




HIGH PERFORMANCE WIND AND SOLAR HYBRID CONTROLLER

The wind/solar hybrid controller is used to control the wind power charging battery under constant voltage. In addition, it includes solar charging control, which makes it good for wind/solar hybrid application.



Technical parameters

Model	CFWS200-12	CFWS300-12	CFWS500-24	CFWS600-24
Picture				
Rated Battery Voltage	12V		24V	
Rated Wind Turbine Maximum Power	200W	300W	500W	600W
Rated Wind Turbine Maximum Input Current	40A			
Wind Turbine Maximum Input Power	500W		1000W	
Unload Voltage (factory default)	14V		28V	
Unload Current (factory default)	0—25A adjustable			
PV Maximum Charge Current	10A			
Unload Mode	PWM			
Display	LCD			
Display Parameters	Battery Voltage、 Wind Turbine Voltage、 PV Voltage、 Wind Turbine Current、 PV Current、 Wind Turbine Power、 PV Power、 Under-voltage、 short-circuit、 Night.Etc			
Range of working temperature & Humidity	-20~+55°C/35~85%RH (Without Condensation)			
Protection Mode	Solar cells reverse charging、 Solar cells anti-reverse、 battery over charge、 battery over-discharge、 battery anti-reverse、 over load、 load short-circuit、 lighting、 wind turbine current limiting、 wind turbine automatic brake and manual brake.			

In order to give our customers better serve, we can adjusted configuration and parameters according to the customer's request

Optional function

- ① **Communication function:** Can chose RS232 communication interface, Provide remote monitoring software along with the controller. After monitoring software installation, users can check and set parameters through te software. At the same times, users can put the parameters which record in the system operation process into Excel to save.
- ② **Low voltage charge function:** To improve the traditional controller's insufficient,which is only when the fan or solar panels's voltage higher than the battery's voltge can be charging.Now the system can be charging from a low voltage.If the users chose the communication function ,they can set the charge voltage through the software.
- ③ **Remote control system :** Users can chose GPRS wireless communicationsfunction, serial communication server system.Users can control some systems through one computer at the same time.

Technical parameters:

Model	CFWS1000-24	CFWS1000-48
Picture		
Rated Wind Turbine Maximum Power	1000W	
Rated Battery Voltage	24V	48V
Rated Wind Turbine Maximum Input Current	60A	30A
Wind Turbine Maximum Input Power	1500W	
Unload Voltage (factory default)	28V	56V
Unload Current (factory default)	0—50A adjustable	0—25A adjustable
PV Maximum Charge Current	10A	
Unload Mode	PWM	
Display	LCD	
Display Parameters	Battery Voltage、Wind Turbine Voltage、PV Voltage、Wind Turbine Current、PV Current、Wind Turbine Power、PV Power、Under-voltage、short-circuit、Night.Etc	
Range of working temperature &Humidity	-20~+55℃/35~85%RH (Without Condensation)	
Protection Mode	Solar cells reverse charging、Solar cells anti-reverse、battery over charge、battery over-discharge、battery anti-reverse、over load、load short-circuit、lighting、wind turbine current limiting、wind turbine automatic brake and manual brake.	

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③ **Remote control system :** Users can chose GPRS wireless communicationsfunction, serial communication server system.Users can control some systems through one computer at the same time.

Technical parameters:

Model	CFWS2000-48	CFWS2000-96	CFWS2000-120	CFWS2000-220	CFWS2000-240
Picture					
Rated Wind Turbine Maximum Power	2000W				
Rated Solar Power	600W				
Rated Battery Voltage	48V	96V	120V	220V	240V
Rated Wind Turbine Maximum Input Current	60A	30A	25A	10A	10A
Wind Turbine Maximum Input Power	3000W				
Unload Voltage (factory default)	56V	112 V	140V	252 V	280 V
Unload Current (factory default)	0—50A adjustable	0—25A adjustable			
PV Maximum Charge Current	10A				
Unload Mode	PWM				
Display	LCD				
Display Parameters	Battery Voltage、 Wind Turbine Voltage、 PV Voltage、 Wind Turbine Current、 PV Current、 Wind Turbine Power、 PV Power、 Under-voltage、 short-circuit、 Night.Etc				
Range of working temperature & Humidity	-20~+55℃/35~85%RH (Without Condensation)				
Protection Mode	Solar cells reverse charging、 Solar cells anti-reverse、 battery over charge、 battery over-discharge、 battery anti-reverse、 over load、 load short-circuit、 lighting、 wind turbine current limiting、 wind turbine automatic brake and manual brake.				
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Technical parameters:

Model	CFWS3000-48	CFWS3000-96	CFWS3000-120	CFWS3000-220	CFWS3000-240
Picture					
Rated Wind Turbine Maximum Power	3000W				
Rated Battery Voltage	48V	96V	120V	220V	240V
Rated Wind Turbine Maximum Input Current	100 A	50 A	40 A	20 A	20 A
Wind Turbine Maximum Input Power	5000W				
Unload Voltage (factory default)	56V	112 V	140V	252 V	280 V
Unload Current (factory default)	0—25A adjustable				
PV Maximum Charge Current	20A	10A			
Unload Mode	PWM				
Display	LCD				
Display Parameters	Battery Voltage、 Wind Turbine Voltage、 PV Voltage、 Wind Turbine Current、 PV Current、 Wind Turbine Power、 PV Power、 Under-voltage、 short-circuit、 Night.Etc				
Range of working temperature & Humidity	-20~+55℃/35~85%RH (Without Condensation)				
Protection Mode	Solar cells reverse charging、 Solar cells anti-reverse、 battery over charge、 battery over-discharge、 battery anti-reverse、 over load、 load short-circuit、 lighting、 wind turbine current limiting、 wind turbine automatic brake and manual brake.				

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③ **Remote control system :** Users can chose GPRS wireless communications function, serial communication server system. Users can control some systems through one computer at the same time.

Technical parameters:


Model	CFWS5000-48	CFWS5000-96	CFWS5000-120	CFWS5000-220	CFWS5000-240
Picture					
Rated Wind Turbine Maximum Power	5000W				
Rated Battery Voltage	48V	96V	120V	220V	240V
Rated Wind Turbine Maximum Input Current	200A	100A	80A	40A	40A
Wind Turbine Maximum Input Power	10000W				
Unload Voltage (factory default)	56V	112 V	140V	252 V	280 V
Unload Current (factory default)	0—25A adjustable				
PV Maximum Charge Current	30A	20A	10A		
Unload Mode	PWM				
Display	LCD				
Display Parameters	Battery Voltage、 Wind Turbine Voltage、 PV Voltage、 Wind Turbine Current、 PV Current、 Wind Turbine Power、 PV Power、 Under-voltage、 short-circuit、 Night.Etc				
Range of working temperature & Humidity	-20~+55℃/35~85%RH (Without Condensation)				
Protection Mode	Solar cells reverse charging、 Solar cells anti-reverse、 battery over charge、 battery over-discharge、 battery anti-reverse、 over load、 load short-circuit、 lighting、 wind turbine current limiting、 wind turbine automatic brake and manual brake.				

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Technical parameters:

Model	CFWS10K-120	CFWS10K-220	CFWS10K-240	CFWS10K-360
Picture				
Rated Wind Turbine Maximum Power	10KW			
Rated Battery Voltage	120V	220V	240V	360V
Rated Wind Turbine Maximum Input Current	130A	70A	60A	40A
Wind Turbine Maximum Input Power	15000W			
Unload Voltage (factory default)	140V	252 V	280 V	420 V
Unload Current (factory default)	0—50A adjustable		0—25A adjustable	0—50A adjustable
PV Maximum Charge Current	20A	10A	10A	10A
Unload Mode	PWM			
Display	LCD			
Display Parameters	Battery Voltage、 Wind Turbine Voltage、 PV Voltage、 Wind Turbine Current、 PV Current、 Wind Turbine Power、 PV Power、 Under-voltage、 short-circuit、 Night.Etc			
Range of working temperature & Humidity	-20~+55°C/35~85%RH (Without Condensation)			
Protection Mode	Solar cells reverse charging、 Solar cells anti-reverse、 battery over charge、 battery over-discharge、 battery anti-reverse、 over load、 load short-circuit、 lighting、 wind turbine current limiting、 wind turbine automatic brake and manual brake.			
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Technical parameters:

Model	CFWS20K-220	CWS20K-240 F	CFWS20K-360
Picture			
Rated Wind Turbine Maximum Power	20KW		
Rated Battery Voltage	220V	240V	360V
Rated Wind Turbine Maximum Input Current	150A	130A	90A
Wind Turbine Maximum Input Power	30KW		
Unload Voltage (factory default)	252 V	280 V	420 V
Unload Current (factory default)	0—25A adjustable		
PV Maximum Charge Current	20A		
Unload Mode	PWM		
Display	LCD		
Display Parameters	Battery Voltage、 Wind Turbine Voltage、 PV Voltage、 Wind Turbine Current、 PV Current、 Wind Turbine Power、 PV Power、 Under-voltage、 short-circuit、 Night.Etc		
Range of working temperature & Humidity	-20~+55°C/35~85%RH (Without Condensation)		
Protection Mode	Solar cells reverse charging、 Solar cells anti-reverse、 battery over charge、 battery over-discharge、 battery anti-reverse、 over load、 load short-circuit、 lighting、 wind turbine current limiting、 wind turbine automatic brake and manual brake.		
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