Tb Plus®

MULTIFUNCTIONAL INVERTER

www.tbplusenergy.com

LEGAL GUARANTEES

In accordance with Law 1480 of 2011 Consumer Statute and Decree 735 of 2013 Legal Guarantee:

- To request a guarantee, the customer is obliged to report the damage to the product, make it available to the company at the guarantee service point at AV CL 80 69-70 Unit 1C, and indicate the invoice number to determine your purchase date.
- The delivery of the repaired product will be delivered to the customer at the warranty service point, unless the customer requests to send it to a different destination, in which case the customer must assume the cost of freight.
- In any case, when a product repair guarantee is denied or approved, the respective written report must be issued supporting the evidence that justifies the decision.
- In no case will Tb Plus Energy proceed with the replacement of the product given under warranty since, if the repair does not proceed, a credit note will be issued which covers the acquisition of another new product or service or the return of the money paid.
- If the failure repeats once the product has been repaired, only the credit note applies which covers the acquisition of another new product or service or the return of the money paid.
- When the customer opts for a refund of the money, it will be for the amount of the sale price. For this purpose, they must send a communication signed by the legal representative, which indicates the bank details to make the return, the which will be effective within fifteen (15) business days after receipt of the return request.
- The repair of the product will be carried out within 30 business days following the claim, which is carried out by filling out the GP-F-018 Warranty Form, which is completed in the PQRF Guarantees tab on the WEB page www. tbplusenergy.com or at the following link:

  https://forms.office.com/Pages/ResponsePage.aspx?id=K987JK0Nuke_1n30RF9URwiKWAfZovhDrWEVYGmhK95UOVZYUFBWMUpaQVZBM0hIS0RKUjdLSkdIWS4u:

- Once the guarantee form has been completed, the client has 15 days to make it available at the guarantee service point.
- The product manuals in which proper use, installation instructions and periods covered by the warranty are reported are found in the PQRF Product Manuals tab on the website www.tbplusenergy.com.

TECHNICAL SPECIFICATIONS

Product description

UPower-Hi series is an inverter charger that supports various management modes of power in solar charging/utility/generator and power supply utility/inverter for AC loads. To maximize energy utilization solar, users can choose energy sources according to actual needs and take the utility as a complement. This inverter charger can increase the rate of guarantee of system power supply, which is suitable for hybrid systems solar energy, utilities/oil generators. Its objective is to provide users high quality electrical energy, high stability and high reliability.

Main properties

- Support battery mode or battery-free mode.
- Surge protections and reverse connection to perfectly support the lithium battery system.
- Three charging modes: solar only, solar priority, utility and solar.
- Two AC output modes: utility priority and inverter priority.
- High tracking efficiency of MPPT no less than 99.5%.
- PFC technology achieves high AC to DC charging power factor and reduces usage of the electrical grid capacity.
- Advanced SPWM technology and pure sine wave output.
- Configurable battery charging current and discharging current.
- Configurable mains charging current.
- Self-learning SOC function.
- 4.2-inch LCD to monitor and modify system parameters.
- Optional WiFi or GPRS remote control via isolated RS485 communication port.
- BMS-Link port and optional BMS-Link communication protocol module.

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Model	UP2000-HM6021	UP3000-HM5041	UP2000-HM6022	UP3000-HM5042	UP3000-HM10022	UP5000-HM8042
Nominal battery voltage	24VDC	48VDC	24VDC	48VDC	24VDC	48VDC
Battery input voltage	21.6~32VDC	43.2~64VDC	21.6~32VDC	43.2~64VDC	21.6~32VDC	43.2~64VDC
Max. battery charging current	60A	50A	60A	50A	100A	80A
Inverter output						
Continuous output power	2000W	3000W	2000W	3000W	3000W	5000W
Max. surge	4000W	6000W	4000W	6000W	6000W	8000W
Output voltage range	110VAC(-3%~+3%); 120VAC(-10%~+3%)	110VAC(-3%~+3%); 120VAC(-10%~+3%)	220VAC(-6%~+3%); 230VAC(-10%~+3%)	220VAC(-6%~+3%); 230VAC(-10%~+3%)	220VAC(-6%~+3%); 230VAC(-10%~+3%)	220VAC(-6%~+3%); 230VAC(-10%~+3%)
Output frequency range	50/60Hz±0.2%					
Output wave	Pure sine wave					
Load power factor	0.2-1(VA load ≤ Continuous output power)					
THD Distortion	THD≤5% (Resistant load)	THD≤5% (Resistant load)	THD≤3% (Resistant load)	THD≤3% (Resistant load)	THD≤3% (Resistant load)	THD≤3% (Resistant load)
80% rated output efficiency	89%	91%	92%	92%	92%	92%
Max. rated output efficiency	88%	90%	91%	90%	91%	91%
Max. output efficiency	90%	92%	93%	93%	93%	93%
Utility charging						
Utility input voltage	88VAC~132VAC (Default); 80VAC~140VAC (Programmable)	88VAC~132VAC (Default); 80VAC~140VAC (Programmable)	176VAC~264VAC (Default); 90VAC~280VAC (Programmable)	176VAC~264VAC (Default); 90VAC~280VAC (Programmable)	176VAC~264VAC (Default); 90VAC~280VAC (Programmable)	176VAC~264VAC (Default); 90VAC~280VAC (Programmable)
Utility input frequency	40~65Hz					
Max. utility charging current	60A	40A	60A	40A	80A	60A
Solar charging						
Max. open circuit voltage photovoltaic	250V(At temperature minimum 220V(25°C)	250V(At temperature minimum 220V(25°C)	450V(At temperature minimum 395V(25°C)	450V(At temperature minimum 395V(25°C)	450V(At temperature minimum 395V(25°C)	500V(At temperature minimum 440V(25°C)
MPPT voltage range	60~200V	60~200V	80~350V	80~350V	80~350V	120~400V
Max. Photovoltaic input power	2000W	3000W	2500W	4000W	4000W	4000W
Max. photovoltaic charging power	1725W	2875W	1725W	2875W	2875W	4000W
Max. photovoltaic charging current	60A	50A	60A	50A	100A	80A
Match charging voltage	29.2V(Default AGM)	58.4V(Default AGM)	29.2V(Default AGM)	58.4V(Default AGM)	29.2V(Default AGM)	58.4V(Default AGM)
Increase charging voltage	28.8V(Default AGM)	57.6V(Default AGM)	28.8V(Default AGM)	57.6V(Default AGM)	28.8V(Default AGM)	57.6V(Default AGM)
Floating charge voltage	27.6V(Default AGM)	55.2V(Default AGM)	27.6V(Default AGM)	55.2V(Default AGM)	27.6V(Default AGM)	55.2V(Default AGM)
Low Voltage Disconnect Voltage	21.6V(Default AGM)	43.2V(Default AGM)	21.6V(Default AGM)	43.2V(Default AGM)	21.6V(Default AGM)	43.2V(Default AGM)
Efficiency Tracking	≥99.5%					
Compensation coefficient temperature	-3mV/°C/2V (Default)					
General						
Overcurrent	50A	56A	50A	56A	60A	95A
Zero load consumption	<1.6A	<1.2A	<1.8A	<1.2A	<1.8A	<1.2A
	(without PV and utility connection, turn on charging output)					
Standby current	<1.2A	<0.7A	<1.2A	<0.7A	<1.2A	<0.7A
	(without PV and utility connection, turn on charging output)					
Dimension(HxWxD)	607.5x381.6x127mm	642.5x381.6x149mm	607.5x381.6x127mm	607.5x381.6x149mm	642.5x381.6x149mm	642.5x381.6x149mm
Net weight	15kg	19kg	15kg	18kg	19kg	19kg
Temperature range functioning	`-20°C~50°C (power reduction above 30°C)					
RH	< 95%(N.C.)					
For interiors	IP30					

WARRANTY CONDITIONS

Tb Plus Energy warrants that each product is free from defects in materials and workmanship manufacturing, and offers a guarantee for a period of **12 months** from the acquisition of the product.

RECOMMENDATIONS

- Check input voltage to connect.
- Check the connections.
- Install in a place where there are no environmental factors that can short out the equipment (Humidity, direct sun, fauna).
- Perform preventive maintenance.
- Avoid blows.
- Install under certified professional recommendation.

Tb Plus®

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