TTNergy

Hybrid Solar Inverter

PLUS PV5000-24 S4.0

Datasheet

Built-in 100A
Solar Charger

Wide MPPT
Range 40-500V

BMS

Support Lithium/
Lead-acid Battery

Lithium Battery
Activation

High PV input power

Work Without
Battery

1.Information

This datasheet is valid for the following machine:

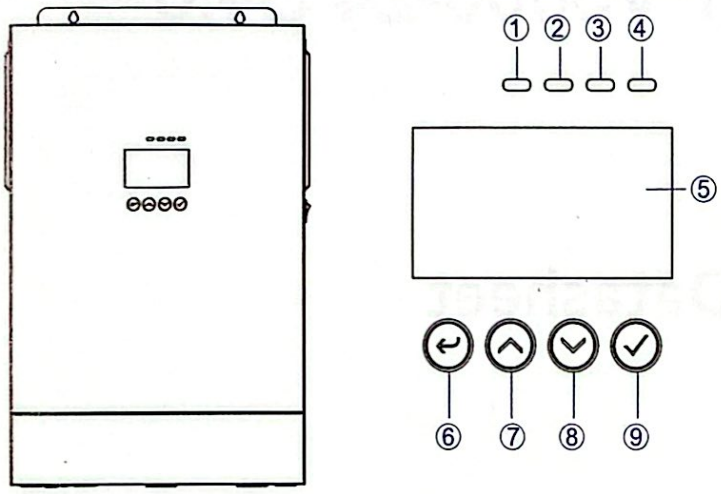
-4000W inverter

2.Introduction

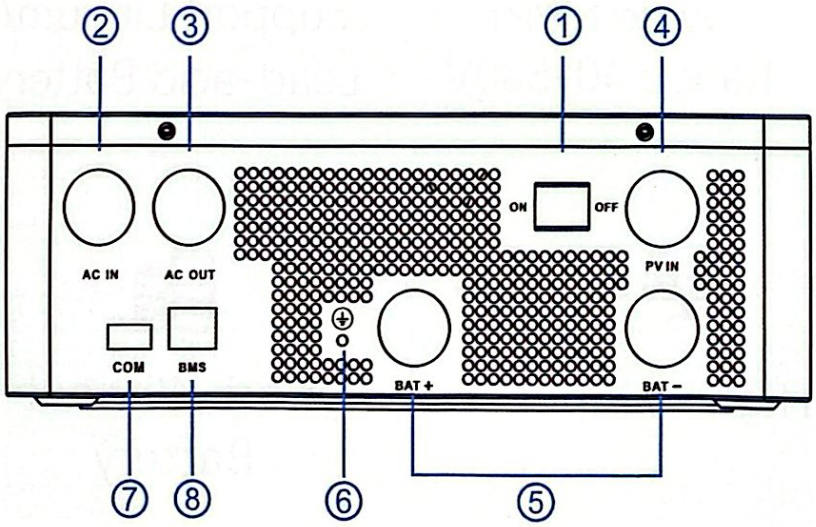
2.1 Features

- Rated power 4.0kVA/kW,power factor 1
- MPPT ranges 40V~450V, 500Voc
- High frequency with small size and light weight
- Pure sine wave AC output
- Solar and grid power loads at the same time
- CAN/RS485 for BMS communication
- Ability to work without battery
- Dual AC output (optional)
- WIFI remote monitoring (optional)
- Feed-in to grid

2.2 Product Overview



① AC Indicator
② Invert Indicator
③ Charging Indicator
④ Fault Indicator
⑤ LCD Display
⑥ ESC Button
⑦ Up Button
⑧ Down Button
⑨ Enter Button



① Power On/Off
② AC Input
③ AC Output
④ PV Input
⑤ Battery Input
⑥ Grounding
⑦ WIFI/GPRS Port
⑧ BMS Port

3. Packing List

No.	Item	Quantity	Description	Remarks
1	Inverter	1		
2	Datasheet	1	English	
3	User manual	1	English	
4	Tubular Terminal	8	E2510	For AC output, AC input, PV
5	OT Terminal	1		For PE

4. Specifications

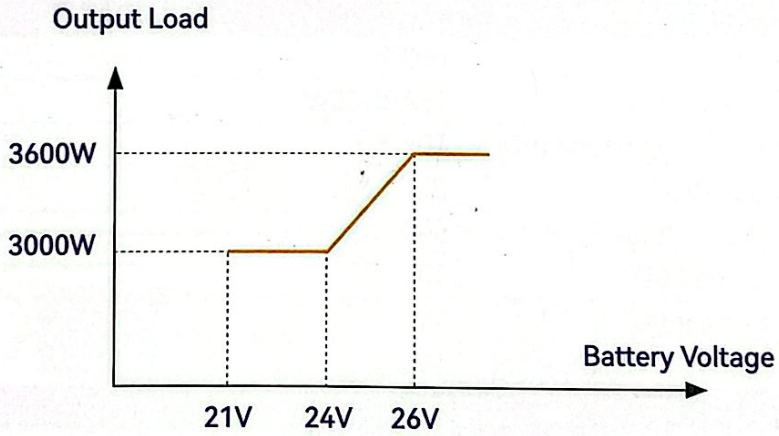
AC Input	
Rated Input Voltage (VAC)	208/220/230/240; L+N+PE
Voltage Range (VAC)	90~280 (APP/GEN mode); 170~264 (UPS mode)
Frequency (Hz)	50/60 (Auto Adaptive)
AC Output	
Rated Capacity (kVA/kW)	4.0 Output Power rating will be reduced to 90%, when setting the Output Voltage to 208V)
Surge Power (kVA)	7.2
Voltage (VAC)	208/220/230/240
Power Factor (PF)	1
Frequency (Hz)	50/60±0.1%
Switch Time (ms)	10 (APP/UPS mode) / 20 (GEN mode)
WaveForm	Pure SineWave
Overload Capacity (Battery Mode)	60s@102%~110%load; 10s@110%~130%load; 3s@130%~150%load; 0.2s@>150%load
Max. Efficiency (Battery Mode)	92%@24VDC
Charger(PV/AC)	
Solar Charger Type	MPPT
Max PV Input Current/Power	18A/5000W
MPPT Range@Operating Voltage (VDC)	40~450
PV Start-up Voltage (VDC)	60
Max PV Open Circuit Voltage (VDC)	500
Max PV Charge Current (A)	100
Max AC Charge Current (A)	100
Max. Charge Current (PV+AC) (A)	100
Battery	
Normal Voltage (VDC)	24
Battery Type	Lithium and Lead-acid

General Data	
HMI	LCD
Interface	RS485/CAN/RS232
Monitoring	WiFi(Optional)
Ingress Protection	IP21
Operating Temperature	-10℃~60℃
Relative Humidity	5%~95% (Non-condensing)
Storage Temperature	-15℃~60℃
Max. Operating Altitude	4000m (Derating above 2000m)

Output Power rating will be reduced due to various conditions.

Battery	PV	AC Input	Max Output Power
L	N	N	Follow the Battery Voltage Derating Curve as shown below.
N	L	N	Depends on the PV input power and Maximum is 3.6kW.
N	N	L	Input Voltage * Input Max current 20A
L	L	N	Two ways to achieve 3.6kW are as follows: 1. Battery Voltage≥26V; 2. Battery Voltage≥21V and PV Input Power≥900W; If none of the above conditions are met, then follow the Battery Voltage Derating Curve as shown below.
N	L	L	Input Voltage * Input Max Current 20A
L	N	L	Input Voltage * Input Max Current 20A
L	L	L	Input Voltage * Input Max Current 20A

Note:The 'L' in the diagram represents the meaning of being accessed or connected, while the "N" signifies the meaning of not being accessed or not being connected.



Battery Voltage Derating Curve

Notes: Updates to the content and version of this datasheet will not be notified separately.