CANBAT

POWER CONVERTER / CHARGER

OWNER'S MANUAL

Please read this manual carefully before use! Subject to change without prior notice. Contact us if you have any other questions!

CONTENT

Important Safety Instructions 1

Specifications 2

Installation & maintenance 4

- Disconnect DC power 4
- Location 4
- Mounting 4
- Electrical requirements 4
- Electrical connections 5
- Lead acid 6
- Fixed / Lithium 7
- Troubleshooting 8

IMPORTANT SAFETY INSTRUCTIONS

SAFETY ALERT

FOR YOUR SAFETY, READ ALL INSTRUCTIONS BEFORE INSTALLATION AND OPERATION.
INSTALLER: Provide these instructions to the end user or consumer.
CONSUMER: Keep these instructions for future reference.
NOTICE: Products are not to be used nor are warranted in aerospace, medical or life safety applications.

WARNING — Avoid Possible Injury or Death

120 VAC is present. This Converter/Charger is designed to convert 120 VAC to 12 VDC. It also provides low voltage power for charging on-board 12 VDC batteries. The Converter/Charger is a "switch mode" type and is designed to be maintenance-free with no user serviceable components. The Converter/Charger power output is "current limiting" by design.

WARNING — Avoid Personal Injury or Product Damage

NEVER store electrical devices in compartments where flammable liquids (such as gasoline) exist.
DO NOT mount/install unit in compartments designed for storage of batteries of flammable liquids.

SPECIFICATIONS

CPC35-12

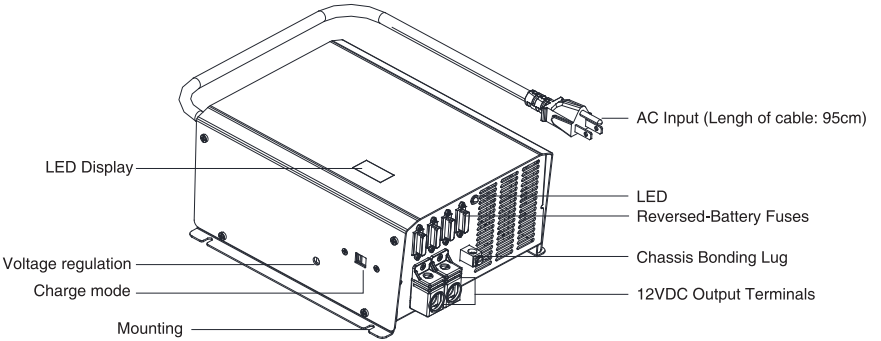
CPC45-12

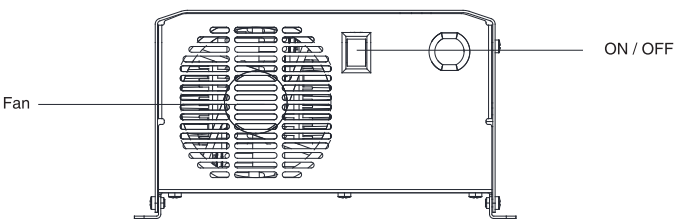
CPC55-12

CPC75-12

CPC100-12

Model	CPC35-12	CPC45-12	CPC55-12	CPC75-12	CPC100-12
DC Output Voltage (No Load) Approx	13-16.5 V				
Max Amp Output Continuous	35A	45A	55A	75A	100A
Max Power Input Continuous	802.8 watts	1011.6 watts	1284 watts	1752 watts	2340 watts
Max AC Current	6.69 amps	8.43 amps	10.7 amps	14.6 amps	19.5 amps
Typical Efficiency	>85%				
Fan Control	Proportional				
Protection	Reverse Polarity, Overload and Thermal Protection				


AC Input (Lengh of cable: 95cm)
LED Display
LED
Reversed-Battery Fuses
Voltage regulation
Chassis Bonding Lug
Charge mode
12VDC Output Terminals
Mounting


ON / OFF
Fan

INSTALLATION & MAINTENANCE

⚠ HI-POT TESTING

(Vehicle/device manufacturing facilities only) DO NOT Hi-Pot DC wiring with the converter/charger connected to the vehicle/device wiring in order to prevent serious injury and/or damage.

1. DISCONNECT DC POWER

Disconnect the battery POS (+) wire at the battery end before connecting this Converter / Charger to any vehicle / device wiring.

2. LOCATION

The mounting location may be on any interior (out of direct weather) surface. Location chosen must be accessible after installation. When mounted inside a cabinet, the cabinet must be large enough to allow dissipation of heated air. Make sure that there is a minimum of 1″ (one inch) free air space at each end of the unit so that cooling air can move through the unit properly. AVOID foreign contaminants such as dirt, metal particles or moisture.

3. MOUNTING

Flanges with holes are provided for ease of mounting using standard fasteners. Confirm that the surface that the converter is mounted to is solid and will hold the weight (6 lbs) during vehicleoperation.

4. ELECTRICAL REQUIREMENTS

A 120 VAC receptacle needs to be located within 36 inches of the Converter/Charger to supply power. Electrical consideration should also be given to mounting near the locations of the batteries and the 12-volt DC distribution panel.

5. ELECTRICAL CONNECTIONS

Be sure to tighten all connections securely. A loose connection can quickly cause terminals and wires to overheat.

◆ 120 VAC CONNECTION

First confirm that the 120 VAC power source AC circuit breaker(s) are in the [OFF] position. DO NOT turn-on AC circuit breakers until installation is complete.

- The terminal marked [+] or [POS] is for the RV 12 VDC positive connection.
- The terminal marked [–] or [NEG] is for the RV 12 VDC negative connection.
- The 12 VDC output wiring does not require over-current protection because the Converter/ Charger limits current output. However, all electrical connections need to comply with the appropriate electrical code

◆ 12 VDC WIRING

It is important to use the correct wire gauge. Use a minimum of 8 AWG size copper wire, but minimum of 6 AWG size copper wire for 100A.

- The terminal marked [+] or [POS] is for the RV 12 VDC positive connection.
- The terminal marked [–] or [NEG] is for the RV 12 VDC negative connection.
- The 12 VDC output wiring does not require over-current protection because the Converter/ Charger limits current output. However, all electrical connections need to comply with the appropriate NEC code.

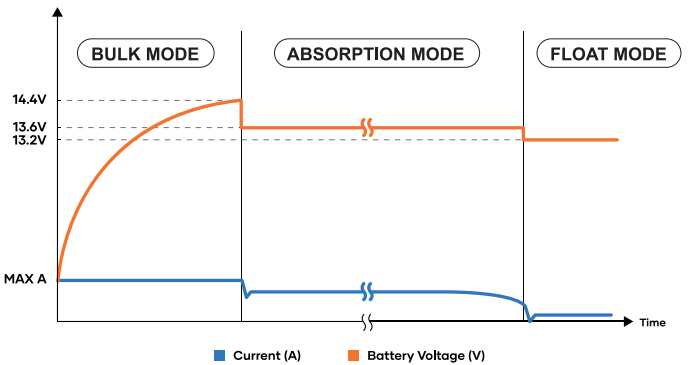
*THE FAN WILL NOT RUN ALL THE TIME. THE FAN IS TEMPERATURE CONTROLED AND WILL ONLY RUN WHEN NEEDED
Never Leave the Power Converter unattended when plugged in.

6. LEAD ACID

These are the factory settings with the smart charging mode with the output voltages preset to 14.4V / 13.6V and 13.2V.

DESCRIPTION: This mode provides an automatic charging system in three steps. 1. A fast charge to bring a good, drained battery back up to full voltage rapidly ("Bulk"). 2. A standard charge to bring the battery up to a full charge at a safe rate to prolong the life of the battery and provide power to run 12V lighting and appliances in the vehicle/device ("Absorption"). 3. A trickle charge to keep the battery fresh during times of load inactivity ("Float").

The charger automatically changes modes to accommodate changes in conditions. The chart below is for reference only, voltages may vary.



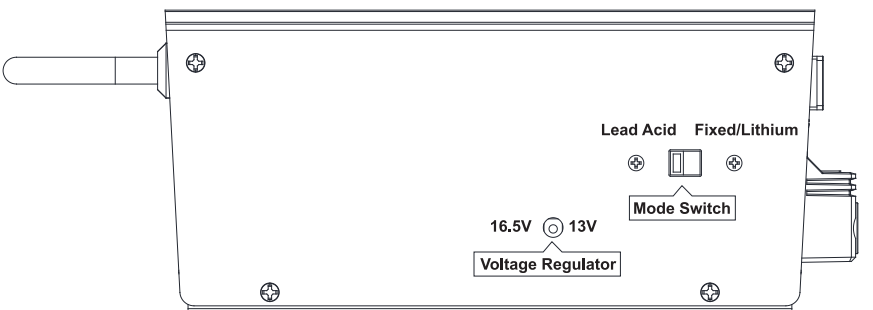
7. FIXED / LITHIUM

This mode can be used as either a converter or a lithium battery charger. The unit automatically detects whether a 12V equipment or a lithium battery is connected. The default voltage is fixed 14.4V, which is the required charge settings for most 12V LiFePO4 batteries on the market. If your battery requires a different voltage, you can adjust it using the voltage regulator.The output voltage can be checked on the built-in voltage LED display.

To set in *FIXED / LITHIUM* mode, with the unit off, move switch A, right to *FIXED / LITHIUM* then plug the unit into 110V power. Turn the voltage regulator gently to adjust the voltage between 13~16.5V until reaching your required output.

NOTE: The output voltage you set is now fixed constantly at this level every time the unit is powered ON.

To return the unit to its factory settings, power down the unit then move mode switch, left to *LEAD ACID*. Power up the unit and the unit already has a voltage meter built-in, use Voltage Regulator to gently turn the voltage up or down until you reach 14.4V. The unit is now back to the standard *LEAD ACID* Factory Setting.



8. TROUBLESHOOTING

NOTE: Before removing and replacing the converter/charger, perform the following checks:
a. Disconnect the AC power from the vehicle/device.
b. Disconnect the wiring and battery from the converter's Positive [+] output terminal.
c. Re-connect the AC power to energize the converter.
d. The Converter is OK if the voltage reading is between 13 VDC and 14 VDC.
Otherwise check the table below:

CONDITION	POSSIBLE CAUSE
No 12 VDC output	• 120 VAC not connected to coach or the coach AC circuit breaker is in the off position. • Reversed battery fuses blown. (Battery wiring connections are reversed). • Severe overload or shorted load. Remove all loads and retest per above instructions. • Converter/Charger internal failure.
Converter cycles On & Off	• Fan air flow is inadequate or blocked. (1" minimum free air space at each end required). • Converter/Charger internal failure.
Reversed Battery fuses blown	• Battery wiring connections are reversed. • Defective battery, possible bad cells.
12 VDC output is too low	• Attached load exceeds rating of the Converter/Charger. • Defective battery, possible bad cells. • Converter/Charger internal failure.
LED light is not on	• The output voltage of the charger has dropped below the battery voltage. If charging a battery, the unit is best to be in its factory starting at 14.4V, unless the battery manufacturer recommends otherwise. • Charger internal failure

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CANADIAN BATTERY MANUFACTURER

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