EN-QSG Jun-2025 Version1.1

High Voltage Battery System

Battery-Box

HVB 5.9, 8.9, 11.8, 14.8, 17.8, 20.7, 23.7, 26.7, 29.6

HVM+ 8.3, 11.0, 13.8, 16.6, 19.3, 22.1

HVS+ 5.1, 7.7, 10.2, 12.8

Quick Start Guide

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For the latest documents visit: www.bydenergy.com

Disclaimer

1. Target Group

Instructions in this document may only be performed by qualified personnel with the following skills:
- Understand how batteries work and operate.
- Understand the working principle and operation method of the inverter.
- Know and comply with locally applicable connection requirements, standards and directives.
- Understand and follow this document and related system documentation, including all safety instructions.
- Training to handle hazards associated with the installation and operation of electrical equipment and batteries.
- Training on installation and commissioning of electrical equipment.
- For personnel engaged in special scenarios such as working at height or operating special equipment, they must be qualified by the local country or region.

2. Firefighting measures

2.1 Extinguishing media

- **Small fire** Dry powder, sand, carbon dioxide (CO_2), water spray
- **Large fire** Water spray

2.2 Fire precautions and protective measures

Flammable properties	Lithium ion batteries contain flammable liquid electrolyte that may vent,ignite and produce sparks when subjected to high temperature (> 150°C),when damaged or abused (e.g.,mechanical damage or electrical overcharge). Burning cells can ignite other batteries in close proximity.
Explosion data	Extreme mechanical abuse will result in rupture of the batteries. Throw into the fire will result in burning.
Special protective equipment for firefighters	In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
NFPA	Health:0 Flammability:1 Instability:0

Configure the Battery System

Through the APP, you can realize intelligent battery management, including remote data monitoring, firmware upgrade and troubleshooting.

- Android users : Search for “BYD Energy” on Google Play.
- iPhone users : Search for “BYD Energy” in the App Store

iOS Android

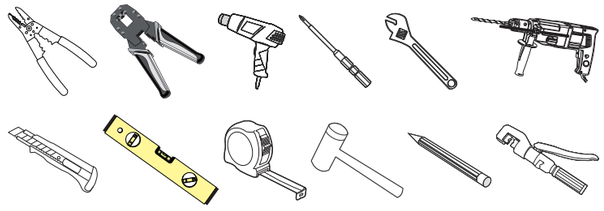
Configuration steps:

Download → Login/Register → Add Device → Bluetooth Connection /Networking → Enjoy

For detailed configuration steps, please refer to the user manual and APP instructions,
Website: www.bydenergy.com.

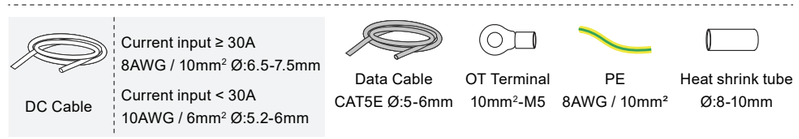
Requirements for Installation

1. Tools & Additional Accessories (*not included in the scope of delivery*)



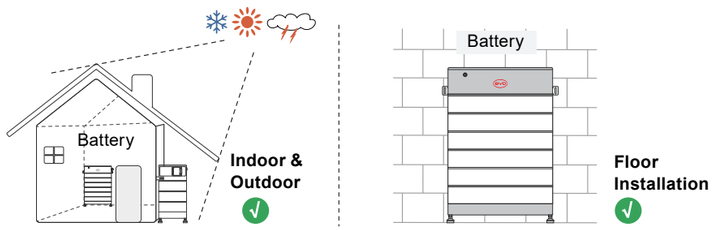
For HVS+ / HVM+ only

Recommended use batterys HVM+ ≥ 6



2. Safety Gear & Required Personnel

3. Installation Scene & Installation Mode



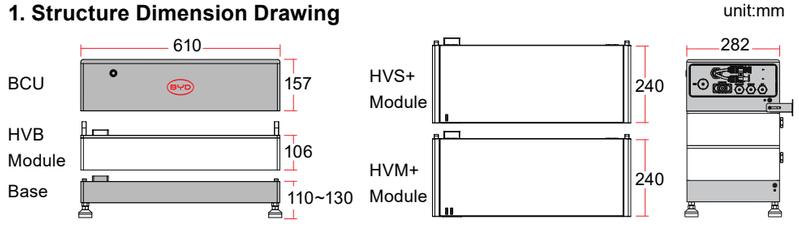
Scope of Delivery

1	**BCU and Base Package**	3. Terminal resistor x 1 4. Screw M4*8 x 2 5. Knob screw x 2 6. Communication terminal x 2 7. Expansion screw M8 x 2 8. Connector special tool x 1	9. MC4 wiring terminal 10. Foot x 4 11. Hanger1 x 2 12. QSG x 1 13. Screw M5*16 x 2 14. Smart WiFi/ LAN Module	15*. Screw M5*16 x 2 16*. Hanger2 x 2 17*. Plastic rivet x 2 * (for HVS+ / HVM+ only)
	1. BCU x 1 2. Base x 1			
2	**Battery Module Package**	18. HVB Module x 1 19. HVS+ Module x 1	20. HVM+ Module x 1 21*. Screw M5*10 x 2	22. MSDS x1

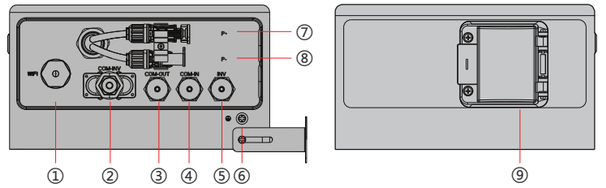
Battery System Overview

1. Structure Dimension Drawing

unit:mm

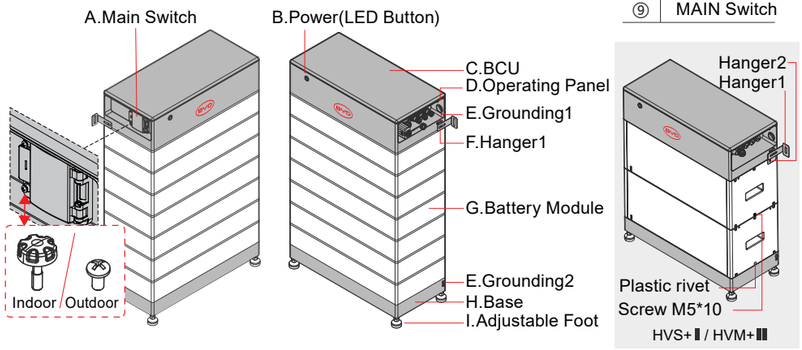


2. Functional Area Overview

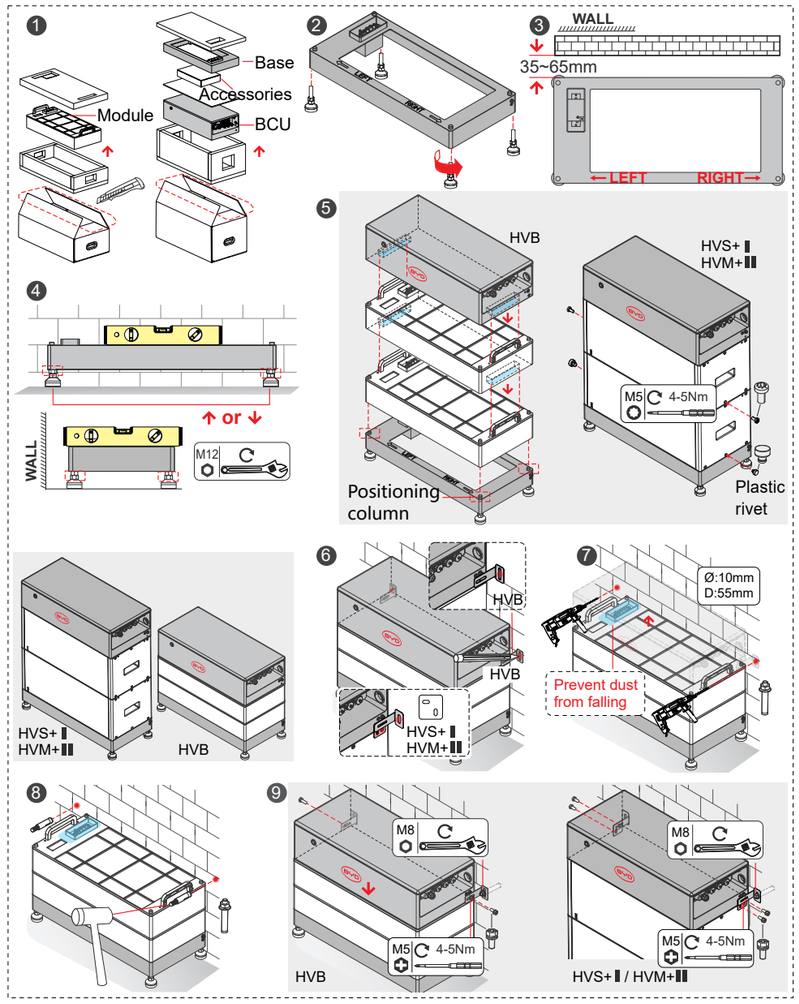


No.	Description
①	WIFI
②	COM-INV
③	COM-OUT
④	COM-IN
⑤	INV
⑥	Grounding
⑦	P+
⑧	P-
⑨	MAIN Switch

3. Battery System Description

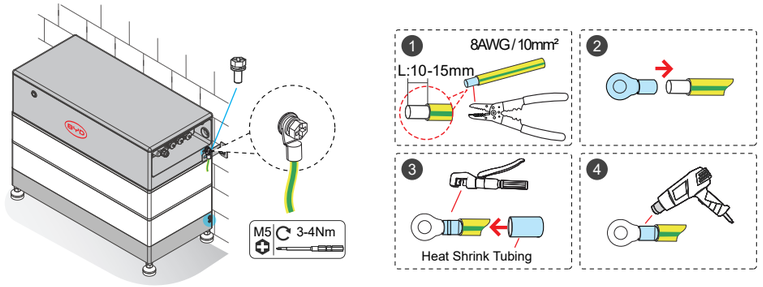


Floor Installation

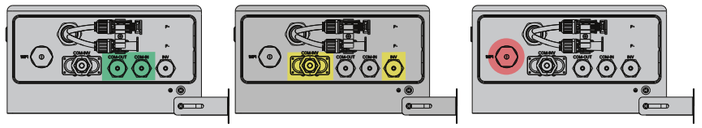


Electrical Connection

1. Connecting the PE

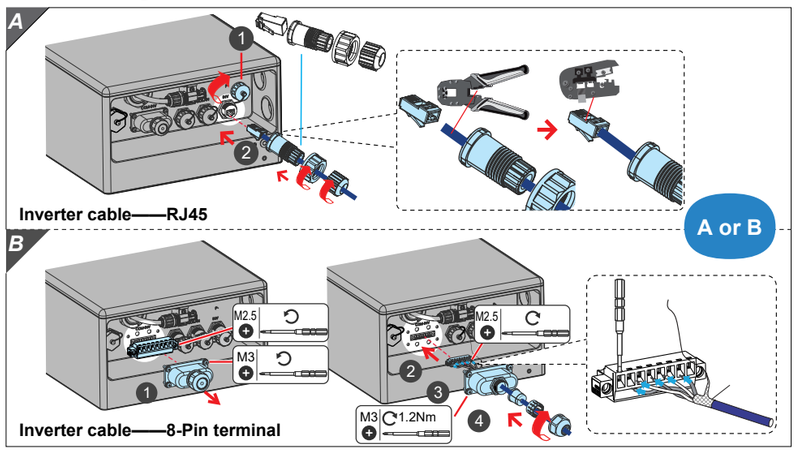


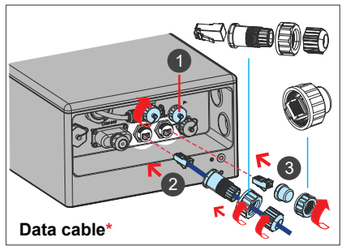
2. Connection Diagram



No.	1	2	3	4	5	6	7	8
INV	RS485A	RS485B	IGND	CAN_H	CAN_L	NC	PCS_EN+	PCS_EN-
IN/OUT	Unused	Unused	Unused	Unused	Unused	Unused	CAN_L	CAN_H
COM-INV	CAN_H	CAN_L	IGND	NC	PCS_EN+	PCS_EN-	RS485B	RS485A

3. Connecting the Inverter cable, Smart Wifi/LAN Module* and Data cable*



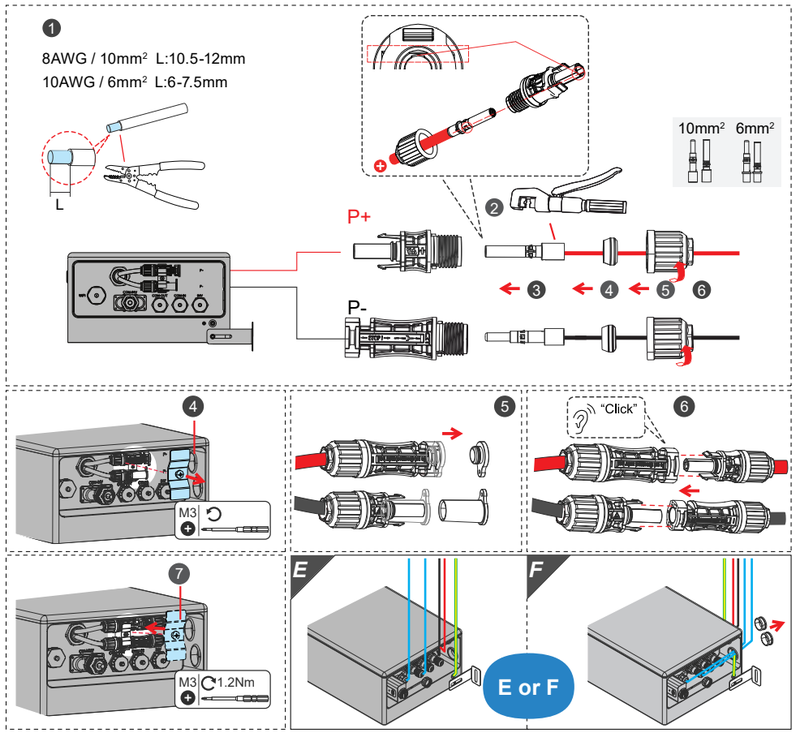


** The battery system doesn't have a wireless communication function. Through the USB, the battery system supports the expansion of connection with the Smart WiFi/LAN Module to implement the wireless function, and the Smart WiFi/ LAN Module had obtained individual cyber security certification in accordance with EN 18031 series.*

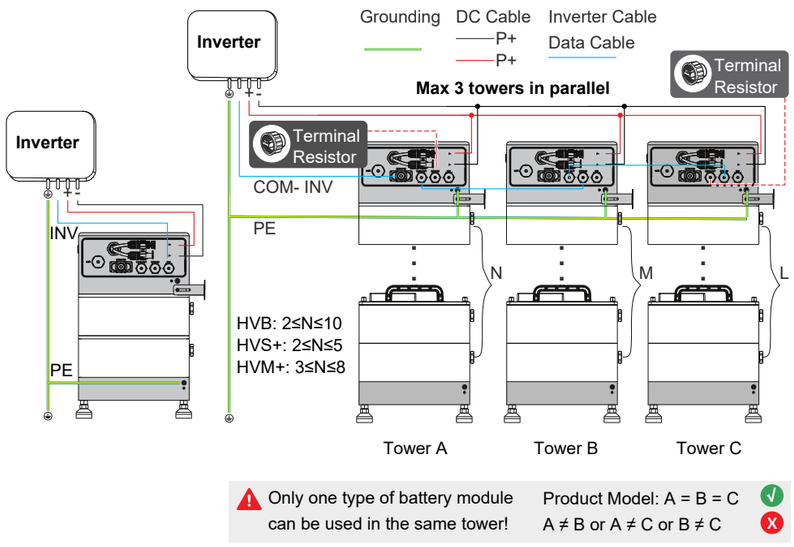
** Data Cable & terminal resistor are used for parallel connection.*

** Connect terminal resistor, Plug the terminal resistor into the "IN" port of the master module and the "OUT" port of the last slave module.*

4. DC Connection



Systems Connection

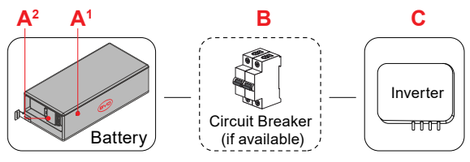


⚠ Only one type of battery module can be used in the same tower!

Product Model: A = B = C ✓

A ≠ B or A ≠ C or B ≠ C ✗

Operation



Switch on the Battery:
B ⟶ A² ⟶ C

Switch off the Battery:
C ⟶ A¹5s ⟶ B

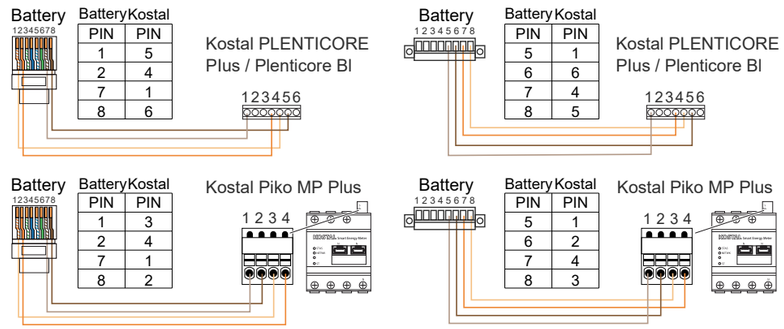
Black Start Function:
B ⟶ A² ⟶ A¹3s

LED Signals

Indicator	Status	Description
Flashing white and blue alternatively	White ON/OFF, Blue ON/OFF, 0.5s	The battery system is initiating
Flashing white slowly	White ON/OFF, Blue ON/OFF, 2s	The battery system is charging
White light flashing	White ON/OFF, Blue ON/OFF, 1s	The battery system is discharging
Constant white	White ON/OFF, Blue ON/OFF	Idle (the battery system is neither charging nor discharging).
Constant blue	White ON/OFF, Blue ON/OFF	BCU failure
Blue light flashes a certain number of times	White ON/OFF, Blue ON/OFF, N, 2.5s, 0.5s	Counting from top to bottom, flashing N times, represents the Nth battery module failure, N represents 1-10 battery modules

Connection Options with Inverters

Connection with Kostal



Connection with Kaco