



Bangzhao Electric Co. , Ltd.



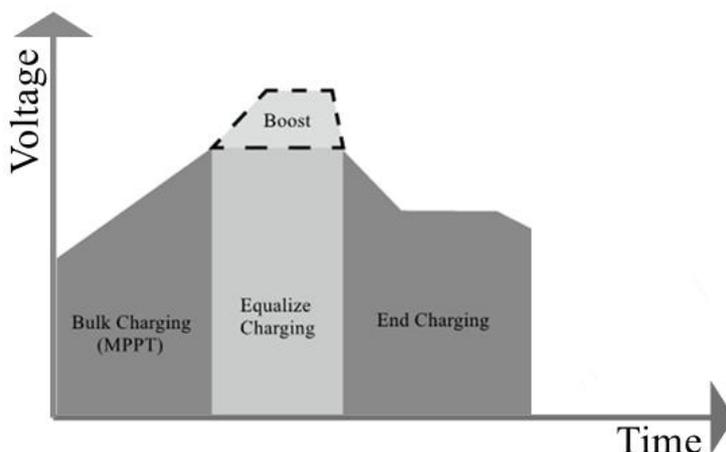
General Information

Bangzhao Electric Co.,Ltd PV charge controller is a smart device which designed for off-grid PV power system. It has great running performance with LCD display and convenient operation. The controller also automatically control cell cut or connect ordinarily according to the change of battery voltage.

The charge controller is very important for solar power system, the performance will affect the life of system directly, especially the battery life. Anyway, the battery's life will be shorted when battery being charged or discharged. The BZMC series PV charge controller adopts MPPT charge model which can improve battery life greatly.

The controller is widely used for independent off grid solar power system, such as telecommunications base stations, fishermen and herdsman of electricity, as well as PV power supply in remote mountainous and border.

Charging Diagram

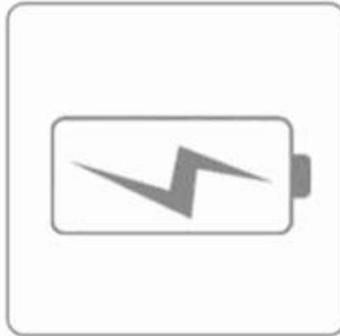


智能，高效，人性化

INTELLIGENT, EFFICIENT, USER-FRIENDLY



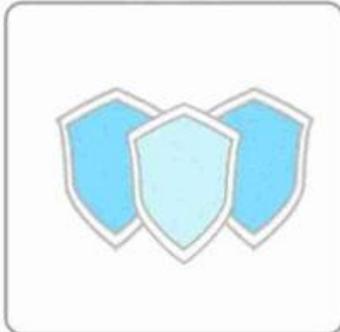
MPPT tracking



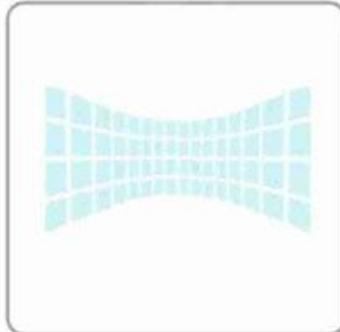
Smart charging



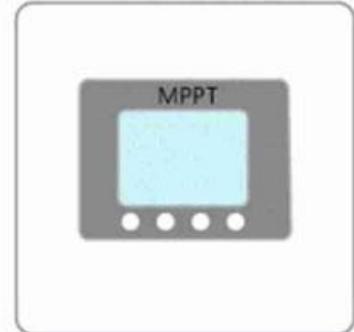
Aluminum alloy
integrated body



Multi-protection



Rs485 & CAN



LCD display

High tracking efficiency of more than 99%

High tracking efficiency of more than 99%



壁挂式
Wall Mounted Type



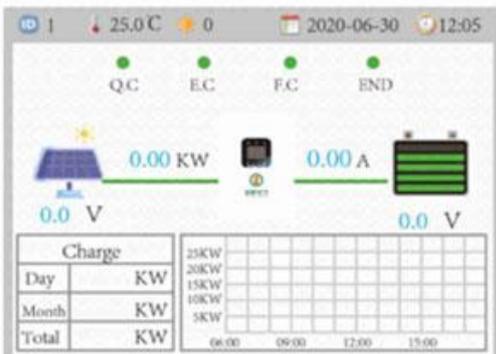
机架式
Drawer Type

Performance Features

- The solar controller uses high performance 32-bit chips which is excellent EMC design
- Advanced MPPT tracking algorithm, >99.5% efficient
- High performance IGBT power module as electronic switch, plus multiphase synchronous rectification technology, stabilizes charging battery voltage from PV voltage
- Ultrafast maximum power point tracking speed to ensure tracking efficiency
- The controller adopts advanced PID algorithm which has more accurate battery energy management system to improve the battery efficiency 45% at least
- Wide range of the charge controller's solar input can save costs reducing or eliminating equipment such as combiner box, cabling and installation
- The controller adopts four charging stages (buck charging, equalize charging, float charging and end charging) which can maximize the utilization of photovoltaic modules and batteries
- Twice protection function to protect battery from damage when the power switch is down
- Through the double loop control function of voltage loop and current loop, user can set the limiting charging current
- Fully enclosed duct design and high-speed fan for cooling makes the controller working under harsh environments
- The controller has power generation statistics and real-time power curve function, so we can know power generating information at any time
- Colorful LCD display, touching key and multi-language option makes the HMC (Human Machine Communication) easy and convenient. Users can set working parameters through the LCD panel and touching keys according to different battery feature
- The controller also has temperature compensation function and RTC real time clock function,
- Standard Modbus protocol for RS-485 communication
- User can control the charging of controller through RS485 or dry contact

LCD Interface

LCD界面



Initialization Interface



Monitor Main Menu

Device Info LCD screen showing device specifications.

Device Info	
Device_Model:	200
Battery_Type:	VRLA
Output_function:	NO
Max_PV_Vol:	800 V
Rated_Bat_Vol:	384 V
Rated_Bat_Cur:	100 A
Rated_Load_Cur:	无
Module_Temp:	40 C
Warning_Code:	*****

Device Info



Device Setting

Charge Setting LCD screen with voltage and current settings.

Charge Setting

OV_Discon: 16.0V, UV_Recover: 12.6V

OV_Recover: 15.0V, UV_Discon: 10.5V

EQ_Charge: 14.4V, EQ_Timing: 120Min

FL_Charge: 13.8V, CC_Charge: 100A

QC_Recover: 13.2V, Buttons: OK, NO

Charge Setting

Load Setting LCD screen with work mode and timing settings.

Load Setting

Work_Mode: 常开

Time1_ON: 00:00

Time1_OFF: 00:00

Time2_ON: 00:00

Time2_OFF: 00:00

Buttons: OK, NO

Load Setting

Technical Parameters

Model BZMC-	192V-50A	192V-80A	192V-100A
Rated system voltage	192V		
Max. charging current	50A	80A	100A
Max. input solar power	9.6KW	15.2KW	19.2KW
Open Circuit Voltage(Voc)	800Vdc		
MPPT Starting voltage	Actual battery voltage+-20V		
PV Start Charge Voltage	Actual battery voltage+-10V		
Max. tracking efficiency	>99%		
Over voltage disconnect	240V	These parameters can be adjusted according to demands of different type battery	
Over voltage reconnect/End charging	235.2V		
Equalize charging voltage	225.6V		
Float charging voltage	220.8V		
Recovery to fast charging	211.2V		
Undervoltage reconnect	201.6V		
Undervoltage disconnect	168V		
Equalize charging time	120 minutes		
Constant-current charging	≤100A		
Display	Colorful LCD screen + Touching keys		
Display language	English		
Terminal type	TC series barrier terminal		
Elevation	≤2000M, should reduce power if the elevation high than 3000M		
Storage temperature	-25°C +55°C		
Cooling method	Intelligent fan cooling		
IP (Ingress protection)	IP32		
Communication	RS485 With standard MODBUS RTU Protocol		
Dimension	500*384*228mm		
Net weight	27KG		

Model BZMC-	240V-50A	240V-80A	240V-100A
Rated system voltage	240V		
Max. charging current	50A	80A	100A
Max. input solar power	12KW	19.2KW	24KW
Open Circuit Voltage(Voc)	800Vdc		
MPPT Starting voltage	Actual battery voltage+-20V		
PV Start Charge Voltage	Actual battery voltage+-10V		
Max. tracking efficiency	>99%		
Over voltage disconnect	300V	These parameters can be adjusted according to demands of different type battery	
Over voltage reconnect/End charging	294V		
Equalize charging voltage	282V		
Float charging voltage	276V		
Recovery to fast charging	264V		
Undervoltage reconnect	252V		
Undervoltage disconnect	210V		
Equalize charging time	120 minutes		
Constant-current charging	≤50A		
Display	Colorful LCD screen + Touching keys		
Display language	English		
Terminal type	TC series barrier terminal		
Elevation	≤2000M, should reduce power if the elevation high than 3000M		
Storage temperature	-25°C +55°C		
Cooling method	Intelligent fan cooling		
IP (Ingress protection)	IP32		
Communication	RS485 With standard MODBUS RTU Protocol		
Dimension	500*384*228mm		
Net weight	27KG		

Model BZMC-	360V-50A	360V-80A	360V-100A
Rated system voltage	360V		
Max. charging current	50A	80A	100A
Max. input solar power	18KW	28.8KW	36KW
Open Circuit Voltage(Voc)	800Vdc		
MPPT Starting voltage	Actual battery voltage+-20V		
PV Start Charge Voltage	Actual battery voltage+-10V		
Max. tracking efficiency	>99%		
Over voltage disconnect	480V	These parameters can be adjusted according to demands of different type battery	
Over voltage reconnect/End charging	444V		
Equalize charging voltage	432V		
Float charging voltage	414V		
Recovery to fast charging	396V		
Undervoltage reconnect	378V		
Undervoltage disconnect	315V		
Equalize charging time	120 minutes		
Constant-current charging	≤100A		
Display	Colorful LCD screen + Touching keys		
Display language	English		
Terminal type	TC series barrier terminal		
Elevation	≤2000M, should reduce power if the elevation high than 3000M		
Storage temperature	-25°C +55°C		
Cooling method	Intelligent fan cooling		
IP (Ingress protection)	IP32		
Communication	RS485 With standard MODBUS RTU Protocol		
Dimension	500*384*228mm		
Net weight	28KG		

Model BZMC-	480V-50A	480V-60A	480V-80A
Rated system voltage	480V		
Max. charging current	50A	60A	80A
Max. input solar power	24KW	28.8KW	38.4KW
Open Circuit Voltage(Voc)	800Vdc		
MPPT Starting voltage	Actual battery voltage+-20V		
PV Start Charge Voltage	Actual battery voltage+-10V		
Max. tracking efficiency	>99%		
Over voltage disconnect	574.5V	These parameters can be adjusted according to demands of different type battery	
Over voltage reconnect/End charging	540V		
Equalize charging voltage	532.5V		
Float charging voltage	/		
Recovery to fast charging	507V		
Undervoltage reconnect	450V		
Undervoltage disconnect	375V		
Equalize charging time	120 minutes		
Constant-current charging	≤100A		
Display	Colorful LCD screen + Touching keys		
Display language	English		
Terminal type	TC series barrier terminal		
Elevation	≤2000M, should reduce power if the elevation high than 3000M		
Storage temperature	-25°C +55°C		
Cooling method	Intelligent fan cooling		
IP (Ingress protection)	IP32		
Communication	RS485 With standard MODBUS RTU Protocol		
Dimension	500*384*228mm		
Net weight	28KG		