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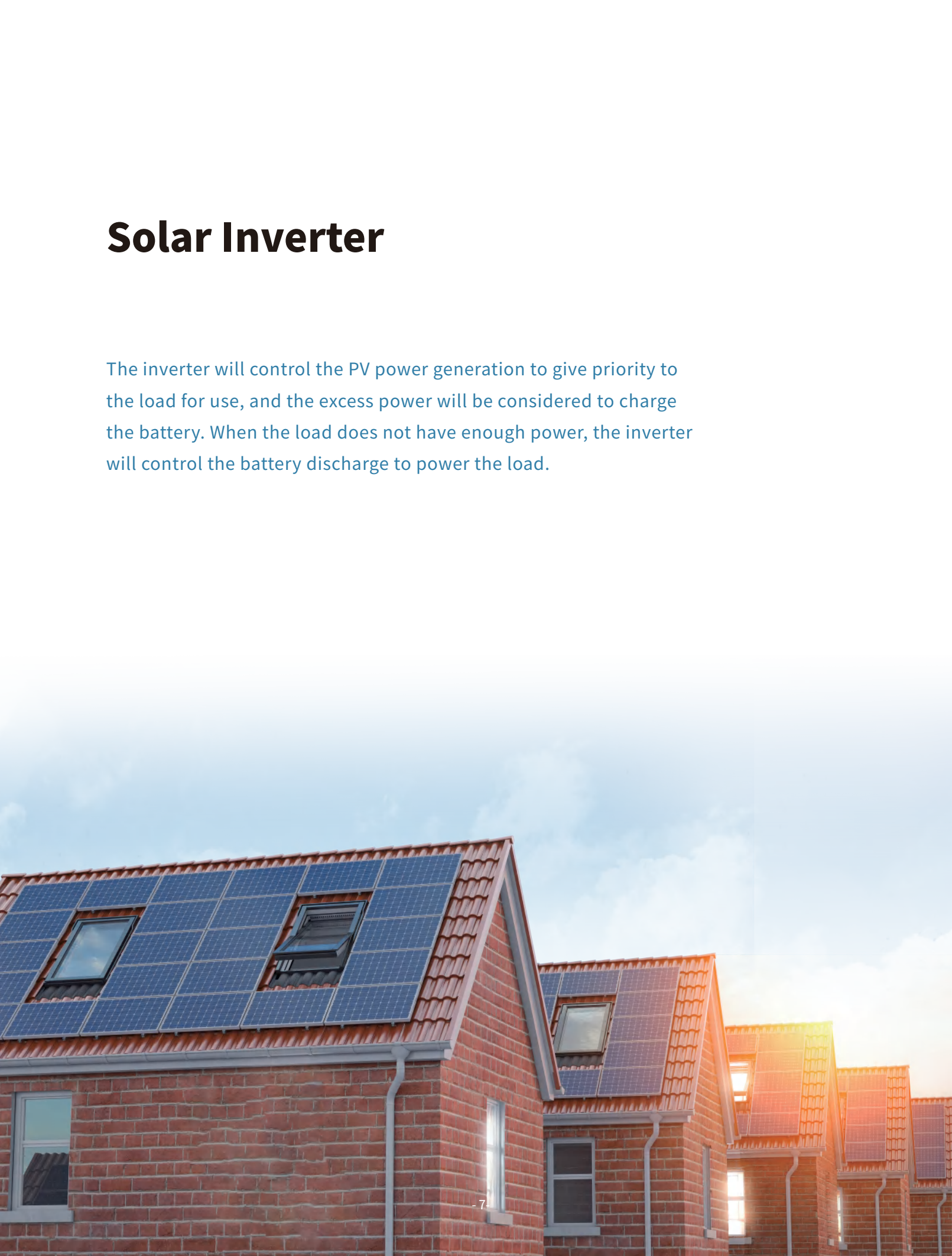
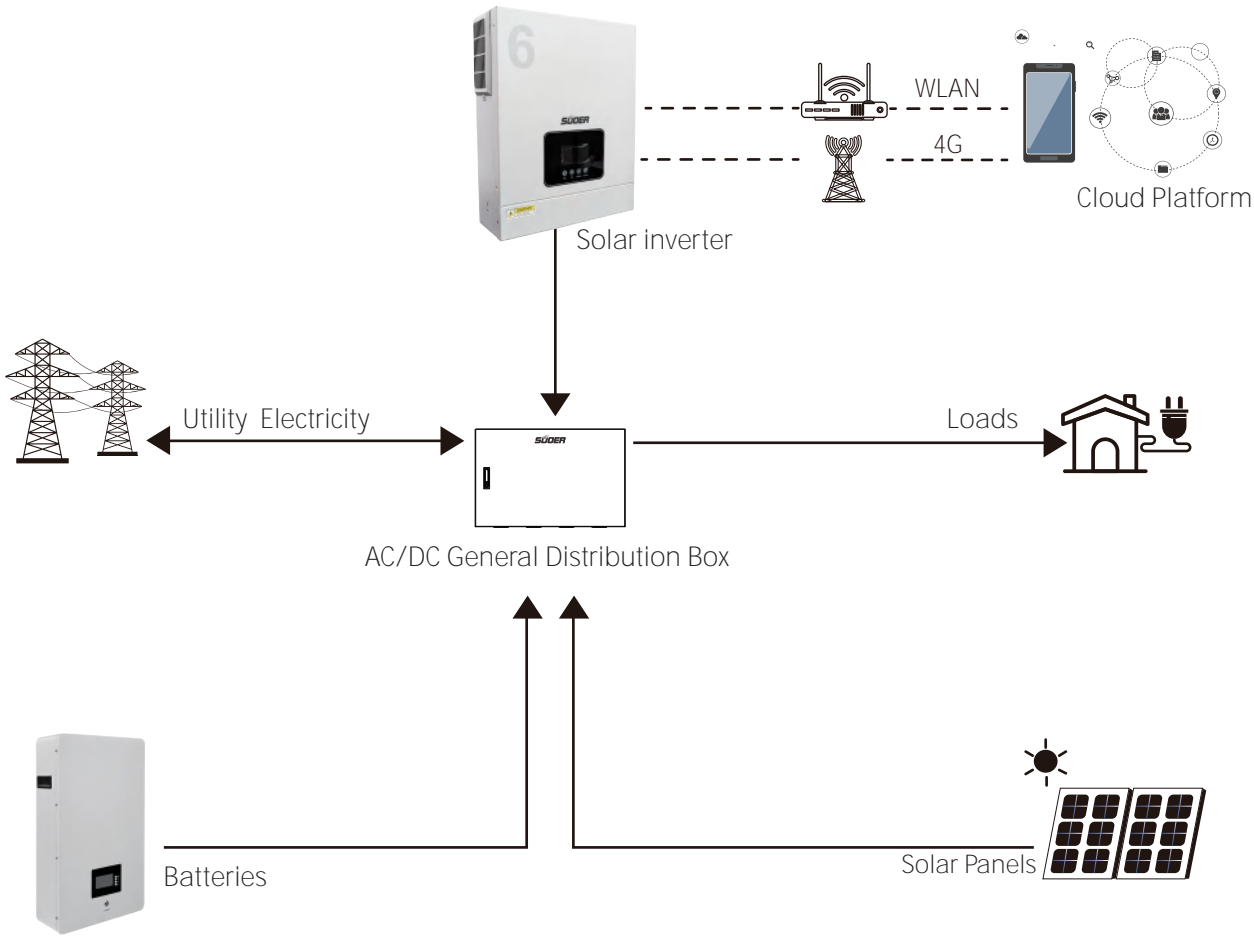
04 SOLAR PUMP INVERTER

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Solar Inverter

The inverter will control the PV power generation to give priority to the load for use, and the excess power will be considered to charge the battery. When the load does not have enough power, the inverter will control the battery discharge to power the load.

System Topology View



VMS 2K/3K

OFF GRID SOLAR INVERTER





Max PV Input
400VDC



80A
MAX PV
CHARGING



MPPT



Wi-Fi
Optional



Li-Ion



Pure sine wave
solar inverter



Monitor



LCD
LCD Display



Detachable
Dust Cover

SOLAR INVETER

MODEL	VMS-V-2.2K-12	VMS-V-3.2K-24
Rated Power	1600W	3000W
AC Input		
Voltage	230 VAC	
Select-able Voltage Range	70-280VAC(ForPersonalComputers) 90-280VAC(For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
AC Output		
AC Voltage Regulation (Batt. Mode)	230 VAC+5%	
Surge Power	3000VA	6400VA
Efficiency (Peak)PV to INV	98%	
Efficiency (Peak)Battery to INV	94%	
Waveform	Pure sine wave	
Transfer Time	10ms(For Personal Computers), 20ms(For Home Appliances)	
Battery & AC Charger		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16 VDC	33VDC
Maximum AC Charge Current	60A	
Solar charger		
Maximum PV Array Power	2400W	3000W
Maximum Charging Current	80A	
MPPT Range @ Operating Voltage	40-400VDC	
Maximum PV Array Open Circuit Voltage	400 VDC	
Physical		
Dimension, DxWxH (mm)	348 x 270 x 95mm	
Net Weight (kgs)	4kg	5kg
Communication Inteface	RS232/Wifi	
Operating Environment		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10 °C - 50 °C	
Storage Temperature	-15 °C - 60 °C	

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VMS

4.2KW/6.2KW

ON/OFF GRID SOLAR INVERTER

Max PV Input
500VDC

120A
MAX PV
CHARGING

MPPT

WORKS
WITH AND WITHOUT
BATTERY

Li-Ion

BMS

Pure sine wave
solar inverter

Monitor

LCD
LCD Display

Detachable
Dust Cover

Wi-Fi
Wi-Fi Optional

Dual AC Output

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SOLAR INVERTER

MODEL	VMS-V-4.2K-24-H	VMS-V-6.2K-48-H
Rated Power	4200W	6200W
AC Input / Output		
Voltage	220/230/240 VAC	
Output Waveform	Pure sine wave	
Frequency Range	50 Hz/60 Hz	
Grid-tie Output:		
Feed-in Grid Voltage Range	195~253VAC	
Feed-in Grid Frequency Range	49~51±1HZ/59~61±1HZ	
Maximum Load	4200W	6200W
Maximum Second Load	1400W	2066W
Battery & AC Charger		
Battery Voltage	20-33 VDC	40-63VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
Solar charger & AC charger		
Solar Charger Type	MPPT	
Maximum PV Array Power	6200W	6500W
Max Solar Charging Current	120A	120A
MPPT Range @ Operating Voltage	60~450VDC	
Maximum Solar Charge Current	120A	
Max AC Charging Current	100A	100A
Nominal PV Voltage	240VDC	360 VDC
Maximum PV Array Open Circuit Voltage	500 VDC	
BMS Communication Interface	RS485	
APP Monitoring Interface	RS232	
Physical		
Dimension, DxWxH (mm)	120 x 344 x 440mm	
Net Weight (kgs)	8.5kg	9.4kg
Operating Environment		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10 °C - 50 °C	
Storage Temperature	-15 °C - 60 °C	

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SOLAR INVERTER

MODEL	VMS-V-9K-48-H/HG	VMS-V-12K-48-H/HG
Rated Power	9000W	12000W
AC Input / Output		
Voltage	220/230/240 VAC	
Output Waveform	Pure sine wave	
Frequency Range	50 Hz/60 Hz	
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)	
Transfer Time	10 ms (For Personal Computers), 20 ms (For Home Appliances)	
Grid-tie Output:		
Feed-in Grid Voltage Range	195~253VAC	
Feed-in Grid Frequency Range	49~51±1HZ/59~61±1HZ	
Maximum Load	9000W	12000W
Battery & AC Charger		
Battery Voltage	48VDC	48VDC
Floating Charge Voltage	54 VDC	54 VDC
Overcharge Protection	66VDC	66VDC
Solar charger & AC charger		
Solar Charger Type	Dual MPPT	
Maximum PV Array Power	11000W(5500W x 2)	12000W (6000W x 2)
Max Solar Charging Current	150A	150A
MPPT Range @ Operating Voltage	90~450VDC	
Max AC Charging Current	120A	150A
Maximum PV Input Current	18A x 2	27A x 2(MAX 40A)
Maximum PV Array Open Circuit Voltage	500 VDC	
BMS Communication Interface	RS485	
APP Monitoring Interface	RS485	
Parallel Function	Optional up to 6 units	
Physical		
Dimension, DxWxH (mm)	147 x 432 x 553mm	
Net Weight (kgs)	17.2kg	18.4kg
Operating Environment		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10 °C - 50 °C	
Storage Temperature	-15 °C - 60 °C	



SOLAR INVERTER

MODEL	SUN-6K-AH2
PV Input	
Max. PV Input Power	9KW
Max. PV Open Circuit Voltage	550V
MPPT Range@Operating Voltage	80~520VDC
Full Power MPPT Voltage Range	250-500VDC
Start -up Voltage	90VDC
Max. Input Current per MPPT	19A/19A
Max. Short -circuit Current	25A/25A
MPPT Tracker/Strings	2/1
Nominal Input Voltage	360V
AC Output(On-Grid)	
Nominal Output Power to Grid	6KW
Max. Apparent Power to Grid	6KVA
Max. Apparent Power from Grid	6KVA
Max. Apparent Current from Grid	26.1A
Nominal Output Current from Grid	26.1A
Max. Output Current to Grid	26.1A
Nominal Voltage/Frequency	230V(176V~280V), 50/60Hz, L+N+PE
Adjustable Power Factor	0.8leading~0.8lagging
THDI	<2%
AC Output(BackUp)	
Nominal Output Power	6KW
Max. Apparent Power	6KVA
Nominal Output Current	26.1A
Max. Output Current	26.1A
Nominal Voltage/Frequency	230V(176V~238V), 50/60Hz, L+N+PE
Automatic Switch Time	<20ms
THDu	<2%
Overload Capacity	110%,30s/120%,10s/150%,0.02s
Efficiency	
Max. Efficiency	98%
Europe Efficiency	97.5%
MPPT Efficiency	99.00%
Max. Battery Charge/ Discharge Efficiency	94.60%

MODEL	SUN-6K-AH2
Battery	
Battery Voltage Range	40~60V
Recommended Battery Voltage	48V
Max. Charging Voltage	60V
Max. Charging/Discharging Current	120A/120A
Battery Type	Lithium and Lead Acid Battery
Protection	
DC Switch	Yes
DC Reverse Polarity Protection	Yes
DC/AC Surge Protection	Type III/Type III
AC Overvoltage Protection	Yes
AC Short-circuit Protection	Yes
Ground Fault Monitoring	Yes
Anti-islanding Protection	Yes
Residual-current Monitoring	Yes
Insulation Resistance Monitoring	Yes
Peak/Valley Time Setting	Yes
General Data	
HMI	LCD & APP
BMS	RS485; CAN
EMS/Meter	RS485
Communication	WiFi(standard)/GPRS(opt)/4G(opt)
Ingress Protection	IP66
Operating Temperature Range	-25~60°C
Relative Humidity	0~95%(Non-condensing)
Max. Operating Altitude	4000m (Derating above 3000m)
Cooling	Natural
Noise Emission	≤ 29dB
Self-consumption(W)	<10
Standard Compliance	
Safety Regulation	IEC/EN62109-1/-2
EMC	IEC/EN61000-6-1/-2/-3
GridRegulation	Europe: EN50549, South Africa: NRS097-2-1:2017, Belgium: C10/11

SP

6KW/12KW

Split-phase low frequency inverter



Max PV Input
500VDC

150A
MAX PV
CHARGING

MPPT

LCD
LCD Display

Li-Ion

Split-phase
low frequency

Pure sine wave
solar inverter

Monitor

Wi-Fi
Wi-Fi Optional

SOLAR INVERTER

MODEL	SP6KW-48V	SP12KW-48V
Capacity	6000W	12000W
Peak Capacity	18000W	36000W
Battery Voltage	48V	48V
MPPT		
Charging Current	80A	150A
PV input Port	One route (60A)	
PV input Voltage Range	80~490V	
Max PV input Power	2880W	
MPPT Efficiency	≈99%	
Unattended Mode	Inverter is OFF mode: MPPT can charge battery if there is sunshine	
Input		
DC Input Voltage Range	42~60V	
AC Input Voltage Range	110VAC: (80-130)VAC; 220VAC: (160-260) VAC/(130-280)VAC, can adjust at site	
AC Input frequency	45HZ-65HZ auto test	
AC Charging Current Can Choose	OFF(can switch off AC charging function)	
Output		
Output Wave	PURE SINE WAVE	
Output Efficiency	≈90%	
Output Voltage	200V/210V/220V/230V240V can adjust at site	
Output Frequency	50Hz/60Hz can adjust at site	
ECO Mode And Loss	5W	
Battery parameter		
Battery Types	Lead-acid battery/GEL battery/ lithium iron phosphate battery/ ternary lithium battery/customized battery	
Battery Customized Parameters	Constant voltage charging, Floating charging, battery recover, AC recover, low voltage alarm and low voltage protection	
Battery Charging Types	Lead-acid: three steps, constant current charging, constant voltage charging, floating charging Lithium battery: constant current charging, constant voltage charging	
Lithium Battery String Numbers Can Choose	lithium iron phosphate battery:3.2V single one Ternary lithium battery:3.7V single one	
Protections	Battery low voltage/battery over voltage/over load protection/ high temperature protection/ charging type protections	
Transfer Time	<5ms	
Heat-dissipating Type	Intelligent temperature control	
Communications	RS232/RS485(Optional)	
Working Temperature	-10℃~40℃	
Altitude	≤3000m	
Inverter Size (L*W*Hmm)	495*320*220mm	560*390*200mm
Net Weight (kg) (About)	28kg	40kg

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OFF GRID SOLAR INVERTER

MODEL	PL-1.5KA	PLP-1000	PL-3KVA	PL-5KVA
Rated capacity	1500VA/1000W	1000W	3000VA/1800W	5000VA/3000W
Mains Input				
Voltage range	230 VAC±5%			
Frequency range	50Hz/60Hz±2.5Hz			
The Output				
Battery efficiency	81%	83%	83%	85%
Waveform	Pure sine wave			
The utility efficiency	93%			
Efficiency(Peak) PV to INV	AC220V±5%			
Output Frequency	50/60Hz±1% (battery mode)			
Transfer time	8ms			
Battery				
Voltage	12V	12V	24V	48V
AC Charge current	0-20A	0-20A	0-30A	0-30A
PV Charging Current	/	30A(PWM)	60A(MPPT)	60A(MPPT)
Max PV Array open circuit voltage	/	50Vdc	105Vdc	105Vdc
Display				
Method	LCD+LED			
Content	input/output voltage, Battery capacity,load capacity,machine mode,frequency			
Protect				
Output short circuit	Breakdown insurance of power status,Inverse shutdown			
Overload	When the load exceeds 105 %,the buzzer gives out an alarm sound and does not shut down.Load over 110%,120%,60 seconds protection shutdown;Load more than 130%, 10 seconds protection shutdown;Load overload 150%,0.5 second protection shutdown;			
High main voltage	Turn off power supply and inverter automatically			
Low battery voltage	The machine will automatically shut off the output,and the machine will automatically resume charging when the mains power is restored			
Over-term perature	To turn it off			
Work Environment				
Temperature	-10 - 50℃			
Altitude	≤3000m			



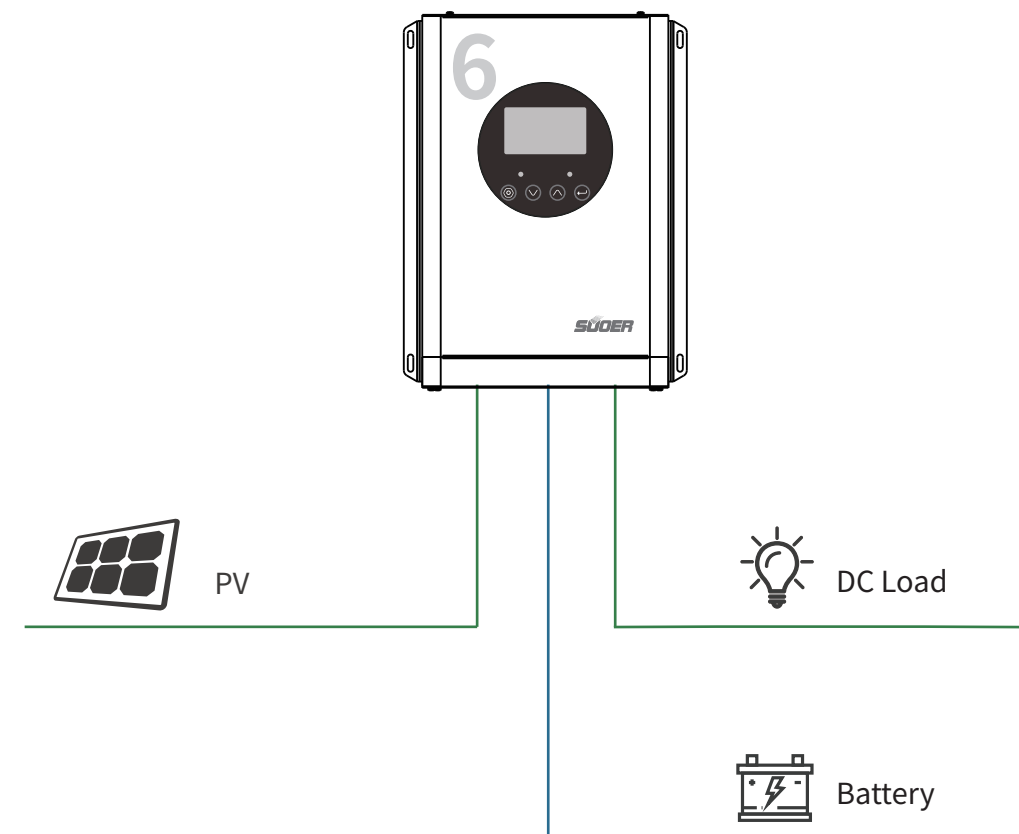
OFF GRID SOLAR INVERTER

MODEL	SON-1500VA	SON-2400VA
Input		
Nominal Voltage	220~240VAC	220~240VAC
Voltage Range	90~280VAC	90~280VAC
Nominal Frequency	50Hz or 60Hz(Auto Detection)	50Hz or 60Hz(Auto Detection)
Solar		
Nominal Voltage	18Vdc	36Vdc
Charging Current	50A±1Amax	50A±1Amax
Output		
Voltage	±10%	±10%
Frequency	50/60Hz0.1Hz	50/60Hz0.1Hz
Waveform	Modified Sine-wave	Modified Sine-wave
Efficiency(AC to AC)	>95%	>95%
Efficiency(DC to DC)	±10%	±10%
Battery		
Normal Voltage	12Vdc	24Vdc
Charger		
Charging Voltage	14.4DC	28.8DC
AC Charging Current	10A/20A	10A/15A
Overcharging Protection	16.0V	32.0V
Transfer		
Time	15-20ms typical(narrow range40ms max(wide range)	
Audible Alarm		
Low Battery Voltage inbattery mode	Buzzing every 2 seconds	
Overload	Buzzing every 0.5 seconds	
Fault	Buzzing continuously	
Environment		
Temperature	0~40℃	

Mppt Solar Controller

This Solar Controller adopts MPPT maximum power tracking technology , it can quickly and accurately track the maximum power point of the solar cell and significantly improve the energy utilization rate of the solar system. It is widely used in solar off-grid photovoltaic systems, manage the charge and discharge of solar panels, batteries and DC loads in the system.

System Topology View





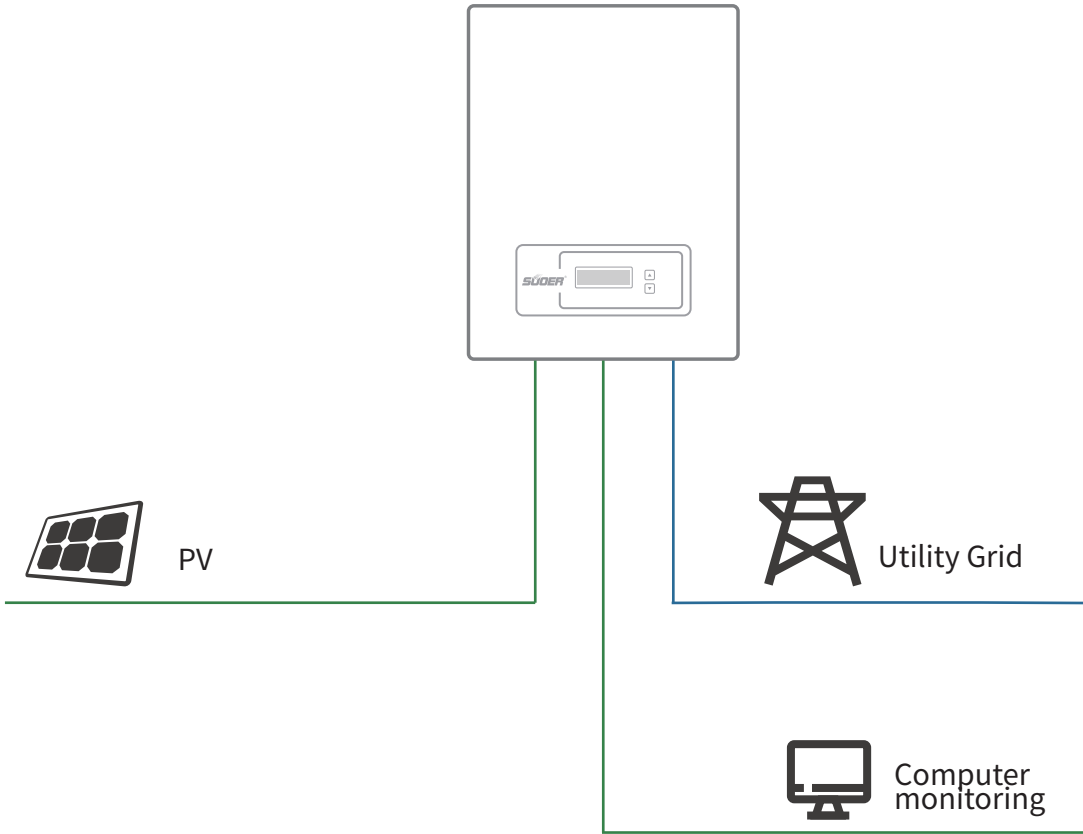
MPPT SOLAR CONTROLLER

MODEL		SMP-4830	SMP-4840	SMP-4860	SMP-48100
charging mode	/	MPPT automatic maximum power point tracking			
charging method	/	Three stages:constant current charging(MPPT),Equalizing charging,float charging			
system type	12V/24V/48V	Automatical recognition/Manual setting			
System identification voltage range	12V system	DC8V-DC16V			
	24V system	DC16V-DC32V			
	48V system	DC32V-DC64V			
Quiesent dissipation	12V/24V/48V	≤5W			
Max conversion efficiency	12V/24V/48V	≥95.5%			
Photovoltaic module utilization ratio	12V/24V/48V	≤99.9%			
Input Characteristics					
Mppt working voltage range	12V system	DC18V-DC150V			
	24V system	DC36V-DC150V			
	48V system	DC72V-DC150V			
Maximun photovoltaic input power	12V system	450W	600W	900W	1500W
	24V system	850W	1200W	1700W	2900W
	48V system	1700W	2300W	3400W	5700W
Output Characteristics					
Optional battery type (default lead-acid)	/	Lead acid battery,LiFePo 4 battery , Ternary lithium battery or Use-Defined			
Rated current	12V/24V/48V	30A	40A	60A	100A
Protection					
Input low voltage protection	12V system	DC14V			
	24V system	DC28V			
	48V system	DC32V			
Input low voltage recovey (Lead-acid battery)	12V system	DC16V			
	24V system	DC32V			
	48V system	DC64V			
Input overvoltage protection	12V/24V/48V	DC180V			
Input overvoltage recovery	12V/24V/48V	DC170V			
Input polarity reverse protection	/	YES			
Output polarity reverse protection	/	YES			
High temperature protection	/	70°C			
Audible noise	/	≤50dB			
Heat dissipation mode	/	fan cooling			
Protective level	/	Ip21			
Environmental requirements					
Humidity	/	0~90%RH			
height above sea level	/	0~3000m			
Ambient temperature	/	-20°C~+40°C			
storage temperature	/	-40°C~+70°C			

On Grid Photovoltaic Energy Storage Solutions

This inverter is the one which DC electricity produced by solar panels is turned into grid-compatible AC electricity. AC electricity produced can reduce your electricity bill.

System Topology View





ON GRID SOLAR INVERTER

MODEL	SOG-3K-SM	SOG-5K-DM
Rated Power	3000W	5000W
Input		
Recommended max PV input power	3100W	5200W
Max DC power for single MPPT	3100W	3100W
Number of independent MPPT	/	2
Number of DC inputs	/	1 for each MPPT
Max. Input voltage	500V	500V
Number of MPPT/String per MPPT	1/1	2/1
Start-up input voltage	120V	
Rated input voltage	380V	
MPPT voltage range	100-490V	
Full load DC voltage range	240-400V	
Max.Input current per MPPT	13A	
Max.Input current	13A	
Output Data (AC)		
Max. AC power	3000W	5000W
Max. output current	/	/
Max.AC output current	14A	22A
Nominal grid voltage	L/N/PE, 220VAC, 230VAC, 240VAC	
Grid voltage range	(According to local standard) 150V-280VAC	
Nominal frequency	50Hz/60Hz	
Grid frequency range	50Hz/60Hz	
Active power adjustable range	0-3000W	0-5000W
THDi	<3%	
Power factor	1 default(adjustable +/-0.8)	
Performance		
Max.Efficiency	97.6%	97.4%
European weighted efficiency	97%	96.9%
Self-consumption at night	<10W	<10W
MPPT adaptation efficiency	99%	99%
Protection		
DC reverse polarity protection	No	
DC switch	Yes	
Anti-Islanding protection	Yes	
Overvoltage category	II(DC side)/III(AC side)	
Over temp protection	Yes	
Leakage current protection	Yes	
Over voltage protection	Yes	
Over current protection	Yes	
Earth fault protection	Yes	
SPD	MOV:Type III standard	
Communication		
Power management App	Yes	
Standard communication mode	Rs485,WiFi/GPRS(optional)	
General Data		
Topology	Transformerless	
Allowable relative humidity range	0~100%	
Noise	<25dB	
Cooling	Natural	
Max.Operating altitude	≤2000m	
Display	LCD	
Protective level	IP65	
Ambient temperature range	-25℃~+60℃	
Dimensions (W / H / D)	274.5 x 321.6 x 99.7mm	600x 490 x 170mm
Weight	8.6kg	20kg

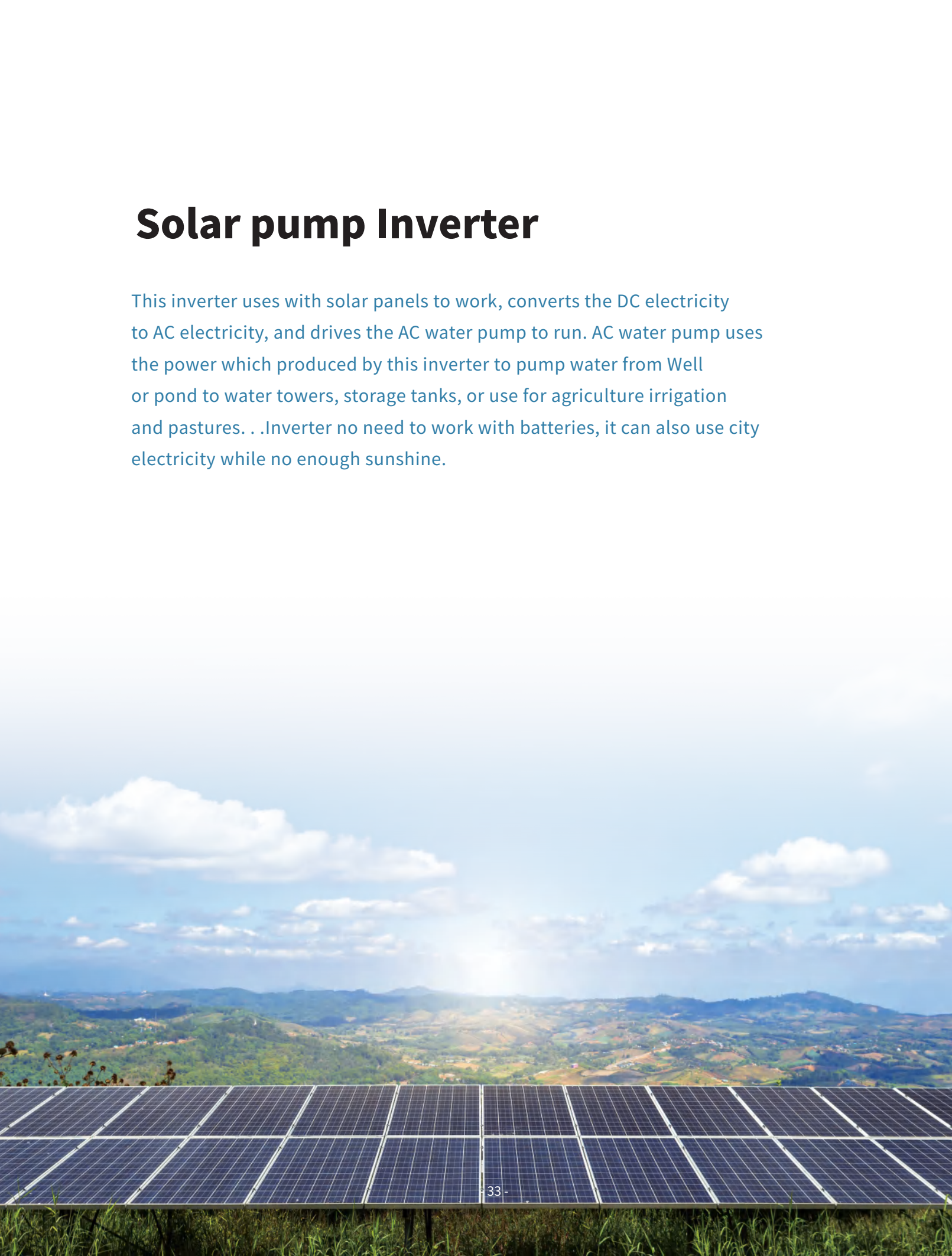


ON GRID SOLAR INVERTER

Display Of The Grip

- 1. Screen displays 5 parameters in turn:Output voltage,output current,output power,gross power generation,total generation time.
- 2. Power switch on the handle is used to control the backlight.
- 3. Press the "rest" button with a small wooden stick for more than 5 seconds, release the indicator light after the red light and green light are on at the same time, and clear the total power generation and power generation time after release;
- 4. Press the "CT" button with a small wooden stick for more than 5 seconds, release the indicator light after the red light and green light are on at the same time, and switch between full power and CT mode

MODEL	GTI-D1200
Output Power	1000W
Voltage of Solar panel	Vmp:42-45V ;Voc:50V
Recommended power of solar panel	1200-1500W
MPPT voltage range	30-45V
AC voltage range	190~260V
Voltage frequency range of electric network	50/60Hz±1%
Power factor	>0.97
MPPT efficiency	>99%
THD	<5%
Phase shift	<2%
Max efficiency	≥86%
Protection function	Low/High AC Voltage Protection;Low/High PV Voltage Protection;High temperature protection;Island protection; Frequency protection etc.
Working temperature	-20℃~50℃
Protective level	Design for interior
Cooling method	Controlled by smart fan
Standby power	2~3W
Display mode	Grip of LED + LCD screen display
Dimensions (W / H / D)	91 x 221 x 328.7mm

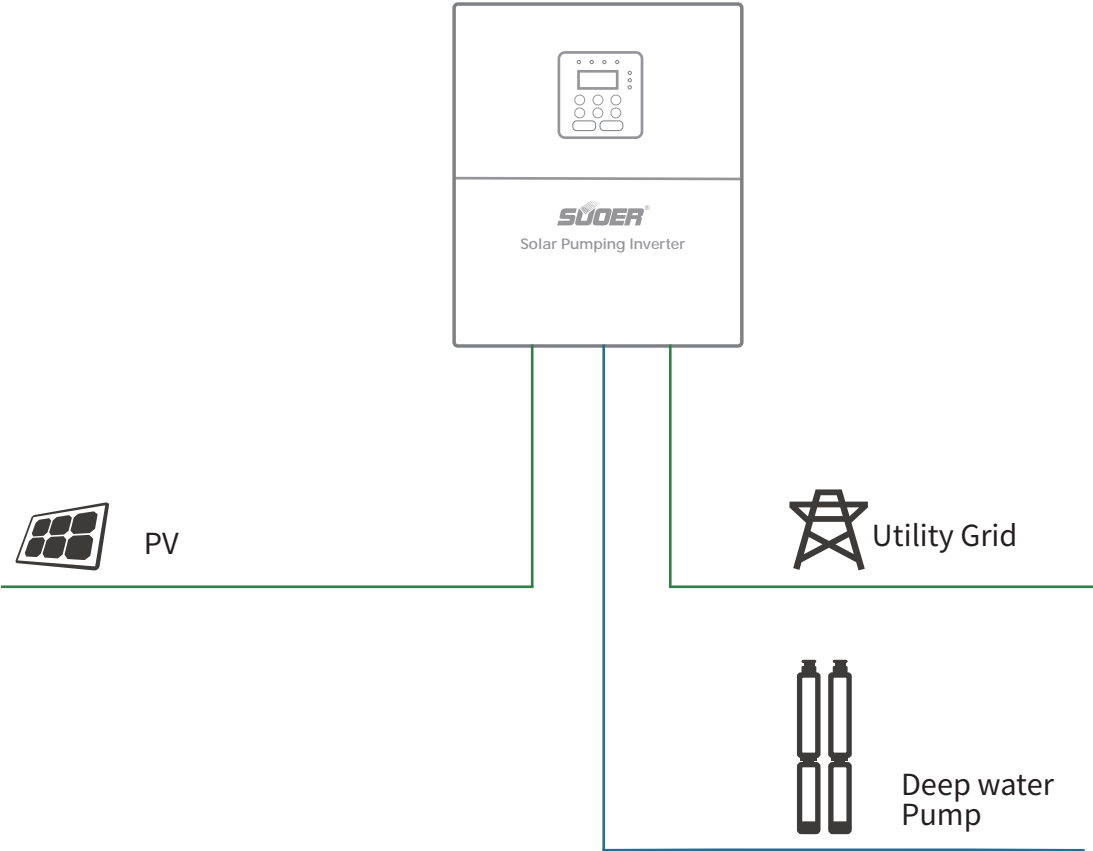


Solar pump Inverter

This inverter uses with solar panels to work, converts the DC electricity to AC electricity, and drives the AC water pump to run. AC water pump uses the power which produced by this inverter to pump water from Well or pond to water towers, storage tanks, or use for agriculture irrigation and pastures. . .Inverter no need to work with batteries, it can also use city electricity while no enough sunshine.

System Topology View

Solar Variable-frequency Drive,VFD





SOLAR PUMP INVERTER

Model	PV100-1R5GSS	PV100-2R2G-SS	PV100-004G-SS	PV100-1R5G-S	PV100-2R2G-S	PV100-1R5G-4T	PV100-2R2G-4T
PV Input Data							
Max.DC Voltage(V)	440 Vdc			440 Vdc		800 Vdc	
Start-up Voltage(V)	200 Vdc			200 Vdc		300 Vdc	
Lowest Working Voltage(V)	150 Vdc			150 Vdc		250 Vdc	
Recommended DC input Voltage Range (V)	200~400 Vdc			200~400 Vdc		300~750 Vdc	
Recommended MPPT Voltage	330 Vdc			330 Vdc		550 Vdc	
AC/Generator							
AC Input Voltage (V)	220(-15%)~240(+10%)VAC Single Phase					380(-15%)~440(+10%)VAC Three Phase	
Rated Input current(A)	15.7A	24A	30A	15.7A	24A	5A	5.8A
Output Data							
Rated Output Power(KW)	1500W	2200W	4000W	1500W	2200W	1500W	2200W
Rated Output Current(A)	10.2A	14A	23A	7.5A	10A	4.2A	5.5A
Rated Output Voltage(V)	220(-15%)~240(+10%)VAC Single Phase			220(-15%)~240(+10%)VAC Three Phase		380(-15%)~440(+10%)VAC Three Phase	
Output Frequency	50HZ/60HZ (optional)						
Protection							
Surge Protection(AC)	Yes						
Under voltage Protection	Yes						
Short Circuit Protection	Yes						
Over heated Protection	Yes						
Protection Level	The protection level of standard inverter is IP20						
General Date							
Ambient Temperature Range	-20°C~45°C						
Cooling Method	Fan Cooling						

SOLAR PUMP INVERTER

Model	PV100-004G-4T	PV100-5R5G-4T	PV100-7R5G-4T	PV100-011G-4T	PV100-015G-4T	PV100-018G-4T
PV Input Data						
Max.DC Voltage(V)	800 Vdc					
Start-up Voltage(V)	300 Vdc					
Lowest Working Voltage(V)	250 Vdc					
Recommended DC input Voltage Range (V)	300~750 Vdc					
Recommended MPPT Voltage	550 Vdc					
AC/Generator						
AC Input Voltage (V)	380(-15%)~440(+10%)VAC Three Phase					
Rated Input current(A)	13.5A	19.5A	25A	32A	40A	47A
Output Data						
Rated Output Power(KW)	4000W	5500W	7500W	11000W	15000W	18500W
Rated Output Current(A)	9.5A	14A	18.5A	25A	32A	38A
Rated Output Voltage(V)	380(-15%)~440(+10%)VAC Three Phase					
Output Frequency	50HZ/60HZ (optional)					
Protection						
Surge Protection(AC)	Integrated					
Under Voltage Protection	Integrated					
Open Circuit Protection	Integrated					
Short Circuit Protection	Integrated					
Over Heated Protection	Integrated					
Protection Level	The protection level of standard inverter is IP20,butthis field is not displayed					
General Date						
Ambient Temperature Range	-20°C~45°C					
Cooling Method	Fan Cooling					
Standard Warrnaty (month)	12					