

# CONFIGURACIÓN DE BMS TOOLS

## HOJA BLANCA

El software para PC “BMS Tools” proporciona análisis y diagnóstico de la batería en tiempo real. La batería no puede comunicarse con BMS Tools y un inversor de circuito cerrado al mismo tiempo. Los pasos que se describen a continuación le guiarán a través de la configuración inicial de BMS Tools.

1. Usando un cable RS-485 (RJ45 pines 1-B, 2-A) a USB-A, conéctelo al puerto RS-485 de la batería y luego a un puerto USB-A en una computadora con Windows.
2. Configure el interruptor DIP de la batería en ID: 64 (todos los dips en ON).
3. Encienda la batería.
4. Confirme que el COM del cable RS485 esté configurado correctamente en el programa BMS. Consulte el Administrador de dispositivos en la PC para obtener más información.

The screenshot displays the BMS\_TOOLS V1.0 software interface. At the top, the 'Primary Status' section shows 'COM' set to 'COM30' and a 'Refresh' button. The 'Baud Rate' is set to '115200'. Below this, there are tabs for 'BMS Monitoring', 'BMS Parameter', 'Historical Record', 'BMS Datalog', and 'Communication'. The main interface is divided into several sections:

- Model Information:** Includes 'Com State' (set to 'Offline'), 'Model', 'Version', and 'SN' fields.
- Battery Information:** Contains fields for 'Status', 'Heater', 'SOC', '% SOH', 'Voltage', 'Current', 'Capacity', 'AH Remain', 'C', 'AH', 'Max Vol', 'Min Vol', 'Vol Diff', 'Max C-C', 'A', 'Max Temp', 'Min Temp', 'Temp Diff', and 'Cell Num'.
- Temperature Information(°C):** Includes 'PCB Temp', 'Ambient Temp', and four temperature sensors (Temp01 to Temp04).
- Voltage(V):** Displays individual voltage readings for 16 cells (Cell01 to Cell16).
- Error Status:** Lists 'Voltage Error', 'Temperature Error', 'Current Error', and 'Cell Unbalance'.
- Warn Status:** Lists 'Pack OV', 'Cell OV', 'Pack UV', 'Cell UV', 'Charge OC', 'Discharge OC', 'Temp Anmaly', 'MOS OT', 'Charge OT', 'Discharge OT', 'Charge UT', 'Discharge UT', 'Low Capacity', and 'Other Error'.
- Protect Status:** Lists 'Pack OV', 'Cell OV', 'Pack UV', 'Cell UV', 'Charge OC', 'Discharge OC', 'Temp Anmaly', 'MOS OT', 'Charge OT', 'Discharge OT', 'Discharge UT', 'Float Stopped', and 'Discharge SC'.

## 5. Cambia la Velocidad en Baudios a 9600.

The screenshot shows the 'Monitor Status' window of BMS\_TOOLS V1.0. The 'Baud Rate' dropdown menu is highlighted with an orange box and is set to '9600'. The interface includes several sections: 'Model Information' with fields for Com State (Offline), Version, and SN; 'Battery Information' with fields for Status, Voltage, Current, Capacity, SOC, and SOH; 'Temperature Information' with fields for PCB Temp, Ambient Temp, and four individual temperature sensors; 'Voltage' with 16 individual cell voltage fields; 'Error Status' with buttons for Voltage Error, Temperature Error, Current Error, and Cell Unbalance; 'Warn Status' with buttons for Pack OV, Cell OV, Pack UV, Cell UV, Charge OC, Discharge OC, Temp Anomaly, MOS OT, Charge OT, Discharge OT, Charge UT, Discharge UT, Low Capacity, and Other Error; and 'Protect Status' with buttons for Pack OV, Cell OV, Pack UV, Cell UV, Charge OC, Discharge OC, Temp Anomaly, MOS OT, Charge OT, Discharge OT, Charge UT, Discharge UT, Float Stopped, and Discharge SC.

## 6. Cambie el "ID" a 64.

The screenshot shows the 'Monitor Status' window of BMS\_TOOLS V1.0. The 'ID' dropdown menu is highlighted with an orange box and is set to '64'. The interface is identical to the previous screenshot, showing the same sections for Model Information, Battery Information, Temperature Information, Voltage, Error Status, Warn Status, and Protect Status.

## 7. Selección, "Iniciar Monitoreo" = "Start Monitoring"

The screenshot shows the BMS\_TOOLS V1.0 interface. At the top right, the 'Start Monitoring' button is highlighted with an orange border. The interface is divided into several sections:

- Model Information:** Com State is 'Offline' (red background), Model is empty, Version is empty, and SN is empty.
- Battery Information:** Status is empty, Heater is empty, SOC is empty, % SOH is empty, Voltage is empty, Current is empty, Capacity is empty, AH Remain C is empty, Max Vol is empty, Min Vol is empty, Vol Diff is empty, Max C-C is empty, Max Temp is empty, Min Temp is empty, Temp Diff is empty, and Cell Num is empty.
- Temperature Information(°C):** PCB Temp is empty, Ambient Temp is empty, Temp01 is empty, Temp02 is empty, Temp03 is empty, and Temp04 is empty.
- Voltage(V):** Cell01 to Cell16 are empty.
- Error Status:** Voltage Error, Temperature Error, Current Error, Cell Unbalance.
- Warn Status:** Pack OV, Cell OV, Pack UV, Cell UV, Charge OC, Discharge OC, Temp Anomaly, MOS OT, Charge OT, Discharge OT, Charge UT, Discharge UT, Low Capacity, Other Error.
- Protect Status:** Pack OV, Cell OV, Pack UV, Cell UV, Charge OC, Discharge OC, Temp Anomaly, MOS OT, Charge OT, Discharge OT, Charge UT, Discharge UT, Float Stopped, Discharge SC.

8. El "Estado de comunicación" ahora cambiará de "Sin conexión" a "Conectado". El sistema ahora monitoreará los valores de la batería en tiempo real.

The screenshot shows the BMS\_TOOLS V1.0 interface after monitoring has started. The 'Stop Monitoring' button is now visible at the top right. The interface is updated with the following data:

- Model Information:** Com State is 'Online' (green background), Model is 'LFP-51.2V100AH-V1.0', Version is '202T15', and SN is '2023-10-13'.
- Battery Information:** Status is 'Standby', Heater is 'Heat off', SOC is '99', % SOH is '100', Voltage is '53.86', Current is '0.00', Capacity is '100', AH Remain C is '99', Max Vol is '3.370', Min Vol is '3.365', Vol Diff is '0.005', Max C-C is '5', Max Temp is '35', Min Temp is '35', Temp Diff is '0', and Cell Num is '16'.
- Temperature Information(°C):** PCB Temp is '35', Ambient Temp is '34', Temp01 is '35', Temp02 is '35', Temp03 is '35', and Temp04 is '34'.
- Voltage(V):** Cell01: 3.367, Cell02: 3.369, Cell03: 3.368, Cell04: 3.366, Cell05: 3.366, Cell06: 3.366, Cell07: 3.365, Cell08: 3.367, Cell09: 3.365, Cell10: 3.367, Cell11: 3.366, Cell12: 3.366, Cell13: 3.366, Cell14: 3.370, Cell15: 3.366, Cell16: 3.368.
- Error Status:** Voltage Error, Temperature Error, Current Error, Cell Unbalance.
- Warn Status:** Pack OV, Cell OV, Pack UV, Cell UV, Charge OC, Discharge OC, Temp Anomaly, MOS OT, Charge OT, Discharge OT, Charge UT, Discharge UT, Low Capacity, Other Error.
- Protect Status:** Pack OV, Cell OV, Pack UV, Cell UV, Charge OC, Discharge OC, Temp Anomaly, MOS OT, Charge OT, Discharge OT, Charge UT, Discharge UT, Float Stopped, Discharge SC.