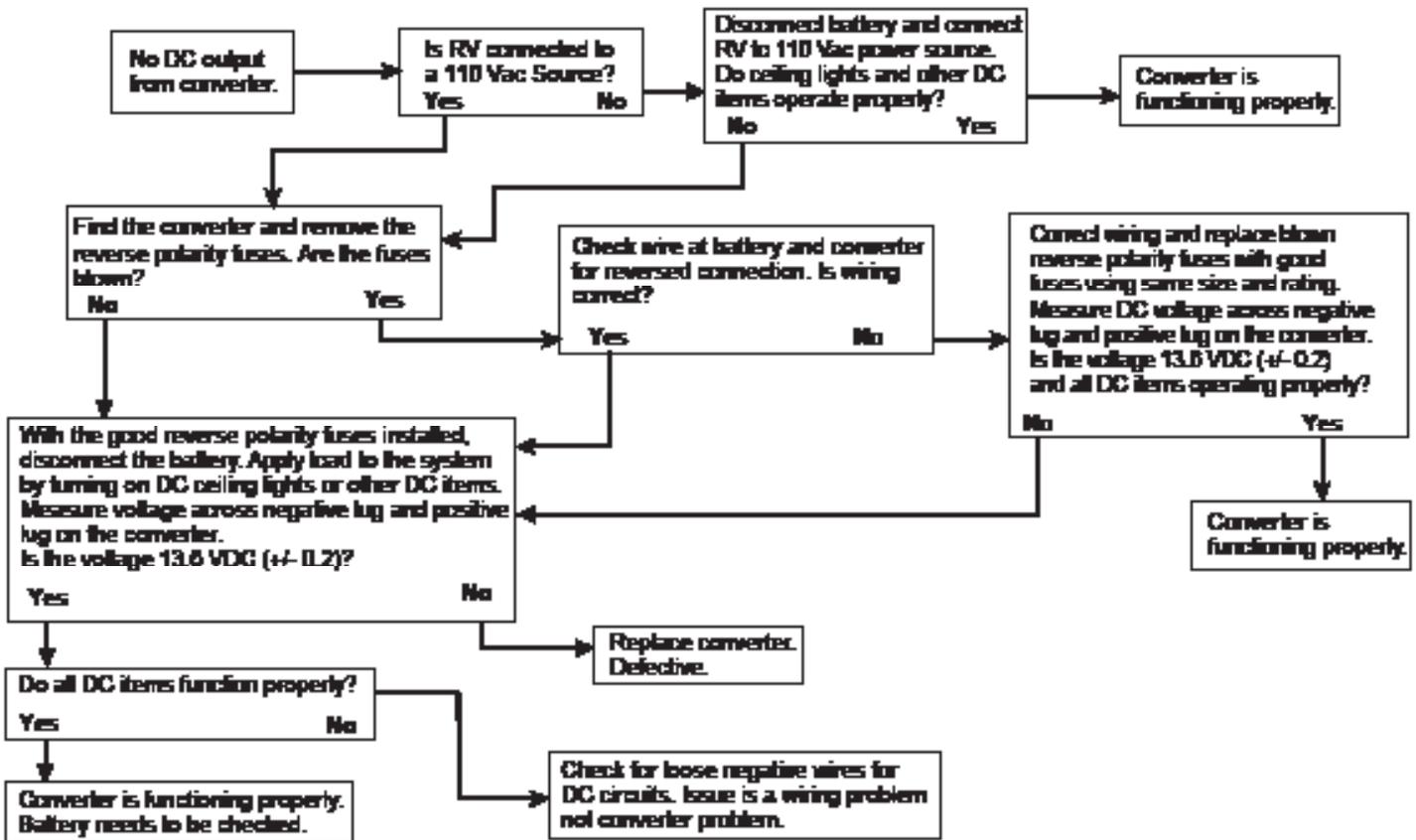
TROUBLESHOOTING MADE EASY

WF-9500 Power Center Series



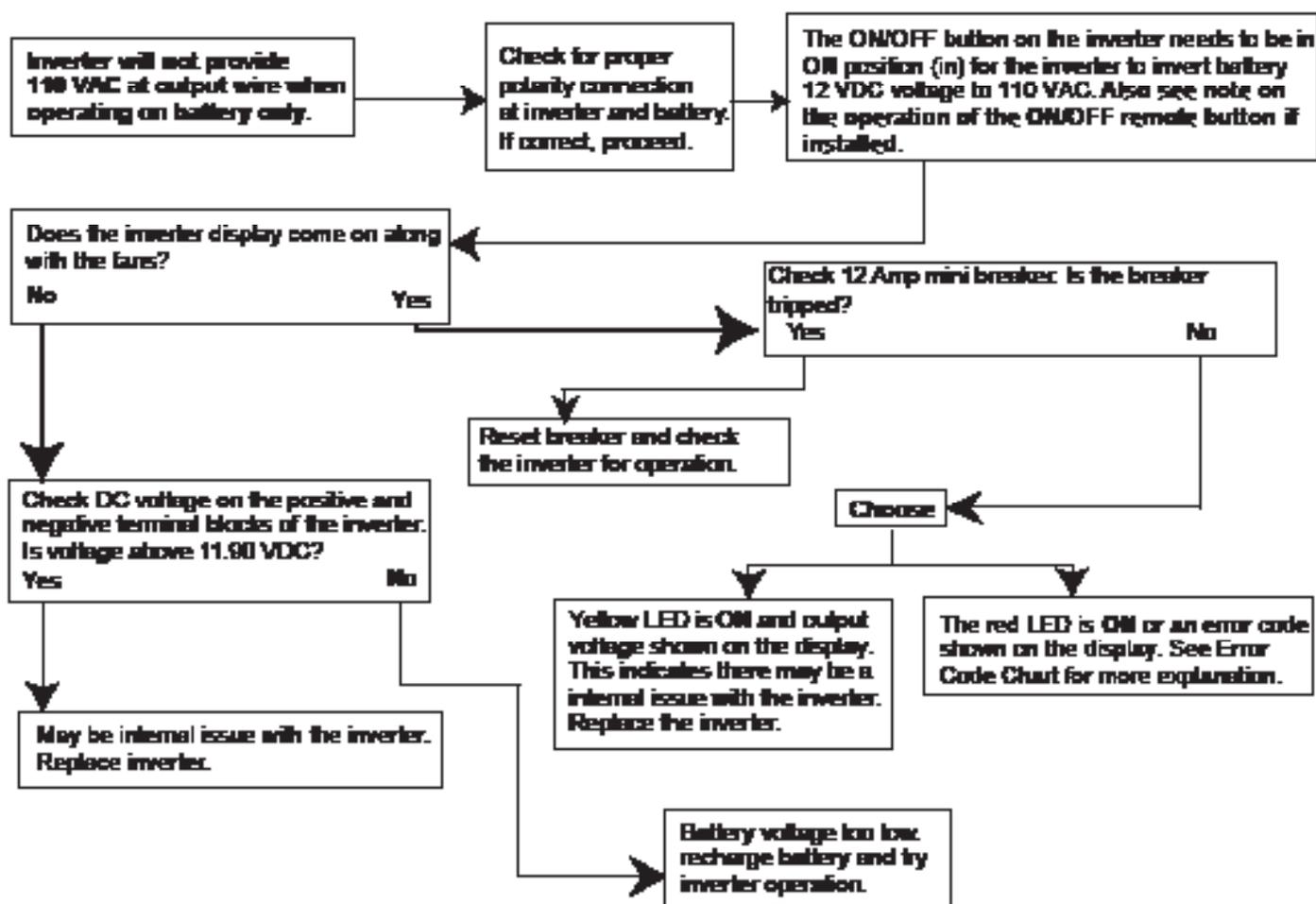
TROUBLESHOOTING MADE EASY

WF-9800 Deck Mount Converter Charger Series



TROUBLESHOOTING GUIDE

WF-5110 Inverter Series 1000-Watt Pure Sine Wave

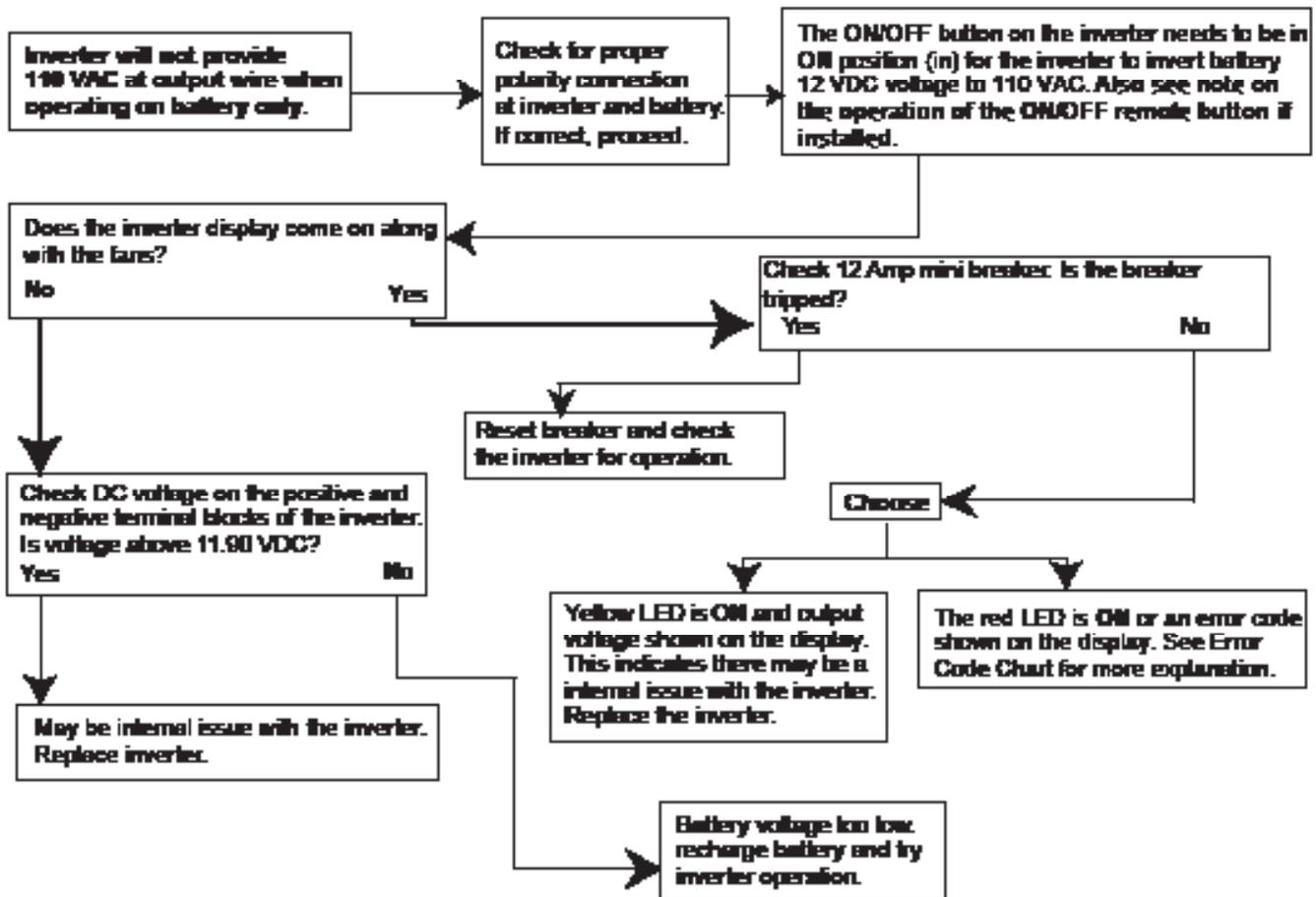


REMOTE OPERATION

The remote feature of the inverter provides a method to turn the inverter ON or OFF from a remote location. For this feature to work correctly, the ON/OFF button on the front of the inverter must be in the OFF (out) position. When turning the inverter ON from the remote location, a green LED on the remote will indicate that the inverter is ON. Should the green LED stay on constantly but the remote button has no function, check the ON/OFF button on the front of the inverter, verifying that the ON/OFF button is in the OFF (out) position.

TROUBLESHOOTING MADE EASY

Troubleshooting Guide for Shore-Power Connection WF-5220 Inverter Series 2000-Watt Pure Sine Wave



TORQUE VALES FOR WFCO PRODUCTS

TECHNICAL INFORMATION

WF-8500, WF-8700, WF-9500, WF-8900, WF-8930/50

Terminal Description	Wire Gauge (AWG)	Torque (in.-lbs.)	Terminal
Terminal Bars: Ground and Neutral*	10 - 12	25	NA35S
	14	15-20	NA35S
	8	30	NA35S
	6	35	NA35S
DC Fuse Panel Lugs: + VCC, NEG-, POS+	10 - 14	25	NA-82 (NEG-)
	8	32	CA60-2
	6	45	(POS+, VCC+)
DC Fuse Panel: Single Circuit Terminals	16	12-20	CA-42
	14	14-20	CA-42
	12	16-20	CA-42
	10	20-25	CA-42

+VCC is not present on WF-8930/50

*Will accept (2) #10 - (2) #14 wires; "(2)" represents two conductors

WF-8100, WF-9800 and WF-6800 Series

Terminal Description	Wire Gauge (AWG)	Torque (in.-lbs.)	Terminal
DC Battery Lugs: NEG-, POS+	10 - 14	25	NA-82
	8	32	NA-82
	6	40	NA-82
	2 - 4	45	NA-82

WF-5100 Series

Terminal Description	Wire Gauge (AWG)	Torque (in.-lbs.)	Terminal
WF-5110R DC Battery Lugs: NEG-, POS+	10 - 14	25	NA-82
	8	32	NA-82
	6	40	NA-82
	2 - 4	45	NA-82
WF-5118/5120 DC Battery Lugs: NEG-, POS+	2/0	120	NONE

EM-15, EM-20

Terminal Description	Wire Gauge (AWG)	Torque (in.-lbs.)	Terminal
Terminal Strip	12 - 14	7	EK950V

WF-T-57, WF-T-30 (Ground Lug Only)

Terminal Description	Wire Gauge (AWG)	Torque (in.-lbs.)	Terminal
Terminal Strip	6 - 14	25 - 35	NONE
Ground Lug	4 - 14	35 Max	LA-42



FREQUENTLY ASKED QUESTIONS

CONVERTER QUESTIONS

Where can I order a converter?

To order a WFCO converter, please refer to the "Where to Buy" tab in the navigation bar on wfcoelectronics.com. From the drop-down, click "RV Owner," "RV Dealer," or "RV Manufacturer."

Will WFCO help me install my converter?

Yes, WFCO provides a manual that can be obtained through wfcoelectronics.com by selecting your product under the "Products" tab and clicking on "More Info" and "Downloads." You can also call The Power Pros for general questions. For more advanced help, we recommend that a Certified RV Technician install your converter.

Where do I find the model number?

The WF-8800, WF-9800, WF-68100, and WF-5100 Series show the model number on the top label. The WF-8500, WF-8700, and WF-8900 Series' show the model number on the inside front panel next to the breakers.

Do you repair converters?

No. If the unit is within the 2-Year Limited Warranty, you may submit it for warranty consideration by following the "How do I file a warranty claim" procedure above. If the warranty is approved, a replacement unit will be issued with a warranty valid for the remainder of the original 2-Year Limited Warranty term.

What is the Reverse Polarity fuse?

The reverse polarity fuse protects the converter when a battery is used. If the battery were connected to the DC fuse board backward, the Reverse Polarity fuse(s) would blow, preventing catastrophic damage to the converter.

Reverse Polarity Fuses:

(Replace with an ATO or ATC fuse having same rating as the original.)

WF-8700 Series	WF-8900 Series	WF-9800 Series
8712 - 15A	8935 - 40A	9835 - 40A
8725 - 30A	8945 - 30A, 30A	9845 - 30A, 30A
8735 - 40A	8955 - 35A, 35A	9855 - 35A, 35A
8740 - 30A, 30A	8965 - 40A, 40A	9865 - 40A, 40A
8975 - 20A, 20A, 20A, 20A	8975 - 20A, 20A	9875 - 40A, 40A
WF-8500 Series	WF-9500 Series	
8540 - 25A, 25A	9540 - 25A, 25A	
8560 - 35A, 35A	9560 - 35A, 35A	
	9580 - 30A, 30A, 30A	

What size DC fuses do I need?

The manufacturer determines the fuses used for the DC circuits. Always replace it with the same type and size as the original.

What are the red LEDs on the DC fuse board for?

They indicate a blown fuse.

How many amps does the converter supply to the battery?

The battery will draw amperage out of the converter. In other words, the converter only provides the amount of amperage required by the battery. This amount is based on the model of the converter that you have and on the condition of the battery. Note that amperage is supplied to the RV load first, then the remainder goes to the battery. In other words, if you reduce the RV's electrical load, more amperage goes to the battery causing it to charge faster.

What is the pigtail for on the black wire to the converter?

The pigtail provides an additional circuit without losing that breaker space to the converter. Keep it capped off when not in use.

How do I get my converter into Float Trickle Mode?

Reduce the load on the system to almost nothing but the battery. Let the system sit undisturbed for approximately 44 hours. The converter voltage will drop to 13.2 V DC. If the converter sees any load during this period or after it is in Float Mode, it will revert to Absorption (Normal) Mode - 13.6 V DC.

Can I force my converter into Bulk Quick mode?

No. There is no means or need to do so.

Can I mount my converter in any direction?

Yes. If you mount a WF-68100, WF-8800, or WF-9800 Converter Series vertically, ensure the fan is on the bottom so cooler air can be drawn into the unit.

BATTERY QUESTIONS

Can I use any battery with WFCO chargers?

Deep-cycle batteries are recommended. They can be either the Lead-Acid or AGM type. The amp hour (Ah) rating should be shown on the battery; for example, 120 Ah. There are many batteries-related Internet sites. Here are some examples:

batteryfaq.org
trojanbattery.com
auto.howstuffworks.com/question219.htm
batteryuniversity.com

Does the converter need a battery to operate?

No. The battery works with the converter to supply DC power to the RV. A battery is typically only necessary if you do much dry camping or have slide-outs or a leveling system.

What type of battery do I need?

It is based on what type of camping you do. An average deep-cycle battery will work if you are plugged into shore power most of the time. We recommend using a deep cycle battery system rated at 100 Amp hours or more if you do much dry camping. The higher the amp hour rating, the longer the battery can deliver power.



FREQUENTLY ASKED QUESTIONS

CONVERTER QUESTIONS

Can I use AGM or Gel batteries?

AGM batteries are OK. See the Owner's Manual for more information.

Can I use more than one battery?

Yes. The batteries must be the same brand and type (preferably the same age). Adding more batteries will provide prolonged use of DC appliances when not on shore power but may reduce the converter's battery charging efficiency.

My battery takes a long time to charge, how can I speed it up?

Reduce loads inside the RV (e.g., turn off appliances and lights). This will provide more amperage to the battery.

What size wire should I have from my batteries to the converter?

Wire size is based on the distance from the battery to the converter panel. The longer the distance, the heavier the gage of wire required. Many charts on the internet will give you this information.

THE "NOT-TO-DO" LIST FOR BATTERIES

- Don't add a new electrolyte (acid).
- Don't place your equipment into storage without a trickle charger.
- Don't add tap water, as it may contaminate the electrolyte.
- Don't let the battery get too hot to the touch and boil violently when charging.
- Don't mix size or type.

TROUBLESHOOTING QUESTIONS

Why is there no AC power?

If you have no AC power, check the following:

1. Are you connected to AC power at the pedestal?
2. Is your Main Breaker tripped?
3. Check your wiring for any problems.

Why is there no DC power?

If you have no DC power, check the following:

1. Is AC power coming into your RV?
2. Is the converter breaker in the ON position?
3. Are the Reverse Polarity fuses in good condition?
4. Check your wiring for any problems.

To determine whether the converter is bad, call the WFCO Power Pros at **574-294-8997** and a technician will troubleshoot the unit with you.

Why aren't my batteries charging?

Even in normal "Absorption Mode", 13.6 V DC range, your batteries are charged slower. The converter will not work without AC input.

Before you call the Power Pros check the following:

1. Locate and record the WFCO converter model number.
2. Are you connected to Shore power?
3. Check breakers at the pedestal and in the power center for proper voltage.
4. Are all of the fuses on the DC panel, OK? Are any red LED's ON?
5. What is your battery condition? Does it have enough water? What is the age? Have you tested for shorted cells?

Voltage Check

1. Disconnected the Positive lead at the battery terminals and set aside.
2. Turn off all DC loads in the RV.
3. Are you reading 13.6 V DC between the Positive battery lead and the Negative battery terminal? If not, the Reverse Polarity fuses may be blown at the converter or there is an OPEN fuse or battery disconnect switch in the Positive battery lead
4. Any battery reading below 12 V DC while disconnected is a possible indication of battery trouble.

My lights are dimming. What is wrong?

If the lights dimmed, the converter is overloaded, or your coach runs only on batteries.

1. Remove some of the load by turning off 12 V lights and appliances.
2. Turn off the converter for 10 seconds to allow the unit to discharge by either turning off the breaker or unplugging the unit.
3. Turn the converter back on.
4. Check the output voltage of the converter. It should be approximately 13.6 V DC.
5. Check your battery. It may be damaged, or the water level may be low. Remember that your battery can pull up to 30A or more from the converter. Low temperatures also will have a major effect on your battery's performance.



FREQUENTLY ASKED QUESTIONS

CONVERTER QUESTIONS

Why do my lights flicker?

If the lights in the RV are flickering, that usually means that the converter is overloaded.

1. Remove some of the load by turning off 12 V lights and appliances.
2. Turn off the converter for 10 seconds to allow the unit to discharge by either turning off the breaker or unplugging the unit.
3. Turn the converter back on.
4. Check your battery. It might be damaged, or the water level may be low.
5. Check the output voltage of the converter. It should be at 13.6 V DC range.

Remember that your battery can pull up to 30A or more from the converter. Low temperatures also will have major effect on your battery's performance.

Should my fan run all the time?

No, the load controls the fan. The fan will start running at a low speed when you have approx. 3.0 to 6.0 DC amp draw. It will increase speed as you add more load until you have approximately 14.0 to 15.0 amps draw. The fan is at maximum speed and will stay there if you add more load. The fan will shut off if the amperage drops below 3.0 to 6.0 DC amps.

Why can I pull my fuses out of the fuse board and some of the LEDs light up, but some do not?

When a fuse blows, the red LED indicates a blown fuse. If the output circuit has no load (turning off the switch or turning off the appliance), the red LED will not light even if the fuse is blown or removed.

Why do I have voltage on the DC Fuse Board output terminals even though the fuse is not in place?

This is normal. There is only voltage present- no amperage. When a fuse is blown, you see the voltage the monitoring circuit needs that turns the red LED ON.

Why can't I see my converter produce 14.4 volts on my voltmeter?

The converter is a constant current device. This design will hold the current (amperage) constant while reducing voltage as loads increase. As amperage is reduced, the voltage will climb. The converter may be in Bulk Charge Mode, but due to the high amperage draw, you may see voltages in the high 12 V DC range.

WARRANTY QUESTIONS

What is the warranty on your products?

All WFCO products carry a 2-year warranty from date of purchase.

How do I file a warranty claim?

For Dealers and Retail Customers. All the necessary forms are available on wfcocoelectronics.com. Click on "Support" and select "Warranty Returns." Select the appropriate form on the page that opens. The documents can be filled in online and then printed. To receive an RGA number, email the completed documents and the Proof of Purchase to the email address on the form. If you need an immediate replacement, complete the "Credit Card Authorization" and fax that with the rest of your forms. Authorizations received before noon EST will be sent out that day.

Where do I return my converter for warranty?

For Dealers and Retail Customers. During the first year, manufacturers (OEMs) typically cover the warranty. If not, please contact the WFCO Power Pros at 574-294-8997, Option 1. Troubleshoot your unit with the Power Pros before filing any warranty claim. Should you need to return a product, please follow the procedure in "How do I file a warranty claim" above.

FREQUENTLY ASKED QUESTIONS

AUTO-DETECT QUESTIONS

What kind of batteries can I use with my Auto-Detect model?

Use any lead acid/AGM series battery or lithium iron phosphate. - Gel batteries are not recommended on Auto Detection models.

Can I use more than one battery with my converter?

Yes, more batteries will increase the run time when using your RV without AC service.

- Using a more extensive battery bank can cause longer charge times. Having the correct-sized model converter will help with shorter charging times. Call our Power Pros for more information.

Why does my battery take a long time to charge??

You can reduce the loads running to increase the current going to the battery.

-Turning off lights or other 12-volt appliances will increase the charge current to the battery.

What wire size should I have from my batteries to the converter?

Wire size is based on the rated output of the charger and the distance from the battery to the converter. The greater the distance between the converter and the battery, the larger the wire size should be connected. The longer wire distance, size, and length will determine the voltage drop. Charts are online to help with wire size, distance, and voltage drop.

THE RECOMMENDED TO DO LIST

- With lead acid batteries, be sure to check water levels.
- Don't use electrolytes (battery acid) to top off your battery levels. Use recommended distilled water after a full charge.
- Don't mix battery types or old batteries with new batteries. Using an old battery with a new one can damage the new one if left in storage unattended.
- If your battery feels hot to the touch, have your battery connections checked or have your batteries checked by a trained technician.
- If your battery is lithium, discharge enough capacity to allow your WFCO converter to enter charge mode. This is part of the Auto-Detect used to determine the correct battery profile for charging by the right battery type.
- Make sure your battery bank capacity is manageable for the converter charger. A larger converter charger is available for bigger battery banks. A smaller converter charger may take longer to charge.
- Example: 400-amp hour capacity battery bank with a WF-8725-AD unit. Suppose we were using the total 80 percent capacity of the battery. While the WF-8725-AD converter will charge a 400-amp hour battery bank, consider upgrading the wire and converter sizes to a more significant charge output to maintain optimum efficiency when charging from a generator. This will be different for each battery manufacturer. In that case, it means out of a 100-amp hour battery, 80 percent is usable capacity, so charging at 25-amp hours, you will have just over three hours of charge time per battery.

- Make sure you have the proper fuse size to match the wire size gauge and insulation type. Also, match the wire size to the output of the converter. Wire size should handle the current rating of the converter and the distance from the converter. Various wire charts on the internet will help explain distance, insulation rating, and distance for multiple voltages and current ratings.

TROUBLESHOOTING QUESTIONS

Why don't I have AC in my RV?

- Check your AC breakers at the service box where you plug in for service for your RV.
- Check your breaker at the Power Center or Distribution panel for tripped breakers. Please turn off the main breaker and turn it back on. Check the rest of the breakers in your distribution panel or power center and do the same procedure.
- If breakers are ok and don't appear tripped, check for loose wire connections. *(Do this with AC power and batteries disconnected from the system). *If you feel unfamiliar with the terminology or touching electrical equipment, you should schedule with your local RV technician for further assistance.

Why is there no DC output from my converter?

- Check your connection to AC service.
- Check AC breakers to make sure they did not trip.
- Check fuses for continuity with a continuity checker. Some volt meters will have this built-in or listed in the selection range for the volt meter.
- Check DC wiring for loose connections. The most common is a missing ground wire connection. Another is positive wire insulation being caught between the screw and the buss bar and not contacting the copper of the wire surface with the screw or buss bar.

Why are my batteries not charging?

- If you have 13.6 V DC in the batteries, this is the absorb voltage for lead acid series batteries and the power mode voltage for lithium batteries.
- Lead acid batteries will continue to charge at the absorbing mode at 13.6 V DC and charge slower. *State of charge (SOC) will determine the number of amps going to the battery.
- Lithium batteries at 13.6 V DC are the power mode voltage and are usually fully charged at this point.
- Check In-line fuses. There are multiple in-line fuses. The most common is auto-reset fuses. Most are thermal active types of fuses. These fuses are located within 18 inches on the battery-positive side from the battery to the converter. A voltmeter will be necessary to check for a bad connection.



QUICK FUNCTION DIAGNOSIS

(if knowledgeable and test equipment is available)

1. If the converter is possibly defective, it should be tested to determine if something is wrong.
2. The unit must check external fuses (continuity check preferred).
3. Set the meter to continuity or resistance, and place a one-meter probe on each leg. A good fuse will have low resistance <1.0 Ohm or continuity.
4. Check for proper and constant 120 V AC 105-132 V AC at the converter.
5. Disconnect the output wires (positive and negative) from the converter (no load).
6. Disconnect the battery from the terminals.
7. The output voltage should be in the 13.0 – 14.6 V DC range under no load conditions.
8. Attach the output wires to the converter.
9. Turn on a couple of lights for 10min and make sure the voltage does not drop below 13 V DC.
10. If the voltage is below 13 V DC with no load, call tech support at 574-294-8997.
11. All WFCO converter fans are load, not temperature controlled, except WF-8800 Converter Series.
12. When submitting a warranty claim, ensure proof of purchase is available.
13. The unit will only be considered for a warranty with proof of purchase. See other warranty limitations under WFCO Limited Two-Year Warranty Policy.
14. You can find warranty policies, forms, and dealer flat rates on the WFCO website.



WFCO WARRANTY

Two-Year Limited Product Warranty

Consumer Limited Warranty for WFCO Technologies Products

To provide better service to our customers, WFCO has adopted a Two-Year Limited Product Warranty Policy. The warranty starts with the purchase of the RV.

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 years. This limited warranty is extended specifically for and is limited to Recreational Vehicle applications 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 quality under regular use and service based on their intended use and function. This warranty is limited to the repair or replacement, at WFCO's discretion, of any defective parts or defective assembly. Unless applicable, State Law provides. Otherwise, any implied warranties of merchantability or fitness for intended use are limited in duration. You may have other rights as specified by each state.

EXCLUSIONS and LIMITATIONS

The OEM warranty specifically does not apply to the following:

- Any WFCO product that has been repaired or altered by an unauthorized person
- Any damage caused by misuse, faulty installation, testing, negligence, accident, or any WFCO product installed in a commercial vehicle
- Defacing the serial number, altered or removed
- Any WFCO product whose installation has not been per the 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. Specifications are subject to change without notice or obligation.

Any WFCO Technologies products sold through unauthorized Internet sources (example: eBay) will be excluded from all warranty coverages offered by WFCO.

CONSUMER WARRANTY CLAIM PROCEDURE

The warranty department will issue an RGA number after determining a defective WFCO product. You can request an RGA number by completing the Warranty Information Form found at wfcoelectronics.com.

Once completed, email the form and proof of purchase to warranty@wfcoelectronics.com or fax both forms to the Warranty Department **574-294-8698**. After receipt of the documents, the warranty department will issue an RGA number. This number must appear on all correspondence with warranty service. Write the RGA number in BOLD lettering on the top and sides of the shipping carton. DO NOT mark directly on the product. Package the product carefully and include a copy of both forms in the shipping carton. DO NOT use shredded paper or packing peanuts, as these materials may affect the testing of the product. Returns are

shipped with prepaid charges. WFCO will not be responsible for freight damage incurred during shipping to a service center. Upon validation of the warranty, WFCO shall replace the product with a like product.

WARRANTY ASSISTANCE

The consumer may contact the selling Dealer or OEM for warranty assistance. The consumer may also contact WFCO Technologies, at:
Phone: **574-294-8997** or
Fax: **574-294-8698**.

How to Submit a Claim – During the FIRST year of warranty?

1. Contact WFCO Technologies Technical Support at **574-294-8997** or **574-294-8997**.
2. Share any testing results.
3. Have product available to troubleshoot.
4. If warranty is needed contact OEM (Contact WFCO Technologies if OEM is out of business).
5. Complete the Warranty Information Form found at: wfcoelectronics.com. Once the form has been completed, email this form along with Proof of Purchase to warranty@wfcoelectronics.com or fax both forms to the Warranty Department **574-294-8698**. Request RGA number.
6. Submit unit.

How to Submit a Claim – After the FIRST year of warranty?

1. Contact Power Pro Technical Support at **574-294-8997, Option 1**.
2. Share any testing results.
3. Troubleshoot.
4. If warranty is needed, complete the Warranty Information Fax Sheet found at wfcoelectronics.com. Once the form has been completed, email this form along with Proof of Purchase to warranty@wfcoelectronics.com or fax both forms to the Warranty Department **574-294-8698**. Request RGA number.
5. Submit unit.
6. Unit will be evaluated.
7. If it is determined to be a warranty case, replacement unit will be issued.

What to send back?

In the case of WF-8500 and WF-9500 Series power centers, only send back the converter/charger. That is the lower portion of the power center. For the rest of the WFCO products, submit the entire unit with removed breakers, fuses, or any additional wires. For the WF-9800 Series, send the whole deck mount unit back. For the WF-8700 Series, remove breakers/fuses and send the entire unit back



WARRANTY SUBMITTAL INSTRUCTIONS

PRODUCT TO BE RETURNED

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

Please review this document to see what product to return. WFCO Technologies recommends that the following actions be taken prior to returning the unit to us for warranty. **Please Note: Do not cut the wires as that will be considered as abuse.** *MBA – Main Board Assembly (Converter/Charger section):

DO NOT REMOVE BATTERY REVERSE POLARITY PROTECTION FUSES	
MODEL NUMBER	ACTION
WF-8500 POWER CENTER SERIES WF-8540,WF-8540-AD,WF-8560,WF-8560-AD	Send in WF-8540/8560-MBA only
WF-9500 POWER CENTERS SERIES WF-9540-AD,WF-9560-AD,WF-9580-AD,WF-9580LiS-AD	Send in WF-9540/9560/9580-MBA only
WF-8700-AD POWER CENTERS SERIES WF-8712-P, WF-8725-P-AD WF-8735-P-AD, WF-8740-P-AD	Remove breakers and fuses Remove breakers and fuses
WF-8900 POWER CENTERS SERIES WF-8935AN-P/PEC-AD WF-8945AN-P/PEC-AD WF-8955AN-P/PEC/LiS-AD WF-8950L2PEC WF-8965AN-P-AD WF-8975AN-P-AD	Send in WF-8935-MBA only Send in WF-8945-MBA only Send in WF-8955-MBA only Send in WF-8950L2-MBA only Send in WF-8965-MBA only Send in WF-8975-MBA only
WF-9900 POWER CENTERS SERIES WF-9960/WF-9990	Send in WF-9960/9990-MBA only
TRANSFER SWITCHES T-30, T-57-P	Send in as is
WF-8900-REP REPLACEMENT KITS SERIES WF-8945-REP, WF-8945-AD-REP WF-8955-REP, WF-8955-AD-REP WF-8950L2-REP	Send in WF-8945 converter section ONLY Send in WF-8955 converter section ONLY Send in WF-8950L2 converter section ONLY
WF-6800 DECKMOUNT CONVERTER SERIES WF-68100A DECKMOUNT CONVERTER SERIES	Send in as is Send in as is
WF-9800 DECKMOUNT CONVERTER SERIES WF-9835, WF-9835-AD, WF-9845, WF-9845-AD, WF-9850L2 WF-9855, WF-9855-AD, WF-9865, WF-9865-AD, WF-9875, WF-9875-AD	Send in as is Send in as is
220 V AC MODELS WF-8725E, WF-8735E WF-8855E WF-8955E	Remove breakers and fuses Send in as is Send in WF-8955E-MBA only
WF-8930/50 DISTRIBUTION PANEL SERIES WF-8930/50N	Remove breakers and fuses
INVERTERS SERIES WF-5110H, WF-5110HP, WF-5110R, WF-5110RS WF-5118, WF-5120, WF-5220	Send in as is Send in as is
ENERGY MANAGEMENT SWITCHES EM-15, EM-20	Send in as is



LABOR RATES AND FREIGHT REIMBURSEMENT

LABOR RATES & REIMBURSEMENT GUIDELINES

Products Included: Power Centers, Inverters, Deck Mount Converters, Distribution Panels, Transfer Switches and Miscellaneous Parts.

STANDARD FLAT RATES

- WF-5100 Inverter Series 0.50 hrs. X dealer published rate
- WF-68100 Converter Series 0.50 hrs. X dealer published rate
- WF-8500 Power Center Series 0.50 hrs. X dealer published rate
- WF-8700 Power Center Series 0.50 hrs. X dealer published rate
- WF-8800 Converter Series 0.50 hrs. X dealer published rate
- WF-8900 Power Center Series remove and replace 0.75 hrs. X dealer published rate
 - WF-89xx-MBA Main Board Assembly only 0.5 hrs. X dealer published rate
 - WF-89xxAN-PCB Fuse Panel 0.20 hrs. X dealer published rate
- WF-8930/50 Distribution Panel Series 0.50 hrs. X dealer published rate
- WF-8930/50N-PCB Fuse Panel 0.20 hrs. X dealer published rate
- 9500 Power Center Series 0.50 hrs. X dealer published rate
- 9800 Converter Series 0.50 hrs. X dealer published rate
- EM-15/20 Energy Management Switches 0.50 hrs. X dealer published rate
- T-30/T-57 Transfer Switches 0.50 hrs. X dealer published rate

NOTE: Diagnostic time is built into the flat rate. Warranty claim checks will be processed within 30 days of claim submittal. Rates are subject to change.

FREIGHT REIMBURSEMENT

Freight reimbursement will be based on sending the unit to WFCO Technologies by use of standard methods such as UPS Ground or Standard Mail. Express methods will be denied.

Send a copy of warranty claim paperwork including the RGA number to:

Email: warranty@wfcocoelectronics.com

Mail:

WFCO Technologies
2021 Aeroplex Drive North, Elkhart, IN 46514
Fax: 574-294-8698

The following information MUST be included on the warranty claim form: make and model number, serial number, RGA number, reason for return, original date of purchase and year of RV.



WARRANTY INFORMATION SUBMITTAL FORM

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

**PROOF OF PURCHASE OF THE COACH/RV OR PRODUCT
MUST BE SENT IN WITH THIS REQUEST OR THE
WARRANTY CLAIM WILL NOT BE PROCESSED.**

EXPECT A 3-4 WEEK TURNAROUND FOR PROCESSING. OTHERWISE, SEE CREDIT CARD FORM TO EXPEDITE.

Date _____ (mm/dd/yy)

SHIPPING INFORMATION

Contact Name _____ Company Name _____

Shipping Address _____

Shipping City State, Zip _____

Hourly Labor Rate (Dealers Only) _____

Phone _____ Email _____

PRODUCT INFORMATION

Customer Name _____

Model Number _____ Quantity _____

Serial Number _____ Date Purchased _____ (mm/dd/yy)

Reason For Return _____

COACH INFORMATION

Year of trailer, coach, motor home _____ VIN Number of Vehicle _____

Model of trailer, coach, motor home _____ Make of trailer, coach, motor home _____

Once all necessary information is received, an RGA number will be assigned. A representative of WFCO Technologies will contact you via phone or e-mail with that RGA number.

NOTE: Write the RGA number on the outside of the box in bold lettering and send to WFCO Technologies for evaluation. **DO NOT** use packing peanuts or shredded paper when shipping the product back to us as your warranty will not be processed.



WF-8700 SERIES TROUBLESHOOTING FORM

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

**PROOF OF PURCHASE OF THE COACH/RV OR PRODUCT
MUST BE SENT IN WITH THIS REQUEST OR THE
WARRANTY CLAIM WILL NOT BE PROCESSED.**

This form is provided to decrease the warranty response time when submitting a claim. Please perform the testing below and record the readings in the marked areas. When completed, enter "Warranty Request" in the subject line of the email message and email this form and any associated warranty forms to warranty@wfcoelectronics.com or call 574-294-8997 option 1 to talk to Power Pros Technical Support.

Date _____ (mm/dd/yy) _____ Dealer

Contact Name _____

Phone _____ Email _____

Model Number _____ Serial Number _____

WF-8700 SERIES TESTING PROCEDURE

Disconnect battery to isolate the converter. Is battery disconnected: _____ Yes/No? Plug the shore cord into 30 or 50 AAC service as required. Is shore cord plugged into 30/50 AAC: _____ Yes/No?

Access to the wire at the back of the converter is necessary for testing the WF-8700 Series. Depending on its location, this can be accomplished by pulling the unit out of the wall or removing a seat or other access panel. Verify AC voltage is delivered to the converter. This can be accomplished by measuring across the output of the breaker (black wire) providing the power to the converter and Neutral Terminal Bar (white wire): Voltage at Converter: _____ V AC.

Turn off the converter's breaker. Pull the reverse protection fuse(s) from the fuse board and measure the fuse continuity: _____/_____ OHMS.

Turn breaker on and measure the voltage across the left fuse holder and the 10 AWG white wire coming out the back of the converter: _____ V DC.

Replace the reverse protection fuse and measure across the red wire and white wire coming out of the back of the converter: _____ V DC.

Do the lights work: _____ Yes/No? Explain: _____

AN RGA MUST BE ASSIGNED BEFORE RETURNING PRODUCT FOR WARRANTY

WFCO Technologies Power Pros Technical Support Team Use Only

WARRANTY APPROVED - Initial _____ Date _____ WARRANTY REJECTED - Initial _____ Date _____



WF-8500, WF-8900 & WF-9500 SERIES TROUBLESHOOTING FORM

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

PROOF OF PURCHASE OF THE COACH/RV OR PRODUCT MUST BE SENT IN WITH THIS REQUEST OR THE WARRANTY CLAIM WILL NOT BE PROCESSED.

This form is provided to decrease the warranty response time when submitting a claim. Please perform the testing below and record the readings in the marked areas. When completed, enter "Warranty Request" in the subject line of the email message and email this form and any associated warranty forms to warranty@wfcoelectronics.com or call 574-294-8997 option 1 to talk to Power Pros Technical Support.

Date _____ (mm/dd/yy) Dealer _____

Contact Name _____

Phone _____ Email _____

Model Number _____ Serial Number _____

WF-8500, WF-8700, WF-8900 & WF-9500 SERIES TESTING PROCEDURE

Disconnect battery to isolate the converter. Is battery disconnected: _____ Yes/No? Plug the shore cord into 30 or 50 AAC service as required. Is shore cord plugged into 30/50 AAC: _____ Yes/No?

Verify 120 V ac is being delivered to the converter. Measure across the output of the breaker (black wire) providing the power to the converter and Neutral Terminal Bar (white wire): Voltage at the Converter: _____ V AC.

Turn off the converter's breaker. Pull the reverse protection fuse(s) from the fuse board and measure the fuse continuity: _____ / _____ OHMS.

Turn the breaker on and measure the voltage across the +VCC and Neg- lugs: _____ V DC. Replace the reverse protection fuse(s). Measure across the Pos+ and Neg- lugs: _____ V DC.

Do the lights work: _____ Yes/No? Explain: _____

AN RGA MUST BE ASSIGNED BEFORE RETURNING PRODUCT FOR WARRANTY

WFCO Technologies Power Pros Technical Support Team Use Only

WARRANTY APPROVED - Initial _____ Date _____ WARRANTY REJECTED - Initial _____ Date _____



WF-9800, WF-8900-REP & WF-68100 SERIES TROUBLESHOOTING FORM

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

PROOF OF PURCHASE OF THE COACH/RV OR PRODUCT MUST BE SENT IN WITH THIS REQUEST OR THE WARRANTY CLAIM WILL NOT BE PROCESSED.

This form is provided to decrease the warranty response time when submitting a claim. Please perform the testing below and record the readings in the marked areas. When completed, enter "Warranty Request" in the subject line of the email message and email this form and any associated warranty forms to warranty@wfcoelectronics.com or call 574-294-8997 option 1 to talk to Power Pros Technical Support.

Date _____ (mm/dd/yy) Dealer _____

Contact Name _____

Phone _____ Email _____

Model Number _____ Serial Number _____

WF-9800, WF-8900-REP & WF-68100 SERIES TESTING PROCEDURE

Disconnect battery to isolate the converter. Is battery disconnected: _____ Yes/No? Plug the shore cord into 30 or 50 AAC service as required. Is shore cord plugged into 30/50 AAC: _____ Yes/No?

Verify 120 V ac is being delivered to the converter. This can be accomplished by measuring the voltage across the receptacle Power and Neutral: Voltage at Converter: _____ V AC.

Turn off the converter's breaker.

Pull the reverse protection fuse(s) in the end of the converter and measure the fuse continuity: _____ / _____ OHMS.

Replace the reverse protection fuses and turn the breaker on.

At the converter, measure the voltage across the +VCC and Neg- lugs: _____ V DC.

At the power distribution box, measure across the fuse board Pos+ and Neg- lugs: _____ V DC.

Do the lights work: _____ Yes/No? Explain: _____

AN RGA MUST BE ASSIGNED BEFORE RETURNING PRODUCT FOR WARRANTY

WFCO Technologies Power Pros Technical Support Team Use Only

WARRANTY APPROVED - Initial _____ Date _____ WARRANTY REJECTED - Initial _____ Date _____



WF-5110 SERIES TROUBLESHOOTING FORM

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

**PROOF OF PURCHASE OF THE COACH/RV OR PRODUCT
MUST BE SENT IN WITH THIS REQUEST OR THE
WARRANTY CLAIM WILL NOT BE PROCESSED.**

This form is provided to decrease the warranty response time when submitting a claim. Please perform the testing below and record the readings in the marked areas. When completed, enter "Warranty Request" in the subject line of the email message and email this form and any associated warranty forms to warranty@wfcoelectronics.com or call 574-294-8997 option 1 to talk to Power Pros Technical Support.

WF-5110 SERIES TESTING PROCEDURE

Shore Power Pass-Thru Mode

1. With Coach plugged into shore power, does the WF-5110 inverter have a green LED illuminated on the screen _____ Yes/No?
 - A. If YES
 - With a voltmeter, test the V ac output wires located in the rear of the 5110 - BLACK "POS" WHITE "NEU" GREEN "Ground". AC Voltage Reading _____ V ac - 105V ac-130V ac reading is working to specs.
 - If reading QV ac at AC output wires, check for tripped resettable AC breaker located in rear of the 5110 - If resettable AC breaker not tripped, unit INOP.
 - B. If NO
 - With a voltmeter, test the 110V receptacle the 5110 is plugged into _____ V ac.
 - If reading QV ac at outlet. - Further troubleshooting will be required excluding the 5110.
 - If reading 105V ac-130V ac at 5110 receptacle. - Please follow testing from 1-A.

Invert Mode

1. Do you have a proper DC input voltage of above 12 VDS at positive RED and Negative BLACK 12V input terminals? Located in the rear of the 5110 _____ Yes/No?
 - A. If YES _____ V DC
 - With the ON/OFF power button pushed into the ON position, do you have a YELLOW LED and LCD screen illuminated _____ Yes/No??
 - If YES - Please follow testing from 1-A.
 - If NO - Unit is INOP.
 - B. If NO
 - Check for blown in-line fuse usually located on battery positive cable between battery and 5110.

**FOR PROPER REMOTE OPERATION, THE ON/OFF POWER BUTTON
SHOULD BE PUSHED OUT TO THE OFF POSITION.**



WF-5220 SERIES TROUBLESHOOTING FORM

EMAIL WARRANTY@WFCOELECTRONICS.COM • FAX 574-294-8698 • PHONE 574-294-8997 OPTION 1

**PROOF OF PURCHASE OF THE COACH/RV OR PRODUCT
MUST BE SENT IN WITH THIS REQUEST OR THE
WARRANTY CLAIM WILL NOT BE PROCESSED.**

This form is provided to decrease the warranty response time when submitting a claim. Please perform the testing below and record the readings in the marked areas. When completed, enter "Warranty Request" in the subject line of the email message and email this form and any associated warranty forms to warranty@wfcoelectronics.com or call 574-294-8997 option 1 to talk to Power Pros Technical Support.

WF-5220 SERIES TESTING PROCEDURE

1. With RV plugged into AC service, does the grid LED light up blue?
2. Does your AC appliance or 120-volt loads run when plugged into AC service?
2. Turn on the inverter while plugging into AC service. You will see a blinking green status LED on the right of the grid LED that is blue. Is it blinking? This lets you know your inverter is on standby.
3. Disconnect from AC service. This will enable inverter mode; the green status light will be solid green when the AC service is disconnected.
4. Are there any error codes in the display? You should see voltages on the display that will include Grid input, AC input, Hertz Input, Inverter AC output (only in inverter mode, No AC service), Inverter Hertz output, Temperature reading, and Unit Fault Codes. Display options and instructions can be found inside the inverter manual for operations or on our website at wfcoelectronics.com, under support.
5. Check Battery voltage input for proper operation at the connections to the inverter unit. Voltage should be above 12 volts for proper operation.
6. Check battery condition for proper voltage, connections, and in-line fuses if no voltage is present at the back of the inverter.
7. Check reciprocal outputs for operation by plugging in a lamp or AC device. AC testers found at most local hardware stores will work, allowing us to see correct wire applications, for example, open neutral or ground.
8. If the inverter does not turn after checking connections, please call Power Pro tech support for further assistance at 574-294-8997 Option 1.



POWER PROS TECHNICAL SUPPORT



The Power Pros provide help in every way our customers need it. It's another example of WFCO Technologies being customer-focused, not stockholder-focused.

Our Power Pros have a combined 50+ years of technical experience. Most have built and serviced RVs and have a wide range of experiences with engineering and technical support of electrical products, including an RVIA-certified staff technician. When you call, the WFCO Technologies Pros are not looking in books for answers. You get years of experience giving you real-world advice that works. When you call, you get an answer right away or a return call within hours.

One of the significant differences at WFCO is that we are committed to distributing our products, allowing us total control of the customer service experience, a critical element in our customer-focused business philosophy.

Another essential aspect of WFCO Technologies is designing and manufacturing all our products. Our Power Pros possess intimate knowledge about every part of our products and their usage. This depth of understanding makes them a better resource for RV manufacturers. Our team understands OEM production lines and the demands on electric system installers. Additionally, our team can talk to OEM installers and other personnel in terms they know because of their experience working for RV OEMs.

Lean on WFCO's Power Pros; their expertise is integral to what makes WFCO the Heartbeat of Today's RVs.

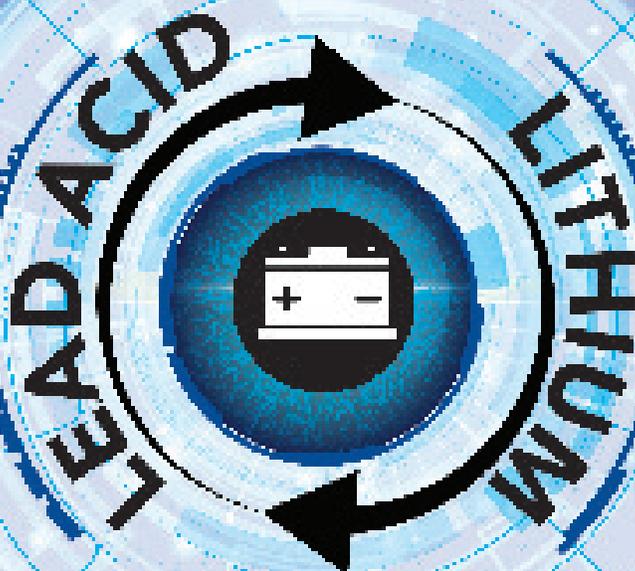
2021 Aeroplex Drive North · Elkhart, IN 46514
P- 574.294.8997 · F- 574.294.8698
wfcoelectronics.com



NOTES

AUTO-DETECT

INTELLIGENT BATTERY DETECTION



Exclusive to WFCO Converters, Power Centers, and MBAs, Auto-Detect is a new Patent Pending technology that will **DETECT** Lead Acid or Lithium Ion batteries and **AUTOMATICALLY** change the charging profile based on the battery.

Auto-Detect Enables RV owners to optimize their batteries without needing to change out an entire converter or operate a manual switch.

- The latest innovative technology from the WFCO Power Pros
- Lead Acid and LiFEPO4 compatible
- Detects battery chemistry, automatically changes and optimizes charging profile
- Innovative processor system that controls charging based on the need of the battery
- Improved fan control for better cooling and efficiency
- Continuous monitoring provides superior performance and battery maintenance

WFCO
TECHNOLOGIES
Innovating the future of RV POWER.

For more information, contact the **Power Pros**
at **574-294-8997** or **wfcoelectronics.com**

WFCO

TECHNOLOGIES

*Innovating the future of **RV POWER.***



Power Pros Technical Support
574-294-8997

2021 Aeroplex Drive North · Elkhart, IN 46514
P- 574-294-8997 · F- 574-294-8698
wfcoelectronics.com