Introduction

Pure sine wave inverter with built-in MPPT controller <u>I-P-HPC-Series</u> is a module design. It has the advantages of high conversion efficiency, low power consumption and strong load-carrying ability. With intelligent control, users can set charging mode, (Utility as complementary power) AC first mode or DC first mode, timing inversion mode and timing utility mode, on/off mode. <u>It is one of advanced hybrid inverter & controller in the world.</u>





I-P-HPC-Series System



I-P-HPC-Series Inverter+Solar Controller

Application

- 1.Off-grid solar power system
- 2. Solar and utility complementary power system



Feature

- 1.Easy to install.To configure a solar system, users just need to connect it with solar panels and batteries
- 2.CPU management, intelligent control, modular design, LCD display
- 3.Built-in MPPT controller, high charging efficiency
- 4.Low power consumption, high conversion efficiency
- 5.Intellectual multi-function, it's convenient for users to make full use of solar energy in different situation
- 6. External battery connection, it's convenient for users to expand back-up power time
- 7.Strong load-carrying ability, low failure rate, easy to maintenance and long service life (under proper operation, it can last at least 5 years)
- 8.Perfect protection:low voltage protection, high voltage protection, over temperature protection, short-circuit protection, overload protection
- 9.CE / EMC / LVD/ RoHS Approvals
- 10.Two years warranty, life-long technical support

Data sheet

Rated Output Power	Parameter Model			1000W	1500W	2000W	3000W	4000W	5000W		
Peak Power 2000W 3000W 4000W 6000W 8000W 10000W 10											
Battery (Lead-acid battery] 24V 24V/48V(optional) 48V											
Lead-aid battery	Pattoni					40000	100000		100000		
Charging Parameter				24V	24V/48V(optional) 48V						
PV charge PV c											
Voltage Volt	DV charge										
Voltage	Charge Mode[setting[
Current 20A 25A 30A 40A		Voltage			24\//48\/			48V			
Max PV Input Voltage						304	40Δ		404		
MPT Solar Controller Max PV Input Power Solaw Solaw 24V: 710W 24V: 852W 24V: 1136 W 272W 2272W 2272W 2272W					2571	P 0/1	1.071	1071	1071		
Controller Max PV Input Power \$68W 24V: 710W 48V1420W 48V: 1704W 48V: 1704W 48V: 1704W 48V: 272W 2272W 227E 22W 227E 22W 22Y 22W 22Y 22W 22Y 22W 22Y 22W 22Y 22W	MPPT Solar										
Max PV Input Power S68W		r charge Emerency		3370			D4V-1136				
Max PV input Power SoBW 48V1420W 48V: 1704W 48V: 2272W		L		L	24V: 710W	24V: 852W	ha/				
May 1		Max PV Input Power		568W				—2272W	2272W		
Charge Mode 3-Stage Charging					48V1420W	48V: 1704W					
Charge Mode 3-Stage Charging	DESIGN.	AC Charge Current		0~15A	•	<u> </u>	1	1	•		
AC Output Voltage prequency SOHz±0.5 or 60Hz±0.5 or 60Hz±0.5 (optional) Output wave type Overload ability Power Consumption (under normal working mode) Power Consumption (under sleep mode) 1-6W Inverter Conversion Efficiency B2Ve+3% or 240V±3% or 100V±3% or 100V±3% or 110V±3% or 110V±3% or 110V±3% or 110V±3% or 100V±3% or 100V±3	Utility										
AC Output Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Volt	Inversion parameter										
AC Output Frequency Freque	AC Output	Valtage	220V±3% or	230V±3 or 240V±3% or 100V±3%							
Output wave type Pure sine wave output, Total Harmonic Distortion THD≤3 Overload ability >120% 1 min, >130% 10s Power Consumption (under normal working mode) 0.4A 24V: 0.5A 24V: 0.7A 24V: 0.7A 0.6A 0.65A Power Consumption (under sleep mode) 1-6W 48V: 0.4A 48V: 0.45A 48V: 0.5A 0.6A 0.65A Inverter Conversion Efficiency 85%~92% 48V: 0.4A 48V: 0.4A 48V: 0.4A 48V: 0.5A 0.6A 0.6A		voitage									
Overload ability >120% 1 min, >130% 10s Power Consumption (under normal working mode) 0.4A 24V: 0.5A 24V: 0.7A 24V: 0.7A 0.6A 0.65A Power Consumption (under sleep mode) 1-6W 48V: 0.4A 48V: 0.45A 48V: 0.5A 0.6A 0.65A Inverter Conversion Efficiency 85%-92% 48V: 0.4A 4		Frequency									
Power Consumption 0.4A 24V: 0.5A 24V: 0.7A 24V: 0.7A 0.6A 0.65A (under normal working mode) 1.6W 25W 25W 25W 25W 25W 25W 25W 25W 25W 25	Output wave type			e output, Total Harmonic Distortion THD≤3							
(under normal working mode) 0.4A 48V: 0.4A 48V: 0.45A 48V: 0.5A 0.6A 0.65A Power Consumption (under sleep mode) Inverter Conversion Efficiency 1-6W Utility Mode 85%~92%			>120% 1 mir		>130% 10s						
May: 0.4A								0.64	0.654		
(under sleep mode) 1-0W Inverter Conversion Efficiency 85%-92% Utility Mode	(under normal working mode)		4	8V: 0.4A 4	8V: 0.45A 48V	: 0.5A	0.04	0.03A			
(under sleep mode) Inverter Conversion Efficiency 85%~92% Utility Mode											
Utility Mode											
		Voltage									
Frequency Ine same as utility's frequency											
AC Output Voltage 220V±5% or 110V+5%[optional[]	AC Output										
' Frequency The same as utility's frequency	·	Frequency	The same as utility's frequency								
			,>130% 10s								
(AC first or DC first) priority	(AC first or DC first)	priority									

UPS Output[]setting[]		AC first, DC standby									
		DC first, AC standby									
Switch Time		S 5ms (AC to DC / DC to ACI)									
		Set by users									
[setting[]		Timed on / off AC output automatically									
General Parameter		·									
Display	Display Mode	LCD+LED									
	Display Information	Input voltage, output voltage, output frequency, battery capacity, load condition, status Information									
Protection		Overload, short-circuit, high-voltage input, low-voltage input, overheat									
Environment	Temperature	-10°C[50°C									
	humidity	10% <u>0</u> 90%									
	Altitude	≤4000m									
Size W×D×H(mm)		438*208*413		450*246*468							
Packing Size W×D×H(mm)		520*310*460		540*300*518							
Net Weight (kg)		15	17	19	25	34	35				
Gross Weight (kg)		16	18	20	27	40	41				

Function

- 1. Charging function
- 1.1 PV only mode: when PV and utility are both connected to the inverter, only the PV will charge the battery while utility will not charge the battery.
- 1.2 PV+AC hybrid mode: when PV and utility are both connected to the inverter, both PV and utility will charge the battery.
- 2. Utility as complementary power UPS function
- 2.1AC first, DC standby UPS mode

When utility and battery are connected to the inverter, utility will supply power to the loads preferentially. When utility is cut off, the battery will automatically continue to supply power to the loads.

Steps are as follows:

- Step 1: When utility power is available, it will drive the loads directly after voltage being stabilized and charge batteries at the same time.
- Step 2: When utility power is cut off suddenly, the inverter will convert DC to AC automatically to ensure uninterrupted power supply within 5ms.
- Step 3: When utility power is available again, it will automatically transfer to utility supplying power to loads and charge batteries at the same time.
- 2.2DC first, AC standby UPS mode:

When utility and battery are connected to the inverter, battery will supply power to the loads prior to utility. When battery capacity is not enough, utility will continue to supply power automatically.

Steps are as follows:

- Step 1: When battery has enough power, it will drive the loads directly via power inverter
- Step 2: When battery does not have enough power, it will automatically transfer to utility supplying power to the loads
- Step 3: After the battery is fully charged (e.g. by solar or wind charge controller), it will automatically transfer to battery supplying power to the loads.
- 3.Timing function
- 3.1 On/Off mode: Users can set specific time to turn on/off the output of the inverter.
- 3.2 Working mode: Battery or utility switchable mode. Users can set specific time when to use battery or utility supplying power (suitable for areas where electric fee is charged differently in different period)
- 4.Recording/checking function
- 4.1 Inverter fault checking: Users can check the inverter fault information

4.2 Discharge time checking: Users can check the discharge time of the battery

LDC display



