



UPower Series Inverter Charger

Product models

UP1000-M3212/UP1000-M3222

UP1500-M3222/UP2000-M3322

UP3000-M3322/UP3000-M2142

UP3000-M6142/UP3000-M6322

UP5000-M6342/UP5000-M8342

UP5000-M10342

The UPower series is a new type of the inverter/charger combining with solar & utility charging and AC output, which adopts a multi-core processor design and advanced MPPT control algorithm, and has the features of high response speed, high reliability and high industrialization standard. It offers four charging modes including Solar priority, Utility priority, Solar and Utility & Solar; two output modes for Battery and Utility, meeting the various application demands.

The up-to-date optimized MPPT tracking technology is adopted for the PV charging modules. It can quickly track the maximum power point of the PV array in any environment and acquire the maximum energy of solar panel in real time;

The advanced control algorithm is adopted for AC-DC charging modules that realize fully digitalized double closed-loop control for voltage and current, with high control precision, small volume. The input range of AC voltage is wide, the output DC charging voltage/current is continuously adjustable in a certain range, and the complete input/output protection functions can offer stable and reliable charging and protection for the battery.

The DC-AC inverter modules are based on full digital and intelligent design. It adopts the advanced SPWM technology, outputs the pure sine wave and converts 24/48VDC to 220/230VAC suitable for AC loads of household appliances, electric tools, commercial units, electronic audio and video devices etc.

The product adopts 4.2 inch LCD display design, which real-time displays the operational data and running state of the system. The comprehensive electronic protection function guarantees more safe and more stable operation of the system.

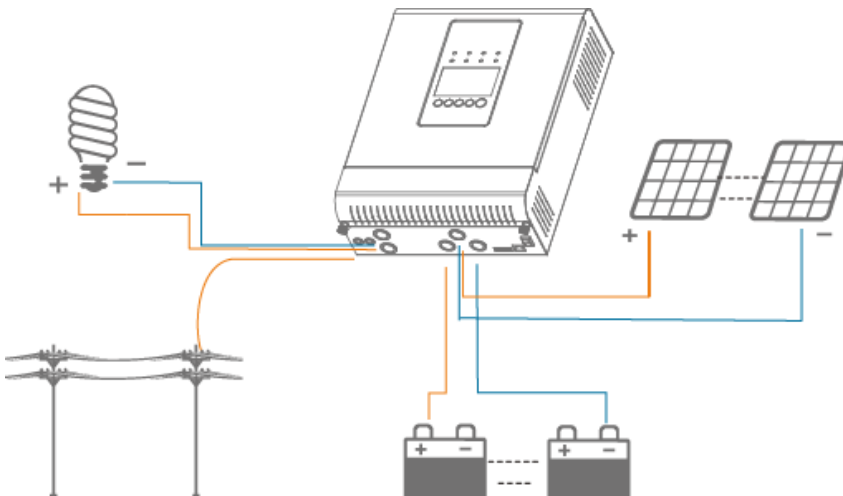
Product Features

- Adoption of the advanced SPWM technology, with pure sine wave output
- Fully digitalized voltage and current double closed-loop control
- Advanced MPPT technology, with efficiency no less than 99.5%.
- Four charging mode: Solar priority, Utility priority, Utility & solar and Solar only
- Two output mode: Battery and Utility
- LCD design that enables dynamic display of system running data and operating state
- Provided with common interface and advanced interface
- Multiple LED indicators that instantly indicate the operating state of the system
- 2P circuit breaker provided at the utility input end
- Independent control of AC output by AC OUT button
- Battery temperature compensation function.
- Extensive Electronic protection

Protection

- PV limit Current
- PV short circuit
- PV Reverse Polarity
- Night Reverse Charging
- Load output Short Circuit
- Load output Overload
- Device overheating
- Utility input overvoltage
- Utility input under voltage
- Battery overvoltage
- Battery Over Discharge

Connection schemat



Technical specifications

Item	UP1000-M3212	UP1000-M3222	UP1500-M3222	UP2000-M3322	UP3000-M3322	UP3000-M6322
System battery voltage	12VDC	24VDC				
Battery input voltage range	10.8~16VDC	21.6~32VDC				
Inverter output						
Continuous output power	800W	800W	1200W	1600W	2400W	2400W
Output power (15min.)	1000W	1000W	1500W	2000W	3000W	3000W
Overload power(5s)	1600W	1600W	2400W	3200W	4800W	4800W
Max. surge power	2000W	2000W	3000W	4000W	6000W	6000W
Output voltage range	220VAC±3%,230VAC(-7%~+3%)					
Output frequency	50Hz/60Hz					
Output wave	Pure Sine Wave					
Distortion THD	≤3%(12V or 24V resistive load)					
Inverter efficiency	91%	94%	95%	95%	95%	95%
Transfer time	20mS					
Utility input						
Utility input voltage range	160VAC~280VAC(Working voltage range)					
	170VAC~270VAC(Utility starting voltage range)					
Max. utility charge current	20A	20A	20A	30A	30A	30A
Solar charging						
Max. PV open circuit voltage	60V★	100V★				150V★
	46V◆	92V◆				138V◆
Max. PV input power	390W	780W	780W	780W	780W	1500W
Max. PV charging current	30A	30A	30A	30A	30A	60A
Equalization voltage	14.6V	29.2V				
Boost voltage	14.4V	28.8V				
Float voltage	13.8V	27.6V				
Tracking efficiency	≤99.5%					
Charging conversion efficiency	≤98%					
Temperature compensate coefficient	-3mV/°C/2V (Default)					
Others						
No load consumption	≤1.2A	≤0.6A	≤0.6A	≤0.8A	≤0.8A	≤0.8A
Enclosure	IP30					
Relative humidity	< 95% (N.C.)					
Working environment temperature	-20°C~50°C (100% input and output)					
Mechanical Parameters						
Dimension	386×300×126mm			444×300×126mm		518×310×168mm
Mounting dimension	230mm					
Mounting hole size	Φ8mm					
Weight	7.3kg	7.3kg	7.4kg	8.5kg	9.2kg	14.9kg

★At minimum operating environment temperature

◆At 25°C environment temperature

Item	UP3000-M2142	UP3000-M6142	UP5000-M6342	UP5000-M8342	UP5000-M10342
System battery voltage	48VDC				
Battery input voltage range	43.2~64VDC				
Inverter output					
Continuous output power	2400W	2400W	4000W	4000W	4000W
Output power (15min.)	3000W	3000W	5000W	5000W	5000W
Overload power(5s)	4800W	4800W	8000W	8000W	8000W
Max. surge power	6000W	6000W	10000W	10000W	10000W
Output voltage range	220VAC±3%,230VAC(-7%~+3%)				
Output frequency	50Hz/60Hz				
Output wave	Pure Sine Wave				
Distortion THD	≤3%(24V or 48V resistive load)				
Inverter efficiency	95%				
Transfer time	20mS				
Utility input					
Utility input voltage range	160VAC~280VAC(Working voltage range)				
	170VAC~270VAC(Utility starting voltage range)				
Max. utility charge current	15A	15A	30A	30A	30A
Solar charging					
Max. PV open circuit voltage	150V★			200V★	
	138V◆			180V◆	
Max. PV input power	1040W	3000W	3000W	4000W	5000W
Max. PV charging current	20A	60A	60A	80A	100A
Equalization voltage	58.4V				
Boost voltage	57.6V				
Float voltage	55.2V				
Tracking efficiency	≤99.5%				
Charging conversion efficiency	≤98%				
Temperature compensate coefficient	-3mV/°C/2V (Default)				
Others					
No load consumption	≤0.6A	≤0.6A	≤0.8A	≤0.8A	≤0.8A
Enclosure	IP30				
Relative humidity	< 95% (N.C.)				
Working environment temperature	-20°C~50°C (100% input and output)				
Mechanical Parameters					
Dimension	444×300×126mm	518×310×168mm	614×315×178mm		
Mounting dimension	230mm				
Mounting hole size	Φ8mm				
Weight	7.3kg	14.7kg	16.6kg	17.5kg	17.8kg

★At minimum operating environment temperature

◆At 25°C environment temperature