

VI. FAQ & Troubleshooting

SYMPTOM	TROUBLESHOOTING & SOLUTION
Bluetooth not found / Hard to connect	Ensure powered on & broadcasting; enable phone Bluetooth & App permissions; move closer and rescan.
No real-time data after connection	Ensure notifications are subscribed; check App communication debug page for TX/RX records.
Inaccurate stats or curve time	Sync device time and timezone in Info/Settings before checking.
Device off after battery connected	Check if polarity is reversed; check if battery is dead or damaged.
Not charging in daytime / Load abnormal	Check PV wiring and shading; check if load is overcurrent, short-circuited, or triggered low-voltage protection.

VII. Technical Specifications

PARAMETER	Spec	PARAMETER	Spec
Model	BSC201 / BSC301	Charge Current	20A / 30A
Charge/Discharge Current Limits	Configurable	Wireless	BLE (Bluetooth Low Energy)
Load Current	10A	System Voltage	12V/24V Auto
Standby Power	Approx. 8mA	Max PV Input	50V
Weight	Approx. 145g	USB Output	5V / 2A
Dimensions(mm)	132×73×22	Operating Temp	-20°C~+55°C
Manual/Firmware	V100 / V6.8.0		

BSC201/301 Series Solar Charge Controller

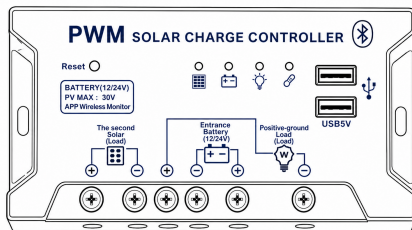
BLE & Mobile App

Real-time Monitor & Stats

12V/24V Auto

Configurable Current Limits

Capacity Test & Config



I. Product Introduction

The BSC201/301 series is an industrial-grade smart Bluetooth solar charge controller with a built-in BLE module. Users can wirelessly connect via the mobile App for panoramic monitoring, deep parameter configuration, energy statistics, and capacity testing of PV panels, batteries, and DC loads. The series includes the **P-Type** (mainly PWM control) and **M-Type** (with MPPT-related status and testing capabilities). It supports 12V/24V auto-recognition, is compatible with various batteries (set battery type in App upon first power-on), and supports configurable **charge current limits** and **discharge current limits** to reduce overcharge, battery heat, and abnormal load current risks. This is especially useful for battery systems without a protection board. It also features an all-aluminum base and multiple safety protections for long-term stable operation.

⚠ Safety & Precautions

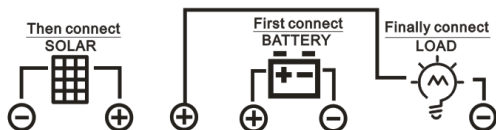
- Must wire in the order printed on the panel;** reverse order for disconnection.
- PV open-circuit voltage **must NOT exceed 50V**; strictly prohibit connecting to AC mains.
- Bluetooth disconnects** after deep standby; hardware reset may be needed to wake up.
- Factory reset** clears configs, logs, and stats. Operate with caution.

II. Panel Structure & Interfaces

- Status Indicators (4 LEDs):** PV, Battery, Load, Bluetooth in order (may all turn off in ultra-low voltage deep standby).
- Dual USB:** Side 5V/2A; USB output switch can be controlled in App (consistent with load command system).
- Reset Button:** Reset upon abnormality; wake up from deep standby, etc.
- Wiring Terminals:** BATTERY / SOLAR / LOAD positive and negative poles, must connect in printed order.
- Aluminum Base:** Back aluminum plate for heat dissipation.

III. Installation & Wiring (★ Core)

Warning: Wiring errors may burn the device! Disconnect in reverse order.



- Step 1: Connect Battery**
Connect positive/negative to 'BATTERY' terminals. Indicators light up upon success; system auto-recognizes 12V/24V.
- Step 2: Connect Solar Panel**
Connect positive/negative to 'SOLAR' terminals. Shows charging when sunlight is present.
- Step 3: Connect DC Load**
Connect positive/negative to 'LOAD' terminals.

IV. Status Indicators

LED	STATUS MEANING (EXCERPT)
PV	Off: Not connected; Solid: Connected; Slow Flash: Charging; Fast Flash: Error/Protection
Battery	Solid: Normal; Fast Flash: Low/Over voltage or errors
Load	Off: Off; Solid: On; Slow Flash: Discharging
Bluetooth	Fast Flash: Broadcasting; Solid: Connected

V. Mobile App Guide

5.1 Download & Connection

Install iOS "BSC301Controller" or Android App; enable Bluetooth, search and connect. Scan the support QR for wiring, pairing, parameter setup and FAQs. It is recommended to **sync time** in Info/Settings after connection to ensure accurate stats.



App download



Support guide

5.2 Main Interface (5 Tabs)

Home: Estimated internal battery voltage and operating data; Load/USB switches. **Data:** Energy, three live voltage curves and 48-hour history. **Capacity:** Test. **Settings:** Battery/load parameters. **Info:** Logs, loop resistance, time and status.

5.3 Load Modes

- Manual Mode:** App one-tap remote on/off.
- Auto Mode:** Auto start/stop based on battery voltage.
- Timer Mode:** Supports 4 timer periods.

5.4 Battery & Charging

Supports Sealed, Gel, Lithium, LiFePO₄ and Custom batteries, multi-stage charging, charge/discharge limits and editable Custom voltages. "Estimated internal battery voltage" is calculated from terminal voltage, battery current and loop resistance; it is not a direct per-cell measurement. Loop resistance includes the battery, cables and contacts.