



# NEEY balancer

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## Product Manual

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# ABOUT US 关于我们

NEEY Technology Co., Ltd. is a lithium(Li-ion/LiFePO4) Battery Management System(BMS) supplier and manufacturer integrating research & development, production, sales and service.

We have our own subsidiary company/factory, with an annual output value of over 100 million dollars, annual shipments exceeding 1 million units, and 30+ patents and inventions in the market.



## CERTIFICATE DISPLAY

NEEY Technology Co., Ltd



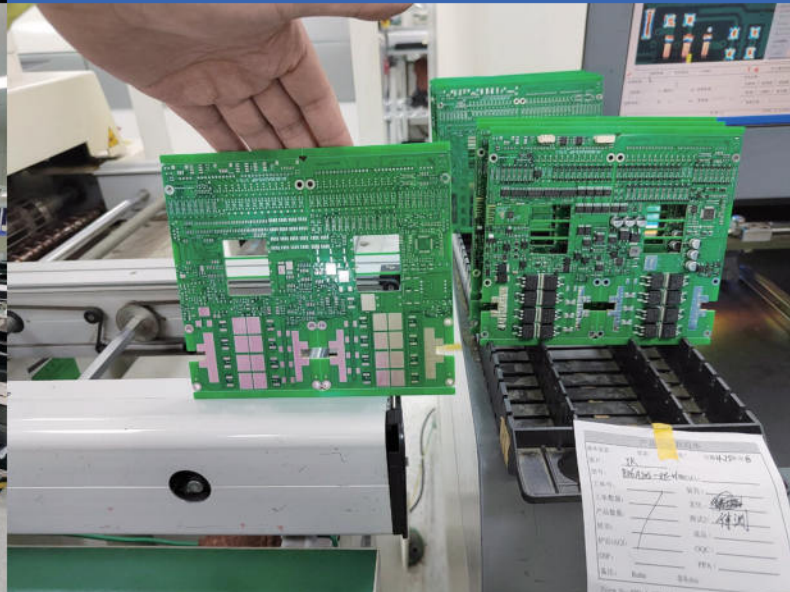
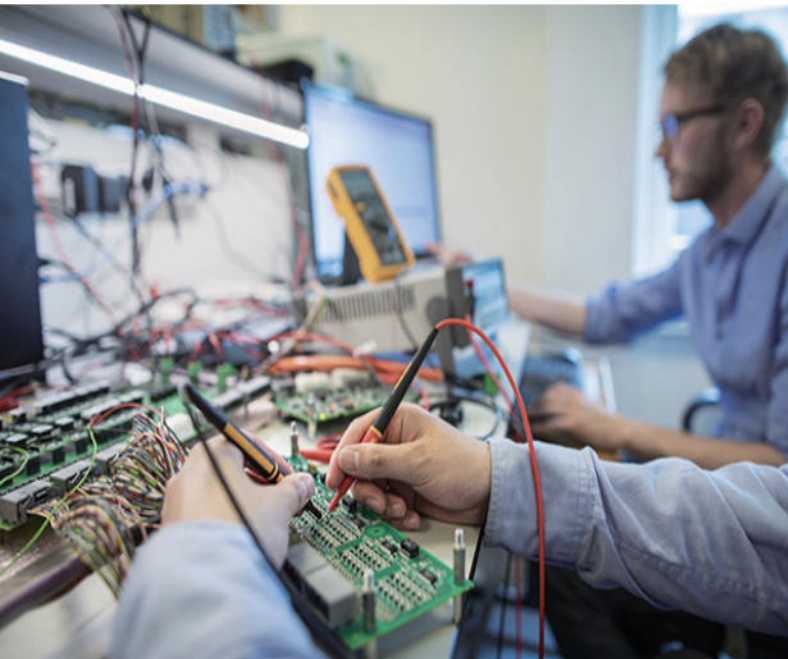
The products have CE/FCC/Rohs Quality Management System and NEEY brand patent certificate. NEEY brand products are exported to Europe, America and Southeast Asia...More than 130 countries.

# OEM/ODM

**Supports multiple customized services such as appearance, parameters, APP, functions, accessories, etc.**



**NEEY gathers a number of leaders in the field of lithium battery BMS research and development, with rich theoretical knowledge and practical experience in the fields of electronics, software, communication, structure application, quality control, technology, materials, etc. They lead NEEY to constantly overcome difficulties and create higher quality BMS**



# NEEY balancer

## Enjoy The Security Of Intelligent BMS



View battery information



Active equalization



Store battery data



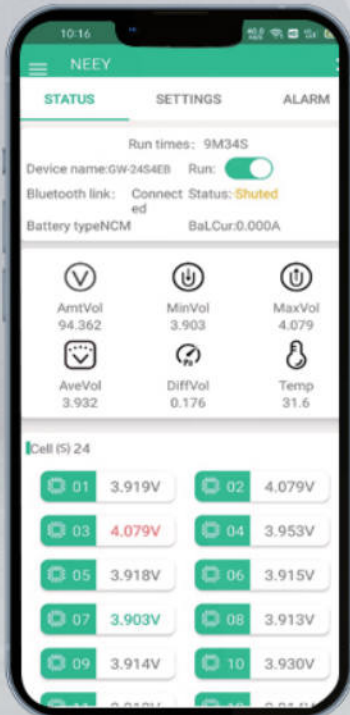
Support Android IOS system



Bluetooth APP SMART BMS

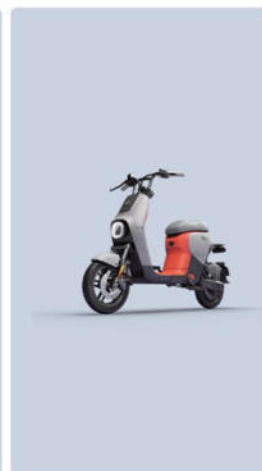
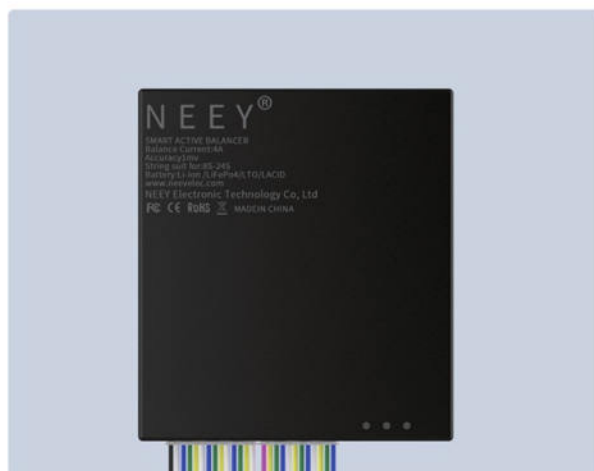


Support 7 languages



1. Competitive factory offer.
2. Hot-selling & famous brand: positive feedback with 5 stars.
3. Support Bluetooth, Android app and IOS system.
4. EU and USA overseas warehouse: fast shipment.
5. Active equalization technology
6. Models alternative from 2s to 24S.
7. Customization: logo, shell color, outer packing.

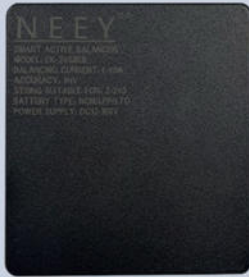
## APPLICATION SCENARIOS



## NEEY 24S4EB(24S4A)

|                                             |                                                                                                                                                                                                                                    |               |        |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|
| Adapt String                                | 8S~24S                                                                                                                                                                                                                             | 8S~17S        | 4S~10S |
|                                             | Already                                                                                                                                                                                                                            | will be soon. |        |
| Adapt battery type                          | NCM /LFP /LTO (Li-ion/Lifepo4/LTO)fully compatible                                                                                                                                                                                 |               |        |
| power supply                                | The minimum total voltage of battery pack is greater than 30V.<br>Recommended values: Li-ion battery≥10S, Lifepo4 battery≥12S, LTO battery≥20S<br>if the battery pack voltage is lower than 30V. external power supplv is required |               |        |
| Monomer voltage<br>operating range          | 1.0~4.5V                                                                                                                                                                                                                           |               |        |
| Voltage balancing<br>accuracy               | Accuracy:+1mV(voltage measurement accuracy), +1mV(voltage equalization accuracy)<br>This product is calibrated by Keithley DMM7510                                                                                                 |               |        |
| Balance mode                                | Patented Balanced Architecture flies across capacitors to achieve efficient balancing in<br>conjunction with point-to-point energy transfer algorithms.                                                                            |               |        |
| Balance current                             | APP custom settings:1-4A, because of constant current and constant voltage technology.<br>The balanced current is independent of the battery pressure difference.                                                                  |               |        |
| Drop-off detection                          | support                                                                                                                                                                                                                            |               |        |
| Undervoltage<br>protection sleep<br>voltage | Undervoltage dormancy voltage can be set by APP customization: 1.54.2V                                                                                                                                                             |               |        |
| Static working current                      | Balance off 10mA Balance on 25mA                                                                                                                                                                                                   |               |        |
| Product Size (MM)                           | L140W128*T22                                                                                                                                                                                                                       |               |        |
| Working environment<br>temperature          | -20C~+55C                                                                                                                                                                                                                          |               |        |
| s External Power<br>Required                | No need for external power supply,<br>relving on the internal energy transfer of the battery to achieve overall balance                                                                                                            |               |        |

## APPLICATION SCENARIOS



## NEEY 24S8/10EB(24S8A/10A)

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Adapt String                                | NEEY-24S8A/NEEY-24S10A                                                                                                                                                                                                                                                                                                                                                                                                              |
| Number of Battery Strings                   | 2S-24S                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Cascade                                     | Support Cascade                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product size                                | L156 x W144 x T20 (mm)                                                                                                                                                                                                                                                                                                                                                                                                              |
| Reverse polarity protection                 | Support disorderly power on detection/protection                                                                                                                                                                                                                                                                                                                                                                                    |
| External power supply /battery power supply | DC 12~100V                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Support battery types                       | Li-ion / Lifepo4 / LTO                                                                                                                                                                                                                                                                                                                                                                                                              |
| Working range of individual voltage         | 1.5V~4.5V                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Undervoltage protection sleep voltage       | Customizable settings for apps : 1.5~4.2V                                                                                                                                                                                                                                                                                                                                                                                           |
| Balancer method                             | Time sharing single channel transfer, point-to point energy transfer.                                                                                                                                                                                                                                                                                                                                                               |
| Balance Current                             | Customizable settings for apps : 1~8A(NEEY-24S8A)/1~10A(NEEY-24S10A)                                                                                                                                                                                                                                                                                                                                                                |
| Voltage balancing accuracy                  | Customizable settings for apps : mV (Typical values)                                                                                                                                                                                                                                                                                                                                                                                |
| External power supply or not                | Battery powered ( $\pm 3\text{mV}$ ) , External power supply ( $\pm 1\text{mV}$ )                                                                                                                                                                                                                                                                                                                                                   |
| Power failure detection function            | Supports power down detection                                                                                                                                                                                                                                                                                                                                                                                                       |
| Wrong wire protection function              | Support for wrong wire protection function                                                                                                                                                                                                                                                                                                                                                                                          |
| Connected to fault alarm function           | Support for fault alarm function                                                                                                                                                                                                                                                                                                                                                                                                    |
| Buzzer                                      | Customizable settings for apps                                                                                                                                                                                                                                                                                                                                                                                                      |
| LED indicator light                         | Green - Power status indicator light; Normally on: The power supply is normal.<br>Blue - Bluetooth status indicator light; Always on: Successfully connected;<br>Blinking: Connection disconnected.<br>Yellow - working status indicator light; Everbright: Balanced completion;<br>Blinking: Balanced operation in progress.<br>Red - Fault status indicator light; Always on: Internal fault; Flashing: Battery detection failed. |
| Consumption                                 | ~ 1W when the equalization system is turned on<br>~0.5W when the equalization system is turned off                                                                                                                                                                                                                                                                                                                                  |
| Ambient Temperature                         | -20° to 45°                                                                                                                                                                                                                                                                                                                                                                                                                         |

## APPLICATION SCENARIOS



## NEEY 24S15EB(24S15A)

|                                      |                                                                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model Number                         | NEEY-24S15EB                                                                                                                                          |
| Adapt String                         | 2S~24S                                                                                                                                                |
| Adapt battery type                   | NCM/LFP/LTO(Li-ion/Lifepo4/LTO) fully compatible                                                                                                      |
| Monomre voltage operating ranger     | 1.0~4.5V                                                                                                                                              |
| Reverse polarity protection          | Support disorderly power on detection/protection                                                                                                      |
| Is External Power Required           | Battery powered (accuracy 3mV); External power supply (accuracy 1mV)(DC 12-120V),                                                                     |
| Cascade                              | Support Cascading                                                                                                                                     |
| Balancer method                      | Time sharing single channel transfer, point-to-point energy transfer.                                                                                 |
| Balance current                      | Patented Balanced Architecture flies across capacitors to achieve efficient balancing in conjunction with point-to. point energy transfer algorithms. |
| Voltage balancing accuracy           | Customizable settings for APP: 1mV (typical value)                                                                                                    |
| Balance current                      | APP custom settings:1A-15A                                                                                                                            |
| Drop-off detection                   | Support                                                                                                                                               |
| Wrong wire protection                | Support                                                                                                                                               |
| Fault alarm function                 | Support                                                                                                                                               |
| Undervoltage protection sleepvoltage | Undervoltage dormancy voltage can be set by APP customization: 1.5-4.2V                                                                               |
| Static working current               | 1W when the balance system is turned on, 0.5W when the balance system is turned off                                                                   |
| Bluetooth function                   | Support Android and IOS                                                                                                                               |
| Product Size (MM)                    | L313 x W193 xT43 (mm)                                                                                                                                 |
| Working environment temperature      | -20°C~+45°C                                                                                                                                           |