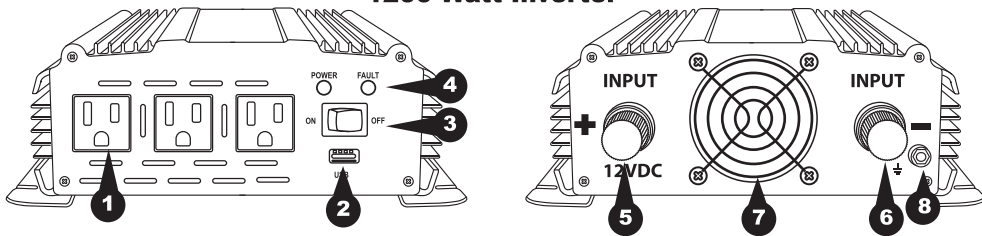


# DURACELL® High Power Inverter 1200W / 3000W User Guide

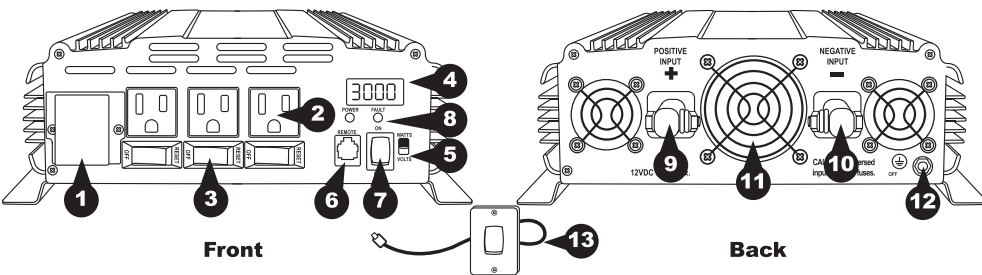
## Features

### 1200 Watt Inverter



1. AC outlets (3 total)
2. USB port
3. Inverter On / Off switch
4. Power/Fault LED lights
5. Positive DC input
6. Negative DC input
7. Cooling vent - IMPORTANT - DO NOT COVER
8. Ground connection

### 3000 Watt Inverter



1. AC output terminal
2. AC outlets (3 total)
3. AC outlet individual On / Off + circuit breaker
4. LED digital display
5. Digital display select (Watts / Volts)
6. Remote port
7. Inverter On/Off switch
8. Power/Fault LED lights
9. Positive DC input
10. Negative DC input
11. 3 Cooling vents - IMPORTANT - DO NOT COVER
12. Ground connection
13. Remote On / Off switch

## Getting Started

**SAVE THESE INSTRUCTIONS** – this manual contains safety and operating instructions for the inverter. Misusing or incorrectly connecting the inverter may damage the equipment or create hazardous conditions for users. Read the following safety instructions and pay special attention to all Caution and Warning statements in the guide.

**Warnings** identify conditions that may result in personal injury or loss of life.

**Cautions** identify conditions or practices that may damage the unit or other equipment.

### IMPORTANT

Consult an electrician. Installations must meet local and national wiring codes.

## Installation

### Wire Selection

Use the thickest gauge and shortest length allowed by your configuration and budget. As a rule of thumb no more than 2% loss should be allowed. The chart below lists minimum specifications, please consult a wire gauge chart for longer installations.

Failure to follow these safety guidelines may cause personal injury and/or damage to the inverter. It may also void your product warranty.

Maximum cable length (ft.) [2% voltage drop]

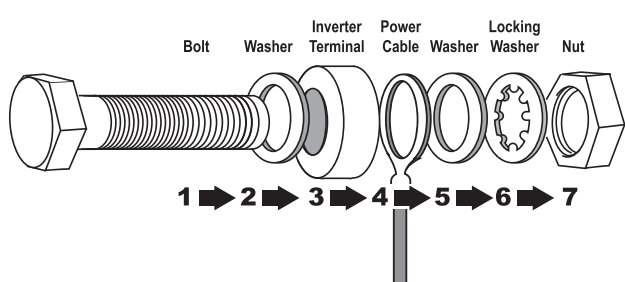
	Wire Gauge AWG						
	8	6	4	2	1/0	2/0	4/0
100A (1200W)		2.9	4.6	7.2	11.5	14.5	23
250A (3000W)			1.8	2.8	4.6	5.8	9.2

### IMPORTANT

All connections must be clean and tight for optimal performance. Loose connections will result in higher resistance loss of power and increased heating. Do not cover or obstruct ventilation openings.

Install in a ventilated area, leave at least 6 inches of space in front and behind the inverter for ventilation and at least 2 inches around the top and sides for the cooling fins to dissipate heat.

### Connecting the power cable to the inverter terminal - must be in this order



### Grounding

The ground connection can be connected to earth or chassis ground depending on the installation:

- **Land:** Connect to earth ground
- **Vehicle:** Connect to vehicle chassis of the vehicle. If power equipment is used outside the vehicle an earth-stake should be used.

### WARNING

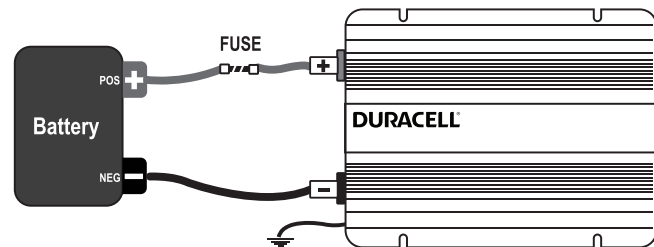
Loose connectors result in excessive voltage drop and may cause over heated wires and melted insulation, which can lead to electrical fires. Reverse polarity connections (positive to negative) will blow internal fuses in the inverter and may permanently damage the inverter.

### Permanent Installation

See diagram below. Install a UL-listed fuse in-line with the red input cable, as close to the battery as possible. Ensure tight connections.

Fuse size  
 DRINV1200 : ANL-200  
 DRINV3000: ANL-400

1. Connect the negative (black) terminal of inverter to the negative battery post.



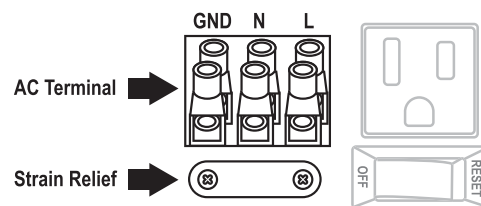
2. Connect the positive (red) terminal of inverter to the positive battery post.
3. Connect the ground terminal according to the GROUNDING section above.

### Direct Connect AC Terminal (DRINV3000 model only)

### IMPORTANT

AC extension wire and socket are not included with this inverter. Each wire should be no thicker than 10AWG.

1. Remove the cover to access the terminals.
2. Expose no more than 1/2" of conductor from each wire and secure the rest through the strain relief.
3. AC wire colors:
  - Line/Hot – Black or Brown
  - Neutral – White or Blue
  - Ground – Green or Green/Yellow



## Using The Inverter

### IMPORTANT

The inverter draws current in the ON position, switch it OFF to prevent it from drawing power from the batteries. See "no-load power draw" section in the specification table.

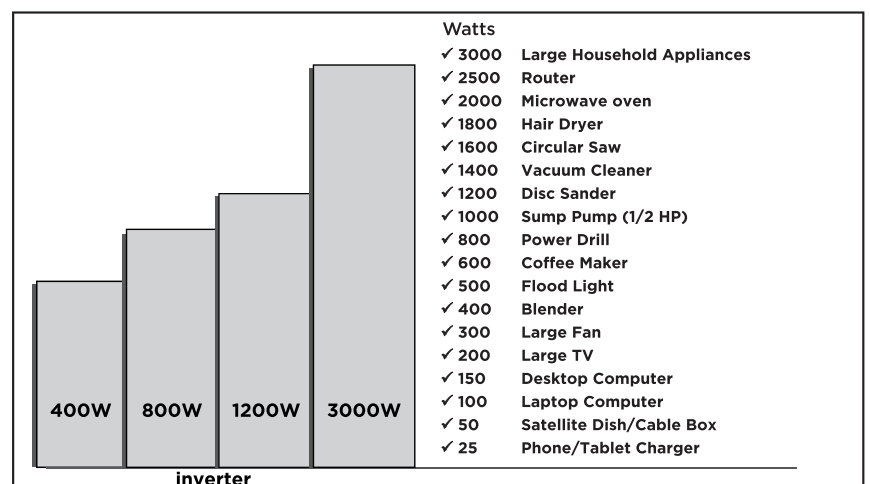
### Connecting your devices/appliances

1. Ensure that all connections are secure and DC power is available.
2. Connect AC devices.
3. Connect USB devices (1200 Watt Inverter Only)
4. Turn the inverter On/Off switch ON.

NOTE: Turn the inverter On/Off switch to OFF when done using the inverter to avoid discharging your battery.

### IMPORTANT

Your inverter is able to operate several devices at once, up to its maximum combined load. The 1200 Watt inverter can power a combined load of up to 1200 Watts of continuous power. The 3000 Watt can power a combined load of up to 3000 Watts of continuous power. If the total power draw of the connected devices, tools and/or appliances exceeds this maximum, the inverter will automatically shut down to avoid dangerous overload. The chart below shows an approximation of typical wattages for popular electrical items. Please consult the manual(s) of your device(s) to determine the exact wattage of your particular model.



### LED display (3000 Watt Inverter only)

Use the digital display select switch to show AC output power in Watts or battery voltage in Volts.

### Remote On/Off switch (3000 Watt Inverter only)

In order to use the remote, the inverter On/Off switch must be in the OFF position. The inverter can then be turned ON or OFF with the remote switch.

## Safety

### Under Voltage

At 10.5 ±0.3V input an alarm sounds, at 10.0V the inverter shuts down and the FAULT LED turns on. This protects the battery from over discharge.

### Over Voltage

If the input voltage is >15V, an alarm sounds, the inverter shuts down to protect itself and the FAULT LED will illuminate.

### Over Load

When power output exceeds the rated continuous power for extended periods of time or the surge power for more than 20 seconds the inverter will shut down. After the excessive load is removed the inverter can be restored by turning it on and off.

### Over Temperature

An alarm will sound and the FAULT LED will illuminate if the inverter overheats and will shut down if it does not cool down. Poor ventilation, over load or high room temperature can cause an overheating condition. The cooling fan is temperature controlled and turns on to prevent overheating during normal operation.

### Short Circuit

When an output short circuit occurs, the inverter will beep, the FAULT LED will turn on and the inverter will shut down.

## Specifications

	DRINV1200	DRINV3000
Continuous Rated Power	1200 Watts	3000 Watts (distributed between the 3 AC outlets - OR - full output wattage from the AC output terminal)
Peak Surge Power	2400 Watts	6000 Watts
Input Voltage (Nominal)	12 V	12 V
Output Voltage AC (Nominal)	115 V	115 V
Output Frequency (Nominal) 60 Hz	60 Hz	60 Hz
Output Waveform	Modified Sine Wave	Modified Sine Wave
Standby Current <0.80A <1.0A	<0.5A	<1.0A
Low Battery Voltage Alarm	10.5 VDC (+/-0.5VDC)	10.5 VDC (+/-0.5VDC)
Low Battery Voltage Shutdown	10.0 VDC (+/-0.5VDC)	10.0 VDC (+/-0.5VDC)
High Battery Voltage Shutdown	>15 VDC	16 VDC (+/-1.0VDC)
Efficiency	>85%	>83%
Dimension (L x W x H)	10.8" x 8.7" x 3.1" (275 x 220 x 78 mm)	16.5" x 10.2" x 3.6" (420 x 260 x 92 mm)
Weight	5.7 lb. (2.6 kg)	13.2 lb. (6.0 kg)
Operating Temperature	-5°C to 40°C	-5°C to 40°C
Operating Humidity	10 to 90% relative humidity	10 to 90% relative humidity

## Troubleshooting

Problem	Cause and remedies
No Power	A bad battery's voltage can be below the inverter's low voltage limit.
No Power	Check fuses and circuit breakers if installed.
No Power	Loose cable connections can create high resistance and voltage drops, check all connections.
Inverter turns off quickly	Over load: check the wattage of devices connected to the inverter and make sure they do not exceed the rated continuous wattage.
Alarm and/or fault led activates	low voltage, over temperature or overload may be the cause. Follow the remedies listed above.