

# EnerSolis Series Grid-Connected Three Phase

ES6000HC~ES12000HC



- Three-phase Inverter
- Acceptable Input Voltage up to 1000 Vdc
- Transformer-less Topology
- Maximum Efficiency 97.6%
- Protection Class IP65
- Dual Independent MPP Trackers
- Intelligent MPPT Technology
- Active and Passive Anti-islanding Technology
- Compact Design
- User Friendly LCD Display
- High MTBF Components
- Temperature-dependent Fan Cooling
- Integrated DC Switch
- High Performance DSP Controller
- Built-in RS485 Communication Port
- Firmware Upgradability
- Wide MPPT Voltage Range with Nominal Power
- Allowable De-rating Operation
- Maximum Output Power Clamping
- Multi-Operation Mode
- Multi-Country Certifications

## Specifications

Model	ES6000HC	ES8000HC	ES10000HC	ES12000HC	
<b>Input</b>	Inverter Technology	Sine-wave, Current source, High frequency PWM			
	Conversion Mode	Sine-wave, Current source, High frequency PWM			
<b>DC Input Data</b>	Isolation Method	Transformer-less Design			
	Nominal DC Voltage	620 Vdc			
	Max. DC Input Voltage	1000 Vdc			
	Working Range	300 ~ 1000 Vdc			
	Max. DC Input current	2 x 8.5 Amp	2 x 11.4 Amp	2 x 14.3 Amp	2 x 14.3 Amp
	MPPT Range (Nominal Output)	370 ~ 850 Vdc			
	MPPT Tracker	2			
<b>AC Output Data</b>	Nominal AC Power	6,000 Watt	8,000 Watt	10,000 Watt	12,000 Watt
	Max. AC Apparent Power	6,600 VA	8,800 VA	11,000 VA	12,000 VA
	Nominal AC Voltage	AC 230V x 3			
	Output Connect Method	3-Phase / 4-Wires (L1, L2, L3, N, PE)			
	AC Voltage Rang	184V ~ 264.5V (Base on 230 Vac)			
	Nominal AC Current	8.69Amp x 3	11.59Amp x 3	14.49Amp x 3	2 x 17.39 Amp
	Frequency	50/60Hz Auto-Selection (47.5 ~ 51.5Hz or 59.3 ~ 60.5Hz)			
	Power Factor	Leading 0.9 ~ Lagging 0.9			
	Current Distortion	Total Harmonic current : Less than 5%			
		Single Harmonic current : Less than 3%			
<b>Efficiency Data</b>	Max. Efficiency	97.60%			
	Euro Efficiency	96.20%	96.60%	97.00%	97.25%
	Operating Temperature	-20 °C ~ +60 °C (-4 °F ~ 139 °F)			
<b>Environmental</b>	Pollution degree classification	PD3			
	Overvoltage category (IEC 60664 - 1)	DC side	Category II		
		AC side	Category III		
	Humidity	0 to 100% (Without condensation)			
	Altitude	0 ~ 2000 m / 0 ~ 6600 ft			
	Dimensions (H x W x D mm /in)	595 x 451 x 247 / 23.4" x 17.7" x 9.72"			
	Net Weight (kg / lbs)	41 / 90.4			
Gross Weight (kg / lbs)	44 / 97.0				
<b>Mechanical</b>	Protection Class	IP65, outdoor			
	Cooling	Temperature-dependent fan			
	AC Connection	Connector			
	DC Connection	MC4			
	Communication Interface	Standard	RS485		
		Optional	USB, RS485, Dry contact, TCP/IP		
<b>Front Panel</b>	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	On: Ground fault or DC input insulation fault		
		Yellow	On: Unit Error or Alarm		
		Green	Flash: Standby or Sleeping mode On: Normal Operation		
Key Pad	UP key/ Down key/ Function key/ Enter key				
<b>Protection</b>	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	Downgraded output power			
<b>Certification</b>	On-Grid Performance	VDE 0126-1-1, VDE AR-N 4105, AS 4777.2/3, ENEL 2010,		VDE 0126-1-1, VDE AR-N 4105	
	Safety	EN 62109-1, EN 62109-2, EN 60730, AS 3100		EN 62109-1, NE 62109-2, EN 60730	
	EMI/EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3		EN 61000-6-2, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3	

\* Specifications subject to change without notice.

\*\* Depending on the model and voltage, please contact Ablerex for more information..

\*\*\* The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.

