EASY BATTERY

10 kWh
48 V / HV

15 kWh
48 V

USER MANUAL

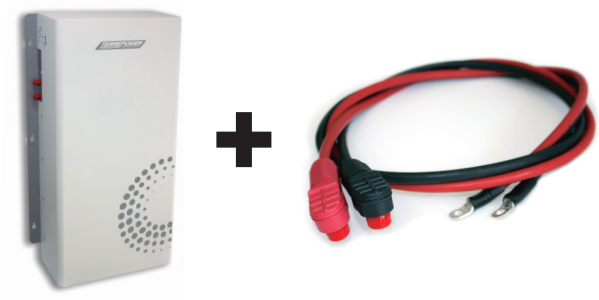
TERREPOWER
A BBB Industries Company

TERREPOWER EASY BATTERY 10 kWh / 15 kWh MANUAL

It is manadatory to read this manual before performing the battery installation.
Version 1.0

This manual details the **TerrePower Easy Battery 10 kWh 48 V / HV and 15 kWh 48 V** batteries with NMC Pouch type cells.
Please 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

•Screws wall anchor

INDEX

1. Introduction

The lithium batteries **TerrePower EASY BATTERY 10 kWh 48 V / HV and 15 kWh 48 V** are a project of **TerrePower** energy storage manufactured in Spain.
EASY BATTERY 10 kWh and 15 kWh are manufactured for 48 V systems and the **EB 10 kWh HV** is manufactured for 87V systems. They are specially designed for both off-grid and grid-connected PV applications.

Easy Battery has a built-in battery cell management system (BMS), this BMS is configured and it is strictly forbidden to modify the configuration (it may cause irreparable damage to the lithium-ion cells).

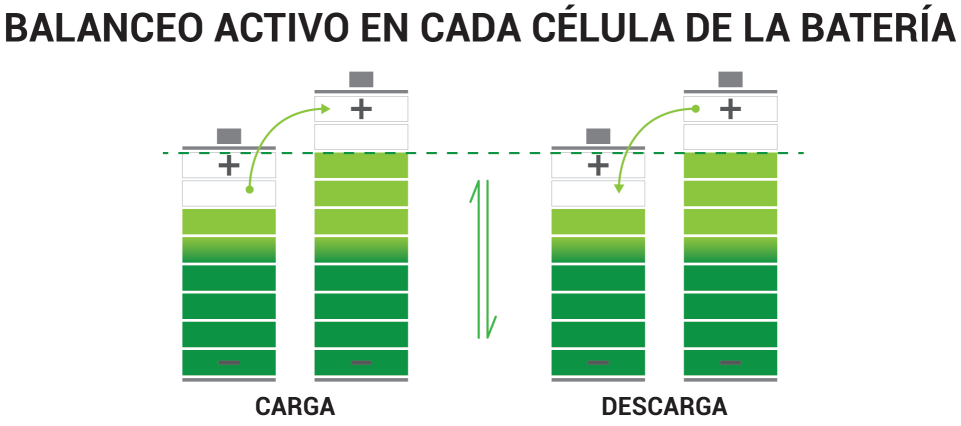
This battery is only compatible with inverters that can be configured the operating voltages (operating range EB 10 kWh 48 V and 15 kWh: 40 V to 50 V; operating range EB 10 kWh HV: 79.2 V to 101 V)

1.1 Features

The enclosure is made of high quality cold rolled steel in white color.
Each unit is delivered with a set of 1.5 meter red and black 35 mm copper cables^2 with quick connectors for connection to the battery and 35/8 copper terminal.

Lithium-ion cells, type Pouch NMC, are used, which provide a charge and discharge power of 125 A with a single module.
The battery management system (BMS) has protection functions for over-discharge, overload, short-circuit, over-current and high/low temperature.

The system automatically manages the charge-discharge status, balances the current and voltage of each cell;



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

The **Easy Battery** batteries are delivered with the BMS configured and several battery modules can be used in parallel to expand the capacity. In order to install several batteries in parallel it is important that you contact your distributor to follow the installation instructions.

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 -10º to 45º.

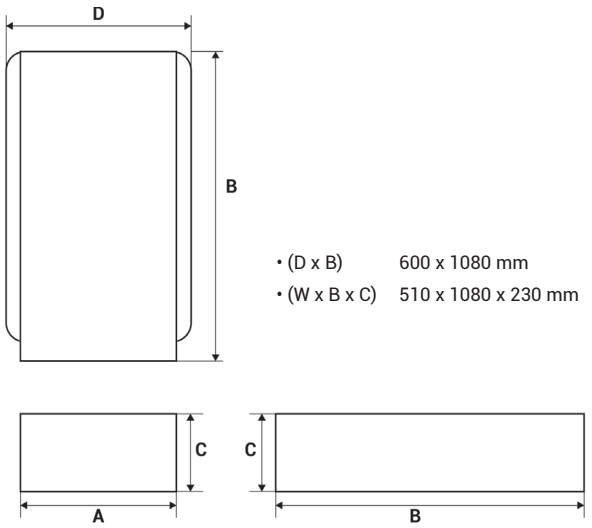
The dimensions of the battery **EASY BATTERY 10 kWh 48 V / HV** are 770x600x230 mm and those of the **EASY BATTERY 15 kWh** are 230 x 600 x 1080 mm.

1.2 Specifications and dimensions

Main parameters	Easy Battery 15 kWh	Easy Battery 48V 10 kWh	Easy Battery HV 10 kWh
Capacity	15 kWh (347 Ah)	10 kWh (231.2 Ah)	10 kWh (115.64 Ah)
Nominal Voltage		43.75 Vdc	87.5 Vdc
Operating voltage range		40 - 50 Vdc	79.2 - 101 Vdc
Maximum charge or discharge current			125 A
Maximum power		5000 W	9000 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	230 x 600 x 1080	770 x 600 x 230	
Mounting			Wall-mounted
BMS communication			Bluetooth
BMS monitoring parameters	•System and cell voltages Cell and system voltage and cell voltage •Current •Temperature •Delta •Power •SoC		
Positive and negative connection cables			Included
Certifications			CE, UN38.3
Warranty			10 years limited

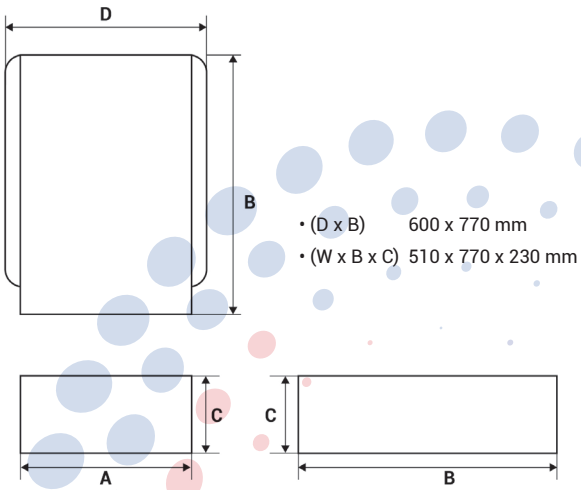
Dimensions

Easy Battery 15 kWh



- (D x B) 600 x 1080 mm
- (W x B x C) 510 x 1080 x 230 mm

Easy Battery 48V 10 kWh
Easy Battery HV 10 kWh



- (D x B) 600 x 770 mm
- (W x B x C) 510 x 770 x 230 mm

1.3 Front panel

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

2. Installation diagram

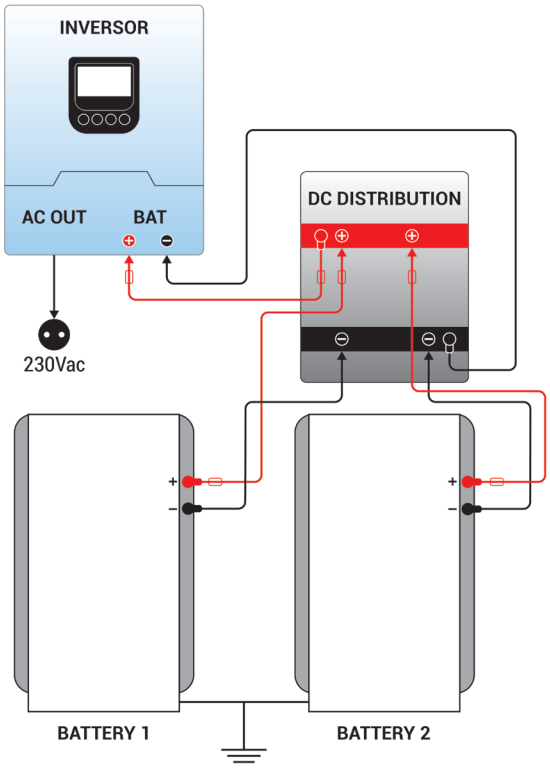
It is mandatory to use the battery with inverters that allow regulating the minimum cut-off voltage, also if it is a hybrid you will need to configure the charging voltages according to the model specification, (operating range 10 kWh 48 V: 40 V to 50 V; operating range 10 kWh HV: 79.2 V to 101 V; operating range 15 kWh: 40 V to 50 V).

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

An incorrect load configuration can cause the battery BMS to give a stop command and the battery must be serviced and restarted.

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

Part No.	422063
Manufacture	dF electric
DC cut-off current (A)	125
Interrupting capacity (kA)	80



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 regulator.
4.	Use safety equipment such as: •Insulating gloves •Protective goggles •Safety shoes
5.	Use only cables with connectors in good condition.
6.	It is advisable 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 by means of 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 AC power directly.
12.	Ground the battery.
13.	Make sure 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.	It is forbidden to connect the battery with other batteries of different types or brands and models.
17.	The battery must not be operated 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 both 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 valorization process, do not disassemble it.
29.	Avoid placing the batteries in humid places to avoid risks.
30.	If the battery has liquid leaks, avoid contact with it completely.

4. Installation

When installing the batteries **TerrePower Easy Battery**, the charge and discharge parameters to be entered in the inverters and regulators and the temperature values **(see section 1.1)** must be taken into account.

The batteries **TerrePower Easy Battery**, have no communication to the external elements and may require a special configuration of these devices for their operation.

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

•With 48 V systems, the use of an inverter higher than 6000 W is not recommended.
•With the 87 V system it is not recommended to use an inverter higher than 9900 W per battery.

Install the battery in a place where there is no risk of falling and where there are no flammable or explosive materials nearby.
It is recommended to use 125A fuses and fuse holders that cut off the power supply between the battery and external elements.
The battery charging and discharging can be activated or deactivated from the BMS app.

5. Connecting 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

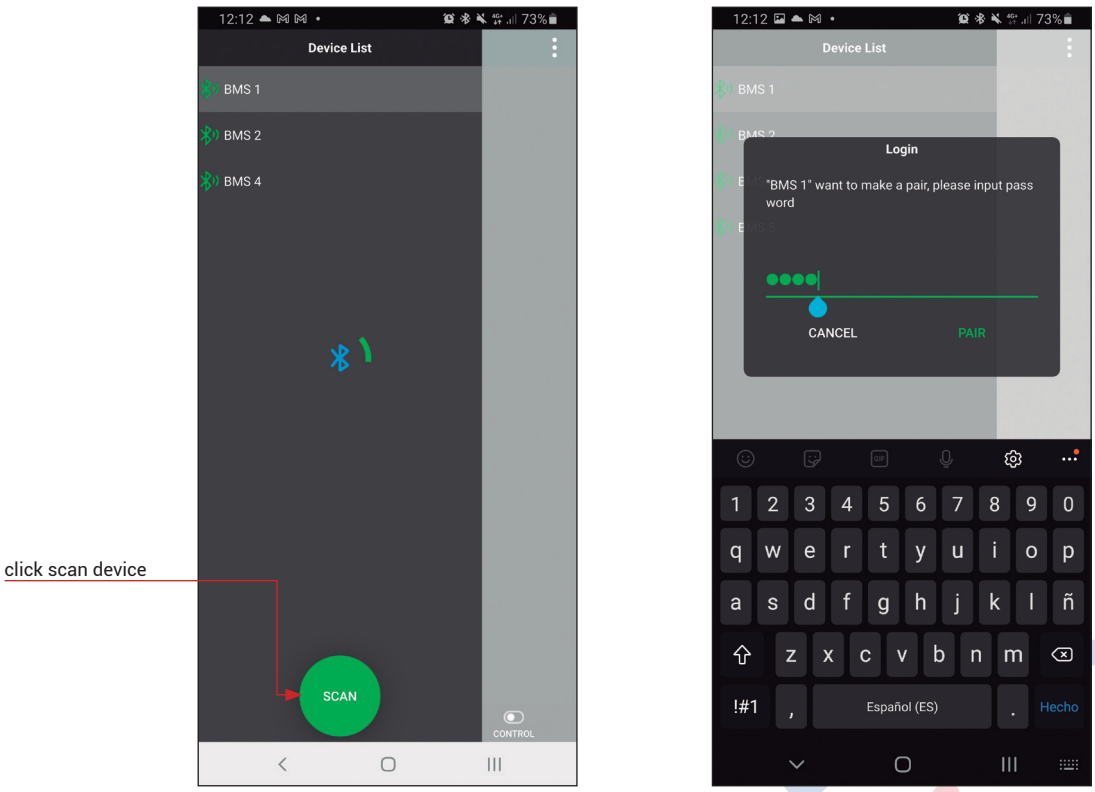
DOWNLOAD YOUR ANDROID APP

Connection:

First turn on the cell phone's **Bluetooth** and then open the app. It must be within 0.5 meters for it to connect.

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

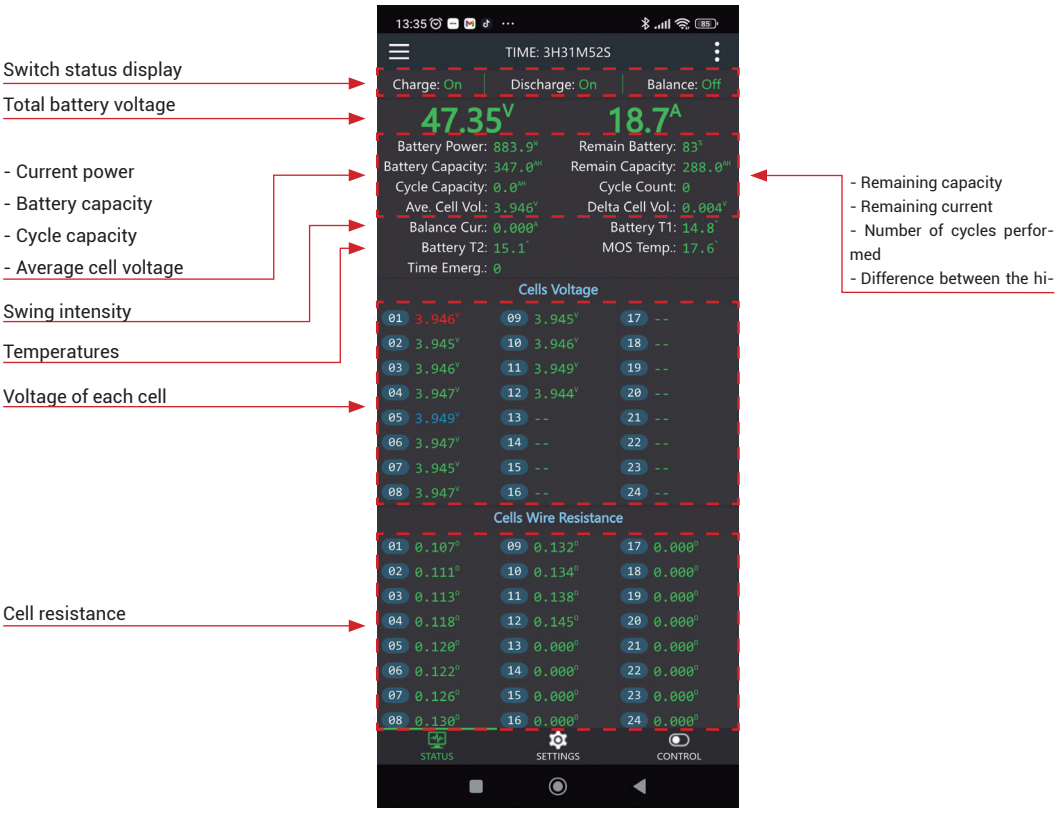
Once the device is connected to the application it will automatically register the password. You will not need to enter the password again the next time you connect.



Real-time Status interface

Control interface

It is recommended not to modify the parameters in this interface, it may cause system failure.



6. Emergency situations

1. Leaking battery

If the battery pack leaks electrolytes, avoid contact with the liquid. If 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 contact your installer or an authorized dealer.

7. Warranty

7.1 Warranty Coverage

The warranty **TerrePower Easy Battery,** has a 10 year limited 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 10 year limited warranty starts from the purchase invoice and must be presented to Easy Battery service.
The battery will be repaired if it is defective. The warranty does not include any accessories supplied with the product.

Warranties with respect to the product only apply if:

1. Has the official **TerrePower Easy Battery serial number**.
2. Is properly installed.
3. Operates and maintained in accordance with the instruction manual.
4. Used on a daily cycle and for the energy storage system only.
5. Invoice of purchase is presented.

7.2 Limitation of liability.

The warranty would be inapplicable, if the defect or failure of the product to perform is attributable to misuse, abuse, accident or failure to comply with the conditions of the manual.
TerrePower may require 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 the product capacity 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 battery capsules must be 25 ºC ± 1 ºC

c) The Product must discharge power at 10 A measured from a 100% charge 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 poking with a sharp object.
5. Abuse, misuse, neglect, accidents or force majeure events, 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.