

Inverter with AC Charger (8KW – 40KW) - EU

**GN** series



## INTRODUCTION

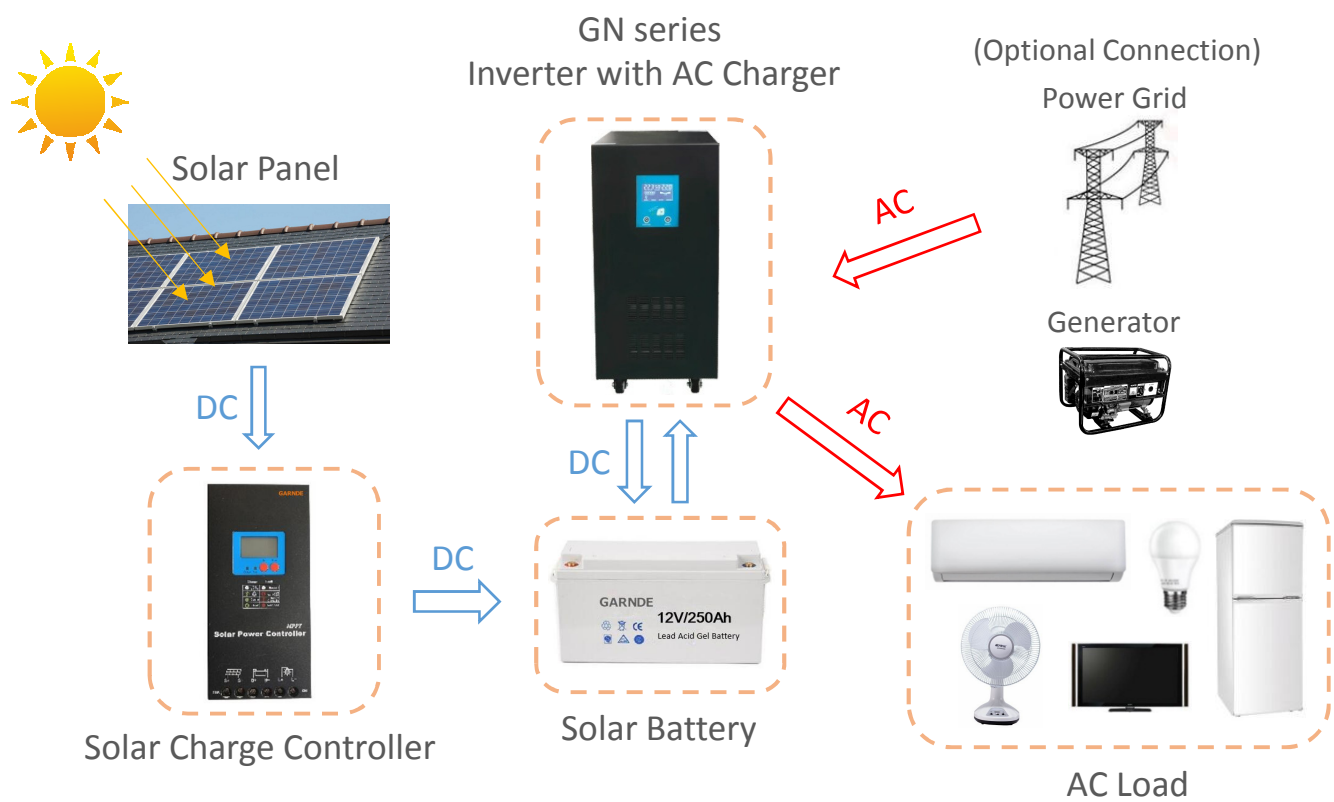
GN series inverter with AC charger is developed for energy storage solar system or uninterruptible power system (UPS). It is an advanced tool of power conversion. It can supply you with AC power converted from a DC power source, while it also has a battery charger with grid power AC input. GN series inverter with AC charger is a stable power source with low harmonic distortion to ensure the widest use of applications.



## FUNCTIONAL CHARACTERISTICS

- Convert 48V/96V/192V/240V/384V DC power to 230V AC pure sine wave power
- Charge the batteries with grid power AC input, max charging current 15A
- Working mode options by switch: Battery-Priority mode (DC), Grid-Priority mode (AC)
- Wide AC voltage input voltage to endure voltage instability
- LCD real-time display, concise and straightforward
- Over load protection, over voltage protection, low voltage protection, short circuit protection, over temperature protection, reverse polarity protection

## APPLICATION DIAGRAM

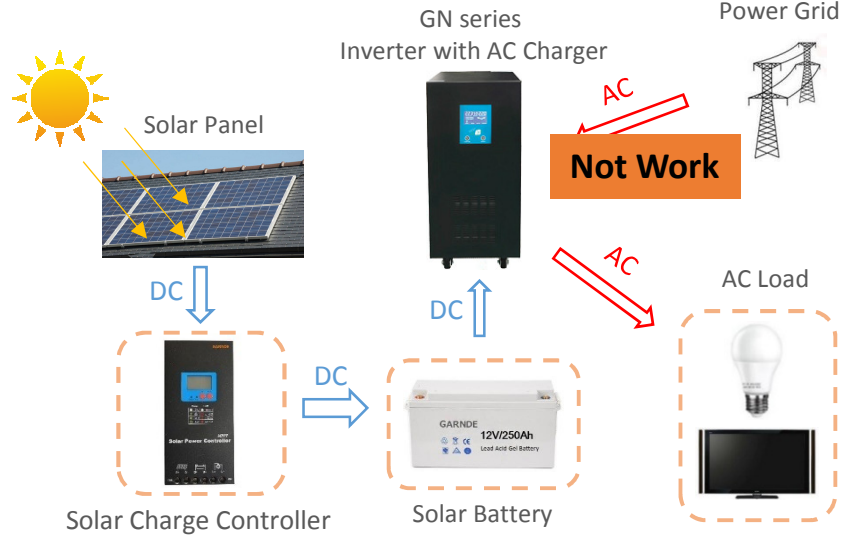


## • Battery-Priority mode (DC)

In Battery-Priority mode, solar panes charge the battery system through solar charge controller.

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

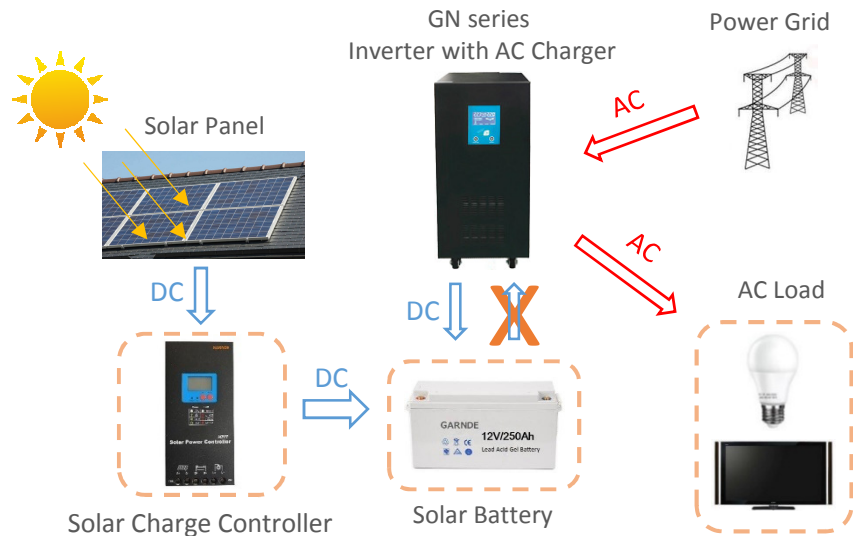
AC power grid is off.



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.

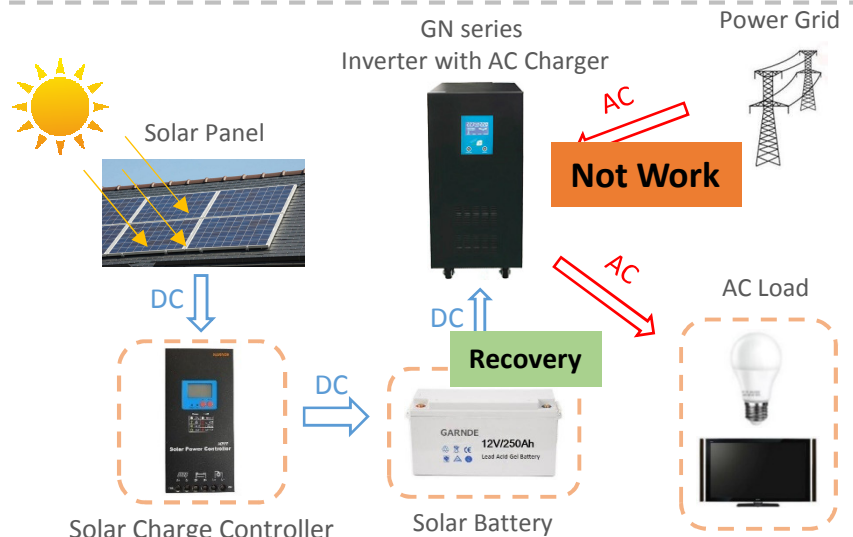
At the same time, the AC power grid drive the loads.

The solar panels are still charging the battery through solar charge controller.



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.

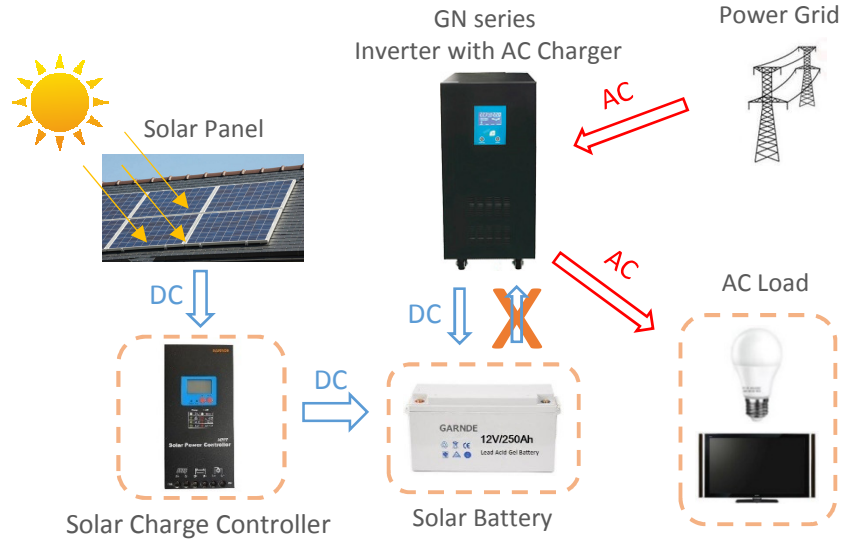


• **Grid-Priority mode (AC)**

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

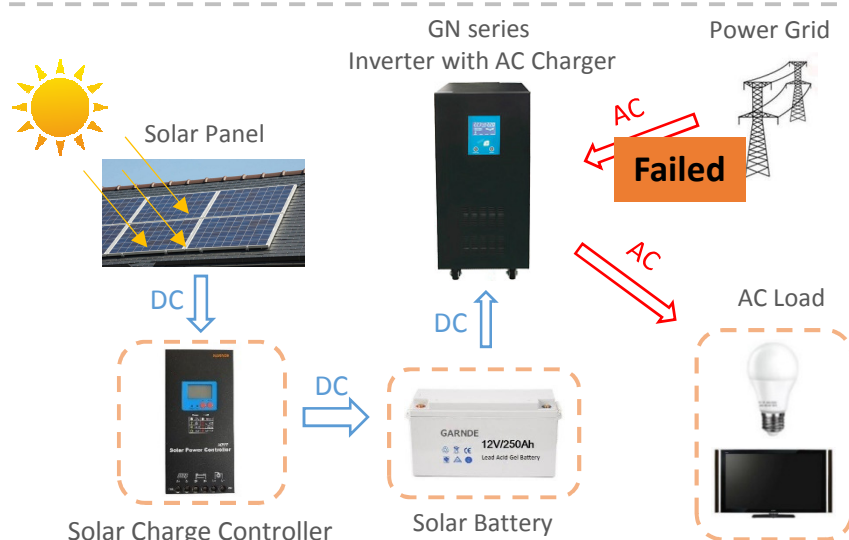
The solar panels also charge the battery system.

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.

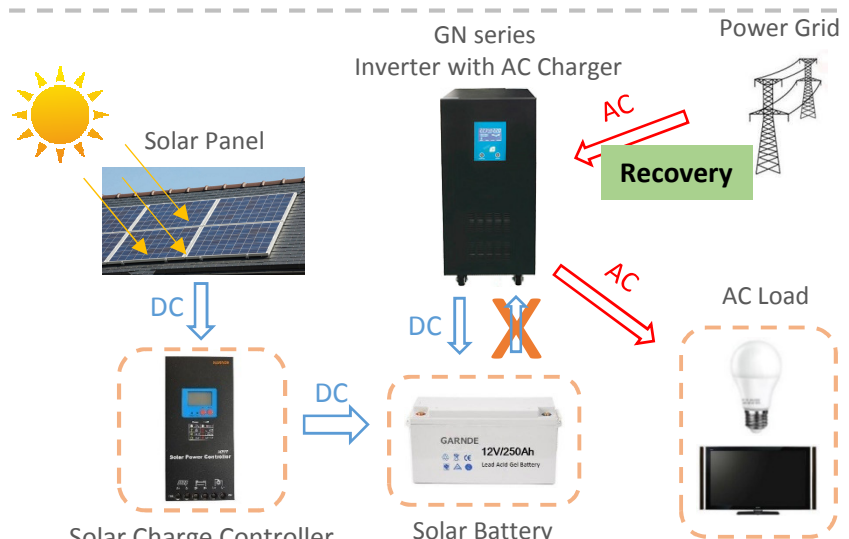
The solar panels keep charging the battery through solar charge controller.



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.



# Inverter with AC Charger 8KW - EU

**GN** series

## TECHNICAL SPECIFICATIONS

Model		GN8K-96-230	GN8K-192-230
Working Mode Options		Grid-Priority mode (AC) / Battery-Priority mode (DC)	
Output	Rated Power	8KW	
	Surge Power	24KW	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	96V	192V
Grid Power	AC Voltage	195-250V	
AC Input	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	Max 15A	
Protection	Over-load	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)	
	Short-circuit	Output short-circuit, automatically shutdown after keeping noise in 20 s	
	Battery	High or low voltage protection	
	Reverse polarity	Reverse polarity protection	
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	485 x 300 x 646 mm / 19.1 x 11.8 x 25.4 inches	
	Net Weight	62 kgs / 137 lbs	
	Packing	CTN: 550 x 365 x 785 mm, 1 pc, 72 kgs / 21.7 x 14.4 x 30.9 inches, 1 pc, 159 lbs	
	Warranty	3 years	

# Inverter with AC Charger 10KW - EU

**GN** series

## TECHNICAL SPECIFICATIONS

Model		GN10K-96-230	GN10K-192-230
Working Mode Options		Grid-Priority mode (AC) / Battery-Priority mode (DC)	
Output	Rated Power	10KW	
	Surge Power	30KW	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	96V	192V
Grid Power AC Input	AC Voltage	195-250V	
	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	Max 15A	
Protection	Over-load	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)	
	Short-circuit	Output short-circuit, automatically shutdown after keeping noise in 20 s	
	Battery	High or low voltage protection	
	Reverse polarity	Reverse polarity protection	
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	485 x 300 x 646 mm / 19.1 x 11.8 x 25.4 inches	
	Net Weight	66 kgs / 146 lbs	
	Packing	CTN: 550 x 365 x 785 mm, 1 pc, 76 kgs / 21.7 x 14.4 x 30.9 inches, 1 pc, 168 lbs	
	Warranty	3 years	

# Inverter with AC Charger 12KW - EU

## GN series

### TECHNICAL SPECIFICATIONS

Model		GN12K-96-230	GN12K-192-230
Working Mode Options		Grid-Priority mode (AC) / Battery-Priority mode (DC)	
Output	Rated Power	12KW	
	Surge Power	36KW	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	96V	192V
Grid Power AC Input	AC Voltage	195-250V	
	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	Max 15A	
Protection	Over-load	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)	
	Short-circuit	Output short-circuit, automatically shutdown after keeping noise in 20 s	
	Battery	High or low voltage protection	
	Reverse polarity	Reverse polarity protection	
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	600 x 300 x 800 mm / 23.6 x 11.8 x 31.5 inches	
	Net Weight	102 kgs / 225 lbs	
	Packing	CTN: 665 x 365 x 830 mm, 1 pc, 115 kgs / 26.2 x 14.4 x 32.7 inches, 1 pc, 254 lbs	
Warranty	3 years		

# Inverter with AC Charger 15KW - EU

## GN series

### TECHNICAL SPECIFICATIONS

Model		GN15K-192-230	GN15K-240-230
<b>Working Mode Options</b>		Grid-Priority mode (AC) / Battery-Priority mode (DC)	
<b>Output</b>	<b>Rated Power</b>	15KW	
	<b>Surge Power</b>	45KW	
	<b>AC Voltage</b>	230V	
	<b>AC Voltage Range</b>	220 - 240V	
	<b>Waveform</b>	Pure sine wave	
	<b>Frequency</b>	50Hz ± 1Hz	
	<b>Communication</b>	RS232/RS485	
	<b>Efficiency</b>	≥ 85%	
<b>DC Input</b>	<b>DC Voltage</b>	192V	240V
<b>Grid Power AC Input</b>	<b>AC Voltage</b>	195-250V	
	<b>Frequency</b>	50Hz ± 5Hz	
<b>Battery Charging</b>	<b>Charging Current</b>	Max 15A	
<b>Protection</b>	<b>Over-load</b>	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)	
	<b>Short-circuit</b>	Output short-circuit, automatically shutdown after keeping noise in 20 s	
	<b>Battery</b>	High or low voltage protection	
	<b>Reverse polarity</b>	Reverse polarity protection	
<b>Others</b>	<b>Transfer Time</b>	≤ 4ms	
	<b>Display</b>	LCD	
	<b>Working Temperature</b>	-10°C - 50°C	
	<b>Cooling Fan</b>	Temperature Control	
	<b>Noise</b>	≤ 55dB	
	<b>Dimensions</b>	600 x 300 x 800 mm / 23.6 x 11.8 x 31.5 inches	
	<b>Net Weight</b>	108 kgs / 238 lbs	
	<b>Packing</b>	CTN: 665 x 365 x 830 mm, 1 pc, 121 kgs / 26.2 x 14.4 x 32.7 inches, 1 pc, 267 lbs	
	<b>Warranty</b>	3 years	



# Inverter with AC Charger 20KW - EU

## GN series

### TECHNICAL SPECIFICATIONS

Model		GN20K-192-230	GN20K-240-230
Working Mode Options		Grid-Priority mode (AC) / Battery-Priority mode (DC)	
Output	Rated Power	20KW	
	Surge Power	60KW	
	AC Voltage	230V	
	AC Voltage Range	220 - 240V	
	Waveform	Pure sine wave	
	Frequency	50Hz ± 1Hz	
	Communication	RS232/RS485	
	Efficiency	≥ 85%	
DC Input	DC Voltage	192V	240V
Grid Power AC Input	AC Voltage	195-250V	
	Frequency	50Hz ± 5Hz	
Battery Charging	Charging Current	Max 15A	
Protection	Over-load	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)	
	Short-circuit	Output short-circuit, automatically shutdown after keeping noise in 20 s	
	Battery	High or low voltage protection	
	Reverse polarity	Reverse polarity protection	
Others	Transfer Time	≤ 4ms	
	Display	LCD	
	Working Temperature	-10°C - 50°C	
	Cooling Fan	Temperature Control	
	Noise	≤ 55dB	
	Dimensions	600 x 300 x 800 mm / 23.6 x 11.8 x 31.5 inches	
	Net Weight	113 kgs / 249 lbs	
	Packing	CTN: 665 x 365 x 830 mm, 1 pc, 130 kgs / 26.2 x 14.4 x 32.7 inches, 1 pc, 287 lbs	
	Warranty	3 years	

# Inverter with AC Charger 30KW - EU

**GN** series

## TECHNICAL SPECIFICATIONS

Model		GN30K-240-230
Working Mode Options		Grid-Priority mode (AC) / Battery-Priority mode (DC)
Output	Rated Power	30KW
	Surge Power	90KW
	AC Voltage	230V
	AC Voltage Range	220 - 240V
	Waveform	Pure sine wave
	Frequency	50Hz ± 1Hz
	Communication	RS232/RS485
	Efficiency	≥ 85%
DC Input	DC Voltage	240V
Grid Power AC Input	AC Voltage	195-250V
	Frequency	50Hz ± 5Hz
Battery Charging	Charging Current	Max 15A
Protection	Over-load	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s ; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)
	Short-circuit	Output short-circuit, automatically shutdown after keeping noise in 20 s
	Battery	High or low voltage protection
	Reverse polarity	Reverse polarity protection
Others	Transfer Time	≤ 4ms
	Display	LCD
	Working Temperature	-10°C - 50°C
	Cooling Fan	Temperature Control
	Noise	≤ 55dB
	Dimensions	720 x 435 x 1120 mm /28.3 x 17.1 x 44.1 inches
	Net Weight	135 kgs / 298 lbs
	Packing	CTN: 790 x 505 x 1260 mm, 1 pc, 150 kgs / 31 x 20 x 50 inches, 1 pc, 331 lbs
	Warranty	3 years

# Inverter with AC Charger 40KW - EU

**GN** series

## TECHNICAL SPECIFICATIONS

Model		GN40K-384-230
Working Mode Options		Grid-Priority mode (AC) / Battery-Priority mode (DC)
Output	Rated Power	40KW
	Surge Power	120KW
	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	384V
Grid Power AC Input	AC Voltage	195-250V
	Frequency	50Hz $\pm$ 5Hz
Battery Charging	Charging Current	Max 15A
Protection	Over-load	In Battery-Priority mode, overload exceeds 110%, automatically shutdown in 30 s ; Overload exceeds 120%, automatically shutdown in 2 s. (In Grid-Priority mode, no shutdown if overload, just keep noise)
	Short-circuit	Output short-circuit, automatically shutdown after keeping noise in 20 s
	Battery	High or low voltage protection
	Reverse polarity	Reverse polarity protection
Others	Transfer Time	$\leq$ 4ms
	Display	LCD
	Working Temperature	-10°C - 50°C
	Cooling Fan	Temperature Control
	Noise	$\leq$ 55dB
	Dimensions	720 x 435 x 1120 mm /28.3 x 17.1 x 44.1 inches
	Net Weight	160 kgs / 353 lbs
	Packing	CTN: 790 x 505 x 1260 mm, 1 pc, 180 kgs / 31 x 20 x 50 inches, 1 pc, 397 lbs
Warranty	3 years	

# **GARNDE**

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