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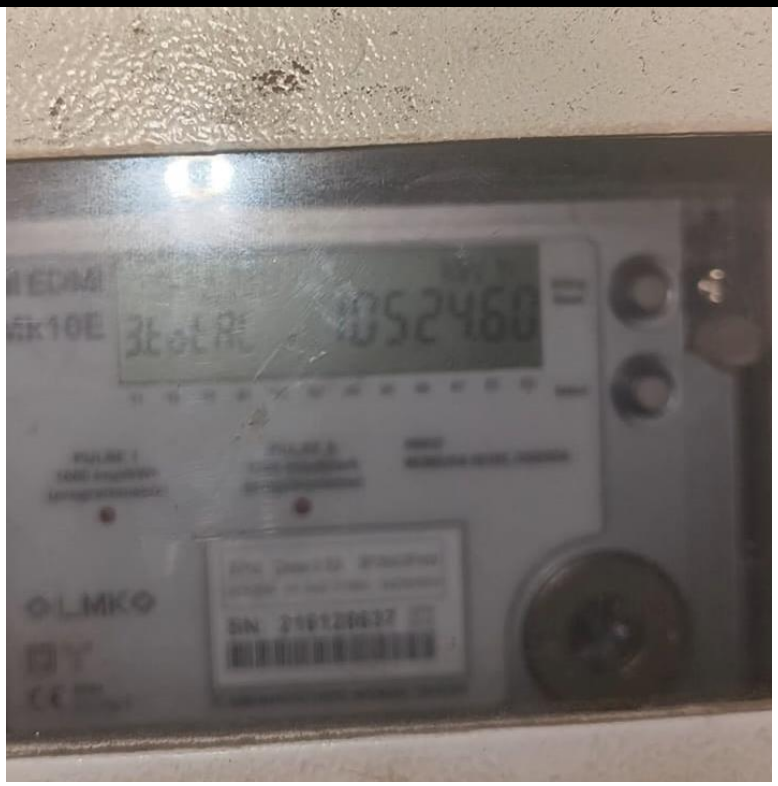
LAMPIRAN

Lampiran 1 Pengambilan Data Beban



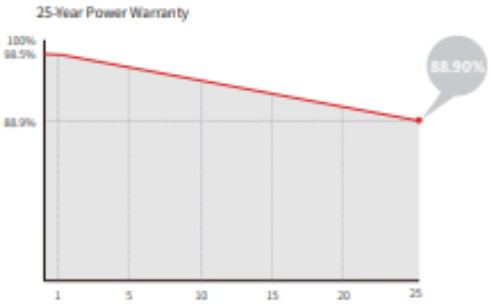
Lampiran 2 Spesifikasi Panel Surya

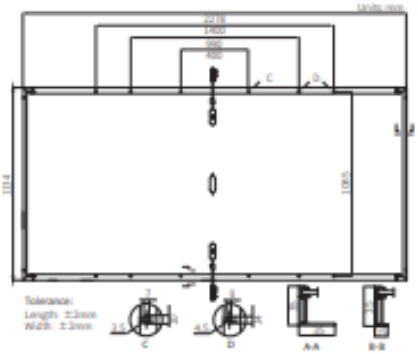
Hi-MO X6 Explorer

LR5-72HTH 565~585M

22.6%	0~3%	<1.5%	0.40%
MAX MODULE EFFICIENCY	POWER TOLERANCE	FIRST YEAR POWER DEGRADATION	YEAR 2-25 POWER DEGRADATION

Additional Value





Mechanical Parameters

Cell Orientation	144 (6×24)
Junction Box	IP68
Output Cable	4mm², +400, -200mm/±1400mm length can be customized
Glass	Single glass, 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	27.5kg
Dimension	2278×1134×35mm
Packaging	31pcs per pallet / 155pcs per 20' GP / 620pcs per 40' HC

Electrical Characteristics

STC : AM1.5 1000W/m² 25°C NOCT : AM1.5 800W/m² 20°C 1m/s Test uncertainty for Pmax: ±3%

Module Type	LR5-72HTH-565M		LR5-72HTH-570M		LR5-72HTH-575M		LR5-72HTH-580M		LR5-72HTH-585M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	565	422	570	426	575	430	580	433	585	437
Open Circuit Voltage (Voc/V)	51.76	48.60	51.91	48.74	52.06	48.88	52.21	49.02	52.36	49.16
Short Circuit Current (Isc/A)	14.01	11.31	14.07	11.36	14.14	11.42	14.20	11.47	14.27	11.52
Voltage at Maximum Power (Vmp/V)	43.61	39.79	43.76	39.93	43.91	40.07	44.06	40.20	44.21	40.34
Current at Maximum Power (Imp/A)	12.96	10.61	13.03	10.68	13.10	10.73	13.17	10.78	13.24	10.84
Module Efficiency(%)	21.9		22.1		22.3		22.5		22.6	

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	UL Type 1 or 2 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

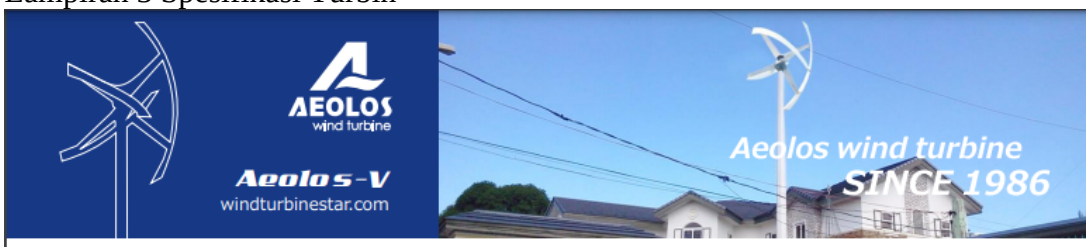
Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.230%/°C
Temperature Coefficient of Pmax	-0.290%/°C

LONGi

No.8369 Shangyuan Road, Xi'an Economic And Technological Development Zone, Xi'an, Shaanxi, China.
Web: www.longi.com

Specifications included in this datasheet are subject to change without notice. LONGi reserves the right of final interpretation. (20230501V10) DG

Lampiran 3 Spesifikasi Turbin



Specification

Generator Type:	Three Phase Permanent Magnet
Rotor Height:	5.3m (17.38 ft)
Rotor Width:	4.2m (13.77 ft)
Turbine Weight:	385kg (848.8 lbs)
Blades Material:	Fiber Glass
Blade Quantity:	3 pcs
Working Temperature:	-30 ℃ to 60 ℃
Design Lifetime:	20 years
Working Humidity:	≤95%
Protection Class:	Ip55

Performance

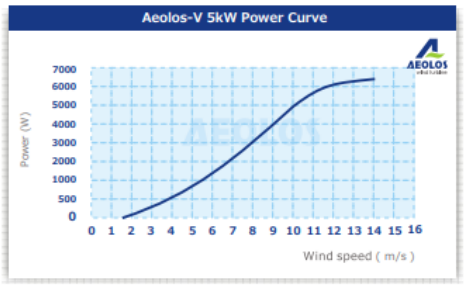
Rated Power:	5000 W
Max Output Power:	7000 W
Cut In Wind Speed:	2.5m/s (5.6 mph)
Rated Wind Speed:	10m/s (22.3 mph)
Survival Wind Speed:	55m/s (122.65 mph)
Generator Efficiency:	96%
Noise Level:	< 45 dB(A)
Warranty:	5 year

Safety

Blades RPM Limitation:	150 RPM
PWM Dump Load:	7.5 kW Box
Mechanical Brake:	Manual/Auto

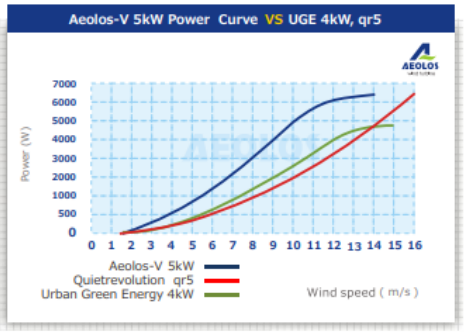
Optional

Remote Monitoring System	(Internet/Wireless)
Auto Hydraulic Brake System	(Unattended Site)
Off Grid :	48 V or 96 V
Grid Tie :	300 V



Aeolos-V 5kW Wind Turbine Annual EnergyOutput

Wind Speed(m/s)	Annual Energy Output (kWh)	Wind Speed(m/s)	Annual Energy Output (kWh)
3 m/s	2278 kWh	8 m/s	26280 kWh
4 m/s	4380 kWh	9 m/s	35741 kWh
5 m/s	6657 kWh	10 m/s	42924 kWh
6 m/s	11386 kWh	11 m/s	49932 kWh
7 m/s	17958 kWh	12 m/s	53436 kWh



Lampiran 4 Spesifikasi Baterai

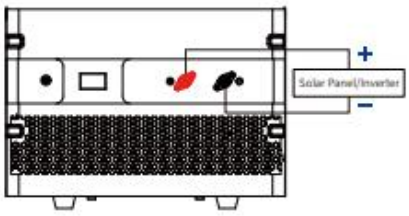
Blue Carbon
蓝晶易碳

Technical Parameters

Model	BCT-UU 48-300	
Basic Specifications	Nominal Capacity	300Ah
	Nominal Voltage	48V(51.2V)
	Electricity(kWh)	15.36kWh
Input	Full charge Voltage	57.6V-60V
	Maximum Charging Voltage	90V
	Input Voltage Range	60V-100V
	Continuously Use Input Current	100A
	Maximum Solar Panel Input Current	100A
	Rshoot delay protection	1000ms
Output	Continuously Use Output Current	100A
	Discharge Cut-off Voltage	40V-46V
	Over-Discharge Delay Protection	1000ms
	Short Circuit Protection Delay	300us
	Short Circuit Protection Recovery	Disconnect load
	Instant Start Current	300A
	Instant Start Current Time	10S

Battery	Cell Type	LiFePO4 Battery/LFP
	Storage Temperature Range	Short-Term -20°C-40°C(Within 1 month)
		Long-term 10°C-35°C(Within 1 year)
	Operating Temperature Range	-15°C-60°C
	Recommended Temperature Range	10°C-40°C
	Storage Humidity	≤75% RH
	Atmospheric Pressure	Below 5000 above sea level
	Self-Discharge (25°)	<3%/Month
	Depth of Discharge	>80%
	C-rate Discharge	<0.8C
	Cycle Life	> 6000 Times (< 0.5c)
Other	Certification Standards	UN38.3/CE/MSDS/DGM
	Warranty	5 years
	Product Size	798±2×565±2×401±2mm
	Packing Size	903±2×671±2×451±2mm

BCT Instructions



Attention:

1. It is forbidden to use any high-voltage to charge it. The open circuit voltage of 12V battery pack can not exceed 22V, 24V battery pack can not exceed 44V and 48V battery pack can not exceed 88V. The maximum open circuit voltage of solar panel can not exceed twice of the voltage of battery.
2. Please use a MPPT controller with lithium iron phosphate battery mode.
3. The output must have high-voltage isolation function when using high-voltage MPPT controller.
4. When the source voltage of the charging terminal is higher than 88V, in order to prevent the failure of the voltage conversion device in the middle and cause overcharging of the battery. The high-voltage circuit breaker with charging protection function must be connected between the charging controller and the battery.
5. 12V battery pack, maximum support 4 battery packs in series, the highest charging voltage of 4 battery packs in series is less than 88V, and the highest charging voltage of 2 battery packs in series is less than 44V. 24V battery pack, maximum support 2 battery packs in series, the highest charging voltage of 2 battery packs in series is less than 88V. 48V battery pack, it is forbidden to use in series. Ensure the batteries are discharged to empty condition or fully charged before connecting them in series. Ensure the voltage of batteries are consistent before connecting the batteries in parallel.
6. It is forbidden to connect the positive and negative poles reversely and short circuit the positive and negative poles of the battery pack; The overload is strictly prohibited.
7. The battery pack should not be used in severe vibration scenarios.
8. It is strictly prohibited to put in water and clean the battery pack, and do not place the product in the outdoor exposed place for a long time to prevent rain or moisture.
9. It is forbidden to use or place the battery at high temperature. If battery is used for a long time, the recommended optimal ambient temperature is 10-40°C.
10. The battery should not be placed in the room where any combustible gas or flammable items are stored, and should be used in a clean, dry and ventilated environment.
11. It is strictly prohibited to knock, throw, reverse or trample on the battery pack. It is strictly prohibited to use the battery pack when the appearance is seriously damage (artificial knocking, scraping, falling from height, unauthorized disassembly of the products, etc.).
12. It is strictly forbidden to dump or invert the product.

Please strictly following the above operating rules when using the battery pack.

Tel: +86-06332190373 Fax: +86-0633-2165720
Email: sales@bluecarbontech.com

Lampiran 5 Spesifikasi Inverter

PWG2-50/100K-NA

PWG2-50/100K-EX

Sinexcel

Features

- Modular design and wide power range in single cabinet
- Bi-directional Power Conversion System
- Built-in transformer
- Grid-support functions
- Flexible configuration
- Support PV access

Supported Battery Types:
- Lithium-ion based battery
- Lead-carbon battery

Specification

Model	PWG2-50K-NA	PWG2-100K-NA	PWG2-50K-EX	PWG2-100K-EX
Utility-interactive Mode				
Battery voltage range	400V(250~520V)		400V(250~520V)	
Batter DC Max Current	150A	300A	150A	300A
PV Voltage Range	520~900V (MPPT 520V~800V)		520~900V (MPPT 520V~800V)	
PV DC. Max Current (in case of completely consumption)	192A	384A	192A	384A
AC voltage	480V(423V~528V)		400V(340V~460V)	
AC current	60A	120A	72A	144A
Nominal power	50kVA	100kVA	50kVA	100kVA
AC frequency	60Hz(59.5Hz~60.5Hz)		50/60Hz(±2.5Hz)	
Output THDI	≤3%	≤3%	≤3%	≤3%
AC PF	Listed: 0.8~1 leading or lagging (Controllable)		Listed: 0.8~1 leading or lagging (Controllable)	
	Actual: 0.1~1 leading or lagging (Controllable)		Actual: 0.1~1 leading or lagging (Controllable)	