



直流转交流电源转换器 使用说明

60W/75W/100W/120W/150W/160W/180W/200W/225W/250W/
300W/325W/350W/400W/450W/500W/550W/600W/800W/1000W/
1200W/1500W/1800W/2000W/2200W/2500W/3000W/3500W/
4000W/5000W/6000W/8000W/10000W/12000W/15000W/20000W

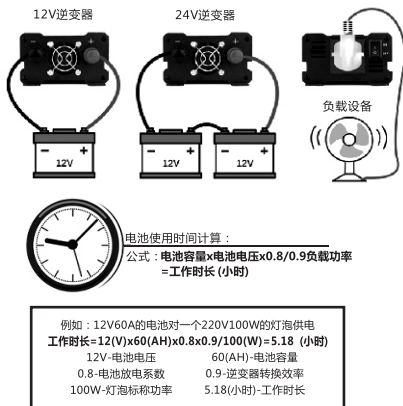
产品功能与特点

● 智能电源转换器（逆变电源），通过将汽车点烟器或电瓶获得的DC12/24V直流电转换为日常家用的AC110/220V交流电；有了它，您在家中使用的笔记本电脑、数码相机、摄像机、手机充电器、音像播放机、小型电视机、小型电冰箱、电热壶、微波炉、吸尘器、传真机、打印机、照明设备、通信设备、救护装置、电动工具等家电产品可以方便地带到您的爱车上使用，是您驱车外出旅行、野地宿营、移动办公的好伴侣。由于汽车发动机运转时能够给蓄电池持续充电，所以移动的汽车能给您提供源源不断的220V交流电。

● 本产品采用目前最先进的电源控制芯片设计，SMT贴片工艺、专利稳压技术、智能风冷系统，CPU微处理器实现多重保护，提供电池欠压、电池过压、输出过载、输入反接、过温等保护；不会因为忘记关闭使用的设备而造成汽车无法正常启动，全面保护您的爱车及移动用电设备。

● 外观特色：本产品采用铝合金外壳、化学成分稳定、抗氧化、坚固耐用，造型设计新颖美观，精致轻巧。

连接方法



安装使用方法

- 1 将转换器开关置于关（OFF）的位置，然后把雪茄头插入车内点烟器插口，确保插到位而接触良好。
- 2 确认所用电器之功率为转换器标称功率以下方可使用，将电器的220V插头直接插入转换器一端的220V插座内，并确保两个插座所连接电器的功率之和在转换器标称功率以内。
- 3 开启转换器开关，绿色指示灯亮，表示工作正常。
- 4 红色指示灯亮，表示因过压/欠压/过载/过温，导致转换器判断。
- 5 在很多情况下，由于车用点烟器插口输出有限，使得正常使用的转换器报警或关断，这时只要发动车辆或减小用电功率即可恢复正常。

技术参数

- 1 输入电压：(12V)11.0~15.0VDC/(24V)21.0~29.0VDC
- 2 输出电压：220VAC±5% 频率：50Hz ±5%
- 3 波形：修正正弦波 内置熔断丝：10A/15A/20A/30A/40A/70A
- 4 过热关断：60℃±5% 空载消耗：12V输入
- 5 输入电压参数对比：

输入电压	12VDC	24VDC
欠压报警	9.5~11.0V	19.5~21.0V
低压关断	9.0~10.5V	18.5~20.5V
过压关断	14.5~15.5V	28.0~30.0V
空载电流	<0.3A	<0.5A
转换效率	80%	80%

- 6 持续输出功率：
50W/60W/80W/100W/120W/130W/145W/160W/180W/200W/
240W/260W/280W/320W/360W/400W/440W/430W/640W/800W/
960W/1200W/1450W/1600W/1760W/2000W/2400W/3000W/6400W/8000W/
30分钟持续功率：
60W/75W/100W/120W/150W/160W/180W/200W/225W/250W/
300W/325W/350W/400W/450W/500W/550W/600W/800W/1000W/
1200W/1500W/1800W/2000W/2200W/2500W/3000W/3500W/4000W/5000W
峰值功率：
120W/150W/200W/240W/300W/320W/360W/400W/450W/500W/
600W/650W/700W/800W/900W/1000W/1100W/1200W/1600W/2000W/
2400W/3000W/3600W/4000W/4400W/5000W/6000W/7000W/8000W/10000W

注意事项

- 1 电视机、显示器、电动机、电钻、大型冰箱、空调等在启动时电量达到峰值。尽管转换器可以承受标称功率2倍的峰值功率，但有些功率符合要求的电器的峰值功率可能会超过转换器的峰值输出功率，引发过载保护，电流被关断。同时带动多个电器，可能发生这种情况，这时应先关闭电器开关，换开转换器开关，然后逐个打开电器开关，并应最先开启峰值最高的电器。
- 2 在使用过程中，电瓶电压开始下降，当转换器12VDC输入端的电压降到9.5~11.0v时(24VDC输入端的电压降到19.5~21.0V时)，报警器发出蜂鸣声，此时电及其它敏感电器应及时关闭。若忽视报警声，12VDC输入端的电压降到9.0~10.5V时(24VDC输入端的电压降到18.5~20.5V时)，自动关断，这样可以避免电瓶被过量放电。电源保护关断后，红色指示灯亮起，应及时启动车辆，给电瓶充电，防止电量衰竭，影响汽车启动和电瓶寿命。
- 3 长时间使用后，转换器壳体表面温度会上升到60℃，这是正常现象，但需避免接触发烫的点烟器插头，注意气流通畅，易受高温影响的物体应远离。
- 4 本产品采用智能风冷系统，根据负载功率大小，风扇会自动调节，一般当负载功率超过150W以上，排热风扇开始转动，切勿将异物伸入风扇，以免损伤风扇，保持风扇出风口通畅。
- 5 尽管转换器设有过压保护功能，当12VDC转器输入电压超过16V(24VDC转换器输入电压超过30V)，仍有可能损坏转换器。
- 6 使用转换器时，应视同于使用家用电源插座，严防湿手接触，绝对不允许在被淋湿的情况下使用！
- 7 请勿在无人状态下使用本产品，另外请将本品放置在儿童不易接触的地方，以防止事故发生！

常见问题和解决方法

1 问题:电器不工作，转换器指示灯不亮

原因	建议解决方法
电瓶不良	检查电瓶，根据具体情况更换
正负极接反	检查电瓶连接，转换器可能有损坏，更换转换器或差往保修
接线未连接	检查电缆线和连接处，旋紧接线柱

2 问题: 电器不工作，转换器红色指示灯亮

原因	建议解决方法
电器额定功率超过转换器标称功率，引起过载关断	使用功率小于转换器标称功率的电器
电器功率小于转换器标称功率，峰值功率过高，引起过载关断	电器峰值功率超过转换器峰值功率，使用峰值功率与转换器一致的电器
电瓶电量放完（转换器报警）	充电或更换电瓶
通风不良，引起过温关断	关闭转换器，冷却15分钟，将转换器放置在阴凉的地方，按要求减少负载，重新启动。
输入电压过高	检查充电系统工作状态，电瓶输出电压12V

3 问题: 测出的转换器输出电压过低

原因	建议解决方法
一般测量用的电压表读数幅度太小	测量修正正弦波转换器输出应用“具有有效值万用表”方能取得准确数据

4 问题: 转换器发出报警声

原因	建议解决方法
欠压或过温保护	缩短导线或使用加粗的导线，给电瓶充电，让转换器冷却，改善转换器周围通风条件，按要求减少负载

5 问题: 转换器只能带动小功率负载

原因	建议解决方法
电流通过导线时，电压衰减	缩短导线长度，使用加粗的导线

6 问题: 转换器排热风扇不转动

原因	建议解决方法
负载功率未超过150W	当负载功率超过150W以上，排热风扇开始转动

警告



触电危险，儿童远离



60W/75W/100W/120W/150W/160W/180W/200W/225W/250W/
300W/325W/350W/400W/450W/500W/550W/600W/800W/1000W/
1200W/1500W/1800W/2000W/2200W/2500W/3000W/3500W/
4000W/5000W/6000W/8000W/10000W/12000W/15000W/20000W

- Thank you for purchasing the power Inverter . the power Inverter is an ultra compact and highly portable power inverter from power Inverter, the leader in the field of high frequency inverter design. From the 12-volt or the 24-volt outlet in your car or boat., the power Inverter will reliably power a wide variety of household AC products, such as portable stereos, laptop computers, camcorders and mobile phone charges. The power Inverter is designed to provide years of trouble free operation and includes automatic safety monitoring circuitry to protect it, and your battery, from inadvertent overload conditions.
- Read this guide before installing or using the power inverter and save it for future reference.

Placement Guidelines

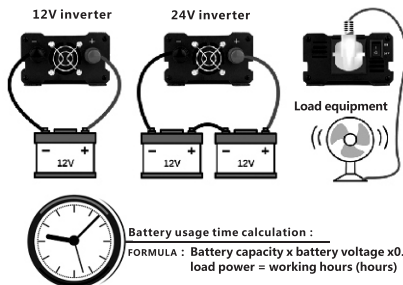
For optimum operation, the Power Inverter should be Placed on a flat surface such as the floor of a car. THE LOCATION SHOULD BE:

- Dry. Do not expose to water drip or spray.
- Cool. Operate only in ambient temperatures between 32°F (0 °C) and 104°F (40 °C). Keep away from heating vents.
- Well ventilated. Allow at least 2 inches (5 cm) clearance above and on all sides of the Power Inverter for proper cooling.

Using the Power Inverter

The Power Inverter 80H/100H/120H/150H/180H/200H/225H/250H/300H/325H/350H/400H/450H/500H/550H/600H/800H/1000H is capable of continuously powering most 220-volt AC products that use 60W/80W/100W/120W/145W/160W/180W/200W/240W/260W/280W/320W/360W/400W/440W/480W/640W/800W or less. Its AC output waveform, called function similarly to the sine wave shape of utility power. Most AC products rated for 60W/80W/100W/120W/145W/160W/180W/200W/240W/260W/280W/320W/360W/400W/440W/480W/640W/800W or less will operate normally with the power Inverter 80H/100H/120H/150H/180H/200H/225H/250H/300H/325H/350H/400H/450H/500H/550H/600H/800H/1000H.

Connection method



For example, the battery of 12V60A is supplied to a 220V100W bulb.
The working time is = 12 (V) X 60 (AH) x 0.8 x 0.9 / 100 (W) = 5.18 (hour).
12V - battery voltage 60 (AH) - battery capacity
Discharge coefficient of 0.8 - battery Conversion efficiency of 0.9 - inverter
Nominal power of 100W - bulb 5.18 (hours) - working hours

The power or wattage rating of AC products is the average power they use. When many AC products are first switched on, they initially consume more power than their power rating. TVs, monitors, and electric motors are examples of products that have high surge requirements at start-up. Although the Power Inverter 80H/100H/120H/150H/180H/200H/225H/250H/300H/325H/350H/400H/450H/500H/550H/600H/800H/1000H can supply momentary surge power as high as 160W/200W/240W/300W/360W/400W/450W/500W/600W/650W/700W/800W/900W/1000W/1100W/1200W/160W/200W/240W/260W/280W/320W/360W/400W/440W/480W/640W/800W or less, may be plugged in. The Power Inverter receives its operating power through its DC Plug that fits standard vehicle cigarette lighter sockets and 12-volt power outlets.

Indicators Controls and Connectors

- An AC outlet is provided on one end of the Power Inverter. A 220-volt AC product with a continuous power consumption of 60W/80W/100W/120W/145W/160W/180W/200W/240W/260W/280W/320W/360W/400W/440W/480W/640W/800W or less, may be plugged in.
- The Power Inverter receives its operating power through its DC Plug that fits standard vehicle cigarette lighter sockets and 12-volt power outlets.

- The ON/OFF switch enables output AC power at the AC outlet when switched ON.
- The green POWER light indicates AC power is present at the AC outlet and the Power Inverter is operating normally.
- The red FAULT light indicates inverter shutdown caused by low of high battery voltage, overload or excessive temperature.

Inverter Operation

- Plug the Inverter DC Plug into a vehicle's cigarette lighter or 12-volt outlet.
- Turn the Power Inverter ON/OFF switch ON. The green POWER light indicates AC power is available at the AC outlet.
- Plug the AC product you wish to operate into the AC outlet and switch it on. As the battery charge is used up, battery voltage begins to fall. When the Power Inverter senses the voltage at its DC input has dropped to 10.7 volts, and audio warning is provided. When input voltage drops to 10.0 volts, the Power Inverter will automatically shut down to prevent battery damage. The red FAULT light illuminates.
- If the Power Inverter exceeds a safe operating temperature, due to insufficient ventilation or a high temperature environment, it will automatically shut down. The red FAULT light will turn on and the audio warning will sound.
- Should a defective battery charging system cause the battery voltage to rise to dangerously high levels, the Power Inverter automatically shuts down. The red FAULT light will turn on.



CAUTION! Although the Power Inverter incorporates protection against over-voltage, it may still be damaged if the input voltage exceeds 16 volts.

In the event of an overload, low battery voltage or overheating, the Power Inverter will automatically shut down (See Section 4.)

Inverter with Electronics Equipment

Generally, most AC products operate with the Power Inverter just as they would with household AC power. Below is information concerning two possible exceptions. Buzzing Sound in Audio Systems. Some inexpensive stereo systems and boom boxes have inadequate internal power supply filtering and buzz slightly when powered by the Power Inverter. Generally, the only solution is an audio system with a higher quality filter.

Television Interference

- The Power Inverter is shielded to minimize interference with TV signals. However, with weak TV signals interference may be visible in the form of lines scrolling across the screen. The following should minimize or eliminate the problem:
- Use an extension cord to increase the distance between the Power Inverter and the TV antenna and cables.
- Adjust the orientation of the Power Inverter, television, antenna and cables.
- Maximize TV signal strength by using a better antenna and use shields antenna cable where possible.
- Try a different TV. Different models of televisions vary considerably in their susceptibility to interference.

Battery Operating Time

When using the Power Inverter, operating time will vary depending on the charge level of the battery, its capacity and the power level drawn by the particular AC load. With a typical vehicle battery and a 50-watt load (such as a portable stereo/CD player), an operating time of 5-6 hours or more can be expected.

When using a vehicle battery as a power source, it is strongly recommended to start the vehicle every hour or two to recharge the battery before its capacity drops too low. The Power Inverter can operate while the engine is running, but the normal voltage drop that occurs during may trigger the Power Inverter slow voltage shutdown feature.

Because the Power Inverter draws less than 0.15 amps with the ON/OFF switch in the ON position and with no AC products connected, it has minimal impact on battery operating times.

WARNING & CAUTION



- **WARNING!** Shock hazard. Keep away from children.
- The Power Inverter generates the same potentially lethal AC power as a normal household wall outlet. Treat it with the same respect that you would any AC outlet.
- Do not insert foreign objects into the Power Inverter's AC outlet or vent openings.
- Do not expose the Power Inverter to water, rain, snow or spray.
- Do not under any circumstances, connect the Power Inverter to power utility AC distribution wiring.
- Failure to follow the above instructions may result in personal injury or damage to the Power Inverter.



- **CAUTION!** Do not use the Power Inverter with the following equipment:
- Small battery operated products such as rechargeable flashlights, some rechargeable shavers, and night-lights that are plugged directly into an AC receptacle to recharge.
- Certain battery chargers for battery packs used in hand powered tools. These chargers will have warning labels stating that dangerous voltages are present at the charger's battery terminals.



WARNING! Heated surface.

- The Power Inverter's housing may become uncomfortably warm, reaching 140 °F (60 °C) under extended high power operation.
- Ensure at least 2 inches (5cm) of air space is maintained on all sides of the Power Inverter. During operation keep away from materials that may be affected by high temperatures.



CAUTION!

- Do not connect any AC product to the Power Inverter, whose neutral conductor is disconnected to ground.
- Do not expose the Power Inverter to temperatures in excess of 104 °F (40 °C).

Troubleshooting

- **Problem: AC product will not operate, no inverter lights are on.**

Possible Cause:

Suggested Remedy:

Poor contact with lighter socket or 12-volt outlet.

Press plug firmly into socket, clean plug or socket unnecessary.

Lighter socket or 12-volt outlet may require ignition to be switched on.

Turn key to accessory position.

Cigarette lighter or 12-volt outlet fuse is blown.

Check vehicle fuses and replace blown fuse with correct value.

Inverter has been connected with reverse DC input polarity.

Probable inverter damage has occurred. Have unit repaired.

- **Problem: Measured inverter output is too low.**

Possible Cause:

Suggested Remedy:

Standard average-reading AC voltmeter used to measure output voltage, resulting in an apparent reading 5 to 15 volts too low.

Inverter's modified sine wave output requires true RMS voltmeter, such as fluke 87 series millimeter, for accurate measurement.

Battery voltage is too low.

Recharge battery.

- **Problem: Battery run time is less than expected.**

Possible Cause:

Suggested Remedy:

AC product power consumption is higher than Rated.

Use a larger battery to make up for increased power requirement.

Battery is old or defective.

Replace battery.

Battery is not being properly charged.

Have vehicle electrical system checked by a qualified technician.

Specifications

Output voltage : 220/110VAC
Output frequency : 50/60Hz +/- 2Hz.
Output waveform : Modified sine wave.

Input voltage range : (12V) 11.0-15.0VDC / (24V) 21.0-29.0VDC
Fuse : 10A/15A/20A/30A/40A/70A.

Input voltage range	12VDC	24VDC
Low battery alarm (nominal)	9.5-11.0V	19.5-21.0V
Low battery shutdown point (nominal)	9.0-10.5V	18.5-20.5V
High battery shutdown point (nominal)	14.5-15.5V	28.0-30.0V
Battery drain with on AC load	<0.3A	<0.5A
Conversion efficiency	80%	80%

Continues AC output power :

50W/60W/80W/100W/120W/130W/145W/160W/180W/200W/
240W/260W/280W/320W/360W/400W/440W/450W/500W/550W/600W/800W/
960W/1200W/1450W/1600W/1760W/2000W/2400W/3000W/3000W/6400W/8000W/

30-minute AC output power :

60W/75W/100W/120W/150W/160W/180W/200W/225W/250W/
300W/325W/350W/400W/450W/500W/550W/600W/800W/1000W/
1200W/1500W/1800W/2000W/2200W/2500W/3000W/3500W/4000W/5000W

Maximum AC output power :

120W/150W/200W/240W/300W/320W/360W/400W/450W/500W/
600W/650W/700W/800W/900W/1000W/1100W/1200W/1600W/2000W/
2400W/3000W/3600W/4000W/4400W/5000W/6000W/7000W/8000W/10000W