HYBRID SOLAR INVERTER

ECO-HBD SERIES SINGLE / THREE PHASE

STATCON ENERGIAA
Inspire • Innovate • Implement

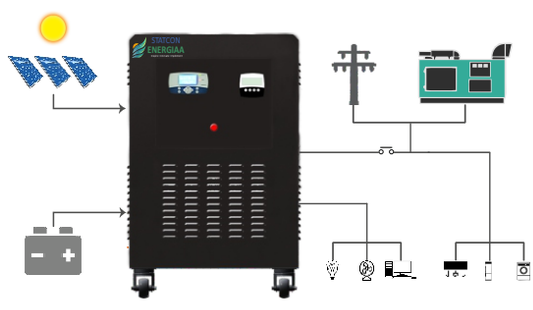
- MPPT BASED TECHNOLOGY
- LI-ION BATTERY COMPATIBLE
- EXCESS POWER EXPORT TO GRID
- BESS SOLUTION READY
- 100% UTILISATION OF SOLAR
- CUSTOMISABLE FOR APPLICATIONS
- GRID SYNCHRONISED WITH STORAGE
- USER SCHEDULING FEATURES
- PRODUCT RANGE FROM 3KVA - 250KVA
- SMART GRID READY

Energiaa's ECO-HBD range of Solar Hybrid Inverters is the No.1 Trusted Hybrid solar technology in the Indian market. Active front end technology enables it to store the renewable solar energy in the battery as well as export any excess solar power generated to the grid, Through net meter, Resulting in improved savings at consumer end.

Advanced world leading embedded software and Statcon Energiaa's experience in industrial grade power electronics has resulted in ECO-HBD range, setting a benchmark for the solar inverter market. High level of flexibility in the form of configurable set points gives the ECO-HBD series an unparalleled level of control over the inverters' parameters.

Customisability of settings makes it the ideal product for solar applications like Cold storages, Process industries or Telecom towers where each site has a different energy consumption.

Easy to connect Xenius remote monitoring box, comes with 5 year internet charge and sim included. Remotely control your ECO-HBD inverter and view system parameters with interactive graphical options.



GRID SYNCHRONISED WITH STORAGE

Scheduling Features

Controlled scheduling via keypad or PLC
Battery charging according to TOD
Programmable night saving mode

Active Front End Technology

Low distortion O/P for critical load applications
Increased battery life by avoiding PSOC condition
Export excess PV power to grid through grid synchronisation

BESS Solution

Peak load shaving/ load levelling
Voltage/ Frequency regulation
Time shifting applications

Flexible Compatibility

Can be AC coupled with String inverters
Compatible with wind, hydro and other sources as well
Seamless synchronisation with DG Sets

Applications

Office Buildings | Mini Grids | Telecom BTS | Railway Signaling | Cold Storage | Process Industries

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ECO-HBD SERIES
SINGLE / THREE PHASE

Technical Datasheet

SOLAR INVERTER							
Inverter Rating	3-5 kVA	4-8 kVA	8-10 kVA	10-25 kVA	25-60kVA	60-100 kVA	100-250 kVA
Nominal Battery Voltage	48 V	96 V	120 V	120 V / 240 V	240 V	240 V	240/360 V
No of Phases	1 Ph	1 Ph	1 Ph	1/3 Ph	3 Ph	3 Ph	3 Ph
Nominal Output Voltage/ Frequency*	230/400 V 50 Hz ± 2% (+ 10% -20% in grid synchronised mode)						
Voltage Regulation (in Standalone Mode)	± 2%						
Freq. Regulation (in Standalone Mode)	± 0.5 Hz						
THD	< than 5%						
Load Power Factor	0.8 lag to unity						
Efficiency (Peak)	89%	90%			92%		
Over Loads: 60 sec/ 30 sec/ 5 sec	110% | 125% | 150%						
Max Allowed Phase Imbalance (for 3Ph)	NA			30%			
Auto Bypass Feature	Provided						
Parallel Operation with Grid/ DG	Provided						
Grid Synchronisation	Provided						
Grid Charging	Enable / Disable (User Settable)						
Power Export to Grid Facility	Enable / Disable (User Settable)						
SOLAR CHARGE CONTROLLER							
Charge Controller Type	MPPT						
Charger Topology	Buck Type						
PV Nominal Capacity (Total in KW)	Same as Inverter Capacity						
No of MPPT Channels	1					3	
Max. Open Circuit PV Volts (Voc)	165 V	320 V		320/620 V	620 V	620/750 V	
MPPT Upper Range	137 V	266 V	266 V	266/515 V	515 V	515/623 V	
MPPT Lower Range	66 V	132 V	165 V	165/330 V	330 V	330/495 V	
Battery type Supported	VRLA | LMLA | Ni-Cd | Li-Ion Chemistries* | Flow Batteries*						
Peak Charging Efficiency	≥94%						
GRID CHARGER							
Grid Voltage Range (Voltage Sync. Range)	+10 % & -20 % VAC						
Grid Frequency range (Freq. Sync Range)	+5% & -5% Hz						
Max Grid Import Power	as per inverter rating						
Peak Charging Efficiency	up to 85 %						
PROTECTION							
PV Side	Reverse Polarity						
	Surge Protection (Class D)						
Battery Side	Reverse Polarity						
	Over/ Under Voltage						
	Current Limit						
	Temperature Compensation						
Grid Side	Over/ Under Voltage						
	Over/ Under Frequency						
	Surge Protection (Class D)						
Load Side	Overloads						
	Short circuit						
System Protection	Over Temperature trip						
	Breakers at all Inputs						
	Emergency stop						
USER INTERFACE							
Display Interface	Graphical LCD with back light (128×64)						
Setting Input	Membrane Keypad for Settings Input						
Battery Parameters	Voltage, Current, Cumulative Import Energy						
PV Parameters	Voltage, MPPT Charger O/P Amps, Power, Energy, Cumulative Generation						
Grid Parameters	Phase Voltage, Frequency, Power, Power Factor, Reactive Power, Average Power, Peak Power, Cumulative Exported Energy						
Load Parameters	Phase Voltage, Phase Current, Frequency, Power, Power Factor, Average Load, Peak Load						
System level Parameters	Mode of Operation, Active Faults, Heat Sink / IGBT temperature, System Mimic						
LED Indications	Mains On, Alarm, Buzzer Mute						
MONITORING							
RS 485	RS-485 based monitoring showing all parameters through MODBUS						
GPRS	Easy to connect GPRS based Xenius Module for remote monitoring of all parameters (5 year data charge + sim included for 3 Phase) as well as remote controlling						
SD - Card	DATA LOGGING in Micro SD Card: All parameters can be logged in Micro SD memory card as per date / time. Logged parameter can be viewed / Saved through Laptop / PC.						
MISCELLANEOUS							
Degree Of Protection	IP-21						
Cooling Method	Temp Controlled Force Cooling						
Operating Temperature	0-55 degrees (without Derating)						
Humidity	Max. 95% Non-Condensing						
Altitude	1000m above sea level						
Housing	Floor Standing / Tower Type						
APPROVALS	IEC 62116, IEC 61727, IEC 61683, IEC 60068-2-(1,2,14,30), EN 50530, IEC 60529						

Note: Over load 200% and grid extra wide range available on request.
Note: 5kVA 48V 3P & 10kVA 48V 3P model also available in ECO-HBD Series.
Note: 60Hz frequency is also available on request.
Note: Certifications available for selected models.
***Note:** Extra interface board required for Li Ion / Flow batteries.

AVAILABLE PRODUCTS VARIANTS FOR SOLAR APPLICATIONS

Single Phase Off-Grid Solar Inverter
3 Phase Central Grid Tie Inverters
1/3 Phase Hybrid Solar Inverter
3 Phase String Inverters
Green Load Bank
Telecom DC Hybrid System
Intelligent String Monitoring Units
Array Junction/Combiner Boxes
Energy Storage Systems
MPPT Charge Controllers

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