HES Sun. Energy Life.

Born for Sun.
Light for You.

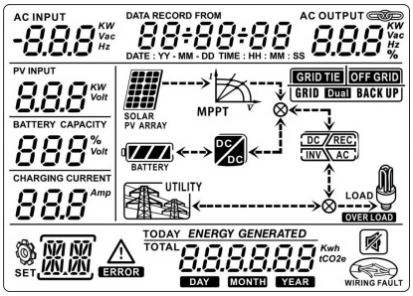
Hybrid Solar Inverter (On Grid+Energy Storage)

Device include MPPT controller , Grid Charger & High-frequency inverter in one machine and pure sine wave integration of Grid & off-grid power generation equipment. By controller or grid charger for battery, battery supply power to the inverter at same time, inverter part provide the AC power to Grid or to AC load.

Offer continuous power from solar power, AC utility, and battery. It's a simple and smart solar device for battery bank energy and use for self-consumption or other demands. Power source priority can be programmed and set up through smart software.

Liquid crystal display (LCD)

1.Grid input voltage Frequency
2.AC output frequency, Voltage, Power, Load ,capacity
3.Input Voltage or PV input power
4.Battery voltage or Battery capacity date time
5.Day Energy Generated
6.Generating Check

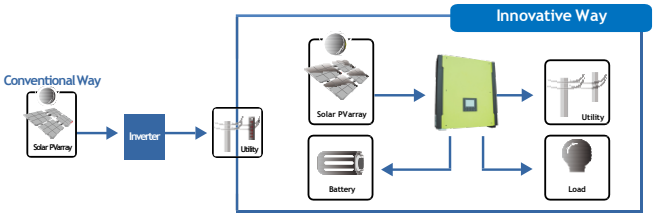


Features

Pure sine wave output & Built in MPPT
Self-consumption and Feed-in to the grid
Programmable supply priority for PV,Battery or Grid
User-adjustable battery charging current suits different types of batteries
Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
IP20 design for harsh environment
Built-in timer for various mode of on/off operation
Multiple communication for USB,RS-232, Modbus and SNMP Monitoring software for real-time status display and control
Parallel operation up to 6 units for 5KW and 10KW

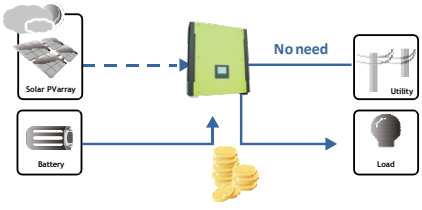
Feed-in is not only choice

In comparison with conventional grid-tie inverter, it is able to not only feed-in power to the grid but also store solar power to the battery for future usage and directly power to the loads.



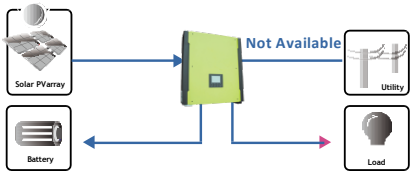
Save money by discharging battery for self-consumption first

Device can save money by using battery energy first when PV energy is low. Until battery energy is low, device will extract AC power from the grid.



Power backup when AC failed

Device can operate as an off-grid inverter to provide continuous power even without the grid. It's a perfect power solution for remote regions or temporary AC power source such as camping or night market.



Specification

MODEL	2KW	3KW	5KW	10KW
PHASE	1-phase in / 1-phase out			3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	2250 W	4500 W	10000 W	14850 W
RATED OUTPUT POWER	2000 W	3000 W	5000 W	10000 W
MAXIMUM CHARGING POWER	1200 W		4800 W	9600 W
GRID-TIE OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	300 VDC / 350VDC	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	80 VDC / 120VDC	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC
MPP Voltage Range	120 VDC ~ 320VDC	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 15 A	1 / 1 x 18 A	2 / 2 x 10 A	2 / 2 x 18.6A
GRID OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	208/220/230/240 VAC		230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	88 - 127 VAC*	184 - 265 VAC*		184 - 265 VAC* per phase
Nominal Output Current	18 A	13 A	21 A	14.5A per phase
Power Factor	> 0.99			
EFFICIENCY				
Maximum Conversion Efficiency (DC/AC)	95%	96%		
European Efficiency@ Vnominal	94%	95%		
OFF-GRID OPERATION				
AC INPUT				
AC Start-up Voltage/Auto Restart Voltage	60 - 70 VAC / 85 VAC	120 - 140 VAC / 180 VAC		120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	80 - 130 VAC	170 - 280 VAC		170 - 280 VAC per phase
Maximum AC Input Current	30 A		40 A	
PV INPUT (DC)				
Maximum DC Voltage	350 VDC	500 VDC	900 VDC	900 VDC
MPP Voltage Range	150 VDC ~ 320VDC	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 15 A	1 / 1 x 18 A	2 / 2 x 10A	2 / 2 x 18.6A
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Waveform	Pure Sinewave			
Efficiency (DC to AC)	90%	93%		91%
HYBRID OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	300 VDC / 350VDC	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	80 VDC / 120 VDC	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC
MPP Voltage Range	150 VDC ~ 320VDC	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
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Nominal Output Voltage	101/110/120/127 VAC	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	88-127 VAC*	184 - 264.5 VAC*		184 - 264.5 VAC* per phase
Nominal Output Current	18 A	13 A	21 A	14.5 A per phase
AC INPUT				
AC Start-up Voltage / Auto Restart Voltage	60 - 70 VAC / 85 VAC	120 - 140 VAC / 180 VAC		120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	80 - 130 VAC	170 - 280 VAC		170 - 280 VAC per phase
Maximum AC Input Current	30 A		40 A	
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Efficiency (DC to AC)	90%	93%		91%
BATTERY & CHARGER				
Nominal DC Voltage	48 VDC			
Maximum Charging Current	Default 25A, 5A - 25A (Adjustable)		Default 60A, 5A -100A (Adjustable)	Default 60A, 10A -200A (Adjustable)
GENERAL				
PHYSICAL				
Dimension, D X W X H (mm)	107 x 438 x 480		204.2 x 460 x 600	167.5 x 500 x 622
Net Weight (kgs)	15.5		29	45
INTERFACE				
Communication Port	RS-232/USB		RS-232/USB and CAN Interface	
Intelligent Slot	Optional SNMP, Modbus and AS-400 cards available			
ENVIRONMENT				
Humidity	0 ~ 90% RH (No condensing)			
Operating Temperature	0 to 40°C		-10 to 55°C	
Altitude	0 ~ 1000 m**			

*These figures may vary depending on different AC voltage and country requirements.
**Power derating 1% every 100 m when altitude is over 1000m.
All specific cations and information are given with good intent, errors are possible and products may be subject to change without notice.