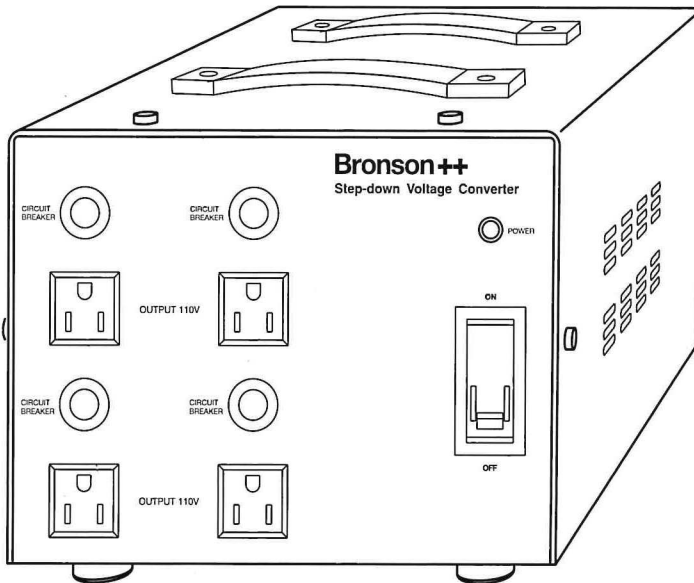


# Bronson++

High Efficiency Step Down Converter

Instruction Manual  
Bronson HE-D Series

Models: HE-D 3000, HE-D 4000, HE-D 5000



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**Instruction Manual  
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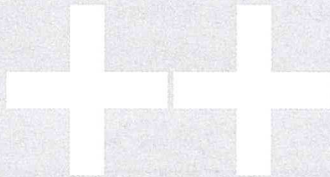
Before operating this product, please read these instructions carefully.

Thank you for selecting this Bronson HE-D Step Down Converter.

The Bronson HE-D Series converts the standard mains voltage from 220-240 Volts (Europe & UK) to 110-120 volts required for most American devices. Due to toroidal core technology the Bronson HE-D Series is energy efficient both in standby mode and under electrical load and will provide reliable protection for your connected equipment. This manual is a guide to install and use the converter. It includes important safety instructions for the operation and correct installation of the converter. If you should have any problems with the converter, please refer to this manual before contacting customer service.

Remarks: This model is single phase. Waveform is Pure Sine Wave and without distortion.

Automatic Voltage Converter



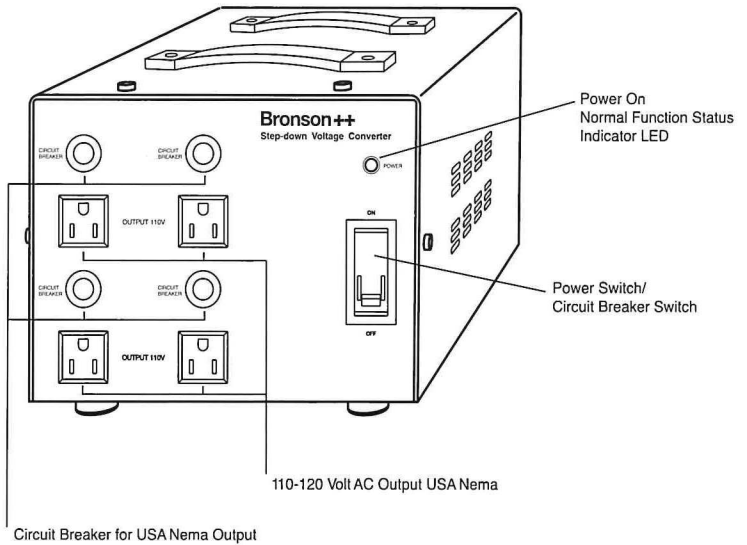
# High Efficiency Step Down Converter Instruction Manual

## Bronson HE-D Series

### 1. Introduction to the converter

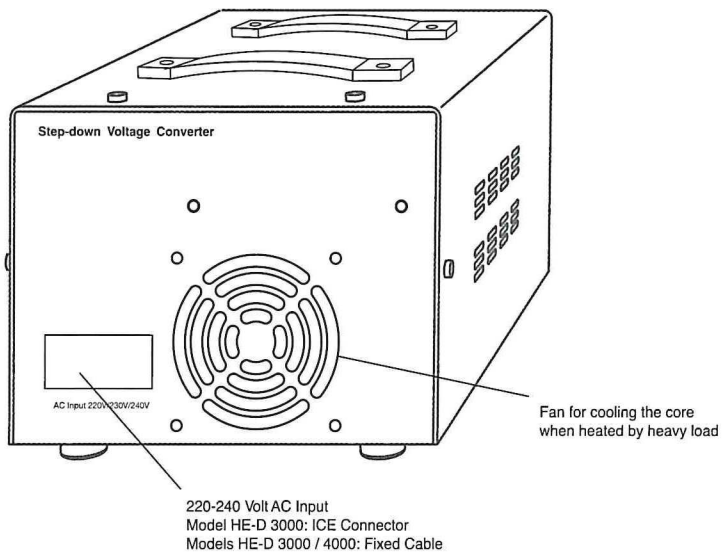
Please familiarize yourself with the various features of your voltage converter.

#### a. Front of the converter



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## b. Rear of the converter



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## c. Specifications

Maximum Capacity (Watts)	HE-D 3000	3000W
	HE-D 4000	4000W
	HE-D 5000	5000W
Continuous Working Capacity (Watts)	HE-D 3000	2400W
	HE-D 4000	3200W
	HE-D 5000	4000W
Input	Input Voltage	220-240v
	Input Frequency	50/60Hz
Output	Voltage	110v-120V
	Output Sockets	4 x USA Nema
	Maximum Load per Output Socket	15 Amp
Core Construction	Toroidal core	
Efficiency	98%	
Phase	Single Phase	
Waveform	Sinewave, no distortion	
Display	Green LED to indicate 'Power on'	
Protection	Short Circuit Protection: Circuit Breaker Switch	
	Overload Protection: Individual Breaker Switches for all 4 Outlets	
Ventilation	Fan for cooling the core when heated by heavy load	
Certification	CE	
Environmental	Operation Temperature	0°C-40°C
	Storage Temperature	15°C-45°C
	Operation Relative Humidity	10%-20%RH, Non-Condensing

## 2. Operation of the Automatic Voltage Converter

### a. Connecting the 110-120 Volt electrical appliances to converter's 110-120 Volt output socket/sockets:

(1) Check the specifications of the electrical appliances to be used with the converter, make sure that the combined total wattage ratings of all the appliances to be used with the converter won't exceed the Maximum Peak Capacity of the converter.

Please also note that the individual USA Nema outputs may not be loaded above 15 Amps, which is the maximum permissible load of USA Nema 5 outputs. Each of the four outputs is equipped with a 15 Amp circuit breaker to protect the output from overload

(2) Make sure all appliances are turned off before connection.

(3) **Caution:** Always make sure that your connected appliance are connected to the ground of your converter.

Always use an appropriate plug for connecting your equipment to the converter: The USA Nema output can only be used to connect Type A and B plugs.

### b. Connect the converter to the electrical mains

Plug the AC mains cord of the converter into the wall mains socket. The model HE-D 3000 has an IEC Connector for the connection of an IEC cable with either a EU Schuko or UK plug. The models HE-D 4000 and HE-D 5000 come with a fixed cable with either a EU Schuko or UK plug.

**Caution:** Always make sure that your converter is connected to the ground. Always use an appropriate socket to connect your converter. If you use a plug adapter to connect your converter make sure that it has a ground connection. Never connect the EU Schuko plug of your converter with a UK socket or every other socket that does not ensure ground connection.

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## c. Switch on the converter

- (1) Push the power switch to 'ON' position and wait until the GREEN LED will light up.
- (2) Switch on the appliances one by one.

## 3. Caution

### a. Always connect converter and connected appliances to ground

You can use your Bronson HE-D transformer to connect Class I as well as Class II appliances.

Class I appliances are electrical appliances that must be connected to the earth by means of a ground wire. Class II appliances are double insulated electrical appliance that do not require a safety connection to electrical earth.

Plugs that have a ground connection (e.g. Type B, E, F, G plugs) are typically used to connect Class I appliances. Always make sure that your connected Class I appliance are connected to the ground of your converter.

Always use an appropriate plug for connecting your equipment to the converter: The USA Nema output can only be used to connect Type A and B plugs.

If you are using adapters in order to connect other types of plugs, make sure they have a grounding connection.

Your Bronson HE-D Converter is a Class I appliance and therefore should only be connected to sockets with a ground connection, regardless of the devices you connect to your converter.

### b. Avoid Overloading

Do not connect to any appliance whose total wattage rating is beyond the maximum power rating of the converter (or to multiple appliances whose combined wattage ratings are greater than the maximum converter rating.) When connected to an appliance with a built-in motor compressor, the starting power is generally several times that of the appliance's listed power rating. Make sure that the total starting power capacity of all connected appliances does not exceed the listed maximum output power of the converter. For color TV, calculate twice the listed capacity.

Furthermore please note that the individual USA Nema outputs may not be loaded above 15 Amps, which is the maximum permissible load of USA Nema 5 outputs. Each of the four outputs is equipped with a 15 Amp circuit breaker.

Devices that can generate internal induction voltage or static charge should not be used with a HE-D transformers.

### c. This voltage converter does not convert the frequency of the entering current

Voltage converters do not convert the frequency (Hertz, Hz) of the electric current (eg. 60Hz in North America to 50Hz in Europe). For most devices this will not pose a problem, because they will be compatible on both 50 Hz and 60 Hz. For some equipment this can cause changes in running performance or damage to the equipment. These include, but are not limited to the following : analog clocks, electric typewriters, large home appliances, microwaves, motorized equipment, power tools, TVs, and record players. If you have any doubt about the compatibility of your device with a voltage converter, please contact the device manufacturer.

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### **d. Always place the converter in an environment that is:**

- Well ventilated.
- Not exposed to direct sunlight or heat sources.
- Out of reach of children.
- Away from water moisture, oil or grease.
- Away from any flammable substance.

### **e. When the circuit breaker switch for overload protection is tripped**

The circuit breaker trips to the OFF position and opens the circuit if the converter is over loaded with too much power from the connected appliances. If this happens unplug the converter from the wall outlet and remove all connected appliances. Wait a few minutes. Then re-connect the appliances. Ensure that the appliances are turned off before you connect them. Ensure that their combined rated power of all appliances does not exceed the power rating of the converter. Then connect the converter to the power supply. Switch on the converter and the connected appliances one by one.

### **f. When one of the circuit breakers of one of the USA Nema output is tripped**

The circuit breaker of one of the US Nema outputs is triggered when the corresponding output is loaded with more than the maximum permissible 15 amperes. If this happens remove the connected device from the corresponding socket. Press the circuit breaker to reactivate the corresponding output. Now you can use the output again. Before reconnecting a device to the output, make sure it is turned off. Ensure sure as well that the combined load of all appliances connected to the output won't exceed 15 amperes.

# Bronson++

**High Efficiency Step Down Converter**

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