

ESS[®]

HOME / INDOOR Energy Storage System



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a turnkey home indoor power solution

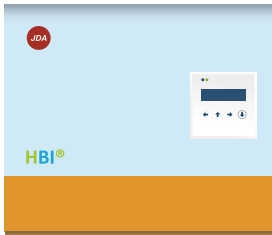
Amita's advance technologies in planning, designing and engineering, for a safe and available power solution.





VDE0126
IEC62109-1-2
EN61000-6-2(EMC)







KEY POINTS

- ✓ SOLAR OPTIMIZING
- ✓ GRID INTERACTIVE
- ✓ PRICE RESPONSIVE
- ✓ DEMAND RESPONSIVE

Brief Specification

- Battery Energy (kWh) : 4.9 / 9.8 / 14.7/19.6
- PV Inverter : 3/5 (kW)

Renewable Value Enhancement

- Amita's ATESS provides a number of different features. Its peak shaving function allows the user to save electricity expenses by utilizing stored energy at peak times. The functionality which allows the integration with various renewable energy sources is one of the key advantages.

Application

- Peak Load Shaving : Programmable energy control plans to optimizes peak load reduction.
- Off-Grid ESS: Stand-alone type in islanded micro-grids
- Demand Response : Targeted energy dispatch upon demand response signals.
- Voltage Support : Grid and critical load voltage support in response to low-voltage events.

General Characteristics

- The next generation, Li-Polymer battery technology has a cycle life of > 4,000 cycles (@ 85% DOD, RT). Integrated with a highly efficient power conversion system (PCS) includes a charger, inverter, solar inverter, battery pack, and an Energy Management Software (EMS).

Reliability

- The BMS is designed to ensure the safety by managing the operation modes in the most effective way.

Software

- Control of ATESS units in real-time including the ability to execute algorithms that automatically operate each ATESS as a fleet according to utility's preferences.

System Technical Data

Battery	Cell type	JD44E
	Chemistry	NMC / (Optional in LFP or LTO)
	Voltage	39.2 Vdc to 58.8Vdc
	Energy (@0.2C Discharge, 25 °C)	4.9 kWh
	Amita Battery Module Type	JMP-2
	Stackble	UP TO 6 units

Specifications

Item	Model ²	Unit	HBI-3600H	HBI-5000H	HBI-6000H
Input (Mains, AC)					
Nominal Voltage	V			230	
Voltage Range	V			190 ~ 300	
Nominal Frequency	Hz			50/60	
Power Factor				0.99	
Maximum Current	A		15	25	25
Inrush Current	A/μS			100/200	
Max. Power	VA		3300	5500	5500
Input (PV, DC)					
Maximum Power	W		3600	5000	6000
Maximum Voltage	V		550	500	500
MPPT Range ³	V		100~500	100~450	100~450
Start-up Voltage	V		150	150	150
Maximum Current	A		10	20	10x2
Absolute Max. Current (Isc)	A		15	30	15
MPP tracker No.			1	1	2
Max. Backfeed Current	mA		1.6	1.6	1.6
Battery I/O (DC)					
Nominal Voltage	V			48	
Voltage Range	V			40~59	
Nominal Current	A		70	116	116
Maximum Current	A		90	150	150
Max. Charge Current ⁴	A		60	20	100
Max. Leakage	mA			1	
Output (Load, AC)					
Nom. Power	VA		3000	5000	5000
Max. Power	W		3000	5000	5000
Inrush Current	A/μS		100/200	100/200	100/200
Max. Fault Current	A		50	79	79
Max. Protection Over-current	A		50	79	79
Nominal Voltage	V			230	
Nom. Frequency	Hz			50/60	
THDV	%			5	
Voltage Regulation	%			2	
DC injection	mV			±100	
Overload Capacity			600 seconds for 100% ≤ load ≤ 110% 30 seconds for 110% < load ≤ 150% 10 seconds for 150% < load ≤ 200%		
General					
Temp. Range	°C		-20 ~ 55 ⁵		
Max. Eff. (PV/AC)	%		96	96.5	96.5
Max. Eff. (BAT/AC)	%		92	92	92
Protection			IP20		
Humidity	%		0~95, non condensing		
Cooling			Forced Air-cooling Variable fan speed control		
Protection Class			I		
Environment Cat.			Pollution Degree III		
Overvoltage Cat.			DC input: II, AC input: III		
Amplitude	m		<2000		
Reconnect Time ⁶	S		300		
Features					
LCD			2-line 16 characters text		
Interface			USB, RS485 & CANbus for multiple-unit operations		
RS485			2 wires, half-duplex		
Date Logging			Yes		
Parallel Operation			Yes	No	Yes
Max. Units for Parallel Operation			6	NA	6
Max. Units for 3-phase connection			9, 3 units in each phase	NA	9, 3 units in each phase

Specifications

Item	Model ²	Unit	HBI-3600H	HBI-5000H	HBI-6000H
Mechanical					
W x H x D	mm		580 x 408 x 168, wall mount models 490 x 165 x 580, rack mount models		
Weight	kg		22	23.8	24.2
DC switch			Optional ⁷		
Compliance					
Grid Monitoring ⁸			VDE0126-1-1/A1 IEEE 519 CEA (2013), IEC 61727, IEC 62116		
Safety			IEC 62109-1, 62109-2 EN61000-6-4,		
EMC Emission		EN61000-3-2, EN61000-3-3	EN61000-3-11, EN61000-3-12		
EMC Immunity			EN61000-6-2		
Battery					
Capacity			100Ah/12V x 4 per bank		
Official Type			Refer to table below		
Coding rule					
HBI-6000H- D Germang rach Germang D DS DR SA SAS SAR Germang with DC switch South East Asia with DC switch South East Asia Rack South East Asia					

Note:

- Specifications are subject to change without prior notice
- There are some variations for each model. Models with suffix "-SA" are off-grid; with "-D" are hybrid models with grid connection capability
- The input power may be reduced for voltage lower than 250V
- Charge current will adjusted according to battery configuration
- Output power may be reduced for temperature > 40°C
- Only for on-grid mode
- For models with "/S" appended to normal model names
- For -D models

PV Inverter Specifications

Model	Unit	HBI-3000-E-xx*	HBI-5000-E-xx*	HBI-5500-E-xx*
Input (PV)				
Max. PV Power	W P	3000	5000	5500
MPPT Range ¹	V	150~450	150~450	120~450
Max. DC Voltage	V	500	500	500
Max. Current	A	10	20	2/2*13
Input (AC)				
Nominal Voltage, Frequency	V/Hz		230,50/60	
Maximum Current	A	15	25	23.9
Battery				
Nominal Voltage	V	48	48	48
Max. Charging I Current	A	40	40	40
Output (AC)				
Nomonal Power	W/VA	2400/3000	4000/5000	4000/5500
Nominal Voltage, Frequency	V/Hz		230,50/60	
Over-Load Capacity	%		200	
Waveform			Pure Sinusoidal	
Regulation (Linear Load)	%		±2	
General				
Temperature Range ²	°C		-20~55	
Environment			Indoor	
Cooling			Forced Air - Coolinh	
Humidity	%		0~95, non-condensing	
Battery Type			VRLA or LiFePO 4	
UPS Function			Yes. Transfer time <4mS 3	
Parallel Operation		No	Yes	No
Interface & Mecchanical				
Display			16 x 2 Test Display	

Note : 1. Input power maybe reduced for VPV <265V 2.AC power may need to be reduced for T>40°C

3.Valid for single unit operation 4.Design to meet 5. Specifications are subject to change without prior notice

*stanealone - SA.

Optional 1 : 80A, Optional 2 : 120A