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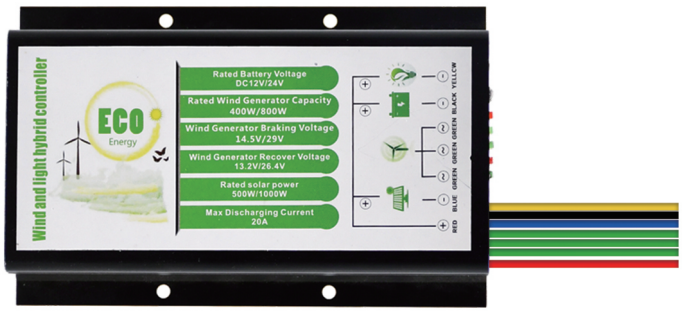


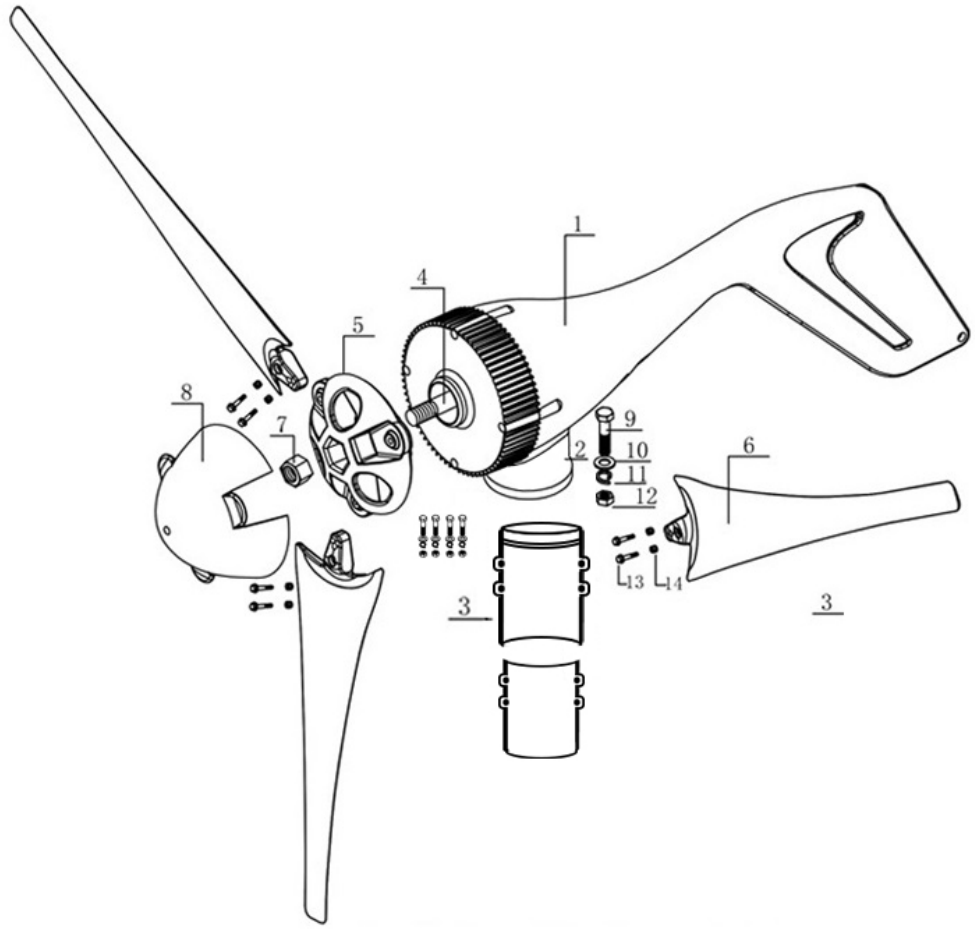
WIND TURBINE GENERATOR & HYBRID CONTROLLER

USER MANUAL

Contents

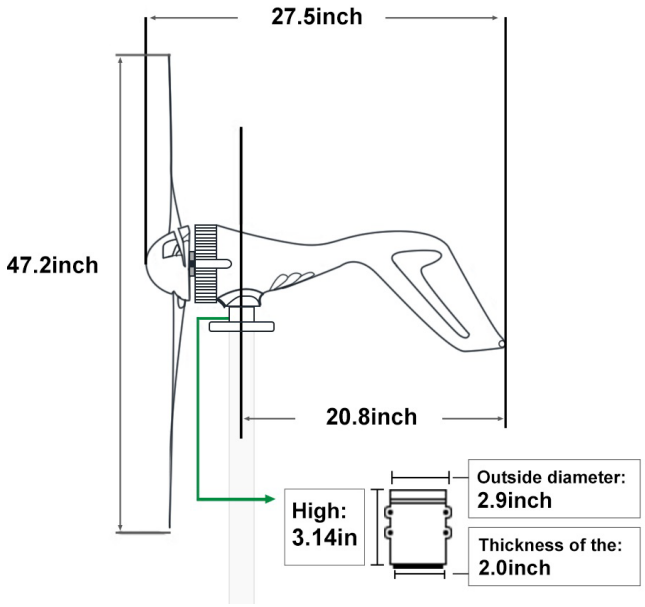
I.Wind Turbine Generator

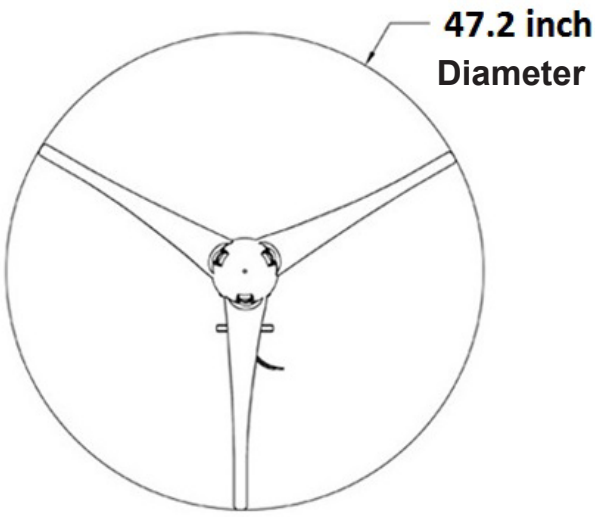
1. Product Diagram



1	Rotor Body	8	Fairing
2	Wind Turbine Tower Flange	9	Bolts
3	Steel Pipe Support	10	Falt Washer
4	Wind Turbine Shaft	11	Elastic Washer
5	Wind Wheel	12	Nuts
6	Wind Turbine	13	Stainless Steel Nail
7	Nuts	14	Pine Nuts

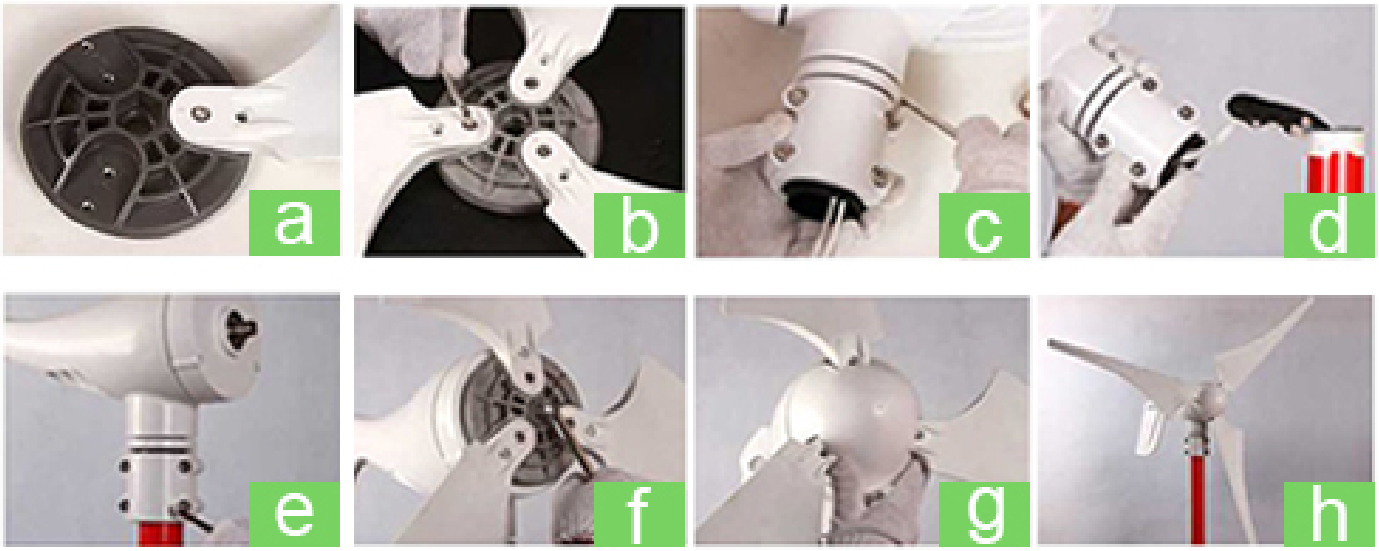
2. Parameters





Rated Power	400w
Rated Voltage	DC12-24V
Battery Voltage	DC12-24V
Start-up Wind Speed	5.6mph (2.5m/s)
Rated Wind Speed	23.5mph (10.5m/s)
Maximum wind speed	78mph (35m/s)
Rated Rotate Speed	800r/min
Battery capacity	200AH-400AH
Control system	Automatic fan dedicated controller
Generator style	Permanent-Magento-Phase A.C
Wind leaf material	Carbon fibre composite
Rotor diameter	47.2 inch(1.2M)
Tower diameter	Suggest more than 3.1inch (80 mm)
Altitude of tower	14.8-32.8 ft (4.5M-10M)
Fan in the weight	17.6pounds (8KG)
Pole diameter	Out diameter 2.9 inch(7.4cm) Inner diameter 2.1 inch(5.3cm)

3. Installation Steps



a. Install the wind vane wheel groove;

b. Using a wrench and tighten the wind leaf;

c. The body with the wheel hub, lock screw;

d. Three wires connected to the fan and controller;

e. Install the base on the supporting frame, screw down;

f. Tighten blades to the generator host;

4. Mode of Connection

Please check page 8-9 to get detailed connection steps.

5. Wind Rating Scale(Beaufort scale)

Beaufort number	Description	Wind speed	Wave height
0	Calm	<1 mph	0 ft
		< 2 km/h	0 m
1	Light air	1–3 mph	0-1 ft
		2–5 km/h	0-0.3 m
2	Light breeze	4–7 mph	1-2 ft
		6–11 km/h	0.3-0.6 m
3	Gentle breeze	8–12 mph	2-4 ft
		12–19 km/h	0.6-1.2 m
4	Moderate breeze	13–18 mph	3.5-6 ft
		20–28 km/h	1-2 m
5	Fresh breeze	19–24 mph	6-10 ft
		29–38 km/h	2-3 m
6	Strong breeze	25–31 mph	9-13 ft
		39–49 km/h	3-4 m
7	High wind, moderate gale, near gale	32–38 mph	13-19 ft
		50–61 km/h	4-5.5 m
8	Gale,fresh gale	39–46 mph	18-25 ft
		62–74 km/h	5.5-7.5 m
9	Strong/severe gale	47–54 mph	23-32 ft
		75–88 km/h	7-10 m
10	Storm,whole gale	55–63 mph	29-41 ft
		89–102 km/h	9-12.5 m
11	Violent storm	64–72 mph	37-52 ft
		103–117 km/h	11.5-16 m
12	Hurricane force	≥ 73 mph	≥ 46 ft
		≥ 118 km/h	≥14 m

II. Wind & Solar Hybrid Controller

WARING

When the battery is connected to the controller and the inverter, the positive and negative poles cannot be reversed, otherwise the electrical appliances may be damaged.
When connecting the system, be sure to connect the controller and the battery first, and then connect the wind turbine. Otherwise, the wind turbine will not be stored and the controller will burn out when generating electricity.

1. Features

This product is a smart controller that combined solar energy controlling and wind energy controlling.
It is designed for high-end small Wind & Photovoltaic hybrid system, especially suitable for wind-photovoltaic hybrid power generation system and wind-photovoltaic hybrid monitoring system.
It can control the wind turbines and solar panels simultaneously to charge the battery safely and efficiently.
The device has a nice appearance, clear instructions and convenient operation. It also has a comprehensive series of

2. Performance

Reliability: Intelligent, modular design, simple structure, powerful functions; Industrial grade high-quality components and strict manufacturing techniques, which is suitable for relatively harsh working environments such as low temperature.
It also has reliable performance and long service life.

3. Parameters

Product Model	ECO-400
Battery Nominal Voltage	DC12/24V
Rated Power of Wind Turbine	400W/800W
Lock Voltage of Wind Turbine	14.5V/29V
Recovery Voltage of Wind Turbine	13.2V/26.4V
Rated Power of Solar Power	500W/1000W
Maximum Discharge Current	20A
Static Power	15mA
Working Temperature	-35~+75℃
Dimensions	130mm×82mm×21mm
Level of Protection	IP67

4. Mode of Connection

a. Firstly, connect the positive pole of the load, battery, and solar panel to the red line of the controller.

b. Then connect to the load's yellow wire of the negative pole.

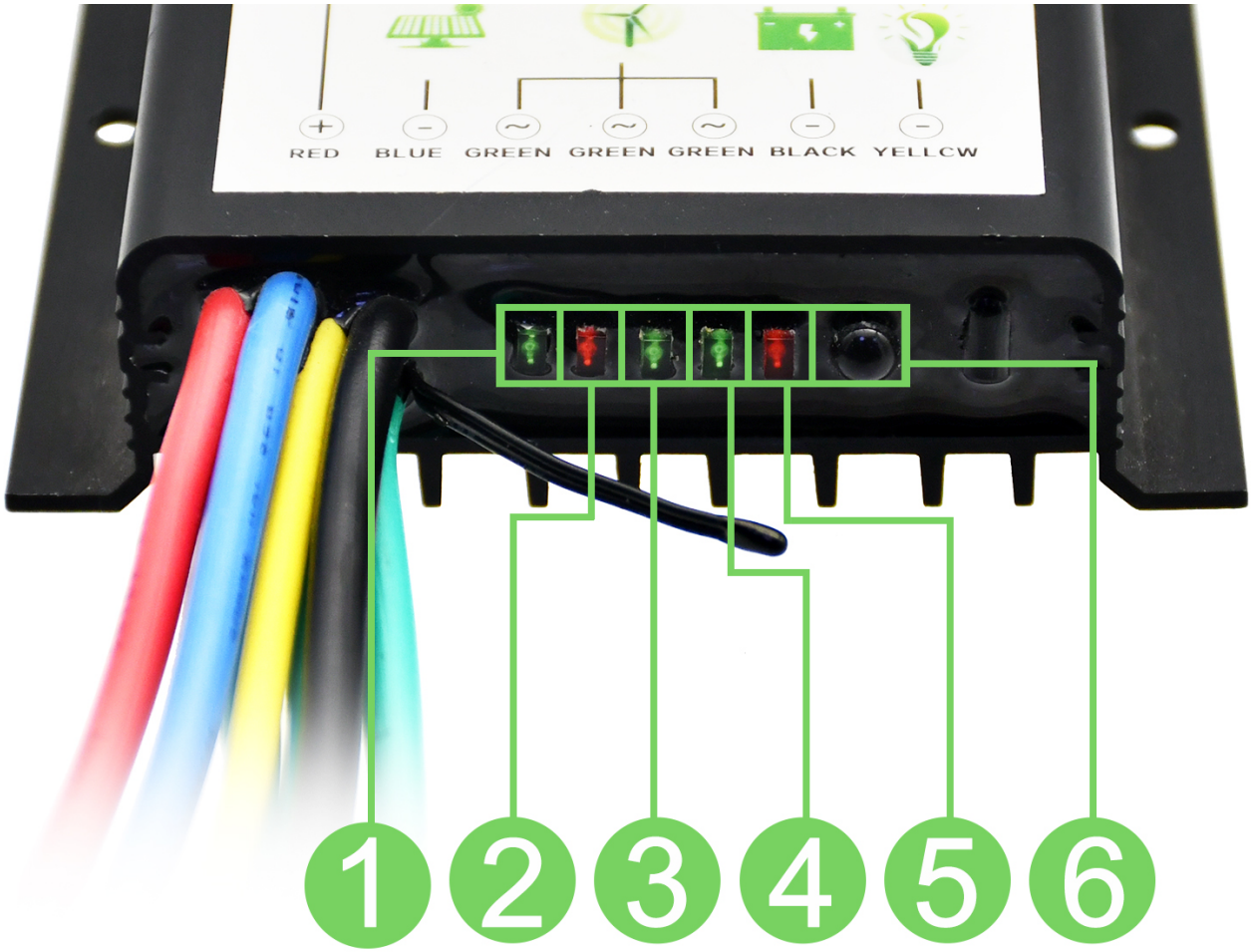
c. Then connect the negative pole of the battery to the black line of the controller.

d. Connect the negative pole of the solar panel to the blue line of the controller.

e. Connect the three-phase AC voltage input line of the controller to the three-phase voltage output line (green line) of the wind turbine.

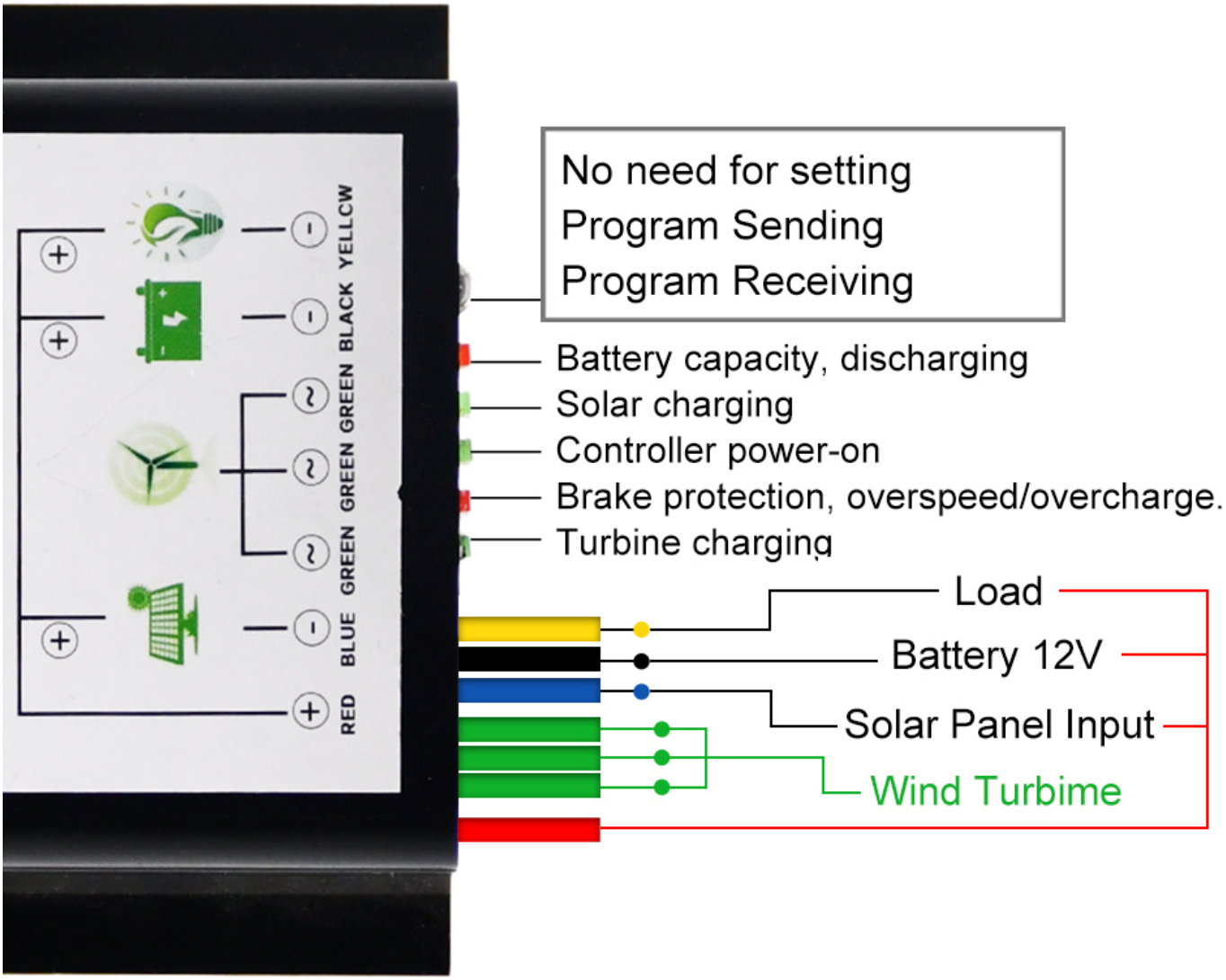
f. After the entire connection is completed, please wrap the connectors with waterproof tape to avoid water ingress.

5. Indicator Light Conditions



Indicator	Meaning
①	Wind turbine generator charging indicator (Light on indicates the wind generator is working)
②	Brake protection, over speed/over charge indicator (Light on indicates warning condition)
③	Controller power-on indicator (Light on indicates the battery is connected properly)
④	Solar charging indicator (Light on indicates charging)
⑤	Battery capacity, discharging indicator (Light on indicates the battery condition)
⑥	No need for setting

6. Controller Connection and Indicator



III. Contact Us

For any question or need help, please feel free to contact us anytime*(inform the order ID if available)*:

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