

# **SUN GB Series**

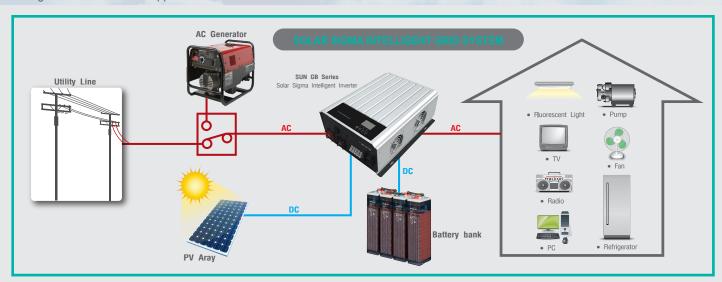
### SOLAR SIGMA INTELLIGENT INVERTER

#### Features:

- Single phase bidirectional inverter
- Include PWM with MPPT charge controller
- Provide uninterrupted backup power to load when utility grid line is not available.
- · Smart battery charging for small battery capacity
- · Feeding excess energy back to grid line
- Low harmonic distortion(less than 3%)
- · High efficiency 96.5%
- · User settable operation
  - 1. Excess PV energy back feed to utility line
  - 2. No PV energy back feed to utility line, PV energy only supply to loads
- · Special design for using at high grid fluctuation area
- Battery temperature compensation(option)
- ISO 9001 and ISO 14001 certified factory



**SUN SB Series** is a single phase multi-function energy storage inverter, combining functions of inverter, On Grid, MPPT Solar charger controller and AC battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/Solar charger priority and acceptable input voltage based on different applications.



1.PV energy feed back to utility	PV energy is large feed to utility		PV energy is small, PV&Battery energy feed to utility					
2. PV energy supply to loads	PV large energy supply to loads & Charge battery	PV small energy & Battery supply to loads		No PV Battery energy supply to loads				
3. Charger mode	PV&Utility Charge to batteries							
4.Bypass mode	Utility supply to loads							
5.PV energy to loads	PV energy supply to loads	PV&Battery energy	y supply to loads	Battery energy supply to loads				





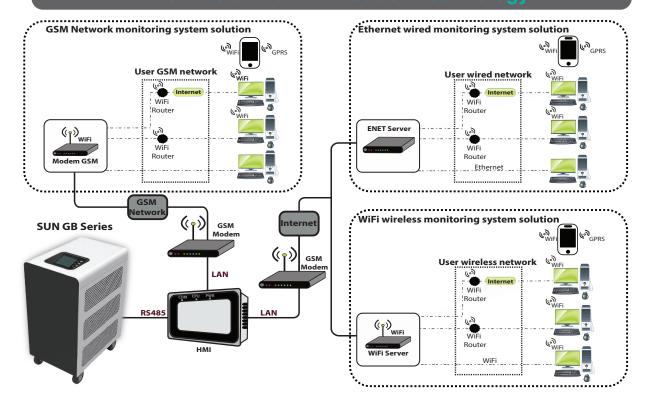




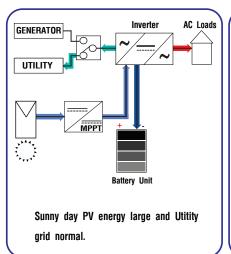


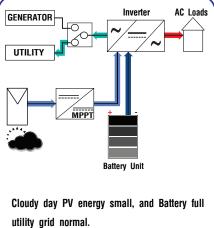


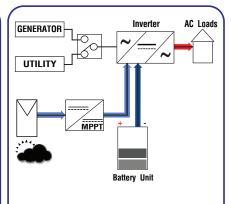
# **Information Communication Technology**



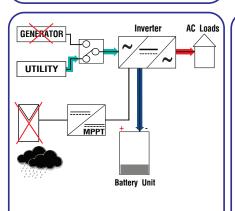
# **Operation Mode**



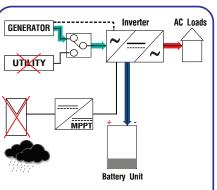




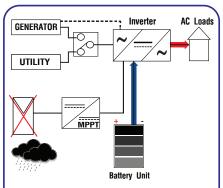
Cloudy day PV energy small, Battery medium and Utility grid normal.



Rainy day No PV energy, Battery lower and Utility grid normal to charge battery.



Rainy day No PV energy, Battery lower, Utility fails and Generator running to charge battery.



Rainy day No PV energy, Battery full, Utility and Generator stop to charge battery.



# SUN GB Series

#### **SOLAR SIGMA INTELLIGENT INVERTER**

MODEL		GB20	GB30	GB40	GB50	GB110			
DOWED DATING	PV Input(Wp)	2400Wp	3600Wp	3600Wp	6400Wp	10KWp			
POWER RATING	AC Output(W)	2000W	3000W	4000W	5000W	10kW			
SOLAR	PV Max.Open Circuit Voltage (Voc)		145Vdc						
CONTROLLER &	PV MPPT Voltage Range (Vmp)		64-72Vdc						
AC CHARGER	Max PV Charging Current (A)	45A	60A		120A(60x2) 180A(60x3				
	Max AC Charging Current (A)	40A	60A	80A	100A	180A			
BATTERY	Normal Voltage(Vdc)		48Vdc						
	Voltage Range(Vdc)		40 - 62 Vdc						
	Max.Battery discharge(A)	60A	90A	120A	150A	120Ax3			
	Low Voltage Alarm (Vdc)			42Vdc					
	High Voltage Alarm (Vdc)		60Vdc						
AC OUTPUT	Output Voltage (Vac) 220/230/240Vac (L-N)								
	Output Regulation		+/-1%						
	Phase		Single Phase						
	Output Frequency (Hz)		50/60Hz +/- 0.1%						
	Output Current (A)	8.7A	13A	17.4A	21.7A	45.45A			
	Total Harmonic Distortion(THDv)		Grid Tied/Grid cha	arging mode <3%,	Backup mode <2%	)			
	Voltage Response time (0 – 100%)		20ms						
	Power Factor		Grid Tied & Grid charger >0.99						
	Overload Capability	11	110% for 30minutes, 125% for 1 minute, 150% for 30 seconds						
	Maximum Surge Current		200% for 10 seconds						
	Grid Tied/Backup Transfer Time		2-4ms						
	Output Wave Form		Sine wave						
	Standby Power Consumption		<2W						
PROTECTION	System Protection	Over voltage, L	Over voltage, Under voltage, Overload, Over current, Over Temperature and Short circuit						
EFFICIENCY	Max.Inverter Efficiency	≥92%	<u> </u>						
	Max.Charger Efficiency		≥92% ≥93% ≥98%						
AC INDUT FORM	Maximum AC Current (A)	17.4	26A	34.8	43.4A	80A			
AC INPUT FORM GRID LINE OR GENERATOR	AC Voltage (Vac)	17.1	220/230/240 +/-10% (L-N)						
	Frequency(Hz)		50/60 Hz +/-3%						
	LED indication	System	System operation, indication of charger and discharger, indication of fault						
DISPLAY	LCD display		Output voltage, Output current, Grid voltage, Grid current, Voltage of storage battery, Load power, Chart of capacity						
ALARM	System Alarm		Low battery, Overload, High Temperature and Short circuit						
COOLING			Automatic cooling fan						
NTERFACE			RS485 / CAN BUS						
PHYSICAL	Inverter Type								
	Dimension W x H x D (mm.)	337*462*183	337*462*18	370*462*183	370*537*183	400*840*555			
	Weight(kg)	25	29.5	35	47	130			
ENVIRONMENT	Operation Temperature		0 - 50 °C						
	Humidity		0 - 95% (Non - condensing)						
	Environmental Protection Rating		Indoor (IP20)						
			0 - 90% relative humility (non - condensing)						
	Ambient humility		0 _ 000/_ rala	tive humility (non	condensing)				

•Product specification are subject to change without further notice.

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#### บริษัท ชูโฟทิค จำกัด

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