



- I. **LIMITED WARRANTY:** Progressive Dynamics warrants its power inverters to be free from defects in material or workmanship under normal use and service; and limits the remedies to repair or replacement.
- II. **DURATION:** This warranty shall extend for a period of two years from the original date of purchase, and is valid only within the continental limits of the United States and Canada.
- III. **WARRANTY EXCLUSIONS:** This warranty does not apply to:
  - A. Any product which has been repaired or altered in any way by an unauthorized person or service station
  - B. Damage caused by excessive input voltage, misuse, negligence, or accident; or an external force
  - C. Any product which has been connected, installed, or adjusted or used other than in accordance with the instructions furnished, or has had the serial number altered, defaced, or removed
  - D. Cost of all services performed in removing and reinstalling the power inverter
  - E. ANY LOST PROFITS, LOST SAVINGS, LOSS OF USE OF ENJOYMENT OR OTHER INCIDENTAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PRODUCT. THIS INCLUDES DAMAGES TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSES.
- IV. **PROOF OF PURCHASE:** A warranty claim must be accompanied by proof of the date of purchase.
- V. **CLAIM PROCEDURE:** Upon discovery of a defect, Progressive Dynamics shall be supplied the following information at the address listed below:
  - A. Name and address of claimant
  - B. Name, model, and serial number of the product
  - C. Application in which product was installed. (Included manufacturer, model, and model year where applicable)
  - D. Date of purchase
  - E. Complete description of the claimed defect

Upon determination that a warranty claim exists (a defect in material or workmanship occurring under normal use and service) the inverter shall be shipped postage prepaid to Progressive Dynamics together with proof of purchase. The product will be repaired or replaced and returned postage prepaid.

Mail Returns to: Progressive Dynamics  
507 Industrial Road  
Marshall, MI 49068

For Warranty Service [service@progressivedyn.com](mailto:service@progressivedyn.com)

For Full User's Manual Please Visit:

<https://www.progressivedyn.com/service/installation-guides/>

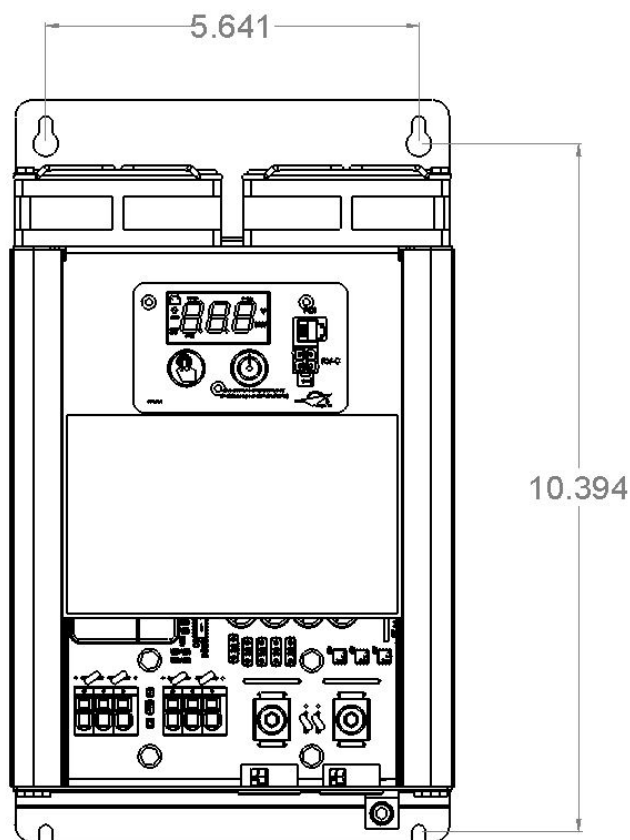
Record the unit's model and serial number in case you need provide this information in the future. It is much easier to record this information now, instead of trying to gather it after the unit has been installed.

Model:	Serial Number:
PD1610_ (1000 Watt)	
PD1618_ (1800 Watt)	
PD1620_ (2000 Watt)	

# Mounting Instructions

## Mounting Instructions

- Inverter may be installed horizontally or vertically. Vertical installations should be sure to protect the inverter from foreign debris falling inside the unit through the ventilation slots.
- External strain relief should be used for DC input wires.
- Inverter can be secured to a flat surface using the side mounting slots. See Figure 1 and Figure 2 for mounting hole pattern.
- Inverter should be located in a well ventilated compartment. Minimum compartment dimensions provide 2" of space above the inverter display and open on the electrical connection side. Operation in high ambient temperatures require additional ventilation space.



**Figure 1:** PD1610 Mounting Hole Pattern

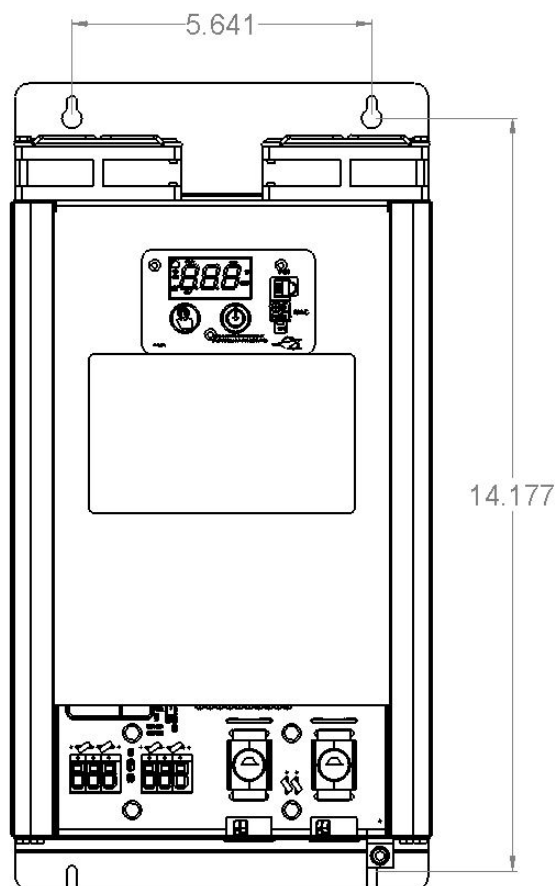
### **⚠ WARNING: FIRE, SHOCK, AND ENERGY HAZARD**

Inverter should only be installed by an electrician or a certified RV technician.

Inverter is NOT ignition protected. Do not mount in the LP gas or battery compartments

Inverter should be mounted in a dry, well ventilated space with adequate air flow

**Failure to follow these instructions may result in serious injury or death. Failure to follow these instructions may also damage the unit and/or equipment.**



**Figure 2:** PD1618/PD1620 Mounting Hole Pattern

### **⚠ WARNING: FIRE HAZARD**

DC Input wiring must be protected with properly sized circuit protection (fuses or circuit breakers)

Never operate the inverter without properly connecting the equipment ground.

Tighten the nuts on terminals properly. Loose connections cause excessive voltage drop and may cause overheated wires and melted insulation. DO NOT under tighten the screw on the terminal lugs. This will cause the wires to lose connection.

**Failure to follow these instructions may result in serious injury or death. Failure to follow these instructions may also damage the unit and/or equipment.**

### **⚠ NOTICE: EQUIPMENT DAMAGE**

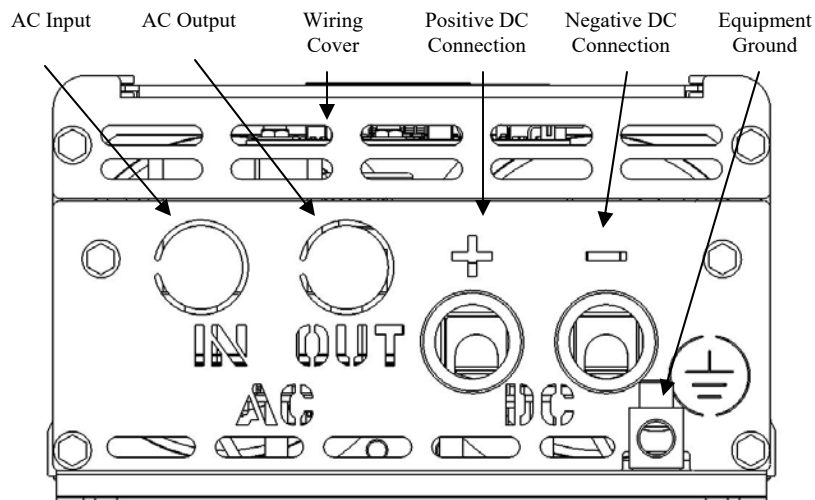
Do not connect any AC source (such as generator or utility power) to the AC output wiring of the inverter. Connecting an AC source to the AC Output of the inverter will result in hazardous conditions.

DO NOT disassemble the inverter. It does not contain any user serviceable parts. Attempting to service the unit yourself could result in an electrical shock or burn.

**Failure to follow these instructions may damage the unit and/or equipment.**

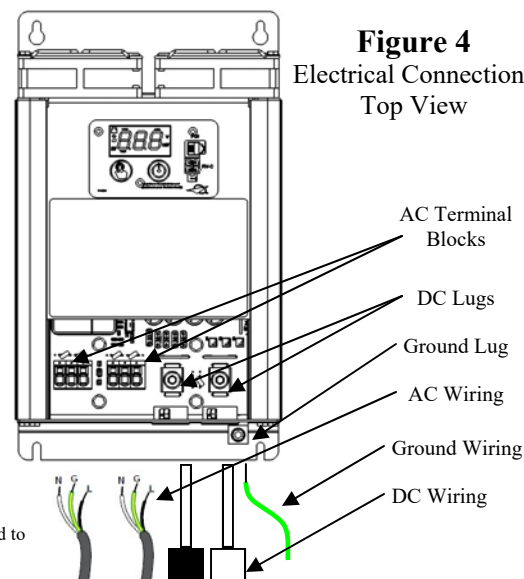
# Electrical Connection Instructions

PD1600 series Inverters are compatible with **BOTH** Lithium and Lead Acid batteries.



**Figure 3** Electrical Connections Side View

NOTE:  
For PD1600J series, use pre-installed power cord to connect AC-IN when connecting AC power.



**Figure 4**  
Electrical Connections  
Top View

## ELECTRICAL CONNECTION INFORMATION

		WIRE LENGTH	MIN. WIRE SIZE	STRIP LENGTH	CONNECTION INFO
DC WIRING	PD1610(1kW)	0-5 ft.	#2 AWG	Strip 3/4" (19 mm) insulation from each cable prior to installation. Do not leave excess copper exposed.	Tighten lugs to a torque of 100 in-lbs (11.3 N-m). <b>Do not over tighten.</b>
		5-10 ft.	#1 AWG		
		10-15 ft.	#1/0 AWG		
	PD1618(1.8kW)	0-10 ft.	#2/0 AWG		
	PD1620(2kW)	0-10 ft.	#2/0 AWG		
AC WIRING	PD1610(1kW)	0-100 ft.	#14 AWG Solid	Strip 0.6" (15 mm) insulation from each wire prior to installation. Do not leave excess copper exposed.	Standard 3/8" trade strain relief . No torque wrench required
	PD1618(1.8kW)	0-100 ft.	#14 AWG Solid		
	PD1620(2kW)	0-100 ft.	#12 AWG Solid		
GND WIRING	PD1600 Series	Any	#8 AWG	Strip 0.5" (13 mm) insulation from each wire prior to installation. Do not leave excess copper exposed.	Torque ground lug to 30-50 in-lbs.

NOTE: To ensure optimum performance all input wires should be as short as possible. Failure to meet minimum recommended wire size will result in reduced performance

### **⚠ WARNING: FIRE, SHOCK, AND ENERGY HAZARD**

Make sure wiring is disconnected from all electrical sources before handling. All wiring must be done in accordance with local and national electrical wiring codes.

**Failure to follow these instructions may result in serious injury or death.**

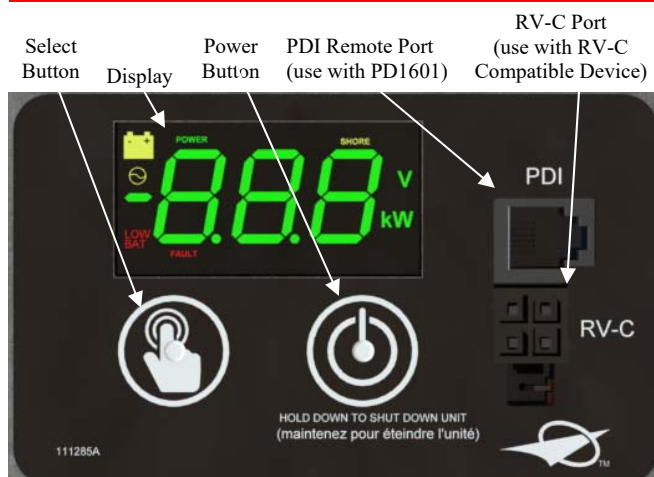
### Electrical Connection Instructions

1. Ensure all power sources are disconnected from the inverter
2. Remove the Wiring Cover
3. Remove AC Input knockouts and AC Output knockouts
4. Install 3/8" strain relief in AC Input and AC Output ports
5. Connect AC Out terminal block (Ground, Neutral, and Line)
6. Connect AC In terminal block (Ground, Neutral, and Line)
7. Tighten strain relief (if applicable)
8. Connect DC terminals (positive and negative) to battery with properly sized wires using a 5/32" hex key
9. When connecting DC wires a small spark may occur. This is normal charging of the inverter's internal capacitors
10. Provide external strain relief for DC wires
11. Connect equipment ground stud to a grounding point (typically the vehicle's chassis ) using a 5/32" hex key
12. Re-install the Wiring Cover

### Recommended GFCI for use with PD1600 Inverter:

Leviton GFTR2 , Eaton SGF20, Bestten USP-20A-20-PKB, Hongki TST20

# Inverter Display Panel



**Figure 7** Display Panel

## Display Features

- Power Button: Press to turn on; hold to turn off
- Select Button: Cycles between display states: Input Voltage, Output Voltage, Output Power, Standby, Error Code (if applicable)
- Power Indicator: Lights up green when the inverter is on
- Shore Indicator: Lights up yellow when AC input is detected
- Low Bat Warning Indicator: Lights up red when the battery is nearing the end of its charge
- PDI Remote Port for externally mounted display
- RV-C Port for communication with a RV-C compatible hub

ERROR CODES		
Error Code	Condition	Action
E-1	Low battery voltage detected	<ul style="list-style-type: none"> <li>• Re-charge the battery</li> <li>• Check DC cable size</li> <li>• Tighten DC connections</li> </ul>
E-2	High battery voltage shutdown	<ul style="list-style-type: none"> <li>• Disconnect external sources (alternator or charger)</li> </ul>
E-3	AC output overload shutdown	<ul style="list-style-type: none"> <li>• Evaluate the loads connected to the AC outlet of the unit. Loads may need to be reduced.</li> </ul>
E-4	Over-temperature shutdown	<ul style="list-style-type: none"> <li>• Reduce load to the AC output</li> <li>• Ensure that the inverter is in a dry, well ventilated space with adequate air flow</li> <li>• Ambient temperature may be too high</li> </ul>
E-5	Internal Error	<ul style="list-style-type: none"> <li>• Ensure all connections are tightened</li> <li>• Contact the PDI Service Department</li> </ul>
E-6	Short Circuit	<ul style="list-style-type: none"> <li>• Look for damaged AC loads</li> <li>• Look for faulty AC wiring</li> <li>• Evaluate peak power requirements for all loads</li> </ul>

## SPECIFICATIONS

PHYSICAL SPECIFICATIONS				TRANSFER SWITCH			
	PD1610	PD1618	PD1620		PD1610	PD1618	PD1620
Dimensions	L:11.2"(284mm) W:6.7"(170mm) H:4.0"(101mm)	L:15.0"(381mm) W:7.9"(200mm) H:4.0"(101mm)	L:15.0"(381mm) W:7.9"(200mm) H:4.0"(101mm)	Transfer Voltage	95 - 135 VAC		
				Transfer Time	< 50 msec		
Net Weight	7 lbs (3.2 kg)	11 lbs (5.0 kg)	11 lbs (5.0 kg)	Pass Through Ampacity	20 AAC		
AC OUTPUT				DC INPUT			
	PD1610	PD1618	PD1620		PD1610	PD1618	PD1620
Waveform	Pure Sine Wave			Nominal Voltage	12.0 VDC		
Output Voltage	120 VAC			Under-Voltage Shutdown	10.5 VDC		
Max Power (Cont)	1000W	1800W	2000W	Under-Voltage Restart	12.0 VDC		
Max Power (Peak)	2000W	3600W	4000W	Over-Voltage Shutdown	15.5 VDC		
Frequency	60 Hz			Over-Voltage Restart	15.0 VDC		
Peak Efficiency	90%			Max Current @ max load	100 ADC	180 ADC	200 ADC

\*All ratings at 25 °C unless otherwise listed

Consult a licensed electrician or RV technician for installation assistance

814420 Rev. C