

Overview

The HP-AHP65C is a color LCD screen version of the high-frequency inverter charger with an IP65 protection rating. It integrates grid power/oil generator with solar charging, supporting grid bypass power supply, inverter output, and energy management. The AC output allows for easy parallel operation in single-phase or three-phase setups. The series employs advanced DSP control technology, ensuring high quality, stability, and reliability. Users can flexibly utilize solar or grid power, maximizing energy efficiency and system reliability through customizable settings. This series is suitable for solar, grid/oil generator hybrid power generation systems, meeting outdoor power supply requirements in harsh environments like salt spray and humidity. This product is suitable for solar, grid/oil generator hybrid power generation systems, it stands strong in challenging conditions like salt spray and humidity, providing a dependable outdoor power solution.

Features

- High IP65 protection rating, suitable for harsh outdoor environments: salt spray and humidity
- Pure sine wave output
- AC output supports single-phase/three-phase parallel operation of multiple units
- Expandable up to 12 times the system capacity
- Supports battery or non-battery mode
- Compatible with various battery types: lithium, gel, sealed, etc
- Equipped with BMS communication interface for safe charge and discharge control of lithium batteries
- PFC technology provides power factor, reducing grid capacity consumption
- Supports charging from various types of generators
- MPPT technology with a maximum tracking efficiency greater than 99.5%
- HP5542-AH1050P65A supports two PV inputs to improve PV utilization
- RS485 communication interface, optional 4G, WIFI modules for remote monitoring
- Historical Data Recording
 - * Storage Capacity: 25,000 entries
 - * Configurable Recording Intervals: 1-3600 seconds
 - * Auto Overwrite: Overwrites oldest data when full
- Comprehensive electronic protection functions to maximize system reliability
- Noise reduction: $\leq 45\text{dB}$
- $-20^{\circ}\text{C}\sim 55^{\circ}\text{C}$ operating temperature range to meet more environmental requirements



Model	HP5542-AH1050P65C
Utility input	
Utility Input Voltage	176VAC ~ 264VAC (Default) 90VAC ~ 280VAC (Configurable)
Utility Input Frequency	45Hz ~ 65Hz
Maximum Utility Charging Current	100A
Switch Response Time	Switch Response Time – Inverter to Utility: 10ms Switch Response Time – Utility to Inverter (when the load power is higher than 100W): 20ms
Inverter output	
Inverter Rated Power (@30°C)	5500W
3-second Transient Surge Output Power	8500W
Inverter Output Voltage	220/230VAC±3%
Inverter Frequency	50/60Hz±0.2%
Output Voltage Waveform	Pure Sine Wave
Load Power Factor	0.2–1(VA ≤ Rated output power)
THDu (Total Harmonic Voltage Distortion)	≤3% (48V resistive load)
Maximum Load Efficiency	91%
Maximum Inverter Efficiency	94%
Solar controller	
PV Maximum Open-circuit Voltage	500V (At minimum operating environment temperature) 440V (At 25°C)
MPPT Voltage Range	85V ~ 400V
Number of MPPTs	2
PV Maximum Input Current	Two ways, 2x15A
PV Maximum Input Power	2x3000W
PV Maximum Charging Current	100A
MPPT Maximum efficiency	≥99.5%
Battery	
Battery Rated Voltage	48VDC
Battery Work Voltage Range	43.2VDC ~ 64VDC
Battery Maximum Charging Current	100A
Others	
No-load Losses	≤1.2A
	Test condition: Utility, PV and Load are disconnected, AC output is ON, fan stops, @48V input
Standby Current	≤0.8A
	Test condition: Utility, PV and Load are disconnected, AC output is OFF, fan stops, @48V input
Work Temperature Range	-20°C to +55°C
Storage Temperature Range	-25°C ~ +60°C
Enclosure	IP65
Relative Humidity	< 100% (N.C.)
Altitude	<4000M
Mechanical parameters	
Dimension (Length x Width x Height)	545mm x 428mm x 248mm
Mounting Size (Length x Width)	350mm x 130mm
Mounting Hole Size	Φ10mm
Net Weight	25.4kg