stability, low failure rate, long life, normal use life can reach more than eight years;

9、Perfect protection features: Low voltage protection, high voltage protection, high temperature protection, short circuit protection, leakage protection, over-current protection, over-load protection, low voltage recovery, high voltage recovery, Intelligent temperature control fan, fault alarm, fault recovery etc comprehensive protection

10、Power efficiency designing,resisting harmonic wave and inductive load ,safe and stable.

11、The frequency of 50/60HZ automatic selection,give priority to use AC and DC with automatic adjustment.display dynamic schematic diagram,comprehensive functions.easier to use.

12、Pure copper transformer , blind post and wire.High density conformal coating.Double ball bearing mute dc fan,Large LCD screen,Large current terminals,Best electric components,best packing,safe,efficient and high level.

4.Type and specification

Specification	Type	Discribtion
DC12V-AC220V	300W，600W，800W，1KW，1.5KW，2KW，3KW	**1：AC voltage：AC110V/100V/120V/230V/240V** **2：Charge from Utility Grid，UPS function** **3：Frequency 50HZ/60HZ，automatic selection**
DC24V-AC220V	300W，600W，800W，1KW，1.5KW，2KW，3KW，4KW，5KW，6KW	
DC48V-AC220V	300W，600W，800W，1KW，1.5KW，2KW，3KW，4KW，5KW，6KW，7KW，8KW，10KW，12KW	
DC72V-AC220V	1.5KW，2KW，3KW，4KW，5KW，6KW，7KW，8KW，10KW，12KW	

（postscript：DC36V and any other would be customized.)

5.Parameters

Solar inverter parameters specifications	
Power Specifications	300W~12KW
DC Input Specifications	

Rated Voltage Specifications	DC12/24/48/72V-AC220V	DC12/24/48/72V-AC110V
Operating Voltage Range(Normal Operating Battery Voltage)	10V-16V (DC12V) 20V-32V (DC24V) 40V-64V (DC48V) 60V-96V (DC72V)	
Low Voltage Alarm(alarm to alert users when battery's voltage is over low)	10.5Vdc ± 0.3Vdc （12V） 21.0Vdc ± 0.6Vdc （24V） 42.0Vdc ± 1.2Vdc （48V） 63.0vdc ± 1.8Vdc （72V）	
Low Voltage Shut off (shut off when battery's voltage is over low)	10.0Vdc ± 0.3Vdc （12V） 20.0Vdc ± 0.6Vdc （24V） 40.0Vdc ± 1.2Vdc （48V） 60.0Vdc ± 1.8Vdc （72V）	
Low Voltage Recovery (Automatic Boot when battery's voltage returns to normal)	12.0Vdc ± 0.3Vdc (12V) 24.0Vdc ± 0.3Vdc (24V) 48.0Vdc ± 0.3Vdc (48V) 72.0Vdc ± 0.3Vdc (72V)	
High Voltage Alarm and shut off (alarms and shut off when the battery's voltage is over high)	16Vdc ± 0.3Vdc （12V） 32Vdc ± 0.6Vdc （24V） 64Vdc ± 1.2Vdc （48V） 96Vdc ± 1.8Vdc （72V）	
High Voltage Recovery (Automatic boot when battery's voltage returns to normal)	15.5Vdc ± 0.3Vdc （12V） 31.0Vdc ± 0.6Vdc （24V） 62.0Vdc ± 1.2Vdc （48V） 93.0Vdc ± 1.8Vdc （72V）	
Inverter Efficiency	≥90%	
DC-priority type, battery low voltage conversion point when there is utility electricity bypass (battery voltage is lower than this, turn to utility electricity to supply)	11Vdc ± 0.3Vdc （12V） 22Vdc ± 0.6Vdc （24V） 44Vdc ± 1.2Vdc （48V） 66Vdc ± 1.8Vdc （72V）	
DC-priority type, after turning to utility electricity to supply, the battery low voltage recovery point (when the battery's voltage is higher than this, turn to battery to supply electricity)	13.5Vdc ± 0.3Vdc （12V） 27.0Vdc ± 0.6Vdc （24V） 54.0Vdc ± 1.2Vdc （48V） 81.0Vdc ± 1.8Vdc （72V）	
AC Input Specifications		
Rated Voltage Specifications	220VAC System	110VAC System
Input Voltage Waveform	Sine wave (utility electricity or generator)	Sine wave (utility electricity or generator)
Rated Input Voltage	220Vac/230Vac/240Vac	110Vac/120Vac/130Vac

Low Voltage Shut off	180Vac±4%	85Vac±4%
Low Voltage Recovery	195Vac ±4%	90Vac ±4%
High Voltage Shut off	260Vac±4%	135Vac±4%
High Voltage Recovery	255Vac±4%	130Vac±4%
Utility Electricity Charging rule	Three Stages:	
	Constant current charging (constant stage)→constant voltage(constant voltage stage)→float (constant voltage stage)	
Utility Electricity Supply Efficiency	≥98%	
Conversion Time (AC to DC)	<4ms	
Conversion Time (DC to AC)	<8ms	
AC output specifications		
Rated output voltage (V)	220Vac/230Vac/240Vac	110Vac/120Vac/130Vac
Output Voltage Range	±10% rms	
Rated output frequency(Hz)	50Hz ± 0.3Hz/60Hz ± 0.3Hz(Optional)	
Power Factor	1.0	
Output Waveform	Pure sine wave	
Waveform distortion rate(THD)	≤3% (Linear load)	
Dynamic Response(0～100%)	5%	
Peak Factor (CF)	3:1	
Overload Protection (SMPS load)	(110%<Load<125%) ±10% ： after 15 minutes disconnecting the output voltage (125%<Load<150%) ±10% ： after 1 minute disconnecting the output voltage (Load>150%) ±10% ： after 20 seconds disconnecting the output voltage	
Other notes		
Continuous operation time	Continuous operation	
Normal Boot no-load Depletion	≤Rated Power×2.5%	
No-load Depletion of energy-saving mode	≤6W	
Safety Certification	CE(EN62040-1) EMC ： EN62040-2, C2	
Communication Interface	RS232 / (Customizable）	
Cooling	Temperature-controlled variable speed fan cooling (Ventilation condition)	
Noise(dB、1 meter)	＜60dB	
Ambient temperature (℃)	-10～+45	
Storage Temperature(℃)	-20～+55	
Using Environment Humidity	0-95% relative humidity（No condensation）	
Altitude(m)	≤5000(More than 1000 m, derating)	
Display Way	LED Indicator +LCD Display	
Alarm Way	Buzzer sounds alarm	

Protection Functions	Low voltage protection, high voltage protection, high temperature protection, short circuit protection, leakage protection, overcurrent protection, overload protection, low recovery, high recovery, intelligent temperature control, solid barrier alarm
Protection Level	IP20 / Customizable

6、The battery type set

Because of the batteries have many types, different types of them have different charging parameters, to effectively protect batteries, we specially design a rotary switch of selected batteries types on the inverter's panel. As long as to select the corresponding gear of battery's type, our inverter can be guaranteed the most suitable charging specification.

Gear description:

Switch Gears	Description of corresponding batter's type	Open-circuit			Floating Charging		
		Voltage			Voltage		
		12V	24V	48V	12V	24V	48V
0	Cancell Charge	Not charging (cancell utility grid charging function)					
1	Gel USA	14.0	28.0	56.0	13.7	27.4	54.8
2	AGM 1	14.1	28.2	56.4	13.4	26.8	53.6
3	AGM 2	14.6	29.2	58.4	13.7	27.4	54.8
4	Sealed lead acid	14.4	28.8	57.6	13.6	27.2	54.4
5	Gel EURO	14.4	28.8	57.6	13.8	27.6	55.2
6	Open lead acid	14.8	29.6	59.2	13.3	26.6	53.2
7	Calcuim	15.1	30.2	60.4	13.6	27.2	54.4
8	De-acidification	15.5	31.0	62	Shut off after 4 hours		
9	Not used	-	-		-	-	

7. Specification of utility grid charging mode

Model	Specification											
	1KW		2KW		3KW		4KW		5KW		6KW	
DC Voltage	12V	24V	12V	24V	12V	24V	24V	48V	24V	48V	24V	48V
Charge current	35A	20A	65A	35A	75A	45A	65A	35A	70A	40A	75A	50A

DC Voltage	48 V	72V	48V	72V	48V	72V		72V		72V		72V
Charge current	9A	6A	15A	10A	30A	15A		20A		25A		30
MCB	10A		20A		30A		30A		30A		30A	
Model	**Specification**											
	8KW			**10KW**			**12KW**					
DC Voltage	48V	60V	72V	48V	60V	72V	48V	60V	72V			
Charge current (±5A)	60	50	40	70A	60A	50A	80A	70A	60A			
MCB	50A											
Initial Charge Voltage	According to battery type											
Charger short-circuit protection	Circuit Breaker											
Charging Rule	Constant current charging(Constant current stage) → constant voltage charging (constant voltage stage) → float charging (constant voltage stage)											
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. ◆ ***Boost CV Stage:*** the charger will keep the boost voltage in Boost CV mode .Then drop the voltage down to the float voltage. The timer has a 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 state for 10 days, the charger will reset the cycle.											

8、Status description

(1)、LCD panel description