

Overview

UPower-Hi, an upgrade hybrid inverter charger, supports utility charging, oil generator charging, solar charging, utility output, inverter output, and energy management. The DSP chip in the product with an advanced control algorithm brings high response speed and high conversion efficiency. In addition, this product adopts an industrial design to ensure high reliability and features multiple charging and output modes.

The new optimized MPPT charging technology fastly tracks the solar panels' max power point in any situation and obtains the maximum energy in real-time.

The AC to DC charging process adopts the advanced control algorithm to realize a full digital PFC and dual closed-loop control of voltage and current. As a result, the DC output charging voltage and current are continuously adjustable within a specific range.

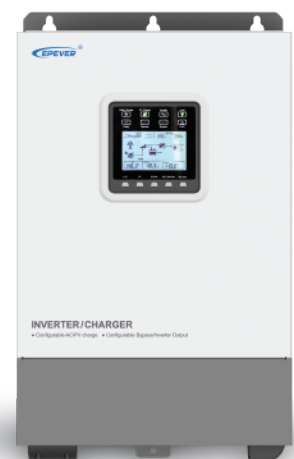
The DC to AC inverting process, based on a fully smart digital design, adopts advanced SPWM technology to get a pure sine wave output. The inverting process converts the DC power to AC power, suitable for household appliances, power tools, industrial equipment, audio systems, and other electronics.

The 4.2-inch LCD shows the operational status and full parameters.

To maximize solar energy utilization, users can choose energy sources according to actual needs and flexibly take the utility as a supplement. This inverter charger can increase the system's power supply guarantee rate, which is suitable for solar energy, utility/oil generator hybrid systems. It aims to provide users with high-quality, high-stability, and high-reliability electrical energy.

Features

- Full intelligent digital energy storage equipment
- Supports the battery mode or non-battery mode
- Non-battery mode: charging with solar (Main) and utility (Assist) simultaneously
- Surge and reverse connection protections to support the lithium battery system perfectly
- Advanced SPWM technology and pure sine wave output
- PFC technology achieves a high power factor of AC to DC charging and reduces grid capacity usage
- Full digital double closed-loop control
- High tracking efficiency of MPPT no less than 99.5%
- Three charging modes: Solar only, Solar priority, Utility & Solar
- Two AC output modes: Utility priority and Inverter priority
- Self-learning SOC display function
- Multiple LED indicators to dynamic display the status
- AC OUT button to control the AC output directly
- 4.2 inch LCD to monitor and modify system parameters
- Remote temperature compensation for batteries
- Optional WiFi or GPRS Remote control by the RS485 isolated com. port
- Optional BMS-Link port, taking the charging and discharging control from BMS
- Customized charging current and discharging limited current
- Supports cold start and soft start
- Comprehensive electronic protection features



Technical Specifications

Item	UP2000-HM6021	UP3000-HM10021	UP3000-HM5041	UP3000-HM8041
Rated battery voltage	24VDC		48VDC	
Battery input voltage	21.6~32VDC		43.2~64VDC	
Max.battery charging current	60A	100A	50A	80A
Inverter output				
Continuous output power	2000W	3000W	3000W	3000W
Max. surge power(3S)	4000W	6000W	6000W	6000W
Output voltage range	110VAC(-3%~+3%), 120VAC(-10%~+3%)			
Output frequency	50/60±0.2%			
Output wave	Pure Sine Wave			
Load power factor	0.2-1(Load power ≤ Continuous output power)			
Distortion THD	THD≤5%(Resistive load)			
80% rated output efficiency	89%	90%	91%	91%
Max. Rated output efficiency	88%	88%	90%	90%
Max. output efficiency	90%	92%	92%	92%
Utility charging				
Utility input voltage	88VAC~132VAC (Default), 80VAC~140VAC(Programmable)			
Utility input frequency	40~65Hz			
Max. utility charge current	60A	80A	40A	40A
Solar charging				
Max. PV open circuit voltage	250V, 220V			
MPPT voltage range	60~200V			
Max. PV input power	2000W	3000W	3000W	4000W
Max. PV charging power	1725W	2875W	2875W	4000W
Max. PV charging current	60A	100A	50A	80A
Equalize charging voltage	29.2V(AGM default)		58.4V(AGM default)	
Boost charging voltage	28.8V(AGM default)		57.6V(AGM default)	
Float charging voltage	27.6V(AGM default)		55.2V(AGM default)	
Low voltage disconnect voltage	21.6V(AGM default)		43.2V(AGM default)	
Tracking efficiency	≥99.5%			
Temp. compensate coefficient	-3mV/°C/2V(Default)			
General				
Surge current	50A	60A	56A	95A
Zero load consumption	<1.6A	<1.6A	<1.2A	<0.8A
	(without PV and utility connection, turn on the load output)			
Standby current	<1.2A	<1.0A	<0.7A	<0.6A
	(without PV and utility connection, turn off the load output)			
Dimension(H x W x D)	607.5x381.6x127mm	642.5x381.6x149mm	642.5x381.6x149mm	642.5x381.6x149mm
Net Weight	15kg	19kg	19kg	19kg
Environment temperature	-20°C~50°C			
Relative humidity	< 95% (N.C.)			
Enclosure	IP30			

Technical Specifications

Item	UP2000-HM6022	UP3000-HM10022	UP3000-HM5042	UP5000-HM8042
Rated battery voltage	24VDC		48VDC	
Battery input voltage	21.6~32VDC		43.2~64VDC	
Max. battery current charging	60A	100A	50A	80A
Inverter output				
Continuous power output	2000W	3000W	3000W	5000W
Max. surge power(3S)	4000W	6000W	6000W	8000W
Output voltage range	220VAC(-6%~+3%), 230VAC(-10%~+3%)			
Output frequency	50/60±0.2%			
Output wave	Pure Sine Wave			
Load power factor	0.2-1(Load power ≤ Continuous output power)			
Distortion THD	THD≤3%(Resistive load)			
80% rated efficiency output	92%	92%	92%	92%
Max. Rated efficiency output	91%	91%	90%	91%
Max. output efficiency	93%	93%	93%	93%
Utility charging				
Utility input voltage	176VAC~264VAC (Default), 90VAC~280VAC(Programmable)			
Utility input frequency	40~65Hz			
Max. Utility charge current	60A(When the Utility input voltage is 90VAC~180VAC, the Max.utility charge current is 30A)	80A(When the Utility input voltage is 90VAC~180VAC, the Max. utility charge current is 40A)	40A(When the Utility input voltage is 90VAC~180VAC, the Max. utility charge current is 20A)	60A(When the Utility input voltage is 90VAC~180VAC, the Max. utility charge current is 30A)
Solar charging				
Max. PV open circuit voltage	450V, 395V		500V, 440V	
MPPT voltage range	80~350V		120~400V	
Max. PV input power	2500W	4000W	4000W	4000W
Max. PV charging power	1725W	2875W	2875W	4000W
Max. PV charging current	60A	100A	50A	80A
Equalize charging voltage	29.2V(AGM default)		58.4V(AGM default)	
Boost charging voltage	28.8V(AGM default)		57.6V(AGM default)	
Float charging voltage	27.6V(AGM default)		55.2V(AGM default)	
Low voltage disconnect voltage	21.6V(AGM default)		43.2V(AGM default)	
Tracking efficiency	≥99.5%			
Temp. compensate coefficient	-3mV/°C/2V(Default)			
General				
Surge current	50A	60A	56A	95A
Zero load consumption	<1.8A		<1.2A	
	(without PV and utility connection, turn on the load output)			
Standby current	<1.2A		<0.7A	
	(without PV and utility connection, turn off the load output)			
Dimension(H x W x D)	607.5x381.6x127mm	642.5x381.6x149mm	607.5x381.6x149mm	642.5x381.6x149mm
Net Weight	15kg	19kg	18kg	19kg
Environment temperature	-20°C~50°C			
Relative humidity	< 95% (N.C.)			
Enclosure	IP30			