HP-AHP20A

INVERTER / CHARGER

Overview

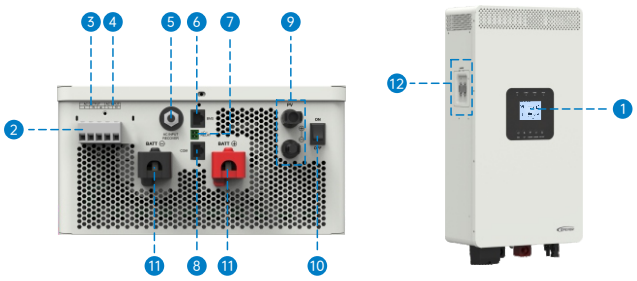
The HP-AHP20A series is a high-frequency inverter charger. It supports multiple charging options, including utility, diesel generator, and solar. It is designed for utility bypass, inverter output, and energy management. The advanced DSP chip, along with its control algorithm, ensures rapid response times, reliability, and high conversion efficiency. Customers can efficiently utilize energy by flexibly switching between solar and utility power using customized settings. This high-quality product provides a stable power supply and is suitable for hybrid power generation systems that combine solar, utility, and oil engine sources. It meets the application requirements for customers seeking costeffective residential power supply solutions.

Features

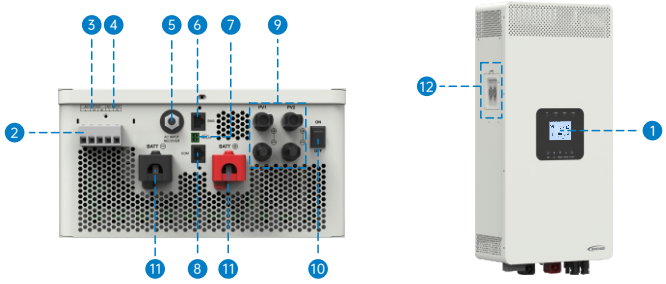
- Pure sine wave output
- Supports battery or non-battery modes
- PFC technology reduces the demand on the power grid capacity
- Advanced MPPT technology, with max. tracking efficiency higher than 99.5%
- Supports two PV inputs to improve PV utilization
- Supports charging from multiple types of generators
- Battery charging or discharging current limits are compatible with various types of batteries
- Adjustable maximum utility charging current for flexible configuration of utility charging power
- Large size LCD display for better status monitoring
- RS485 communication interface with optional 4G, WiFi, or TCP modules for remote monitoring
- Comprehensive electronic protections
- -20℃~+50℃ operating temperature range to meets more environment requirements
- AC output supports parallel operation, standard configuration of 12 units in parallel
- AC output parallel operation supports single-phase and three-phase settings
- With the function of historical data recording, storage capacity for 25,000 records (the interval time of 1~3600 seconds settable)

Appearance

• HP3522-AH1250P20A, HP3542-AH0650P20A, HP2022-AH0750P20A, HP2042-AH0450P20A



• HP2021-AH0730P20A, HP3521-AH1230P20A, HP3541-AH0630P20A, HP2041-AH0430P20A, HP6041-AH1130P20A, HP5542-AH1050P20A



1. LCD
2. Terminal cover
3. AC output port
4. AC input port
5. Utility over-current protector
6. BMS port (RJ45, with isolation design)
7. Dry contact interface
8. RS485 port (RJ45, with isolation design) 5VDC/200mA
9. PV terminals
10. Power switch
11. Battery terminals
12. Parallel connection interface

Specifications

Model	HP2021-AH0730P20A	HP2041-AH0430P20A	HP3521-AH1230P20A	HP3541-AH0630P20A	HP6041-AH1130P20A
Battery（DC）					
Battery Type	Lithium battery/Lead-acid battery				
Voltage Range	21.6-32.0VDC	43.2-60.0VDC	21.6-32.0VDC	43.2-60.0VDC	
Rated Voltage	24VDC	48VDC	24VDC	48VDC	51.2VDC
Max. Charging Current	70A	40A	120A	60A	110A
Max. Discharging Current	103A	52A	180A	90A	140A
PV Input（DC）					
Max. Input Power	3,000W		4,000W		8000W
Max. Input Voltage	300V				
Max. PV Input Current	15A+15A		20A+20A		30A+30A
Max. PV Short-Circuit Current	18A+18A		22A+22A		33A+33A
MPPT Voltage Range	65-240V				
Number of MPPTs	2				
Number of Strings per MPPT	1				
Utility Input					
Rated Input Power (Charging+Bypass)	3,050W		5,350W		8,680W
Max. Input Current	27.3A		45.5A		72.8A
Rated Input Voltage	110VAC/120VAC				
Input Voltage Range	80-140VAC				
Rated Input Frequency	45-65Hz				
Inverter Output					
Rated Power	2,000W		3,500W		6,000W
Transient Surge Output Power	4,000W (3S)		7,000W (3S)		8,500W (3S)
Rated Output Current	18.2A		31.9A		50.0A
Output Voltage Level	110/120VAC±3%				
Output Voltage Waveform	Pure Sine Wave				
Output Frequency Level	50Hz/60Hz±0.2%				
THDu	≤3%				
Load Power Factor	0.2-1				
Switch Time	Inverter to Utility: 10ms Utility to Inverter: 20ms				
Efficiency					
Max. Inverter Efficiency	92%	92%	93%	93%	94%
Max. Load Efficiency	88%	90%	89%	90%	92%
Environmental Parameters					
Operating Temperature	-20°C to 50°C（>30°C Derating）				
Storage Temperature	-25°C-60°C				
Relative Humidity	< 95%（N.C.）				
Altitude	4,000m（> 2,000m Derating）				
Ingress Protection	IP20				
Mechanical Parameters					
Dimensions (L × W × H)(mm)	654×291.4×163		679×291.4×163		761×361.4×179
Mounting Size (L × W)(mm)	617×200		642×200		704×200
Mounting Hole Size (L × W)(mm)	Φ9/Φ10				
Weight (kg)	14.6		16.9	16.5	20.5
Others					
No-load Loss	< 24W	< 28.8W	< 26.4W	< 28.8W	< 52.8W
Standby Loss	≤19.2W	< 24W	< 19.2W	≤24W	< 36W
Communication with BMS	RS485				
Communication with Portal	RS485				
Parallel Function	Yes, 12 Units in Standard, 16 Units at Most				
Display	LCD				
Protection	AC Overcurrent Protection / AC Overvoltage Protection / AC Undervoltage Protection / AC Overfrequency Protection AC Underfrequency Protection / AC Bypass Overload Protection / Battery Overvoltage Protection Battery Overdischarge Protection / Battery Overtemperature Protection / Lithium Battery Low Temperature Protection PV Input Reverse Polarity Protection / PV Current Limiting / Power Limiting Protection / PV Short Circuit Protection Device Overheating Protection / Load Output Short Circuit Protection / Inverter Output Overload Protection				

BEIJING EPSOLAR TECHNOLOGY CO., LTD.
+86-10-82894112
HUIZHOU EPEVER TECHNOLOGY CO., LTD.
+86-752-3889706
BEIJING EPSOLAR TECHNOLOGY CO., LTD. SHENZHEN BRANCH
+86-755-89236750