

MPPT Inverter - EU

MGX series



REVERSE POLARITY
PROTECTION



OVERLOAD
PROTECTION



OVER TEMPERATURE
PROTECTION



LOW/OVER VOLTAGE
PROTECTION



SHORT CIRCUIT
PROTECTION

INTRODUCTION

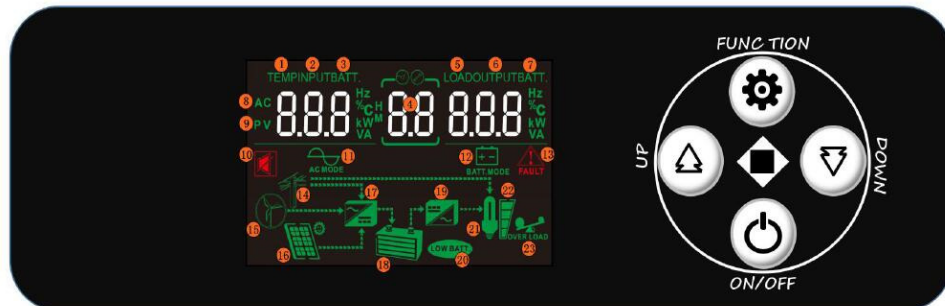
MGX series MPPT inverter is developed for battery backup solar system or uninterruptible power system (UPS). It is an advanced tool of power conversion. It can supply you with AC power converted from a DC power source, while it also has a battery charger of grid power AC input. With built-in MPPT solar charge controller, it will charge the battery with Maximum Power Point Tracking charging technology. It has display board to select the inverter to work in Grid-Power-Priority mode or Battery-Power-Priority mode. MGX series MPPT inverter is a stable power source with low harmonic distortion to ensure the widest use of applications.



FUNCTIONAL CHARACTERISTICS

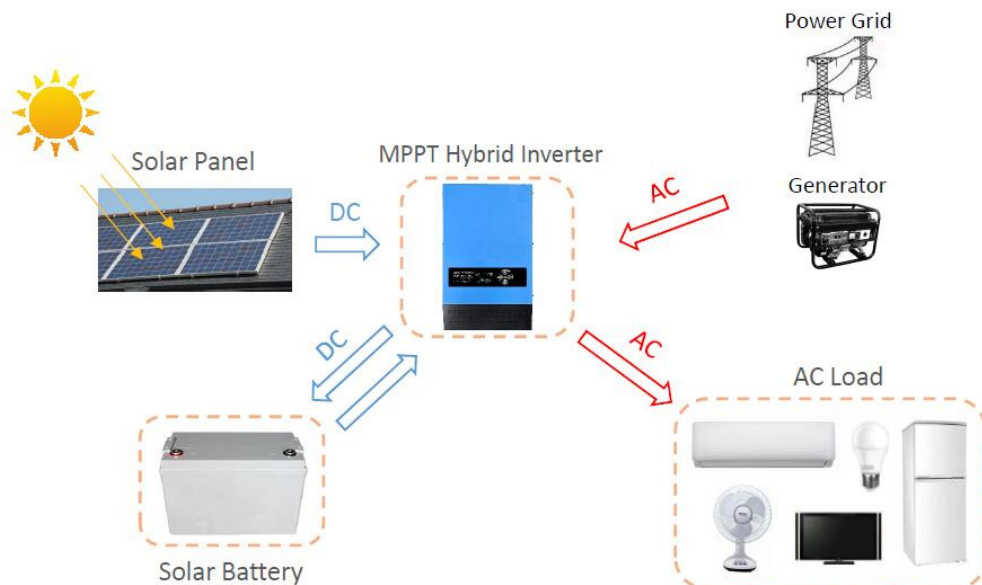
- Convert 12V/24V/48V DC power to 230V AC pure sine wave power
- Charge the batteries with solar power DC input by built-in MPPT charge controller
- Charge the batteries with grid power AC input, 0-30A adjustable
- Three working mode options by LCD display board: Grid-Power-Priority mode; Battery-Power-Priority mode; ECO mode
- Output type and socket optional
- Over load protection, over voltage protection, low voltage protection, short circuit protection, over temperature protection, reverse polarity protection

DISPLAY BOARD INTRODUCTION



- | | | |
|---|---|--------------------------|
| ① Temperature | ⑧ Grid Input Voltage | ⑱ Battery System Display |
| ② Input | ⑨ Solar Input Power | ⑲ Inverter Converter |
| ③ Battery Voltage | ⑩ Mute Icon | ⑳ Battery Low Vol. Alarm |
| ④ Working Mode
(d1: Grid-Power-Priority Mode)
(d2: ECO Mode)
(d3: Battery-Power-Priority Mode) | ⑪ Grid-PRI. Mode Icon | ㉑ AC Load Display |
| Battery Type | ⑫ Battery-PRI. Mode Icon | ㉒ AC Load % Display |
| Grid Input Charge Current | ⑬ Fault Icon | ㉓ Overload Display |
| ⑤ AC Load | ⑭ Grid Input Connected | |
| ⑥ AC Output | ⑮ Wind Input Connected | |
| ⑦ Battery Power % | ⑯ Solar Input Connected | |
| | ⑰ Grid, Wind, Solar Charge Charger Icon | |

APPLICATION

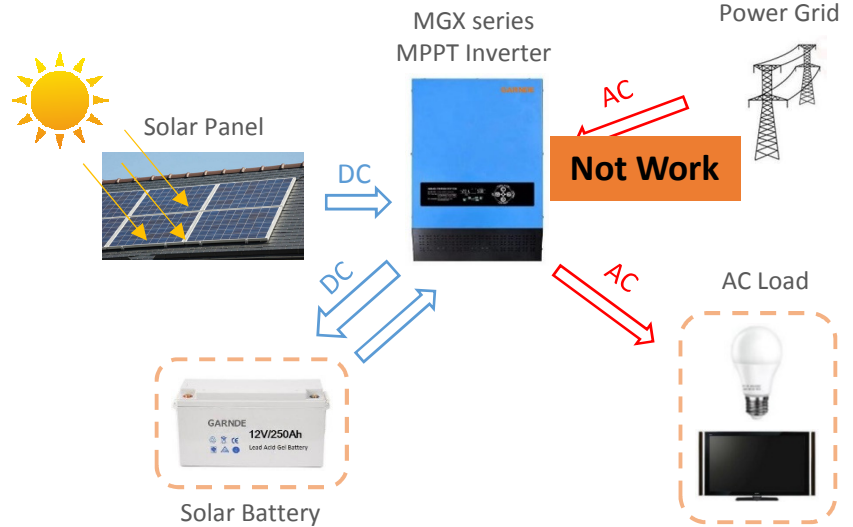


• Battery-Power-Priority mode

In Battery-Power-Priority mode, solar panes charge the battery system through the built-in MPPT controller of the hybrid inverter.

The inverter convert DC power from battery to AC power to drive the loads.

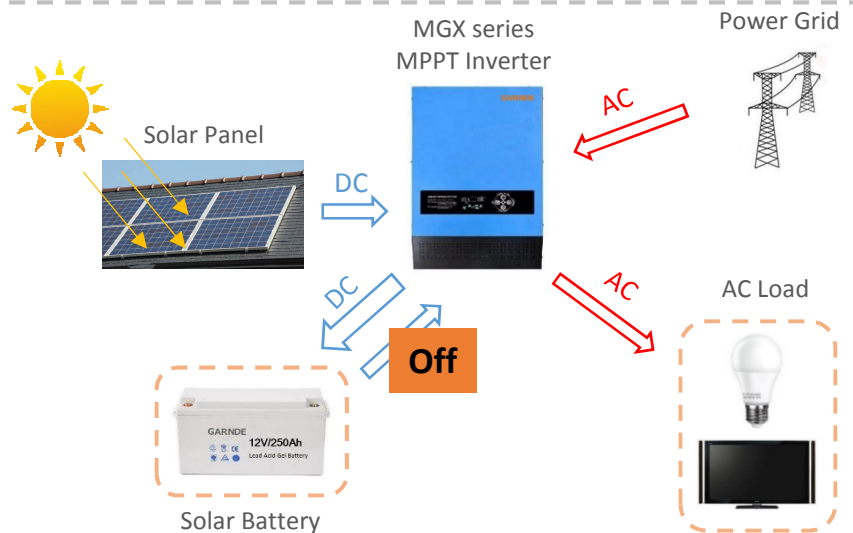
AC power grid is off.



When the battery is discharged, the inverter turn off the battery discharge and turn on the power grid AC charger to charge the battery automatically.

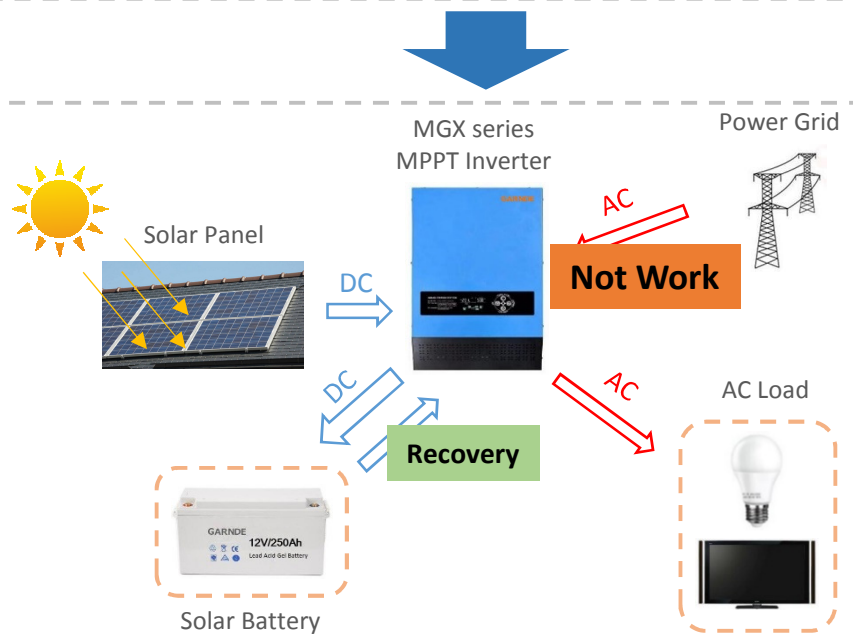
At the same time, the AC power grid drive the loads.

The solar panels are still charging the battery through the built-in MPPT controller of the hybrid inverter.



When the battery system is charged. The inverter turn off the power grid AC charger and turn off the AC input automatically.

The solar system back to inverter converting DC power from battery to AC power to drive the loads again.

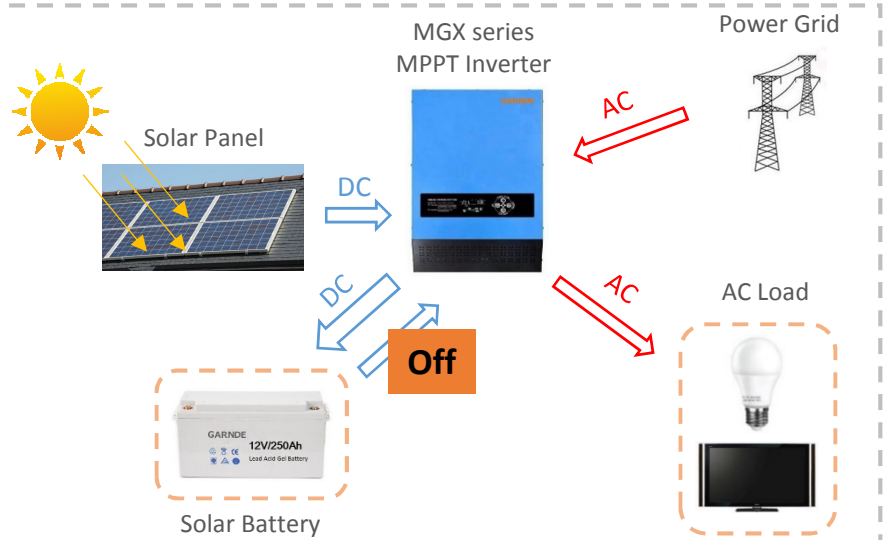


• Grid-Power-Priority mode

In Grid-Power-Priority mode, the AC power grid drive the loads and charge the battery system.

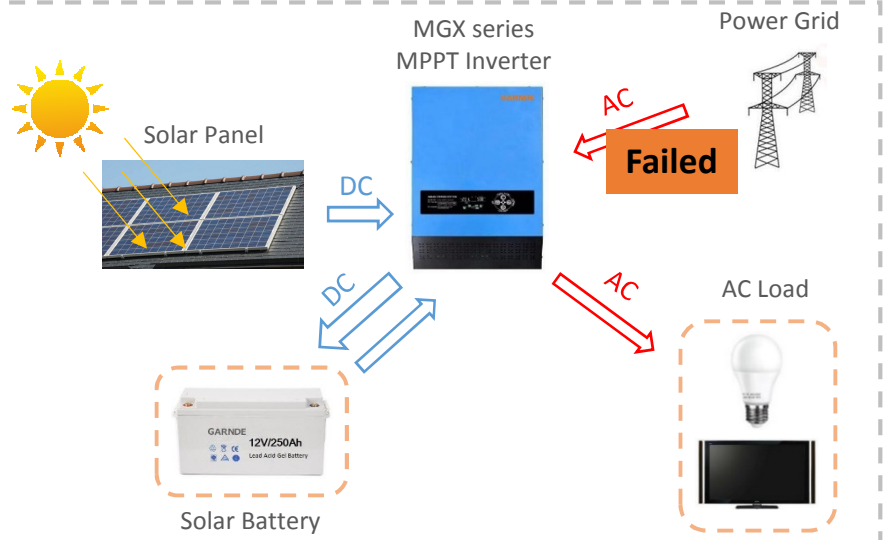
The solar panels also charge the battery system.

the battery system does not discharge.



When the AC power grid is off, the inverter turn on the battery discharge automatically and convert DC power to AC power to drive the loads.

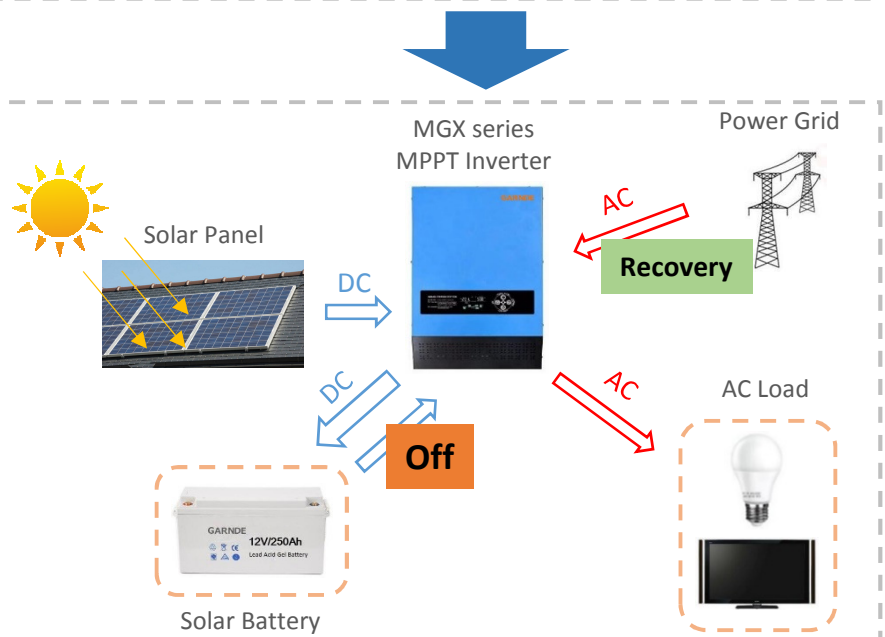
The solar panels keep charging the battery through solar charge controller.



When the AC power grid is recovered, the inverter turn off the battery discharge.

The AC power grid drive the loads and charge the battery.

The solar panels still charge the battery system.



MPPT Inverter 1000W - EU

MGX series

TECHNICAL SPECIFICATIONS

Model		MGX1000-30-12-230	MGX1000-50-24-230
Working Mode Options		Grid-Power-Priority Mode / Battery-Power-Priority Mode / ECO Mode	
Output	Rated Power	1000W	
	Surge Power	2000W	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz \pm 1Hz	
	Communication	RS232/RS485	
	Efficiency	\geq 85%	
DC Input	DC Voltage	12V	24V
MPPT Controller	Max. Charging Current	30A	50A
PV Input	Max. Input Voltage	50V	
	Max. Input Power	400W	1200W
Grid Power AC Input	AC Voltage	170-275V	
	Frequency	50Hz \pm 5Hz	
Battery Charging	Charging Current	C6(30A) (default), C0(0A), C1(5A), C2(10A), C3(15A), C4(20A), C5(25A) can be selected and set up	
Protection	Overload / Overcurrent / Short circuit / Over temperature / Anti-reverse protection		
Others	Transfer Time	\leq 4ms	
	Display	LCD	
	Working Temperature	-10 $^{\circ}$ C - 50 $^{\circ}$ C	
	Cooling Fan	Temperature Control	
	Noise	\leq 55dB	
	Dimensions	490 x 300 x 130 mm / 19.3 x 11.8 x 5.1 inches	
	Net Weight	13 kgs / 29 lbs	
	Packing	CTN: 57 x 40 x 23 cm, 1 pc, 15 kgs / 22.4 x 15.7 x 9.1 inches, 1 pc, 33 lbs	
	Warranty	3 years	

MPPT Inverter 2000W - EU

MGX series

TECHNICAL SPECIFICATIONS

Model		MGX2000-50-24-230	MGX2000-50-48-230
Working Mode Options		Grid-Power-Priority Mode / Battery-Power-Priority Mode / ECO Mode	
Output	Rated Power	2000W	
	Surge Power	4000W	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	24V	48V
MPPT Controller	Max. Charging Current	50A	50A
PV Input	Max. Input Voltage	50V	100V
	Max. Input Power	1200W	2400W
Grid Power AC Input	AC Voltage	170-275V	
	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	C6(30A) (default), C0(0A), C1(5A), C2(10A), C3(15A), C4(20A), C5(25A) can be selected and set up	
Protection	Overload / Overcurrent / Short circuit / Over temperature / Anti-reverse protection		
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	490 x 300 x 130 mm / 19.3 x 11.8 x 5.1 inches	
	Net Weight	16 kgs / 35 lbs	
	Packing	CTN: 57 x 40 x 23 cm, 1 pc, 18 kgs / 22.4 x 15.7 x 9.1 inches, 1 pc, 40 lbs	
Warranty	3 years		

MPPT Inverter 3000W - EU

MGX series

TECHNICAL SPECIFICATIONS

Model		MGX3000-50-24-230	MGX3000-60-48-230
Working Mode Options		Grid-Power-Priority Mode / Battery-Power-Priority Mode / ECO Mode	
Output	Rated Power	3000W	
	Surge Power	6000W	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	24V	48V
MPPT Controller	Max. Charging Current	50A	60A
PV Input	Max. Input Voltage	50V	100V
	Max. Input Power	1200W	2900W
Grid Power AC Input	AC Voltage	170-275V	
	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	C6(30A) (default), C0(0A), C1(5A), C2(10A), C3(15A), C4(20A), C5(25A) can be selected and set up	
Protection	Overload / Overcurrent / Short circuit / Over temperature / Anti-reverse protection		
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	490 x 300 x 130 mm / 19.3 x 11.8 x 5.1 inches	
	Net Weight	18 kgs / 40 lbs	
	Packing	CTN: 57 x 40 x 23 cm, 1 pc, 20 kgs / 22.4 x 15.7 x 9.1 inches, 1 pc, 44 lbs	
	Warranty	3 years	

MPPT Inverter 4000W - EU

MGX series

TECHNICAL SPECIFICATIONS

Model		MGX4000-50-24-230	MGX4000-60-48-230
Working Mode Options		Grid-Power-Priority Mode / Battery-Power-Priority Mode / ECO Mode	
Output	Rated Power	4000W	
	Surge Power	8000W	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	24V	48V
MPPT Controller	Max. Charging Current	50A	60A
PV Input	Max. Input Voltage	50V	100V
	Max. Input Power	1200W	2900W
Grid Power AC Input	AC Voltage	170-275V	
	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	C6(30A) (default), C0(0A), C1(5A), C2(10A), C3(15A), C4(20A), C5(25A) can be selected and set up	
Protection	Overload / Overcurrent / Short circuit / Over temperature / Anti-reverse protection		
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	510 x 320 x 130 mm / 20.1 x 12.6 x 5.1 inches	
	Net Weight	20.5 kgs / 45 lbs	
	Packing	CTN: 59 x 42 x 23 cm, 1 pc, 23 kgs / 23.2 x 16.5 x 9.1 inches, 1 pc, 51 lbs	
	Warranty	3 years	

MPPT Inverter 5000W - EU

MGX series

TECHNICAL SPECIFICATIONS

Model		MGX5000-60-48-230
Working Mode Options		Grid-Power-Priority Mode / Battery-Power-Priority Mode / ECO Mode
Output	Rated Power	5000W
	Surge Power	10000W
	AC Voltage	230V
	AC Voltage Range	220 - 240V
	Waveform	Pure sine wave
	Frequency	50Hz ± 1Hz
	Communication	RS232/RS485
	Efficiency	≥ 85%
DC Input	DC Voltage	48V
MPPT Controller	Max. Charging Current	60A
PV Input	Max. Input Voltage	100V
	Max. Input Power	2900W
Grid Power AC Input	AC Voltage	170-275V
	Frequency	50Hz ± 5Hz
Battery Charging	Charging Current	C6(30A) (default), C0(0A), C1(5A), C2(10A), C3(15A), C4(20A), C5(25A) can be selected and set up
Protection	Overload / Overcurrent / Short circuit / Over temperature / Anti-reverse protection	
Others	Transfer Time	≤ 4ms
	Display	LCD
	Working Temperature	-10°C - 50°C
	Cooling Fan	Temperature Control
	Noise	≤ 55dB
	Dimensions	510 x 320 x 130 mm / 20.1 x 12.6 x 5.1 inches
	Net Weight	23.5 kgs / 52 lbs
	Packing	CTN: 59 x 42 x 23 cm, 1 pc, 26 kgs / 23.2 x 16.5 x 9.1 inches, 1 pc, 57 lbs
	Warranty	3 years

GARNDE

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