

VBN series PWM Solar charge controller



This VBN series is common negative controller, with LCD display, working data programmable, It has communication function via RS485 port to PC monitoring software, realizing real-time monitoring and battery management parameter setting.



Models

VS1024BN/ VS2024BN/ VS3024BN/ VS4524BN/ VS6024BN

10A,20A,30A,45A,60A

12/24V auto work

Features

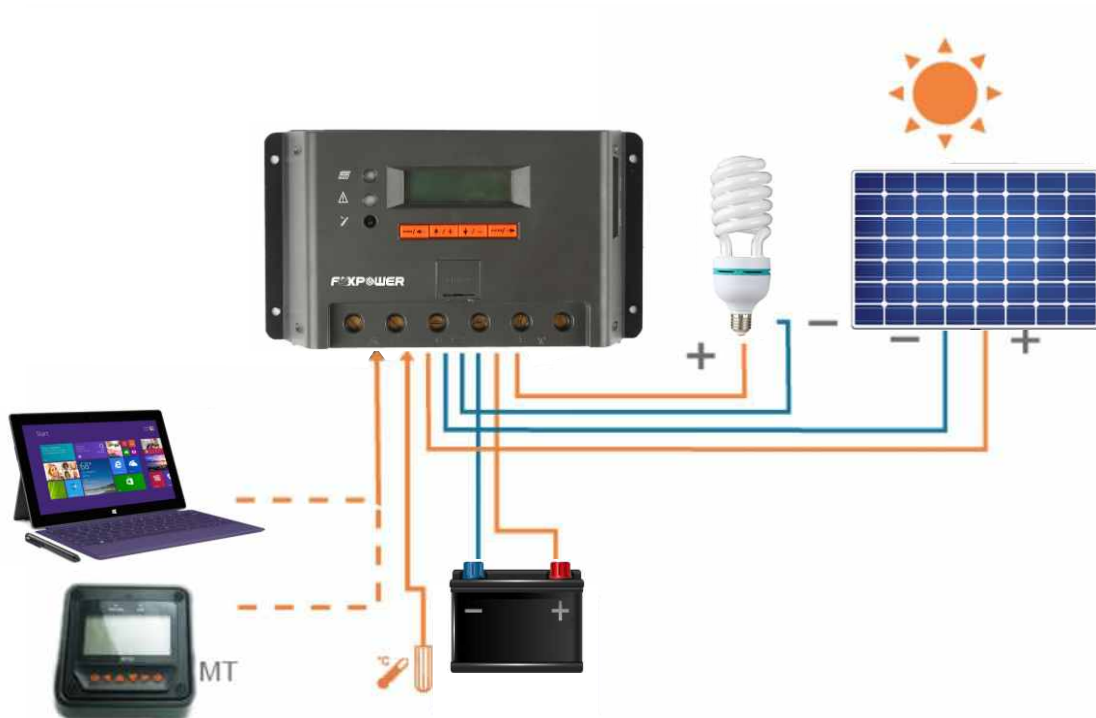
- PWM charging
- 32 bit MCU with high speed
- Battery type selection: Sealed, Gel, Flooded, and User (programmable)
- Intelligent lighting and timer control for solar lighting system
- 12 bit A/D high-precision sampling to ensure accuracy
- Full control parameters setting and modification, diversified load control mode

- Humanized design of browser interface
- Battery temperature compensation
- Adopt graphics dot-matrix LCD screen and 4 buttons for integrated menu displaying and operation
- Real-time energy statistics
- RS485 port with industrial standard MODBUS open architecture
- Real-time data monitoring and parameters setting with MT50, APP or PC software
- Support firmware upgrade



Electronic protections:

- PV short circuit protection ? PV reverse polarity protection
- Battery over voltage protection ? Battery over discharge protection
- Battery reverse polarity protection ? Battery overheating protection
- Load overload protection ? Load short circuit protection
- Controller overheating protection



Optional accessories

			
MT50 Remote meter with 2m communication cable	RTS300R47K3.81A Remote temperature sensor (3m)	CC-USB-RS485-150U PC communication cable (1.5m)	OTG-12CM OTG cable(12cm)

PC software



Mobile APP



*Free download from website for PC software and APP.

Technical specifications:

Model	VS1024BN	VS2024BN	VS3024BN	VS4524BN	VS6024BN
		VS2048BN	VS3048BN	VS4548BN	VS6048BN
Nominal system voltage	12/24V auto work	VS**24BN: 12/24V auto work			
		VS**48BN: 12/24/36/48V auto work			
Rated charge current	10A	20A	30A	45A	60A
Rated discharge current	10A	20A	30A	45A	60A

Technical Specifications

Model	VS1024BN	VS2024BN	VS3024BN	VS4524BN	VS6024BN
		VS2048BN	VS3048BN	VS4548BN	VS6048BN
Battery input voltage range	VS**24BN: 8~32V, VS**48BN:8~64V				
Equalize charging voltage*	Sealed: 14.6V, Flooded: 14.8V, User-defined: 9~17V				
Boost charging voltage*	Gel: 14.2V, Sealed: 14.6V, Flooded: 14.8V, User-defined: 9~17V				
Float charging voltage*	Gel /Sealed /Flooded: 13.8V, User-defined: 9~17V				
Low voltage reconnect voltage*	Gel /Sealed /Flooded: 12.6V, User-defined: 9~17V				
Low voltage disconnect voltage*	Gel /Sealed /Flooded: 11.1V, User-defined: 9~17V				
Self-consumption	≤15mA(12V); ≤10mA(24V); ≤9mA(36V); ≤8mA(48V)				
Temperature compensation coefficient	-3mV/°C/2V				
Grounding	Common negative				
Communication	RS485 / RJ45 interface				

- Technical data for 12V system at 25°C, twice in 24V system rate, triple in 36V system rate and quadruple in 48V system rate.

Model	VS1024BN	VS2024BN	VS3024BN	VS4524BN	VS6024BN
Overall dimension	162x85x40mm	162x100x50mm	200x103x58mm	201x109x59mm	205x129x67mm
Terminals	12AWG(4mm ²)	8AWG(10mm ²)	6AWG(16mm ²)	2AWG(35mm ²)	2AWG(35mm ²)
Net weight	0.3kg	0.4kg	0.7kg	0.8kg	1.3kg
Enclosure	IP30				

Model	VS2048BN	VS3048BN	VS4548BN	VS6048BN
Overall dimension	200x103x58mm	201x109x59mm	205x119x67mm	205x174x64mm
Terminals	6AWG(16mm ²)	2AWG(35mm ²)	2AWG(35mm ²)	2AWG(35mm ²)
Net weight	0.7kg	0.8kg	1.2kg	1.6kg
Enclosure	IP30			

Environmental

LCD temperature	-20°C ~ +70°C
Working environment temperature	-25°C ~ +55°C
Relative humidity	≤95% (N.C.)