

HOUSEHOLD ENERGY STORAGE SYSTEM

SINGLE-PHASE HYBRID SOLAR INVERTER
E 10kW~12kW/48V

Application Scenarios

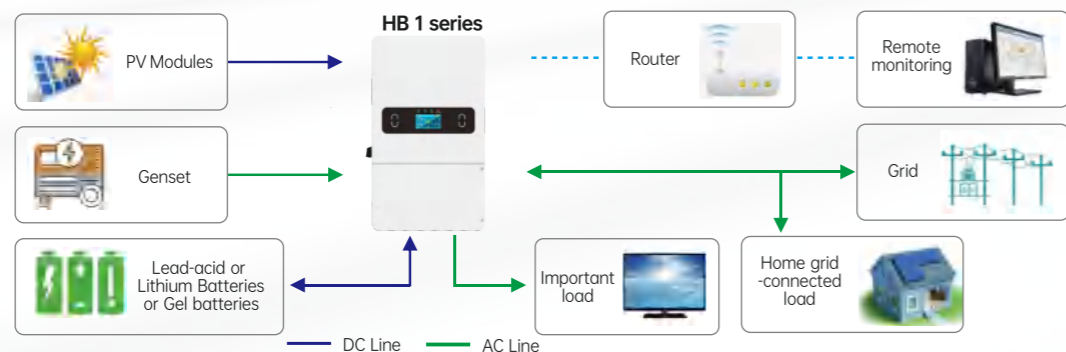
Small household single-phase hybrid energy storage system, suitable for new installation or modification of photovoltaic energy storage system,AC 220V/230V output.



Product Highlights

- It has the function of soft start when closing the battery switch, which can eliminate the starting inrush current, protecting both the machine and the battery.
- The PV power can reach up to twice the rated power, and it simultaneously supports full-power grid connection as well as charging and energy storage.
- It adopts three - stage charge - discharge conversion, which results in low current ripple and prolongs the service life of the battery.
- The Maximum Supports up to 12 parallel machines,Meet users' capacity expansion needs.
- It is equipped with a multi-functional generator interface, enabling intelligent switching and control, thus saving additional investment.
- Both the AC input port and the generator interface can be connected to the PV grid -connected inverter for renovating the original PV system.
- 4.3-inch 65K-color HD touch screen, supporting customization of languages worldwide
- Set the charging and discharging time periods according to the time-of-use electricity price.
- With an IP66 protection rating, it can be installed outdoors.

Application System Diagram



HB1100EH048 ~ HB1120EH048 Parameters

MODEL	HB1100EH048		HB1114EH048		HB1120EH048	
PV Input						
Max PV Input Power	20000W		22800W		24000W	
Max PV Input Voltage	550Vdc					
PV Input Starting Voltage	90Vdc					
MPPT Input Voltage	370Vdc(95~550V)					
MPPT Full Load Voltage Range	150~425Vdc					
PV Max Input Current	30A+30A					
PV Short-circuit Current	34A+34A					
Number of MPPT / Strings per MPPT	2/2+2					
AC Output						
Rated Output Voltage	220/230Vac (single phase)					
Grid Voltage Range	Local grid standard mode / Custom mode: 90Vac~280Vac (configurable)					
Output Frequency Range	50/60Hz(±5), Intelligent adaptive/Settable					
Rated grid-connected current	43.5A/45.5A		49.5A/51.8A		52.1A/54.5A	
Max off-grid current	45.6A/47.7A		52A/54.4A		54.7A/57.3A	
Rated Grid-connected Active Power	10000W		11400W		12000W	
Rated Grid-connected Apparent Power	10000VA		11400VA		12000VA	
Max Off-grid Power	10500W		11970W		12600W	
DC Component	< 0.5% In					
Grid Type	Single Phase,L+N+PE					
Output Power Factor(cosφ)	> 0.99 @ Rated power (Adjustable 0.8 leading~0.8 lagging)					
THDi	< 3%					
THDu	< 2%(Linear load)					
Transfer Time	10ms(Typical value)					
Off-grid Overload Capability	<105%Long-term work , 106%-120% 3min , >120% 10S					
Battery Input						
Battery Type	Lead-acid, lithium batteries, gel batteries, etc					
Charging Mode	3-section type/Equilibrium/Self-adaption BMS					
Battery Voltage	48Vdc(40~60V)					
Max Discharge Current	210A		250A			
Max Charging Current	210A(1~210Adjustable)		250A(1~250Adjustable)			
Max Charge/Discharge Power	10000W		11400W		12000W	
Efficiency						
Max PV Conversion Efficiency	97.6%					
European Efficiency	97.0%					
MPPT Efficiency	> 99%					
General Parameters						
Display	Touch Screen+LED					
Communication Mode	Standard: RS485/CAN/DRM, Optional 4G/WIFI/GPRS					
Protection function	Over/Under Volt Prot. Over/Under Freq Prot. AC Out SC/OL Prot. Anti-Island Prot. Batt Chg/Dchg OC Prot. Leakage Curr Prot. Insul Imped Prot. Grid Fault Prot. PV Rev Conn Alarm					
Surge Protection	DC Type II / AC Type III					
Noise (dB)	< 45					
Cooling	Intelligent fan					
Operating Ambient Temperature	-25℃ ~ 60℃(> 45℃ Derating)					
Humidity	0-100%					
Altitude	4000m (>2000m Derating)					
Electricity Consumption At Night	15W					
Protection Degree	IP66					
Installation Method	Wall-mounted					
Dimension. W*D*H(mm)	420*233*670					
Weight (kg)	35.6					
Warranty	5 years standard/10 years optional					
Certifications						
Certification standard	IEC 62109-2 2011, IEC 62109-1 2010, EN/IEC 50549-10,EC 60529:1989/AMD:2013, GB/T 4208-2017 EN/IEC 61000-6-3:2021, EN 61000-3-12:2011, EN/IEC 61000-3-12:2019, EN/IEC 61000-6-1:2019, RoHS					

Specifications are subject to change without advance notice.