

EEB1 Series

20KW PWM Wind/Solar Hybrid Controller Off-grid



Controller



Dump load

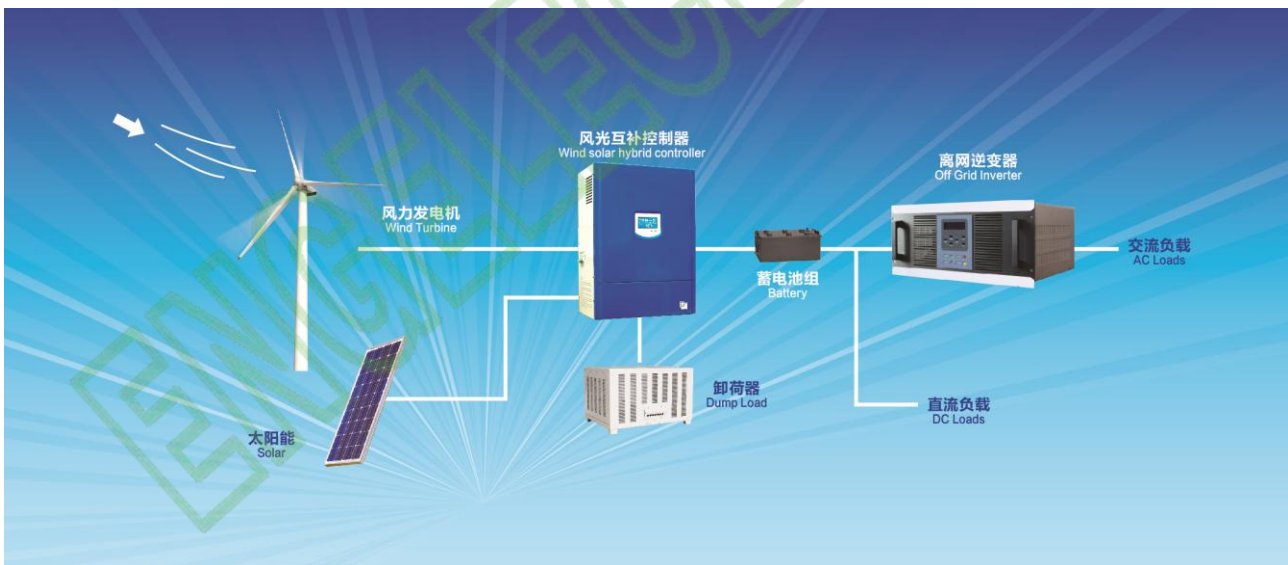
Product Features:

- ◆ The product is manufactured according the JB/T6939.1-2004 industrial standard and GB/T 19115.1-2003 national standard also with users' technical requirements.
- ◆ Big LCD display. The images tell working state visually. Various data show: real-time wind turbine voltage, current, power; solar panel voltage, current, power; battery group voltage, charge current.(The main board is with button battery, in case of power failure, history data can be saved for 30 days)
- ◆ Two sets of control systems: PWM constant voltage system and three-phase dump load system.
- ◆ PWM constant voltage control is 120% of the rated power of the wind turbine. In case exceeding of PWM's capacity, the three-phase dump load will automatically start immediately to ensure safe running of the overall wind turbine system.
- ◆ When the strong or super-strong wind conditions PWM control to ensure battery charged by the wind turbine with constant voltage and current.
- ◆ When the battery disconnect or damage, the three-phase dump load will start automatically to avoid the wind turbine idling and runaway accident.
- ◆ The protection function of battery: polarity reverse protection, disconnection and damage protection.
- ◆ Over-charging protection of the battery: When the battery is full (the battery voltage getting 125% of the rated voltage), the controller will carry out three-phase dump load automatically to stop charging the battery.
- ◆ Auto recharging of battery: When the battery voltage reduces to 108% of the rated voltage,it stops three-phase dump load to recharge battery automatically.
- ◆ The controller is equipped with manual three-phase dump load switch. To using this switch, the wind turbine will carry out three-phase dump load forcibly.
- ◆ The inside of the controller is equipped with surge arrester. Contain the over voltage into the wind turbine under the bearable voltage of the equipment or system. On the other way, to conduct the strong lightening current into the earth directly to avoid any damage of equipment.

Optional Function:

- ※ Solar panel control system is optional based on customers' requirement.
- ※ Diesel generator port is optional. Control the generator start and stop automatically
- ※ Adopt Modbus Communication protocol. Convenient to carry out the secondary development.
- ※ Adjusting the technical specification via RS485 is available. Convenient to adjust the different wind turbines for professional customers.
- ※ Support WIFI and GPRS. Customers can monitor the real-time working state of the on grid wind power system via PC and mobile and query history working state. Both Android and IOS are compatible in Mobile.
- ※ For the different wind turbine, the controller can be equipped with mechanical yawing, Rotate tail control, furling empennage, mechanical brake, hydraulic brake, electromagnetism brake and other brake functions.

Connection Diagram:



Technical Parameters

Type	20KW-420Vdc
Wind turbine rated power	20KW
Wind turbine max. power	40KW
*Solar panel power	6KWp
Battery	420Vdc
Function	Rectifier,charge, control, *DC output
Automatic protection function	Over voltage protection, constant voltage charge, arrester
Manual function	Manual brake
Display mode	LCD+LED
Display content	Wind turbine voltage, current, power; solar panel voltage, current, power; battery voltage, charge current
PWM constant pressure voltage	>507Vdc
Wind turbine 3-phase dump load 1 voltage	520±5Vdc
Wind turbine 3-phase dump load 2 voltage	525±5Vdc
Wind turbine recharge voltage	475±5Vdc
*Solar control stop charging voltage	520±5Vdc
*Solar control recharge voltage	475±5Vdc
*Diesel generator starting voltage	350±5Vdc
*Diesel generator off voltage	475±5Vdc
Self-provided 3phase dump load connecting wire	>6mm ²
Self-provided battery connecting wire	>12mm ²
PWM fuse	80A
*Solar fuse	20A

Charging fuse	125A
Work environment temperature	-30-60°C
Relative humidity	<90% No condensation
Noise (1m)	<40dB
Degree of protection	IP20 (Indoor) IP65 (Outdoors)
Cooling method	Forced air cooling
* Extral Control function (optional)	yawing, variable pitch, mechanical brake, hydraulic brake, electromagnetism brake
*Communication interface (optional)	RS485/USB/GPRS/WIFI/Ethernet
*Temperature compensation (optional)	-4mv/°C/2V, -35°C~+80°C, Accuracy:±1°C
Controller Size (mm) Weight (kg)	500*500*900 58 Kg
Dump load Size (mm) Weight (kg)	720*500*1030 90Kg

***Above parameter only for reference only. Could be custom made to user specifications.**

