HOUSEHOLD ENERGY STORAGE SYSTEM

THREE-PHASE HYBRID SOLAR INVERTER

E 20.5kW~30.5kW/120~600V

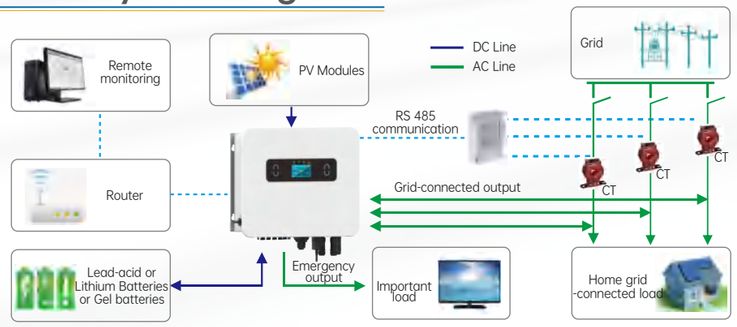
Application Scenarios

Household or light commercial three-phase hybrid energy storage system,is applicable to newly installed or modified photovoltaic energy storage system, AC 380V/400V

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 15 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



HB3205EH600~HB3305EH600 Parameters

MODEL	HB3205EH600	HB3255EH600	HB3299EH600	HB3305EH600
PV Input				
Max PV Input Power	41kW	51kW	60kW	61kW
Max PV Input Voltage	1000Vdc			
PV Input Starting Voltage	120Vdc			
MPPT Input Voltage	120~850Vdc			
MPPT Full Load Voltage Range	260~850Vdc	215~850Vdc	250~850Vdc	255~850Vdc
PV Max Input Current	30A+30A+15A	30A+30A+30A		
PV Short-circuit Current	34A+34A+17A	34A+34A+34A		
Number of MPPT / Strings per MPPT	2 / 2/2+1	3 / 2+2+2	3 / 2+2+2	3 / 2+2+2
AC Output				
Rated Output Voltage	220/380Vac,230/400Vac			
Grid Voltage Range	Local grid standard mode / Custom mode: 90Vac~280Vac (configurable)			
Output Frequency Range	50/60Hz			
Rated Output Current	31A/29.7A	38.6A/37A	45.3A/43.3A	46.2A/44.2
Max Grid-connected Current	31A/29.7A	38.6A/37A	45.3A/43.3A	46.2A/44.2
Rated Grid-connected Power	20500W	25500W	29900W	30500W
Max Grid-connected Viewing Power	22550VA	28050VA	32890VA	33550VA
Max Grid-connected Active Power	20500W	25500W	29900W	30500W
DC Component	< 0.5% In			
Grid Type	Three-phase, 3L+N+PE			
Output Power Factor(cosφ)	> 0.99 @ Rated power (Adjustable 0.8 leading~0.8 lagging)			
THDi	< 3%			
THDu	< 3%(Linear load)			
Transfer Time	10ms(Typical value)			
Off-grid Overload Capability	<110%Long-term work, 110%-120% 1min , >120% 10S			
Battery Input				
Battery Type	Lead-acid, lithium batteries, gel batteries, etc			
Charging Mode	3-section Type/Equilibrium/Self-adaption BMS			
Battery Voltage	120-600V			
Max Discharge Current	50A			
Max Charging Current	50A			
Efficiency				
Max PV Conversion Efficiency	98%			
European Efficiency	97.0%			
MPPT Efficiency	> 99%			
General Parameters				
Display	Touch Screen+LED			
Communication Mode	Standard: RS485/CAN, 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、Grd Fault Prot、PV Rev Conn Alarm			
Surge Protection	DC Type II / AC Type III			
Noise (dB)	< 30			
Cooling	Intelligent fan cooling			
Operating Ambient Temperature	-35°C ~ 60°C			
Humidity	0~95%			
Altitude	4000m (>2000m Derating)			
Electricity Consumption At Night	< 15W			
Protection Degree	IP66			
Installation Method	Wall-mounted			
Dimension. W*D*H(mm)	520*220*660			
Weight (kg)	48	50	54	54
Warranty	5 years standard/10 years optional			
Certifications				
Certification standard	IEC 62109-2 2011, IEC 62109-1 2010, EN/IEC 50549-10, VDE-4105, 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.