EASY BATTERY
6 kWh 24 V / 48 V

INSTRUCTION MANUAL

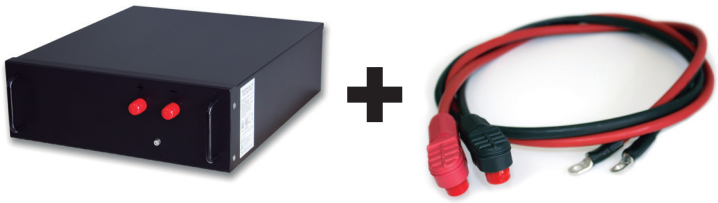
TERREPOWER
A BBB Industries Company

MANUAL EASY BATTERY 6 kWh 24V / 48V

It is mandatory to read this manual before installing the battery.
Version 1.0

This manual presents the batteries **Easy Battery 6 kWh 24 V / 48 V** with CATL NMC Pouch cells.
Read this manual before attempting to install the battery and follow the instructions carefully during the installation process.
If you have any questions, please contact your dealer immediately for advice and clarification.

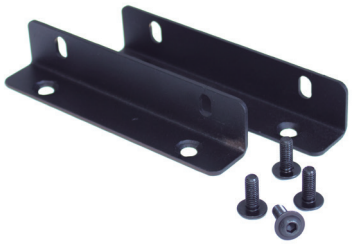
INCLUDED IN BATTERY



•Battery

•Connecting cables

NOT INCLUDED IN BATTERY



• Rack cabinet mounting kit (sold separately)

INDEX

1. Introduction

The Easy Battery lithium battery is a product of **TerrePower** for energy storage, manufactured in Spain.

Easy Battery 6 kWh is manufactured in 24V and 48V. It is specially designed for both off-grid and grid-connected photovoltaic applications.

Easy Battery includes a management system (BMS) for the cells that make up the battery, this BMS is configured and it is strictly forbidden to modify the configuration (it can cause irreparable damage to the lithium ion cells).

This battery is compatible with the inverters that can be configured the working voltages. (Operating range 24 V: 23.75 - 30 Vdc ; 48 V: 47.50 - 60 Vdc)

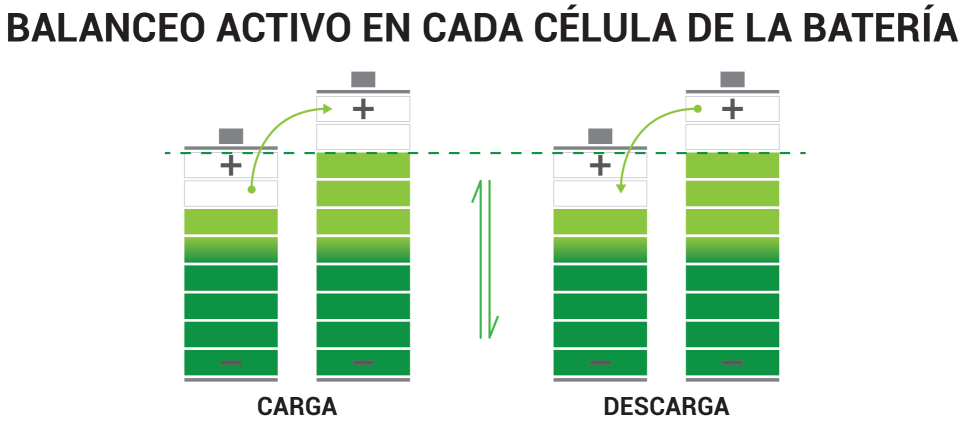
1.1 Characteristics

The case is made of high quality cold rolled steel in black color.

Each unit is delivered with 2 handles, 1.5 meter red and black 25mm copper cable set[2] with quick connectors for connection to the battery and 25/8 copper terminal.

Lithium ion cells **CATL** type **Pouch NMC** are used, which are characterized by high power and a very high cycle life.

The battery management system (BMS) has protection functions for over-discharge, over-charge, over-current and high/low temperature.



Ecualiza activamente la energía de las células para garantizar la consistencia de la batería y alimentar la vida útil

The system automatically manages the charging and discharging and balances the voltage of each cell.

Easy Battery is delivered with the BMS configured and can work with several battery modules in parallel to expand capacity. In order to install multiple batteries in parallel it is important that you contact your distributor for installation instructions. The Easy Battery can only be configured in parallel with other units of the same model and voltage.

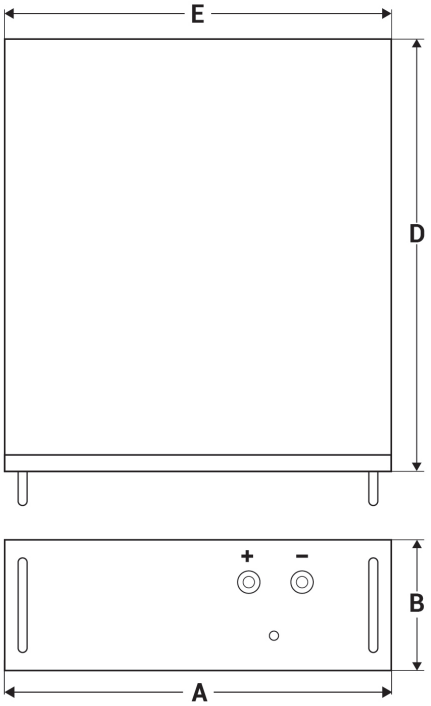
The module has a very low self-discharge, up to 6 months without charging; no memory effect, excellent charge-discharge performance; the working temperature range is -10° to 45°.

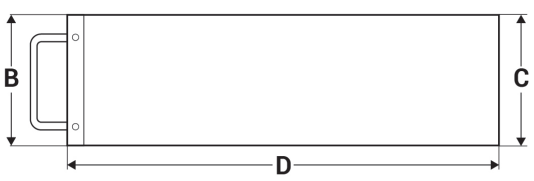
The battery has a standard 19" rack cabinet size.

1.2 Specifications and dimensions

Main parameters	Easy Battery 6 kWh 24 V	Easy Battery 6 kWh 48 V
Capacity		6 kWh
Current	240 Ah	120 Ah
Nominal Voltage	25.55 Vdc	51,1 Vdc
Operating Voltage Range	23,75 - 30 Vdc	47,50 - 60 Vdc
Maximum charge or discharge current		125 A
Maximum power	3000 W	6000 W
Life expectancy		>10 years
BMS technical data	Protections: •Active Balancing • Vmax / Vmin	• Short circuit • Imax • Temp
Operating temperature		-10ºC to 45ºC
Optimal temperature		0ºC to 30ºC
Humidity		<85%
Dimensions (mm) L x W x H		430 x 480 x 145
Rack mounting		4U horizontal with handle
BMS communication		Bluetooth
Monitoring parameters by BMS	•System voltage and cell voltage •Current •Temperature	•Delta •Power •SoC •Load cycles
Positive and negative connection cables		Included
Certifications		CE, UN38.3
Warranty		3 Years 2 optional

Dimensions





•(H x B) 480 x 145
•(W x D x D) 430 x 480 x 145mm

1.3 Front panel

The battery connectors are connected by snapping and disconnected by pressing a **small button** on each connector.
To avoid damage to the connectors, **the circuit must be** open when is connected or disconnected to the battery

2. Installation diagram

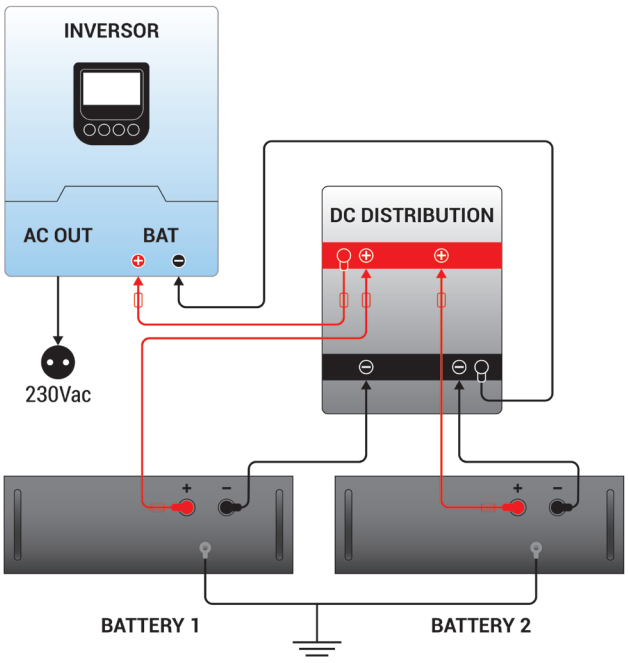
It is mandatory to use the battery with inverters that allow regulating the minimum cut-off voltage, also if it is a hybrid you will need to configure the charge voltages according to the model specification.

If solar regulators are used, these must not exceed the charge value indicated according to the model.

A wrong load configuration can cause the battery BMS to give a stop order and the battery will have to be serviced and restarted again.

A fuse must be installed between battery and inverter with the following characteristics:

Part number	422063
Manufacture	dF electric
DC cut-off current (A)	125
Interrupting capacity (kA)	80



2.1 Example of installation

3. Safety

1.	It is mandatory to read the battery instructions before use to avoid possible damage.
2.	Keep the battery away from high voltage and out of the reach of children.
3.	Before connecting make sure that the polarity is correct between the battery and the inverter or solar controller.
4.	Use safety equipment such as: •Insulating gloves. •Safety goggles. •Safety shoes.
5.	Use only cables with connectors in good condition.
6.	It is recommended to use 125A fuses and fuse holders.
7.	If the ambient temperature is outside the range indicated in section 1.2, the battery will stop working for safety reasons.
8.	Parallel connections of several batteries should be made using copper plates.
9..	The battery is shipped fully activated and ready for operation.
10.	Make sure that there is no short circuit in the external elements.
11.	The battery cannot be connected to the AC power supply directly.
12.	Connect the battery to ground.
13.	Make sure that the battery is compatible with external equipment.
14.	Keep the battery away from fire and water.
15.	The battery may only be connected in parallel with another battery of exactly the same type and voltage.
16.	Do not connect the battery with other batteries of different types or brands and models.
17.	Do not start the battery operation with defective or incompatible inverters.
18..	Tampering with the inside of the battery is prohibited.
19.	In case of fire, only dry powder fire extinguishers may be used, liquid extinguishers are prohibited.
20.	Do not open, repair, or disassemble the battery.
21.	Only **Easy Battery** personnel may repair the battery. We do not assume any consequence or related liability that is due to violation of safety operation or violation of design, production and equipment safety standards.
22.	If the battery is stored for a long time, it is advisable to charge it every six months.
23.	The battery must be recharged within 12 hours after complete discharge.
24.	Contact the supplier as soon as possible if you notice anything abnormal.
25..	Warranty claims are excluded for direct or indirect damage due to the above items.
26.	During handling, be very careful to avoid knocks/drops to the battery.
27.	Be careful not to touch the two contacts at the same time, there may be a risk of electric shock.
28.	The battery, at the end of its useful life, requires a process of valorization, do not disassemble it.
29.	Avoid to locate the batteries in humid places to avoid risks.
30.	If the battery has liquid leaks, avoid the contact with this one totally.

4. Installation

When installing the batteries **TerrePower 6 kWh 24v/48v**, the charge/discharge parameters to be entered in the inverters and regulators, as well as the temperature values **(see section 1.1)** must be taken into account.

The battery **EASY BATTERY 6 kWh 24v/48v**, has no communication with external elements and may require special configuration of these devices for operation.

Each battery power cable can carry a maximum of 125A.

- **With the 24 V system, the use of an inverter greater than 3000 W per battery is not recommended.**
- **With the 48 V system it is not advisable to use an inverter higher than 6000 W per battery.**

It is advisable to install the battery inside a 19" communication rack.
Install the battery in a place where it cannot fall and where there are no flammable or explosive materials nearby.

It is advisable to use 125 A fuses and fuse holders that cut off the power supply between the battery and external elements.

5. Connection to the BMS

In order to connect to the BMS and monitor the battery data, the app for mobile devices must be installed. Scan the QR code to download and install the app.

The QR code can be found on the battery packaging and below:

DOWNLOAD YOUR IOS APP

DOWNLOAD YOUR ANDROID APP

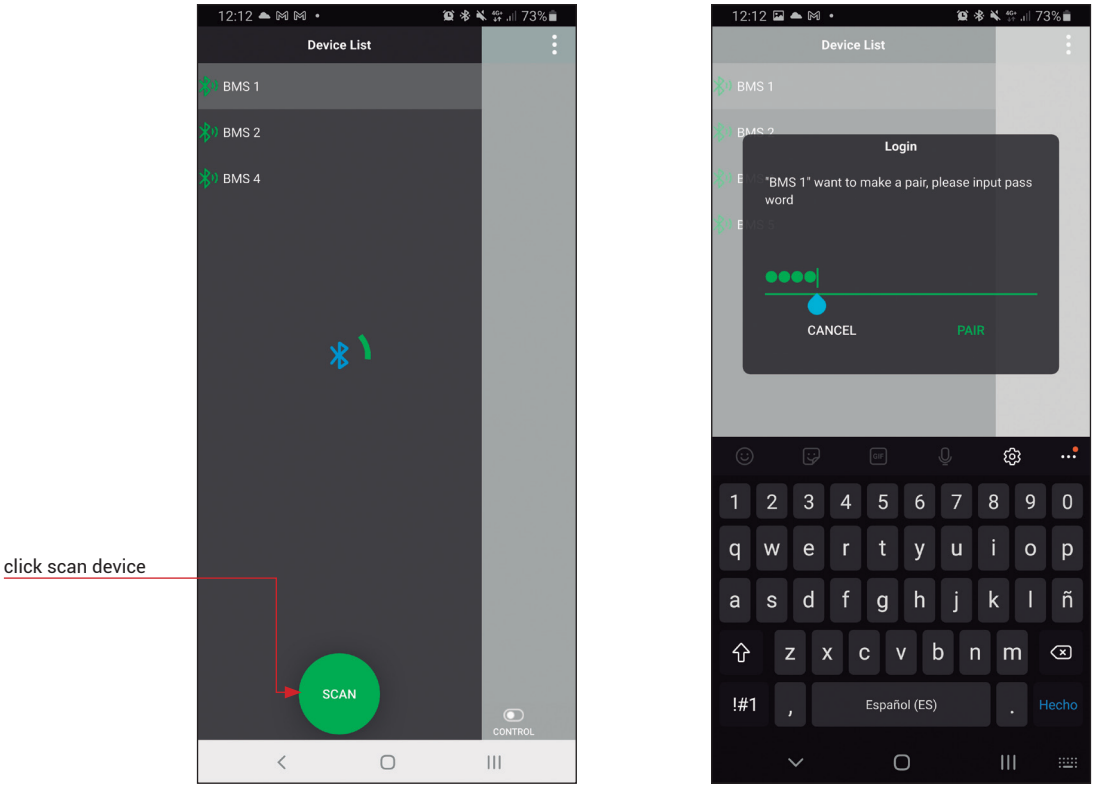
Connection:

First turn on the cell phone's **Bluetooth** and then open the app. It must be within a distance of less than 1 meter to connect.

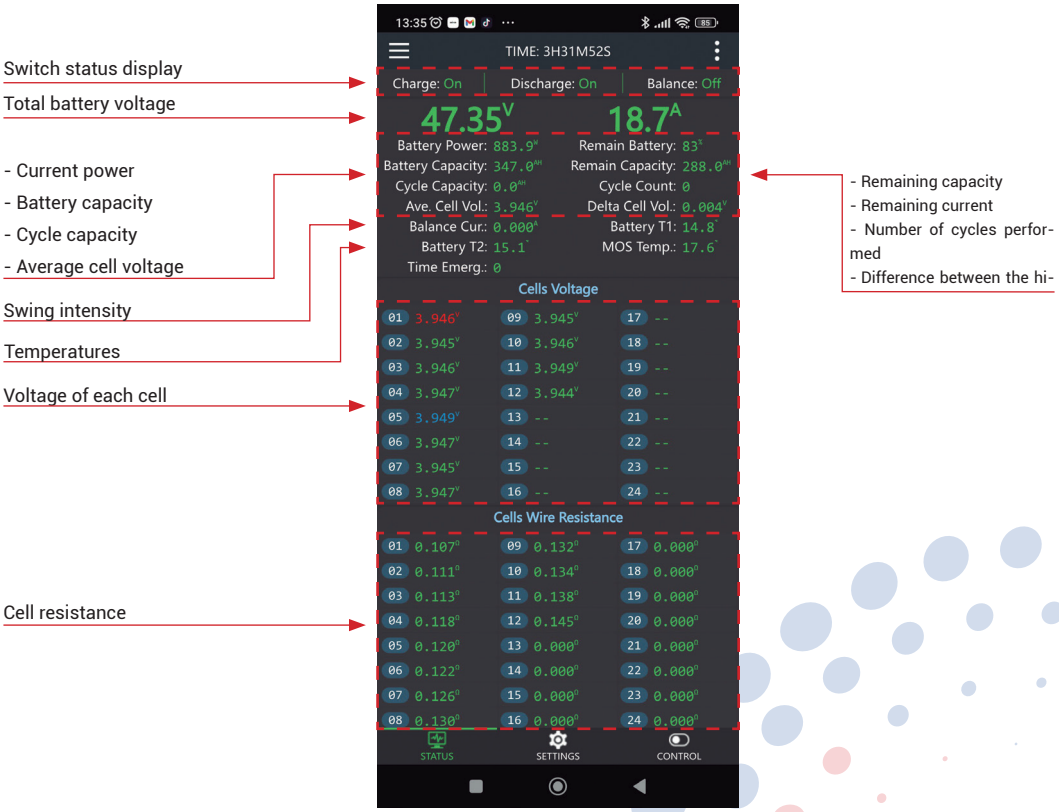
Click on the icon in the upper left corner to scan the device. The first time you connect to the APP, you will be prompted to enter a password. The default password for the device is **"1234".**

Once the device is connected to the application it will automatically register the password. You will not need to enter the password again the next time you connect.

Real-time Status interface



Control interface



6. Emergency situations

1. Leaking battery

If you detect a liquid leak, avoid contact. If you are exposed to the leaked substance, immediately perform the actions described below in each case:

- **Inhalation:** Evacuate the contaminated area and seek medical attention.
- **Eye contact:** Flush eyes with plenty of running water for 15 minutes and seek medical attention.
- **Skin Contact:** Wash affected area thoroughly with soap and water and seek medical attention.
- **Ingestion:** Induce vomiting and seek medical attention.

2. Fire

DO NOT USE WATER! Only dry powder fire extinguishers may be used; If possible, move the battery to a safe place before it catches fire.

3. Wet battery

If the battery pack is wet or submerged in water, do not allow anyone to access it and contact your installer or an authorized dealer for technical assistance.

4. Damaged battery

Damaged battery is dangerous and should be handled with extreme care. It would be unfit for use and may present a danger to persons or property. If the battery pack appears to be damaged, pack it in its original carton and then return it to your installer or an authorized dealer.

NOTE

Damaged batteries may leak electrolyte or release flammable gas. If such damage occurs, contact your installer or an authorized dealer.

7. Warranty

7.1 Warranty coverage

The warranty **TerrePower 6 kWh 24 V / 48 V**, has a 3-year warranty against manufacturing defect.
TerrePower warrants that the product is free from defects caused by workmanship or materials.
The claim will always be made to the invoicing company.
The 3-year warranty starts from the purchase invoice and must be presented to Easy Battery's technical service.
The battery will be repaired if it presents any manufacturing defect.

The warranties with respect to the product only apply if:

1. It has the official serial number of **TerrePower 6 kWh 24 V / 48 V**.
2. Is properly installed.
3. Operates and is maintained in accordance with the instruction manual.
4. Used on a daily cycle and only for the energy storage system.
5. The purchase invoice is presented.

7.2 Limitation of Liability

Warranty would be inapplicable, if the defect or failure in product performance is attributable to misuse, abuse, accident or failure to comply with the conditions of the manual.
TerrePower may request complete product testing, photos and installation videos.
If you contest the verification of the claim by **TerrePower**, the product must be evaluated by an EU certified testing laboratory or a certified third party testing company. You will bear the cost of any expenses for the evaluation service.

If any verification of product capability is required, the test must be performed under the following conditions:

a) The ambient temperature of the Product must be -10 ºC to 45 ºC

b) The initial temperature of the cells must be 25 ºC ± 1 ºC

c) The Product must discharge power at 10 A measured from a 100% load capacity.

If the Product is no longer available, **TerrePower** may, at its discretion, replace the Product with a reconditioned one or different parts with equivalent functions and performance according to the latest available technical information.
TerrePower excludes all liability for the Product to the extent that any damage or defect has been caused or contributed to by the following:

1. Charger or inverter failure.

2. The product is installed with inverters or chargers that are not compatible.

3. You have treated the product improperly, negligently or in any other improper manner, including using the product outside the ambient temperature condition recommended by the instruction manual.

4. Improper transportation, including but not limited to dropping, trampling, deforming, impacting or piercing with a sharp object.

5. Abuse, misuse, neglect, accidents or acts of God, lightning, flood, fire, extreme cold or hot weather.

6. Any attempt to prolong or reduce the useful life of the product by physical, programming or other means.

7. Water, conductive dust or corrosive gas.

8. The product has been connected with battery modules of different types.

9. Failure to have the product in accordance with the instructions.

10. Normal wear, deterioration or surface defects, dents or marks that impact the performance of the product.

11.. Theft or vandalism of the Product or any of its components.