

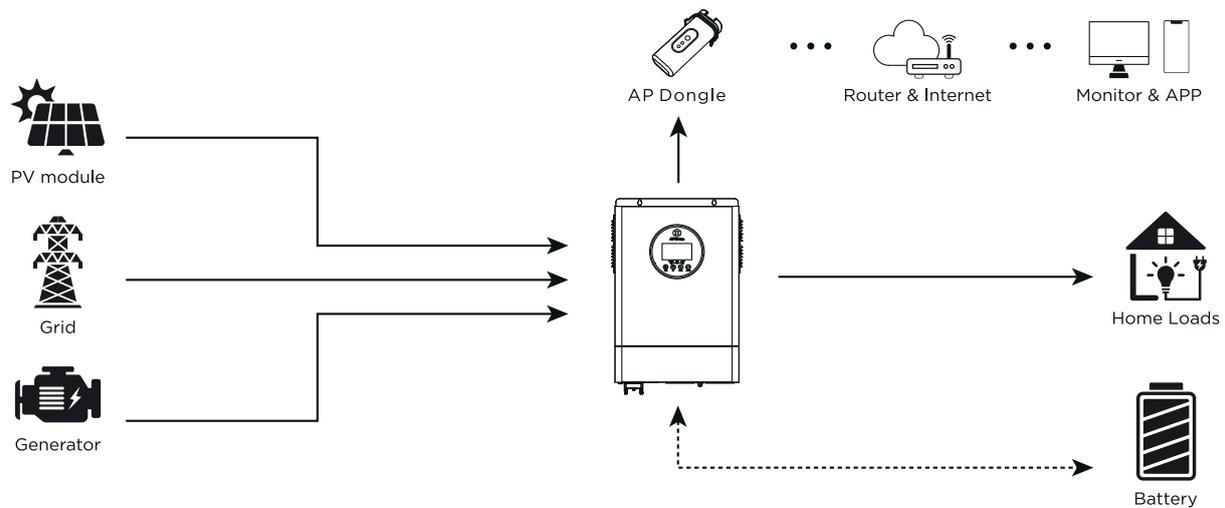


AHS-5-LV

Solar Battery Hybrid Controller

Your Family Energy Storage Solution

System Diagram



Features

Safety

- ✓ Low battery voltage input
- ✓ Reliable protection against short-circuit, overvoltage, undervoltage, overload, etc
- ✓ IP43 intelligent air-cooled design enhances system reliability and service life

Flexibility

- ✓ Compatible with 12V/24V/48V multi voltage input
- ✓ Compatible with lead-acid batteries and lithium batteries
- ✓ Two output modes: utility bypass and inverter output
- ✓ Easy-to-use LCD screen with keys for function adjustment
- ✓ Multiple working modes: The priorities of PV power, utility power, and battery using the LCD screen
- ✓ Support for battery-free operation mode

Smart

- ✓ DSP control, dual-loop technology, and pure sine-wave output
- ✓ UPS switching time ≤ 5 ms
- ✓ Low no-load loss in power saving mode
- ✓ Supports real-time monitoring via APP for intelligent and efficient energy management

Performance

- ✓ Rated power 5000VA
- ✓ Peak power up to 10000VA
- ✓ MPPT efficiency up to 99.9%
- ✓ PV to inverter maximum efficiency 96%
- ✓ Battery to inverter maximum efficiency 94%

Datasheet | Solar Battery Hybrid Controller AHS-5-LV

Model

AHS-5-LV

General Specifications

Dimensions W/H/D	362mm × 526mm × 141mm		
Weight	11.8kg		
Ingress Protection	IP43		
Operating Ambient Temperature Range	-10°C to 55°C		
Storage Temperature Range	-15°C to 60°C		
Relative Humidity	5% to 95%		
Cooling	Air-cooled by smart fans		
Communication Interface	RS485/CAN		
Safety and EMC Compliance	EN/IEC62109-1/-2; EN/IEC-6-1/-2/-3/-4; EN/IEC62920		

Battery Data

Battery Voltage Type	12V	24V	48V
Float Charging Voltage	13.5V	27V	54V
Overcharging Protection Voltage	15V	30V	60V
Battery Type	Lead-acid batteries / lithium batteries		
Charging Mode	Three-stage charging (lead-acid batteries); Default charge curve or BMS communication (lithium batteries)		
Max. DC Discharge Current	105A		
Max. Charge Current (from PV)	105A		
Max. Charge Current (from Grid)	105A		
Max. Charge Current	105A		

AC Output Data

Max. Output Apparent Power	5000VA, DC 12/24V derating
Peak Output Apparent Power	10000VA
Output Waveform	Pure sine wave
Nominal Output Voltage	120VAC (±5%)
Nominal Output Frequency	50Hz/60Hz
Peak Efficiency (PV to Inverter)	96%
Peak Efficiency (Battery to Inverter)	94%
Switching Time	5ms
Overload Protection	(102% < load < 125%) ± 10%: Reports an error and turns off the output 5 minutes later. (125% < load < 150%) ± 10%: Reports an error and turns off the output 10 seconds later. (Load > 150%) ± 10%: Reports an error and turns off the output 5 seconds later.

AC Input Data

Nominal Voltage	120VAC
Operating Voltage Range	90 to 140VAC
Nominal Frequency	50Hz/60Hz
Power Factor (Default/Adjustable)	> 0.99 (adjustable from 0.8 leading to 0.8 lagging)
Total Harmonic Distortion of Current	< 3%
Grid Connection	Single phase
Max. Bypass Overload Current	50 A

PV Input Data

Max. PV Input Power	6500W
Number of MPPTs	1
Max. Input Voltage	500VDC
MPPT Voltage Range	60 to 450VDC
Max. PV Input Current	22 A
MPPT Efficiency	99.9%

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Specifications subject to change without notice please ensure you are using the most recent update found at web : www.APsystems.com

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Building 2, No. 522, Yatai Road, Nanhu District, Jiaxing City, Zhejiang, China | 400-100-8470 | Email: info@APsystems.cn