

Overview

- ◆ What is the most important factor that determine the efficiency and lifespan of the battery pack? Why the battery is easy to be over charged or over discharged? Why the capacity decreases quickly?
–Battery consistency
- ◆ How to keep the batteries in good consistency always?
BMS has balance function. But it is known to us all most BMS in the world balance performance is not satisfactory.
Let' s GNE active battery balancer help you!
GNE(**Green New Energy Co.,ltd**) is a researching team who are keen on electronics, new energy industry for nearly 15 years. We got **invent patent** of USA and China for the key technology on battery management solution in year of 2015. This product is invented by us and produced by us **ONLY** in the world.
- ◆ **Using the balancers, keep all the batteries voltage within 10Mv
Prolong the lifespan of your battery 2~3 times!**

4S balance module



1S single balancer



GNE active battery balancer specification

LiFePo4 pack

Li-cylindrical battery pack



Lithium polymer pack

2V 6V 12V lead acid battery(



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Key features

- ◆ 24 hours working
- ◆ Dynamic equalizing
- ◆ Energy transfer
- ◆ Maintenance and recovery
- ◆ Sharing capacity
- ◆ Simple installation
- ◆ Independent
- ◆ High safety
- ◆ High efficiency
- ◆ High accuracy
- ◆ Low consumption
- ◆ Flexible

More details about the features

1 24 Hours working

balance during charge, discharge, and storage

2 Dynamic equalizing

Prevent batteries out of balancing all the time

3 Energy transfer

Transfer energy from higher voltage cells to the lower ones

4 Maintenance and recovery

Keep normal batteries at good condition, recover the backward ones

5 Sharing capacity

The power will flow from one cell to another and share them among all the cells

6 Simple installation

Connect the balancers together and then connect to battery+ and battery-

7 Independent

No affect to battery pack wiring, no impact to charging or discharging



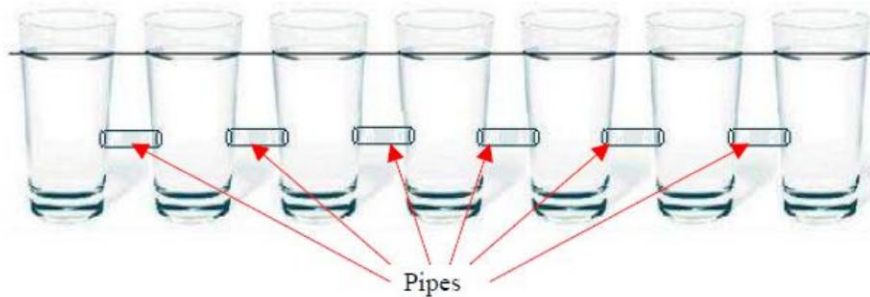
How is the balancer working?

This diagram tell you how the balance work.
Each battery is compared to a cup. Each balancer is like a pump.
with the pumps, all the cups will have the same level of water.

The water level in each is different



**But when the cups are connected with pipes,
the water level of each cup is become the same**



Main technical parameters

Battery capacity limited	20ah~1000ah lithium
Battery count limited	2~unlimited Over 1000V At least balance 2 cells
Battery type limited	battery;Lifepo4,LiMnO4 etc AGM,Gell,Flooded battery and so on
Working voltage	2V~5V
Power consumption	<50mW
Balance method	Energy transfer &Dynamic
Acceptable Constant balance current	6A
Peak balance current	10A
Voltage difference after using the balancer	<10mv
Working efficiency when balance current is 1A	>94%
working temperature	-40~+80°C
storage temperature	-40~+100°C
BMS limited	can work with BMS Or can work independently

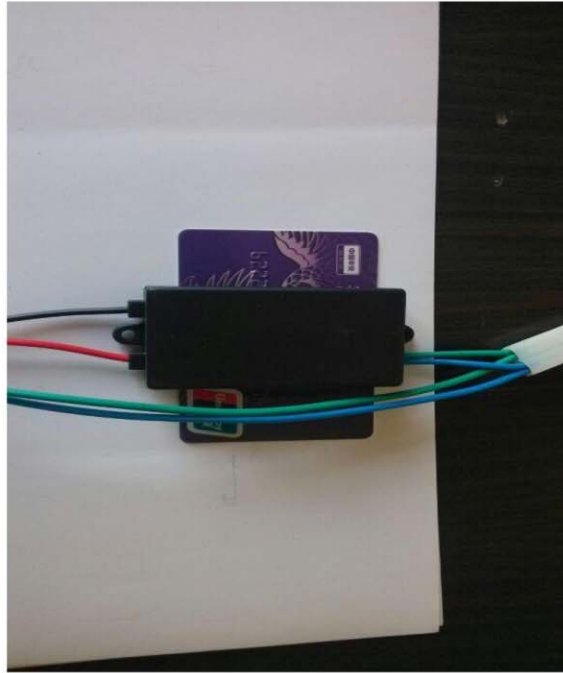


Size and weight



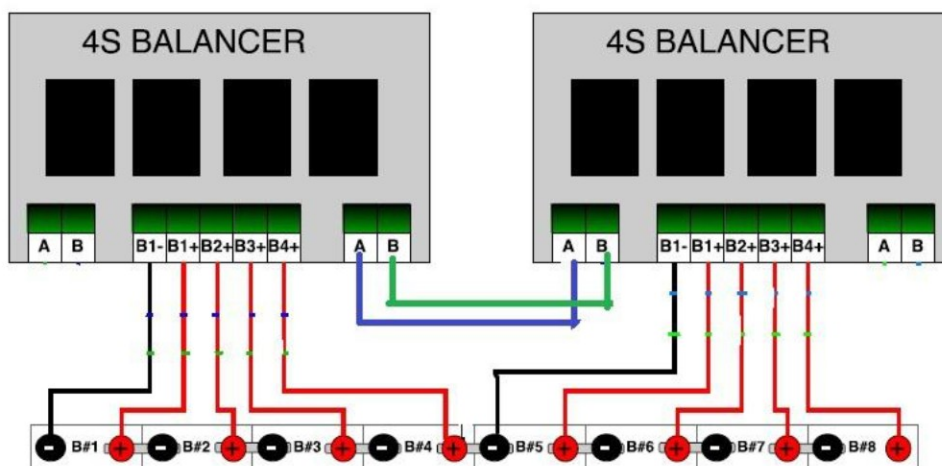
4S module size:150L*70W*20H(mm)
Besides 4S,we have 5S,6S,8S modules for options.
Net weight:0.3KG

GNE active battery balancer specification



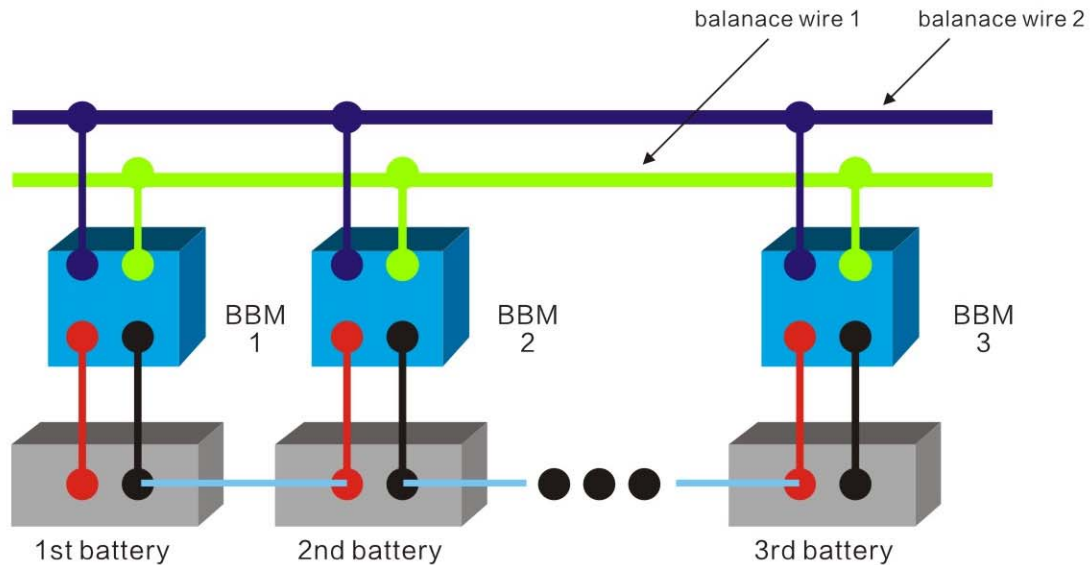
1S single balancer size:85L*40W*25Hmm
Net weight:0.1KG

Wiring



With GNE active balancer, keep all the batteries voltage within 10mV. Prolong the lifespan of your battery 2~3 times!

battery balancer module (BBM) wiring diagram



Warning:

Connect the balancers together first.
And then connect to batteries.
Don't do it oppositely.

If the modules or cells become warm or hot disconnect the modules from the pack.

User Attention

First,if you order 1S balancers,we have **20cm** wires on the balancers with **M8** terminals as default.

If you need other size of terminals and different length of wires,please tell us.
If you order balance modules,**no terminals or wires**.

Second,The balance power consumption is less than 50mW.

If you don' t use the battery for over 2months,please either disconnect the balancers, or recharge the battery once a month or once two months.
Recharging the batteries occasionally is better for your batteries as well.

Third,we have wiring diagram on the balance modules. Don't make any mistakes. If you are unsure of installation,please contact our sales person.
we will be glad to help you.

Here are several ways of making a judgment where you install them correctly or not.

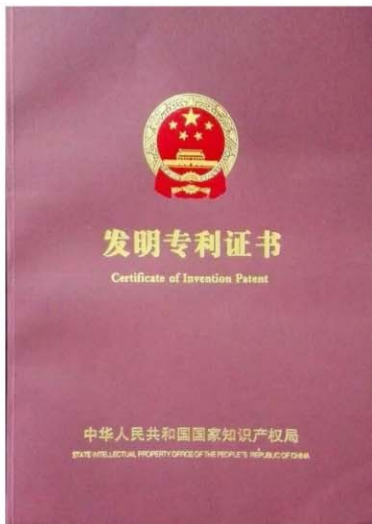
1,Measure voltage of the batteries with a multi-meter after you finish installation. See if all the batteries voltage is normal or not.

2,Touch the batteries.if any battery get hot quickly,disconnect the balancers soon.this means you install them in the wrong way.If you find the mistake in a few minutes,the battery won' t be broken.

3,Listen. If the balancers are connected correctly,they will produce a high-frequency voice.the voice is small.you need to get close to the balancers.The more balanced the batteries are,the smaller the balance current it will have,and the smaller voice there will be.and vice versa. if you connect them in wrong way,you can' t hear any voice.



We get United State patent and China patent .



Application

- 1) **Power battery:** electric car,/bus/scooter/truck/golf cart /boat and so on
- 2) **Storage battery:** storage power station,wind power,solar power and so on
- 3) **Communication power:** communication base stations, substations, etc.



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