

Hybrid Inverter (Off-grid)

Single Phase: GF1-8KS2M/12KS2

The GF1 8-12KS2 series is an off-grid solar inverter combining economy and high performance, designed for backup power, off-grid, providing uninterruptible power support and ESS applications. This inverter uniquely integrates generator interface, AC coupling and smart load output interface for true versatility. The intuitive operator interface and intelligent monitoring features also make energy management easy and simple. In addition, it can handle high surge loads, and the extremely short on/off switching time ensures that critical loads continue to operate during power outages, increasing the stability and high reliability of system operation.

Product Benefits

- ① Dual MPPT design, compatible with 182/210 solar modules
- ② Color LCD touchscreen with integrated LED light for intelligent status display
- ③ Flexible expansion, independent ports for generator & smart load connection
- ④ 250A/250A max charge/discharge current for fast power backup
- ⑤ Sleek industrial design, easy to install and operate



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INVERTER

Model	GF1-8KS2M		GF1-12KS2	
PV Input				
Max. PV Input Power	16000W		24000W	
Max. PV Input Voltage			500V	
Min. PV Input Voltage			60V	
MPPT Voltage Range			60 – 500V	
Start-up Voltage			70V	
No. of MPPTs/Strings per MPPT	2 / 2		3 / 2	
Max. PV Input Current	32/32A		32/32/32A	
Max. Short Circuit Current	40/40A		40/40/40A	
AC Input				
Max. AC Input Power			13800W	
Max. AC Input Current	40A		60A	
Rated AC Input Voltage			L/N/PE, 220/230/240V	
AC Input Voltage Range			0.85 – 1.1 Un	
Rated AC Input Frequency			50 / 60 Hz	
AC Input Frequency Range			45 – 55 / 55 – 65 Hz	
AC Output				
Rated AC Output Apparent Power	8800VA		13200VA	
Rated AC Output Power	8000W		12000W	
Output Peak Power			2 times of rated power, 10s	
Rated Output Voltage			L/N/PE, 220/230/240V	
Rated Output Frequency			50 / 60 Hz	
Rated Output Current	36.4A		54.5A	
THDv, Rated Power			< 3 %	
On/Off-grid Switchover Time			< 10 ms	
Generator Data				
Max. Input Power	8000W		12000W	
Max. Input Current	36.4A		54.5A	
Rated Input Frequency			50 / 60 Hz	
Efficiency				
Max. Efficiency			97.60%	
Euro Efficiency			96.80%	
Battery				
Battery Type			Li-ion	
Battery Voltage Range			40 – 60 V	
Max. Charge/Discharge Current	190A		250A	
Communication with BMS			CAN / RS485	
Inverter Data				
Dimension (W*H*D)			496*505*225 mm	
Weight			34 kg	
Mounting Method			Wall Mounting	
Protection Rating			IP66	
Cooling			Forced air cooling	
Operating Temperature Range			–25°C to +60°C (derating at 45°C)	
Display			LCD + APP	
Noise			<45 dB	
Operating Attitude			2000m	
Operating Humidity			0 – 95 %	