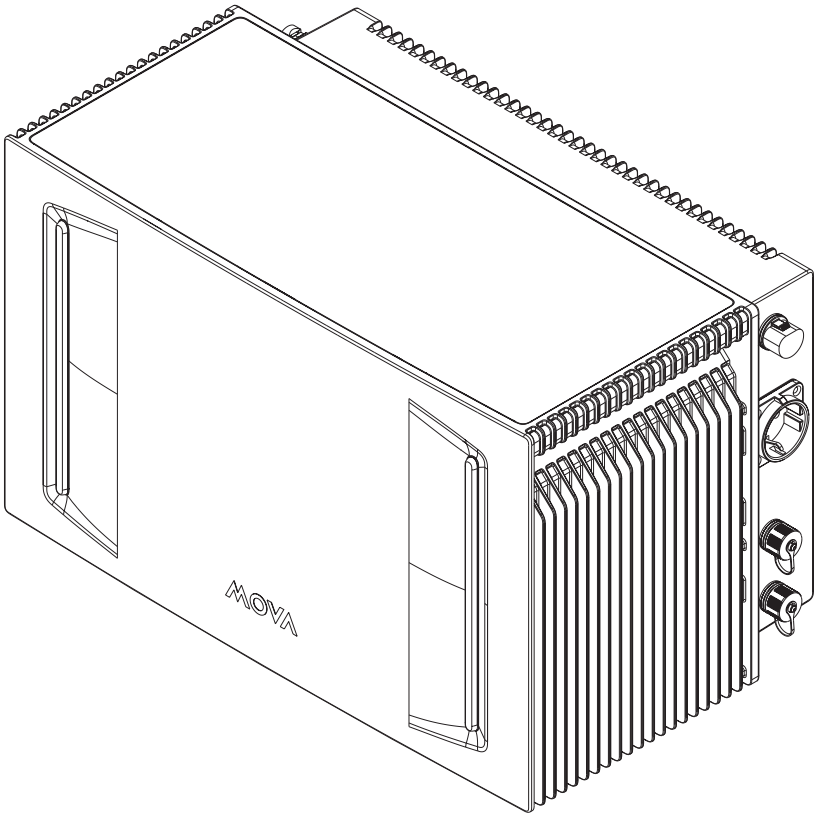
MOVA



LumeGret A4000

Instruction Manual

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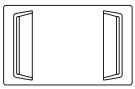
DISCLAIMER

⚠ This product includes essential printed documentation required for setup and basic usage. Improper use may result in serious injury damage, or property loss. By using this product, you agree to and accept all terms outlined in the product documentation. MOVA is not liable for losses, damages, or injuries caused by misuse or non-compliance.

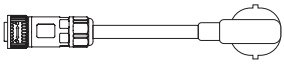
- Read this document and other related product documentation before any operation.
- The installation of this product must comply with all applicable local regulations, codes, or standards.
- An overcurrent circuit breaker must be installed between this product and the grid.
- When the photovoltaic (PV) array is exposed to light, it supplies direct current voltage to the power conversion equipment (PCE).
- Use insulation tools and wear personal protective equipment when installing, servicing, or maintaining this product.
- Install this product in a tidy, dry, and well-ventilated environment.
- Keep the product out of reach of children and pets. If the product is to be used near children, they should be closely supervised.
- Before making any electrical connections, ensure that any load to be connected (e.g. devices or equipment intended to be powered by this product) is powered off.
- Always pull the plug instead of the cord when disconnecting the product to reduce the risk of damage to the electric plug and cord.
- Do not put fingers or hands into the product.
- Do not expose this product to direct sunlight, rain, and snow.
- Do not expose this product to strong electromagnetic fields to avoid radio interference.
- Do not install or operate this product near flammable, explosive, corrosive,or caustic sources.
- Do not install or operate this product during extreme weather events such as lightning, heavy rain, or strong wind.
- Do not subject this product to severe impacts, vibrations, or drops to prevent physical damage.
- Do not drag, squeeze, step on this product, or throw it into the fire, as there is a risk of explosion.
- Do not use any damaged cords or cables with this product.
- Do not damage, deface, or remove any labels on this product.
- Do not disassemble, repair, or modify this product by yourself for any maintenance or service, contact MOVA Customer Service.
- Do not use any unofficial or unrecommended components and accessories.
- For any replacements, please contact MOVA for further assistance.
- Do not clean the product with flammable or toxic solvents. Wipe it with a dry soft cloth.
- Do not place heavy objects (>40 kg) on the product.

1 Product Introduction

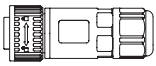
1.1 Package List



LumeGret A4000
×1



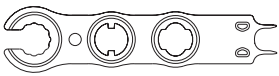
AC Power Cord
×1



RS485 Connector
×1



Expansion Screw
x2



MC4 Wrench
×1



Mounting Plate
×2



Rubber Feet
×4



Flat head
screw(M4x10) ×4

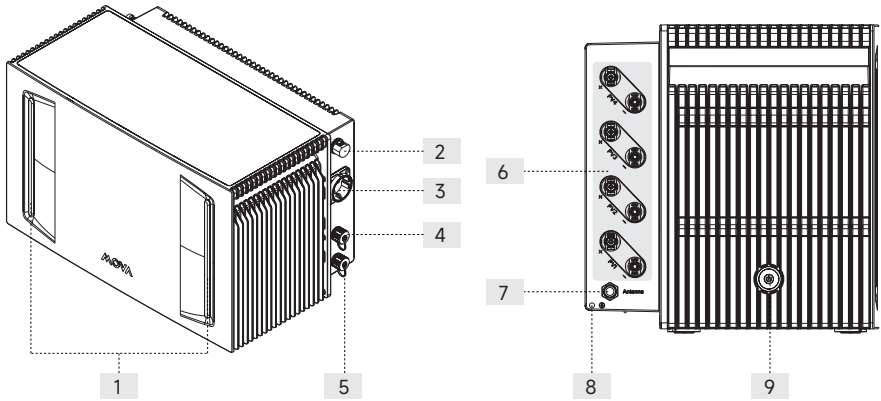


Flat head
screw(M5x10) ×4



Documents

1.2 Product Overview



1	Indicator LED Light	4	Grid Energy Dispatch Connect	7	Antenna
2	AC Outlets	5	Meter Parallel Connector	8	Ground Screw Hole
3	Backup Terminal	6	PV Terminals	9	Power Button

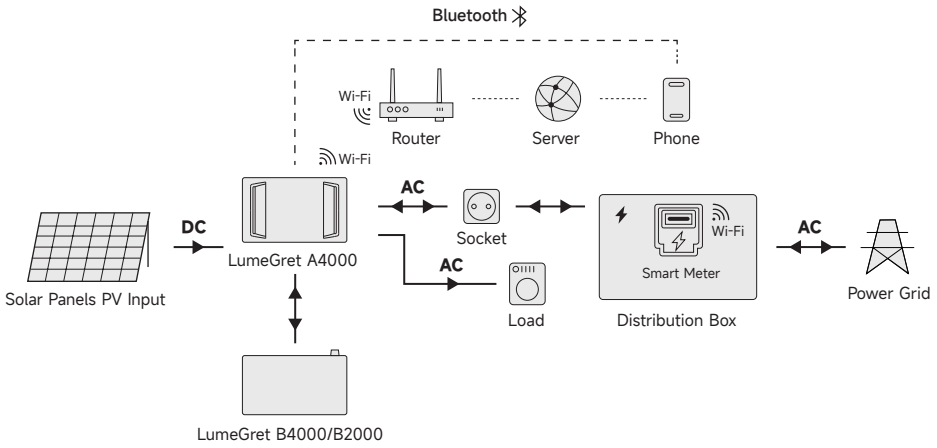
1.3 Button Controls

	Action	Status
Button	Press for 3 seconds	Turn LumeGret A4000 on
	Press for 4 seconds	Turn LumeGret A4000 off
	Press once	Check battery level
	Press three times	Reset bluetooth and Wi-Fi

1.4 LED Indicator

Light	Status	Description
Button Light	Power On	Solid Light
	Power Off	Off
LED Light Bar	Powered On	The light bar lights up and turns off after 30 seconds.
	Battery level	The light bar changes according to battery level
	Connecting to the network...	The center LED illuminates toward both sides, and then cycles again
	Network connection successful	The center LED illuminates toward both sides, and turns off after 30 seconds
	Upgrading firmware	The blue LED strip in the middle will light up in a running pattern
	Error or Warning	Flashing red

1.5 System Overview



System Overview					
LumeGret A4000	×1	×1	×1	×1	×1
LumeGret B4000	/	×1	×2	×3	×4
System Capacity	4.02 KWh	8.04 KWh	12.06 KWh	16.08 KWh	20.10 KWh

The table shows the combination of LumeGret A4000 and LumeGret B4000. Users can also purchase the expansion battery LumeGret B2000 . The LumeGret B4000 and LumeGret B2000 can be used individually with the LumeGret A4000, or in combination [e.g., LumeGret A4000 + B4000 + B2000]. However, it can only be expanded with a maximum of 4 expansion batteries.

2 Pre-Installation

2.1 Check the packaging

Before unpacking the unit, carefully inspect the packaging for any signs of damage, such as holes or cracks, and verify that the model number matches your order. If you notice any damage or an incorrect model, do not unpack the unit. Contact your dealer or point of purchase immediately.

2.2 Check the unit

After unpacking the unit, check if it is intact and complete, and free from any obvious damage. If any item is missing or damaged, contact your dealer or source of purchase.

2.3 Check the installation environment and position

When choosing the position of installation, comply with the following conditions:

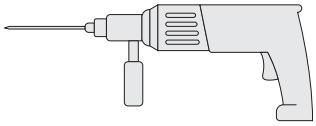
- Choose a proper position to place the LumeGret A4000, leaving at least a 50 mm gap between the back of the unit and the wall to ensure good heat dissipation.
- Avoid electromagnetic interference that can compromise the correct operation of electronic components of the unit.
- An AC power outlet is needed while finalizing the installation.
- Do not install it under direct sunlight, or near fire sources or explosives.
- Ensure the selected location is not at risk from potential hazards such as flooding.
- The maximum operating altitude is 4,000 meters.

2.4 Heavy lifting safety

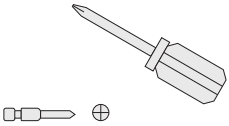
- When carrying the LumeGret A4000, preparations should be made for loading-bearing to avoid being crushed.
- When handling the unit, it is recommended that two people lift the LumeGret A4000. Wear protective gloves to prevent injury.

3 Installation Steps

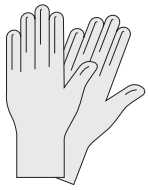
The following tools（Not included） are required before installation:



Hammer drill
Ø 8mm



Screwdriver
(PH0, PH1, PH2)

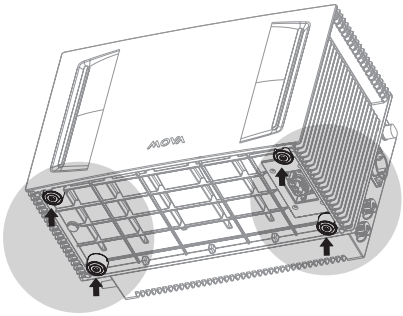


Safety gloves

Step 1: Install rubber feet

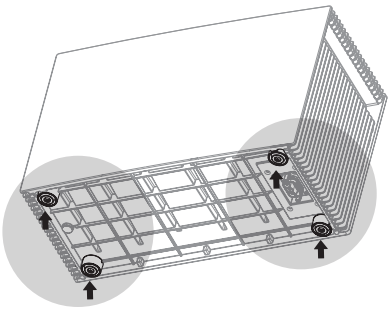
▪ If no expansion battery pack is purchased, the rubber feet are installed on the bottom of the LumeGret A4000 main unit.

▪ If one or more expansion battery are purchased, they are installed at the bottom of the lowest expansion battery .



LumeGret A4000

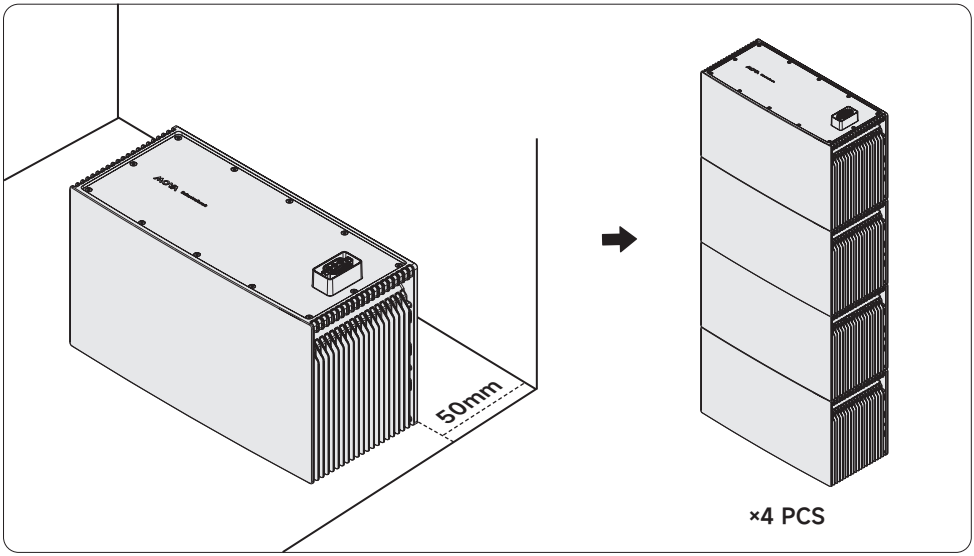
or



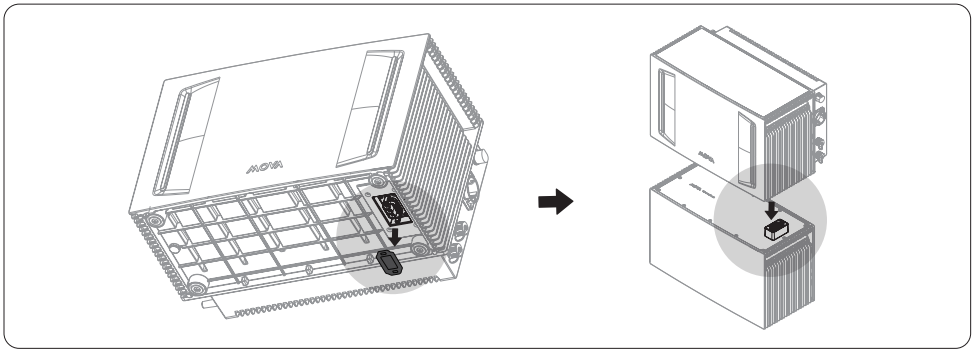
LumeGret B4000/B2000

Step 2: Place expansion battery (If you didn't purchase the B4000/B2000 separately, please skip this step)

- Place expansion battery on the bottom, and keep about 50 mm away from the wall.
- Stack all expansion batteries one by one. (Up to 4 Stackable expansion Batteries can be stacked.)



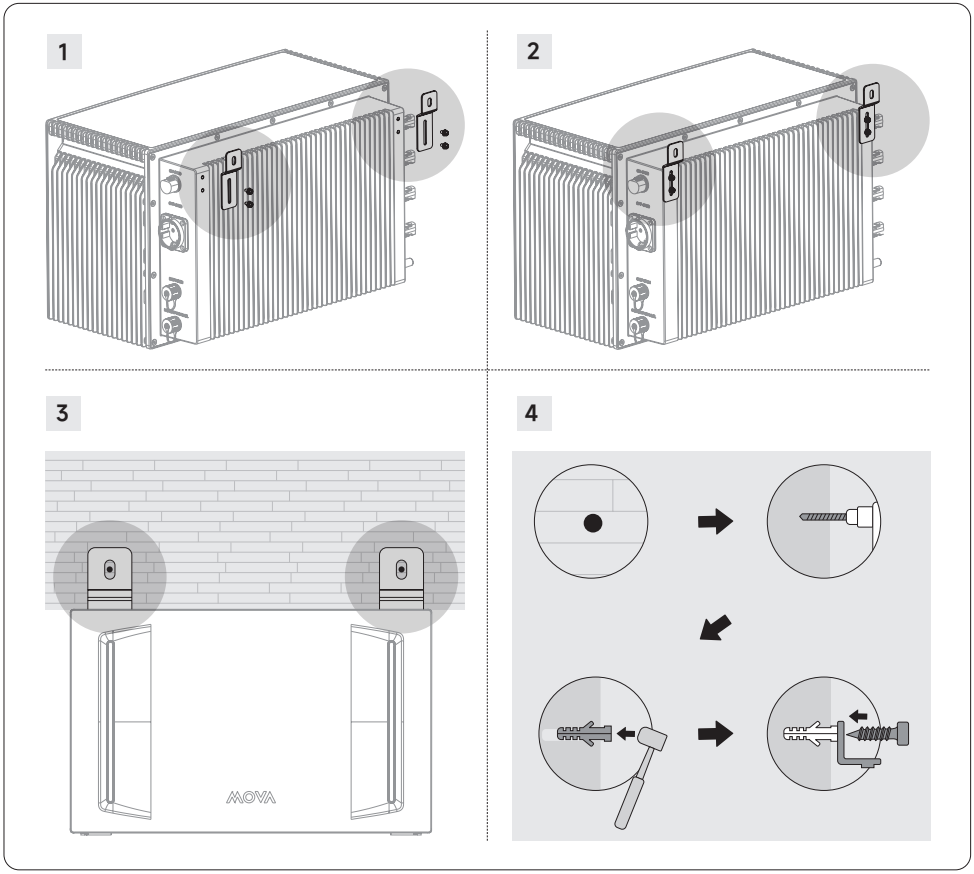
Step 3: Remove the bottom rubber plugs of LumeGret A4000, and stack them at the top of expansion batteries



⚠ Warning

If you didn't buy the expansion batteries seperately, you can place the LumeGret A4000 directly on the ground, but make sure that the rubber plugs of the bottom device should not be removed!

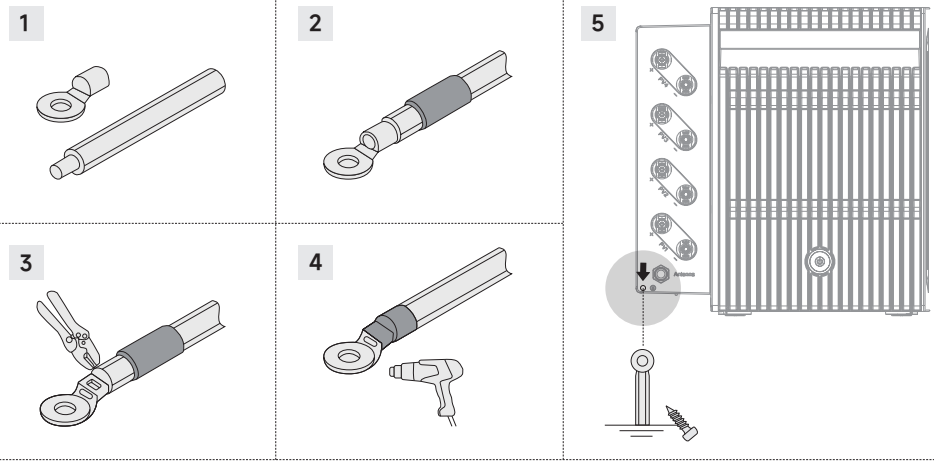
Step 4: Install the Wall Mount Kit



Step 5: Grounding

The following tools and supplies are not included in the package. Ensure that you have them ready before proceeding with the electrical connections.

Required Supplies	Specifications
GND cable	1 mm2,yellow/green
Ring terminal	Suitable for the 1 mm2 GND cable and the M5 screw
Heat shrink tubing	Caliber: 8 mm; Length: 25 mm
Heat gun	/
Phillips screwdriver	PH2

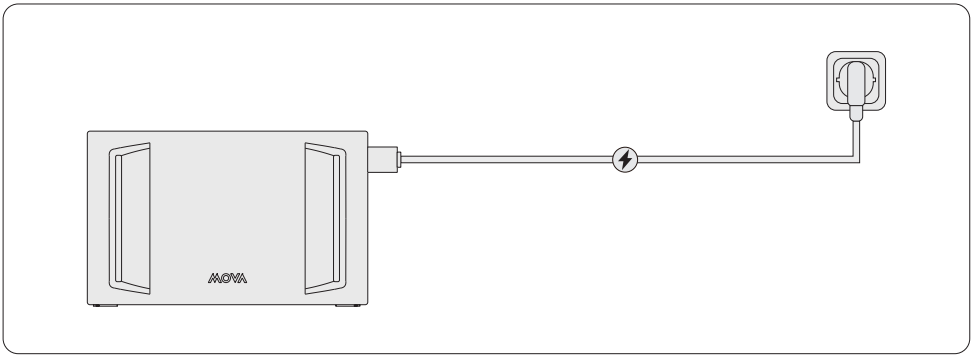


1. Strip the insulation layer of the GND cable.
2. Insert a heat shrink tubing and a ring terminal into the GND cable.
3. Crimp the ring terminal onto the GND cable using a crimper.
4. Wrap the wire crimping area with the heat shrink tubing using a heat gun.
5. Loosen the pre-installed screw and use it to secure the GND cable.

Step 6: Connect to Grid Power via a Home Outlet

⚠ Warning

The grid connection must be connected to a grounded electrical outlet or grounding busbar. Additionally, grounding the product casing via its dedicated grounding terminal is recommended for enhanced safety. Ensure the device is powered off before installation.

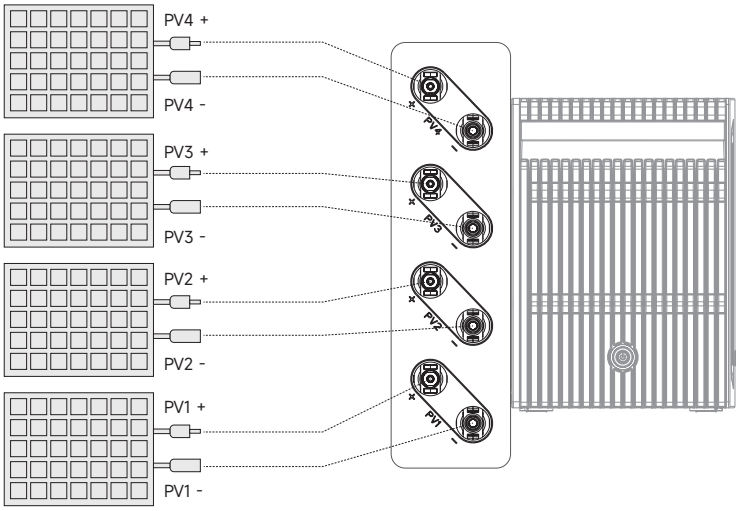


Step 7: Connect to Solar Panels

Solar Panel is not included in the package, it's an optional accessory.

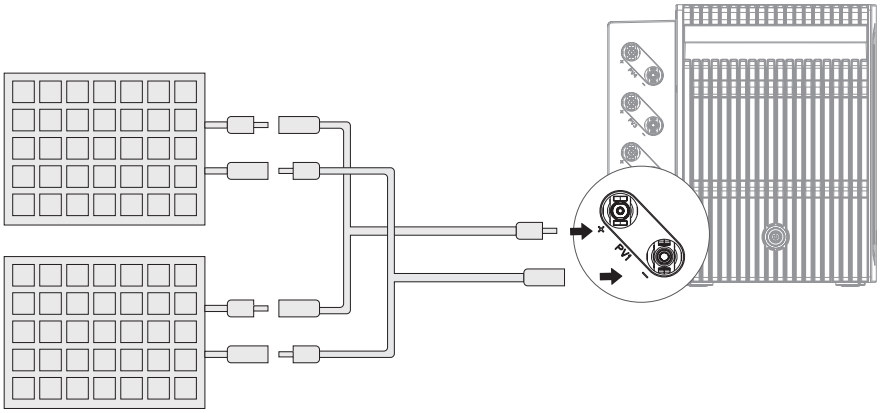
⚠ Caution

Never connect the leads of a solar panel to different PV terminals (e.g., gative to PV1-and positive to PV2+) to prevent short circuits.

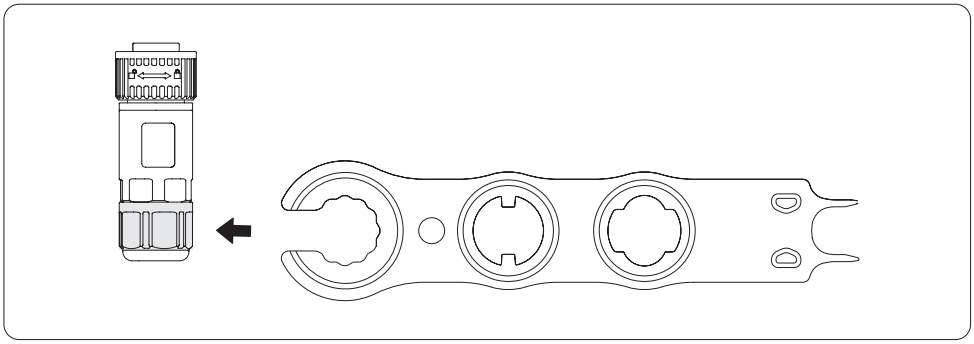


Parallel Connection (Up to 8 PV Modules)

Connect every two pv modules to the same set of pv input ports.



If you need to adjust the PV Connection, dis connect the solar connectors using the PV Wrench.



Step 8: Power On and Settings.

- **Power On:** Long press the power button for 3 seconds to power on the device.

  ⚠ **Note:**

  When the LumeGret A4000 is powered on, the expansion batteries LumeGret B4000/B2000 will automatically activate. Confirm that the battery button light is on.this indicates that the expansion batteries are powered on.

- **Download the MOVAhome App:**
  Scan the QR code or search for the MOVAhome app in your app store to download it.
  Then, register an account and log in.

Scan to download
the MOVAhome APP

Download on the App Store

GET IT ON Google Play

Search for the MOVAhome App
in your App store to download it.

- **Bind the Device and Set Up the Internet:**
  Follow the in-app instructions to bind the device and enjoy smart control from your phone.

4 Specifications

LumeGret A4000

PV Terminal
Max. PV Input Voltage: 60 VDC
Operation Voltage Range: 16-60 VDC
Max. PV Input Current: 18A*4
Max. PV Short-Circuit Current(ISC): 25A*4
Max. PV Input Power: 3600W

Battery Data
Rechargeable Battery: LFP
Rated Voltage: 51.2V
Rated Power (Single Device): 2000W
Rated Capacity: 4020Wh

AC Output (On-Grid Terminal)
Max AC Output Power: 800W / 2500W
Rated Voltage: L+N+PE,220V/230V,50Hz
Rated Current: 4A / 11A

AC Input (On-Grid Terminal)
AC Input Power: 2500W
Rated AC Input Voltage:
L+N+PE,220V/230V,50Hz
Rated Current: 8.7A

AC Output (Off-Grid Terminal)
Max AC Output Power: 2500W
AC Output Voltage: 230V,50Hz
Max AC Output Current: 11.5A

General Parameters
Communication: WiFi&Bluetooth+RS485
Protective Class: I
Ingress Protection: IP65
Inverter Topology: Isolated
Operating Temperature Range: -20~55°C
Max Altitude: 2000m
Warranty: 10 Years
Dimensions: 493*305*295mm
Net Weight: 48kg

Expansion Battery B4000/B2000 (Sold separately)

LumeGret B4000 Battery Data
Rechargeable Battery: LFP
Rated Voltage: 51.2V
Rated Power (Single Device): 2000W
Rated Capacity: 4020Wh
Ingress Protection: IP65
Operating Temperature Range: -20~55°C
Warranty: 10 Years
Dimensions: 493*307.7*220mm
Net Weight: 40kg

LumeGret B2000 Battery Data
Rechargeable Battery: LFP
Rated Voltage: 51.2V
Rated Power (Single Device): 1000W
Rated Capacity: 2010Wh
Ingress Protection: IP65
Operating Temperature Range: -20~55°C
Warranty: 10 Years
Dimensions: 493*307.7*220mm
Net Weight: 27kg

5 EU Declaration of Conformity

Equipment with Wireless Communication Modules

The equipment with wireless communication modules sold in the European market meets the requirements of the following directives:

- Radio Equipment Directive 2014/53/EU (RED)
- Restrictions of Hazardous Substances Directive 2011/65/EU and (EU) 2015/863 (RoHS)
- Waste Electrical and Electronic Equipment 2012/19/EU
- Registration, Evaluation, Authorization and Restriction of Chemicals (EC) No1907/2006 (REACH)

Battery

The batteries sold in the European market meets the requirements of the following directives:

- Electromagnetic compatibility Directive 2014/30/EU (EMC)
- Battery Directive 2006/66/EC and Amending Directive 2013/56/EU
- Waste Electrical and Electronic Equipment 2012/19/EU
- Registration, Evaluation, Authorization and Restriction of Chemicals (EC) No1907/2006 (REACH)

6 Warranty Exclusions

In the event of damage related to the causes listed below, no warranty claims will be acknowledged or accepted. Claims that relate to defects that are caused by the following factors are not covered by MOVA's warranty obligations.

1. Can not provide proof of purchase.
2. Force majeure (storm damage, lightning strike, over voltage, fire, thunderstorm, flooding; social causes such as war, turmoil, government intervention, strikes, embargoes, market conditions, etc.).
3. Accidental damage, misuse, abuse, non-compliant use, normal wear and tear, theft, loss, or confiscation.
4. Improper application of electrical supply voltage, current and/or frequency.
5. Improper installation, commissioning, start-up, configuration, or operation (contrary to the guidance detailed in the installation manual supplied with each product).
6. Inadequate ventilation and circulation resulting in insufficient cooling and natural airflow.
7. Modifications to any part of the product.
8. Unauthorized repair attempts.
9. Products whose serial number sticker or imprint has been removed, defaced or tampered with.
10. Products purchased from unauthorized dealers/resellers.
11. Free products/rewards/gifts.
12. Products used outside of the purchasing region, and products that are shipped to areas that are not easily accessible by courier or freight services, such as overseas or remote islands.
13. Cosmetic or superficial defects, dents, marks or scratches, which do not influence the proper functioning of the product.
14. This limited warranty does not cover any battery cell or product containing a battery cell unless you fully charge the battery cell within thirty (30) days of receiving the product and subsequently charge it at least once every 3 months. Failure to do so will void the warranty for the battery cell and coverage for any associated damage or malfunctions. It is preferable to fully charge it within seven (7) days of receiving the product.
15. Our warranties are non-transferable from end user to end user.

Furthermore, this limited warranty and related service will not exceed the original cost of the MOVA product. Please note that these warranty terms and conditions are subject to change without prior notice. The MOVA Support Team reserves the right to make a final determination regarding warranty service eligibility, and to determine the appropriate solution, which may include replacement, repair, or refund, at its sole discretion.