MultiSolar: On-Grid Inverter with Energy Storage

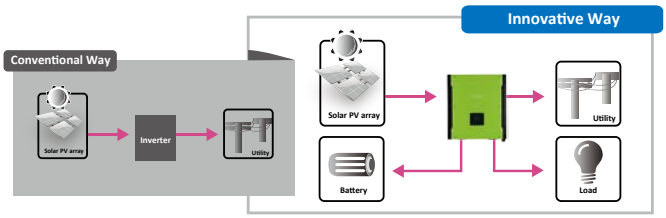
Innovative and Cost-effective Power Solution

- Pure sine wave output
- 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
- 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

MultiSolar is a flexible and intelligent hybrid inverter which utilizes solar power, AC utility, and battery power source to supply continuous power. It's a simple and smart solar power storage system for home users to either store energy into a battery and wait for night-time usage or use for self-consumption first depending on demands. Priority for power source can be programmed and set up through smart software. During night time or power failure, it will automatically extract power from the battery. In this way, it will reduce dependence on the utility.

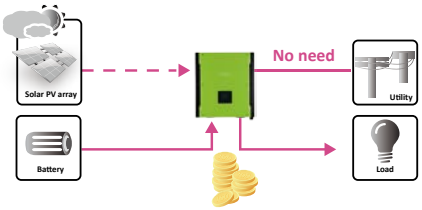
Feed-in is not only choice

In comparison with conventional grid-tie inverter, MultiSolar 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. The feed-in can be blocked.



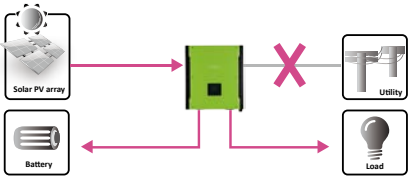
Save money by discharging battery for self-consumption first

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



Power backup when AC failed

MultiSolar 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.



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MultiSolar On-grid Inverter with Energy Storage Selection Guide

MODEL	MultiSolar Plus 3KW	MultiSolar 5KW	MultiSolar Plus 5KW	MultiSolar 3P 10KW
PHASE	1-phase in / 1-phase out			3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	4500 W	5000 W	10000 W	14850 W
RATED OUTPUT POWER	3000 W	5000 W	5000 W	10000 W
MAXIMUM CHARGING POWER	1200 W	1500 W	4800 W	9600 W
GRID-TIE OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC		720 VDC / 900 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC		225 VDC / 250 VDC	320 VDC / 350 VDC
MPP Voltage Range	250 VDC ~ 450 VDC	277 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 18 A		2 / 2 x 10 A	2 / 2 x 18.6A
GRID OUTPUT (AC)				
Nominal Output Voltage	208/220/230/240 VAC			230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 265 VAC*			184 - 265 VAC* per phase
Nominal Output Current	13 A	21 A	21 A	14.5A per phase
Power Factor	> 0.99			
EFFICIENCY				
Maximum Conversion Efficiency (DC/AC)	96%			
European Efficiency@ Vnominal	95%			
OFF-GRID OPERATION				
AC INPUT				
AC Start-up Voltage/Auto Restart Voltage	120 - 140 VAC / 180 VAC			120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC			170 - 280 VAC per phase
Maximum AC Input Current	30 A		40 A	
PV INPUT (DC)				
Maximum DC Voltage	500 VDC	500 VDC	900 VDC	900 VDC
MPP Voltage Range	250 VDC ~ 450 VDC	277 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 18 A	1 / 1 x 18 A	2 / 2 x 10A	2 / 2 x 18.6A
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	202/208/220/230/240 VAC	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)	93%			91%
HYBRID OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC
MPP Voltage Range	250 VDC ~ 450 VDC	277 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 18 A	1 / 1 x 18 A	2 / 2 x 10A	2 / 2 x 18.6A
GRID OUTPUT (AC)				
Nominal Output Voltage	202/208/220/230/240 VAC	220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 264.5 VAC*			184 - 264.5 VAC* per phase
Nominal Output Current	13 A	21 A	21 A	14.5 A per phase
AC INPUT				
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC			120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC			170 - 280 VAC per phase
Maximum AC Input Current	30 A		40 A	
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	202/208/220/230/240 VAC	220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Efficiency (DC to AC)	93%			91%
BATTERY & CHARGER				
Nominal DC Voltage	48 VDC			
Maximum Charging Current	Default 25A, 5A - 25A (Adjustable)	Default 30 A, 5A - 30A (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	16	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.
Product specifications are subject to change without further notice.

CE VDE-AR-N 4105
VDE 0126-1-1
AS4777, AS/NZS3100, NRS-097-2-1 (only for multiolar Plus 3KW)

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