

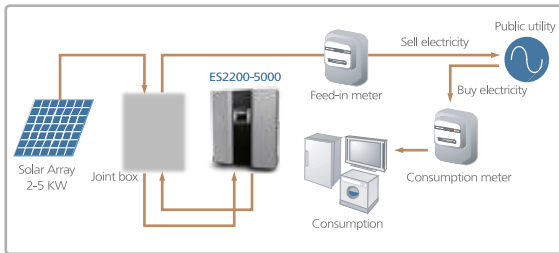


EnerSolis Series Grid-connected Photovoltaic Inverter

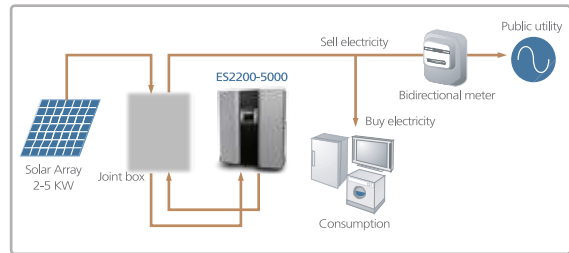
The EnerSolis series grid-connected Photovoltaic Inverter are delivered in a waterproof IP65 enclosure which can be installed in either a grid connected solar tracker system or a stationary PV system. By taking care of an accurate power conversion from solar panel to local grid, the EnerSolis series effects conversion process with minimal power loss and maximum reliability.

- Two Built-in Independent MPPT Boosters increase overall efficiency
- Convectional Cooling System provided to guarantee quiet operation
- Compact Size, Light Weight
- Up to 96% high conversion efficiency
- Advanced DSP Control Technology delivers accurate data
- Ease of Installation to Save Time and Money
- Mimic LCD Display
- Higher MTBF Components Used
- IP65 Cabinets for both Indoor and Outdoor Applications
- VDE/ETL Certified to Ensure Safe Operation
- Optional Monitoring Software provided to offer operational status and electricity generated data.

In general, solar system generates electricity then sells to public utility company via feed-in meter. The public utility company will provide electricity to electrical appliance via consumption meter.

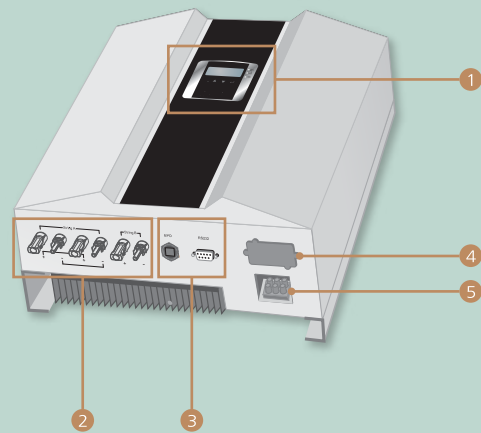


If there is any redundant electricity left after feeding in those electrical appliance, it can be sold to the public Utility company and vice versa.



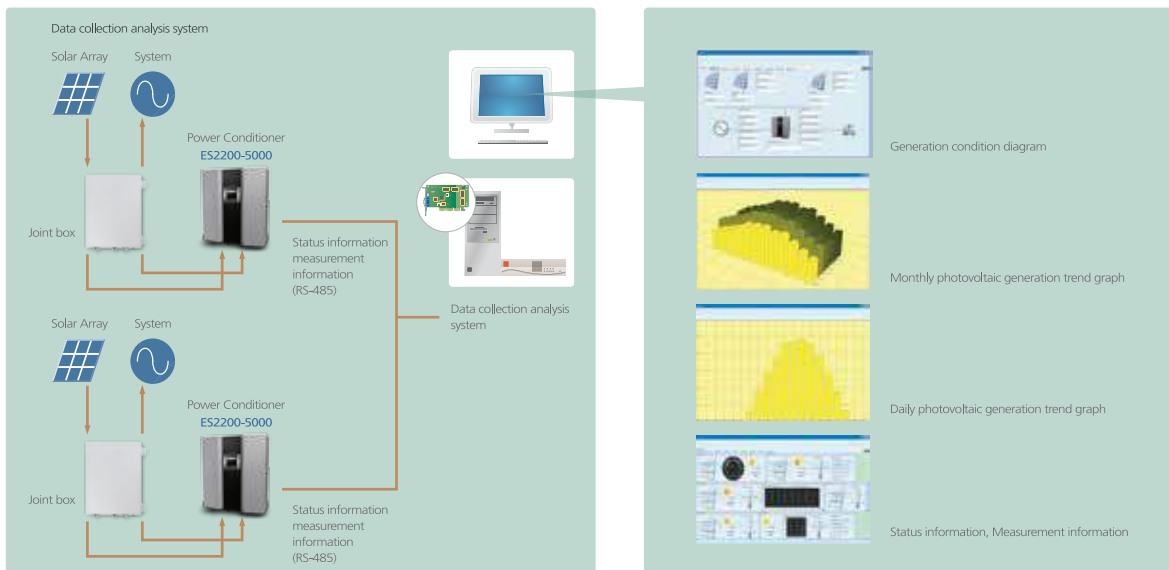
Unit Description

- 1 LCD & LED Display: Showing the operation information and status of the inverter.
- 2 Solar array input: Plug-and-play connectors for the connection of the solar modules (The ES2200/ES3300 only have one PV string input).
- 3 Standard communication Port : EPO & RS232.
- 4 Optional communication slot: USB, RS485, Dry contact, TCP/IP.
- 5 AC output terminal: AC output for the utility supply.



Communication System

An optional data collecting & analysis system may measure up to 20 units of EnerSolis PV inverters via RS485 communication interface.



Specifications

Item		Model	ES2200P/ ES2200	ES3300P/ ES3300	ES4200P/ ES4200	ES5000P/ ES5000
		Inverter Technology	Conversion Mode	Sine-wave, Current source, High frequency PWM		
	Isolation Method	Transformer-less Design				
DC Input Data						
Nominal DC Voltage		360 VDC				
Max. DC input Voltage		500 VDC				
Working range		120 VDC ~ 500 VDC*				
Max DC input current (Each MPPT Tracker)		14.6 Amp	22 Amp	14 Amp	17.65 Amp	
MPPT Range		150 VDC ~ 450 VDC				
MPPT Tracker		1			2	
Efficiency Data						
Max. efficiency		>96%				
Euro efficiency		>94%				
CEC efficiency		>94%				
Environmental						
Operating Temperature		-25°C ~ +50°C - 13°F ~ 122°F				
Humidity		0 to 90%(Without condensation)				
Altitude		0 ~ 2000 M / 0 ~ 6600 ft				
Communication						
Communication Interface		Standard	RS232			
		Optional	USB, RS485, Dry contact, TCP/IP			
Front Panel						
LCD		Boost input Voltage/Boost input Current/Boost input Power/AC output Voltage /AC output frequency/AC output current /AC output power/AC Energy yield/Inner Temperature/Heat sink Temperature /Status message/ Error message				
LED		RED	Leakage current fault or DC input isolation fault			
		Yellow	Spec. of Utility is not matches with the Utility specifications of the inverter			
		Green	Solar Cell power is greater or smaller than sleep power			
Key Pad		UP key/ Down key/ Function key/ Enter key				
Protection						
Utility		Over/under Voltage, Over/under Frequency, Ground fault, DC Isolation fault				
Islanding operation detection		Passive : Voltage phase jump detection Active : Reactive power control				
Over Temperature		reduced output power				

To get rated output, it should be operated at 150V_{DC} - 500V_{DC}.

EnerSolis Series
Grid-connected Photovoltaic Inverter

Specifications

Item	Model							
	ES2200P	ES3300P	ES4200P	ES5000P	ES2200	ES3300	ES4200	ES5000
AC Output Data								
Nominal AC Power	2000W	3000W	4000W	5000W	2000W	3000W	4000W	5000W
Max. AC Power	2200W	3300W	4200W	5300W	2200W	3300W	4200W	5300W
Nominal AC Voltage	AC 220V				AC 230V			
Output Connect Method	1-Phase / 2-Wires(L, N, G)							
AC Voltage Range	200 ~ 240 Vac				209 ~ 240 Vac			
Nominal AC Current	9.1Amp	13.6Amp	18.2Amp	22.7Amp	8.7Amp	13.0Amp	17.4Amp	21.7Amp
Max. AC Current	10.0Amp	15.0Amp	20.0Amp	25.0Amp	9.57Amp	14.35Amp	19.13Amp	23.91Amp
Frequency	50Hz (47.5Hz ~ 50.5Hz)							
Power Factor	> 0.9 Output Power over 10%							
Current Distortion	Total Harmonic current : Less than 5% Single Harmonic current : Less than 3%							
Mechanical								
Dimensions (L x H x D in mm)	455 x 430 x 190 mm		455 x 510 x 190 mm		455 x 430 x 190 mm		455 x 510 x 190 mm	
Weight(Kgs / Lbs)	23 kgs		28 kgs		23 kgs		28 kgs	
Protection Class	IP65, outdoor							
Cooling	Free Convection							
AC Connector	Terminal							
DC Connector	Multi-Contact							
Certification								
Safety	VDE0126-1-1, AR-N-4105, IEC61727, IEC62116, EN50178, IEC62103, ENEL2010, AS3100 / AS4777, G83/1, JET.....etc							
EMI/EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-12, EN 61000-3-3, EN 61000-3-11, EN55022							

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