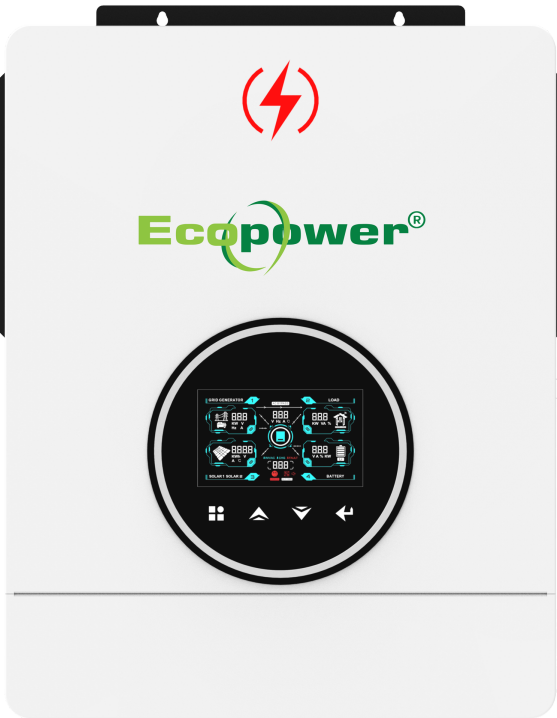


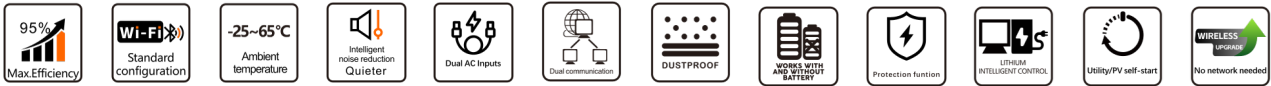
DATASHEET

INVERTER HYBRID ECOPOWER
SERIES: SGE



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KEY STRENGTHS



FEATURES

- High Efficiency & Smaller: Inverter/charging efficiency up to 95.5% (mainstream ≤93%), 30% smaller, low heat for longer life
- Smart Dual Outputs: Manages critical and general loads; custom 2nd output switch time & power-off voltage
- Smart Lithium Battery Mgmt: Activates protected batteries; adjusts charging curve by power to optimize charging
- Parallel Operation: Up to 9 units parallel; compatible with 3-phase/single-phase
- Smart Noise Control: Long-life fan (35-50dB); balances heat dissipation & quietness
- Standard broken-code LCD (current standard); optional 4.3-inch capacitive touch display
- Dustproof net: replaceable, washable; humanized cleaning cycle reminder
- Supports wireless upgrade (no network needed) for personalized customization
- Utility/PV self-start: Auto-starts when utility/PV connected (no manual restart after low-voltage battery shutdown)
- Recommended altitude ≤2000m (derated use at 2000m)
- Dual-CPU control, dual safety protection, built-in Gateway network module
- AC dual-input: One for mains power, one for generator dedicated interface
- Microgrid anti-backflow (optional): External CT + current sensor enables self-consumption, reducing wiring work
- Battery-Free Operation: Works with PV or mains power
- The optional WIFI module,support links SUNRAY Cloud for anytime/anywhere energy management & monitoring
- Bluetooth Direct Connect: Check device status via phone without network
- Standard 2 independent PV inputs; each MPPT tracking efficiency >99.5%
- Battery communication: customizable protocol; supports RS485/CAN, lithium/lead-acid batteries
- Optimal operating temp: 25°C; max: 65°C (derated above 45°C)
- Smart fan control: reduces noise/air intake, extends dustproof net & device service life
- Max noise <50dB; <40dB at night

PRODUCT DATA SHEET

MODEL	SGE4.5KW	SGE6.5KW(ES)	SGE6.5KW	SGE9KW	SGE12KW
Rated Output Power	4.5kw	6.5kw		9kw	12kw
Rated Output Current	19.6A	28.5A		39.2A	52A
Input Mode	Single phase				
Input Voltage Range	170~280Vac				
Maximum AC Current Input	32A	40A	40A	55A	65A
Change-over Time	10ms (narrow range), 20ms (wide range)				
Input Power Factor	> 0.99				
	> 0.9				
BATTERY MODE					
Output Voltage	220/230±5 (Vac)				
Battery Discharge Current	160A	140A	140A	190A	230A
Battery Charging Current	160A	140A	140A	190A	230A
Battery Input Range	20-30 (VDC)	40-60 (VDC)			
Overvoltage Protection	32VDC	63VDC			
Battery Discharge Conversion Efficiency	94.5%	95.20%		95.20%	
Battery Charging Conversion Efficiency	95%	95.20%		95.20%	
Overload	110%-125% 1min				
	125% -150% 30S				
	> 150% 1S				
Battery Type	Lead-acid batteries,lithium batteries,flooded lead-acid battery, user customization				
Dual-port Output	The second load can be set to start and stop mode:				
	1. User-defined battery voltage for shutdown and startup				
	2. Users can define the time interval to start and stop				
Peak Coefficient Of Output Current	1: 3				
Parallel Current Sharing	Not support		Imbalance<2%		
MPPT INPUT					
MPPT Quantity	1		1+1		
Maximum PV Input Current	24A	24A	18A+18A	18A+18A	18A+18A
Maximum PV Input Power	6kw	8.5kw	10kw	12kw	14.5kw
MPPT Starting Voltage	120VDC				
PV Input Voltage Range	60-500 (VDC)				
PV Best Input Voltage	360VDC				
MPPT Maximum Efficiency	99.5%				
European Efficiency	97%	97.3%	97.50%		
PV Priority Supply	Priority charging				
PROTECTIVE FUNCTION					
Input Overvoltage Protection	280Vac				
Input Overvoltage Protection Recovery	270Vac				
Input Under-voltage Protection	90Vac (narrow range); 170Vac (wide range)				
Input Under-voltage Protection Recovery	100Vac (narrow range); 180Vac (wide range)				
Output Short Circuit Protection	5 power frequency cycles				
Fan Fault Protection	Fan fault protection function. When any fan is faulty, the power module has no output.				
COMMUNICATION FUNCTIONS					
PROJECT		REMARKS			
Lithium Battery	One RS485;	One RS485; one CAN (optional)			
WiFi/host Computer	No built-in WiFi, external WiFi module supported	Built-in WiFi and Bluetooth modules, RS232;			
Parallel Operation	Not support	CAN, up to nine units in parallel			
Remote Control	Not support	Bluetooth (for near-range inverter data setup & viewing, no network required)			
OTHER					
Battery-free Mode	Compatible with lithium battery activation and no battery use				
IP Rating	IP20 (SGE series)				
Lithium Battery Communications	Standard protocol: PACE, PYLON				
	Support dedicated charging curve for lithium battery				
Noise	Maximum noise 45dB				
	Rated power condition <50dB (ambient temperature 45 degrees)				
	Under light load at night <40dB (ambient temperature 25 degrees)				
Island Protection	Inclusion of isolated island protection				
Safety Standard	IEC/EN-62109-1, IEC/EN-62109-2				
WORK ENVIRONMENT					
Operating Temperature Range	-20~65°C (use above 45°C derated)				
Relative Humidity	5~95% (surface no condensation)				
PHYSICAL					
Dimension, D*W*H (mm) (With dust filter)	390*326*105 (mm)			467*371*114 (mm)	
weight (kg)	9.3kg		9.8kg	12kg	