

BMS04 Operation and Web Server Manual



Device Power Up

BMS04 will power up by applying voltage between 8V ~ 72 V, because device has rectifier inside to allow no polarity issue of input voltage, therefore user can connect power to device in ease.

After power up, BMS04 show logo and then display the first information on LCD (figure 1), device will store the date and time before no power into the non volatile memory

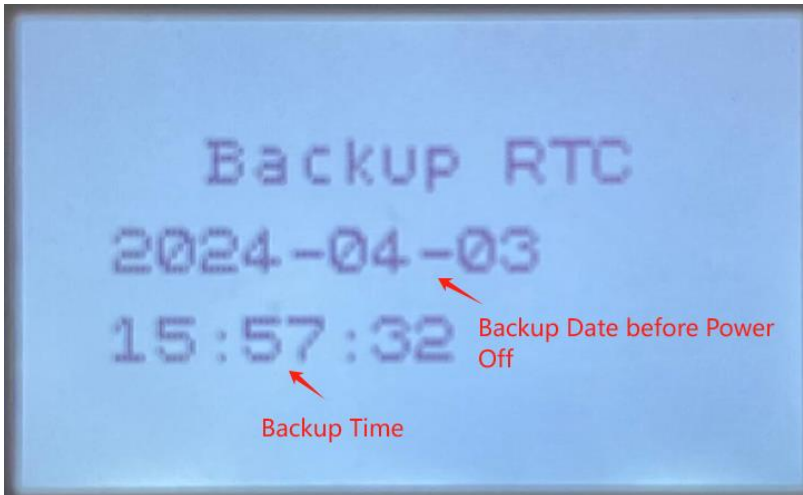


Figure 1

Device then checking some hardware resource like the flash memory and SIM card installation (figure 2)

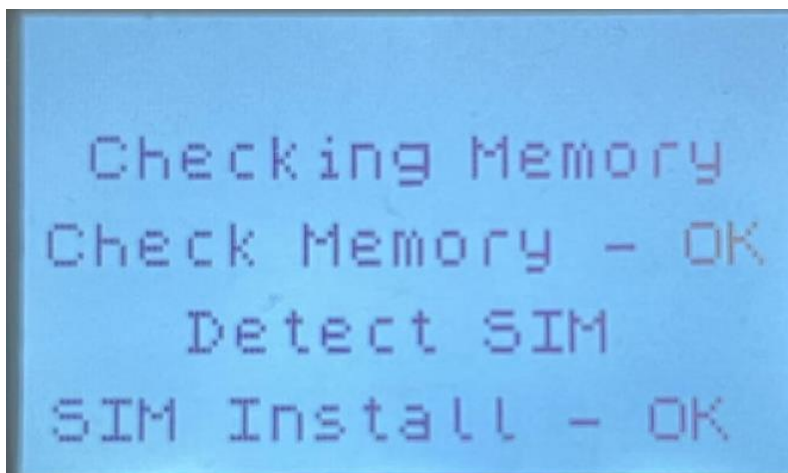


Figure 2

If both checking pass then device will start running, first show the current firmware version (as figure 3) then start collect data and display (as figure 4)

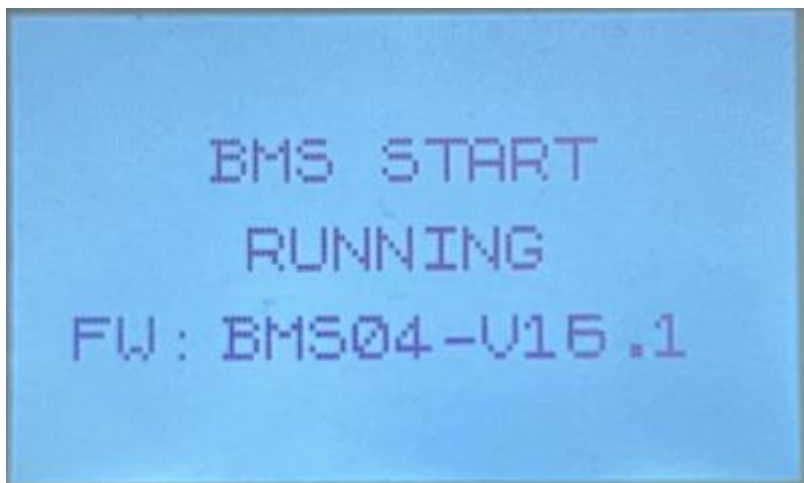


Figure 3

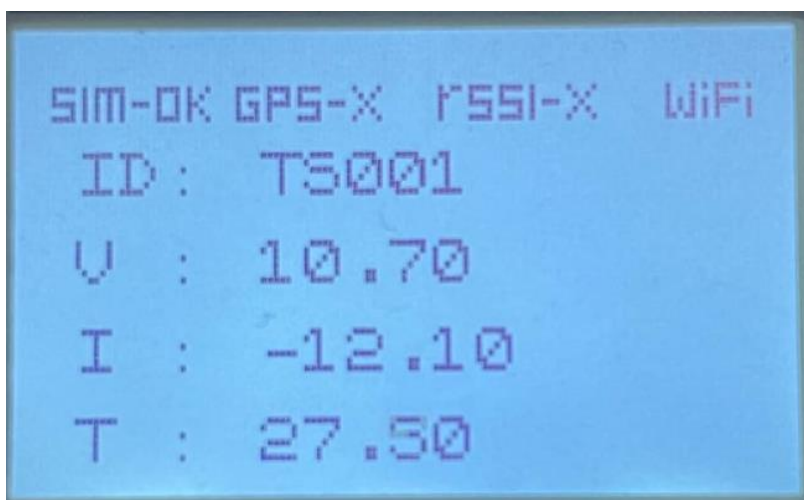


Figure 4

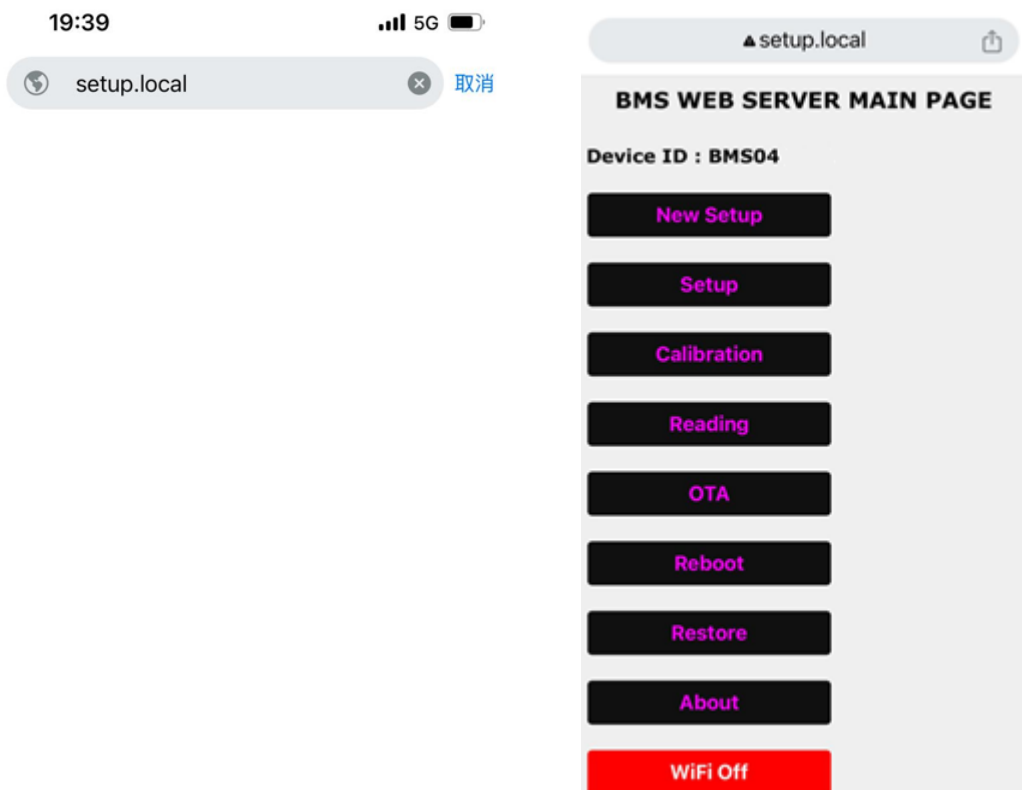
SIM – X	->	Sim installation fail
SIM – OK	->	Sim installation OK
GPS – X	->	Not yet locking GPS
GPS – OK	->	Found GPS
RSSI – X	->	Not yet connect to APN
RSSI + Level	->	how Signal Strength
No WiFi Mark	->	Not connect to WiFi hotspot
WiFi Mark On	->	Connect to WiFi hotspot

Web Server

1. Finding device in mobile WiFi list
2. Select device to connect, (maybe need enter password according to mobile, default is 12345678)



3. Use any browser, type in "setup.local" and then click, mobile will enter BMS04 web server page



4. User can setup device information by clicking “Setup”, inside “Setup” page can enter the WiFi hotspot SSID and password, rename device ID Prefix and number, adjust sending interval and Web Server password etc, in this example, device ID will change to BMS-05, and device will connect to APN (need turn WiFi to On on front page) with SSID Macdonald and password is abc123456.

The image shows two side-by-side screenshots of a mobile application's 'BASIC SETUP' page. Both screenshots have a browser address bar at the top showing '▲ setup.local' and a share icon. The left screenshot shows the initial configuration: 'Device ID : BMS04', 'Hotspot SSID' (NIL), 'Hotspot Password' (NIL), 'ID Prefix' (empty), 'Device ID Number' (1), 'Sending Interval' (1), and 'Web Server Password' (12345678). The right screenshot shows the updated configuration: 'Device ID : BMS04', 'Hotspot SSID' (Macdonald), 'Hotspot Password' (abc123456), 'ID Prefix' (BMS), 'Device ID Number' (5), 'Sending Interval' (1), and 'Web Server Password' (12345678). Both screenshots feature a pink 'UPDATE' button and a pink 'BACK' button at the bottom.

5. Press “Update” button to confirm data, device restart to use the new setting to run

The image shows a screenshot of a mobile application's 'SETUP LIST CHECK' page. At the top, the browser address bar shows '▲ setup.local' and a share icon. The page title is 'SETUP LIST CHECK'. Below the title, the following settings are listed: 'SSID : Macdonald', 'Password : abc123456', 'Device ID : BMS005', 'Sending Interval : 1', and 'AP Password :'. At the bottom of the list, it says 'BMS reboot now'.

6. User can calibrate device by clicking “Calibration”, inside “Calibration” page can calibrate current sensor offset, voltage offset and temperature offset, please unload any current loading on current sensor and device will get the zero offset, in this example, 1786 is the offset data, then enter the battery voltage measure by multimeter, in this example is 13.2V, and use thermometer of the surrounding temperature, in this example is 28 degree Celsius, then press “Set” button to confirm entry, on next page, “Set” button will disappear and press “Next” button, entry data will show on page 2

CALIBRATE BMS - 1
Setup Reference Parameter

Current Offset : 1786

Reference Voltage
13.2
Default = 12.0V / Range = 12.0 ~ 48.0V

Reference Temperature
28
Default = 24.0C / Range = 0.0 ~ 60.0C

SET

NEXT

BACK

CALIBRATE BMS - 2
Calibrate Parameter

Calculate Current Offset : 1786

Reference Voltage : 13.20
Reading Voltage : 10.70 V
Calculate Voltage Offset : 2.50

Reference Temperature : 28.00
Reading Temperature : 40.20 C
Calculate Temperature Offset : -12.20

BACK

7. User can read device data by clicking “Reading”, inside “Reading” page can view most of the device data as shown

VIEWING DATA

Device ID : BMS005

Time : D 2024-01-01 T 02:32:16

Firmware Version : BMS04-V16

Voltage : 13.20 V

Current : 0.00 A

Temperature : 28.10 C

Latitude : 0.000000

Longitude : 0.000000

WiFi IP : Not Yet Connect

Sim Card Status : Card Install OK

GSM/4G Status : Under Connect

GSM/4G Network Strength : NIL

REFRESH

BACK

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note: The Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. such modifications could void the user's authority to operate the equipment.

The device has been evaluated to meet general RF exposure requirement.

To maintain compliance with FCC's RF exposure guidelines, the distance must be at least 20 cm between the radiator and your body, and fully supported by the operating and installation

