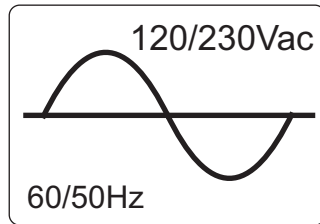




Product Information Guide



1000W	5000W
2000W	6000W
3000W	7000W
4000W	8000W
9000W	10000W
11000W	12000W

Continuous power
with P.F.C. charger

Sine Wave Combined Inverter & Charger



General specification

Input Wave Form:	Sine wave (Utility or Generator)							
Nominal Voltage:	120Vac		230Vac					
Low Voltage Trip:	85V+4%		184V/154V 4%					
Low Voltage re engage:	95V + 4%		194V/164V + 4%					
High Voltage Trip:	140V +4%		263V + 4%					
High Voltage re engage:	135V +4%		253V +4%					
Max Input AC Voltage:	150Vac		270Vac					
Nominal Input Frequency:	60Hz or 50Hz (Auto detect)							
Low freq trip:	40Hz for 50Hz		50Hz for 60Hz					
High freq trip:	55Hz for 50Hz, 65Hz for 60Hz							
Output wave form:	(Bypass mode) same as input							
Overload protection:	Circuit breaker							
Short circuit protection:	Circuit breaker							
Transfer switch rating:	30amp or 40amp							
Efficiency on line transfer mode:	95%							
Line transfer time:	10ms Typical							
Bypass without battery connected:	Yes							
Max bypass current:	30amp or 40amp							
Bypass over load current:	35amp or 45amp: Alarm							
Inverter Specification/output								
Output wave form:	Pure sine wave							
Output continuous power Watts:	1000	2000	3000	4000	5000	6000	7000	8000
Power factor:	0.9 - 1.0							
Nominal output voltage RMS:	120/230 Vac							
Output voltage regulation:	+10%RMS							
Output frequency:	50Hz + 0.3Hz or 60Hz +0.3Hz							
Nominal efficiency:	>85%							
Surge ratings:	3000	6000	9000	12000	15000	18000	21000	24000
Short circuit protection:	Yes, fault after 10s							
Inverter Specification/input								
Nominal Input voltage:	12V	24V	48V	72V				
Minimum start voltage:	10V	20V	40V	60V				
Low battery alarm:	10.5V	21V	42V	63V				
Low battery trip:	10V	20V	40V	60V				
High voltage alarm:	16V	32V	64V	96V				
Power saver:	Below 25watts when enabled							
Power saver:	Same witched on/off on remote							
Charger Mode specification								
Input voltage range:	85-140Vac or 184-263Vac							
Output voltage:	Dependent on battery type							
Charger current:	15A/20A/35A/50A/70A/90A							
Battery initial voltage for start up:	10-15.7V or 12V(*2 for 24V,*4 for 48V)							
Over charge protection shutdown:	15.7V for 12V(*2 for 24V,*4 for 48V)							
Charger curve (4 stage constant current) Battery types								
4 step digital controlled progressive charge								
Battery type:	Fast V	Float V	(*2 for 24V,*4 for 48V)					
Gel U.S.A.	14.0	13.7						
A.G.M.1	14.1	13.4						
A.G.M.2	14.6	13.7						
Sealed Lead Acid	14.1	13.6						
Gel Euro	14.4	13.8						
Open Lead Acid	14.8	13.3						
Calcium	15.1	13.6						
Desulphation	15.5 for 4hrs							
Remote control/RS232/USB	Yes. Optional							
Size: in mm	1000-3000W Model: 460*220*190mm							

Weight	1000W	1500W	2000W	3000W	4000W	5000W	6000W	7000W	8000W
	16kg	19kg	20kg	25kg	36kg	39.5kg	48kg	53.5kg	59kg

Smart Key Power

Ordering Information

Typical part number SWE -- 1000 -- E -- 12 -- C

1. Basis series

Low frequency pure sine wave
Inverter & Charger

2. Power Rating

1000=1000W 2000=2000W 3000=3000W
4000=4000W 5000=5000W 6000=6000W
7000=7000W 8000=8000W

3. AC Voltage

E=120Vac NC=230Vac

4. Battery Voltage

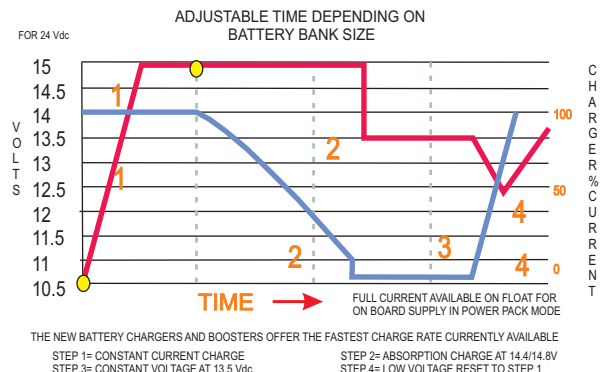
12=12Vdc 24=24Vdc 48=38Vdc

5. Display

c=LCD Display NC=LED Display

Charge Stage Transition Definitions

- Boost CC Stage: If AC input is applied, the charger will run at full current in CC mode until the charger reaches the boost voltage.
- Software timer will measure the time from AC start until the battery charger reaches 0.3V below the boost voltage, then take this time as To and To * 10= Ti.
- Boost CV Stage: Start a Ti. Timer: the charger will keep the boost voltage in Boost CV mode until the Ti. Timer has run out. The drop the voltage down to the float voltage. The timer has minimum time of 1 hour and a maximum time of 12 hours.
- Float Stage: In float mode, the voltage will stay at the float voltage.
- If the AC is reconnected or the battery voltage drops below 12Vdc/ 24Vdc, the charger will reset the cycle above.
- If the charger maintains the float stage for 10 days, the charger will reset the cycle.

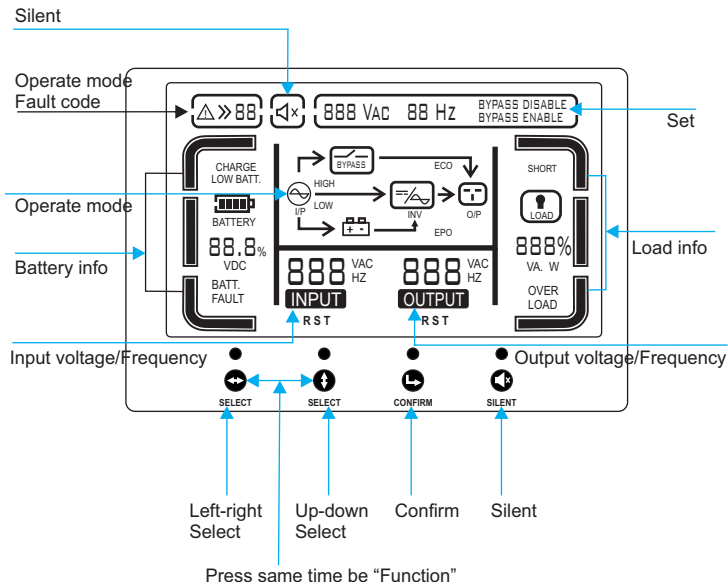


Operation

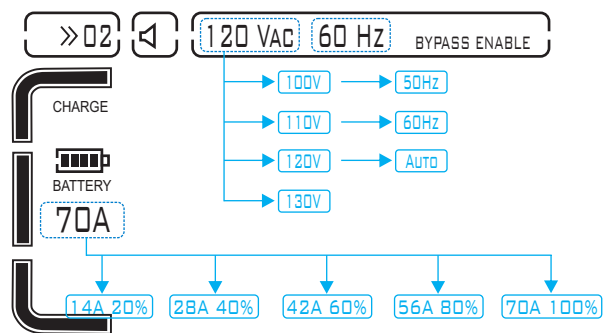
It is easy to operate the inverter, please according to below instructions.

1. Description of Panel

1. Description of Panel



2. Set modes



Keypress name	Function
Silent	Press it and hold over 3s, the inverter will be in silent mode, and press again over 3s, it will have sound again.
Function	Press the two select buttons same time to enter into "function" mode, press over 2s, can set inverter specification.
Left-right select	Only valid in "Function" mode, press over 1s, can change voltage and frequency choice.
Up-down select	Only valid in "Function" mode, press over 1s, can change voltage and frequency choice.
Confirm	Only valid in "Function" mode, press over 1s, can confirm new data.

3. Display meaning

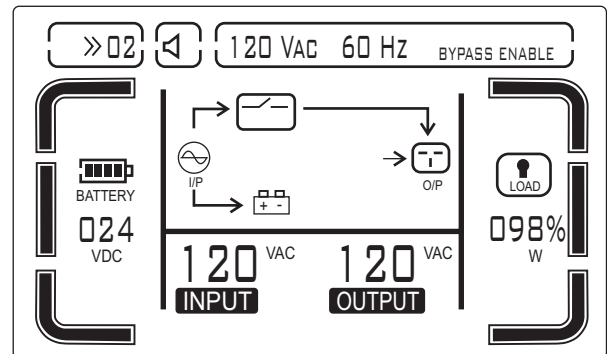
Sign	Meaning
	When inverter is faulty, this sign will appear, behind it is fault code. Fault over temperature 01: Overload 02, same time OVERLOAD sign will flash every 1s; Output short circuit 03; Over temperature 04; Low Battery voltage 05; Input output reverse 06; semi-wave short circuit (unusual load) 07; Over charge 08; Battery Over voltage 09.
>> 88	Mode display: 00 standby mode; 01 AC mode; 02 Invert mode; 03 Power saver mode.
	Silent mode in inverter mode, "X" means no sound.
888 Vac	Display output voltage, can set 110V, 120V, 130V.
88 Hz	Display output frequency, can set 60Hz, 50Hz, Autosense IF.
88.8% Vdc	Display battery left capacity and battery voltage, will change to the other info in every 3s
88.8 Vac Hz INPUT	Display AC input voltage and frequency, will change to the other info in every 3s.
88.8 Vac Hz OUTPUT	Display AC output voltage and frequency, will change to the other info in every 3s.
	Bypass mode
	If show "HIGH" incans AC input voltage high if show "LOW" means AC input voltage low. If AC is normal, will no show. If reverse L and N it will flash every 1s.
	Inverter mode
SHORT	Short circuit.
88.8% VA W	Display load capacity: when VA value > W value, show VA value; when W value > VA value, show W value.
OVER LOAD	Overload, flash every 1s
	Load.
CHARGE	Battery is charging..
LOW BATT.	Low battery voltage, flash every 1s.
	Battery capacity

4. Fault code meaning

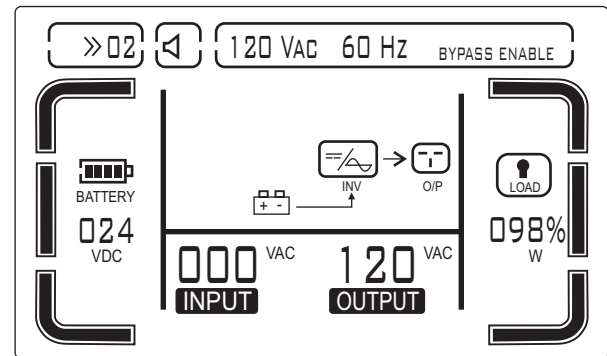
Fault code	Fault	Reason and Solution
01	Over temperature, fan fault (alarm light on)	Inverter operate temperature is very bad, insufficient ventilation and indoor temperature is very high. Close inverter and wait for 10 minutes, after inverter cool, start again. If fan fault, please replace with new fan.
02	Overload (alarm light on)	Connecting load power is over than inverter rated power, if reduce load equipments quantity, inverter will back to work.
03	Output short circuit (alarm light on)	Close inverter, and disconnect all load equipments, inspect load equipments if any of them has fault or internal short circuit, then start inverter again. If still fault, please consult with manufacturer.
04	Over temperature (alarm light on)	Inverter operate temperature is very bad, insufficient ventilation and indoor temperature is very high. Close inverter and wait for 10 minutes, after inverter cool, start again.
05	Low battery voltage (alarm light on)	Battery damage; Battery deep discharge, so need to charge again; Inverter charger problem, please consult with manufacturer to replace.
06	Reverse input and output	Connect input and output again in correct way.
07	Semi-wave short circuit (unusual load)	Connecting load power is over than inverter rated power, if reduce load equipments quantity, inverter will back to work.
08	Over charge	Charger damage, please consult with manufacturer for replace.
09	Battery over voltage	Check if battery bank DC voltage is corresponding to this inverter request DC voltage

- ① Power save button
- ② Battery charge indicator
- ③ Inverter indicator
- ④ Alarm indicator
- ⑤ Inverter mode button
- ⑥ Close inverter button

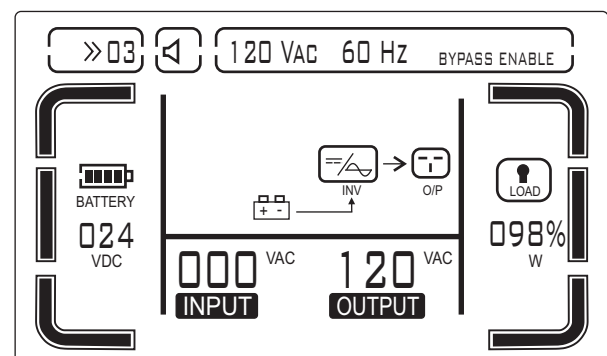
● Operate mode



AC mode 01



Battery inverter mode 02



Power save mode 03
(at same time, "OUTPUT" and "O/P" signs flash)

Note: If connect with generator, please according to below procedures:

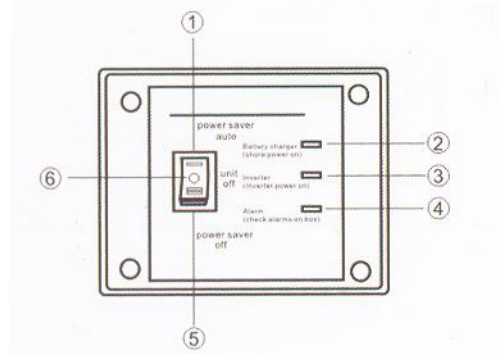
1. Start generator, after is has run in normal, please connect its output with inverter input (must confirm no load connect with inverter when connecting), then start inverter. After inverter start, connect with load.
2. The watt of generator is better to be twice of inverter watt.

● Operate

1. Battery mode

- 1) Power save mode: Press the "power saver auto" button; inverter will work in power save mode. (Only if connect with load, inverter will have output; if not connect with load, inverter will not have output).
- 2) Invert mode: Press the "Power saver off" button, inverter has output and work in invert mode.
- 3) AC mode: Connect with AC, AC indicators will light, inverter will charge Batteries and give ac output.

2. Close inverter: Press "Unit Off" button, inverter will close and no output.



Combined Inverter & Charger

Basic wiring for the Smart Key Power SWE series

Warning: High voltage, do not open unless qualified to do so;
Please read instructions before working on this product.



WHAT CABLE TO USE in mm²

A charger or inverter	Cable run distance 0-1.5m	Cable run distance 1.5-4.0m
0-150A	25mm ²	35mm ²
150-200A	50mm ²	70mm ²
200-350A	70mm ²	90mm ²

Please note that if there is a problem obtaining, for example 90 mm² cable, use 2*50 mm², or 3*35 mm². To adopt one cable is always the best, cable is simply copper and all require ins the copper, so it does not matter if it is one cable for ten cables as long as the square areas adds up. Performance of any products can be improved by thicker cable and shorter runs, so if just keep the length as short as possible.

natural earth inverter requirements
if you want to maintain a trough earth simply
connect the input earth to the output earth.

