

Lead Acid Battery Equalizer Specifications

Heltec Energy

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1. Introduction

The battery equalizer is used to maintain the charge and discharge balance between the batteries in series or parallel. During the working process of batteries, due to the difference in chemical composition and temperature of the battery cells, the charge and discharge of every two batteries will be different. Even when the cells are idle, there will be an imbalance between cells in series due to varying degrees of self-discharge. Due to the difference during the charging process, one battery will be overcharged or over-discharged while the other battery is not fully charged or discharged. As the charging and discharging process is repeated, this difference will gradually increase, eventually causing the battery to fail prematurely.

2. Specifications

12V With LCD	
24V No Display	24V With LCD
48V No Display	48V With LCD

3. Product Basic Information

Brand Name:	HeltecBMS
Material:	PCB board
Origin:	Mainland China
MOQ:	1 pc
Battery Type:	Lead acid battery
Balance Type:	Energy Transfer / Active Balancing

Package:	Anti-static bag, anti-static sponge and corrugated case.
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4. Working Principle

This battery equalizer is an energy transfer equalizer that can compensate the battery in both directions. When the voltage difference between the batteries connected in series exceeds 50 mV, the battery equalizer starts to work, and the current will flow from the higher voltage battery to the lower voltage one. The low battery will eventually balance the battery. It can be connected to the battery connected in series for a long time to automatically maintain the battery balance without maintenance.

5. Model Selection

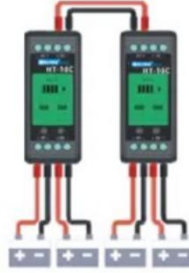
Model	HT-10C	HT-HA01 / HT-HC01	HT-HA02 / HT-HC02
Display Method	LCD	No/LCD	No/LCD
Working Voltage	12V	2*12V	4*12V
Optimizing Current	0-10A	0-5A	0-10A
Standby Current	10mA	≤3mA	≤5mA
Working Temperature	-20° C ~ 55° C		
Connection Method	Parallel Connect or Series Connect		
Multi-module parallel connection	Support		
Product Size (mm)	85*75*30	70*70*27	62*124*27
Product Weight	160g	111g	121g

6. HT-10C Wiring Diagram

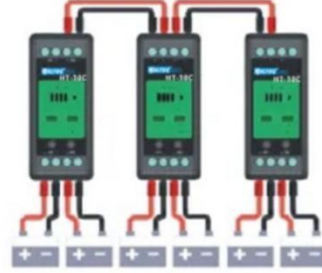
① 2PCS Batteries Connect



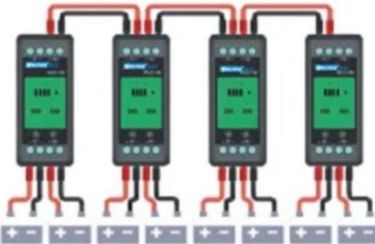
② 4PCS Batteries Connect



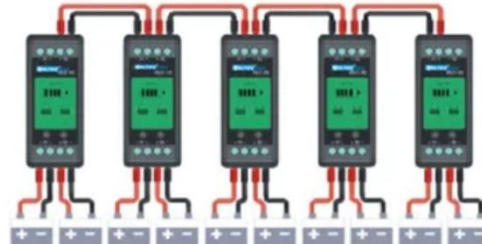
③ 6PCS Batteries Connect



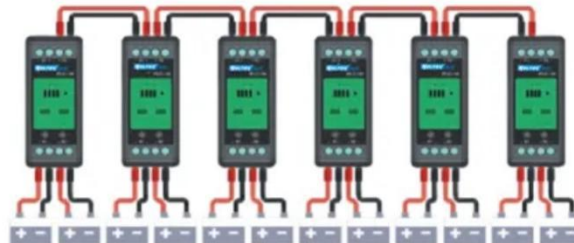
④ 8PCS Batteries Connect



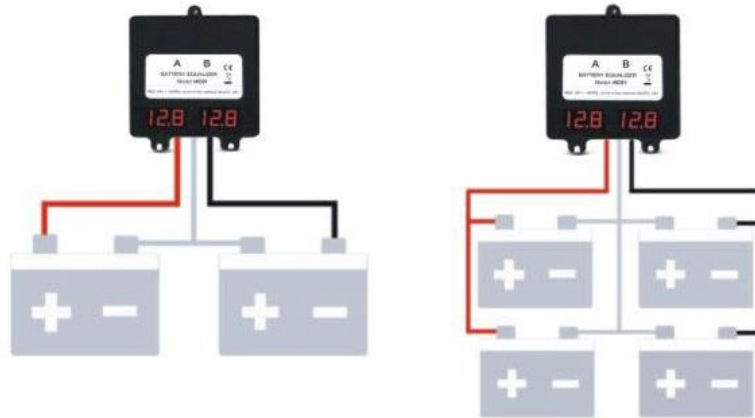
⑤ 10PCS Batteries Connect



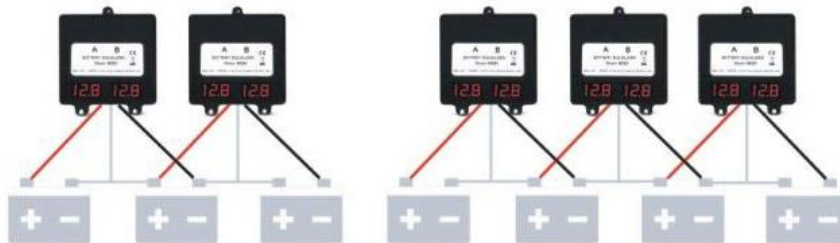
⑥ 12PCS Batteries Connect



7. HT-HA01/HA02/HC01/HC02 Wiring Diagram



24V Battery



36V Battery

48V Battery

8. Note

- Each equalizer corresponds to two batteries. The two batteries must be of the same type. Different battery capacities or new and old batteries will affect the effect of the battery equalizer.
- Multiple battery equalizers can be used in parallel to solve the voltage balance of multiple batteries in the battery pack. In theory, countless batteries can be connected in parallel.