

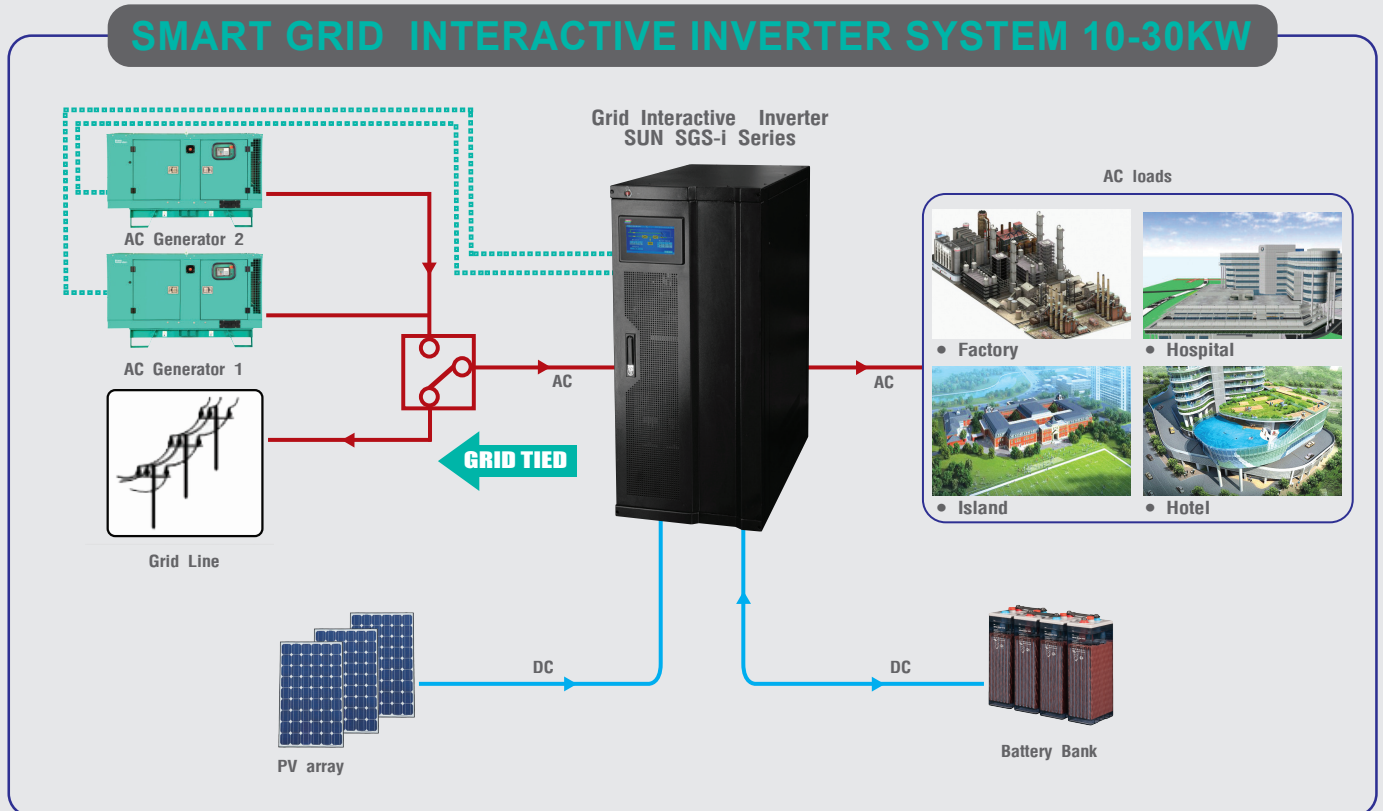
SUN SGS-i Series

Three Phase Smart Grid Connect Interactive Inverter with MPPT Solar Controller

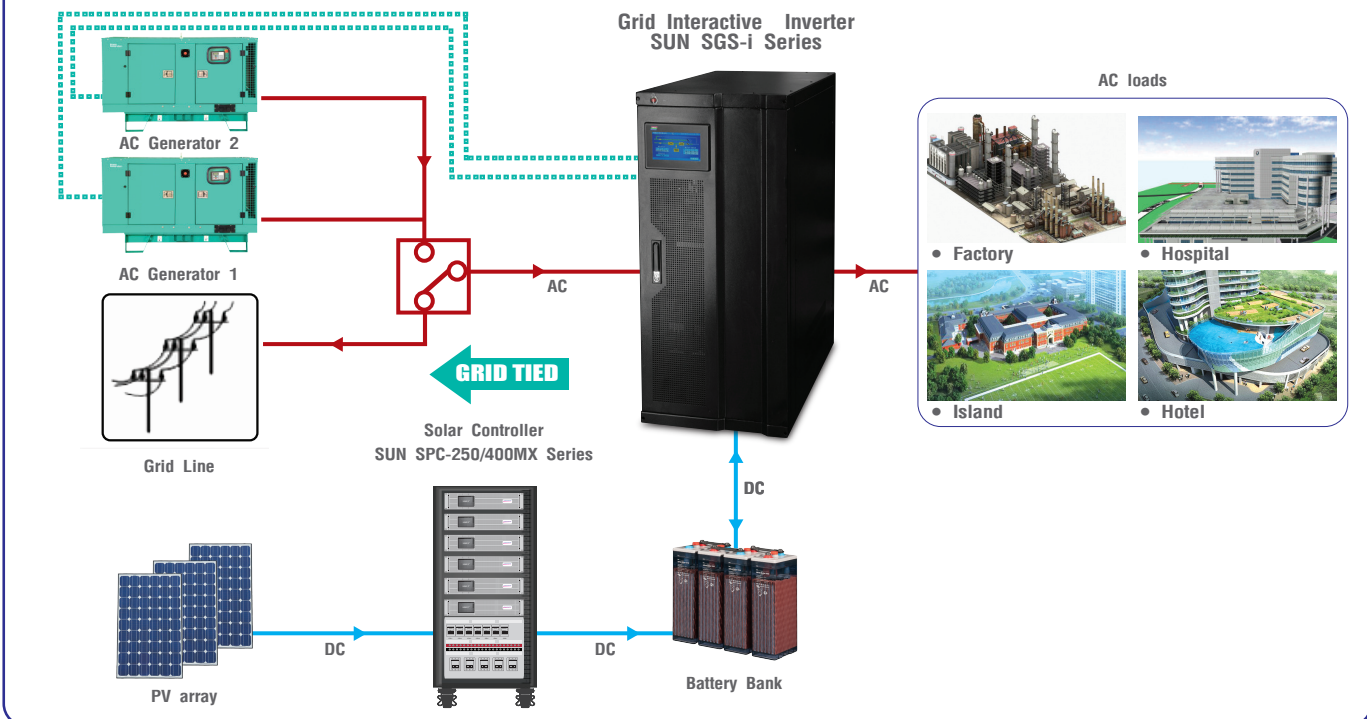
- Three phase IGBT inverter Technology (SPWM) with output isolate transformer.
- Include PWM with MPPT solar controller (10-30kWp).
- Provide uninterruptible backup power to load when utility grid line is not available.
- Smart battery IGBT rectifier charging for small battery capacity.
- Feeding excess energy back to grid line.
- With Function parallel N+X upto 8 pcs Master-Slave
- High efficiency >98%.
- IGBT Rectifier input power factor >0.99, THDi<5%
- Generator connected signal and automatic start generator signal when generator provide as other energy source of the system.
- Static Transfer Switch Zero time Inverter to utility
- Special design for using at high grid fluctuation area.
- User settable operation:
 1. Excess PV energy back feed to utility line(Grid connect)
 2. No PV energy back feed to utility line, PV energy and Battery only supply to load(Stand alone)
 3. Setable on/off & %Control Excess PV energy back feed to utility line and external device control
 4. Setable Battery %DoD and %SoC
- Battery temperature compensation(option).
- HMI 7inch touch screen, Communication through to RS232, RS485/Modbus and dry contact.
- ISO9001:2008 and ISO14001:2004 certified manufacturer.



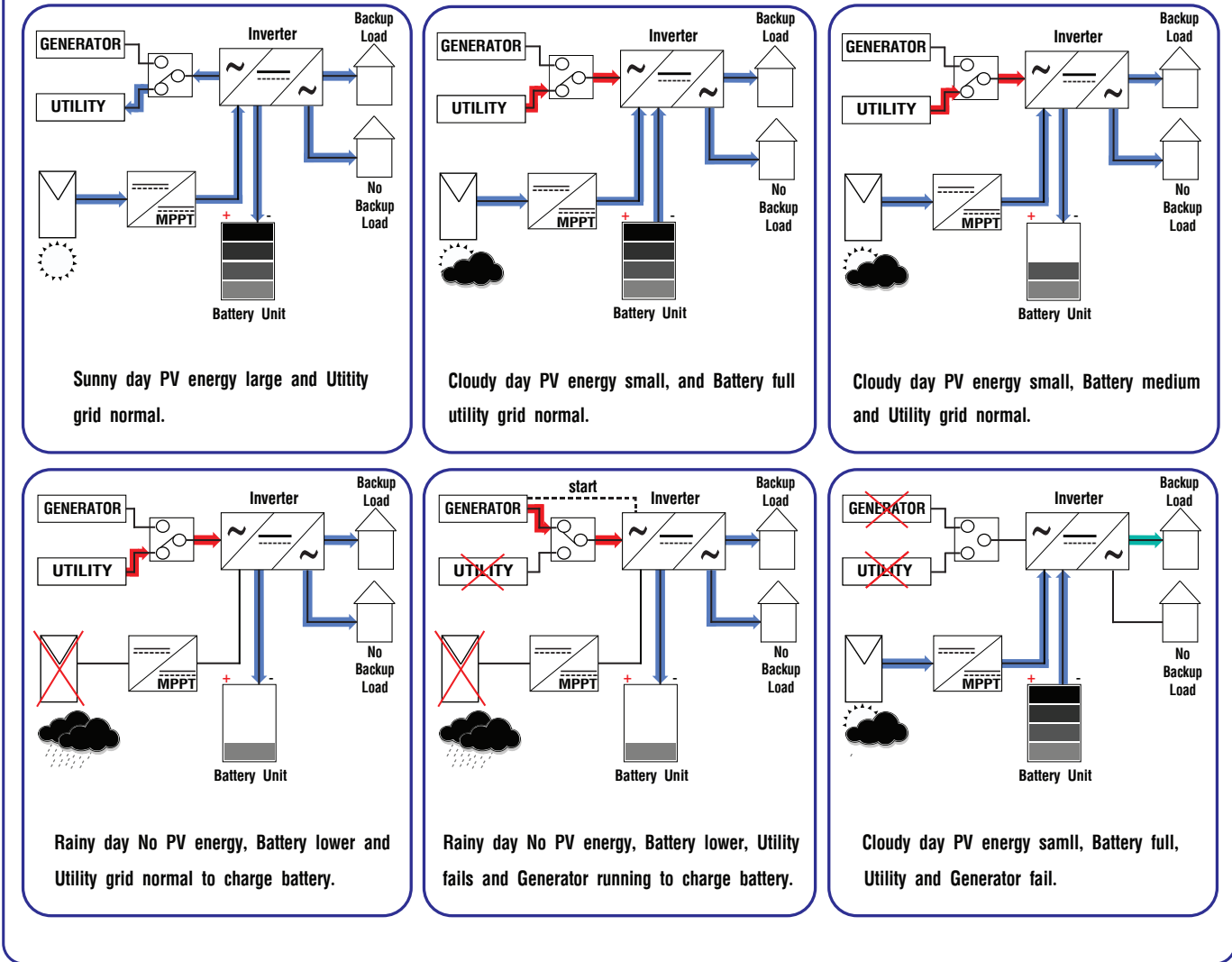
SMART GRID INTERACTIVE INVERTER SYSTEM 10-30KW



SMART GRID INTERACTIVE INVERTER SYSTEM 40-250kW



Operation Mode



SUN SGS-i Series

Smart Grid Interactive Inverter



Model		SGS-10i	SGS-15i	SGS-20i	SGS-30i	SGS-40i	SGS-50i	SGS-60i	SGS-75i	SGS-100i	
SMART GRID SYSTEM	Application	Smart Grid System for Mini Plant									
	Control & Technology	Smart DSP control Double Conversion IGBT Technology									
HYBRID SYSTEM	Inverter	10kW	15kW	20kW	30kW	40kW	50kW	60kW	75kW	100kW	
	Battery Storage	100-200Ah	150-300Ah	200-400Ah	250-500Ah	400-800Ah	450-1000Ah	500-1000Ah	750-1500Ah	1000-2000Ah	
	PV System	10-12kWp	15-17kWp	20-25kWp	30-40kWp	40-45kWp	50-60kWp	60-70kWp	75-90kWp	100-120kWp	
	Generator	10kW	15kW	20kW	30kW	40kW	50kW	60kW	75kW	100kW	
	Electrical Grid	10kVA/15A	15kVA/25A	20kVA/30A	30kVA/55A	40kVA/60A	50kVA/75A	60kVA/91A	75kVA/115A	100kVA/152A	
BATTERY VOLTAGE	Normal Voltage	240 Vdc						400 Vdc			
	Voltage Range	210-290 Vdc						368-480 Vdc			
	Max.AC Charging Current	40A	60A	75A	130A	150A	190A	225A	300A	375A	
	Maximum Battery current	42A	63A	85A	125A	167A	210A	225A	300A	375A	
IGBT CHARGER/RECTIFIER	Voltage charge	250-290 Vdc						400-480 Vdc			
	Charging Current (Max.)	20A dc	30 A dc	38 A dc	60A dc	75A dc	95A dc	110A dc	150A dc	190A dc	
AC INPUT GRID LINE GENERATOR	Generator Power	10kW	15kW	20kW	30kW	40kW	50kW	60kW	75kW	100kW	
	Voltage Fluctuation Vsp	L-L: 380/400/415 Vac, L-N: 220/230/240 Vac +/-10%									
	Phase	3Phase 4Wire +PE									
	Frequency Fluctuation Vsp	50/60 Hz ±3%									
	Function start/stop	Relay dry contact 10 A(ACC on and start)									
AC OUTPUT	Power Continuous(PF=1)	10kW	15kW	20kW	30kW	40kW	50kW	60kW	75kW	100kW	
	Output Voltage	L-L: 380/400/415Vac, L-N: 220/230/240Vac 3Phase 4Wire+PE									
	Voltage Regulation/Power Factor	+/-5% steady state load, <4% at 100% step load within 0.1sec/0.9-1.0PF leading and Lagging									
	Frequency	50/60 Hz ±0.1%									
	Total Harmonic Distortion	THD<3% (Linear load) 0.8 Lagging Power Factor									
	Wave Form	Pure sine wave power output									
	Overload Capability	>125% load for 10 min, 150% load for 30sec, >150% load for 10sec, 200% at 2 Sec.									
ISOLATION	Type	Galvanic isolation									
EFFICIENCY	Inverter Peak (Max.)	>90% Including Isolation T/F				>95% Including Isolation T/F					
PROTECTION	System	Over current, Overload, Over temperature, Short circuit, Over voltage, Under voltage, Low battery voltage and Over battery voltage									
	IP level	IP20									
INDICATOR	HMI 7 inch LCD Display	Input/Output, Voltage, Current, Frequency, Inverter, overload, Output power, AC Energy Hour, Today, Month, Year, AC Energy ACC., Battery voltage, Load, DC current, inverter status and Fault									
COMMUNICATION	Interface Port	RS 323, RS485/Modbus and Dry Contact									
ALARM	Operation Alarm	Low battery, Overload, Over temperature and Fault									
COOLING	System Operate	Automatic cooling fans									
ENVIRONMENT	Temperature	0 - 45°C									
	Relative Humidity	0 - 95%(Non-condensing)									
DESIGE REGULATION	Tested According to	ISO9001, ISO14001, IEC 62040, Accordance to IEEE 929-2000, IEEE 1547-2003, IEC 61727-2004 and IEC 62116-2008 Incorporating with PEA Recommendation									
PHYSICAL	Dimension WxDxH(mm.)	550x890x1550(with SPC400-40)				700x880x1600					
	Weight (kg)	250	250	300	350	600	600	700	800	800	

*Continuous products development is our commitment. In that manner, the above specifications may be changed without prior notice.

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SUN SGS-i Series

Smart Grid Interactive Inverter



Model		SGS-120i	SGS-150i	SGS-160i	SGS-200i	SGS-225i	SGS-250i
SMART GRID SYSTEM	Application	Smart Grid System for Mini Plant					
	Control & Technology	Smart DSP control Double Conversion IGBT Technology					
HYBRID SYSTEM	Inverter	120kW	150kW	160kW	200kW	225kW	250kW
	Battery Storage	1250-2500Ah	1500-3000Ah	1600-3200Ah	2000-4000Ah	2000-4000Ah	2500-5000Ah
	PV System	120-135kWp	150-170kWp	160-180kWp	200-225kWp	200-230kWp	250-280kWp
	Generator	120kW	150kW	160kW	200kW	225kW	250kW
	Electrical Grid	120kVA/182A	150kVA/227A	160kVA/243A	200kVA/303A	250kVA/380A	250kVA/380A
BATTERY VOLTAGE	Normal voltage	400 Vdc					
	Voltage Range	368-480 Vdc					
	Max.AC Charging Current	450A	560A	600A	750A	800A	935A
	Maximum Battery Current	450A	560A	600A	750A	800A	935A
IGBT CHARGER/RECTIFIER	Voltage	400-480 Vdc					
	Charging current(Max.)	225Adc	280Adc	300Adc	375Adc	400Adc	465Adc
GENERATOR	Generator Power	120kW	150kW	160kW	200kW	225kW	250kW
	Voltage Fluctuation Vsp	L-L: 380/400/415 Vac, L-N: 220/230/240 Vac $\pm 10\%$					
	Phase	3Phase 4Wire +PE					
	Frequency Fluctuation Vsp	50/60 Hz $\pm 3\%$					
	Function start/stop	Relay dry contact 10 A(ACC on and start					
AC OUTPUT	Power Continuous (PF=1)	120kW	150kW	160kW	200kW	225kW	250kW
	Output Voltage	L-L: 380/400/415Vac, L-N: 220/230/240Vac 3Phase 4Wire+PE					
	Voltage regulation/Power Factor	$\pm 5\%$ steady state load, $< 4\%$ at 100% step load within 0.1sec/0.9-1.0PF leading and Lagging					
	Frequency	50 Hz $\pm 0.1\%$					
	Total Harmonic Distortion	THD $< 3\%$ (Linear load) 0.8 Lagging Power Factor					
	Wave Form	Pure sine wave power output					
	Overload Capability	$> 125\%$ load for 10 min, 150% load for 30sec, $> 150\%$ load for 10sec, 200% at 20sec					
ISOLATION	Type	Galvanic isolation					
EFFICIENCY	Inverter Peak(Max.)	95% Including Isolation T/F					
PROTECTION	System	Over current, Overload, Over temperature, Short circuit, Over voltage, Under voltage, Low battery voltage and Over battery voltage					
	IP Level	IP20					
INDICATOR	HMI 7 inch LCD Display	Input/Output, Voltage, Current, Frequency, Inverter, overload, Output power, AC Energy Hour, Today, Month, Year, AC Energy ACC., Battery voltage, Load, DC current, inverter status and Fault					
COMMUNICATION	Interface Port	RS 232, RS485/Modbus and Dry Contact					
ALARM	Operation Alarm	Low battery, Overload, Over temperature and Fault					
COOLING	System Operate	Automatic cooling fans					
ENVIRONMENT	Temperature	0 - 45°C					
	Relative Humidity	0 - 95%(Non-condensing)					
DESIGE REGULATION	Tested According to	ISO9001, ISO14001, IEC 62040, Accordance to IEEE 929-2000, IEEE 1547-2003, IEC 61727-2004 and IEC 62116-2008 Incorporating with PEA Recommendation					
PHYSICAL	Dimension WxDxH(mm.)	1600x1000x2000					
	Weight(kg.)	1200	1300	1350	1400	1450	1500

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