Open Energy for All

Three-phase HiOne Series

Quick Installation Guide

HiOne-(8-20)T-G3
HiOne-8B-G3

1 General Declaration

- The information in this quick installation guide is subject to change due to product updates or other reasons.
- This guide cannot replace the product labels or the safety precautions in the user manual unless otherwise specified. All descriptions here are for guidance only.
- Before installations, read through the quick installation guide and the user manual to learn about the product and the precautions.
- All installations should be performed by trained and knowledgeable technicians who are familiar with local standards and safety regulations.
- Check the deliverables for correct model, complete contents, and intact appearance. Contact the manufacturer if any damage is found or any component is missing.
- Use insulating tools and wear personal protective equipment when operating the equipment to ensure personal safety. Wear anti-static gloves, clothes, and wrist strips when touching electronic devices to protect the inverter from damage. The manufacturer shall not be liable for any damage caused by static electricity.
- Strictly follow the installation, operation, and configuration instructions in this guide and user manual. The manufacturer shall not be liable for equipment damage or personal injury if you do not follow the instructions.
- All cables in this article are copper cables.
- EU Declaration of Conformity

  Hoymiles Power Electronics Inc. hereby declares that (model: HiOne-8/10/12/16/20T-G3) is in compliance with the essential requirements and other relevant provisions of directives 2014/30/EU, 2014/35/EU, 2011/65/EU, (EU) 2015/863, and 2012/19/EU.

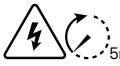
  Hoymiles Power Electronics Inc. hereby declares that (model: HiOne-8B-G3) is in compliance with the essential requirements and other relevant provisions of directives 2014/30/EU, 2011/65/EU, (EU) 2015/863, and EU Battery Regulation (EU) 2023/1542.

  Hoymiles Power Electronics Inc. hereby declares that Hoymiles Data Transfer Stick (model: DTS-WL-G3) is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2009/125/EC, 2011/65/EU and (EU) 2015/863.

  The original EU Declaration of Conformity may be found at ***https://www.hoymiles.com***.

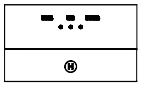
  Hoymiles Energy Storage Inverter works with Hoymiles Data Transfer Stick. Hoymiles DTS described in this document is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

  OPERATING FREQUENCY (the maximum transmitted power): 2412 to 2472 MHz (<20 dBm).

	Caution Failure to observe any warnings may result in injury.	CE	CE mark
	Danger to life due to high voltage.		Do not dispose of the inverter as household waste.
	Hot surface Burn danger due to hot surface that may exceed 60 °C.	RoHS	RoHS mark
	After the inverter is turned off, wait for at least 5 minutes before opening the inverter or touching live parts.		Observe the documentation.

2 Packing List

HiOne-(8-20)T-G3 Packaging Box

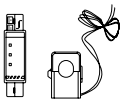

Inverter*1


Bracket*2


Expansion Screw M8*2


OT Terminal*2 Screw M4*8

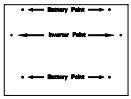

Communication Cable (5 m)*1


Three-phase Meter*1


Core*2


DTS-WL-G3*1

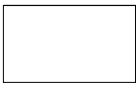

Decorative Cover*2



Positioning Board*1


Document*1

HiOne-8B-G3 Packaging Box


Battery*1


Bracket*2

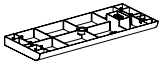

Expansion Screw M8*2


Screw M4*6


Decorative Cover*2

Accessory Packaging Box

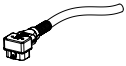

Handle*2


Base*1


Top Cover*1


Expansion Screw M8*4

Optional Accessory Packaging Box


Battery Cable


M4 Screw*5

Tower Parallel Installation Accessories


Bracket*2

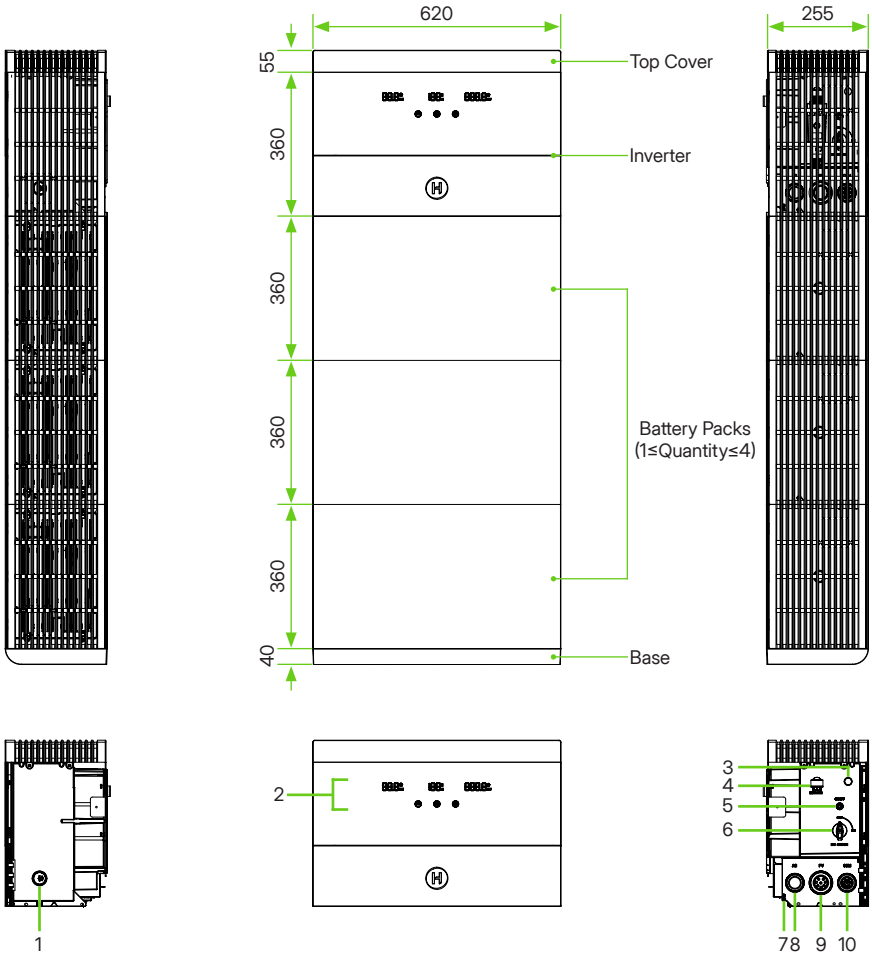

Expansion Screw M8*4

Wall-mounting Accessories

Note: *You need to buy accessories separately depending on the installation type. For a tower parallel system, order the Tower Parallel Installation Accessories. For a wall-mounted installation, order the Wall-mounting Accessories.*

3 Product Appearance

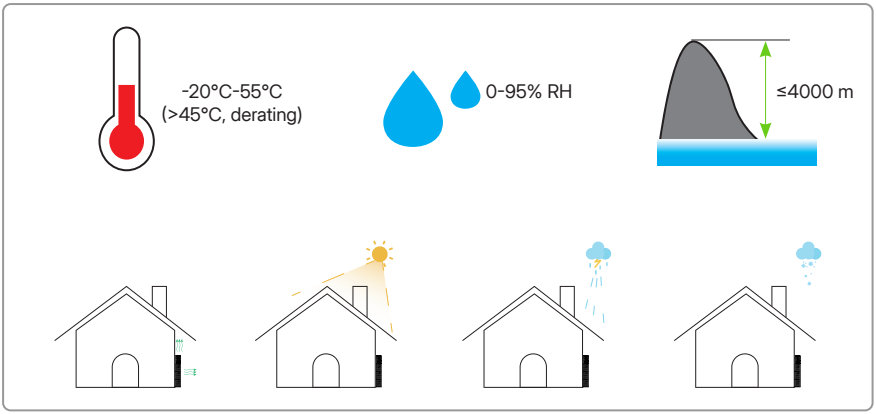
Unit: mm



No.	Description	No.	Description
1	Cable Entry for Parallel Batteries	6	DC Switch
2	LED Indicators	7	Ground Terminal
3	Relief Valve	8	AC Cable Entry
4	Data Transfer Stick (DTS) Port	9	PV Cable Entry
5	Power Button	10	COM Cable Entry

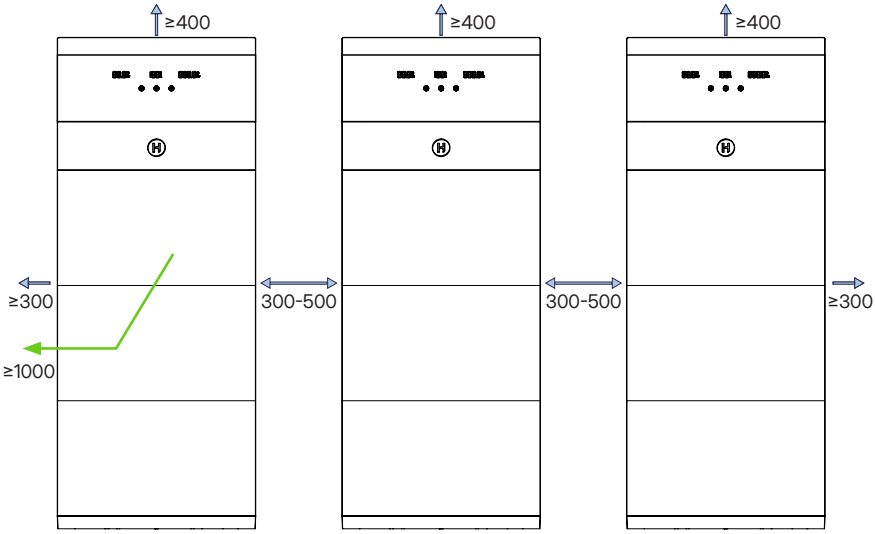
4 Installation Requirements

Environmental Requirements



Space Requirements

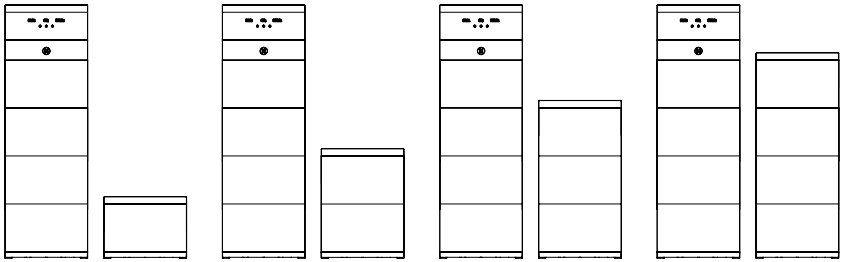
Unit: mm



Stackable Requirements

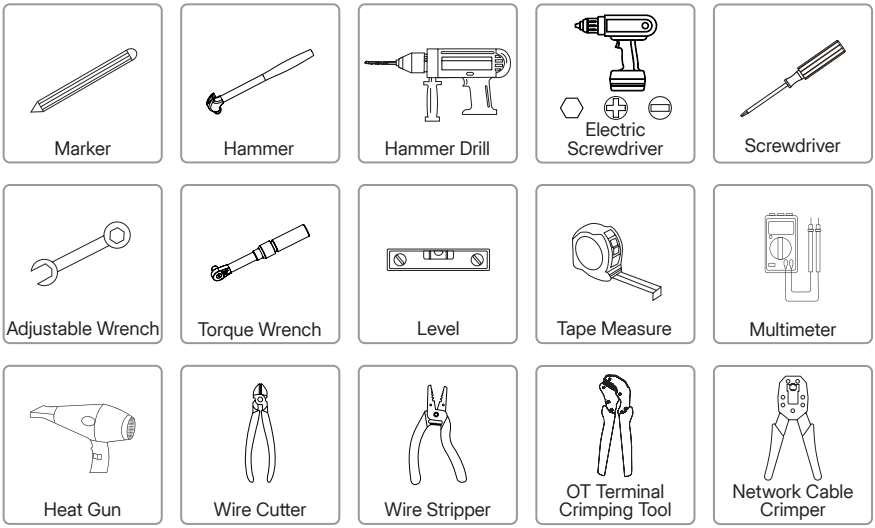
Up to 4 batteries can be stacked in one battery tower.

Up to two battery towers can be connected to one inverter.



Installation Tools

The following tools are recommended in the installation process, and other auxiliary tools can also be used if necessary.

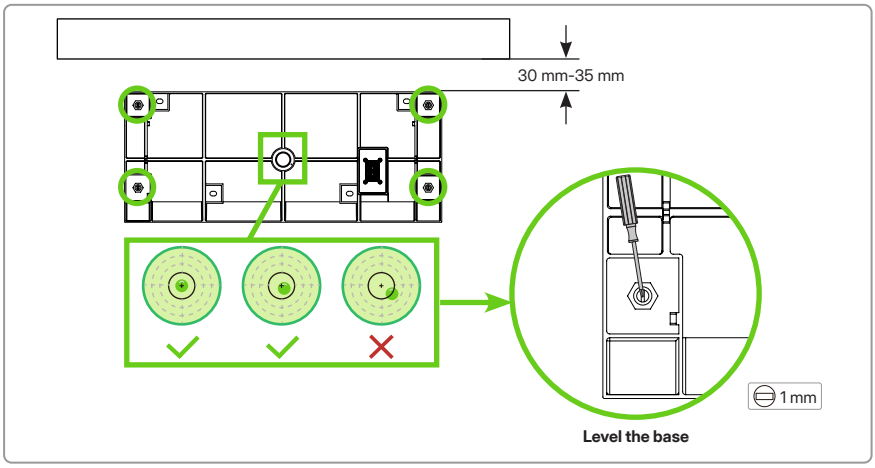


Personal Protective Equipment

5 Installation Steps

Floor-standing Installation

Step 1 Place the base on a level ground, parallel to the wall, and keep a distance of 30 mm to 35 mm. Ensure that the level bubble is in the center; if not, use a flat-head screwdriver to adjust the base.

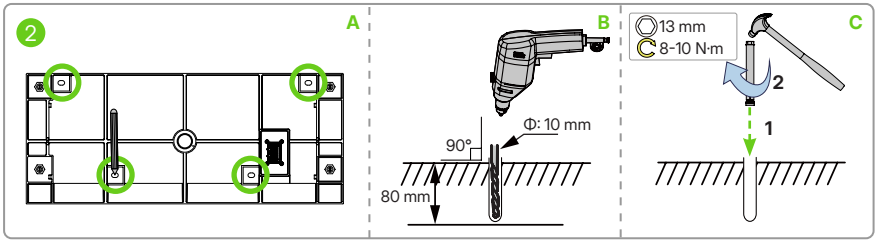


Step 2 Fix the base.

A. Mark hole positions.

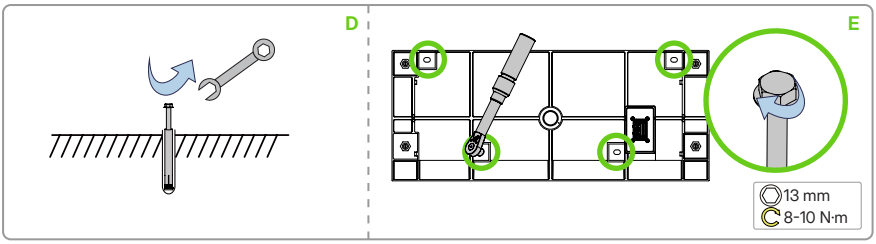
B. Drill holes.

C. Hammer and tighten the expansion screws.

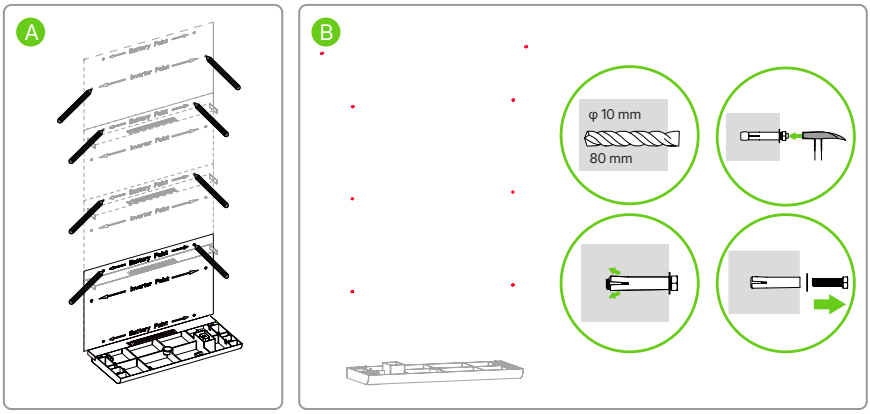


D. Unscrew the screws while leaving sleeves in place.

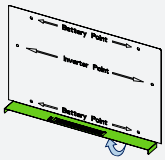
E. Place the base, insert the screws into the sleeves, and tighten them.



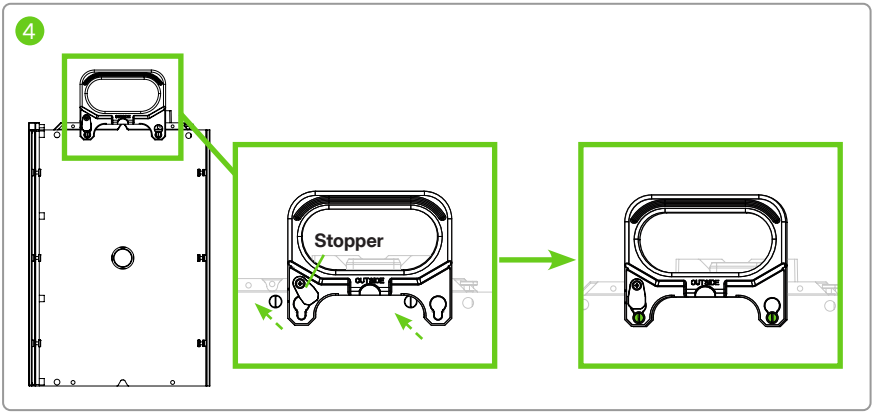
Step 3 Use the Positioning Board to mark the drilling positions.



Tips: How to Use the Positioning Board?
The positioning board has a specific section that is designed to be bent. You need to bend that section first. After bending it, you clip the Positioning Board to the base.

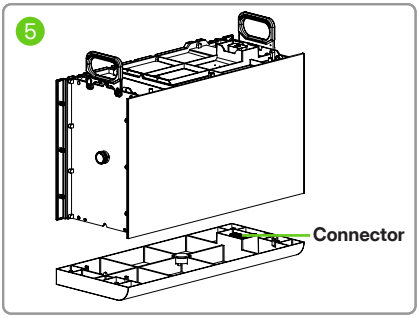


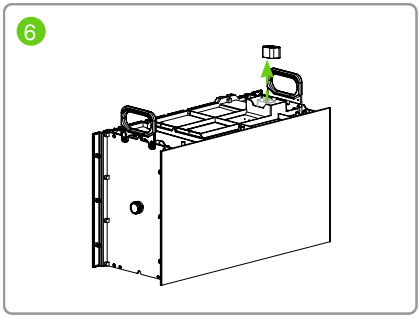
Step 4 Install the handles.



Step 5 Hold the handles to lift the battery, align the connector, and place the battery on the base.

Step 6 Remove the connector cover of the battery.



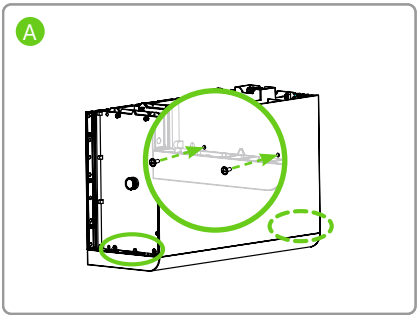


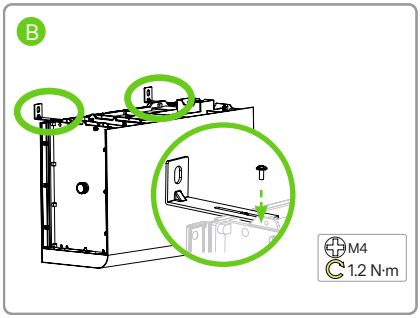
Step 7 Fix the battery.

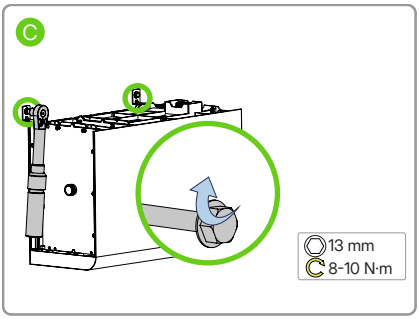
A. Use M4 screws secure the connection between the base and the battery.

B. Place the two L-shaped brackets on the battery and use M4 screws to fix them on the battery.

C. Secure the battery to the wall using L-shape brackets and M8 expansion screws.

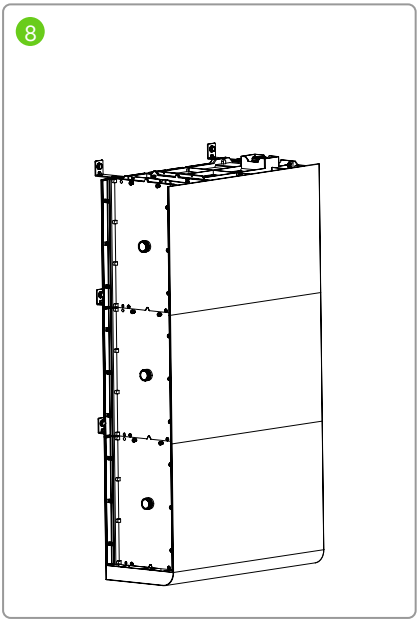


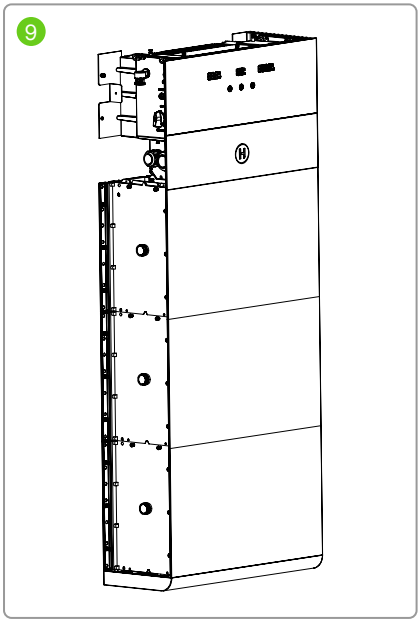




Step 8 Hold the handles to lift and stack the battery packs based on actual installation. Repeat ***step 5*** to secure the connection between the battery packs and fix the battery on the wall.

Step 9 Use the handles provided to place the inverter on the battery.





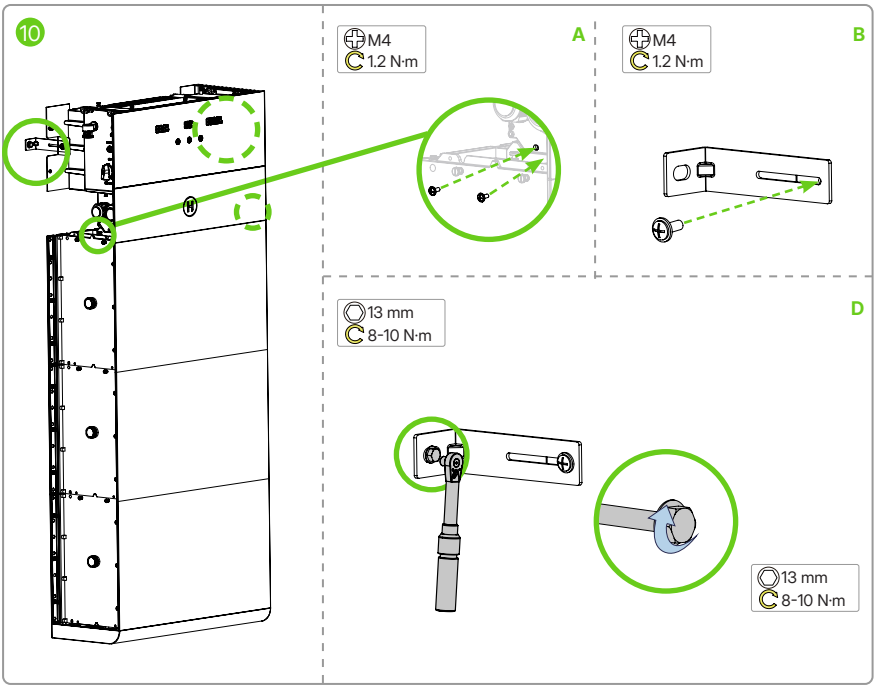
Step 10 Fix the inverter.

A. Secure the inverter to the battery using the supplied M4 screws.

B. Align the two L-shaped brackets with the mounting holes on the inverter, then fasten them using M4 screws.

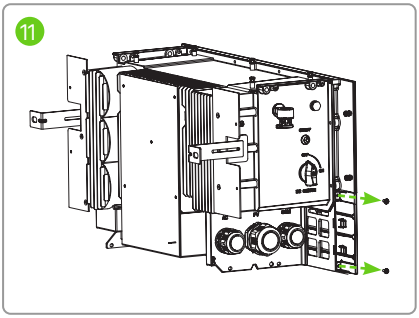
C. Align the L-shaped brackets with the drilling positions.

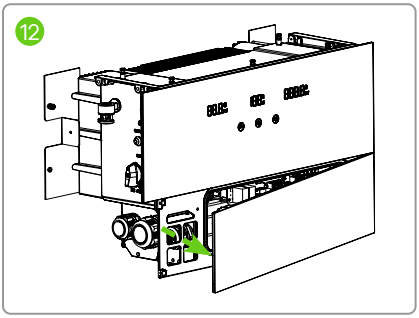
D. Insert the screws through the brackets into the sleeves and tighten them to secure the inverter to the wall.



Step 11 Unscrew the two screws on the left side of the inverter.

Step 12 Open the wiring box cover.

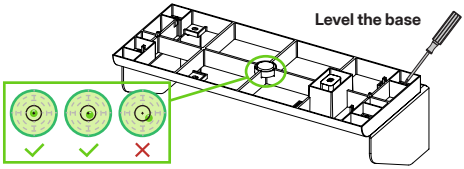




Wall-mounting Installation

Prerequisite: Level the Base

The base includes a built-in bubble level at its center. If the bubble is centered, the base is level.
If not, the base is uneven. Use flat-head screws to adjust the base height until the bubble is centered and the base is level.



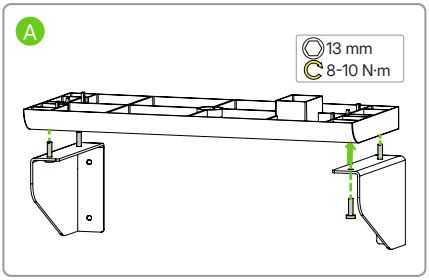
Step 1 Install the Wall-Mounting Bracket

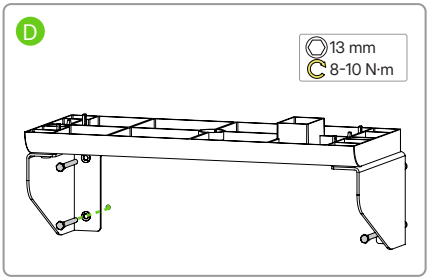
A. Attach the two wall-mounting brackets to the base.

B. Place the bracket assembly against the wall and adjust it until the level bubble is centered.

C. Mark the drilling positions through the bracket holes, then drill the holes.

D. Insert the expansion bolts and tighten them to secure the wall-mounting brackets to the wall.



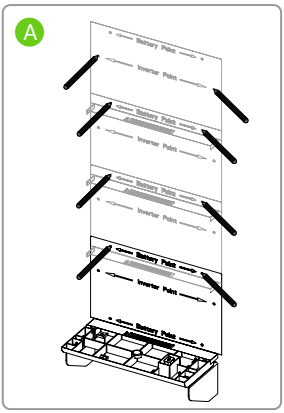


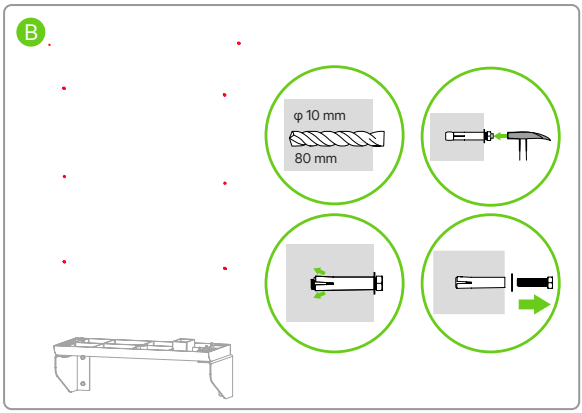
Step 2 Install the First Battery

A. Use the Positioning Board to mark the drilling positions.

B. Drill the holes.

C. Remove the connector cap from the top of the base.





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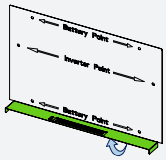
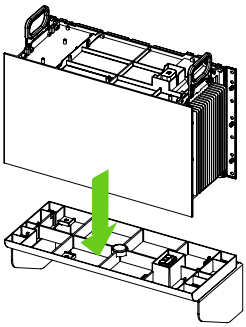


D. Lift the battery and place it onto the base until the connector fully engages.

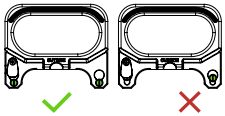
E. Secure the battery to the base with M4 screws.

F. Secure the battery to the wall using L-shape brackets and M8 expansion screws.

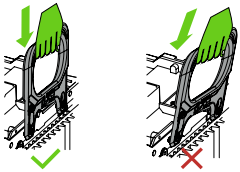
D



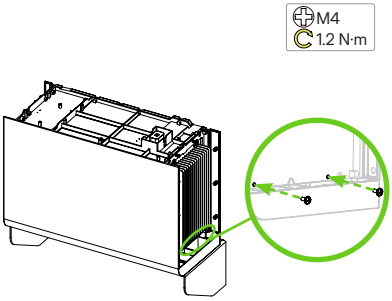
Make sure the handle is fully seated in position.



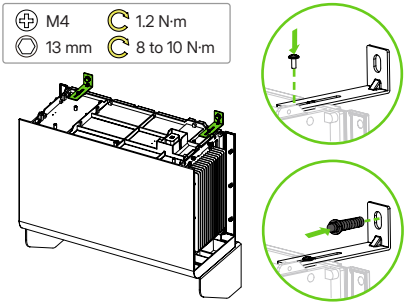
Lift the handle to 90°.



E



F



Step 3 Install Additional Stackable Batteries

A. Remove the connector cap from the top of the installed battery.

B. Lift the battery and lower it onto the previous one until the connectors fully engage.

C. Secure the two batteries together with M4 screws.

D. Repeat these steps until all batteries are installed.

Step 4 Install the Inverter

A. Remove the connector cap from the top of the battery and from the bottom of the inverter.

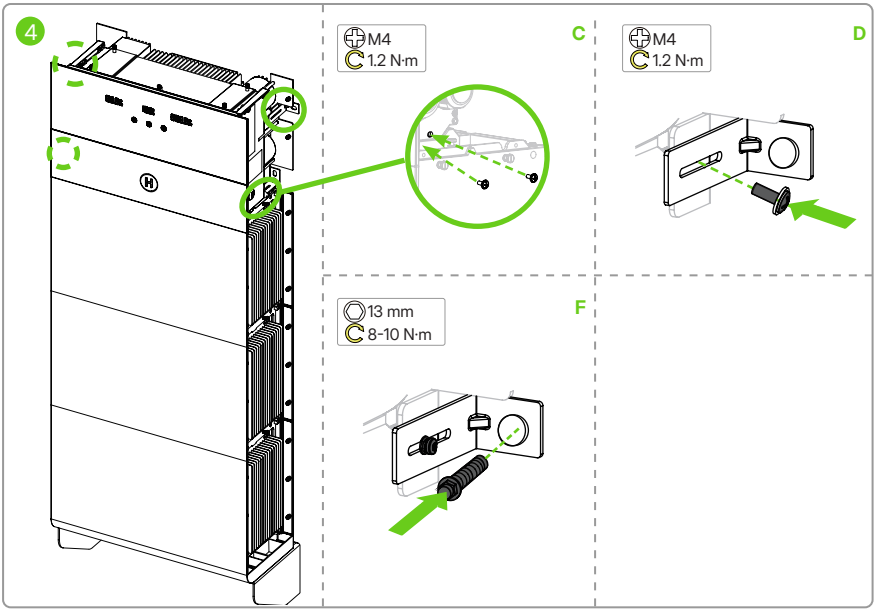
B. Lift the inverter and place it onto the battery until the connector fully engages.

C. Secure the inverter to the battery using the supplied M4 screws.

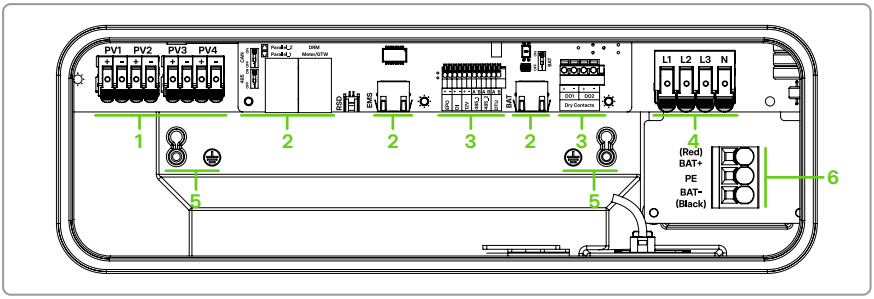
D. Align the two L-shaped brackets with the mounting holes on the inverter, then fasten them using M4 screws.

E. Align the L-shaped brackets with the drilling positions.

F. Insert the screws through the brackets into the sleeves and tighten them to secure the inverter to the wall.



6 Electrical Connection



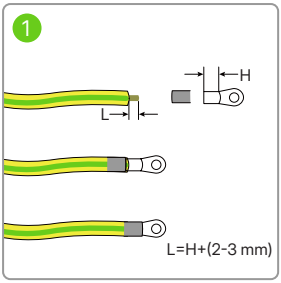
NO.	Description	NO.	Description
1	PV Terminals	4	AC Terminals
2	Communication Terminals (COM1)	5	Ground Terminal
3	Communication Terminals (COM2)	6	Battery Terminals (For Parallel Towers)

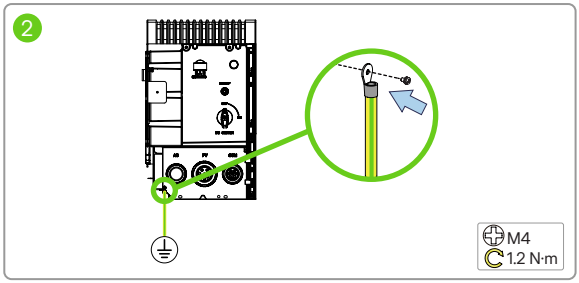
Note:

- *The following data is the cable specification recommended by Hoymiles.*
- *The cables used in actual installation can be larger than the recommended specifications, but cannot be smaller than the recommended specifications. Select the appropriate cables in accordance with local laws and regulations.*
- *To ensure a reliable electrical connection, it is recommended to use crimp terminals when connecting cables to the inverter.*
- *The wiring color code may vary. Please follow local laws and regulations for wiring.*

Ground Cable Connection

Cable (90°C, Copper)	Recommended Specification (mm^2)					Stripping Length (mm)
	HiOne-8T-G3	HiOne-10T-G3	HiOne-12T-G3	HiOne-16T-G3	HiOne-20T-G3	HiOne-8/10/12/16/20T-G3
Ground	2.5		4		6	12



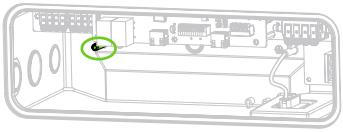


AC Cable Connection

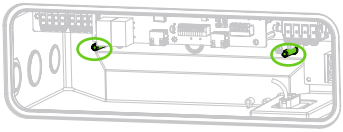
Cable (90°C, Copper)	Recommended Specification (mm²)					Stripping Length (mm)
	HiOne-8T-G3	HiOne-10T-G3	HiOne-12T-G3	HiOne-16T-G3	HiOne-20T-G3	HiOne-8/10/12/16/20T-G3
AC	2.5		4		6	18

Before You Start

The product has two grounding lugs. Which one you can use depends on the product version. On early versions, one lug is already connected to the battery cable, so use the other lug for grounding. On later versions, both lugs can be used, and you may choose either one.



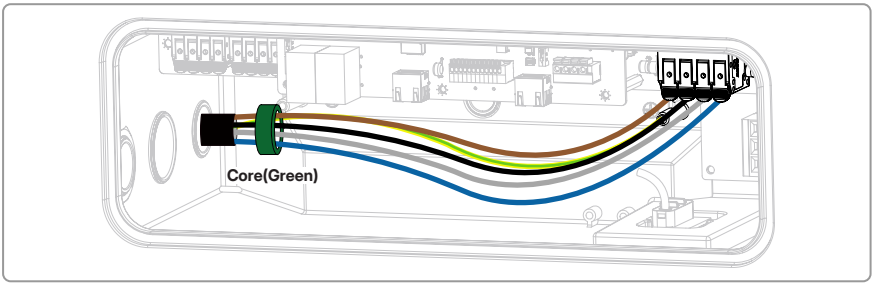
Early Version

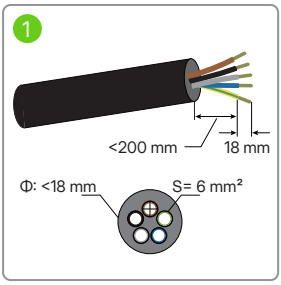


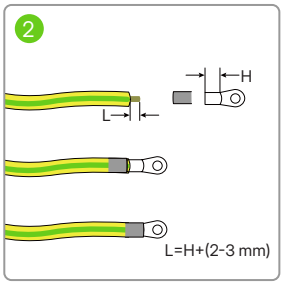
Later Version

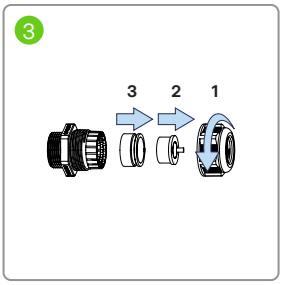
Procudure

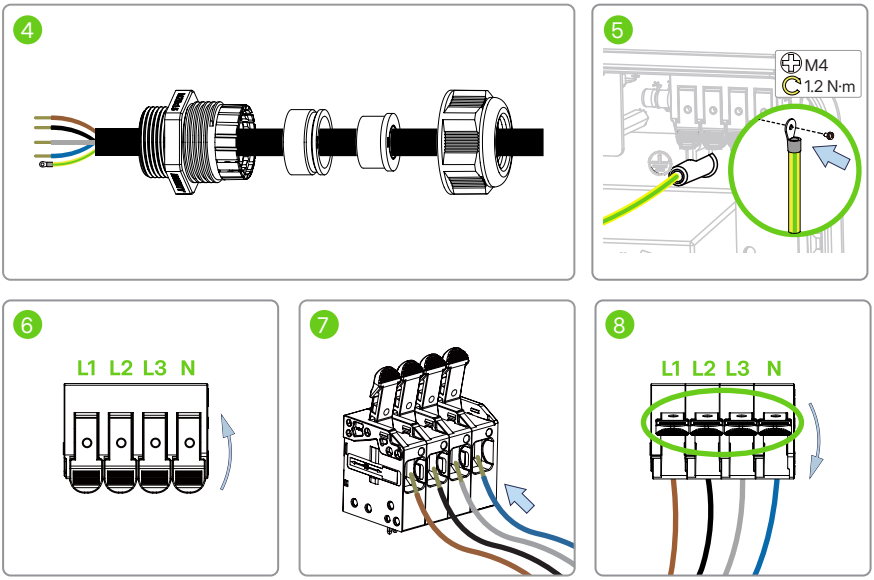
Taking ***HiOne-20T-G3*** as an example:









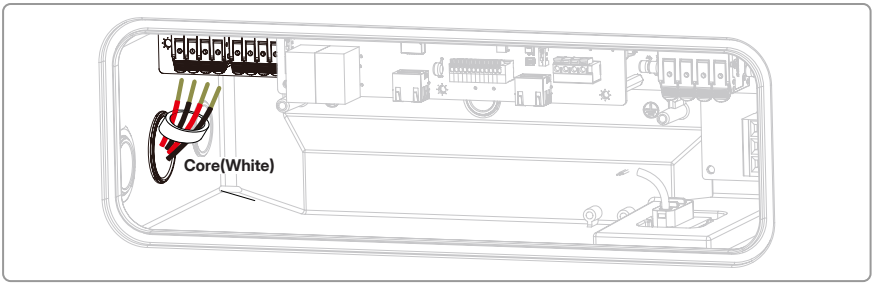


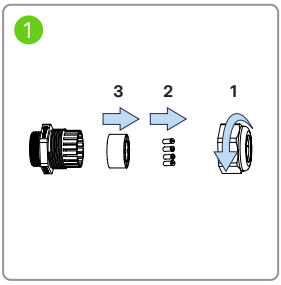
Note:

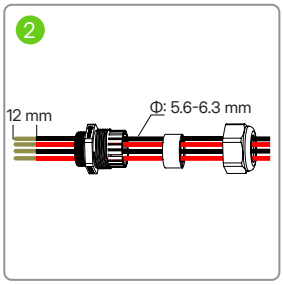
Tighten the cable gland with a torque of 7 N·m to 8 N·m after completing the wiring.

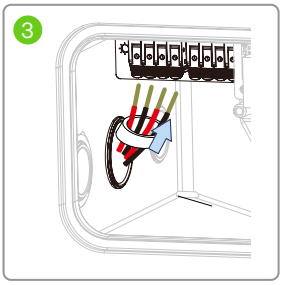
PV Cable Connection

Cable (90°C, Copper)	Recommended Specification (mm²)	Stripping Length (mm)
	HiOne-8/10/12/16/20T-G3	HiOne-8/10/12/16/20T-G3
PV	4	12



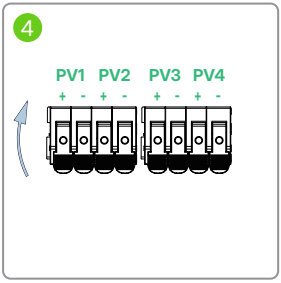


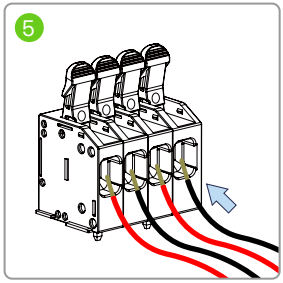


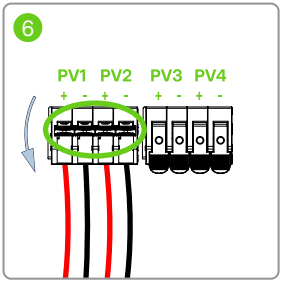


Note:

There are rubber plugs at the bottom of the cable glands. To ensure sealing performance, remove the rubber plugs based on the actual number of cables.



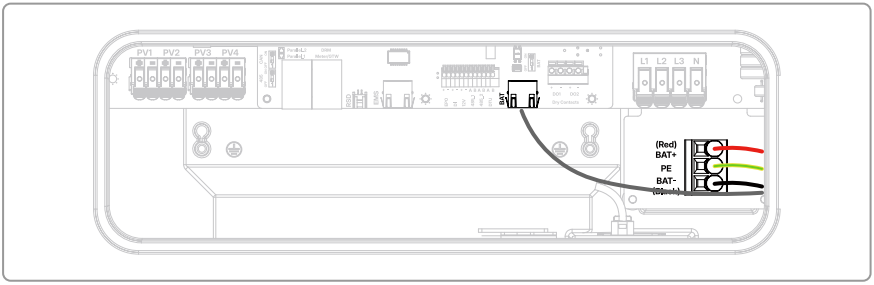


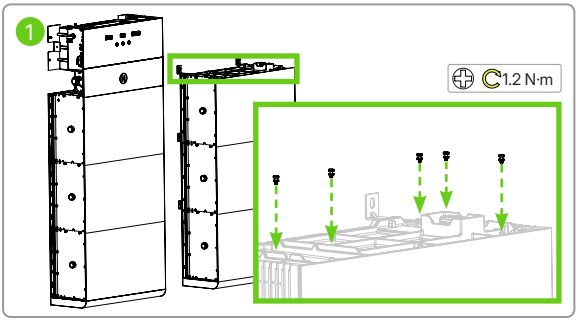


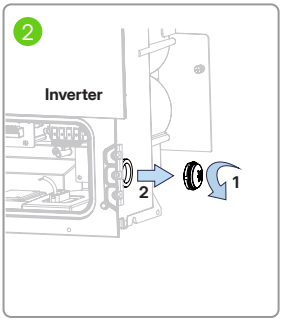
Note: *Tighten the cable gland with a torque of 10 N·m to 13 N·m after completing the wiring.*

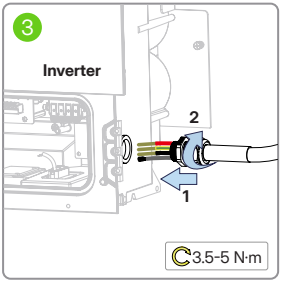
(Optional) Battery Cable Connection

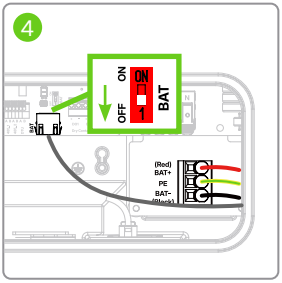
If the second battery tower needs to be installed, use the provided cable to connect the second battery tower to the inverter.

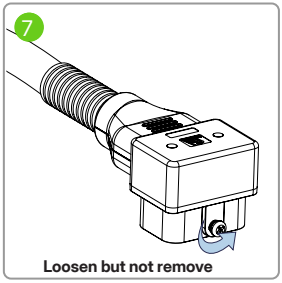


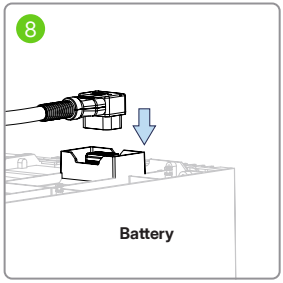


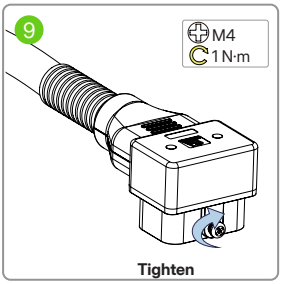






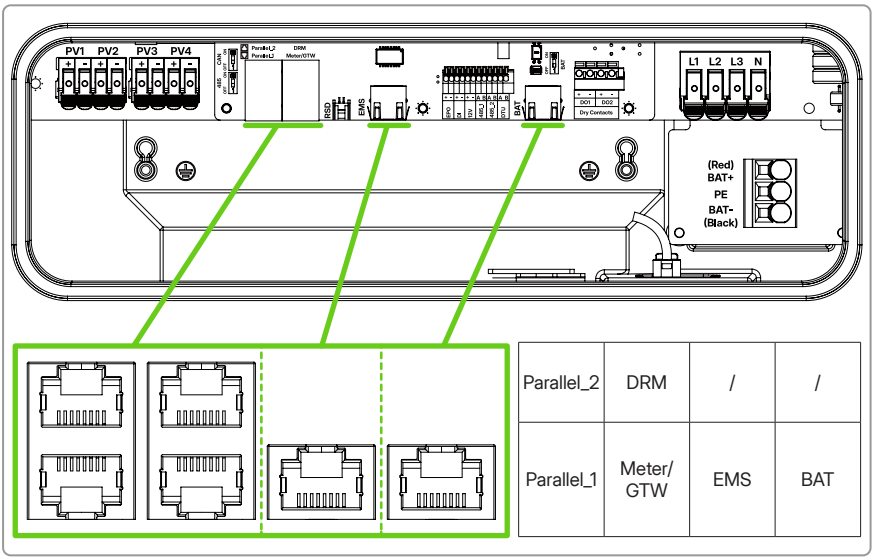






Communication Cable Connection

COM1 Connection

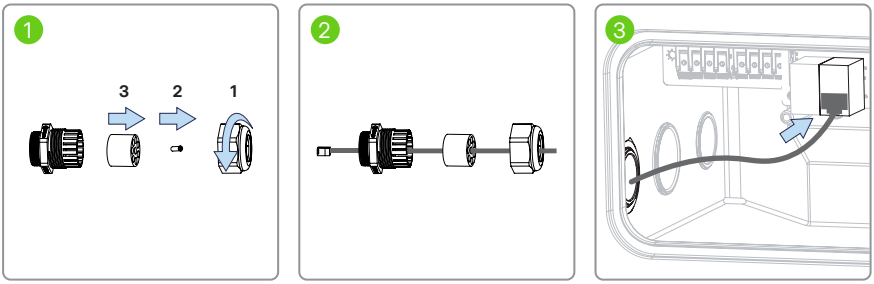


Terminal	PIN	Definition							
		1	2	3	4	5	6	7	8
Parallel_2		NC	GND	CANH	Psync-485A	Psync-485B	CANL	485B	485A
Parallel_1		NC	GND	CANH	Psync-485A	Psync-485B	CANL	485B	485A
DRM		DRM1/5	DRM2/6	DRM3/7	DRM4/8	REFGEN	COM/ DRM0	NC	NC

Meter/GTW		CANH	CANL	GND	485A	485B	GND	+12V1A_0UT	+12V1A_0UT
EMS		RX_P	RX_N	TX_P	NC	NC	TX_N	NC	NC
BAT		Button 2+	Button 2-	NC	NC	+12V	GND	CANL	CANH

Note:
If the batteries are stacked in one battery tower, ensure that this termination resistor is "ON".

Taking Meter Connection as an example:



Note:

- *There are rubber plugs at the bottom of the cable gland. To ensure sealing performance, remove the rubber plugs based on the actual number of cables.*
- *Tighten the cable gland with a torque of 6.75 N·m to 7.5 N·m after completing the wiring.*

Meter and CT Connection

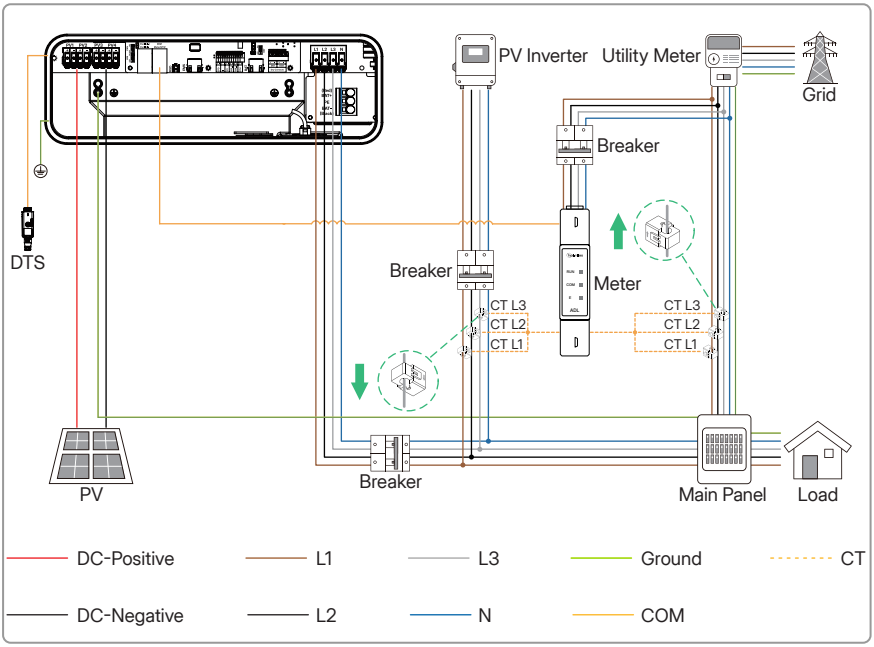
Step 1 Respectively connect the meter's terminals L1/L2/L3/N to Grid L1/L2/L3/N.

Step 2 Clamp the grid side CTs to Grid L1/L2/L3. The arrow on the surface of the CTs should point to the grid.

Step 3 Connect the grid side CTs to the meter's CT1 terminal.

Step 4 (Optional) If a PV inverter is connected, clamp the PV inverter side CTs to L1/L2/L3, and connect the PV inverter side CTs to the meter's CT2 terminal. The arrow on the surface of the CTs should point to the opposite direction of the PV inverter.

Step 5 Use a standard Ethernet cable to connect the meter's RS485 terminal and the inverter's meter terminal.

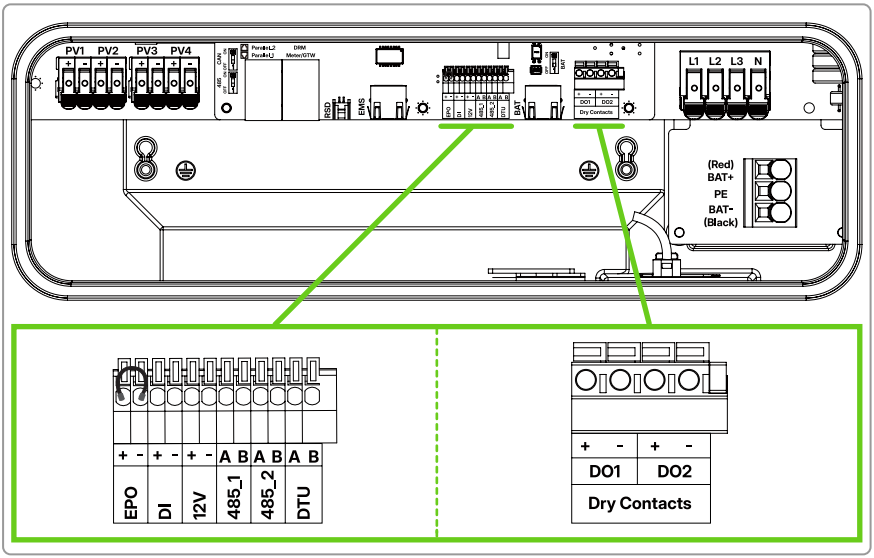


Note:

- *This series inverter comes with Meter-1T-G3 as standard. To install an AC coupled system, another set of CTs must be purchased separately from Hoymiles.*
- *In an AC coupled system, the grid side CTs must be connected to the meter's CT1 terminal, and the PV inverter side CTs must be connected to the meter's CT2 terminal.*

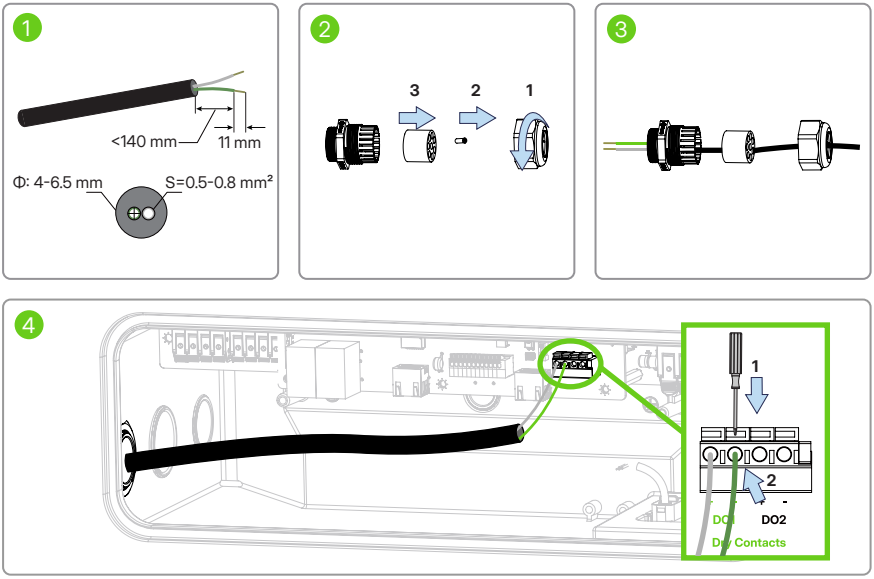
COM2 Connection

Cable	Recommended Specification (mm²)	Stripping Length (mm)
	HiOne-8/10/12/16/20T-G3	HiOne-8/10/12/16/20T-G3
COM2	0.5-0.8	11



Label	Definition
EPO	For external Emergency Power Off switch.
DI	Reserved dry contact input.
12V	12V/1A output. For heat pump control by connecting an external relay. For the Gateway connection.
485_1	For the third-party EMS communication.
485_2	For the EV charger control.
DTU	For DTU communication.
DO1 (NO1, COM1)	Dry contact output. For SG Ready heat pump control.
DO2 (NO2, COM2)	Reserved dry contact output.

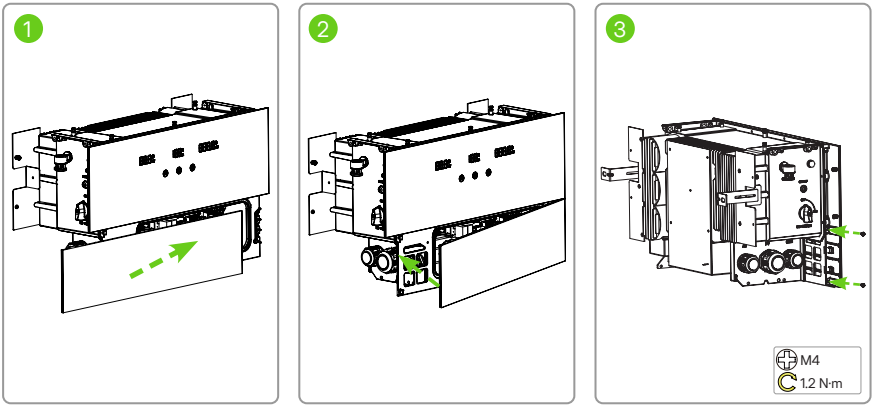
Taking DO1 connection as an example:



Note:

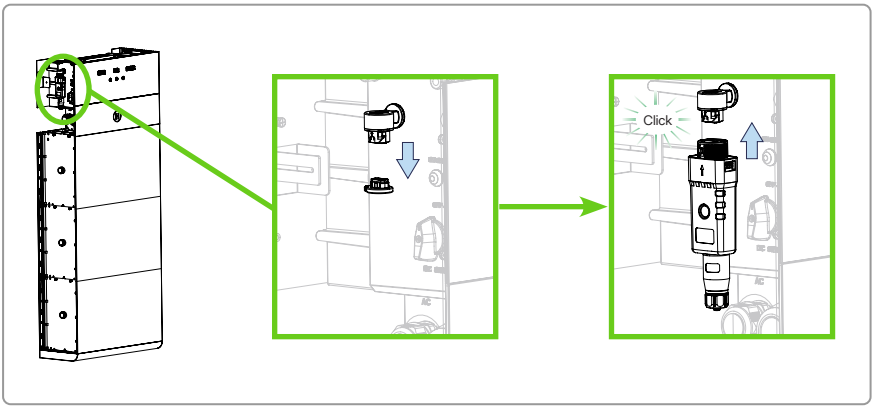
- *There are rubber plugs at the bottom of the cable gland. To ensure sealing performance, remove the rubber plugs based on the actual number of cables.*
- *Tighten the cable gland with a torque of 6.75 N·m to 7.5 N·m after completing the wiring.*

Installing the Wiring Box Cover

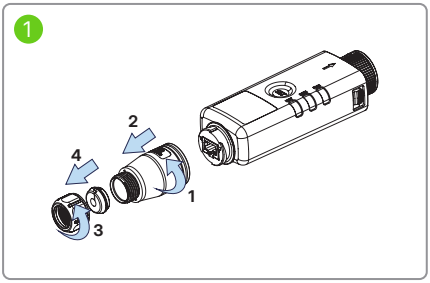


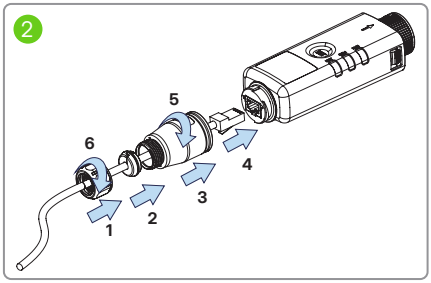
Installing the Data Transfer Stick (DTS)

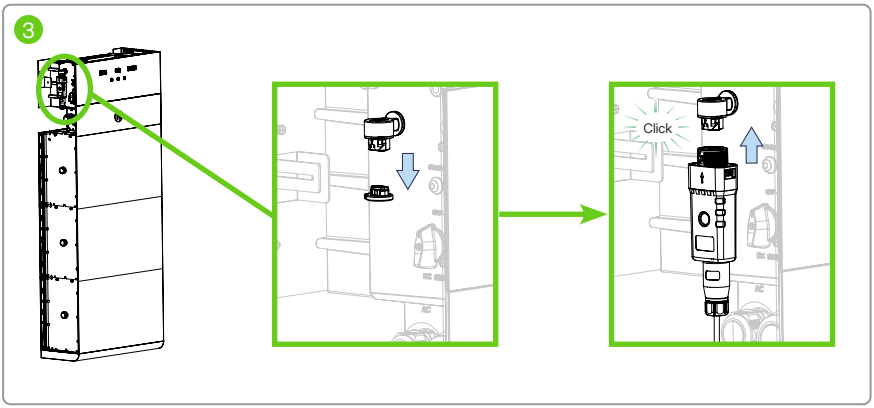
DTS-WL-G3 (Wi-Fi Mode)



DTS-WL-G3 (LAN Mode)







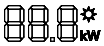
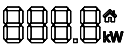
7 System Power-on

Step 1 Turn on the AC breaker between the inverter and the grid.

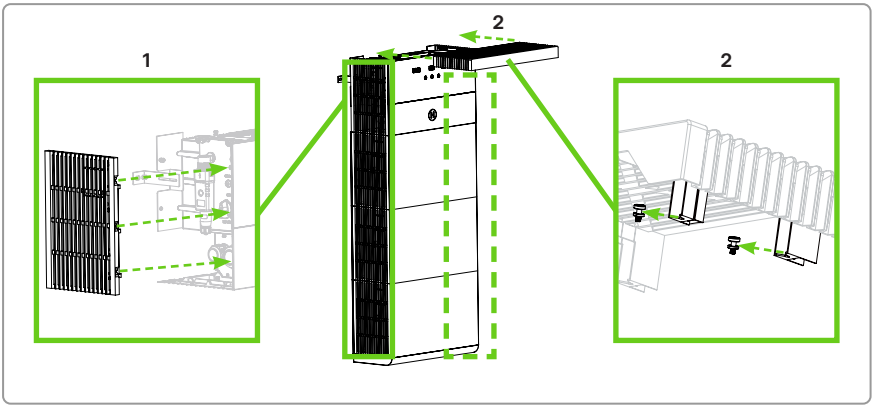
Step 2 Rotate the DC switch to "ON" if the inverter is connected to the PV strings.

Step 3 (Optional) Press the power button on the left side of the inverter to activate the battery if the battery SOC is lower.

Step 4 Verify that the inverter is operating properly by checking the inverter indicator status.

Indicator		Status		Explanation
	PV		Digital readout	Real-time Power Generation
		/	Off	No PV Power
	Battery SOC		Digital readout	Real-time SOC
		/	Off	No Battery Connection
	Battery Status		Solid white	Battery Charging
			Solid red	Battery Fault
		/	Off	Battery Discharging/Standby/ No Battery Connection
	Load Consumption		Digital readout	Real-time power consumption
			0.0 display	No load connection/Zero consumption/No meter connection
	Meter		Solid white	Normal
			Solid red	Communication Fault
		/	Off	No Meter Connection
	State		Solid white	System Normal Operation/Standby
			Solid red	System Fault
		/	Off	System Power-off
	Internet		Solid white	Connected to Network and Cloud
			Flashing white	Connected to Network, but Not Connected to Cloud
		/	Off	No DTS Connection

8 Decorative Cover Installation



9 Commissioning via Hoymiles App

User Manual in the QR code or at
www.hoymiles.com/download-center.html

Installation video in the QR code or at
www.youtube.com/@Hoymiles/videos

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support@hoymiles.com

www.hoymiles.com

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