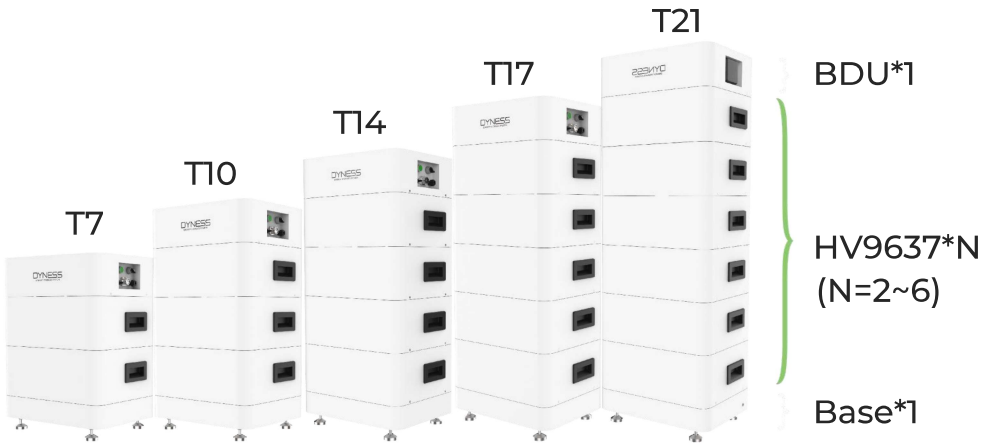
03

Tower &
Tower Pro

Tower



Easy Installation

Stackable auto-configuration modules, wireless connection

Flexible Expansion

Parallel Connection available (Max. 12 clusters; up to 255.72 kWh)

Wide Compatibility

Matching with leading inverters

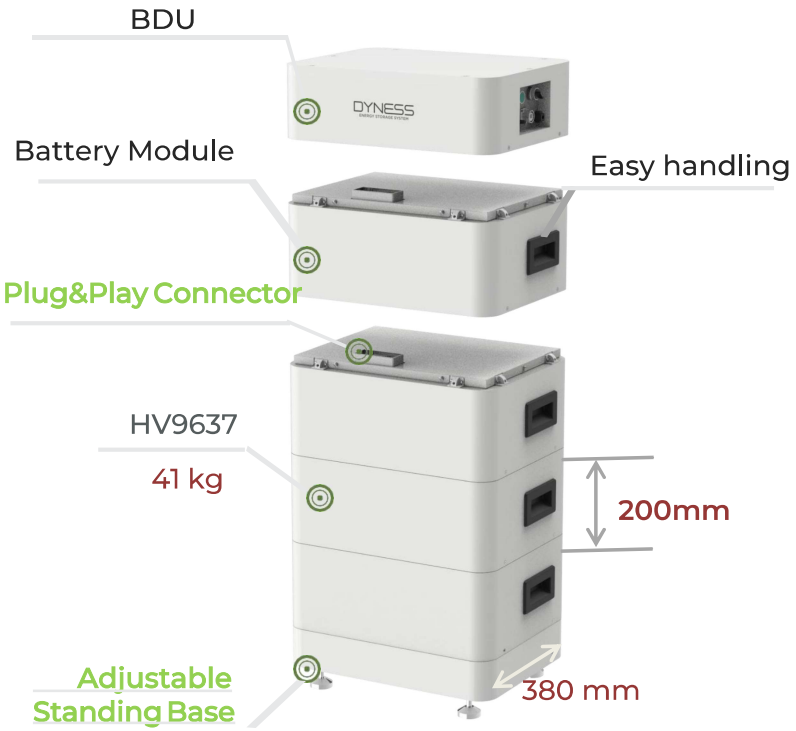
Optimized Experience

Real-time monitoring & Over-the-air updates (Optional)

High Protection Level

Floor-standing Indoor & outdoor installations

Tower



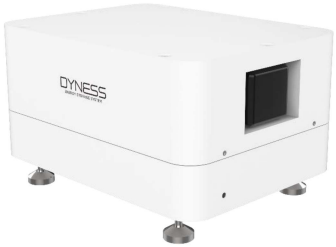
- Dyness upgraded Tower Series is tailor-made for residential applications.
- DYNESS DC BUS Box is designed for battery system paralleling (Tower), by which the battery capacity could be extended further.

Product Parameters

Model	Tower T7	Tower T10	Tower T14	Tower T17	Tower T21
Battery Capacity	37Ah				
Nominal Energy	7.10 kWh	10.66 kWh	14.21 kWh	17.76 kWh	21.31 kWh
Operating Volatge	168 ~219V	252 ~ 328V	336 ~ 438V	420 ~ 547V	504 ~ 657V
Max Charge/Discharge Current	22.5 A				
Max Charge/Discharge Power	4.26kW	6.39kW	8.52kW	10.65kW	12.78kW
Module Weight	105 kg	146 kg	187 kg	228 kg	269 kg
Module Number	2	3	4	5	6
Enclosure Protection	IP54				
Operation Temperature Range	Charge: 0℃~50℃, Discharge: -10℃~50℃				
Communication	CAN/RS485/RS232				
System Dimension	504*380*700 mm	504*380*900 mm	504*380*1100 mm	504*380*1300 mm	504*380*1500 mm
Warranty	10 Years				
Certification	UN38.3/CE-EMC/IEC62040/IEC62619/IEC62477/IEC60730/IEC63056 /UKCA/CEC/UL1973/VDE2510-50				

Packing List

Module*n



BDU+Base

Positive cable with connector*1

Negative cable with connector*1

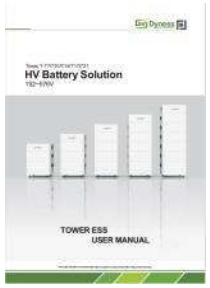
Communication cable to inverter*1

Communication connector to BDU (RJ45 connector)

Terminal OT4-6 *2

M6*14 Ground screw*1

M4*10 screws*20

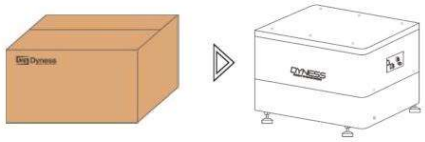


User Manual

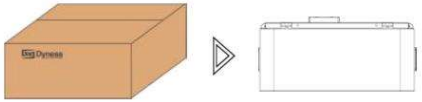
DYNESS

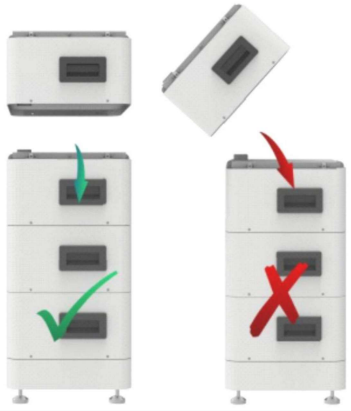
Easy installation

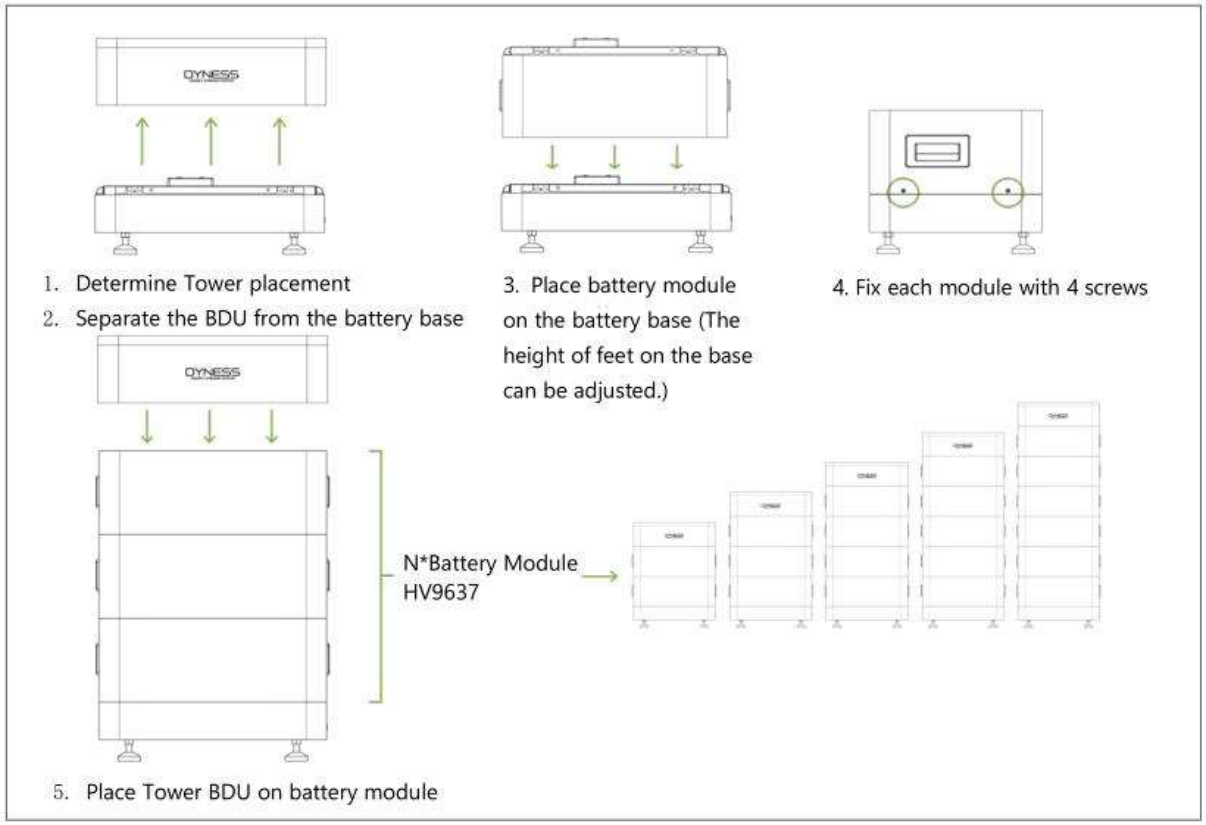
BDU+Base



HV9637







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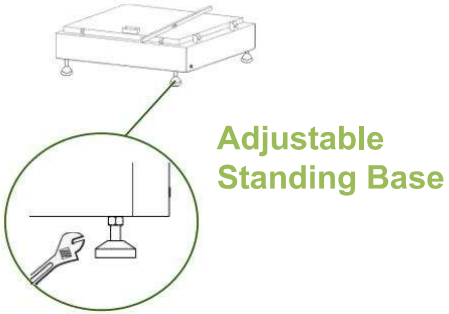
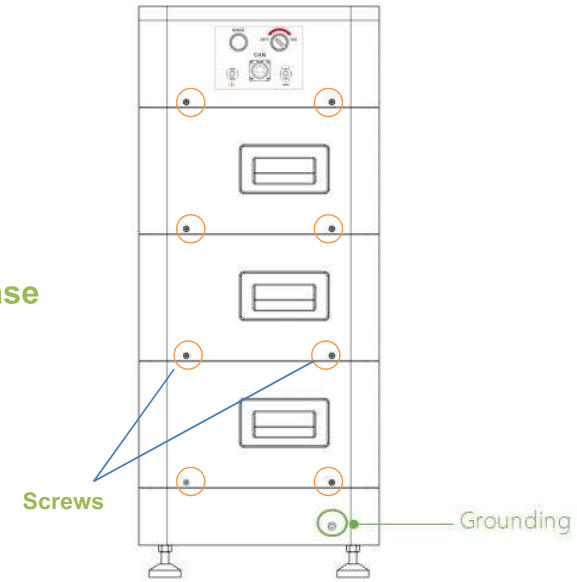
Battry installation

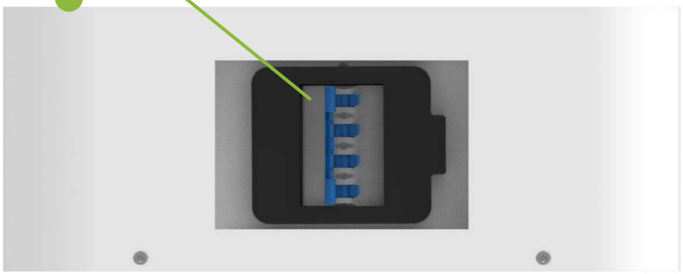
⭐ Please note that the battery should be installed with a minimum safe clearance from the surrounding equipment or battery.

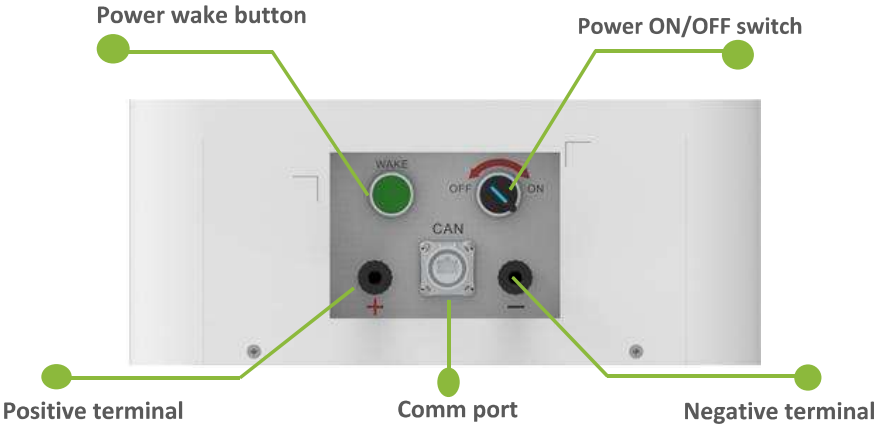


Adjustable Standing Base



BDU 1G - Interface & Start





1. **DC breaker**: When you want to switch on the battery, the first thing is to turn on this breaker. It's a breaker between module and BDU, is only used to make the battery module power the BDU, not the main function of the short circuit protection between battery and inverter, so when you install a system, we recommend you add one DC breaker between battery and inverter.
2. **Power ON/OFF switch**: the power switch, when you want to start the battery, after turning on the breaker, you need to switch it on. When you want to turn off the battery, you need to switch off it and then turn on the breaker.
3. **Power wake button**: after switching on the Power ON/OFF switch, you need to press this button for about 3s to wake up BDU.
4. **Comm port**: **CAN/RS485** connect the communication cable from this port to the inverter BMS port
5. **Positive terminal**: connect the positive power cable here
6. **Negative terminal**: connect the negative power cable here

Power-on Order: Turn on the BDU breaker → Push the power switch to the "ON" → Press "WAKE" button for 3s → When you hear the sound of the relay closing, release the button and the green is always on
Shutdown Order: Push the power switch to the "OFF" → Disconnect the BDU breaker

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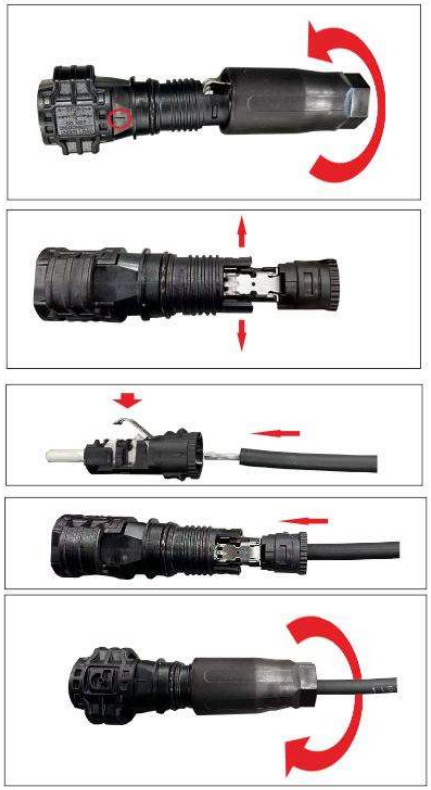
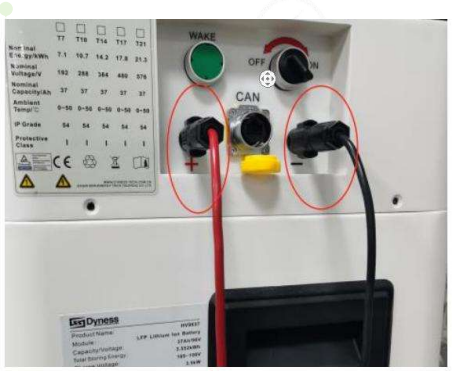
Cable Connection

1. Rotate counterclockwise to lock the connector
2. Push the locks on both sides outward,pull out the terminal.
3. Push the cable and press the elastic stopper down into the snap to lock the cable.
4. Push the terminals into the connector until they locked.
5. Rotate clockwise and lock the connector until it is completely closed.





6. Connect the positive and negative power cables to the BDU.

7. Disassemble the waterproof connector, and pass the communication cable through the connector and waterproof rubber ring from back to front until it is locked in the card slot at the front of the connector.
8. Connect the communication cable to the BDU, waterproof connector is recommended for outdoor use.

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Tower

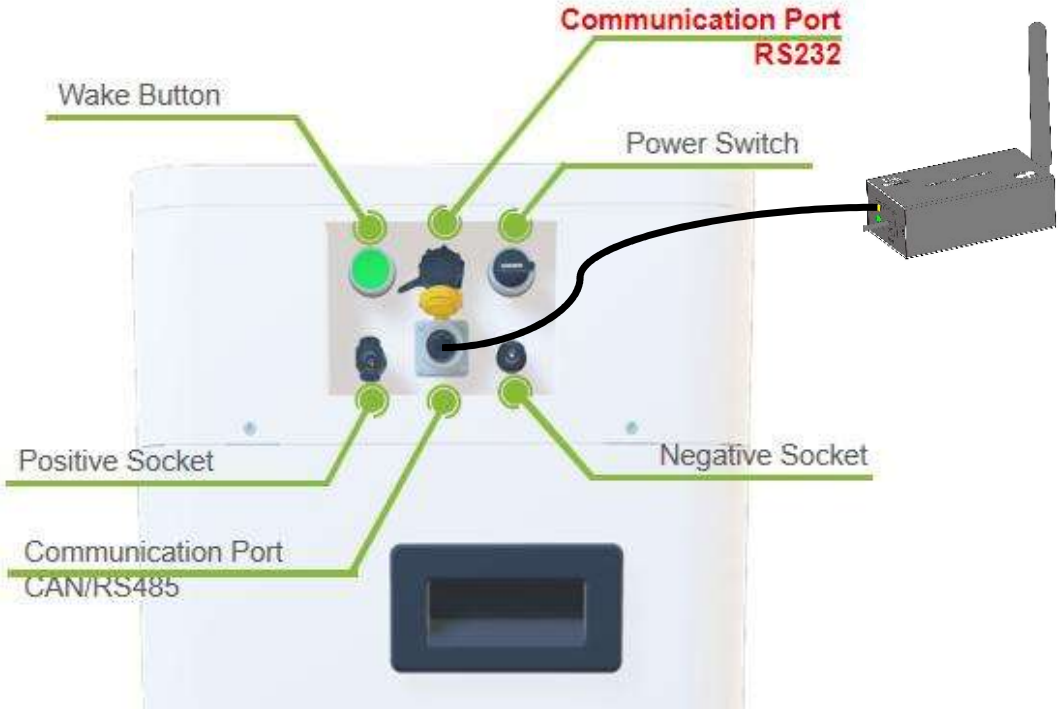
1.5G Interface Introduction

Tower

Interface Introduction

Dyness BDU 1G

Dyness BDU 1.5G



Dyness BDU 2G

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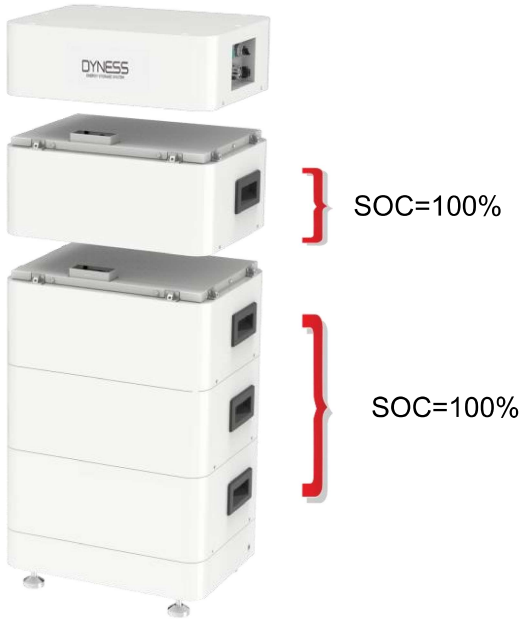
Battery Expansion - Previous solution

⭐ It is recommended that the time interval between new module(s) and the previous system should not exceed **6 months**.

1. Fully charge the original system with an inverter until SOC to 100%.

2. Add the module to be charged between BDU and Base. Fully charge it with DC power until it is cut off.



3. Add the expansion module to the original battery system.

Battery Expansion - New solutions

Solutions 1 : Module balancing Optimizer

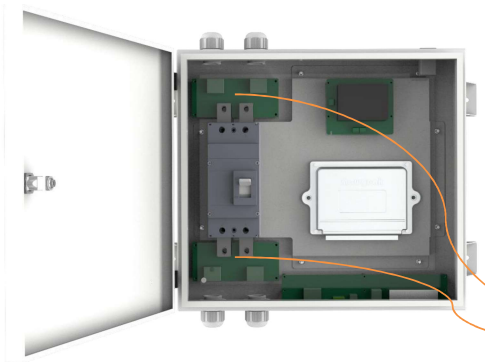
BDU
Module Balancing Optimizer
Module HV9637
Module Balancing Optimizer
Module HV9637
Base

Solutions 2 : Module slave board changing

DYNESS

Tower Combiner Box

- DYNESS DC BUS Box is designed for battery system paralleling (Tower & Tower Pro), by which the battery capacity could be extended further.
- A combinar box is needed for the parellel connection .



Top view of Combiner box

Two ways to connect the Power Line