

WFCO WF-9845-AD-CB

WFCO Arterra WF-9845-AD-CB Converter/Charger User Manual

Model: WF-9845-AD-CB | Brand: WFCO

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your WFCO Arterra WF-9845-AD-CB Converter/Charger. Please read this manual thoroughly before installation and use to ensure proper function and to prevent damage to the unit or connected equipment.

The WF-9845-AD-CB is a versatile, advanced power source solution designed to provide clean, reliable DC power for various applications, particularly in RVs and similar setups. It features automatic three-stage battery charging and electronic current limiting for enhanced safety and battery longevity.

2. SAFETY INFORMATION

Always observe the following safety precautions to reduce the risk of injury or damage:

- **Electrical Hazard:** Installation and servicing must be performed by qualified personnel. Disconnect all power sources before working on the converter.
- **Ventilation:** Ensure adequate ventilation around the unit. Do not block ventilation openings.
- **Fuse Replacement:** Replace fuses only with the same type and rating to prevent fire or electrical shock.
- **FCC Class B Compliance:** This device is designed not to cause harmful interference. However, if interference occurs, try reorienting or relocating the receiving antenna, increasing the separation between the equipment and receiver, or connecting the equipment into an outlet on a circuit different from that to which the receiver is connected.
- **Battery Connection:** Ensure correct polarity when connecting to batteries. Reverse polarity will blow the fuse.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

3. PRODUCT OVERVIEW

The WF-9845-AD-CB is a deckmount converter/charger designed for reliable power conversion and battery charging. Key features include:

- **45 Amp DC Output:** Provides stable 45 Amps of DC power for various loads.
- **Automatic Three-Stage Battery Charging:** Optimizes battery life with Bulk (14.4 VDC), Absorption (13.6 VDC), and Float (13.2 VDC) modes.
- **Auto-Detect Functionality:** Automatically detects battery type (lead-acid or lithium-ion) and adjusts charging profile.
- **Quiet Operation:** Cooling fan activates only when needed, reducing noise.
- **Electronic Current Limiting:** Automatically shuts down during overload or short-circuit conditions.



Figure 3.1: Front-side view of the WFCO Arterra WF-9845-AD-CB Converter/Charger, showing the main housing and power cord.



Figure 3.2: Rear-side view of the WFCO Arterra WF-9845-AD-CB Converter/Charger, highlighting the fuse panel and positive/negative terminals.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of your converter/charger:

1. **Choose a Location:** Select a dry, well-ventilated area for mounting the converter. Ensure there is sufficient space for air circulation around the unit. The unit is designed for deckmount installation.
2. **Mounting:** Securely mount the converter using appropriate fasteners. Ensure the mounting surface is stable and can support the unit's weight (approximately 5.25 lbs).
3. **AC Input Connection:** Connect the 15 Amp AC power cord to a suitable 105-130 VAC, 60 Hz power source. Ensure the circuit is properly fused and grounded.
4. **DC Output Connection:**
 - Connect the positive (+) DC output terminal (red) to the positive terminal of your RV's 12V distribution panel or battery bank.
 - Connect the negative (-) DC output terminal (black) to the negative terminal of your RV's 12V distribution panel or battery bank.
 - Ensure all DC connections are tight. Max torque for terminals is 45 in-lbs. Use a 5/32" hex key for tightening.
5. **Battery Connection (Optional but Recommended):** If connecting to a battery, ensure the battery is properly installed and charged. The converter will automatically detect the battery type (lead-acid or lithium-ion) and adjust its charging profile.

6. **Verify Connections:** Double-check all wiring connections for correct polarity and tightness before applying power.

5. OPERATING INSTRUCTIONS

The WF-9845-AD-CB converter/charger operates largely automatically once installed correctly.

5.1 Powering On

Once all connections are secure, apply AC power to the converter. The unit will automatically begin providing DC power and, if a battery is connected, will initiate its charging cycle.

5.2 Three-Stage Battery Charging

The converter features an automatic three-stage charging system to optimize battery life:

- **Bulk Mode (14.4 VDC):** Rapidly charges the battery to approximately 90% capacity.
- **Absorption Mode (13.6 VDC):** Safely completes the charging process, bringing the battery to 100% capacity.
- **Float Mode (13.2 VDC):** Maintains the battery at a full charge, preventing overcharging and extending battery life.

5.3 Auto-Detect Function

The WF-9845-AD-CB automatically detects whether a lead-acid or lithium-ion battery is connected and adjusts its charging profile accordingly. No manual selection is required.

5.4 Cooling Fan Operation

The cooling fan operates only when necessary to maintain optimal internal temperature, ensuring quiet operation during periods of low load.

6. MAINTENANCE

The WF-9845-AD-CB is designed for minimal maintenance. However, periodic checks are recommended:

- **Cleanliness:** Keep the unit clean and free from dust and debris. Ensure ventilation openings are not obstructed.
- **Connections:** Periodically check all electrical connections for tightness and signs of corrosion.
- **Fuse Inspection:** If the unit is not functioning, check the 30 Amp automotive-type fuses located on the unit. Replace blown fuses only with fuses of the same type and rating.
- **Environment:** Ensure the operating environment remains dry and within specified temperature ranges.

7. TROUBLESHOOTING

If you encounter issues with your WF-9845-AD-CB, refer to the following table:

Problem	Possible Cause	Solution
No DC Output / No Power	No AC input power; Blown fuse; Overload/Short circuit.	Check AC power source and connections. Inspect and replace fuses if blown. Disconnect loads to check for short circuit; reconnect one by one.

Problem	Possible Cause	Solution
Battery not charging	Loose battery connections; Blown DC fuse; Battery fault.	Check battery connections for tightness and corrosion. Inspect DC fuses. Test battery condition.
Fan running constantly or very loudly	High ambient temperature; Heavy load; Obstructed ventilation.	Ensure adequate ventilation. Reduce DC load if possible. Clean any dust or debris from fan and vents.
Interference with radio/TV	Proximity to sensitive electronics.	Increase separation between converter and affected devices. Reorient receiving antenna. Consult a professional if issues persist.

If troubleshooting steps do not resolve the issue, contact WFCO customer support.

8. SPECIFICATIONS

Feature	Detail
Model	WF-9845-AD-CB
Input Voltage/Frequency	105-130 VAC, 60 Hz
Output Power	45 Amps DC Output
Converter Type	Three-Stage Converter Charger (Auto-Detect)
Charging Modes	14.4 VDC (Bulk), 13.6 VDC (Absorption), 13.2 VDC (Float)
Weight	5.25 lbs
Product Dimensions	11.5 x 6.25 x 4.25 inches
Fuses	30 Amp (Automotive type)
Compliance	FCC Class B

9. WARRANTY AND SUPPORT

For warranty information and technical support, please contact WFCO customer service. Keep your purchase receipt as proof of purchase.

WFCO Customer Support:

- Refer to the official WFCO website for the most current contact information and warranty details.
- When contacting support, please have your product model number (WF-9845-AD-CB) and purchase date ready.

For additional resources, visit the [WFCO Electronics website](#).

