

Introduction

[I-Panda](#) Pure sine wave inverter with built-in MPPT controller [I-P-HPC-Series](#) 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. [It is one of advanced hybrid inverter & controller in the world.](#)

I-P-HPC-Series System





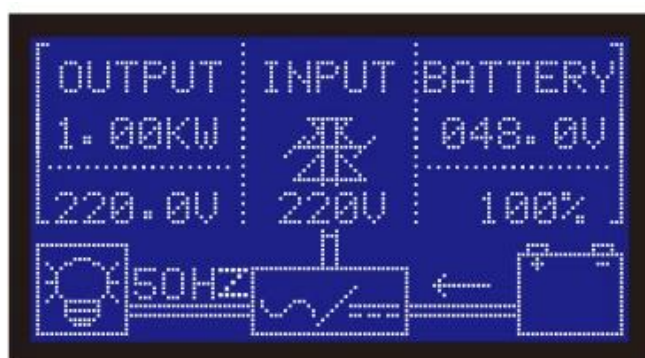


Application

1. Off-grid solar power system
2. [Solar and utility complementary power system](#)



LDC display



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

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

2.1 AC 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.

2.2 DC 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

Parameter

Parameter	Model	1000W	1500W	2000W	3000W	4000W	5000W
Rated Output Power		1000W	1500W	2000W	3000W	4000W	5000W
Peak Power		2000W	3000W	4000W	6000W	8000W	10000W
Battery (Lead-acid battery)		24V	24V/48V(optional)			48V	
Charging Parameter							
Charge Mode[setting]		PV charge PV charge + utility charge					

MPPT Solar Controller	Voltage	24V	24V/48V	48V
	Current	20A	25A	30A
	Max PV Input Voltage	100V	30A	40A
	PV Charge Efficiency	95%~99%		
	Max PV Input Power	568W	24V: 710W 48V1420W	24V: 852W 48V: 1704W
Utility	AC Charge Current	0~15A	24V:1136W 48V: 2272W	2272W
	Charge Mode	3-Stage Charging		
Inversion parameter				
AC Output	Voltage	220V±3% or 230V±3 or 240V±3% or 100V±3% or 110V±3% (optional)		
	Frequency	50Hz±0.5 or 60Hz±0.5 (optional)		
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 48V: 0.4A	24V: 0.7A 48V: 0.45A	24V: 0.7A 48V: 0.5A
Power Consumption (under sleep mode)	1-6W			
Inverter Conversion Efficiency	85%~92%			
Utility Mode				
AC Input	Voltage	220V±35% or 110V+35%[optional]		
	Frequency	The same as utility's frequency		
AC Output	Voltage	220V±5% or 110V+5%[optional]		
	Frequency	The same as utility's frequency		
Overload Ability	>120% 1 min,>130% 10s			
(AC first or DC first) priority				
UPS Output[setting]	AC first, DC standby DC first, AC standby			
Switch Time	<5ms [AC to DC / DC to AC]			
Power On [setting]	Set by users 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℃~50℃		
	humidity	10%~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
Gross Weight (kg)	16	18	20	27
				34
				40
				41