



## Galvani Sodium Battery

*EBL-4.5-02*

# Installation Manual

## **A Sustainable, Reliable, and Scalable Energy Storage Solution**

Eleven Energy Galvani Sodium Battery combines innovative sodium-ion technology with sustainable design, offering reliable energy storage that's eco-friendly, durable and adaptable to your needs.

This manual provides detailed information about the battery system, including installation guidelines, electrical connections, configuration and and technical specifications.

Before installing and operating the product, please read this manual carefully to ensure you are familiar with the safety instructions, features, and functions of the battery system.

### **Check Out Our Installation Guide Video**



[elevenenergy.co.uk/product-documents](https://elevenenergy.co.uk/product-documents)

# Box Contents

## Accessory Box Contents



**Junction Box**  
640 x 220 x 250 mm  
Qty: 1



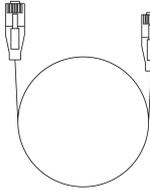
**Battery Base**  
640 x 80 x 250 mm  
Qty: 1



**Adjustable Foot**  
M12  
Qty: 4



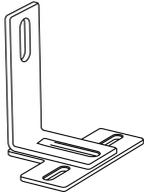
**Inverter-Battery Power Cable Set**  
Pre-installed  
35 mm<sup>2</sup>; 2 m  
Qty: 1 set



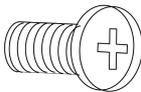
**Data Cable**  
2 m  
Qty: 1



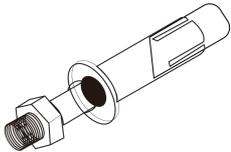
**Grounding Cable**  
12 AWG; 2 m  
Qty: 1



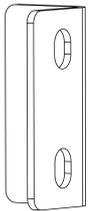
**Wall Mount Bracket**  
Qty: 4 Sets



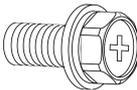
**M5 Flat Head Screw**  
12 mm  
Qty: 12



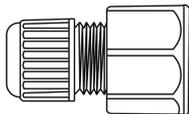
**M6 Expansion Bolt**  
80 mm  
Qty: 4



**Battery Interlink Bracket**  
Qty: 2

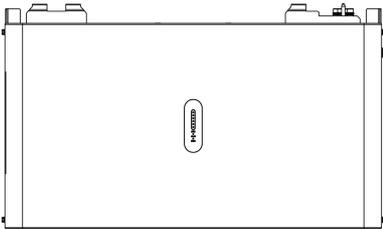


**M5 Hex Screw**  
16 mm  
Qty: 4

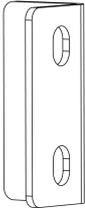


**Waterproof Gland**  
For Data Cable Terminal  
Qty: 3

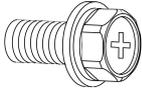
## Battery Box Contents



**Battery Pack**  
640 x 350 x 250 mm  
Qty: 1



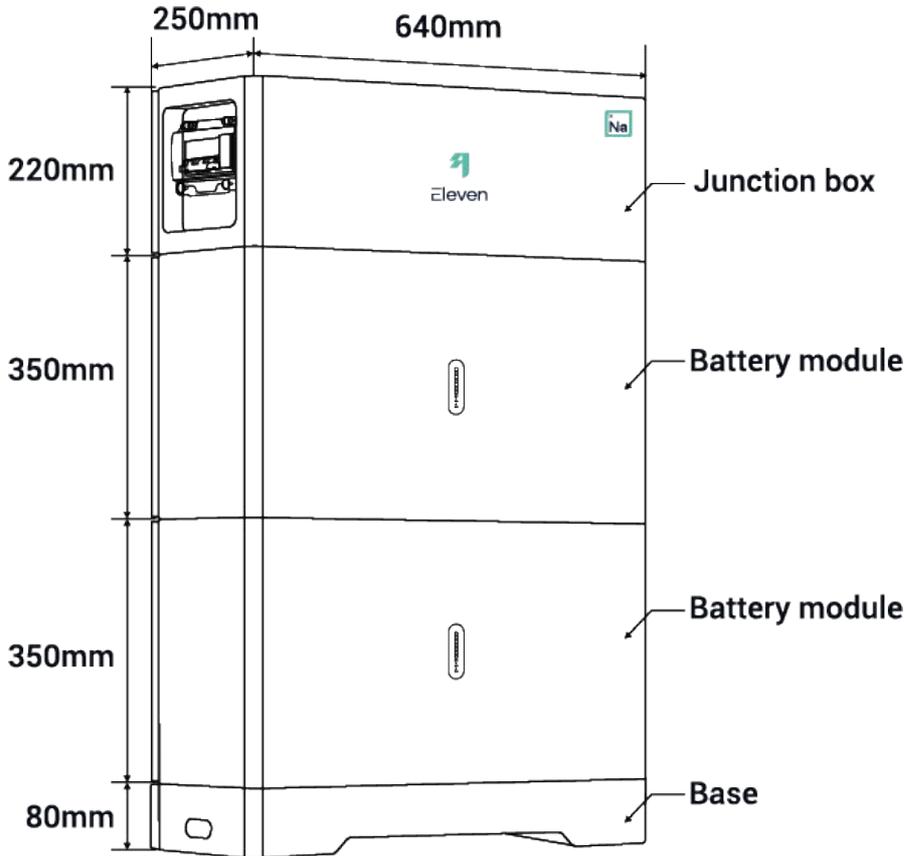
**Battery Interlink Bracket**  
Qty: 2

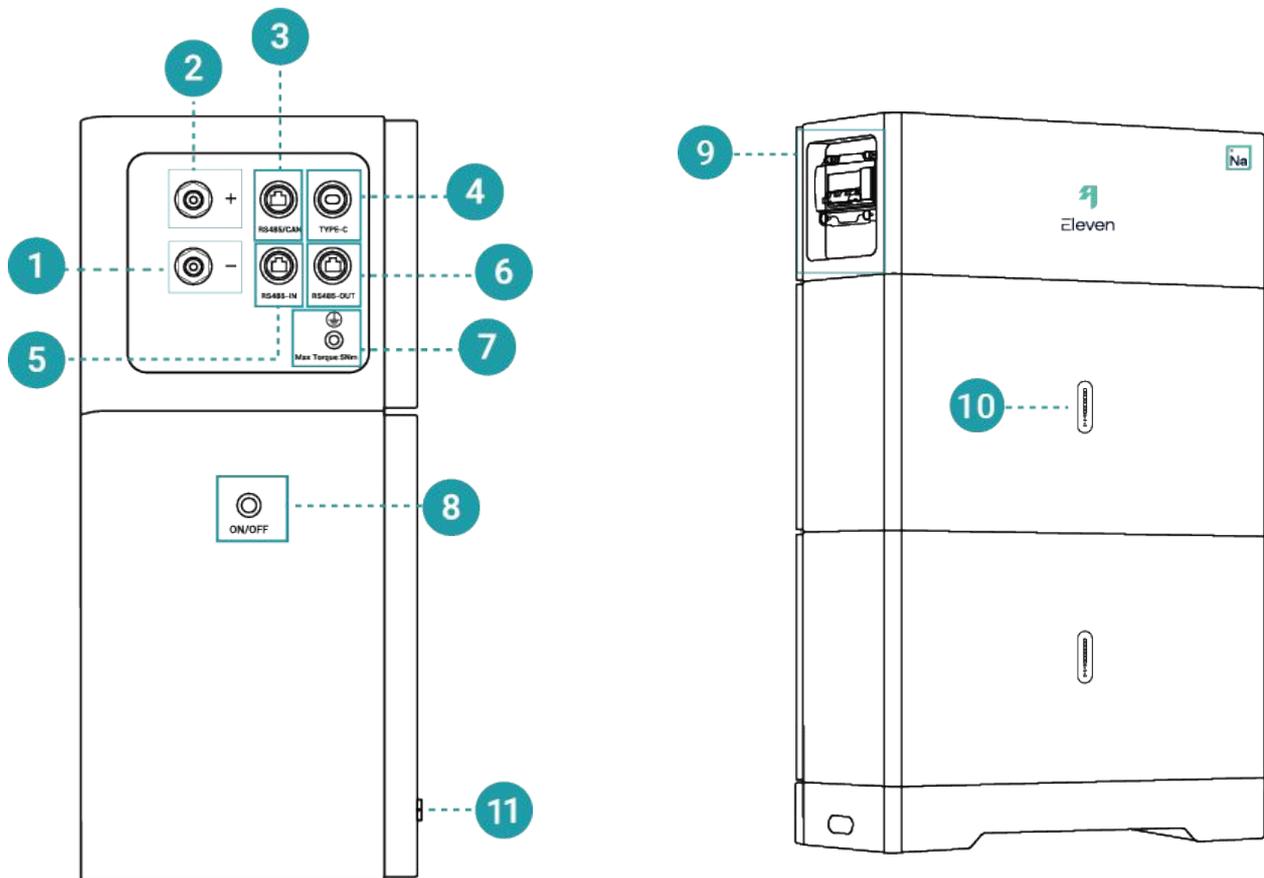


**M5 Hex Screws**  
16 mm  
Qty: 4

If any damaged or missing parts are found, please contact Eleven Energy immediately.

## Dimensions





<b>1</b>	- Battery Negative Terminal
<b>2</b>	+ Battery Positive Terminal
<b>3</b>	Inverter-Battery Communication Port
<b>4</b>	USB Type-C Battery Diagnosis Port
<b>5</b>	RS485-IN: Battery Stack Parallel Connection Port
<b>6</b>	RS485-OUT: Battery Stack Parallel Connection Port
<b>7</b>	GND: Battery Grounding Connection Point
<b>8</b>	Battery Module ON/OFF Switch Button
<b>9</b>	Integrated Battery Circuit Breaker
<b>10</b>	Battery Status Indicator Lights
<b>11</b>	Battery Module Pressure Relief Valve

# Safety and Precautions

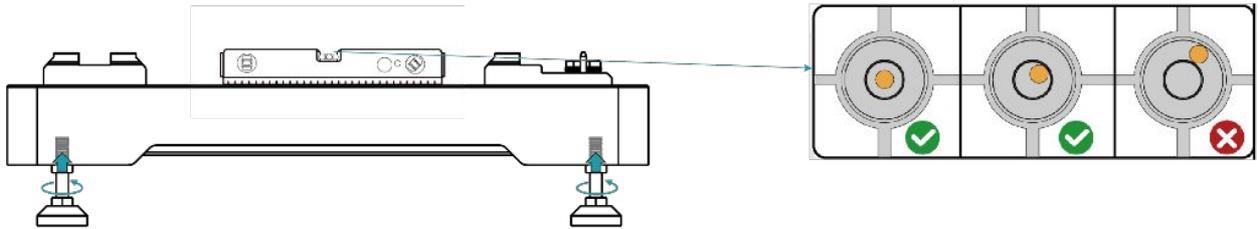
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This document is intended exclusively for professional electricians accredited for the installation of battery storage systems and thoroughly familiar with UK electrical standards and regulations. **All electrical installations must be carried out by a qualified and UK registered electrician and in accordance with the IEE Wiring Regulations (BS 7671 - 18th Edition).**



- The battery is designed to work with Eleven Energy Hybrid Inverters. Do not connect this battery pack to any other brands of inverters or battery packs.
- An earth bond must be installed between the battery and the inverter.
- Do not connect the battery packs in series.
- Avoid installing the battery pack near water or fire sources.
- Ensure the mounting wall is fire-resistant and sturdy enough with **a minimum thickness of 100 mm.**
- Do not use the battery if there are any deformities, such as bulging or leakages
- Do not disassemble, puncture or throw the battery pack.
- Do not attempt to repair the battery pack.
- In the event of a fire, only dry powder fire extinguishers can be used.
- Do not store or install the battery pack upside down or sideways.

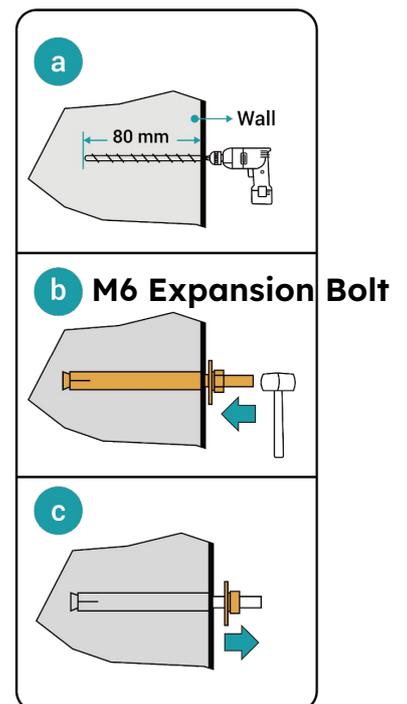
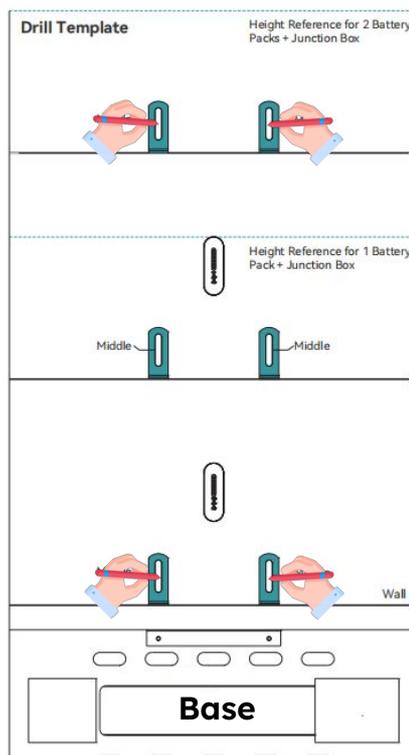
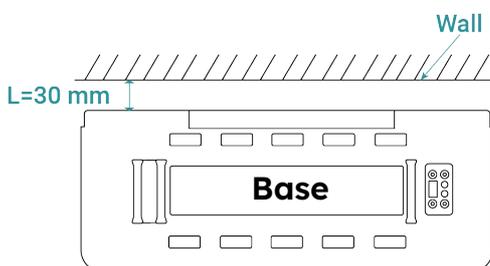
## 1. Install Adjustable Feet



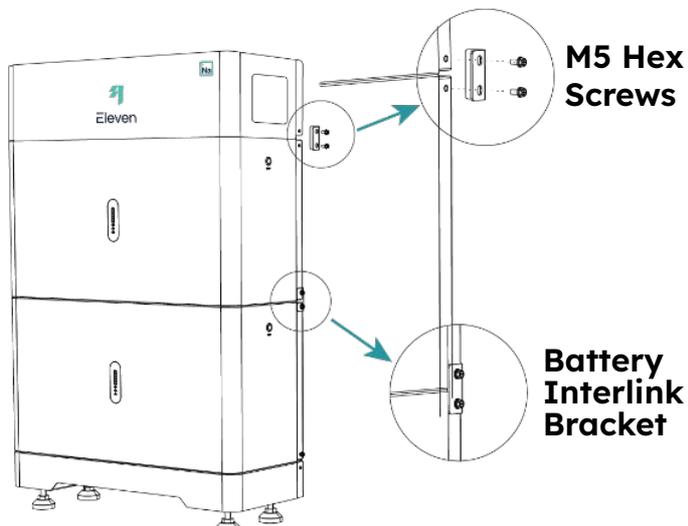
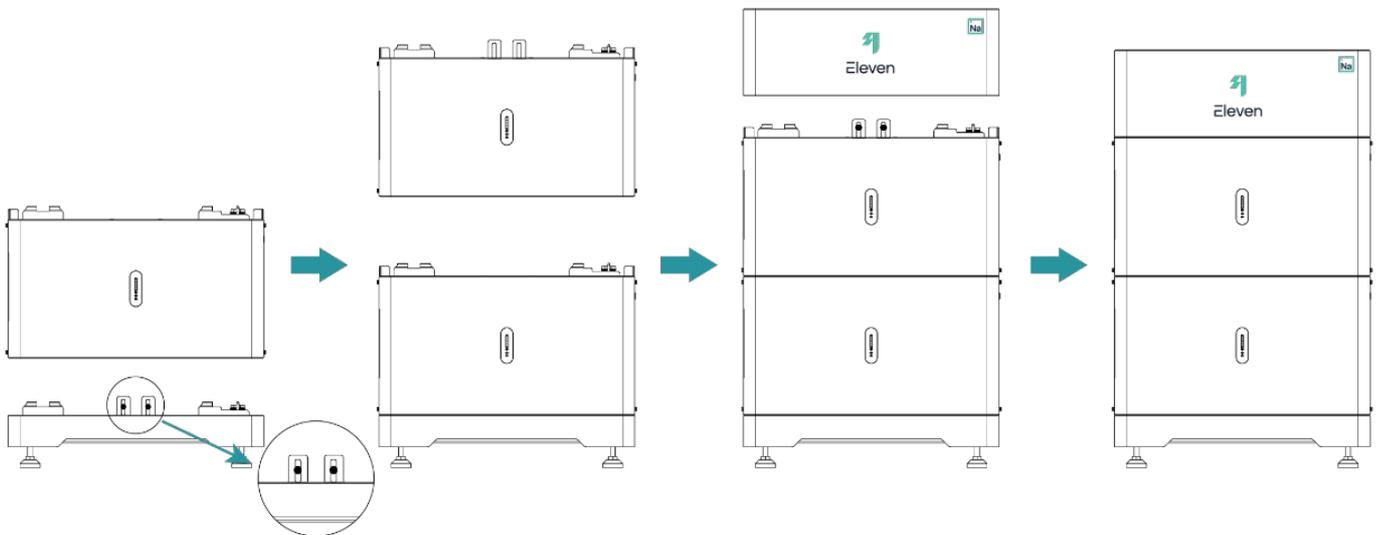
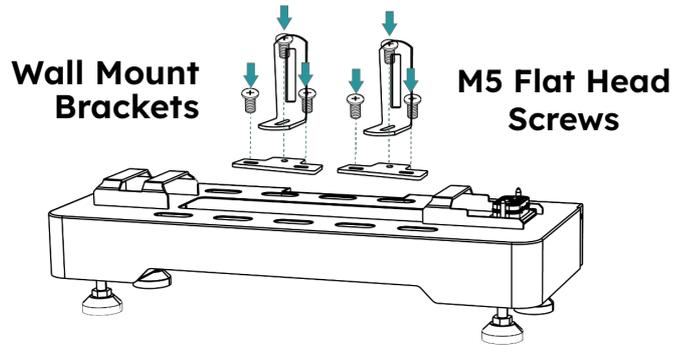
## 2. Install expansion bolts for wall mounting bracket

### Drill Template

**Note:** Only four drill holes are required per stack—two for the top battery module and two for the base.



## 1. Assemble Battery Models and Junction Box



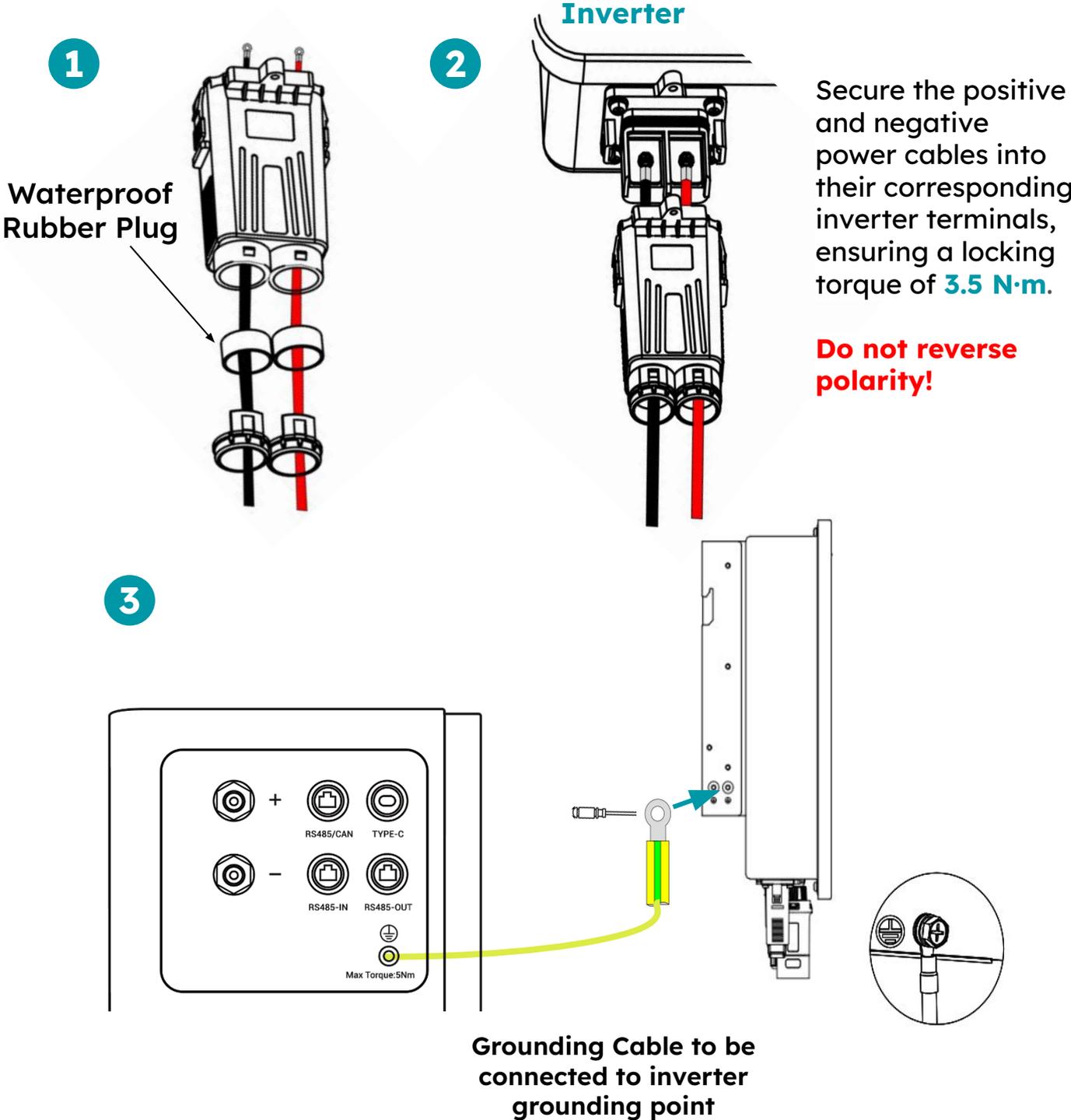
Do not stack more than **four battery modules** in a single stack.

# Inverter Connection

**⚡ WARNING – ELECTRIC SHOCK HAZARD**

Before connecting the battery packs, verify that both the inverter and the battery modules are switched OFF and that all indicator LEDs are OFF.

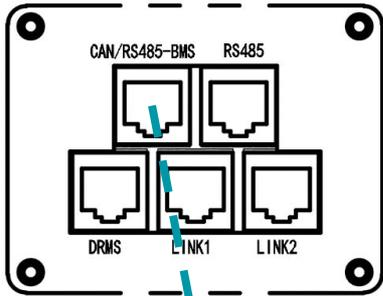
Do not connect or disconnect battery cables while the inverter is operating or energised, as this may result in electric shock and damage to the inverter and battery modules.



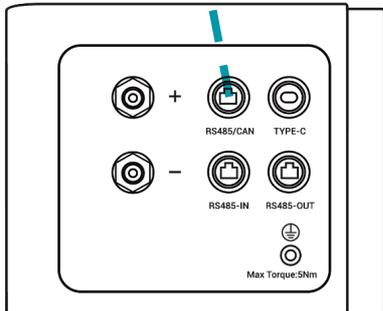
# Inverter Connection

4

## Inverter Communication Module Interface RS485 / CAN Port

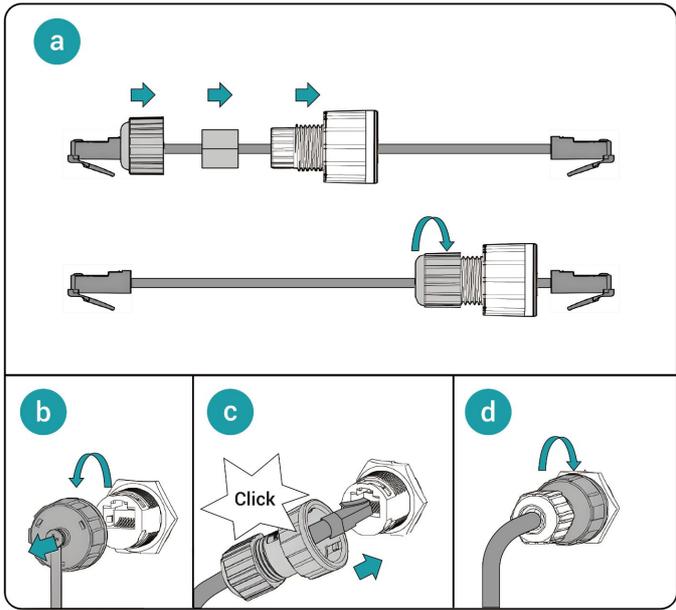


Data Cable



## Battery Junction Box Communication Interface RS485 / CAN Port

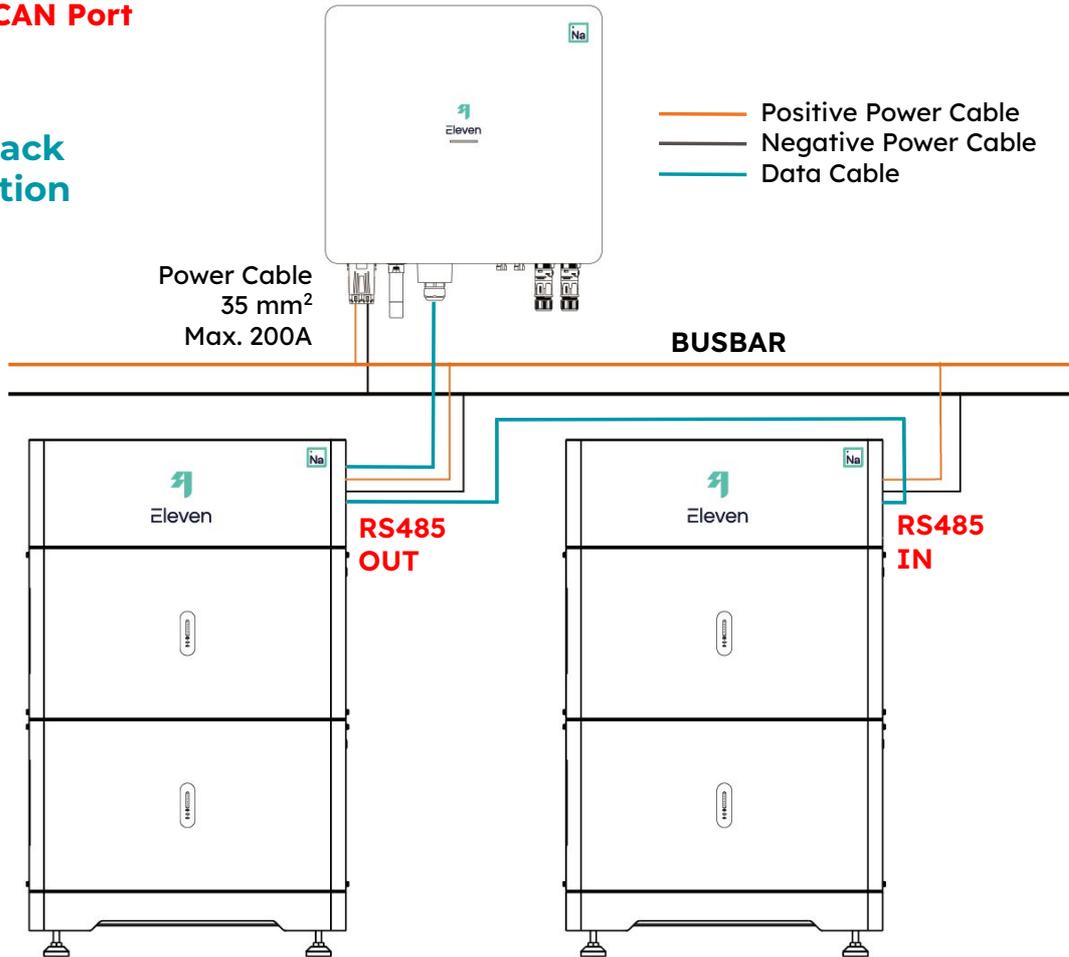
## Data Cable Terminal Waterproof Gland



Any unused ports must have the caps screwed on and tightened

5

## Multi-stack Connection



# Startup / Shutdown & Indicator Lights

## Startup

Press the **ON/OFF switch button** on each battery module to initiate start-up. Once the battery status indicator light turns on, move the **junction box circuit breaker** to the ON position.

## Shutdown

Move the **junction box circuit breaker** to the OFF position, then press the **ON/OFF switch button** on each battery module.

		Charge						Discharge					
Indicator Light		L1	L2	L3	L4	L5	L6	L1	L2	L3	L4	L5	L6
Battery Capacity	0~17%	Off	Off	Off	Off	Off	Flash	Off	Off	Off	Off	Off	On
	18~33%	Off	Off	Off	Off	Flash	On	Off	Off	Off	Off	On	On
	34~50%	Off	Off	Off	Flash	On	On	Off	Off	Off	On	On	On
	51~66%	Off	Off	Flash	On	On	On	Off	Off	On	On	On	On
	67~83%	Off	Flash	On	On	On	On	Off	On	On	On	On	On
	84~100%	Flash	On	On	On	On	On	On	On	On	On	On	On
Running Light (RUN)		On						On					

If the Alarm light (**ALM**) is constantly on, it indicates an abnormal condition in the battery pack. This could be due to over-temperature, over-current, a short circuit, or reversed polarity in the power connections. Please turn off the battery pack and contact Eleven Energy immediately.

## Galvani ELB-4.5-02

## Specifications



**Sodium-ion Technology**  
Green & Sustainable Battery

**High Charge / Discharge Rate**  
Single module: Up to 100 A  
Multi-module: Up to 200 A

**Wide Operating Temperature Range**  
-20°C - 55°C

**Flexible Installation Location**  
Indoor or Outdoor

**Expandable Capacity**  
Up to 16 battery modules can be connected to provide 66.24 kWh of usable capacity.

<b>Battery Type</b>	Sodium-ion
<b>Capacity</b>	4.5 kWh
<b>Max. Charging / Discharging Current</b>	Single module: 100 A / 100 A Multi-module: 200 A / 200 A
<b>Rated Voltage</b>	45 V
<b>Operating Voltage Range</b>	33V - 59.2V
<b>Depth of Discharge</b>	92% on-grid / 95% off-grid
<b>Charging Temperature</b>	-20°C - 55°C
<b>Discharging Temperature</b>	-30°C - 55°C
<b>IP Grade</b>	IP65
<b>Humidity Range</b>	5 ~ 95%
<b>Dimensions (W x H x D)</b>	Battery Module: 640 x 350 x 250 mm Junction Box: 640 x 220 x 250 mm Base: 640 x 80 x 250 mm
<b>Weight</b>	Battery Module: 59 kg Junction Box: 11.5 kg Base: 6 kg
<b>Interface</b>	RS485 / CAN
<b>Standard</b>	EN IEC 61000-6, EN IEC 62619
<b>Product Warranty</b>	10 Years