

Hybrid Inverter with MPPT Solar Controller



Hybrid Inverter with Charger and MPPT Solar charge controller

1. System Introduction

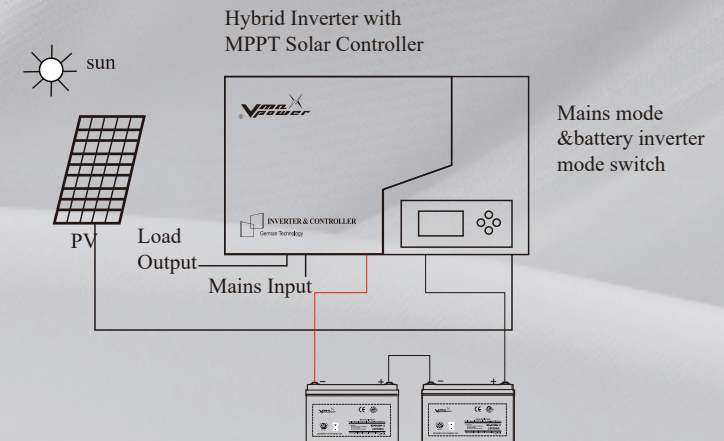
Hybrid Inverter with Charger and MPPT Solar charge controller system is a set of battery charging and discharging control, PV mains switch control and inverter control in one multifit functional integrated system, mainly including PV array, grid, battery, hybrid off-grid inverter and the AC load, PV array absorption of solar radiation and translate into electrical energy to provide power for the entire system, utility power switch over and Inverting control function, also could converting DC power from battery to supply power for AC loads. System Priority mode is PV mode. PV controller and Grid charger achieves the intelligent battery-charging control. The inverter inverts the DC to AC for the load power supplying; and automatic control the start-stop of Grid charger if needed. the best to use the solar energy and the continuous demand of electricity. It's the preferred solution to solve the public grid or less developed areas residents daily electricity.

2. Internal structure

Hybrid Inverter including PV Charger, Grid Charger, Inverter and Controller, using a common DC Bus mode, as the output of Battery, PV Charger, Grid Charger and Inverter merge into DC Bus. Meanwhile, DC Bus is battery's charging current path, and PV charging is priority than Grid.

Product Features

- Independent patent technology MPPT control algorithm, Max MPPT tracking efficiency $\geq 99\%$
- Modular design, high power density;
- With high frequency isolation method, significantly reduce product dimensions and weight;
- High conversion efficiency, low temperature rise, low noise;
- With independent patent technology to run and control automatically;
- Complets system protection mechanism, and high reliability;
- Intelligent air cooling design, Effective solution to the system cooling, improve the ffficiency of the system;
- Key parts mainly adopt international well-known brands, ensure security and reliability;
- Well user experience, user-friendly man-machine interface, easy to operate;
- Support RS485 communication, remote monitoring;
- Wide array input voltage range and power input voltage range;
- Feature-rich, stable and reliable, with high cost performance.



SUNINVM MPPT series

MULTIFIT Technical Parameters



Type (unit)	SuninvM-500	SuninvM-1000	SuninvM-1500	SuninvM-2000	SuninvM-3000	SuninvM-4000	SuninvM-5000	SuninvM-8000	SuninvM-10000	
Rated power	500W	1000W	1500W	2000W	3000W	4000W	5000W	8000W	10000W	
PV Adaptation Models	The whole series can offer optional PV charging									
PWM Controller (Optional)	12V40A	12V60A	24V50A	24V60A	48V60A	48V60A	48V80A	48V100A	48V100A	
PWM PV Input Range	16-50V	16-50V	30-50V	30-50V	60-100V	60-100V	60-100V	60-100V	60-100V	
MPPT Controller	•	•	•	24V30A	48V 60A	48V 60A	48V 60A	48V 60A	48V 60A	
MPPT Voltage Input Range					MPPT: 50 - 150V					
Input	Voltage	AC165-275V/AC85-135V								
	Frequency	50Hz/60Hz								
Output	Voltage	220/230/240V/110/115/120V								
	Frequency	50HZ-60HZ (Optional)								
	Wave	Sine Wave								
	Distortion factor	<3%								
	Efficiency	>85%								
Battery	Type	Optional								
	Rated Voltage	DC12V	DC24V				DC48V			
	Charging Current	0-30A Optional								
Protection	Over temperature, overload, short circuit, battery with low voltage, battery with high voltage, AC input high voltage/low voltage protection									
Working Model	Normal and Energy Saving									
Transform Time	<10ms									
Load Capacity	100%-120% 30s protection, 125%-140% 15s protection, > 150% 5s protection									
Operating Environment	Temperature	0-50°C								
	Humidity	10%-90% Non-condensing								

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