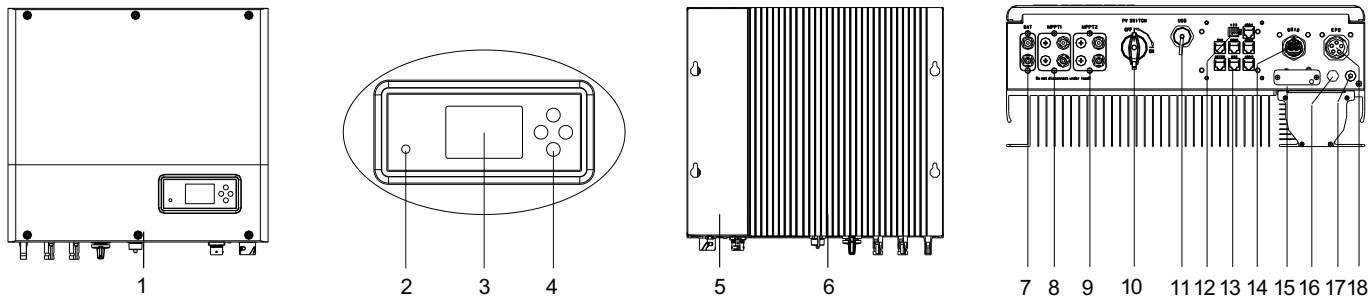
1. Overview



1. Front panel	2. Dual-color LED	3. LCD screen	4. Push button	5. Inductor placing area
6. Heat sink	7. Battery connector	8. PVA connector	9. PVB connector	10. PV switch
11. USB port	12. Dry contact port	13. NC (not connected)	14. AC grid connector	15. RSD (rapid shutdown device)
16. Ventilation	17. Grounding screw	18. EPS connector		

⚠ Note:

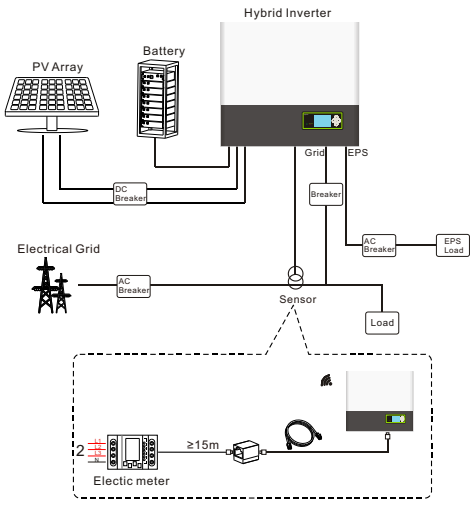
1. Only three-phase meter supports current direction detection.
2. Pin definition of the RJ45 connector is described later in this guide.

⚠ Note:

1. The information in this document is subject to change without notice due to product upgrades or customer feedback. All information and suggestions in this document do not constitute a warranty of any kind, express or implied. Growatt reserves all rights for final explanation.
2. This document is for quick installation guidance only. For details, please refer to the User Manual.
3. Machine damage caused by failure to follow the instructions is not covered under any warranty.

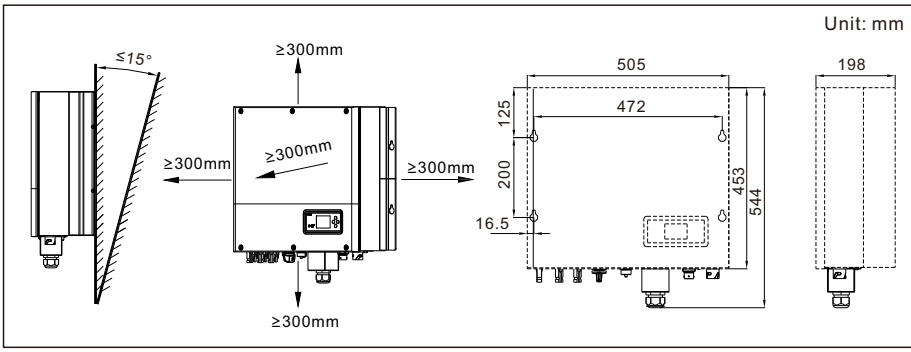
2. Installation

System overview

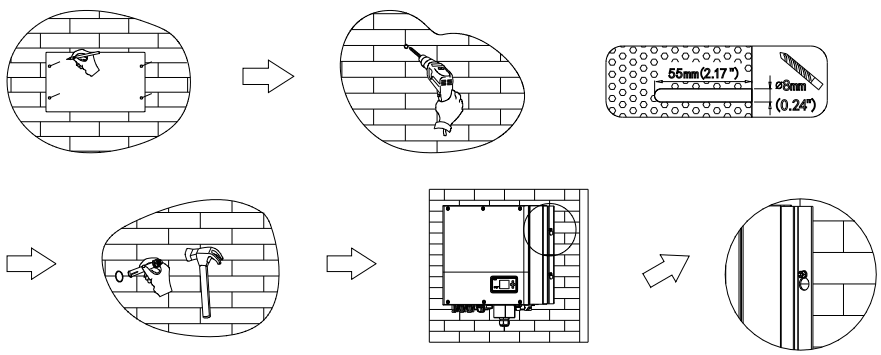


⚠ Note:
When installing the hybrid system, you need to consider the position of the battery and the inverter.

2.1 Installation requirements

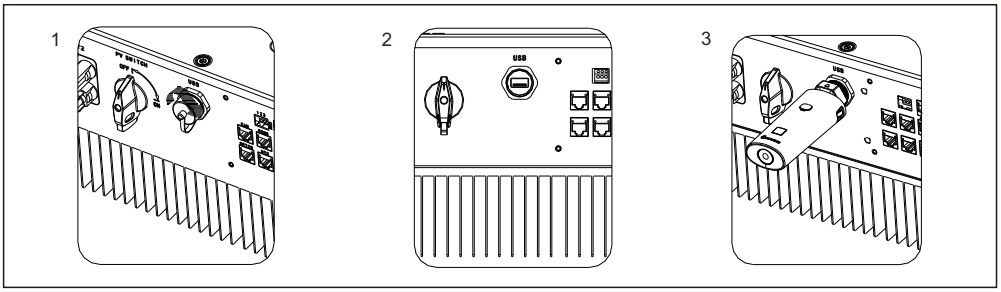


2.2 Wall mounting



⚠ Note:
Caution! When drilling holes, avoid the water pipes and power cables buried in the wall.

2.3 Installing the communication module



Follow the installation steps:
1. Remove the USB waterproof cover.
2. Plug in the communication module.

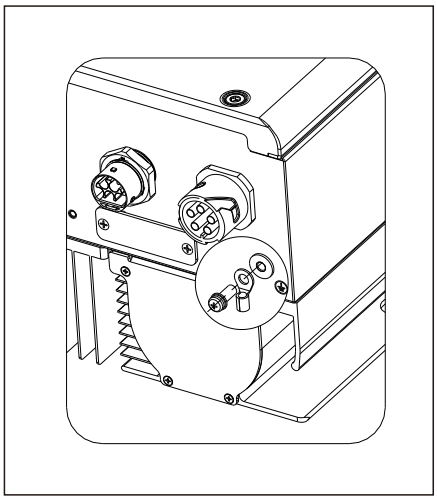
3. Connecting cables

Please prepare the cables before connecting as follows.

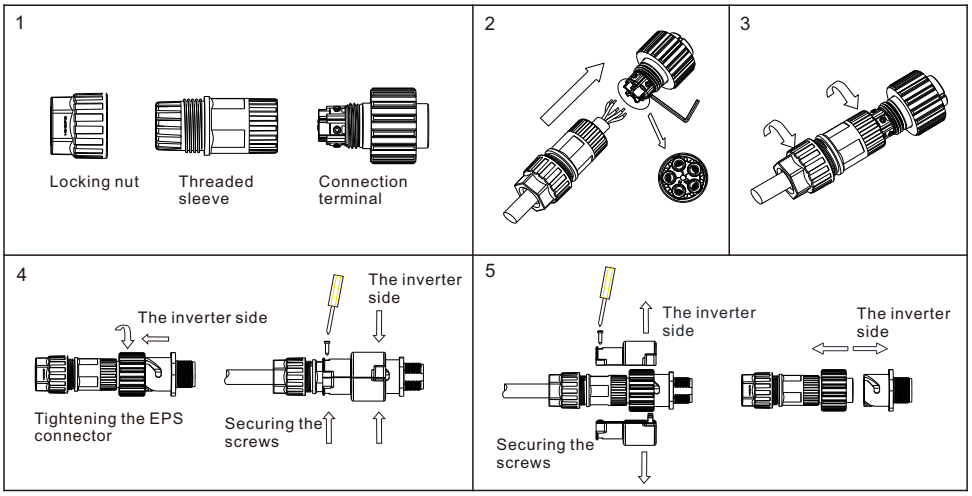
Number	Cable name	Type	Recommend specification
1	Grounding wire	A multi-core yellow-green copper wire	Wire diameter>AWG10
2	AC output wire	Two or three different color multi-core copper wires	Wire diameter>AWG12
3	PV input wire	Photovoltaic dedicated cable (such as PV1-F)	4mm² - 6mm²
4	Battery input wire	Red and black multi-core copper wires	Wire diameter>AWG10
5	Communication wire	CAT5E	/

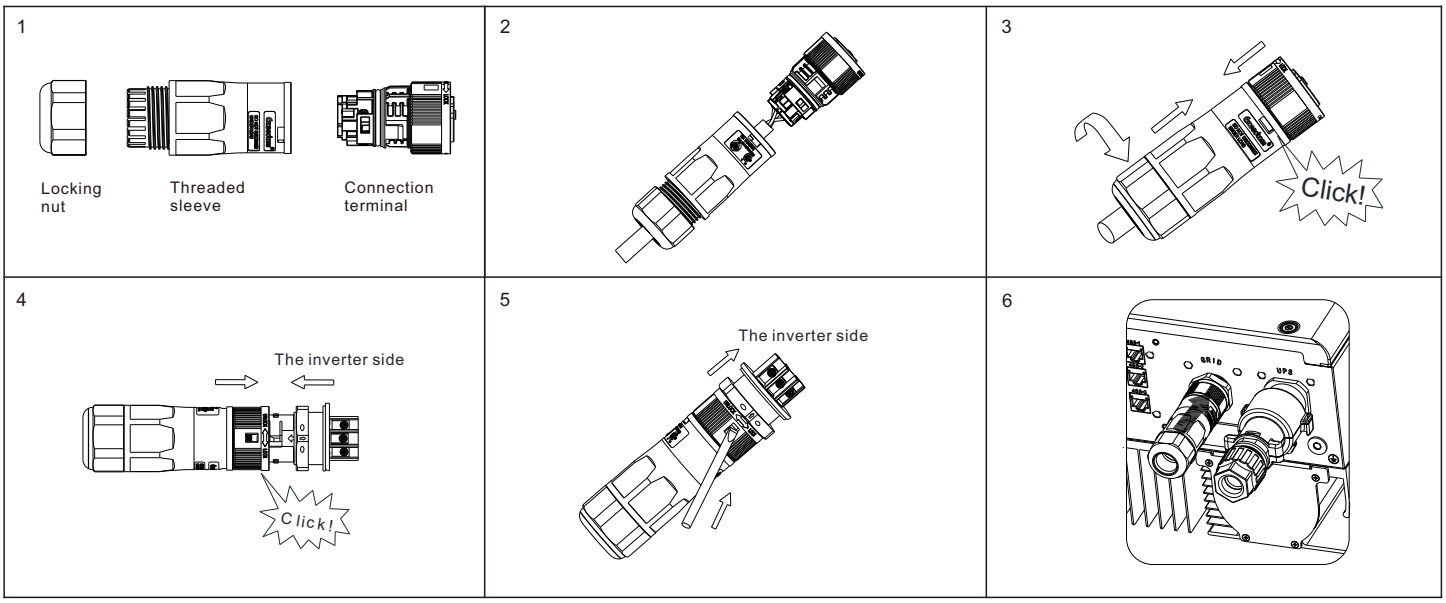
⚠ Note:
Make sure all switches are OFF before connecting the cables. For personal safety, do not operate with power on.

3.1 Grounding



3.2 AC GRID and EPS output connection

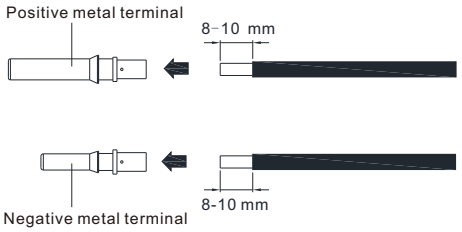




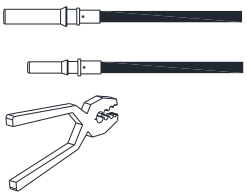
3.3 DC connection

3.3.1 Assembling the PV & battery input cables

1

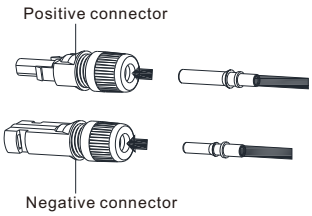


2



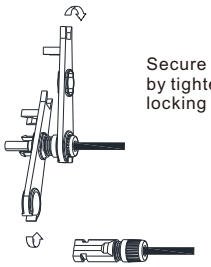
Ensure that the cable cannot be pulled out from the terminal after crimping.

3



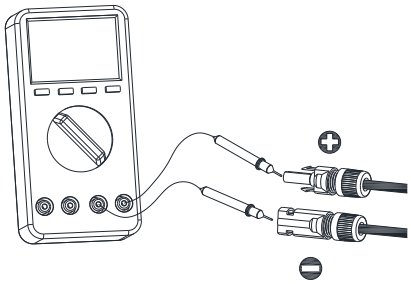
Pull the PV or Battery cable make sure there is no loosen or shaking.

4



Secure the connection by tightening the locking nut.

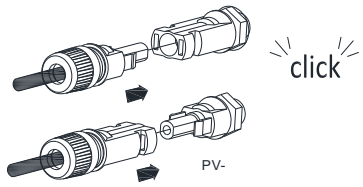
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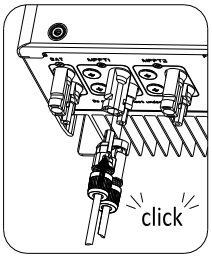
Pull the PV cable back gently to check that they areconnected securely.

3.3.2 Plugging into the PV terminals

1



2

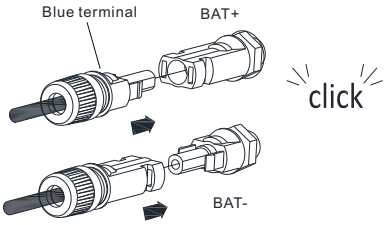


⚠Note:

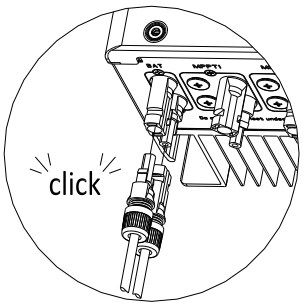
1. Before installing the PV terminals, please confirm that the PV input voltage and current do not exceed the specified limits.
2. When installing the PV terminals, identify the positive and negative terminals and connect them to the inverter respectively following the color correspondence.
3. A "click" sound will be heard when the terminal is connected. Please gently pull the PV cable back to make sure it is securely connected.

3.3.3 Plugging into the Battery terminals

1



2

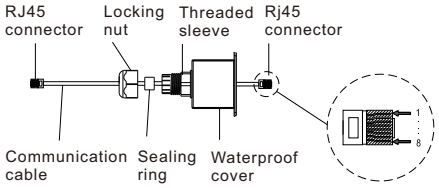


⚠Note:

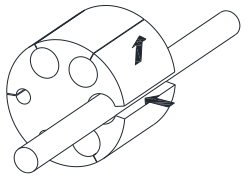
1. Turn off the battery switch and disconnect the CAN communication cable before plugging into the battery terminals. Ensure that the battery input voltage and current do not exceed the limits.
2. When installing the PV terminals, identify the positive and negative poles and connect them to the inverter respectively with the correct polarity.
3. A “click” sound will be heard when the terminal is properly connected. Gently pull the cable back to make sure it is securely connected.

3.3.4 Communication cables installation

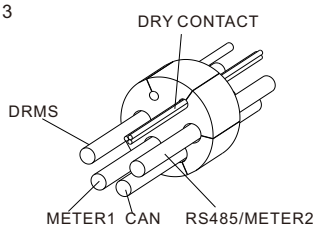
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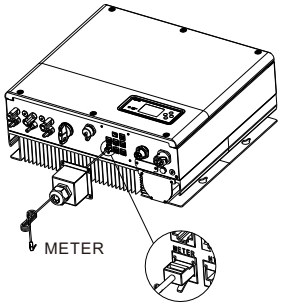
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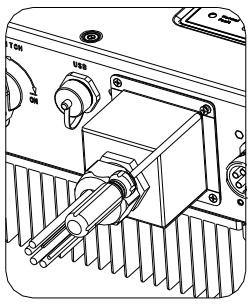
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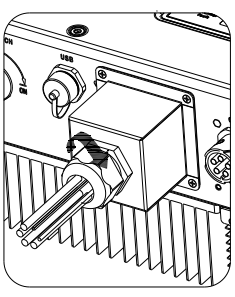
4



5



6



After all the communication cables are connected, install the cover by securing the screws, then fasten the cable gland.

4. Post-installation check

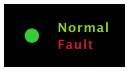
Number	Checking items	Number	Checking items
1	Hybrid inverter is installed correctly and firmly.	2	ShineWiFi-X or ShineLink or GPRS is installed correctly and firmly.
3	Cable routing is proper and meets all requirements. No damaged or skin-scratched cable is used.	4	The ground wire confirms the connection and is reliable.
5	All switches are off.	6	All wires are correctly and securely connected.
7	Cable ties are neatly cut without sharp burs.	8	All vacant ports are sealed and protected.
9	Post-install cleanup.		

5. Powering on/off the hybrid inverter

⚠ **Note:**
Before powering on the system, please make sure all the voltage and current are within the specified range of the hybrid inverter. Otherwise, it might cause damage to the hybrid inverter.
Proceed as follows to power on the system:
1. Turn on the breaker between the grid and hybrid inverter;
2. Turn on the battery and the breaker between the battery and the hybrid inverter;
3. Turn on the PV switch on the inverter. And then turn on the breaker between the PV side and the hybrid inverter. Do not turn on the PV switch on the inverter when the PV voltage is present, which might damage the inverter.
4. For details about configuring the inverter, please refer to the User Manual.
Note: You can power off the system in reverse order.
5. The hybrid inverter comes with the installation diagnosis function, please run the "DiagnosFunc" upon completing the installation.

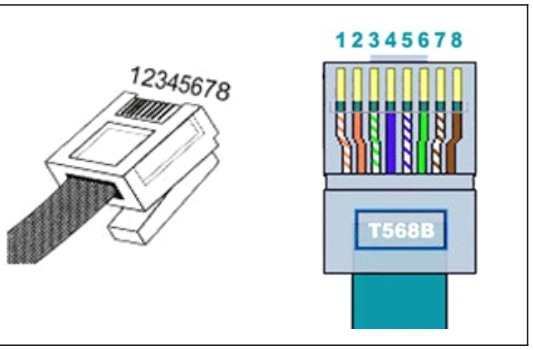
6. Status of the hybrid inverter

You are allowed to view more information by pressing the buttons. The following table describes functions of buttons and the LED indicator.

Symbol	Description	Explanation	
	Push buttons	Allow you to set parameters on the screen	
	SPH status indicator	Green light on	SPH runs normally
		Red light on	Fault state
		Green light blinking	Alarm state
		Red light blinking	Software updating

7. Definition of RJ45 connector pin

No.	CAN	METER	COM	DRMS	485-1/485-2	485-3
1	/	RS485B	DRY+	DRM1/5	RS485B	RS485B
2	/	GND	/	DRM2/6	GND	GND
3	/	/	DRY-	DRM3/7	/	/
4	CANH	/	/	DRM4/8	/	/
5	CANL	RS485A	/	REF	RS485A	RS485A
6	GND	/	/	COM	/	/
7	/	/	/	/	/	/
8	WAKEUP	/	/	/	/	/



8. Suggestions on selecting the residual current device

This product is equipped with a built-in residual current detection device (RCD). Once the fault current detected exceeds the threshold, the inverter will be immediately disconnected from the utility grid. If local regulations require the installation of an external RCD between the inverter and the loads, you are advised to install a type A RCD with a rating of 30 mA. If local regulations require the installation of an external RCD between the inverter and the grid, you are advised to install a type A RCD with a rating of 300 mA.

9. Service and contact

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