



户用储能系统

Household Energy Storage



单相混合储能逆变器

HB1030EH024~1060EH048系列

应用场景

户用单相混合储能系统，光伏系统改造提升光伏消纳率，交流220/230V输出

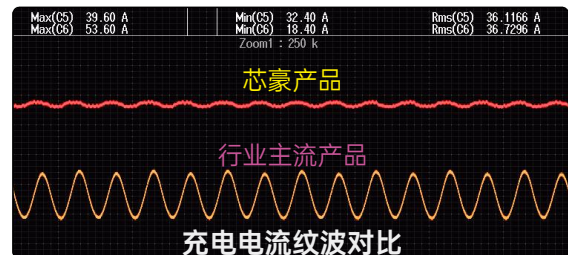
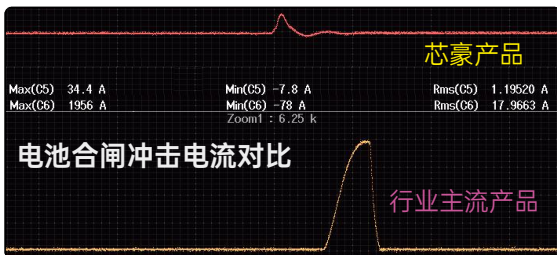


产品特性

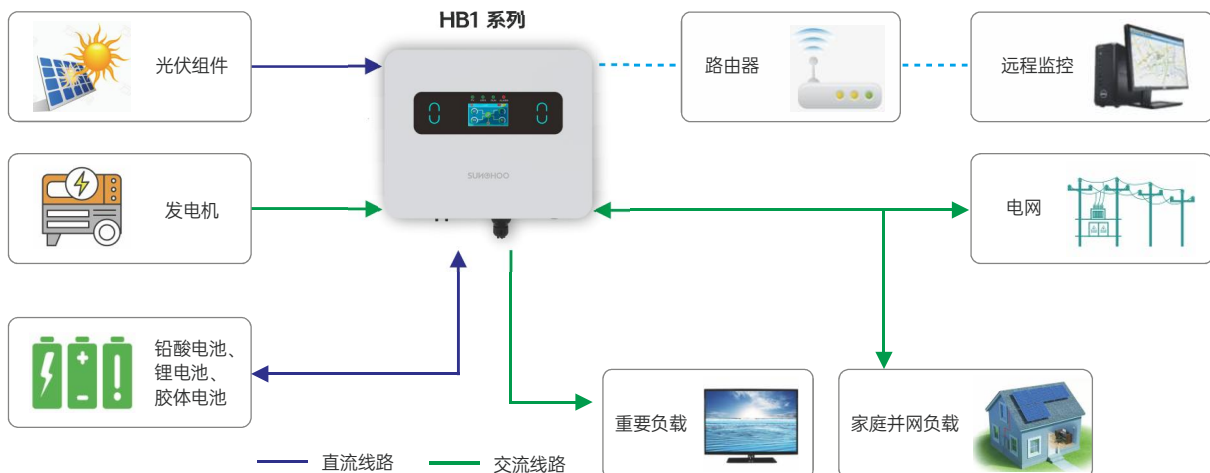
- ◎ 集成双路MPPT 控制器，MPPT 效率高达 99.9%
- ◎ 拥有并网、离网、旁路三种输出模式
- ◎ 具备 UPS 功能切换时间 $\leq 10\text{ms}$
- ◎ IP66 防护等级，可户外安装
- ◎ 具备两种防逆流功能
- ◎ 无风扇设计，噪音小
- ◎ 多种工作模式满足不同场景用户需求：
自发自用，售电优先，后备模式，分时模式，组合模式
- ◎ 具备过载、过温、短路、过欠压、过欠频等安全保护功能
- ◎ 可选 4G、WIFI 或 GPRS 远程通讯模块，24 小时负载监控
- ◎ 兼容铅酸电池、锂电池、胶体电池等，具有电池管理功能

产品亮点

- ◎ 熊猫外观搭配智能呼吸灯，新颖形象，活力亲切
- ◎ 充放电三级变换，电流纹波小，提高电池使用寿命
- ◎ 双继电器串联方案，多重安全保障
- ◎ 可定制化设计，满足客户不同需求
- ◎ 智能电网自适应，支持弱电网情况下正常发电
- ◎ 电池合闸软起功能，无启动冲击电流，保护机器和电池
- ◎ 4.3寸65K色高清触摸屏，内容丰富，人机界面友好
- ◎ 多功能油机接口，智能切换和控制，节约额外投入
- ◎ 支持15台并机，并支持单相组网三相，满足用户的扩容需求
- ◎ 具备升维驱动功能，带载功率更大，带载种类更多



应用系统图





产品参数

型号	HB1030 EH024	HB1030 EH048	HB1036 EH048	HB1040 EH048	HB1046 EH048	HB1050 EH048	HB1060 EH048
PV 输入							
PV 输入最大功率	3900W	3900W	4680W	5200W	5980W	6500W	7800W
PV 输入最大电压	550Vdc						
PV 输入启动电压	90Vdc						
MPPT 输入电压	370Vdc(125~500V)						
MPPT 满载电压范围	280~500Vdc						
PV 最大输入电流	13A		13A+13A				
PV 短路电流	17A		17A+17A				
MPPT 数量 / 每路组串数量	1/1		2/1+1				
AC 输出							
额定输出电压	220V/230Vac						
输出频率范围	50/60Hz(±5), 智能自适应 / 可设置						
额定输出电流	13A	13.6A	16.4A	18.2A	20.9A	22.7A	27.2A
最大并网电流	15A	15A	18A	20A	23A	25A	30A
额定并网功率	3000W	3000W	3600W	4000W	4600W	5000W	6000W
最大并网视在功率	3300VA	3300VA	3960VA	4400VA	5060VA	5500VA	6600VA
最大并网有功功率	3300W	3300W	3960W	4400W	5060W	5500W	6600W
直流分量	< 0.5% In						
电网类型	单相, L+N+PE						
输出功率因数 (cosφ)	> 0.99 @ 额定功率 (可调 0.8 超前 ~0.8 滞后)						
并网总电流谐波 (THDi)	< 3%						
离网总电压谐波 (THDu)	< 2%(线性负载)						
切换时间	10ms(典型值)						
离网过载能力	< 105%长期工作, 106%-120% 1min, >125% 10S						
电池输入							
电池类型	铅酸电池、锂电池、胶体电池等						
充电方式	3 段式 / 均衡 / 自适应 BMS						
电池电压	24Vdc(20~30V)		48Vdc(40~60V)				
最大放电电流	120A	70A	90A	100A	115A	120A	120A
最大充电电流	100A	70A	90A	100A	100A	100A	100A
效率							
PV 最大转换效率	97.6%						
欧洲效率	97.0%						
MPPT 效率	> 99%						
常规参数							
显示方式	触摸屏+LED						
通讯方式	标配: RS485/CAN/DRM, 可选 4G/WIFI/GPRS/ 温度补偿模块						
过电压类型	DC Type II / AC Type III						
噪声 (dB)	< 30						
冷却方式	自然对流						
工作环境温度	-25°C~60°C (> 45°C降额运行)						
相对湿度	0~100%						
海拔高度	3000m (>2000m 降额运行)						
夜间自耗电	15W						
防护等级	IP66						
安装方式	壁挂式						
尺寸 W*D*H (mm)	505*188*410						
重量 (kg)	25				28		
质保期	5 年标配 / 10 年可选						

规格指标若有变动, 恕不另行通知。



HOUSEHOLD ENERGY STORAGE SYSTEM

SINGLE-PHASE HYBRID SOLAR INVERTER

HB1030EH024 ~ 1060EH048 SERIES



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 Features

- ⊙ Integrated MPPT controller, MPPT efficiency up to 99.9%.
- ⊙ Three output modes: grid-connected, off-grid, and bypass.
- ⊙ It has the function of UPS, and the switching time ≤ 10 ms.
- ⊙ Compatible with lead-acid battery, lithium battery, gel battery, etc., with battery management function.
- ⊙ It has two anti-reflux functions
- ⊙ Optional 4G, WIFI or GPRS remote communication module, 24-hour load monitoring.

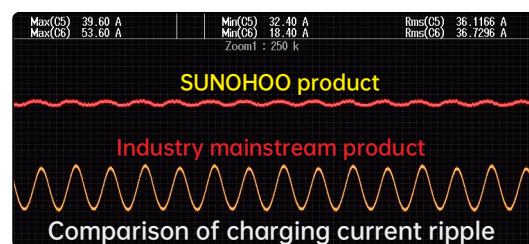
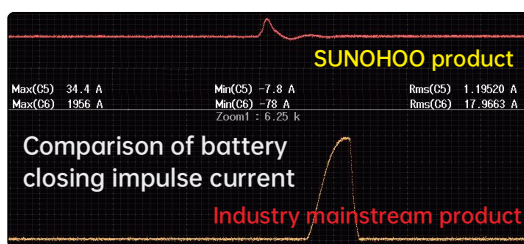
Product Highlight

- ⊙ Charge and discharge current three-stage conversion, low current ripple, improving battery life.
- ⊙ The grid port adopts a dual relay series scheme for multiple safety guarantees.
- ⊙ Independent multi-function generator interface, intelligent switching, saving additional investment.
- ⊙ Equipped with uphill driving function, with higher load power and more types of loads.
- ⊙ The appearance is like a panda, lively and friendly.

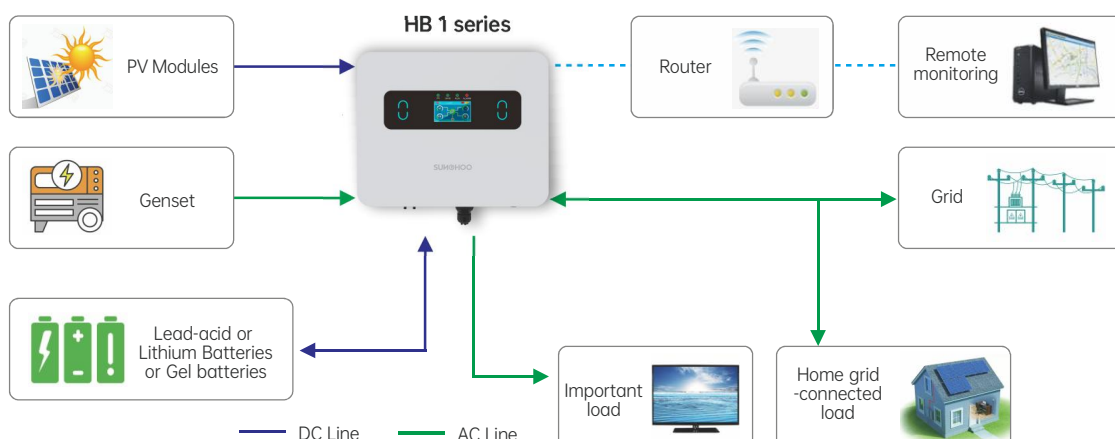


- ⊙ Multiple working modes to meet the needs of users in different scenarios: Self Use, Selling First, Back-Up Mode, Force Time Use, Composite Pattern.
- ⊙ It has overload, short circuit, overvoltage and undervoltage, underfrequency, overfrequency and other safety protections.
- ⊙ With IP66 protection degree, it can be installed outdoors.
- ⊙ The design is fanless and low noise.

- ⊙ Soft start function of battery, without starting impact current, protect the machine and battery.
- ⊙ 4.3-inch 65K color high-definition touch screen, rich content, friendly human-computer interface.
- ⊙ The Maximum Supports up to 15 parallel machines, and three-phase group grid.
- ⊙ Power grid self-adaptation, supporting normal power generation under weak grid conditions.
- ⊙ Customizable design to meet different customer needs.



Application System Diagram





Product Data Sheet

MODEL	HB1030 EH024	HB1030 EH048	HB1036 EH048	HB1040 EH048	HB1046 EH048	HB1050 EH048	HB1060 EH048	
PV Input								
Max PV Input Power	3900W	3900W	4680W	5200W	5980W	6500W	7800W	
Max PV Input Voltage	550Vdc							
PV Input Startup voltage	90Vdc							
MPPT Input Voltage	370Vdc(125~500V)							
MPPT Full Load Voltage Range	280~500Vdc							
PV Max Input Current	13A						13A+13A	
PV Short-circuit Current	17A						17A+17A	
Number of MPPT / Strings per MPPT	1/1						2/1+1	
AC Output								
Rated Output Voltage	220V/230Vac							
Output Frequency Range	50/60Hz(±5), Intelligent adaptive/Settable							
Rated Output Current	13A	13.6A	16.4A	18.2A	20.9A	22.7A	27.2A	
Max Grid-connected Current	15A	15A	18A	20A	23A	25A	30A	
Rated Grid-connected Power	3000W	3000W	3600W	4000W	4600W	5000W	6000W	
Max Grid-connected Viewing Power	3300VA	3300VA	3960VA	4400VA	5060VA	5500VA	6600VA	
Max Grid-connected Active Power	3300W	3300W	3960W	4400W	5060W	5500W	6600W	
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% 1min , >125% 10S							
Battery Input								
Battery Type	Lead-acid, lithium batteries, gel batteries, etc							
Charging Mode	3-section type/Equilibrium/Self-adaption BMS							
Battery Voltage	24Vdc(20~30V)	48Vdc(40~60V)						
Max Discharge Current	120A	70A	90A	100A	115A	120A	120A	
Max Charging Current	100A	70A	90A	100A	100A	100A	100A	
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/Temperature compensation module							
Surge Protection	DC Type II / AC Type III							
Noise (dB)	< 30							
Cooling	Natural convection							
Operating Ambient Temperature	-25°C ~ 60°C(> 45°C 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)	505*188*410							
Weight (kg)	25					28		
Warranty	5 years standard/10 years optional							

Specifications are subject to change without advance notice.