

# Solar Power Inverter with Built-in PWM Solar Charge Controller 1000W

## ➤ Application scope:

- 1) Solar off-grid energy generation system
- 2) Solar energy/utility power complementary power generation system(include AC first and DC first.)

## ➤ Products Introduction:

1. 1000W-8000W, 8models, which can drive any load.
2. Pure sine wave inverter output
3. High effective working inverter status
4. The solar inverter is consist of inverter, solar charge controller, AC charger, remote control all in one machine.
5. This type inverter can be use in generator station, industrial field, home system, office power supply,etc.
6. Good design with cost effective
7. Fast delivery time with best after-sale service
8. Technical support and system solution

## ➤ Main Function and Features:

- a. Micro processor control
- b. Building inside with solar controller
- c. Smart size design
- d. Full automatic and silent operation
- e. Automatic line-to-battery switch over
- f. Three stage intelligent automatic charging mode technology
- g. Remote control solution by RJ11 and remote panel
- h. Automatic charge while AC recovery (off model charging)
- i. High efficient DC-To-AC conversion.minimizing energy loss
- j. Over load, short circuit protection, over charge, discharge protection
- k. Low battery and high battery protection
- l. Cool start
- m. Isolated output
- n. Compatibility with generators
- o. Full Multi-Function LED display with full meanings and buzzer alarms design
- p. Application for fan, light ,TV, motor,air-conditions, refrigerator and office appliances etc.
- q. Intelligent variable speed fan operation
- r. Battery type setup to get the best charge voltage and mode
- s. Sine wave inverter/charger system
- t. The desirable long backup power solution for home and office appliances.
- u. The complementary function of Solar and utility ensure the uninterrupted output.

## Products Parameter:

MODEL	MS-GPI-SC-1KW
SPECIFICATION	
DC INPUT	
Input Voltage(Vdc)	12V/24V
Min DC start voltage(Vdc)	10V/20V
AC Bypass	
Nominal Input Voltage	110V or 230Vac(waveform:Sine or generator)
Input AC Range(Vac)	90Vac $\pm$ 4%-135Vac $\pm$ 4% or 184Vac $\pm$ 4%-253Vac $\pm$ 4%
Frequency Range(HZ)	57Hz or 60Hz(47Hz -53Hz for 50Hz)-----{57Hz -63Hz for 60Hz}
Input Frequency(Hz)	50Hz/ 60Hz(Auto detection)
Bypass Output Voltage(Vac)	Same as input voltage
Bypass Output Frequency(Hz)	Same as input frequency
Pass through without Battery	Yes
Max Bypass Overload Current	10A
AC Efficiency	> 95%
Transfer Time(ms)	20ms (typical)
Solar controller	
Solar controller	10A,20A,30A,40A,50A,60A,80A 12V/24V/48V/96V/192V optional
AC CHARGER	
Charge mode Input Voltage Range	95~127Vac or 196~243Vac
Automatic Charge mode	Three stage charge mode:Boost CC (constant current stage) → Boost CV (constant voltage stage) → Float (constant voltage stage)
Nominal Charge Voltage	According to the battery type setup
Charge Current(A)	17.5A
Charge boost voltage(v)	According to the battery type setup( 12VBAT:14-15.5V; 24V BAT:28-31V)
Charge Floating Voltage(V)	According to the battery type setup (12V BAT: 13.3-13.7V; 24V BAT: 26.6-27.6V)
Over Charge Protection	Bat. V $\geq$ 15.7Vdc, beeps 0.5s every 1s & fault after 60s (15.7 for 12V;31.4V for 24V)
Charger Short Circuit Protection	Circuit breaker
INVERTER	
Capacity(VA)	1000
Output Power(W)	1000
Power Factor(PF)	1
Output Voltage	110VAC or 230VAC(Sine wave)
Output Frequency	50hz/60hz $\pm$ 0.3Hz(auto tracking main first power connection)
Wave	Pure sine wave
Inversion Efficiency	>88%
Over load capacity	(110%<load<125%) $\pm$ 10%: Fault (shutdown output) after 15 minutes; (125%<load<150%) $\pm$ 10%: Fault (shutdown output) after 60s; Load>150% $\pm$ 10%: Fault (shutdown output) after 20s
Low Battery Alarm	10.5Vdc $\pm$ 0.3Vdc for 12V battery, 21.0Vdc $\pm$ 0.6Vdc for 24V battery

Power saver	Load $\leq$ 25W (Enabled on “P/S auto” setting of Remote control)
<b>AMBIENT</b>	
Noise(dB)	60dB max.
Temperature	0°C to 40°C
Humidity	5% to 95%
Sea Level(m)	$\leq$ 1500
<b>DIMENSION</b>	
Product size L×W×H(mm)	L438mm*W184mm*H181mm
Packing size	L590mm*W312mm*H295mm
Weight(Kg)	16.5/17.5

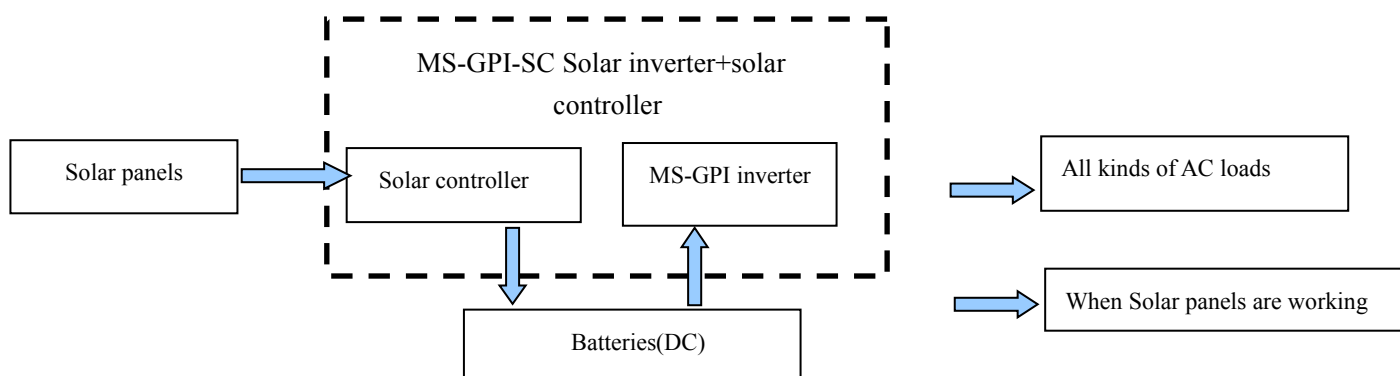
1)Inverter: Please check the detail specification of the above.

2)Solar energy controller: please check the corresponding specifications of the controller and choose the voltage of solar controller in accordance with the input DC voltage of the inverter;

All the parameters above come from our former customers' requirements,if you have special need,we can change the parameter only for you,such as DC voltage, charging current etc.

## Diagram of product and introduction of the system:

### 1) Off-grid power generation system

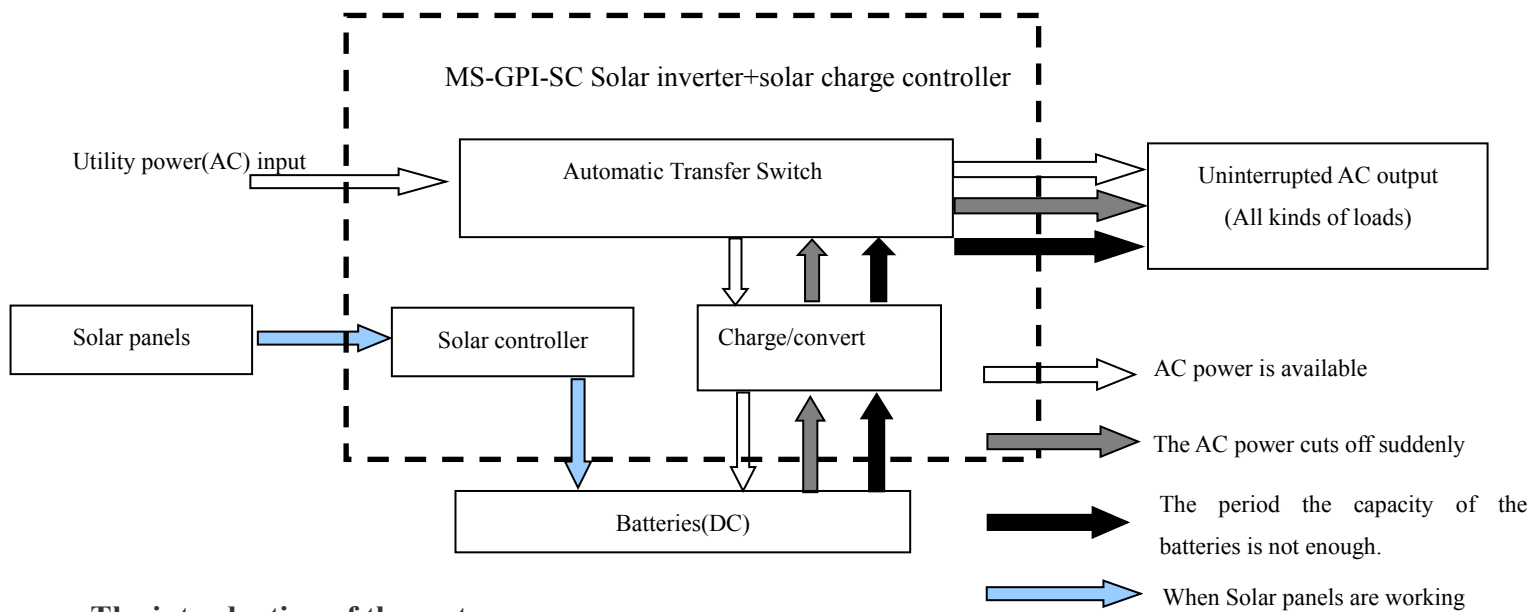


### The introduction of the system:

1)Independent off-grid energy generation system.

2)Suitable for no utility area where there need long time usage of solar energy energy system.

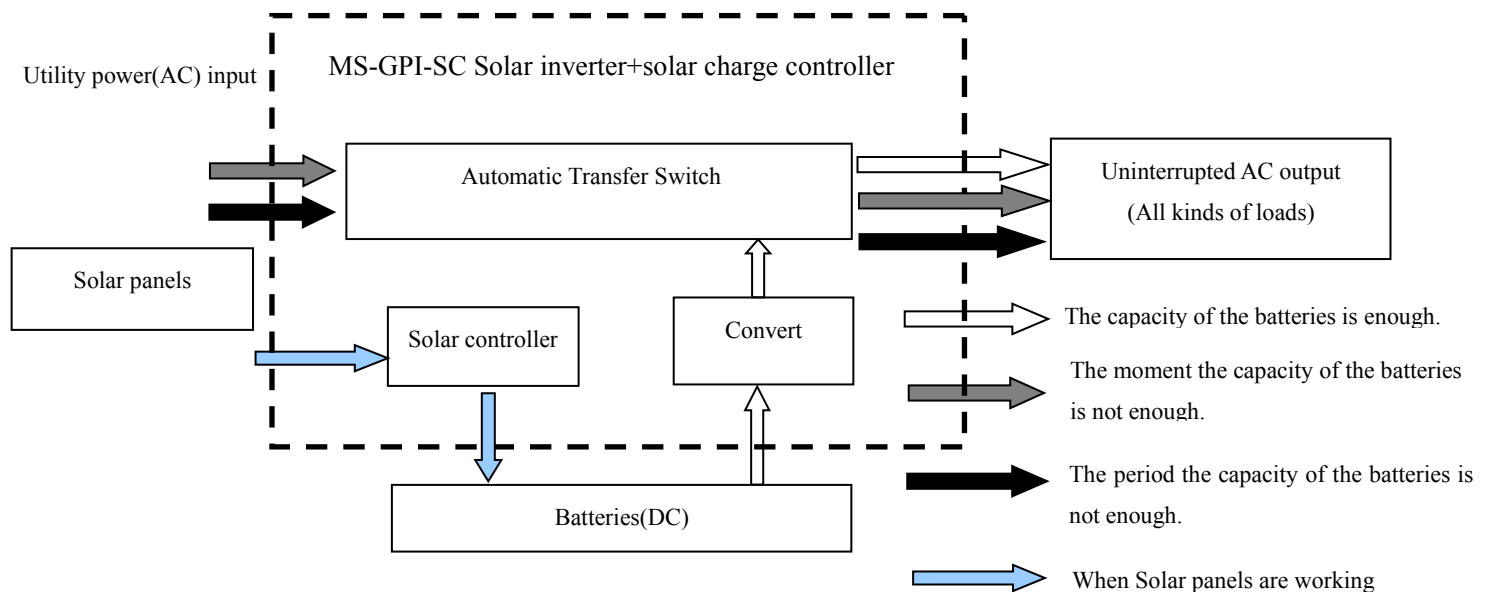
## 2)AC first(utility comes first) power generation system



### The introduction of the system:

- 1)Two models of battery charge:AC charge and solar energy charge;
- 2)When connect with both batteries and utility power,the machine will preferentially to drive the loads with utility power.When the utility power cuts off,the machine will automatically switch convert the DC power from batteries to drive the loads.This is AC first solar energy energy& utility power complementary power generation system;
- 3)When connected with batteries under the condition without utility power,the machine will directly drive the loads with DC power from batteries.This is off-grid solar energy generation system
- 4)This system is suitable for using in lack electricity area as power generation system or in no utility area as independent energy generation system, or as the power generation system which often have to be used in the utility and no utility area.

## 3) DC first(DC to AC inverter first) power generation system



### The introduction of the system:

- 1)One model of charging:solar energy charge;

- 2)When connect with both batteries and utility power, the machine will preferentially to drive the loads with DC power from batteries.When the capacity of batteries is not enough ,the machine will automatically switch to drive the loads with utility power.This is DC first solar energy and utility power complementary power generation system;
- 3)When connected with batteries under the condition without utility power, the machine will directly drive the loads with DC power from batteries.This is off-grid solar energy generation system.
- 4)This system is suitable for using in expensive electric charge area, environmental protection area where the solar energy or wind system can be made full use of , this actually save the utility;such as home solar or wind energy generation system, solar or wind streetlight generation system etc.

We are specialize in the research,development, design, production and marketing of Power inverter, Solar inverter with built-in solar charge controller, solar charge controller and solar dc system. Our Products have CE, RoHS, and export to all over the world.