

HOUSEHOLD ENERGY STORAGE SYSTEM

SINGLE-PHASE HYBRID SOLAR INVERTER
E 3kW~8kW/48V



Application Scenarios

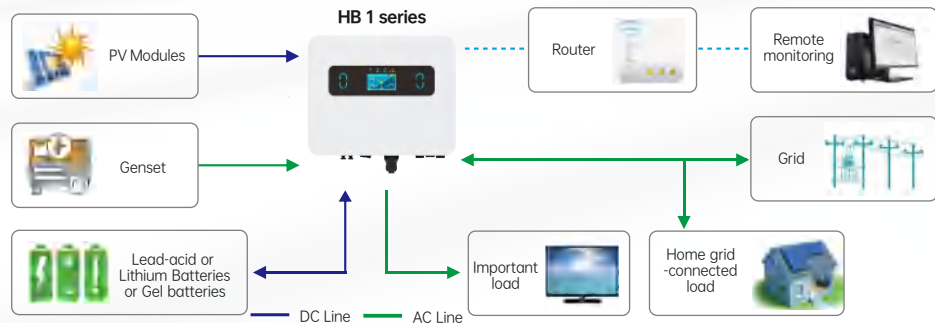
Small household single-phase hybrid energy storage system, suitable for new installation or modification of photovoltaic energy storage system, AC 220V/230V output.



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 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



HB1030EH048 ~ HB1080EH048 Parameters

MODEL	HB1030 EH048	HB1036 EH048	HB1040 EH048	HB1046 EH048	HB1050 EH048	HB1055 EH048	HB1060 EH048	HB1080 EH048
PV Input								
Max PV Input Power	6000W	7200W	8000W	9200W	10000W	11000W	12000W	16000W
Max PV Input Voltage	550Vdc							
PV Input Startup voltage	90Vdc							
MPPT Input Voltage	370Vdc(90~550V)							
MPPT Full Load Voltage Range	210~550Vdc	250~550Vdc	140~550Vdc	160~550Vdc	175~550Vdc	195~550Vdc	210~550Vdc	280~550Vdc
PV Max Input Current	15A		15A+15A					
PV Short-circuit Current	20A		20A+20A					
Number of MPPT / Strings per MPPT	1/1		2/1+1					
AC Output								
Rated Output Voltage/Frequency	220Vac/230Vac/240Vac, 50Hz/60Hz							
Grid Voltage Range	Local grid standard mode / Custom mode: 90Vac~280Vac (configurable)							
Rated Output Frequency	45Hz~55Hz,55Hz~65Hz, Intelligent adaptive							
Rated grid-connected current	13A	15.6A	17.4A	20A	21.7A	23.9A	26A	34.8A
Max off-grid current	13.7A	16.4A	18.3A	21A	22.8A	25A	27.4A	38.2A
Rated Grid-connected Active Power	3000W	3600W	4000W	4600W	5000W	5500W	6000W	8000W
Rated Grid-connected Apparent Power	3000VA	3600VA	4000VA	4600VA	5000VA	5500VA	6000VA	8000VA
Max Off-grid Power	3150W	3780W	4200W	4830W	5250W	5775W	6300W	8400W
DC Component	< 0.5% In							
Grid Type	Single-phase, L+N+PE							
Output Power Factor	1 (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							
Battery Voltage	48Vdc(40V~60V)							
Max Discharge Current	70A	90A	100A	115A	120A	120A	120A	150A
Max Charging Current	70A	90A	100A	100A	100A	100A	100A	150A
Max Discharge Power	3000W	3600W	4000W	4600W	5000W	5500W	6000W	8000W
Max Charging Power	3000W	3600W	4000W	4600W	5000W	5500W	6000W	8000W
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 SQ/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							< 58
Cooling	Natural convection							Intelligent fan
Operating Ambient Temperature	-25℃ ~ 60℃(> 45℃ Derating)							
Humidity	0~100%							
Altitude	3000m (>2000m Derating)							
Electricity Consumption At Night	15W							
Protection Degree	IP66							
Installation Method	Wall-mounted							
Dimension. W*D*H(mm)	505*188*413							
Gross Weight (kg)	20				24.5			25
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.