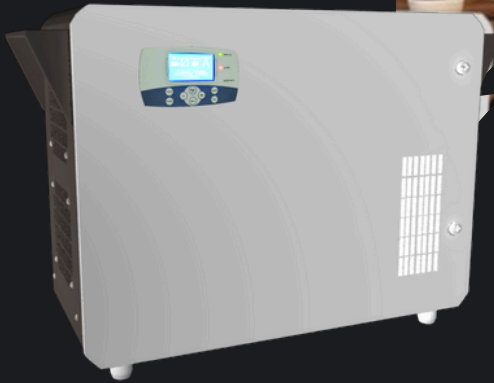




## HBD SERIES



- 5-15 KVA/48V  
3 PHASE
- 10-15KVA/120V  
3 PHASE
- 15-100KVA/240V  
3 PHASE
- 30-200KVA/360V  
3 PHASE
- 125-250KVA/480V  
3 PHASE
- 250KVA/576V  
3 PHASE

### THREE PHASE HYBRID MPPT PCU (5-250 KVA)\*

Genuine 'Hybrid'-Not just 'Off- Grid'

Our HBD series offers hybrid solar inverters of 1-250KVA to residential/commercial/ industrial customers. This series is built to resolve the two challenges posed by unreliable grids and power cuts- intermittent electricity and high electricity costs. Energiaa's HBD series inverters are essentially grid-tie inverters with storage. They also work as standalone systems in case of no grid. They not only store electricity in the attached batteries but also export unconsumed solar power to the grid, or store and mix with the grid as programmed in its unique 'behind-the-meter' use.

\*Other customised ratings available on request

### UNIQUE FEATURES

<b>BI-DIRECTIONAL</b>	Seamless switching to and from grid (both import and export) and battery supply, high-efficiency MPPT technology
<b>GRID-INTERACTIVE</b>	Blends solar and grid- power for optimisation
<b>ENERGIAA'S BENCHMARK SOLAR TECHNOLOGY</b>	We use the latest DSP-based ' <b>Active Front End</b> ' technology with IoT to achieve 'flexible' or 'smart' energy
<b>IEC CERTIFIED</b>	IEC certifications available
<b>BEHIND-THE-METER</b>	Latest global tech enabled wherein the absence of Net- Meter policy, we can store solar energy into battery and then blend it with Grid during high-tariff times or with DG-set for DG set optimisation
<b>EASY-TO-MONITOR</b>	Optional GPRS-based remote monitoring and controlling
<b>3-PRIORITY WORKING MODES</b>	HBD with export/ HBD without export/ Off-Grid
<b>PURE SINE WAVE TECHNOLOGY</b>	Recommended for longer life of Industrial/Commercial equipment
<b>INTELLIGENT BATTERY CHARGING</b>	3-Stage charging (Float, Bulk & Absorption) for more battery life (for Lead Acid batteries). Communication-based charging for Lithium chemistries available
<b>COMPATIBLE CHARGER</b>	Supports wide range of batteries-Flooded Lead Acid Tubular/GEL/VRLA. On request product for Li+

### KEY BENEFITS

<b>CUSTOMISABLE ENERGY SHIFT</b>	Store power and use later
<b>RUNS AC AT HOME</b>	Can sustain jerk loads like Air Conditioner
<b>PROTECTION</b>	Protects against grid fluctuations, overload, short circuit, array reverse, battery reverse and thermal fluctuations
<b>GALVANIC ISOLATION</b>	Uses galvanic isolation at output-Ideal for Rural/Microgrid applications
<b>LONG LIFE</b>	Lifespan of 15+ years
<b>ALMOST ZERO-SERVICING</b>	Our robust HBD series inverters are IoT-based and require zero to negligible servicing and maintenance
<b>LARGEST-IN-CLASS DISPLAY</b>	Beautiful display units showing all inverter + solar + battery data

**TOLL-FREE SERVICING SUPPORT: 1800-891-3319**

## 3-P LOW VOLTAGE (48V) 5-15KVA HYBRID MPPT PCU



RATINGS	5KVA/48V	8KVA/48V	10KVA/48V	15KVA/48V
Model No.	HBD-048-05K-3P	HBD-048-008K-3P	HBD-048-010K-3P	HBD-048-015-3P
<b>A. MPPT CHARGER</b>				
PV Nominal Capacity (Total KWp)	5	8	10	15
Max No. of String	5	8	10	15
Charge Controller Type (Buck)	MPPT			
No of MPPT Channel/ No. of Inputs	1/1			
Max. Open Circuit PV Volts (Voc)*	190			
MPPT Voltage Range (Vmp)*	75-160			
Max SCC O/P Amps	100	160	200	300
Peak Charging Efficiency	94%			
<b>B. SOLAR INVERTER</b>				
Nominal Capacity (Total)	5KVA	8KVA	10KVA	15KVA
Output Amps per Phase	6	9	12	17
Nominal Battery Voltage	48			
Output Voltage/ Frequency/ Phase	400V (±2%) / 50Hz / 3P+N			
Load Power Factor	0.8-Unity			
Peak Efficiency	>86%		>88%	
Over Loads: 60sec/ 30sec/ 5sec	101-110%/111-125%/126-150%			
Auto Bypass Feature	Provided			
Anti Islanding/Power Export to Grid	Provided (As per IEC 62116 & IEC 61727)			
<b>C. GRID CHARGER</b>				
Grid Voltage Operating Range	400V (+10%&-20%)			
Grid freq Operating Range	50Hz (+5% &-5%)			
Max Grid Import Power	7.5KVA	12KVA	15KVA	22.5KVA
<b>D. PROTECTIONS &amp; DISPLAY PARAMETERS</b>				
	<b>PROTECTIONS</b>		<b>DISPLAY PARAMETERS</b>	
PV Side	• Reverse Polarity, PV Power Limit, Surge Protection (MOV)		• Voltage, Charger O/P Amps, Power, Cumulative Energy	
Battery Side	• Reverse Polarity, O/U Voltage, Current Limit		• Voltage, Current, Battery State	
Grid Side	• O/U Voltage, O/U frequency, Surge Protection (MOV)		• Phase Voltage, Frequency, Power, Power Factor	
Load Side	• Overloads, Short Circuit, Surge Protection (MOV)		• Voltage & Current, Frequency, Power, Export KWh	
System Protection	• Over Temperature		• Mode of Operation, Active Faults, Status Mimic	
<b>E. MISCELLANEOUS</b>				
Switchgear Protection	MCB/MCCB provided on PV, Battery, Load & Grid path.			
LED Indications	Mains On, Alarm, Buzzer Mute			
Data Port (RS 485/ RS 232)	Optional (Available on Request)			
Remote Monitoring	Optional through GPRS based Modem			
Ingress Protection	IP-20 (Indoor Type)			
Cooling Method	Forced Cooled (Temp. Controlled)			
Operating Temperature	0-50 degree (Without Derating)			
Humidity	Max. 95% Non-Condensing			
Altitude	1000m above sea level			
Color shade	RAL7035/ DA GREY HE 15005			
Dimensions (H×W×D)	750×530×897.45MM			

\*\* The above models are compatible with Lead-Acid batteries only. Lithium compatibility requires extra hardware/ software (at extra cost), which is factory-fitted only. Statcon Energiaa Pvt. Ltd. reserves the right to modify or withdraw any of the ratings or technical specifications.

\* Revised Voc & Vmp are effective from 21-09-2023

## 3-P HIGH VOLTAGE (120/240/360V) 10-50KVA HYBRID MPPT PCU



RATINGS	10KVA/120V	15KVA/120V	15KVA/240V	20KVA/240V	25KVA/240V	30KVA/240V/360V	40KVA/240V/360V	50KVA/240/360V	
Model No.	ECO-HBD-120-010K-3P	ECO-HBD-120-015K-3P	ECO-HBD-240-15K-3P	ECO-HBD-240-25K-3P	ECO-HBD-240-25K-3P	ECO-HBD-240-30K-3P ECO-HBD-360-30K-3P	ECO-HBD-240-40K-3P ECO-HBD-360-40K-3P	ECO-HBD-240-50K-3P ECO-HBD-360-50K-3P	
<b>A.MPPT CHARGER</b>									
PV Nominal Capacity (Total KWp)	10	15	15	20	25	30	40	50	
Max no. of Strings	6	9	5	6	8	9/6	12/8	15/10	
Charge Controller Type (Buck)	MPPT								
No of MPPT Channel/No. of Inputs	1/1								
Max. Open Circuit PV Volts (Voc)*	320		650			650/820			
MPPT Voltage Range (Vmp)*	165-280		330-570			330-570/495-681			
Max SCC O/P Amps	80	120	60	80	100	120/80	160/108	200/135	
Peak Charging Efficiency	94%								
<b>B. SOLAR INVERTER</b>									
Nominal Capacity	10KVA	15KVA	15KVA	20KVA	25KVA	30KVA	40KVA	50KVA	
Output Amps per PHASE	12	17	17	23	29	35	46	58	
Nominal Battery Voltage	120		240/360						
Output Voltage/Freq/Phase	400V(±2%) 50Hz/3P+N								
Load Power Factor	0.8-Unity								
Peak Efficiency	>89%		>90%			>92%			
Over Loads: 60sec/ 30sec/ 5sec	101-110%/111-125%/126-150%								
Auto Bypass Feature	Provided								
Anti Islanding/Power Export to Grid	Provided (As per IEC 62116 & IEC 61727)								
<b>C. GRID CHARGER</b>									
Grid Voltage Operating Range	400V (+10% & -20%)								
Grid freq Operating Range	50Hz (+5% & -5%)								
Max Import Power	15KVA	22.5KVA	22.5KVA	30KVA	37.5KVA	45KVA	60KVA	75KVA	
<b>D. PROTECTIONS &amp; DISPLAY PARAMETERS</b>									
PV Side Battery Side Grid Side Load Side System Protection	<b>PROTECTIONS</b> <ul style="list-style-type: none"> <li>Reverse Polarity, PV Power Limit, Surge Protection (MOV)</li> <li>Reverse Polarity, O/U Voltage, Current Limit</li> <li>O/U Voltage, O/U frequency, Surge Protection (MOV)</li> <li>Overloads, Short Circuit, Surge Protection (MOV)</li> <li>Over Temperature</li> </ul>				<b>DISPLAY PARAMETERS</b> <ul style="list-style-type: none"> <li>Voltage, Charger O/P Amps, Power, Cumulative Energy</li> <li>Voltage, Current, Battery State</li> <li>Phase Voltage, Frequency, Power, Power Factor</li> <li>Voltage &amp; Current, Frequency, Power, Export KWh</li> <li>Mode of Operation, Active Faults, Status Mimic</li> </ul>				
<b>E. MISCELLANEOUS</b>									
Switchgear Protection	MCB/MCCB provided on PV, Battery, Load & Grid path.								
LED Indications	Mains On, Alarm, Buzzer Mute								
Data Port (RS 485/ RS 232)	Optional (Available on Request)								
Remote Monitoring	Optional through GPRS based Modem								
Ingress Protection	IP-20 (Indoor Type)								
Cooling Method	Forced Cooled (Temp. Controlled)								
Operating Temperature	0-50 degree(Without Derating)								
Humidity	Max. 95% Non-Condensing								
Altitude	1000m above sea level								
Color shade	RAL7035/DA GREY HE 15005								
Dimensions(H×W×D)	700X550X845		800X550X845				900X650X965		

## 3-P HIGH VOLTAGE (240/360/480/576V) 60-250KVA



RATINGS	60KVA/240V/360V	80KVA/240V/360V	100KVA/240/360V	125KVA/360V/480V	150KVA/360/480	200KVA/360V/480V	250KVA/480V
Model No.	ECO-HBD-240-60K-3P	ECO-HBD-240-80K-3P	ECO-HBD-240-100K-3P	ECO-HBD-360-125K-3P	ECO-HBD-360-150K-3P	ECO-HBD-360-200K-3P	ECO-HBD-480-250K-3P
	ECO-HBD-360-60K-3P	ECO-HBD-360-80K-3P	ECO-HBD-360-100K-3P	ECO-HBD-480-125K-3P	ECO-HBD-480-150K-3P	ECO-HBD-480-200K-3P	
<b>A.MPPT CHARGER</b>							
PV Nominal Capacity (Total KWp)	60	80	100	125	150	200	250
Max No. of Strings (per channel)	6/4	8/5	10/6	8/7	10/10	14/13	12/9
Charge Controller Type (Buck)	MPPT						
No of MPPT Channel/ No. of Inputs	3/3						4/4
Max. Open Circuit PV Volts (Voc)*	650/820			820/900			900
MPPT Voltage Range (Vmp)*	330-570/495-681			495-681/660-800			660-800
Max SCC O/P Amps	235/157	314/209	392/261	326/245	392/294	522/392	490
Peak Charging Efficiency	94%						
<b>B. SOLAR INVERTER</b>							
Nominal Capacity	60KVA	80KVA	100KVA	125KVA	150KVA	200KVA	250KVA
Output Amps PER phase	69	92	115	144	173	231	289
Nominal Battery Voltage	240/360				360/480		480
Output Voltage/ Frequency/ Phase	400(±2%) / 50Hz/ 3P+N						
Load Power Factor	0.8-Unity						
Peak Efficiency	>92%			>94%			
Over Loads: 60sec/ 30sec/ 5sec	101-110%/111-125%/126-150%					101-110%/111-120%/121-130%	
Auto Bypass Feature	Provided						
Anti Islanding/Power Export to Grid	Provided (As per IEC 62116 & IEC 61727)						
<b>C. GRID CHARGER</b>							
Grid Voltage Operating Range	400V(+10% & -20%)						
Grid freq Operating Range	50Hz (+5% & -5%)						
Max Import Power	90KVA	120KVA	150KVA	188KVA	225KVA	250KVA	300KVA
<b>D. PROTECTIONS &amp; DISPLAY PARAMETERS</b>							
	<b>PROTECTIONS</b>			<b>DISPLAY PARAMETERS</b>			
PV Side	• Reverse Polarity, PV Power Limit, Surge Protection (MOV)			• Voltage, Charger O/P Amps, Power, Cumulative Energy			
Battery Side	• Reverse Polarity, O/U Voltage, Current Limit			• Voltage, Current, Battery State			
Grid Side	• O/U Voltage, O/U frequency, Surge Protection (MOV)			• Phase Voltage, Frequency, Power, Power Factor			
Load Side	• Overloads, Short Circuit, Surge Protection (MOV)			• Voltage & Current, frequency, power, Export KWh			
System Protection	• Over Temperature			• Mode of Operation, Active Faults, Status Mimic			
<b>E. MISCELLANEOUS</b>							
Switchgear Protection	MCB/MCCB provided on PV, Battery, Load & Grid path.						
LED Indications	Mains On, Alarm, Buzzer Mute						
Data Port (RS 485/ RS 232)	Optional (Available on Request)						
Remote Monitoring	Optional through GPRS based Modem						
Ingress Protection	IP-20 (Indoor Type)						
Cooling Method	Forced Cooled (Temp. Controlled)						
Operating Temperature	0-50 degree(Without Derating)						
Humidity	Max. 95% Non-Condensing						
Altitude	1000m above sea level						
Color shade	RAL7035/DA GREY HE 15005						
Dimensions(H×W×D)	1650X800X850		1900X800X1050		2125×1200×1200		

\*\* The above models are compatible with Lead-Acid batteries only. Lithium compatibility requires extra hardware/ software (at extra cost), which is factory-fitted only. Statcon Energiaa Pvt. Ltd. reserves the right to modify or withdraw any of the ratings or technical specifications.

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