2~24S 3A/4A Intelligent Battery Equalization Instrument Operation Instructions

(1990)

Heltec Energy

1. Introduction

This product is applicable for 2-24S lithium batteries (NCM, LFP, LTO, or batteries with nominal voltage between 2V and 4.5V). The balanced voltage is automatically recognized as the lowest series voltage. It can automatically recognize the number of strings of battery pack.

There are alarms for reverse connection, over voltage (4.5V), and low voltage (2V). When equalization is done, it will automatically stop working and alarm.

The equalization instrument uses constant resistance discharge method, with a constant resistance value of 1 ohm. The maximum balance current of NCM can reach 4A, and the maximum balance current of LFP can reach 3A.

The single-string battery input interface has voltage resistance (-100V~+100V), and the external power supply is 12V 5A.

2. Display Content

- Voltage of each cells;
- The total voltage;
- The average voltage;
- The maximum voltage;
- The minimum voltage;
- The maximum voltage difference;
- The balanced voltage;
- Number of strings of the battery pack cells.

3. Operation Steps

1. Power on the instrument.
2. Wire the batteries according to the sequence of markings on the instrument or wiring board.
3. Check if the voltage and cell numbers displayed on the screen are correct. If not, check the wiring and battery again.

4. Start the equalization and check if the balance voltage is correct. After the equalization is completed, the instrument will automatically stop.

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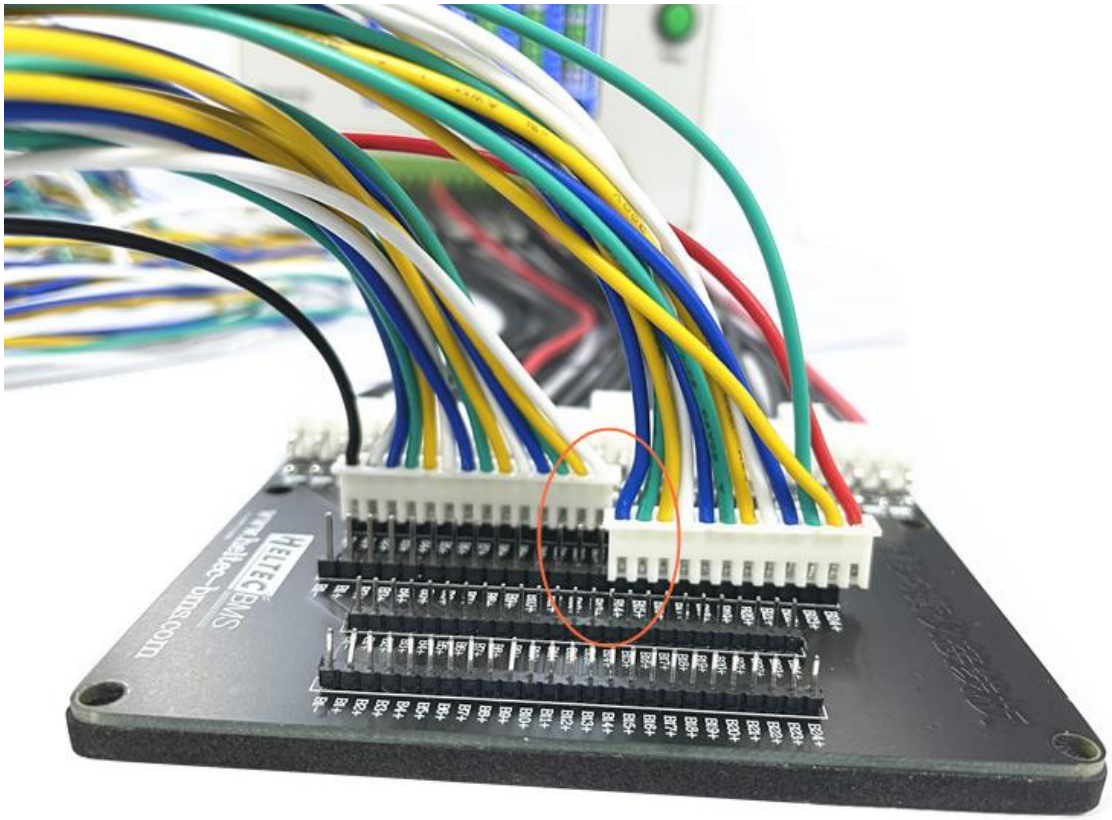
*Note:

The wiring board has markings of sequence on it. Please note that repeated connection of the same pin will form a short circuit and damage the battery and instrument!



4. Battery Maintenance Steps

1. There is a faulty battery cell: replace the cell - fully charged - balance - fully charged - battery maintenance is completed.

2. There is no faulty battery cells: fully charged - balance - fully charged - battery maintenance is completed.

3. If one time equalization cannot achieve the desired effect, it can be repeated

multiple times for better results.

5. Attention

1. Due to the large balancing current, the wires should be thick enough, otherwise it may burn out or cause other problems.
2. B - refers to the negative pole of the battery pack, B1 is the first string from the negative pole, and it is prohibited to connect more batteries during equalization.
3. When balancing, please be careful not to touch the battery with the wires disconnected and do well insulation protection.
4. Please kindly confirm the multiple times before connecting to the instrument.

6. Packing List

*Note: the green wiring board has changed to black appearance.