

Overview

The HPS-AHL(BR) series is a high-frequency home battery backup with built-in lithium iron phosphate battery, featuring utility charging, oil generator charging, solar charging, utility output, inverter output, and energy management.. The device structure adopts a compartmentalized design with separate cooling channels and sensor components, providing superior protection. The series offers three models ranging from 1KW to 2.5KW, with a variety of DC output interfaces and different charging/discharging modes. Users can flexibly select the energy supply method according to their needs, achieving efficient energy utilization and high power supply reliability. It can be widely used in areas with limited or no electricity access.

Features

- Excellent dust-proof performance with separate compartment design
- Built-in LiFePO₄ lithium battery
- Intuitive display of battery SOC via 5-bar indicator lights
- Multiple DC output ports (5VDC/3A ports, 12VDC/2A ports, Type C ports)
- Large-sized LCD screen to monitor and modify system parameters
- Optional 4G or WiFi module to remote control the inverter/charger by the RS485 com. port
- AC input overload relay for disconnecting from the grid when the fault occurs
- Circuit breaker on PV input for equipment safety
- Circuit breaker on battery output for battery safety
- AC charging with PFC technology, high power factor for efficient energy consumption
- Bidirectional high-frequency transformer isolation topology
- Advanced MPPT technology: maximum tracking efficiency $\geq 99.5\%$
- EMC design on AC output to avoid interference with AC load
- Long-term continuous operation at full power
- Pure sine wave output
- Comprehensive electronic protection



Model	HPS1022-AHL0210(BR)	HPS1522-AHL0310(BR)	HPS2522-AHL0610(BR)
Utility Input			
Utility Rated Voltage	220VAC		
Recommended Utility Input Voltage	175V-285V		
Failure Voltage	290VAC		
Utility Frequency	60Hz		
Utility Maximum Work Current (Charging plus Bypass)	7A@220VAC	10A@220VAC	15A@220VAC
Switch Response Time	Utility to Inverter/ Inverter to Utility: ≤20ms		
AC Input Overload Relay	HAVE		
Inverter Output			
Inverter Rated Power (@25℃)	1000W	1500W	2500W
4-second Transient Surge Output Power	1800W	2700W	4500W
Inverter Output Voltage	220VAC±3%		
Inverter Frequency	60Hz±0.2%		
Output Voltage Waveform	Pure sine wave		
Output Voltage Harmonic Distortion Rate	≤3%		
Output Gradual Start	HAVE		
Solar Controller			
PV Maximum Input Withstand Voltage	95VDC		
Solar Controller Type	MPPT		
MPPT Maximum Efficiency	≥99.5%		
MPPT Voltage Range	24VDC ~ 76VDC		
MPPT Input Channels	1		
PV Maximum Charging Current	20A	30A	60A
Battery			
Battery Type	LFP8S2P	LFP8S3P	LFP8S1P
Battery Rated Capacity	40Ah	60Ah	100Ah
Cell Dimension	Diameter: 40.0+0.5/-0mm Height: 136.25±0.5mm	Diameter: 40.0+0.5/-0mm Height: 136.25±0.5mm	Length: 160.0±0.8mm Height: 118.5±0.5mm Width: 50.1±0.5mm
Battery Rated Voltage	25.6VDC		
Maximum Continuous Charging Current	1C		
Maximum Continuous Discharging Current	1.8C	1.8C	1C
Battery Work Voltage Range	21.0VDC~30.0VDC		
Battery Work Temperature Range	Discharging Mode: -20℃ ~ 50℃ Charging Mode: 0℃ ~ 50℃		
Cycle Times	2000 times		5000 times
DC Output			
12V DC Output (x2)	12V≐2A, Max. 24W/port, Total 48W		
USB-A Output (x2)	5V≐3A, Max. 15W/port, Total 30W		
USB-C Output (x1)	5V≐3A, Max. 15W		
USB-C Output (x1)	5/9/12/15V≐3A, 20V≐5A, Max. 100W		
DC Output Switch	HAVE		
Others			
Work Temperature Range	-20℃ ~ 50℃		
Enclosure	IP30		
Communication Method	Bluetooth, RS485 (WiFi optional)		
LCD	Monochrome LCD, English interface		
Warranty	Two years		
Dimension (Length x Width x Height)	385x307x345mm		427x325.4x368mm
Net Weight	20.0kg	24.0kg	37.0kg

