

Win series

Solar charge controller



Win300-NBT



Win500-MPPT

- 12/24V automatic recognition
- Liquid, Gel, AGM and Lithium battery for selection
- Perfect EMC & thermal design
- Full automatic electronic protect function

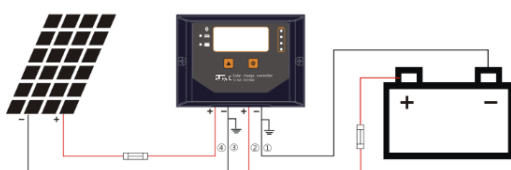


Overview

Win series solar controller is based on an advanced maximum power point tracking (MPPT) technology developed, dedicated to the solar system, the controller conversion efficiency up to 98%.

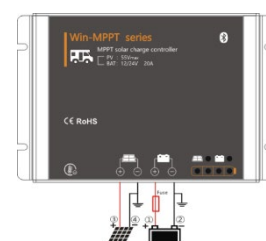
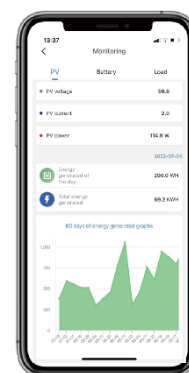
The controller can rapidly track the maximum power point(MPP) of PV array to obtain the maximum energy of the panel, especially in case of a clouded sky, when light intensity is changing continuously, an ultra fast MPPT controller will improve energy harvest by up to 30% compared to PWM charge controllers.

- Innovative Max Power Point Tracking(MPPT) technology, tracking efficiency >99.9%
- Full digital technology, high charge conversion efficiency up to 98%
- LED indicator for easy to read charging state and battery information
- The separate ports for remote temperature sensor, make battery temperature compensation more accurate
- Four stages charge way: MPPT, boost, equalization, float
- Automatic over-temperature power reduction function
- Dual automatic restriction function when exceeding rated charging power and charging current
- Android APP version for Bluetooth communication
- Common negative design



Cyber-BT

Cyber-BT is a kind of serial adapter which can make our company's solar controller be with bluetooth communication function, and carry out wireless monitoring, parameter setting, and etc. for the system only by cooperating with mobile phone APP.



Technical Data

	Item	Win300-NBT
Battery Parameters	System Voltage	12V
	Max Charging Power	300W
	Max Voltage On Battery Terminal	20V
	Max Voltage On PV Terminal	25V
	Temperature Compensation	-4.17mV/K per cell (Boost, Equal), -3.33mV/K per cell (Float)
	Battery Type	AGM, GEL, WET, Calcium, LiFePO4, Li-ion, LTO
System Parameters	Communication	BlueTooth
	Dimensions (mm)	144*104*28
	Weight (g)	180g
	Self Consumption	< 10mA
	Grounding	Common Negative
	Mounting	Vertical Wall Mounting
	Maximun Ternimals Wire Size	10AWG (4mm ²)
	Ambient Temperature	-20~+55°C
	Storage Temperature	-25~+80°C
	Ambient Humidity	0~100%RH
	Protection Degree	IP65
	Max Altitude	4000m

Battery Type	AGM	GEL	WET	Calcium	LiFePO4	Li-ion	LTO
Fast Voltage	9.0V~14.0V, Current=Rated Charge Current						
Boost Voltage	14.4V	14.1V	14.7V	14.9V	14.4V	12.6V	14.0V
Equalization Voltage	N/A	N/A	15.0V	15.0V	N/A	N/A	N/A
Float Voltage	13.6V	13.6V	13.6V	13.6V	N/A	N/A	N/A
Under Voltage Recharging	12.5V	12.5V	12.5V	12.5V	14.2V	12.4V	13.8V
Low Voltage Disconnect	11.0V	10.8V	11.0V	11.0V	10.4V	9.0V	10.0V
Over Voltage Protection	15.8V	15.8V	15.8V	15.8V	14.6V	12.8V	14.2V

Technical Data

	Item	Win500-MPPT
Battery Parameters	System voltage	12/24V automatical recognition
	Max charging current	20A
	MPPT charging voltage	before boost or equalization charging stage
	Boost voltage	14.0~14.8V/28.0~29.6V (default:14.5/29.0V@25°C)
	Equalization voltage	14.0~15.0V/28.0~30.0V (default:14.8/29.6V@25°C)
	Float voltage	13.0~14.5V/26.0~29.0V (default:13.7/27.4V@25°C)
	Low voltage disconnect	10.8~11.8V/21.6~23.6V (default: 11.2/22.4V)
	Low voltage reconnect	11.4~12.8V/22.8~25.6V (default: 12.0/24.0V)
	Temperature compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
	Charging target voltage	10.0~32.0V (Lithium, default: 14.4V)
	Charging recovery voltage	9.2~31.8V (Lithium, default: 14.0V)
	Low voltage disconnect	9.0~30.0V (Lithium, default: 10.6V)
	Low voltage reconnect	9.6~31.0V (Lithium, default: 12.0V)
	Max volt on bat. terminal	35V
	Battery type	Gel, AGM, Liquid, Lithium (default: Gel)
Panel Parameters	Max voltage on PV(-20°C)	55V*1
	Max voltage on PV(25°C)	50V
	Max input power	260/520W
	MPPT tracking range	(Battery Voltage+1.0V) ~Voc*0.9 *2
System Parameters	Max tracking efficiency	>99.9%
	Max conversion efficiency	98.0%
	Dimensions	164*107*32mm
	Weight	700g
	Communication	BLE
	Grounding	Common Negative
	Power terminals	10AWG (5mm ²)
	Ambient temperature	-20~+55°C
	Storage temperature	-25~+80°C
	Ambient humidity	0~100%RH
	Protection degree	IP54
Max Altitude	4000m	

*1.This value represents the maximum voltage of the solar panel at the minimum operating ambient temperature

**2.Voc means the open circuit voltage of the solar panel

*3.Around oblique line value separately on behalf of 12V and 24V system's value