

## SWM Series Controller with MPPT

### Machine



### System Diagram



## Applications

Product can be used to supply power for those street lights, monitoring devices, remote communication base stations, border posts and coastal islands. Besides, it can work well with vertical axis wind turbine.

## Features

- Recognize 12V/24V battery automatically
- Wind turbine MPPT track point adjustable
- Electronic components in high quality
- Complete protection function
- Solar and wind generation capacity and electricity consumption visible.
- Seven modes of load output optional.
- RS232/RS485/RJ45/GPRS/Bluetooth/Zigbee monitoring modes optional
- Compatible with standard MODBUS communication protocol

## Technical Parameters

Model	WWS06-24-24
<b>Wind Turbine Input</b>	
Rated input power	300W(12V Battery) 600W(24V Battery)
Rated input voltage	14Vdc(12V Battery)/28Vdc(24V Battery)
Input voltage range	2Vdc~16Vdc ( start charge voltage 2Vdc, settable. 12V battery) 4Vdc~32Vdc ( start charge voltage 4Vdc, settable. 24V battery)
Rated input current	22A dc
Manual Brake	Keep press the button for 5s to unload completely, and then recover by hand.

Brake by over current	26A (factory default,0~26A settable) unload completely when reached the set current, and recover automatically after working 10mins.
Brake by overvoltage	Refer to “output overvoltage” control
Brake by over wind speed (optional)	18m/s (0-30m/s settable), unload completely when reached the set wind speed, and recover automatically after working 10mins.
Brake by over rotational Speed (optional)	500r/min (factory default,0~1500r/min settable), unload completely when reached the set rotational speed, and recover automatically after working 10mins.
<b>PV Input</b>	
Rated input power	150W(12V Battery)/300W(24V Battery)
Max. Open circuit voltage	24V(12V Battery)/48V(24V Battery)
Rated input current	13A
Reversed connection protection	YES
<b>Charge Parameters</b>	
Rated battery voltage	12V/24V *recognize automatically
Temperature compensation function (optional)	-3mV/°C/2V
<b>Output Parameters</b>	
Rated output voltage	24V/12V *recognize automatically
Output overvoltage point	14V (factory default,11Vdc~16Vdc settable) 28V (factory default,22Vdc~32Vdc settable)
Output overvoltage recovery point	12.7V (factory default, reduce 1.3V from the output overvoltage point) 25.4V (factory default, reduce 2.6V from the output overvoltage point)
Max. Output current	25A
<b>DC Load Output</b>	
Output loops	2 loops
Output control mode	Both 2 loops could be set in 7 modes, such as light control on&off, light control on and time control off.
Output voltage range	21.6V~32V (24V battery); 10.8V~16V (12V battery)
Undervoltage recovery point	Refer to "rated battery voltage"
Rated output current	10A/each loop

Overload protection	120% rated DC output -1min,150% rated DC output -10s
Short circuit protection	Instant protection
<b>General Parameters</b>	
Rectifier mode	Uncontrolled rectifier
Display mode	LCD
Display information	Battery voltage, wind turbine voltage/current/ power, PV power/voltage/current, light control on voltage, light control off voltage, time control duration, load current, wind power generation capacity, solar power generation capacity, load power consumption, and so on.
Monitoring mode (optional)	RS232/RS485/RJ45/GPRS/Bluetooth/Zigbee
Monitoring Contents	Real-time display: Battery voltage, wind turbine voltage/current/ power, PV power/voltage/current, wind power generation capacity, solar power generation capacity, Battery status, wind turbine status, day and night, DC overload, DC load short circuit, and so on.
	Parameter setting: Output overvoltage point, wind turbine over current point, wind turbine start voltage, DC load overvoltage/undervoltage/undervoltage recovery point, output mode choice for two loops,light control on voltage, light control off voltage, and wind turbine brake settings.
Lightning protection	YES
Static loss	<0.6W
Ambient temperature	-20℃ ~ +40℃
Humidity	≤90% ,No condensing
Noise	≤65dB
Cooling mode	Natural cooling
Installation mode	Wall-mounted
Cover protection class	IP52
Product dimension (W*H*D)	150×220×83mm
Product net weight	2.3kg
<b>Note: Part of parameters can be adjusted according to customer's specific demand.</b>	

## 48V System

Model	WWS06-48-48
<b>Wind Turbine Input</b>	
Rated input power	600W
Rated input voltage	56Vdc
Input voltage range	0~64Vdc
Start charge voltage	8~64Vdc(start charge voltage 8Vdc, settable.)
Rated input current	11Adc
Manual Brake	Keep press the button for 5s to unload completely, and then recover by hand.
Brake by over current	15A (factory default,0~15A settable) unload completely when reached the set current, and recover automatically after working 10mins.
Brake by overvoltage	Refer to “output overvoltage” control
Brake by over wind speed (optional)	18m/s (0-30m/s settable), unload completely when reached the set wind speed, and recover automatically after working 10mins.
Brake by over rotational Speed (optional)	500r/min (factory default,0~1500r/min settable), unload completely when reached the set rotational speed, and recover automatically after working 10mins.
<b>PV Input</b>	
Rated input power	300W
Max. Open circuit voltage	96V
Rated input current	7A
Reversed connection protection	YES
<b>Charge Parameters</b>	
Rated battery voltage	48V
Temperature compensation function (optional)	-3mV/°C/2V
<b>Output Parameters</b>	
Rated output voltage	48V
Output overvoltage point	56V (factory default,44Vdc~64Vdc settable)

Output overvoltage recovery point	50.8V(factory default, reduce 5.2V from the output overvoltage point)
Max. Output current	13A
<b>DC Load Output(Optional)</b>	
Output loops	2 loops
Output control mode	Both 2 loops could be set in 7 modes, such as light control on&off, light control on and time control off.
Output voltage range	43.2V~64V
Undervoltage recovery point	Refer to "rated battery voltage"
Rated output current	10A/each loop
Overload protection	120% rated DC output -1min,150% rated DC output -10s
Short circuit protection	Instant protection
<b>General Parameters</b>	
Rectifier mode	Uncontrolled rectifier
Display mode	LCD
Display information	Battery voltage, wind turbine voltage/current/ power, PV power/voltage/current, light control on voltage, light control off voltage, time control duration, load current, wind power generation capacity, solar power generation capacity, load power consumption, and so on.
Monitoring mode (optional)	RS232/RS485/RJ45/GPRS/Bluetooth/Zigbee
Monitoring Contents	Real-time display: Battery voltage, wind turbine voltage/current/ power, PV power/voltage/current, wind power generation capacity, solar power generation capacity, Battery status, wind turbine status, day and night, DC overload, DC load short circuit, and so on.
	Parameter setting: Output overvoltage point, wind turbine over current point, wind turbine start voltage, DC load overvoltage/undervoltage/undervoltage recovery point, output mode choice for two loops, light control on voltage, light control off voltage, and wind turbine brake settings.
Lightning protection	YES
Static loss	<0.6W
Ambient temperature	-20℃~+40℃
Humidity	≤90%,No condensing

Noise	≤65dB
Cooling mode	Natural cooling
Installation mode	Wall-mounted
Cover protection class	IP52
Product dimension (W*H*D)	150×220×83mm
Product net weight	2.3kg
<b>Note: Part of parameters can be adjusted according to customer's specific demand.</b>	