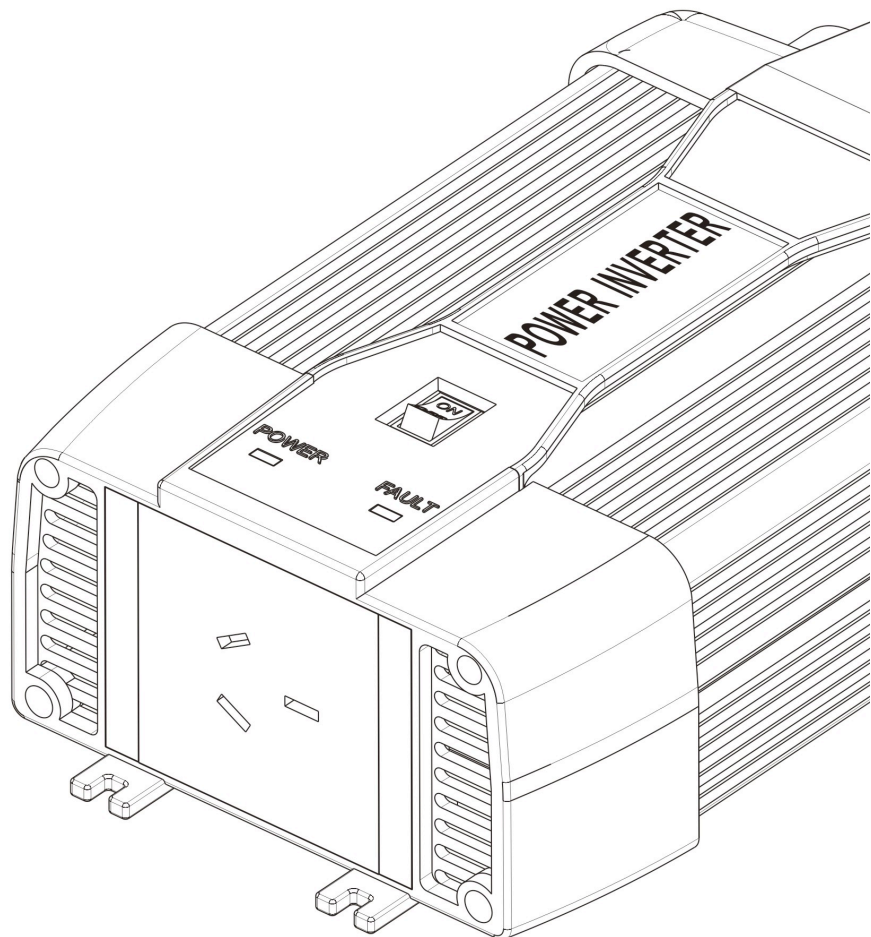




DC TO AC

POWER INVERTER

FTS420 USER INSTRUCTION MANUAL



Applicable for: 420W

User's Manual

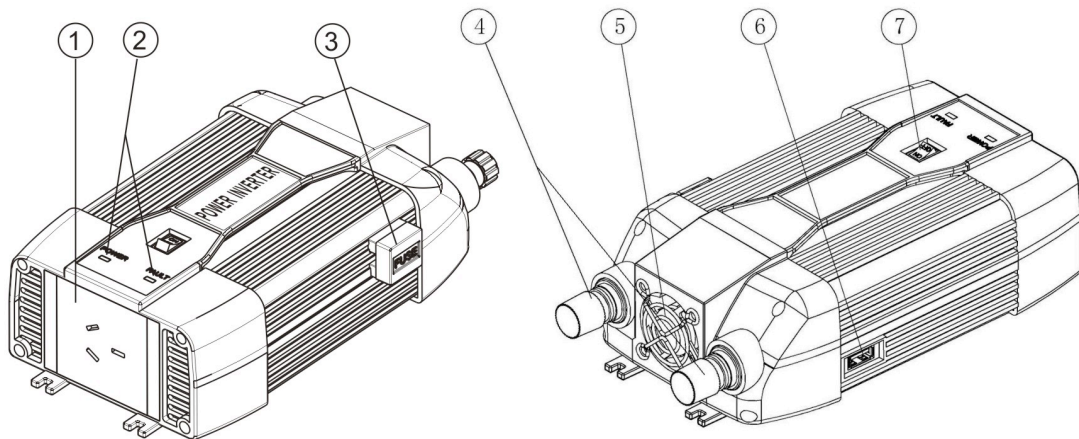
□. Description:

Power Inverter is a kind of products which change the DC electricity to AC electricity then offer power to small electrical equipment and digital products. It has been widely used in cars, steamboats, mobile office post and telecommunications, public security, emergency and so on.

This power inverter has adopted the international lead circuit design, with the advantage of small size, light, stable, and high conversion efficiency. It owns five protect function such as: input under voltage protection, input over voltage protection, overload protection, over temperature protection, output short circuit protection. These five functions can protect the electrical equipment and the circuit of the vehicle.

Please read this carefully before using, it's applicable to 420W series of products.

II . Products and cables diagram:



- ① AC outlet
- ② Power indicator (green)
Fault indicator (red)
- ③ External fuse

- ④ DC input "+" terminal (red)
DC input "-" terminal (black)
- ⑤ Cooling fan
- ⑥ USB port
- ⑦ ON / OFF Switch



Cigar lighter plug



Alligator clip cable

(The above pictures are for reference only, actual product may differ)

III. Connection Explanation:

Connecting In a wrong way will destroy the power inverter as well as the electrical equipment, please follow the following steps and sequence and make sure use the products in a right way.

1. When use in the car, please connect the inverter with the DC cigar lighter port.
 - ⊖ Connect the red side of the cigar lighter with “+” terminal and fix it, the black side connect with “—” terminal and fix it; Do not mix them or it will destroy the inverter.
 - ⊖ Insert the cigar lighter to the DC port of the car, turn on the power inverter, the green LED light will on.
 - ⊗ Insert the plug of the electric equipment into the AC socket of the inverter.
 - ④ Notice: When using the power inverter in the car please do not exceed 150W or it will destroy the inside wire of the car and it will be dangerous.
2. When using outside car or exceed 200W:
 - ⊖ When using outside car or exceed 200W please use the battery clip cable to connect with the battery.
 - ⊖ The battery clip cable have red and black two cables, connecting the red cable with “+” and fix it , connecting the black cable with the “-” and fix it;
 - ⊗ The clip on the red cable connect with “+” terminal of the battery and the clip on the black connect with the “-” terminal. Do not reverse or it will destroy ~~power~~ inverter.
 - Turn on the power inverter, the green light will on; Insert the plug of the electric equipment into the AC socket of the inverter.

IV. Scope of Application and Related Matters:

1. Scope of application:
 - a. Only use for class II appliance
 - b. Scope of electric appliance that inapplicability
 - ⊖ All electric appliances that exceed the rated power of the inverter;
 - ⊖ Generally capacitive load and perceptual load appliances are not inapplicability: Air condition, high power electric drill, fridge, microwave oven, blender;
 - ⊗ We do not recommend using this inverter with appliances which have strict requirement on power supper, such as precise equipments, if use ordinary power inverters with this kind of equipment will affect the measuring data.
 - c. Scope of electric appliance that inapplicability with the USB (Only for inverters with USB port)
 - USB is only for charging , do not have date exchange function;
 - Before charging please check carefully if the charging current of the appliance is under the inverters current, if it is exceed the charging current of the inverter please do not use, or it may destroy the USB port.
 - Some appliance must charging use certain charger, please don't charge with USB port.

2. Please check the voltage carefully before use:
Inverter's input voltage must be same as battery's voltage; appliance's working voltage must be same as inverter's output voltage; once all are same, connect them in right way based on "**Connection Explanation**" of the manual.
3. Please use the inverter in ventilate condition and make sure the fan is not blocked.
e. Do not put the inverter under rain or in humid place, keep it dry. In order to keep a long lifespan of the inverter, please keep it work under 85% of the related power.
4. The inverter have input under voltage protect function, input over voltage protect function, over load protection function, over temperature protect function and short circuit protect function. If these happened, the inverter will stop work and after the breakdown, the inverter will restart work automatically.
5. To save energy, the fan will not work unless the under two situations:
 - The fan will work when the load is exceed 30% of the related power of the inverter;
 - When the inside temperature of the inverter exceed 60 degree, the fan will work.
6. About extended cable using:
 - We do not recommend use extended cable between the inverter and the battery, because it will case lost of DC electricity and affect the effect of the inverter.
 - If really need use extended we suggest you use high quality cable to reduce the loss of electricity.
7. Other matters:
 - This is modified sine wave inverter; When measuring the voltage please use precise equipment. (RMS)
 - When supper power to audio system, radio or TV, the appliance may have interference and this is normal phenomenon;
 - When using in cars, please stop use the inverter while the engine stopped;
 - Please do not open the inverter, if need mending please ask professional to mend it.

V. **Security matters:**

1. Please do not operate the inverter while your hand is wet, Keep it from the touch of children.
2. The temperature of the shell will be high after longtime working, so do not touch it in case scalded;
3. Do not put metal into the inverter in case not to electric shock.
4. Do not touch the metal of the socket while insert the plug to the socket of the inverter.
5. Keep the inverter away from explosives;
6. Keep all AC electric away from the inverter, it will damage the inverter and also may cause electric shock.

VI. Protect function and Restart work method;

Function	State description			Restart work method
	LED light	alarm	AC output	
Input low voltage alarm	Green on Red off	Alarm	AC have output	When the voltage of the batter return to the related voltage, alarm stop automatically.
Input low voltage shut down	Green on Red on	No alarm	No AC output	When the voltage of the batter return to the related voltage the inverter will restart work, green light on, red light off.
Input over voltage protection	Green on Red on	No alarm	No AC output	When the voltage of the batter return to the related voltage the inverter will restart work, green light on, red light off.
Over load protection	Green on Red on	No alarm	No AC output	Reduce the load to related rang the inverter will restart work, green light on, red light off
Over temperature shut down	Green on Red on	Alarm	No AC output	When the inside temperature return to related rang, inverter will restart work, green light on ,red light off.
Output short circuit	Green on Red off	No Alarm	No AC output	When short circuit stopped, inverter restart to work automatically.

(PS: If with USB port ,the USB port can work normally under all kinds of protection condition.)

VII. Waste dispose:

Please do not discard the products when it is useless, otherwise it will cause environmental pollution.

VIII. Specification:

Specification	FTS420
Input DC voltage	DC 12V (DC 11-15V)
Output Ac voltage	AC 220-240V
Output frequency	50Hz
USB output	DC 5V / 2100mA
Continuous power	420W
Peak power	840W
Output Wave	Modified sine wave
Max efficiency	85%
No load current	<0.4A
Input under voltage alarm	DC 10.2 – 10.8V
Input low voltage shut down	DC 9.2 – 9.8V
Input over voltage shut down	DC 15 – 16V
Overload shut down	460W – 520W
Fuse	30A * 2
Best working Temperature	5 – 35°C
Cooling method	Fan
Accessories	Cigar lighter plug alligator clip cable

Technical Assistance:

If you need technical assistance with your Aerpro inverter now or in the future contact Aerpro Support Australia: www.aerpro.com/Contact

