KEHUA TECH

Residential Energy Storage System

SPH 192V 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:

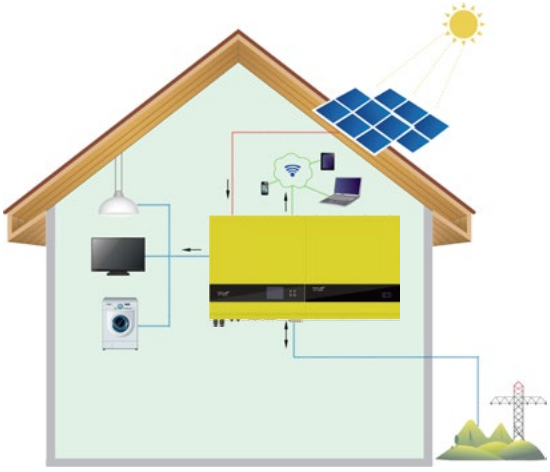
- Smart self EMS for all operating mode
- Daily/Monthly/Total energy generation logs
- Full protection function
- Maximize self-consumption, lower your bills

Lithium-ion Battery:

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

Backup Power:

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

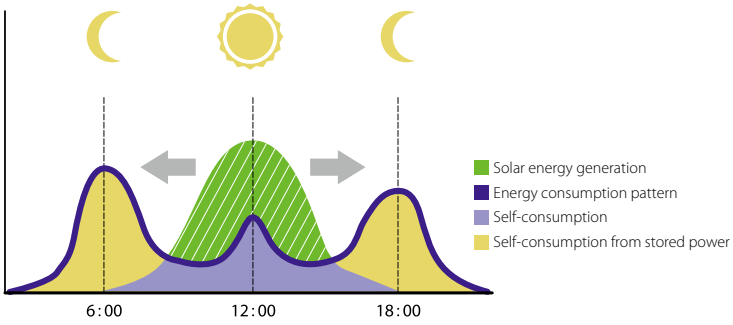


Value-added Services:

- 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

Reliable Power Network

Energy Storage System



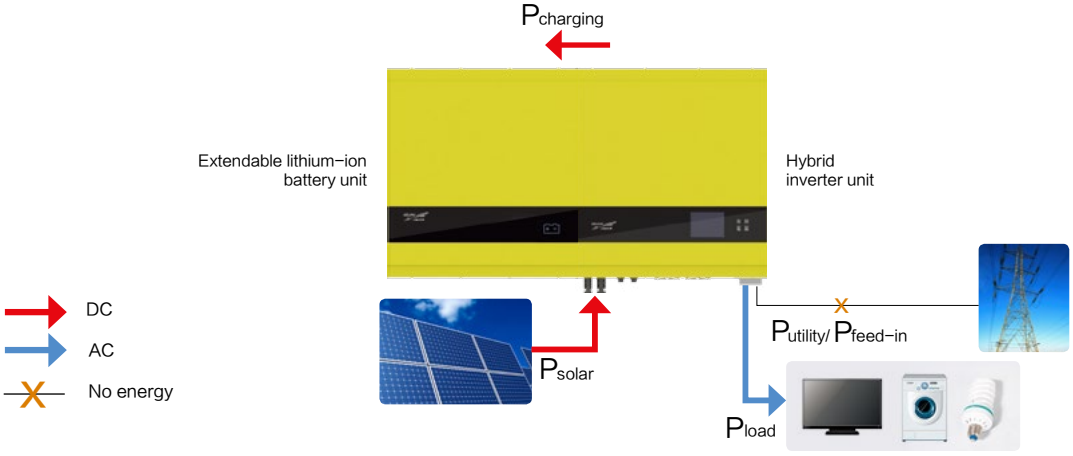
Save money for home energy management:

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:

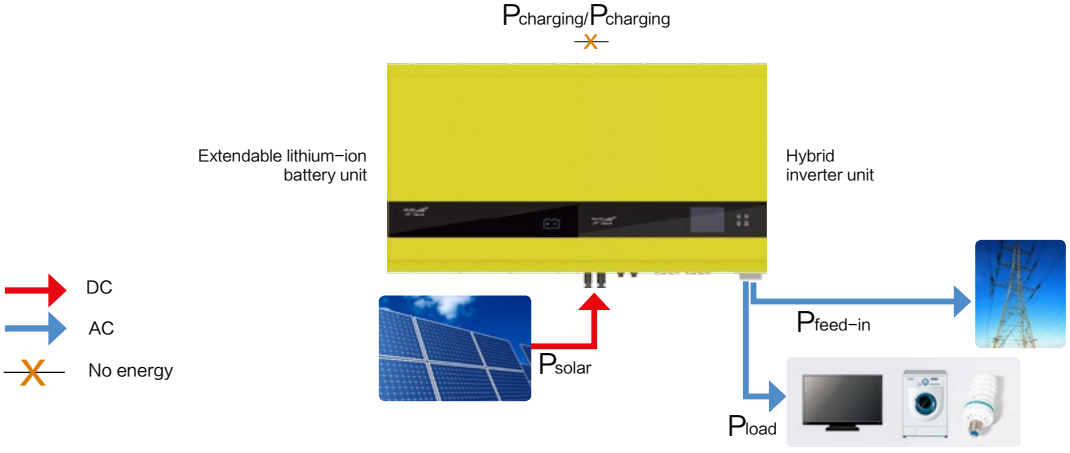
- the sunshine is sufficient in the morning, then household-generated energy is used for self-consumption first.



Psolar = Pcharging + Pload

Noon mode:

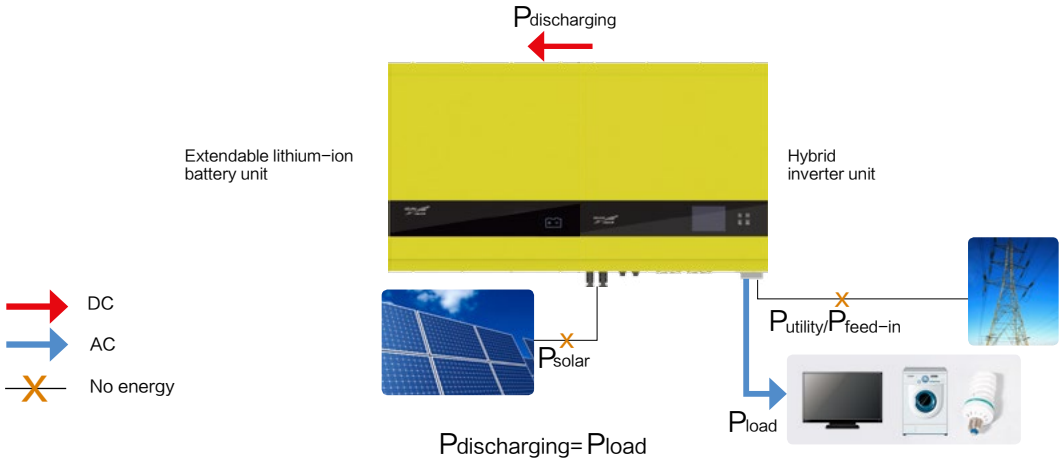
- the sunshine is strong at noon, there is excess household-generated energy for feed-in to grid after battery is fully charged.



Psolar = Pload + Pfeed-in

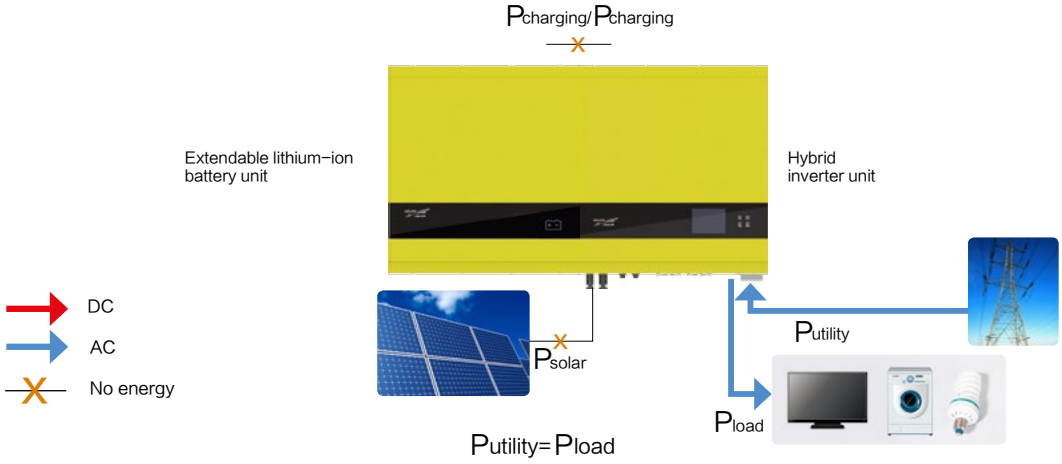
Evening mode:

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



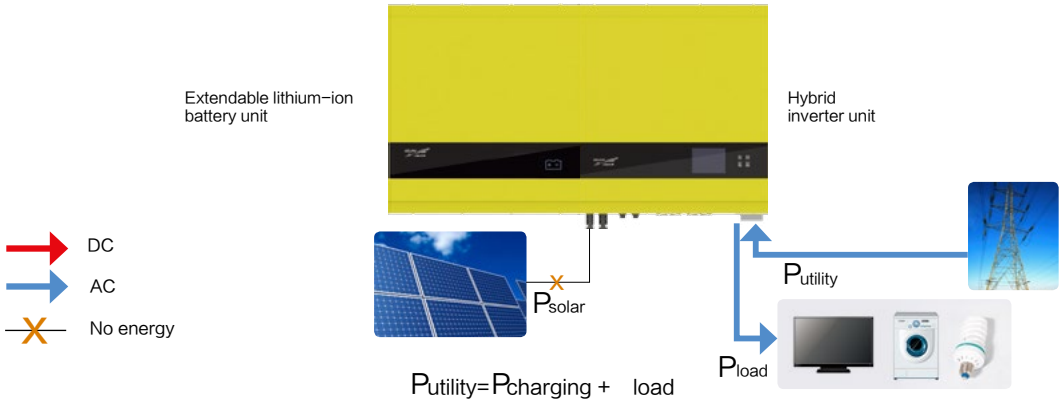
Night mode:

- 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

SPH Series (2-5kW)

Items	SPH2000-B	SPH3000-B	SPH3600-B	SPH5000-B
PV Input				
Maximum PV Input Power (W)	2200	3300	4000	5000
Maximum PV Voltage (VDC)	480			
DC Voltage Range (VDC)	160~480			
Full-load MPPT Voltage Range (VDC)	200~420			
MPPT Number	2			
String Maximum Input Current (A)	10	10	10	10
Battery (Lithium-ion) & Charger				
Battery Capacity(Wh)	2kWh to 9.6kWh			
Maximum Charging Current (A)	7	10	10	10
Maximum Discharging Power (W)	2200	3300	3600	4600
Rated Battery Voltage(V)	192			
Battery Voltage Range(V)	175~226			
On-grid Output				
Rated Output Power	2000	3000	3600	4600
Rated Grid Voltage (V)	220/230/240			
Grid Voltage Range (V)	187~264 (this may vary with grid standards)			
Maximum Output Current (A)	9.1	13.6	16.3	20.9
THDi (Full Load)	<3%			
Rated Grid Frequency (Hz)	50/60			
Grid Frequency Range(Hz)	47.5-52.5 / 57.5-62.5 (this may vary with grid standards)			
PF	1/±0.8 (adjustable)			
Max Efficiency	97.0%			
Off-grid Output				
Rated Output Power (W)	2000	3000	3600	3600
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			
Weight(KG)	20	20	20	
Communication Interface	RS485(PC)/RS485(Meter)/Wifi			
Relative Humidity	0 ~ 90% , No condensation			
Noise(dB)	<55			
Operating Temperature(ºC)	-20 to 50 (>40 , power derating)			
IP Grade	IP20			
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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Version No.: 20170323-01-500