Progressive Dynamics PD9300 Series Power Converter Installation Guide

Contents

PD9300 Series Power Converter

Installation and Operation Guide for PD9300 Series Power Converter

INTRODUCING
Multi-Battery Charging System
Selectable charging for
Flooded Lead Acid – AGM – Lithium
Utilizing Progressive Dynamics
TCMS technology

www.progressivedyn.com

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INSTALLATION INSTRUCTIONS

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 that there is sufficient unobstructed ventilation to the converter allowing it to operate at its maximum rated load. 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-lbs. 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.

WARNING:

THIS EQUIPMENT EMPLOYS COMPONENTS THAT TEND TO PRODUCE ARCS OR SPARKS – TO PREVENT FIRE OR EXPLOSION DO NOT INSTALL IN COMPARTMENTS CONTAINING BATTERIES OR FLAMMABLE MATERIALS

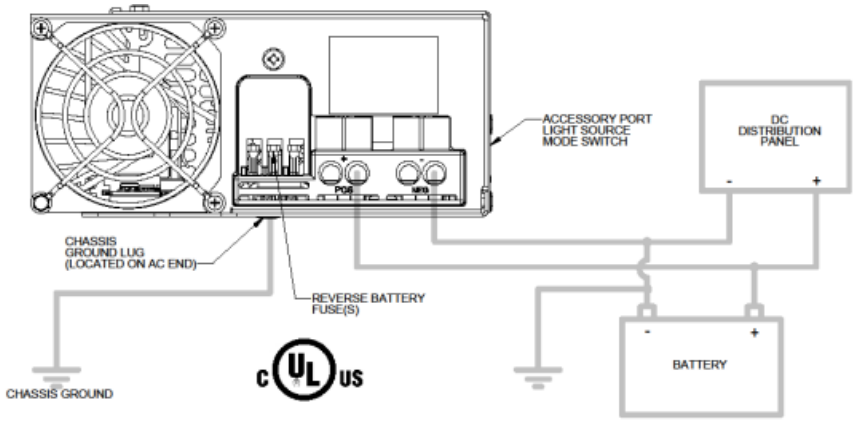
Installation Steps:

1. Secure converter firmly to mounting surface.

2. Connect chassis ground lug (found on unit base) to chassis.
• Ground wire to be between 6 and 12AWG wire.
3. Disconnect battery from both positive (+) and ground (-) cables.
4. Connect battery ground (-) to converter NEG (-) lug.
• Conductor to be between 2 and 10AWG (follow all applicable codes when sizing conductor)
5. Disconnect any optional pendant.
6. Plug converter into appropriate outlet.
7. Set converter to correct output mode.
8. Using a DC voltmeter, verify converter output.
If no output is present, refer to the trouble shooting guide in this manual and on the website.
9. Disconnect power to converter.
10. Connect battery positive (+) to converter POS (+) lug.
• Conductor to be between 2 and 10AWG (follow all applicable codes when sizing conductor)
Note: When connecting battery to converter POS (+), a spark may occur. This is normal.
11. Reconnect battery cables.
12. Reconnect any optional pendants or modules.
13. Reconnect power to converter.

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

Torque Data
DC Lugs: 30 – 50 IN LBS
Battery Ground Lug: 25 – 35 IN LBS
DO NOT REMOVE TERMINAL BLOCK SCREWS



FEATURES

SELECTABLE CHARGE PROFILES… Allow you to select the right profile for the battery being charged. The unit can also provide a constant output voltage for special needs.

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 facilities power source.

REVERSE BATTERY PROTECTION prevents damage if battery leads are cross connected. Since the only consequence of cross connection is a blown fuse, damage to or possible replacement of the converter is avoided. Cross connection of battery leads is the only thing that will blow these fuses. Replacement fuses are available at any automotive store

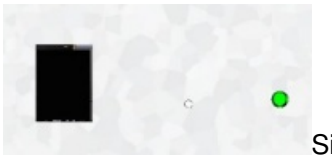
GENERAL OPERATION

The INTELI-POWER series converter will supply “clean” power from input voltages that range from 105-130 VAC.
CONSTANT VOLTAGE (MAGENTA LIGHT) – The full rated load is available for load, battery charging or both. When charging the battery, the converter has a nominal voltage output of 13.6 VDC.

CAUTION
DO NOT STORE VEHICLE FOR EXTENDED PERIODS OF TIME IN THIS MODE.
LITHIUM W/ 2 STAGE CHARGE (BLUE LIGHT) –

When charging the battery, the converter has a nominal voltage output of 14.4 VDC. When the converter senses an output current drop below a preset level, the converter will automatically switch to IDLE mode and the voltage output will drop to 13.6VDC

CAUTION
DO NOT USE TO RECHARGE FLOODED LEAD/ACID BATTERIES WHILE IN EITHER LITHIUM (BLUE) OR AGM (WHITE) MODE


Side of Converter

Accessory Port Mode Button Access
Mode Indicator LED
Green – Lead Acid w/ Wizard
Blue – Lithium
White – AGM
Magenta – Constant Voltage

⚠ **CAUTION**

IF THE REVERSE BATTERY 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, VEHICLE DAMAGE, INJURY OR OTHER CONSEQUENCES (SEE

WARRANTY).

⚠ **CAUTION**

IT IS IMPORTANT THAT THE FLUID LEVEL OF ANY CONNECTED BATTERIES BE CHECKED ON A REGULAR BASIS. ALL BATTERIES WILL "GAS" AND LOSE SOME FLUIDS WHEN CONTINUOUSLY CONNECTED TO ANY CHARGING SOURCE.

FLOODED LEAD ACID (GREEN LIGHT) – When charging the battery, the converter will sense voltage on the battery and automatically select the proper operating mode to provide the correct charge level to the batteries. If the voltage drops below a preset level the converter will automatically switch to BOOST mode and the output voltage will increase to approximately 14.4 VDC to rapidly recharge the battery. When the converter senses an output drop below a preset level, the converter will automatically switch to NORMAL mode and the voltage output will drop to 13.6VDC. If there is no significant battery usage for 33 hours the converter will automatically switch to STORAGE mode and the output voltage will drop to 13.2 VDC. In storage mode, the output voltage increases to 14.4 VDC for approximately 15 minutes every 21 hours to help prevent sulfation of the battery plates.

AGM (WHITE LIGHT) – When charging the battery, the converter has a nominal voltage output of 14.0 VDC. After a preset time, the converter will automatically switch to ABSORPTION mode and the voltage output will increase to 14.7VDC. When the converter senses an output current drop below a preset level, the converter will automatically switch to FLOAT mode and the voltage output will drop to 13.6VDC

Press and hold the MODE BUTTON for at least 3 seconds until the LED changed color. Continue to depress button until the desire battery type is selected.

See www.progressivedyn.com for more detailed description of operation

PD9330 Input: 105-130 VAC 60 Hz 500 Watts Output: 13.6 VDC – 14.7 V DC, 30 Amps Dimensions: 4.5H x 8.25L x 7.25W Weight: 4.5lbs	PD9345 Input: 105-130 VAC 60 Hz 725 Watts Output: 13.6 VDC – 14.7 V DC, 45 Amps Dimensions: 4.5H x 8.25L x 7.25W Weight: 4.5lbs	PD9360 Input: 105-130 VAC 60 Hz 1000 Watts Output: 13.6 VDC – 14.7 VDC, 60 A mps Dimensions: 3.6H x 8L x 9W Weight: 5.8lbs	PD9380 Input: 105-130 VAC 60 Hz 1300 Watts Output: 13.6 VDC – 14.7 VDC, 80 A mps Dimensions: 3.6H x 8L x 9W Weight: 6.0lbs

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	ACTION
	Proper AC power not connected	Connect power supply
		Check AC distribution panel for proper operation

1. No Output	External Fuses Blown	Check for reverse polarity
		Replace fuses with same type and rating
	Short Circuit	Trace circuits for possible fault
	Unit has shutdown due to overheating	Check air flow
		Allow unit to cool
	Unit has shutdown due to over voltage (Also see Item 4 below)	Check input voltage
		Converter will shut down if the input voltage exceeds 132 Volts
		Correct input voltage
2. External Fuses Blown	Reverse Battery Hook Up	Correct hook up and replace fuses with same type and rating
3. Low Output	Excessive load for converter	Reduce load requirements or install larger converter
	Input voltage not between 105-130 VAC	Correct input supply voltage
	Bad battery cell(s)	Replace battery
	Mild Overheating	Check air flow
		Allow unit to cool
	Incorrect Output Mode	Change output mode
4. Intermittent or no Ou	Unit has shutdown due to over voltage.	Add another load to the generator, this may reduce the “spikes” to an acceptable level

tput on Generator, wor ks on Shore Power	Some generators exhibit excessive voltage spikes o n the AC power output, this may cause the over volt age protection to shut the unit down	Contact generator manufacture r for possible defect in the gen erator
5. High Output	Incorrect Output Mode	Change output mode

Please refer to website for further trouble shooting information.

See website www.progressivedyn.com for more troubleshooting information and return instructions.

LIMITED WARRANTY: Progressive Dynamics, Inc. warrants its power control center to be free from defects in material or workmanship under normal use and service for a period of two years from the original date of purchase; and limits the remedies to repair or replacement.

This warranty is valid only within the continental limits of the United States and Canada.

See website **www.progressivedyn.com** for more warranty information and return instructions

Documents / Resources

	**Progressive Dynamics PD9300 Series Power Converter** [pdf] Installation Guide PD9300, PD9300 Series Power Converter, PD9300 Series, Power Converter, Converter

References

- One moment, please...
- User Manual