Installation and Operation Guide

EX-PC45 45 A Voyager Converter Charger

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NOTES

• Horizontal mounting of the power converter is recommended although it can be mounted in any position that provides unobstructed ventilation to the fan and vent holes.
• The OEM should test the power converter under full load conditions in its intended mounting location. This will ensure there is sufficient ventilation to the converter allowing it to operate at its maximum rated output. Failure to provide adequate ventilation to the converter will cause the converter output to be reduced as it responds to ambient conditions.
• The INTELI-POWER converters are not designed for zero clearance compartments.
• Use a 5/32" hex driver to tighten the output screws. Do not exceed 50 in-lb torque on the output terminals.
• The INTELI-POWER converters are not weather-tight or designed for wet mounting locations. They must be protected from direct contact with water.
• Avoid the introduction of foreign materials into the case as this could damage or cause a malfunction of the converter.

INSTALLATION

1. Secure the converter firmly to the mounting surface.
2. Connect chassis ground lug (found on unit base) to chassis. *Ground wire to be 10 AWG copper wire minimum (follow all applicable codes when sizing conductor).*
3. Disconnect the battery from both positive (+) and ground (-) cables.
4. Connect battery ground (-) to converter NEG (-) lug. *Conductor to be minimum 8AWG copper with minimum 75 ºC jacket rating (follow all applicable codes when sizing conductor).*
5. Disconnect any optional accessories or modules.
6. Plug the converter into the appropriate outlet.
7. Using a DC voltmeter, verify the converter output. If no output is measured, refer to the troubleshooting guide in this manual or on the Expion360 website.
8. Disconnect power to the converter.
9. Connect battery POS (+) to converter POS (+) lug. *Conductor to be minimum 8AWG copper with a minimum 75 ºC jacket rating (follow all applicable codes when sizing conductor)*. Note: When connecting the battery to converter POS (+), a spark may occur. This is normal.
10. Reconnect cables.
11. Reconnect any optional accessories or modules.
12. Reconnect power to the converter.

Torque Data
DC Lugs: 30 to 50 in-lb **Chassis Ground Lug:** 25 to 35 in-lb DO NOT REMOVE TERMINAL BLOCK SCREWS

CAUTION RISK OF FIRE
The chassis bonding wire must be a separate wire connected directly from the grounding lug provided on the converter. ***DO NOT*** connect output negative to chassis using the same wire.

FEATURES

MULTIPLE BATTERY CHARGING: INTELI-POWER converters have the capability of charging multiple batteries at the same time.

GFCI PROTECTION: INTELI-POWER converters have the LOWEST ground fault leakage. The user can confidently utilize the RV's AC outlets without concern of ground fault interruption of the shore power source.

REVERSE POLARITY PROTECTION prevents damage if battery leads are connected in reverse. If the battery leads are connected in reverse, the converter protection fuse will blow and damage to the converter will be avoided. Connecting the battery leads in reverse is the only event that will blow this fuse. Replacement blade fuses are available at any automotive store.

GENERAL OPERATION

INTELI-POWER converters will supply "clean" power from input voltages ranging from 105 – 130 Vac.

INTELI-POWER converters are designed for use with a battery; however, filtered DC voltage can power sensitive electronics without the need for a battery or other filtering.

At normal input voltages, the full-load rated capacity is available. At input voltages, less than 105 Vac the converter may not supply full-rated output capacity.

The full-rated output is available for load, battery charging, or both. When charging the battery, the converter has a nominal voltage output of 14.4 Vdc.

CAUTION
The EX-PC45 45 A Voyager Converter Charger is designed to charge lithium iron phosphate batteries. DO NOT USE THIS MODEL TO CHARGE LEAD-ACID BATTERIES!

When storing the vehicle for extended periods of time, disconnect the batteries. Follow the steps in the installation section before reconnecting the converter charger.

CAUTION
IF THE REVERSE POLARITY PROTECTION FUSES ARE BLOWN DURING INSTALLATION, CHECK TO SEE THAT THE BATTERY HAS BEEN CONNECTED PROPERLY BEFORE REPLACING THE FUSES. REPLACE THE FUSES ONLY WITH THE SAME TYPE AND RATING AS THE ORIGINAL FUSES. USING OTHER FUSES MAY RESULT IN CONVERTER DAMAGE, INJURY, OR OTHER CONSEQUENCES. (SEE WARRANTY)

WARNING
THIS EQUIPMENT IS NOT IGNITION PROTECTED AND MAY PRODUCE ARCS OR SPARKS. TO PREVENT FIRE OR EXPLOSION, DO NOT INSTALL IN COMPARTMENTS CONTAINING FLAMMABLE GASES OR MATERIALS.

PRODUCT SPECIFICATIONS

EX-PC45
Input: 105 – 130 Vac, 60 Hz, 725 Watts
Output: 14.4 Vdc, 45 Adc
Dimensions (W x L x H): 7.25 in x 8.25 in x 4.5 in
Weight: 4.5 lb

TROUBLESHOOTING GUIDE

Problem	Possible Causes	Action
1. No output	Proper AC power not connected	Connect power supply
		Check AC distribution panel for proper operation
	External fuses blown	Check for reverse polarity
		Replace fuses with the same type and rating
	Short circuit	Trace circuits for possible fault
	Overheating	Check the airflow
		Allow unit to cool
	Overvoltage condition (See also Item 4) (No overvoltage protection for 230 V units)	Check input voltage
		The converter will shut down if the input voltage exceeds 132 Vdc
		Correct the input voltage
2. External fuses blown	Reverse polarity connection	Correct connections and replace fuses with the same type and rating
3. Low output	Excessive load for converter	Reduce load requirements or install a larger converter
	Input voltage not between 105 – 130 Vac	Correct the input supply voltage
	Mild overheating	Check the airflow
		Allow unit to cool
4. Intermittent or no output when connected to a generator, works on shore power	The unit has shut down due to overvoltage	Add another load to the generator, this may reduce the spikes to an acceptable level
	Some generators produce excessive voltage spikes in the AC power output. This may cause the overvoltage protection to shut the unit down	Contact the generator manufacturer for a possible defect in the generator