

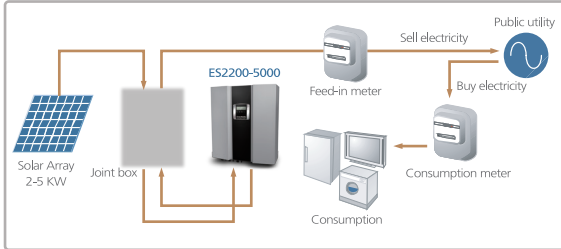


EnerSolis Series Grid-connected Photovoltaic Inverter

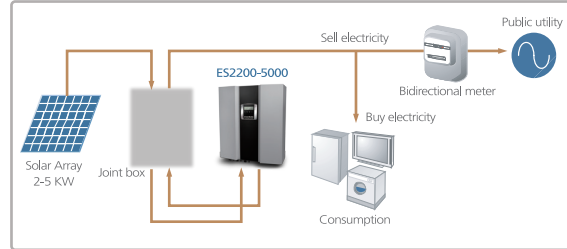
The EnerSolis series grid-connected Photovoltaic Inverter are delivered in a waterproof IP65/Nema 3R enclosure which can be installed in either a grid connected solar tracker system or a stationary PV system. By taking care of an accurate power conversion from solar panel to local grid, the EnerSolis 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/Nema 3R 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.

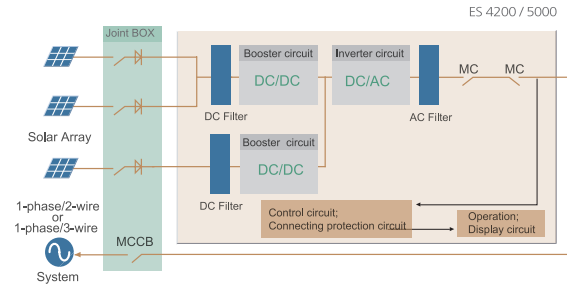
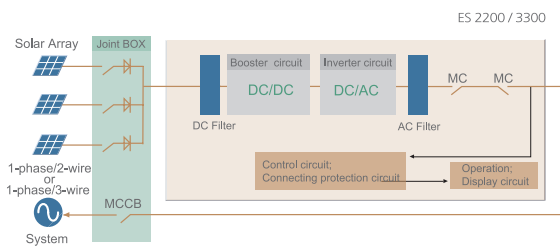
In general, solar system generates electricity then sells to public utility company via feed-in meter. The public utility company will provide electricity to electrical appliance via consumption meter.



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.

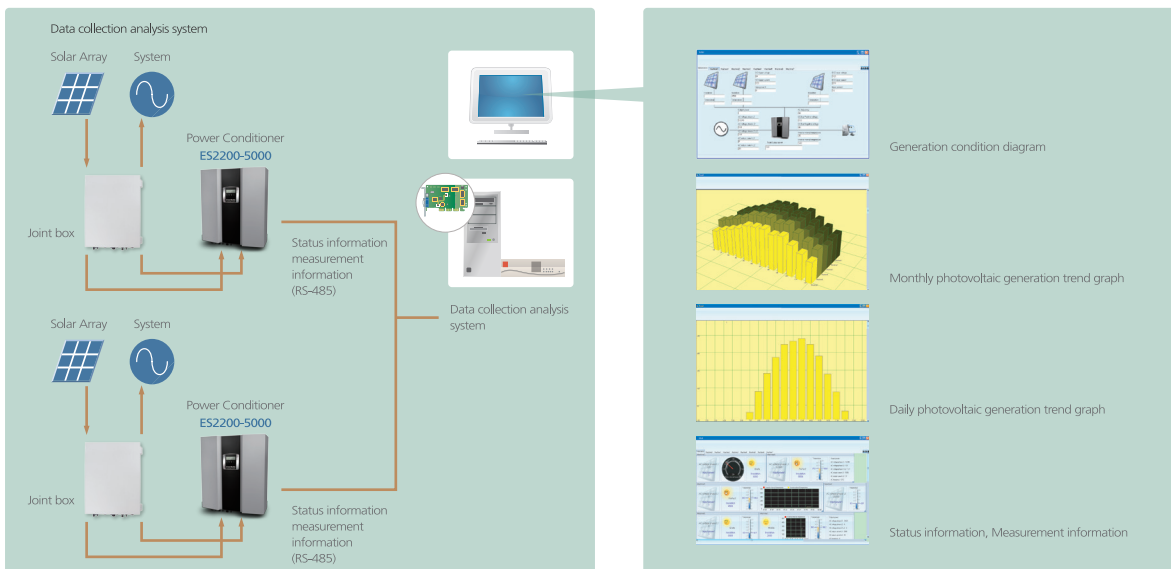


System Block Diagram



Communication System

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



EnerSolis Series
Grid-connected Photovoltaic Inverter

Specifications

		Model	ES2200	ES3300	ES4200	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

Model	ES2200	ES3300	ES4200	ES5000
AC Output Data				
Nominal AC Power	2000	3000	4000	5000
Max. AC Power	2200	3300	4200	5300
Nominal AC Voltage	AC 230V			
Output Connect Method	1-Phase / 2-Wires(L, N, G)			
AC Voltage Rang	184 ~ 264.5Vac			
Nominal AC Current	8.7Amp	13Amp	17.4Amp	21.7Amp
Max. AC Current	9.57Amp	14.35Amp	19.13Amp	23.91Amp
Frequency	50/60Hz Auto-Selection(47.5 ~ 50.2 Hz or 59.3 ~ 60.5 Hz)			
Power Factor	>0.99 with nominal AC current			
Current Distortion	Total Harmonic current : Less than 5% Single Harmonic current : Less than 3%			
Mechanical				
Dimensions (L x H x D in mm / inch)	455 x 430 x 190 mm		455 x 510 x 190 mm	
Weight(Kgs / Lbs)	23 kgs		28 kgs	
Protection Class	IP65, outdoor			
Cooling	Free Convection			
AC Connector	Terminal			
DC Connector	Multi-Contact			
Certification				
Safety	VDE0126-1-1, EN50178, IEC62103, DK5940, AS3100/AS4777, G83/1, JET...etc.			
EMI/EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN61000-3-2, EN61000-3-12, EN61000-3-3, EN61000-3-11, EN55022			

