

# Multisolar hybrid inverter : Grid connected inverter with battery storage



- Pure sine wave output
- Self-consumption and injection of surplus production into the grid
- Programmable power priority: PV, battery, grid
- Setting of battery charge curves according to type
- Programming according to different modes: grid connected, off grid and grid connected with back-up
- Integrated timer
- Communication via USB, RS-232 Modbus and SNMP
- Real time monitoring and control software

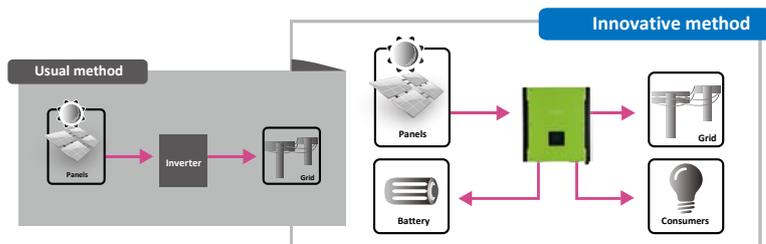
The Multisolar inverter is a flexible and intelligent inverter that can be connected to photovoltaic panels, the grid and batteries to provide uninterrupted power. This inverter offers a simple solution for storing solar energy for residential use during the day and night, maximising self-consumption.

The power priorities (energy source) can be set via the control software. During the night or in case of a grid failure, the power source automatically switches to the batteries. The Multisolar inverter therefore reduces your dependence on the grid.



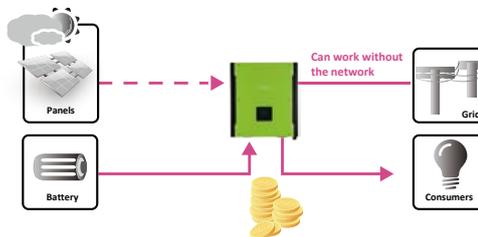
## Injection into the grid: a choice

Unlike standard inverters that feed their energy into the grid, the Multisolar inverter chooses where it delivers its energy. It can: charge the batteries (for future use), supply consumer appliances directly and inject surplus production into the grid. Injection into the grid can be blocked by programming.



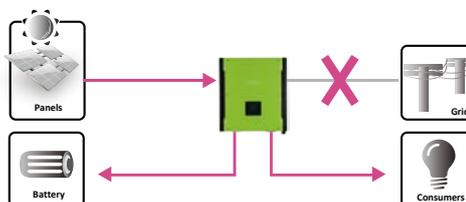
## Using batteries to maximise self-consumption and savings

The Multisolar inverter saves money by supplying energy during the day and discharging its batteries at night. If the battery level drops below a certain level, the inverter will switch its power supply to the grid.



## Back-up in case of power failure

The Multisolar UPS works as an uninterruptible power supply (UPS) by providing energy via its batteries even in the event of a power failure. It is therefore an effective solution in areas where load shedding and blackouts are frequent or in remote areas not connected to the grid.



## MultiSolar inverter with battery storage - Features

Models	MultiSolar Plus 3KW	MultiSolar Plus 5KW	MultiSolar 3P 10KW	MultiSolar 3P 15KW
<b>Phase</b>	1-phase in / 1-phase out		3-phase in / 3-phase out	
<b>Max PV power</b>	4500 W	10000 W	14850 W	22500 W
<b>Power output</b>	3000 W	5000 W	10000 W	15000 W
<b>Max. load power</b>	1200 W	4800 W	9600 W	15000 W
<b>Network connected operation</b>				
<b>Solar input (DC)</b>				
Nominal DC voltage / Max. DC voltage	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Starting voltage / Minimum working voltage	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC	320 VDC / 350 VDC
Voltage range MPP	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC	400 VDC ~ 800 VDC
Number of MPP inputs / Max input current	1 / 1 x 18 A	2 / 2 x 10 A	2 / 2 x 18.6 A	2 / A: 37.65A; B:18.6A
<b>Consumer output (AC)</b>				
Rated output voltage	208/220/230/240 VAC		230 VAC (P-N) / 400 VAC (P-P)	
Output voltage range	184 - 265 VAC*		184 - 265 VAC* by phase	184 - 264.5 VAC* by phase
Rated output current	13 A	21 A	14.5A by phase	21.7A by phase
Power factor	> 0.99			
<b>Efficiency</b>				
Maximum conversion efficiency (DC/AC)			96%	
European efficiency at nominal voltage			95%	
<b>Off-grid operation (off-grid)</b>				
<b>AC input</b>				
AC starting voltage / automatic restart voltage	120 - 140 VAC / 180 VAC		120 - 140 VAC by phase / 180 VAC by phase	120 - 140 VAC by phase / 180 VAC by phase
Input voltage range	170 - 280 VAC		170 - 280 VAC by phase	170 - 280 VAC by phase
Max. AC input current	30 A	40 A	40 A	40 A
<b>Solar input (DC)</b>				
Max. DC voltage	500 VDC	900 VDC	900 VDC	900 VDC
Voltage range MPP	250 VDC ~ 450 VDC	277 VDC ~ 450 VDC	400 VDC ~ 800 VDC	350 VDC ~ 850 VDC
Number of MPP inputs / Max input current	1 / 1 x 18 A	1 / 1 x 18 A	2 / 2 x 18.6A	2 / A: 37.65A; B:18.6A
<b>Output in battery mode (AC)</b>				
Nominal output voltage	202/208/220/230/240 VAC		230 VAC (P-N) / 400 VAC (P-P)	230 VAC (P-N) / 400 VAC (P-P)
Signal shape	Pure sinus			
Efficiency (DC/AC)	93%		91%	
<b>Hybrid operation</b>				
<b>Solar input (DC)</b>				
Nominal DC voltage / Max. DC voltage	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Starting voltage / Minimum working voltage	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC	320 VDC / 350 VDC
Voltage range MPP	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC / 800 VDC	350 VDC / 850 VDC
Number of MPP inputs / Max input current	1 / 1 x 18 A	2 / 2 x 10A	2 / 2 x 18.6A	2 / A: 37.65A; B:18.6A
<b>Consumer output (AC)</b>				
Rated output voltage	202/208/220/230/240 VAC		230 VAC (P-N) / 400 VAC (P-P)	230 VAC (P-N) / 400 VAC (P-P)
Output voltage range	184 - 264.5 VAC*		184 - 264.5 VAC* by phase	184 - 264.5 VAC* by phase
Rated output current	13 A	21 A	14.5 A by phase	21.7 A by phase
<b>AC Input</b>				
AC starting voltage / automatic restart voltage	120 - 140 VAC / 180 VAC		120 - 140 VAC by phase / 180 VAC by phase	120 - 140 VAC by phase / 180 VAC by phase
Voltage range MPP	170 - 280 VAC		170 - 280 VAC par phase	170 - 280 VAC by phase
Number of MPP inputs / Max input current	30 A		40 A	
<b>Output in battery mode (AC)</b>				
Nominal output voltage	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)	230 VAC (P-N) / 400 VAC (P-P)
Efficiency (DC/AC)	93%		91%	91%
<b>Batteries and chargers</b>				
Nominal DC voltage	48 VDC			
Max. load current	Default 25A, 5A - 25A (Adjustable)	Default 60A, 5A - 100A (Adjustable)	Default 60A, 10A - 200A (Adjustable)	Default 60A, 5A - 300A (Adjustable)
<b>General characteristics</b>				
<b>Physical characteristics</b>				
Dimensions, P x L x H (mm)	107 x 438 x 480	204.2 x 460 x 600	167.5 x 500 x 622	219 x 650 x 820
Weight (kg)	15.5	29	45	62
<b>Interface</b>				
Communication port	RS-232/USB		RS-232/USB and CAN Interface	
Intelligent Slot	SNMP, Modbus and AS-400 cards available as options			
<b>Environment</b>				
Humidity	0 ~ 90% RH (non-condensing)			
Operating temperature	0 to 40°C		-10 to 55°C	
Altitude	0 ~ 1000 m**			

\*These figures may vary depending on AC voltage requirements and different countries.

\*\* Power reduction of 1% for every 100m from 1000m altitude.

Product specifications are subject to change without notice.

CE VDE-AR-N 4105

VDE 0126-1-1

AS4777, AS/NZS3100, NRS-097-2-1 (only for MultiSolar Plus 3KW)