Energy Storage System

SPH Series (2-5kW)

» All-in-one solution
» Lower your electric bills
» Maximize self-consumption
» Help for energy independence

Intelligent Communication:

- Monitoring through WiFi
- Cloud-base Monitoring Service
- RS485 and USB communication ports

Smart Energy Management:

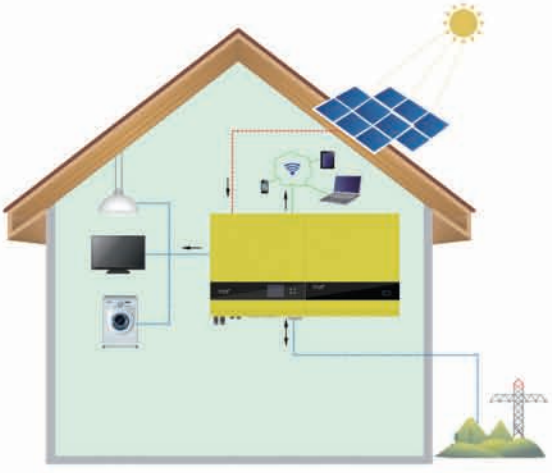
- Smart self EMS for all operating mode
- Daily/Monthly/Total energy generation logs
- Full protection function
- Maximize self-consumption, lower your bills

Lithium-ion Battery:

- 10 years plus lifetime
- Capacity modularly extended from 2 to 9.6kWh
- Accordant appearance for whole system
- Intelligent BMS

Backup Power:

- Load power backed-up at grid interruption
- User-adjustable charging setting for different battery
- Battery DC/AC efficiency: 94.8%

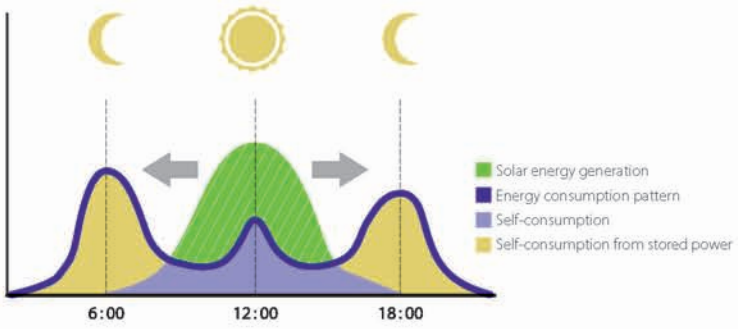


Value-added Services:

- Maximize self-consumption via internal sensing, can also add CT or Smart Meter to increase precision for option
- Lead-acid battery for option
- Power distribution cabinet

Ecological Power Network

Energy Storage System



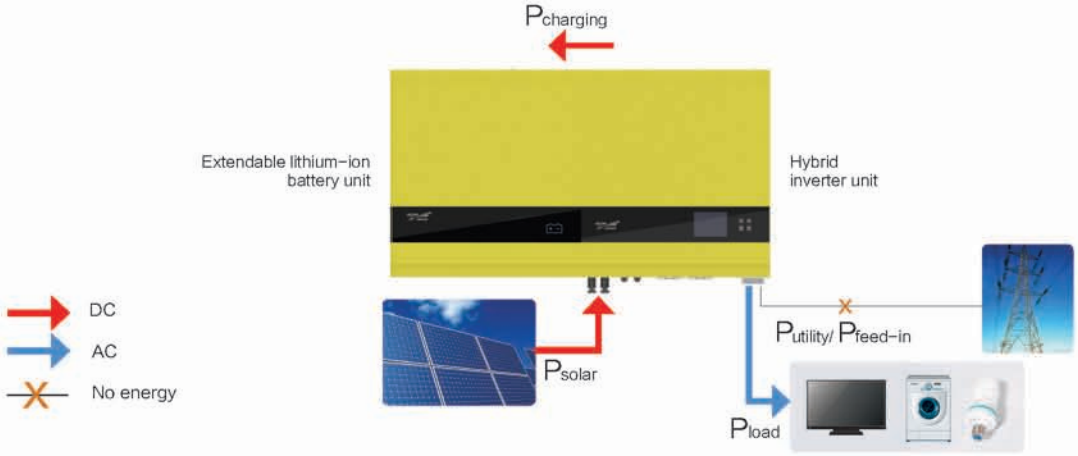
Save money for home energy management:

Kehua SPH allows to store the low price energy for nighttime when needed. With energy bills ever increasing, self-consumption by using intelligent functions for controlling setting can save money by generating your own electricity at fixed cost.

- Smart energy management, export control
- Time-of-use shifting
- Increased solar energy self-consumption
- Decreased electricity bill

Morning mode:

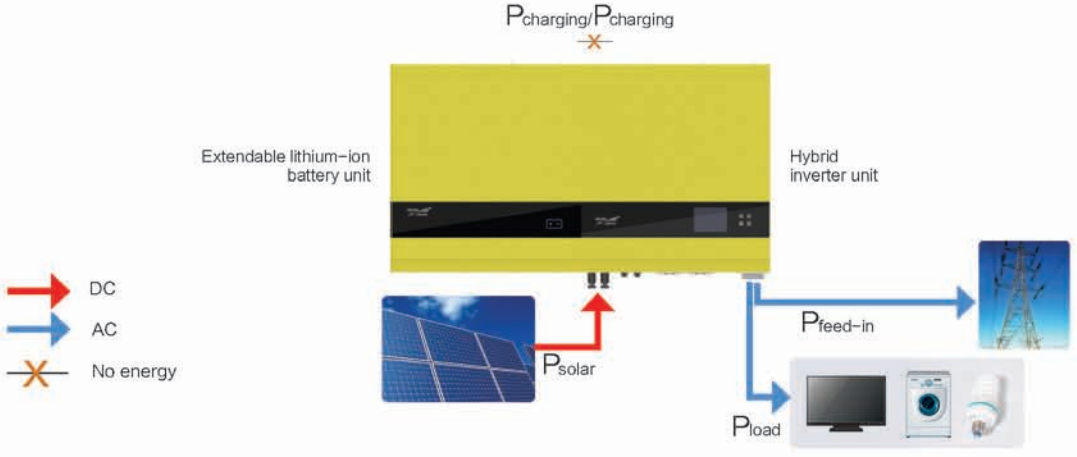
- the sunshine is sufficient in the morning, then household-generated energy is used for self-consumption first.



Psolar = Pcharging + Pload

Noon mode:

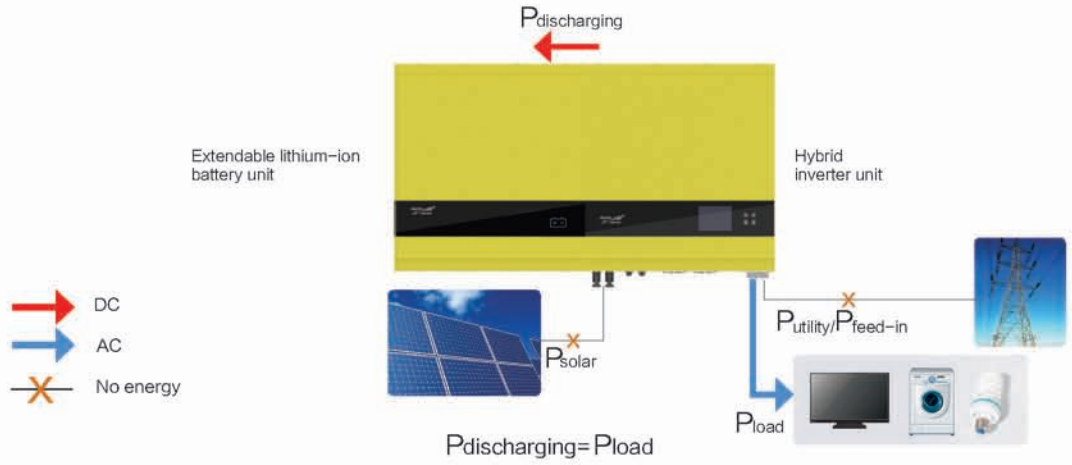
- the sunshine is strong at noon, there is excess household-generated energy for feed-in to grid after battery is fully charged.



Psolar = Pload + Pfeed-in

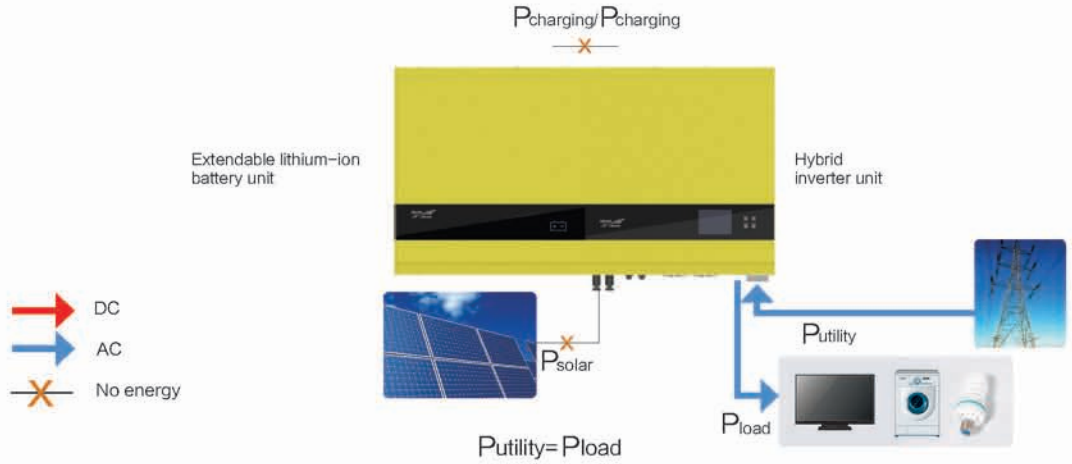
Evening mode:

- the battery delivers the energy to the load after sunset.



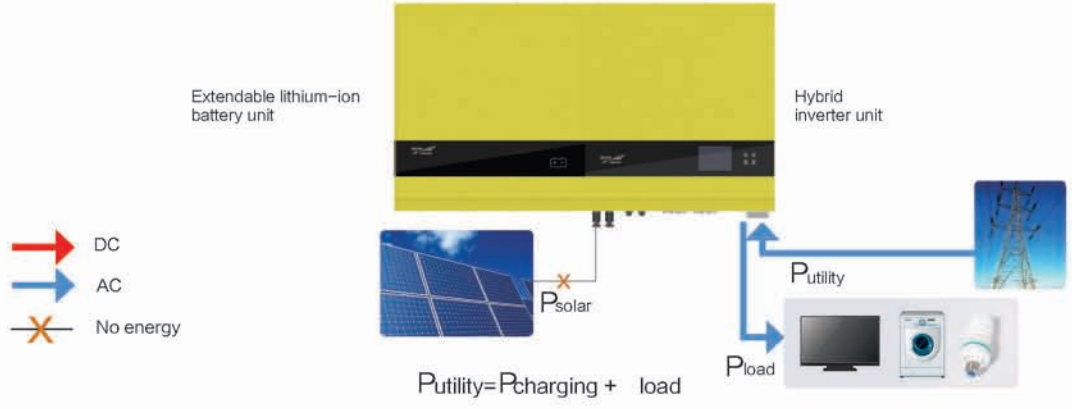
Night mode:

- the battery capacity is insufficient, then the utility helps to supply power to the load.



Energy storage mode:

- If the electricity price is lower in nighttime than daytime and the battery capacity is insufficient, then user can use the utility to recharge the battery in nighttime and supply power to loads in daytime.



Energy Storage System

Model	SPH2000-B	SPH3000-B	SPH3600-B	SPH5000-B
Input Data				
Maximum PV Input Power(W)	2200	3300	4000	5500
Maximum PV Voltage(VDC)	480			
MPPT Voltage Range(VDC)	200~480			160~480
Start-up Voltage(VDC)	120			
MPPT Number	2			
String Maximum Input Current(A)	6	9	10	13.8
Battery (Lithium-ion) & Charger				
Battery Capacity(Wh)	2000 (can extend to 9.6kWh)			
Maximum Charging Current(A)	7	10	10	12
Maximum Discharging Power (W)	2200	3300	3600	5500
Rated Battery Voltage(V)	192			
Battery Voltage Range(V)	175-226			
On-grid Output				
Rated Output Power	2000	3000	3600	5000
Rated Grid Voltage(V)	220/230/240			
Grid Voltage Range(V)	187-264			
Maximum Output Current(A)	8.7	13.2	16	25
THDi (Full Load)	<3%			
Rated Grid Frequency(Hz)	50/60			
Grid Frequency Range(Hz)	47.5-52.5 / 57.5-62.5			
PF	1/±0.8 (adjustable)			
Max Efficiency	96.5%	96.5%	96.5%	97.0%
Off-grid Output				
Rated Output Power(W)	2000	3000	3600	5000
Rated Grid Voltage(V)	220/230/240			
Frequency(Hz)	50/60			
Over Load Capacity	105% continuity; 106-130% for 1min			
THDu	<3% (linear load)			
Efficiency (Max)	94.8%			
Others				
Dimension, W×D×H(mm)	480×438×144			480×550×144
Weight(KG)	20	20	20	25
Communication Interface	RS485(PC)/RS485(Meter)/Wifi			
Relative Humidity	0 ~ 90% ,No condensation			
Noise(dB)	<55			
Operating Temperature(°C)	-20 to 50 (>40 , power derating)			
IP Grade	IP20			IP21
Altitude(m)	0 ~ 2000 (>2000, power derating)			
Certificate	VDE0126-1-1, VDE-AR-N4105, G83; IEC62109-1, IEC62109-2; EN61000-6-3, EN61000-6-2			
Topology	Transformerless			

· Specifications are subject to change without prior notice.

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