MMC Series 500W-2000W

AC/DC Digital power inverter



GENERAL CATALOG

گروه بازرگانی

تالى الكتريك

DC TO AC POWER INVERTER







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DC to AC Power Inverter User's Guide

Placement Guidelines

For optimum Operation, inverter should be Placed on a flat surface such as the floor of acar. 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 heat vents.
- Well ventilated. Allow at least 2 inches (5cm)clearance above and on all sides of the inverter for proper cooling.

Using the Power Inverter

The 100W/150W/300W/500W is capable of continuously powering most 220-volt AC products that use 80W/120W/240W/400W or less. Its AC output waveform. called "modified-sine wave", is designed to function similarly to the sine wave shape of utility power Most AC products rated for 80W/120W/240W/400W or less will operate normally with the 100W/150W/300W/500W.

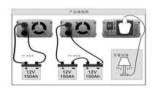
The power or "wattage" rating of AC products is the average power they use. When many AC Products are first switched on the initially consume more power than their power rating. Tvs. monitors, and electric motors are examples of poducts that have high surge."

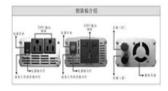
requirements at start up. Although the 100W/150W/300W/500W can supply momentary surge power as high as 200W/300W/600W.1000W. ccasionally some products rated less than 80W/120W/240W/400W may esceed its surge capabilities and trigger its safafy overload shutdown feature.

Indicators Controls and Connectors

- An AC outlet is provided on one end of the inverter, A220-volt AC product with a continuous power consumption of 80W/120W/240W/400W or less, may be plugged in.
- The inverter receives its opersting power through its DC Plug that fits standard vehicle cigarette lighter sockets and 12-volt power outlets.

Usage of the Power Inverter







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 inverter can operate while the engine is running, but the normal voltage drop that occurs during starting may trigger the inverter's low voltage shutdwon feature.

Because the 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&CAUSION

Incorrect installation or misuse of the inverter may result in danger to the suer or hazardous conditions. We urge you to pay more attention to all CAUTINN and WARNING statements. CAUTION statements identify conditions or practices that may result in damage to the inverter or to other equipment. WARNING statements identify conditions that may result in personal injury or loss of life.



WARNING!Shock hazard.Keep away from children.

- The inverter generates the same potentially lettlal AC power as a normal house hold walloutiet. Treat it with the same respect that you would any AC Outlet.
 - Do not insert foreing objects into the inverter's Acoutlet or vent openings.
 - Do not expose the inverter to water.rain.snow or spray.
- Do not under any circumstances, connect the inverter to power utility AC distribution wiring.
- Failure to follow the above instructions may result in personal injury or damage to the inverter.



WARNING!Heated surface.

- The 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 all sides of the inverter during operation.keep away from materials that may be affected by high temperatures.



CAUTION!

- Do not connect any AC product to the inverter whose neutral conductor is connect to ground.
- Do not expose the inverter to temperatures in excess of 104'F(40'C)



CAUTION!Do not use the 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.

Troubleshooting

Problem:AC product will not operate.no inverter lights are on.
Possible.Cause: Suggested Remedy:



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

Inveter Operation

- Plug the inverter DC plug into a vehicle's cigarette lighter or 12-volt outlet.
- Turn the AC product you wish to operate into the Ac outlet and switch it on. As the battey charge isused up. battery voltage begins to fall. When the inverter senses the voltage at its DC input has dropped to 10.7 volts.an audio warning is provided. When input voltage drop to 10.0 volts.the inverter will automatically shut down to prevent battey damage. The red FAULT light filluminates.
- If the inverter exceeds a safe operation temperature due to insufficient ventilation or a high temperature environment, it will automatically shut down. Then red FAULT light will turn on.



CAUTLON! Although the inverter has 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 inverter will automati-cally shut down. (See Section 4.) Interference with Electroniscs Equipment

Generally most AC products operate the inverter just as they would work with household AC power. Bolow is information coneming two possble exceptions.

Buzzing Sound in Audio Systems.

Some inexpensive stereo sustems and "boom boxes" have inadequate internal power supply filtering and "buzz" slightly when powered by the inverter. Generally, the only solution is an audio Television interference.

The inverter is shielded to minimize interference with TV signals. However, with weak TV signals interference maybe 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 inverter and the TV antenna and cables.
- Adjust the oriontation of the inverter. antenna and cables.
- Maximize TV signal strength by using a better antenna and use shielded antenna cable where possible.
- Try a different TV different models of televisions vary consierably in their susceptibility to interference.

Battery Operating Time

When using the 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-wattload(such as a portable stereo/CDplayer), an operating time of 5-6 hours or more could be expected.



Poor contact with lighter socket or 12--volt

Lighter socket or 12--valt outlet may require ignition

to be switched on.

Cigarette lighter or 12--volt outlet fuse is blown.

Inverter has been connected with reverse DC input polarity.

Problem:Measured inverter output is toolow.

Possible Cause: Standard"average-leading" AC voltmeter used to

measure output voltage. Reading 5 to 15 volts too low.

Battery voltage is too low.

Recharge battery.

Problem:Battery run time is less than expected Suggested Remedy: Possible.Cause:

AC product power consumption is higher than

rated

Battery is old or defective. Battery is not beingproperly

charged.

Press plug firmly into socket.clean plug or socket if necessary. Tum key to accessory position.

Check vehicle fuses and replace blown

fuse with correct value.

Probable inverter damage has occurred.

Have unit repaired.

Suggested Remedy:

Inverter's modified sine wave output Requires"trus RMS" voltmeter such as Fluke 87 series millimeter for accur are

measurement.

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

Replace battery.

Have vehicle electrical system checked by a qualifled technician.

Specialfecton

ITEM MODEL		100W	150W	200W	300W	500W	800W	1000W	1200W	1500W	2000W	2500W	3000W	
Continues AC output power		80W	120W	160W	240W	400W	640W	800W	900W	1200W	1600W	2000W	2400W	
Maximum AC output power		200W	300W	400W	600W	1000W	1600W	2000W	2400W	3000W	4000W	5000W	6000W	
output voltage		220V±10%, 50±2Hz or 110v±10%, 60±2Hz												
Waveform		Modified sine wave												
Input voltage		12V				24V				48V				
Low battery alarm		10.5±0.5V				21±0.5V				42±0.5V				
Low battery shut-off		≤9.5V				≤19V				≤38V				
High battery shut-off		≥14.5V				≥30V				≥60V				
Peak efficiency		≥85%				≥90%				≥95%				
Fuse(A)		//20/30/60/90/120 120/160/240/240/				// 10/ 20/ 30/ 40/ 60/ 60/ 80/ 120/ 120/				//5/10/20/30/ 40/40/40/60/60/				
	L	78	105	105	150	195	225	250	250	330	380	380	430	
SIZE(mm)	w	62	63	70	95	95	95	165	165	190	190	190	190	
	н	25	38	46.6	55	55	55	60	60	74	74	74	74	
Weight(kg)		0.2	0.28	0.35	0.54	0.72	0.86	1.48	1.48	2.6	3.5	3.5	4.3	