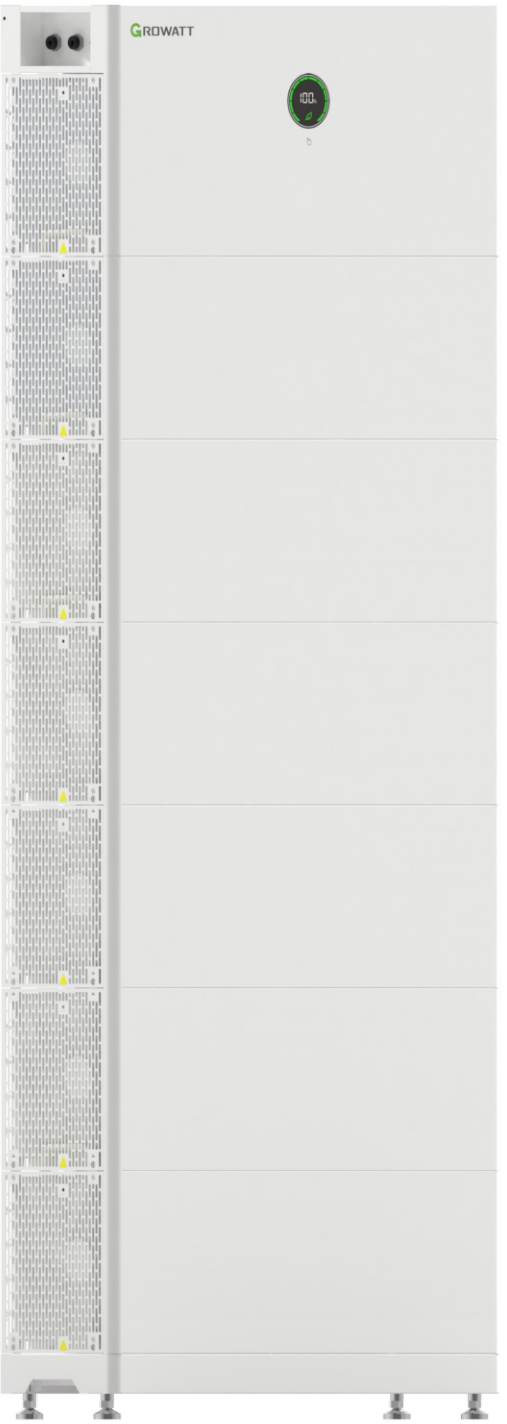
Quick Installation Manual

APX 7.0-84.0M-S3



Shenzhen Growatt New Energy Co., Ltd.

Environment requirements



Max. +55℃ (+131℉)

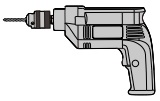
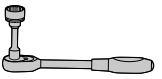
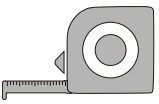


Min. -20℃ (-4℉)



RH. 5%~95%

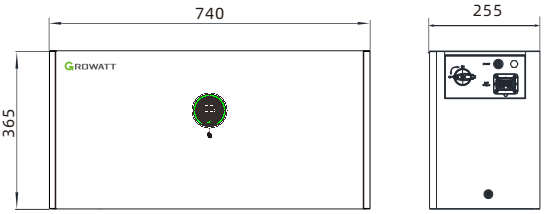
Installation tools

 Hammer drill (Drill bit: Φ=10 mm)	 Flat-head and Cross-head Screw Driver	 Socket Wrench	 Marker
 Tap Measure	 Multimeter	 Level	 Hammer

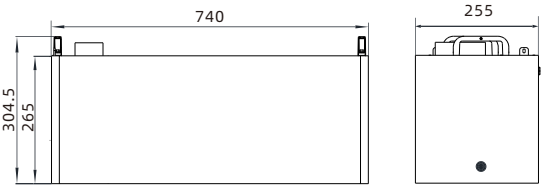
Dimensions

Unit:mm

APX 7.0M-B3
(Master Module)

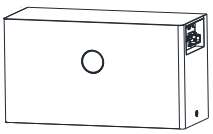


APX 7.0P-B3
(Battery Module)

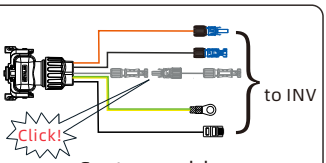


1. Inspection upon delivery

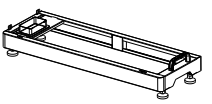
1-1 Check the packing list for the APX 7.0M-B3



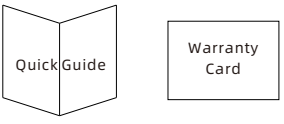
APX 7.0M-B3



System cable
(Length: 2000mm)



APX 7.0P-B3
Base *1

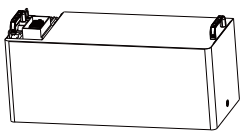


A Quick Guide *1
B Warranty Card *1



A Anti-tipping plate *2
B M6 expansion screw *2
C M4x12 stainless steel screw *4

1-2 Check the packing list for the APX 7.0P-B3



APX 7.0P-B3



A

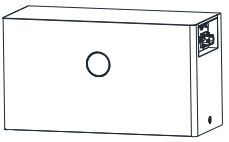


B

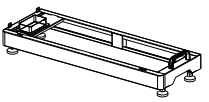
A Warranty card *1

B M4x12 stainless steel screw *2

1-3 Check the APX7.0-84.0M-S3 Battery System of different capacities

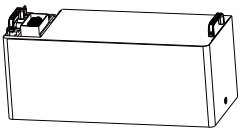


APX 7.0M-B3



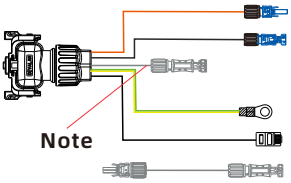
APX 7.0P-B3 Base

A



APX 7.0P-B3

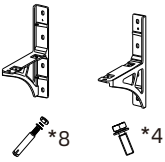
B



System cable

C

Optional (purchase separately)



Wall bracket

D

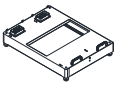
Optional (purchase separately)



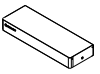
APX M-S3 cascading communication cable

E

Optional (purchase separately)



Front-back installation Base



Top Cover



Anti tipping plate



bolt

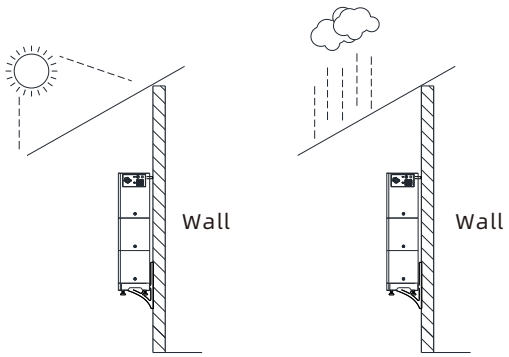
Front-back installation kit

F

Note: In the old version, the N wire was blue and two meters long; in the new version, the N wire is gray and comes with an extension cord.
If installation height is constrained, use the optional front-back installation kit for two-row installation.

Battery System Capacity	Floor-mounted Installation Compound Mode	Wall-Mounted Installation Compound Mode
7kWh	A+C	A+C+D
14kWh	A+B+C	A+B+C+D
21kWh	A+B*2+C	A+B*2+C+D
28kWh	A+B*3+C	A+B*3+C+D
35kWh	A+B*4+C	A+B*4+C+D
42kWh	A+B*5+C	A+B*5+C+D
49kWh	A+B*6+C	A+B*6+C+D
56kWh	A+B*7+C+F	/
63kWh	A+B*8+C+F	/
70kWh	A+B*9+C+F	/
77kWh	A+B*10+C+F	/
84kWh	A+B*11+C+F	/
98kwh	A*2+B*12+C*2+E*1	A*2+B*12+C*2+D*2+E*1
168kwh	A*2+B*22+F*2+E*1	/
147kwh	A*3+B*18+C*3+E*2	A*3+B*18+C*3+D*3+E*2
252kwh	A*3+B*33+F*3+E*2	/

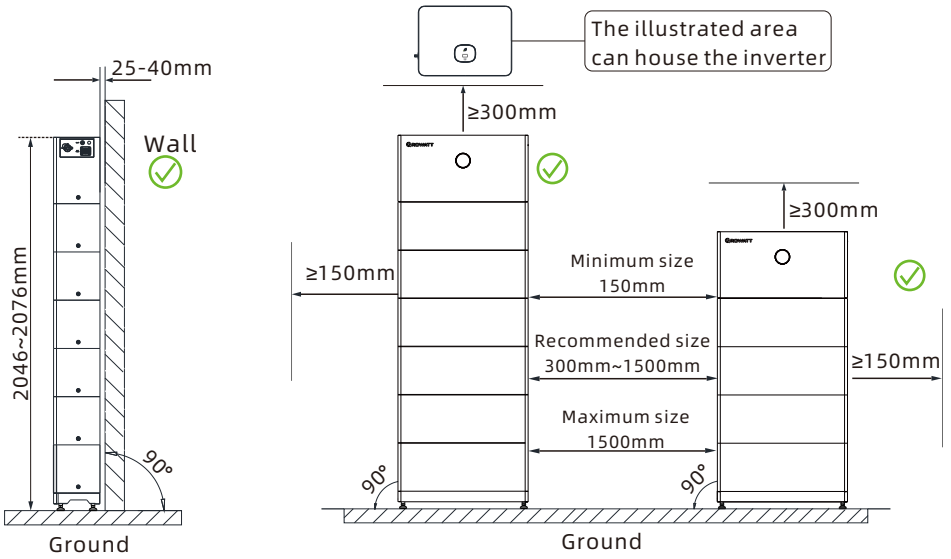
2. Installation environment requirement



Note :
When installed outdoors, build a sun/rain shelter to protect the battery system from direct sunlight and rain.

3. Floor-mounted installation

3-1 Installation location requirements

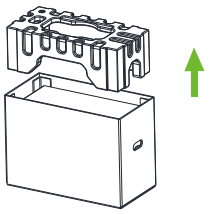


Note:
The ground must be flat and solid (e. g., a cement floor), and shall be leveled during installation to prevent the equipment from shaking or collapsing after placement.

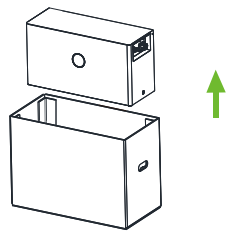
3-2 Preparation work before installation

➢ Please follow these steps to remove the packaging:

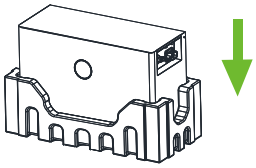
1. Remove the foam and the top accessory.



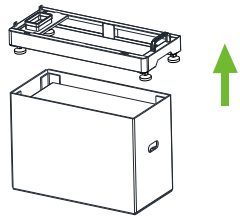
2. Take out the Master Module .



3. Place the main control module on the foam.



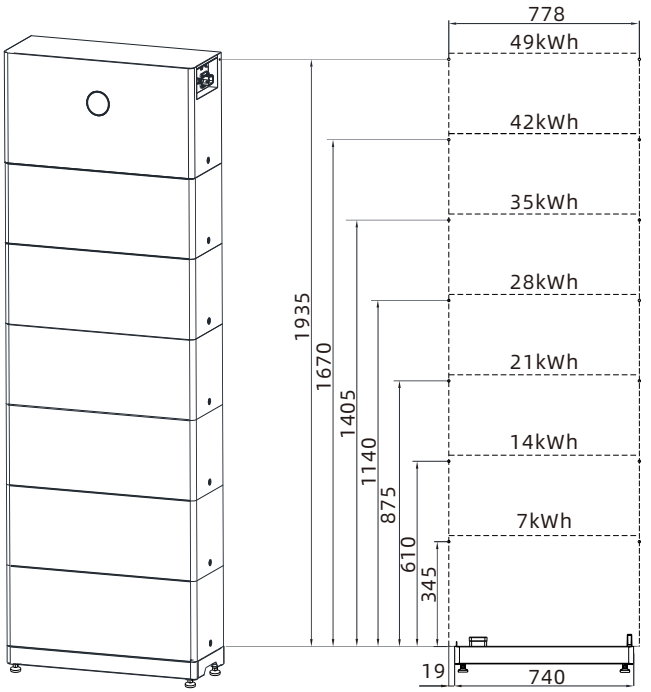
4. Remove the base from the box.



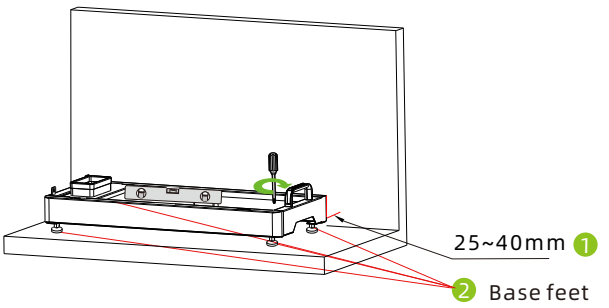
3-3 Installation procedure

Unit:mm

Mounting hole dimensions:



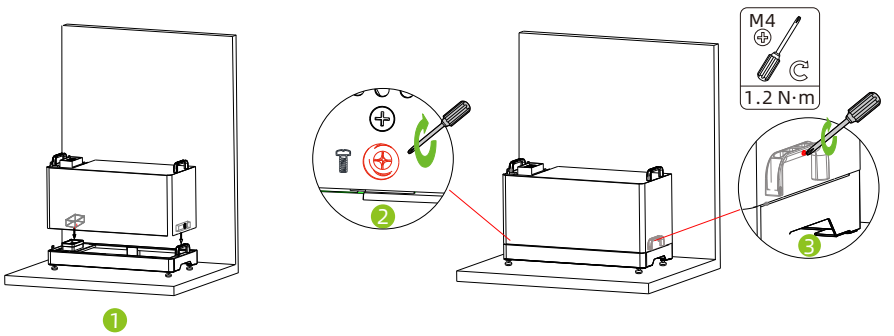
1



1 Determine the installation location.

2 Use a spirit level to determine the levelness of the base, and use a flathead screwdriver to rotate the base feet to bring the base closer to a level position.

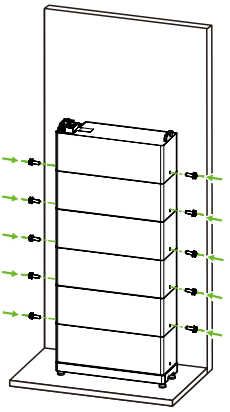
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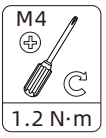


1 Place the first Battery Module on the base.

2 3 Install the mounting screws securing both sides of the Battery Module to the base.

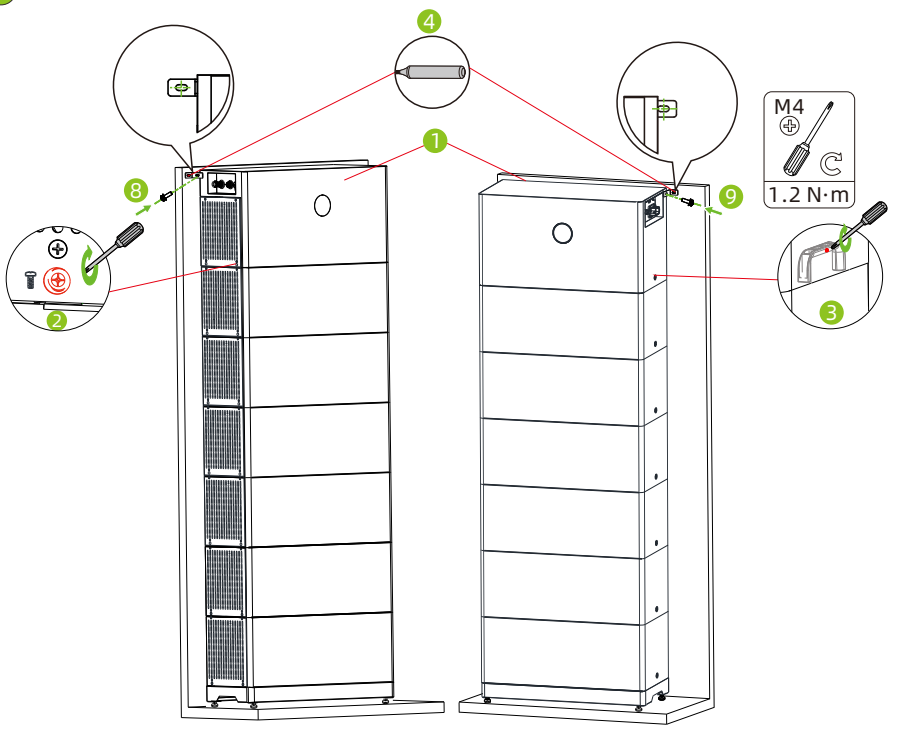
3

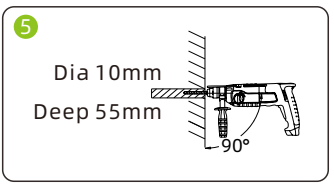


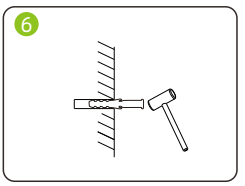


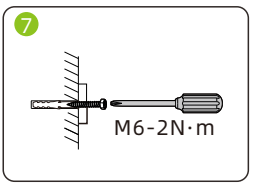
Install all the batteries and the fixing screws on both sides of the battery modules

4









1 Install the Master Module at the very top position.

2 3 Install the mounting screws on both sides of the Master Module and Battery Module.

4 Compare the threaded holes and connector positions on the module above to locate the positions on the wall where you need to drill holes, and mark them with a marker.

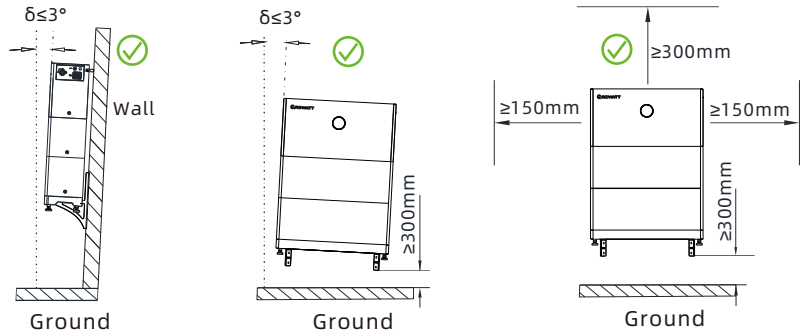
5 6 Drill holes in the wall and install expansion tubing.

7 Secure the connector to the wall using M6 expansion bolts.

8 9 Screw the M4 screw into the threaded holes of the connector and module.

4. Wall-mounted installation

4-1 Installation location requirements



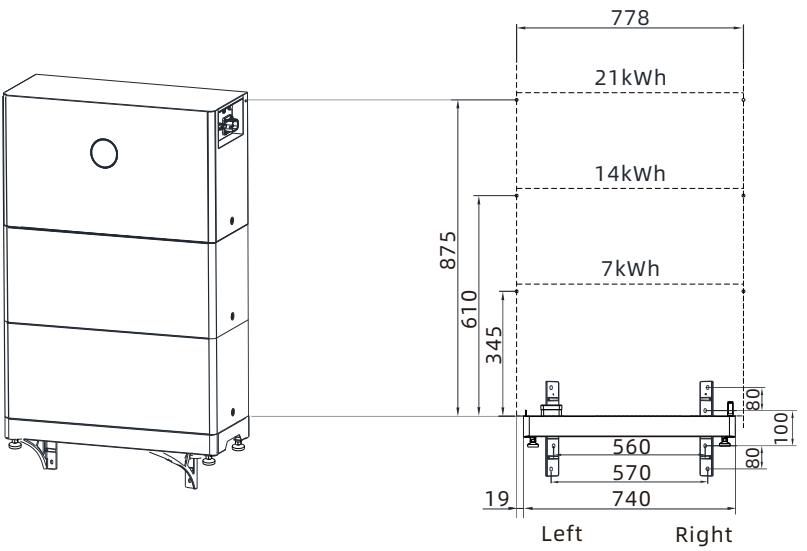
Note:

1. Prior to installation, a professional must assess the load-bearing capacity of the wall to prevent equipment damage caused by insufficient wall load-bearing capacity; concrete walls or solid brick walls are recommended as the preferred option.
2. For wall-mounted installations, a single column can be configured with up to three modules (1 Master Module + 2 Battery Modules).

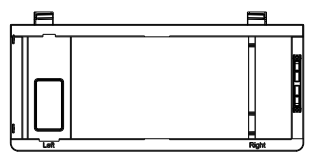
4-2 Installation location requirements

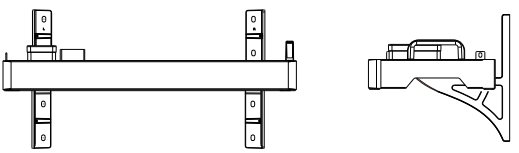
Unit:mm

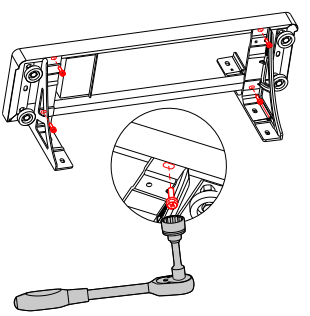
Mounting hole dimensions:



1

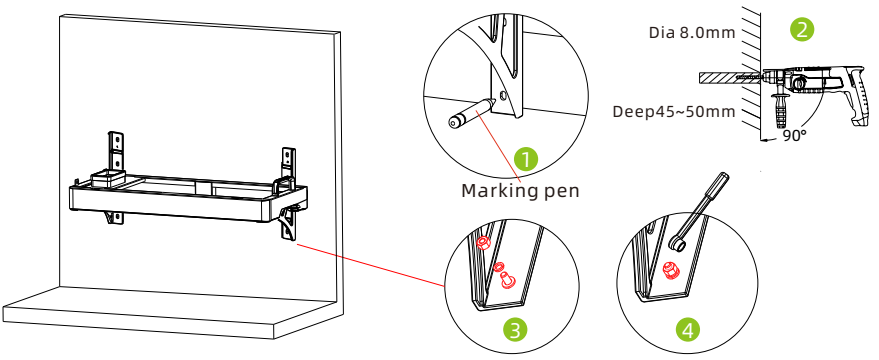






install the wall bracket

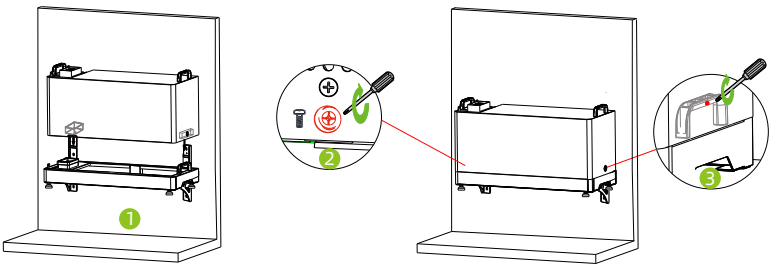
2



1 Mark the hole positions. 2 Drilling eight holes.

3 4 Fix the bracket on the wall.

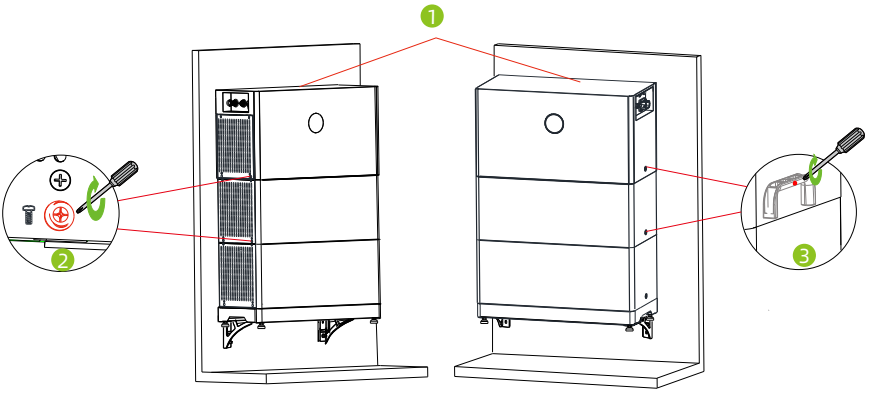
3



1 Place the first Battery Module on the wall bracket.

2 3 Install the mounting screws securing both sides of the Battery Module to the wall bracket.

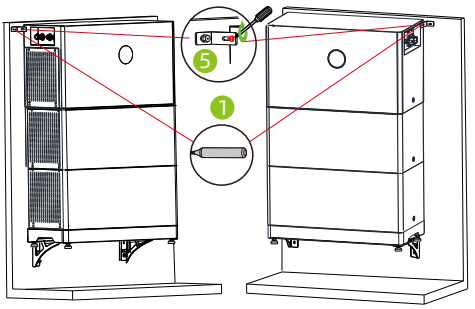
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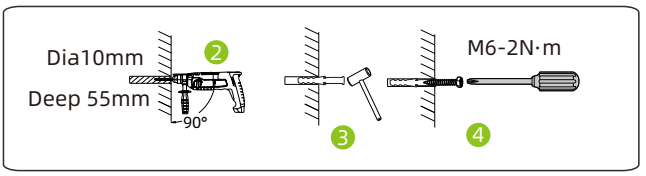


1 Install all battery modules and main module.

2 3 Install the mounting screws on both sides of the Master Module and Battery Module.

5





1 Locate the positions where holes need to be drilled in the wallby identifying the locations of the connector's threaded holes and the upper module's holes, and mark them with a marker.

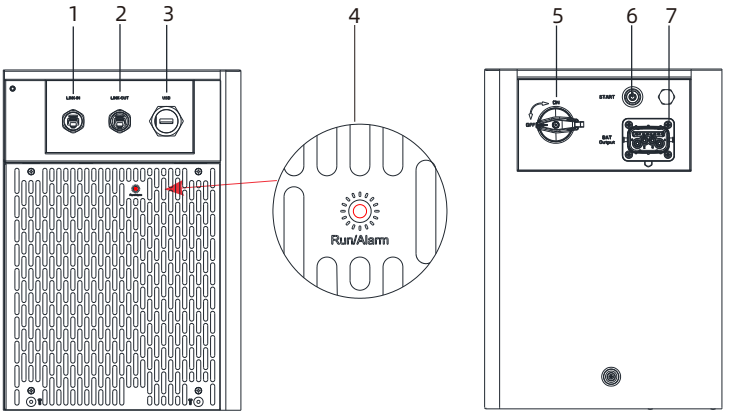
2 3 Drill holes in the wall and install expansion tubing.

4 Secure the connector to the wall using M6 expansion bolts.

5 Screw the M4 screw into the threaded holes of the connector and module

5. Cable connection

5-1 APX 7.0M-B3 terminal&key description

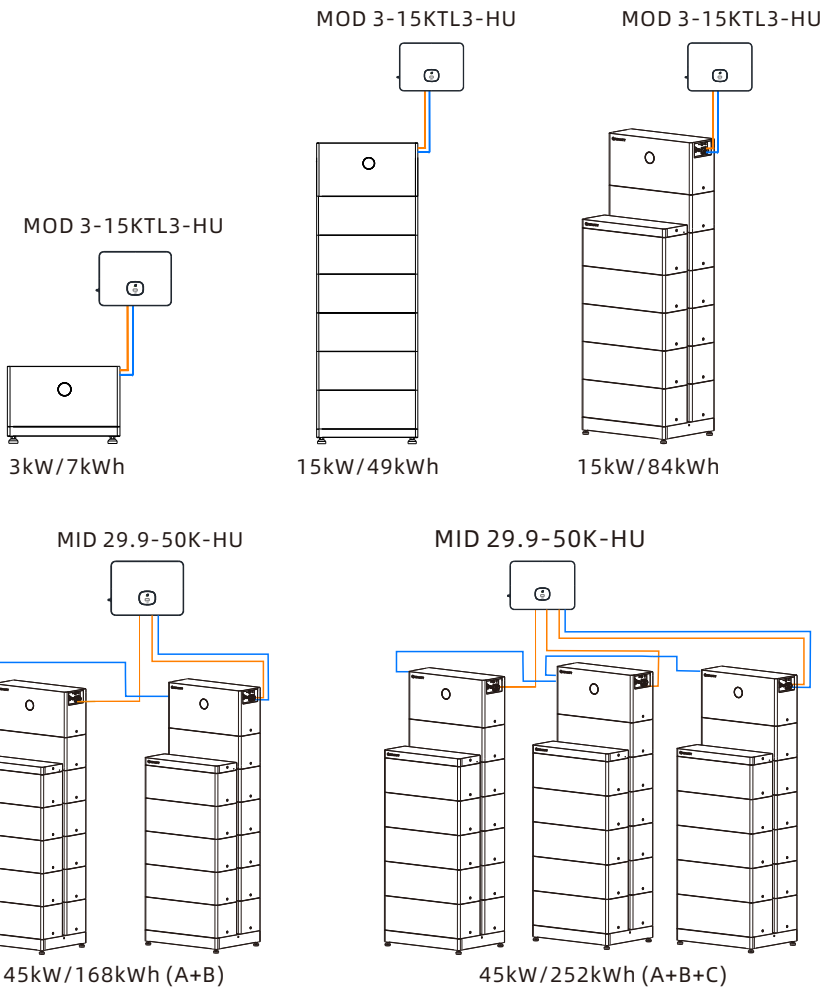


No.	Port	Function
1	Link-in	APX M-S3 cascading communication input port
2	Link-out	APX M-S3 cascading communication output port
3	USB	USB port for inserting a USB flash drive to update the firmware
4	LED	LED status indicator, Steady green:Normal; Steady red:Fault; Permanent darkness: Hibernation
5	DC switch	Turn on/off the power connection from Master Module to inverter
6	Start button	Wake up the Battery Module (Press and hold for over 5 seconds)
7	Power and communication integrated terminal	Power and communication interfaces connected to the inverter (Connect the system cable after removing the cover).

5-2 Battery capacity description

A single APX M-S3 system can connect 0 to 11 Battery Modules parallel to increase the capacity and power of the battery system, and it communicates with the inverter through RS485/CAN communications. At the same time, it supports the cascading of up to 3 APX M-S3 systems. One APX M-S3 system communicates with another APX M-S3 system through CAN communication.

DC input cable Communication cable

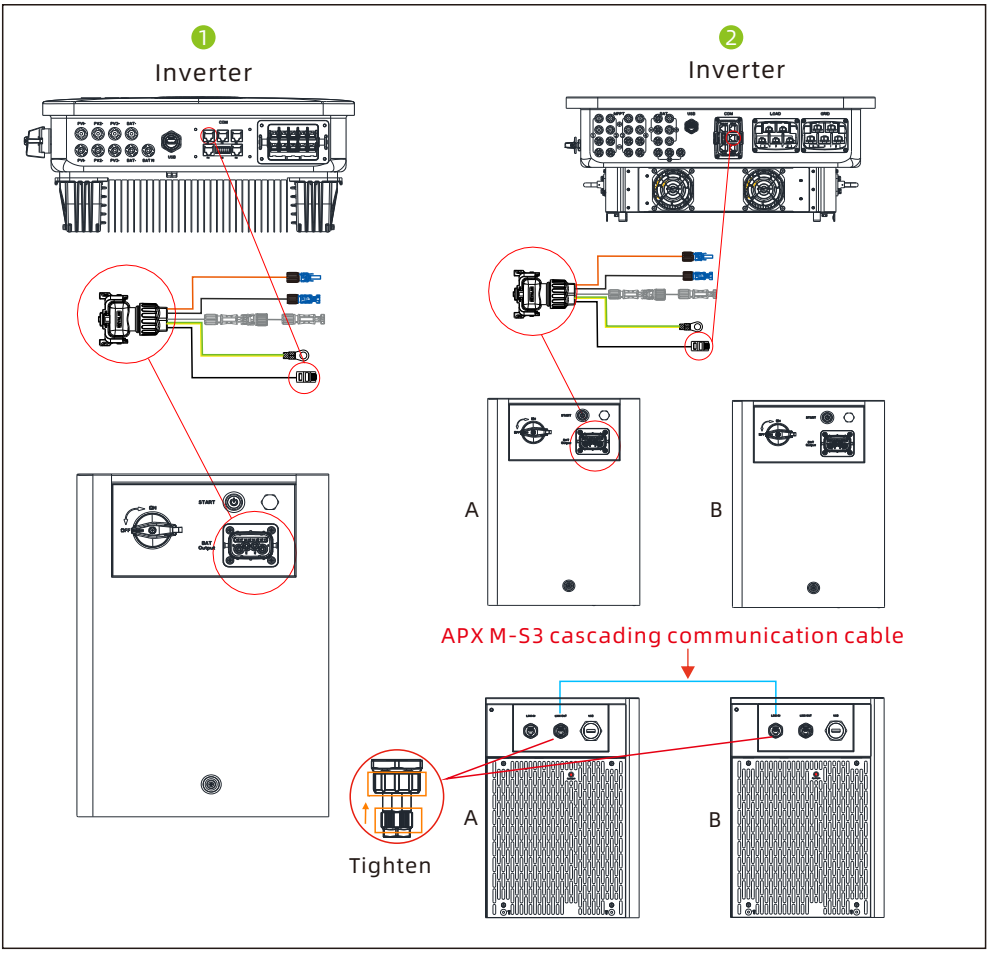


Note: Dual-cluster connection is only available for MID-XH and MID-HU series inverters.

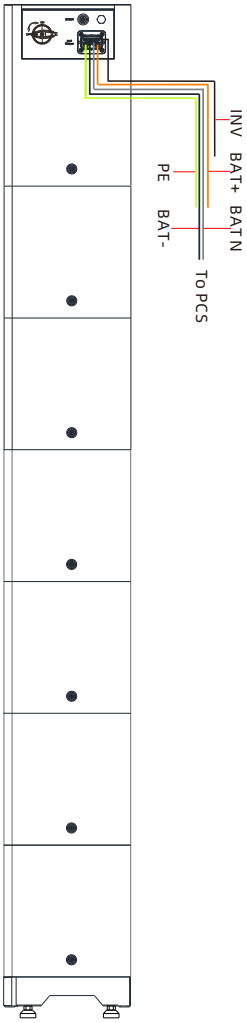
5-3 Communication port connection

APX 7.0-84.0M-S3			MOD-HU/MID-HU			MIN-XH2 (Rj45 version)			Communication port pinout
COM-INV	1	INV.EN(-)	COM-BAT	1	BAT.EN-	COM-BAT	1	BAT.EN-	
	2	INV.EN(+)		2	BAT.EN+		2	BAT.EN+	
	3	M3_CAN2_L		3	CAN.L.M3		3	\	
	4	DSP_CAN2_L		4	CAN.L.DSP		4	\	
	5	DSP_CAN2_H		5	CAN.H.DSP		5	\	
	6	M3_CAN2_H		6	CAN.H.M3		6	\	
	7	RS485_B(B)		7	485B.BAT		7	485B/CAN.L	
	8	RS485_A(A)		8	485A.BAT		8	485A/CAN.H	

The communication port definition for the APX 7.0-84.0M-S3 is as follows:
Pin 1-2: Battery wake-up signal
Pin 3-6: CAN communication between the battery and the inverter
Pin 7-8: RS485 communication between the battery and the inverter
For the corresponding port definition on the inverter side, please refer to the inverter's user manual.



5-4 System wiring diagram

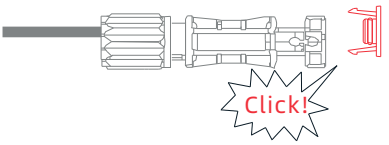


Note1: When connecting the communication cable, ensure the protective cover is fully tightened to maintain waterproof integrity. Water damage resulting from improper installation is not covered under the warranty.

Note2: It is strongly recommended not to install a DC circuit breaker between the battery and the inverter. If one must be installed, ensure its rated voltage exceeds 1000V and its rated current exceeds 40A. Never operate the breaker while the system is energized, as this can cause severe equipment damage.

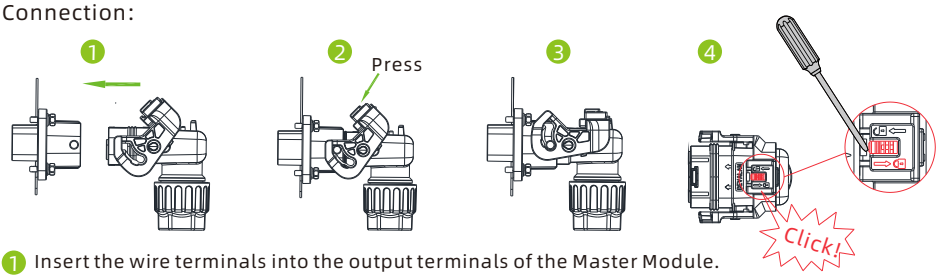
Note3: When the APX M-S3 system is used with a single-phase inverter (such as the MIN-XH2 series), the gray N wire does not need to be connected; instead, seal its connector socket with a dust cap. The N wire extension is also not required.

Note4: When the N line (gray or blue) does not need to be connected to the inverter, the connector plug of the N line must be sealed with a waterproof plug.The extension cable of the N line does not need to be installed.



6. Connection & disconnection of power and communication integrated terminal

Connection:

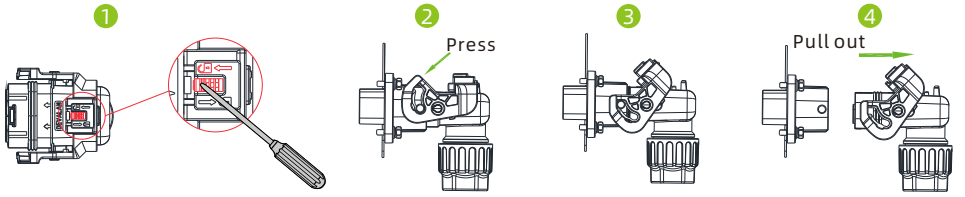


1 Insert the wire terminals into the output terminals of the Master Module.

2 3 Press the knob in the direction shown.

4 Use a screwdriver to push the latch in the direction shown to lock the terminal.

Disconnection:

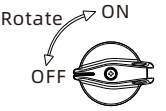


1 Use a screwdriver to push the clip in the direction shown to unlock the terminal.

2 3 Press the knob in the direction shown.

4 Pull the wire terminals outward.

7. Powering on/off the battery system

Power on	1. Turn on the DC Switch 2. Press the start button for more than 5s	
Power off	Turn off the DC Switch (wait for over 90s)	

Note:

1. Before performing maintenance or inspection work, ensure that the AC circuit breaker and the DC switch of the inverter, as well as the the DC switch on the APX 7.0M-B3 are all disconnected. After powering down the system, wait for 2 minutes and confirm that the LED display light on the APX 7.0M-B3 has turned off. Do not perform any operations until the system is completely shut down.
2. Do not touch the machine while it is running to avoid burns.
3. When cascading multiple APX M-S3 systems, pressing the start button on any Master Module will activate the entire system.
4. This document is subject to ongoing review and revision. Growatt reserves the right to modify the content at any time without prior notice. Unless otherwise specified, this document serves solely as a quick installation guide. All information and suggestions in this document do not constitute a warranty of any kind, expreess or implied. Growatt reserves all rights for final interpretation.

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