

# Quick Installation Guide

Hybrid Inverter

SH110CX/SH125CX



- Contents may be periodically updated or revised due to product development. The information in this guide is subject to change without notice. In no case shall this guide substitute for the user manual or related notes on the device.
- Make sure to read over, fully understand and strictly follow the detailed instructions of the user manual and other related regulations. Visit <http://www.sungrowpower.com/>, choose "Hybrid Inverters" and search for the device model on the "Products" tab page to view or obtain the user manual.
- All operations can be performed only by qualified personnel, that must be trained in the installation and commissioning of the electrical system, as well as the dealing with hazards, have knowledge of the manual and of the local regulations and directives.
- Before installation, check that the package contents are intact and complete against the packing list. Contact SUNGROW or the distributor in case of any damaged or missing components.
- The cable must be intact and well insulated. Operation personnel must wear proper personal protective equipment (PPE) all the time.
- Any violation could result in personal death or injury or device damage, and will void the warranty.

## Safety

Please follow the safety instructions related to the PV strings and the utility grid. Otherwise, SUNGROW shall not be held liable for any damage caused.

### DANGER

Lethal voltage!

- PV strings will produce electrical power when exposed to sunlight and can cause a lethal voltage and an electric shock.
- Only qualified personnel can perform the wiring of the PV panels.
- All electrical connections must be in accordance with local and national standards.
- Only with the permission of the utility grid, the inverter can be connected to the utility grid.
- Do not open the enclosure at any time. Unauthorized opening will void guarantee and warranty claims and in most cases terminate the operating license.
- When the enclosure lid is removed, live components can be touched which can result in death or serious injury due to electric shock.

### WARNING

All the warning labels and nameplate on the inverter body must be clearly visible and not be removed, covered or pasted.

### CAUTION

Risk of burns due to hot components!

Do not touch any hot parts (such as heat sinks) during operation.

### NOTICE

Only qualified personnel can perform the country setting.












Unauthorized alteration of the country setting may cause a breach of the type-certificate marking.

## Security Declaration

To learn more about the product network security vulnerability response process and vulnerability disclosure, please scan the QR code below or visit the following website:

<https://en.sungrowpower.com/security-vulnerability-management>



 Electrical hazard! Installation and operation must only be performed by qualified technical persons.	 Hot surface! Do not touch.
  After the inverter is disconnected from the external power source, wait at least 15 minutes before touching its internal conductive parts.	 Danger of high voltages! The inverter must be grounded before it is powered on.
 Do not dispose of the inverter as household waste.	 The inverter does not have a transformer.
 CE compliance mark.	 RCM mark of conformity.
  Read through the manual before performing any operation on the inverter.	

Manufacturer : Sungrow Power Supply Co., Ltd.  
 No 1699, Xiyou Road, Hefei 230088, P.R.China  
 For EU only  
 EU/EEA Importer: Sungrow Deutschland GmbH  
 Balanstraße 59, 81541 München, Germany

## EU Declaration of Conformity

within the scope of the EU directives



- Low Voltage Directive 2014/35/EU (LVD)
- Electromagnetic compatibility 2014/30/EU (EMC)
- Restriction of the use of certain hazardous substances 2011/65/EU and 2015/863/EU (RoHS)
- The radio equipment directive 2014/53/EU (RED)

The manufacturer Sungrow Power Supply Co. Ltd, China hereby confirms that the product SH125CX complies with the essential requirements and other relevant provisions of Directive 2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU, 2015/863/EU (RoHS) and 2014/53/EU (RED).

The full EU Declaration of Conformity can be found at

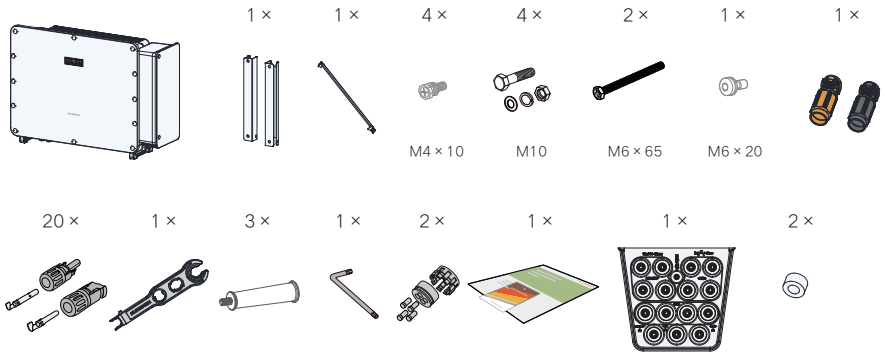
<https://support.sungrowpower.com/Document?materialId=material-b56de969-0d45-43eb-a46e-eac91bba24da&source=PRODUCTION>

The communication module that comes with the inverter and the technical parameters of wireless communication are listed in the table below. The model of the communication module actually delivered shall prevail. The EU Declaration of Conformity for the communication module can be found at [support.sungrowpower.com](https://support.sungrowpower.com).

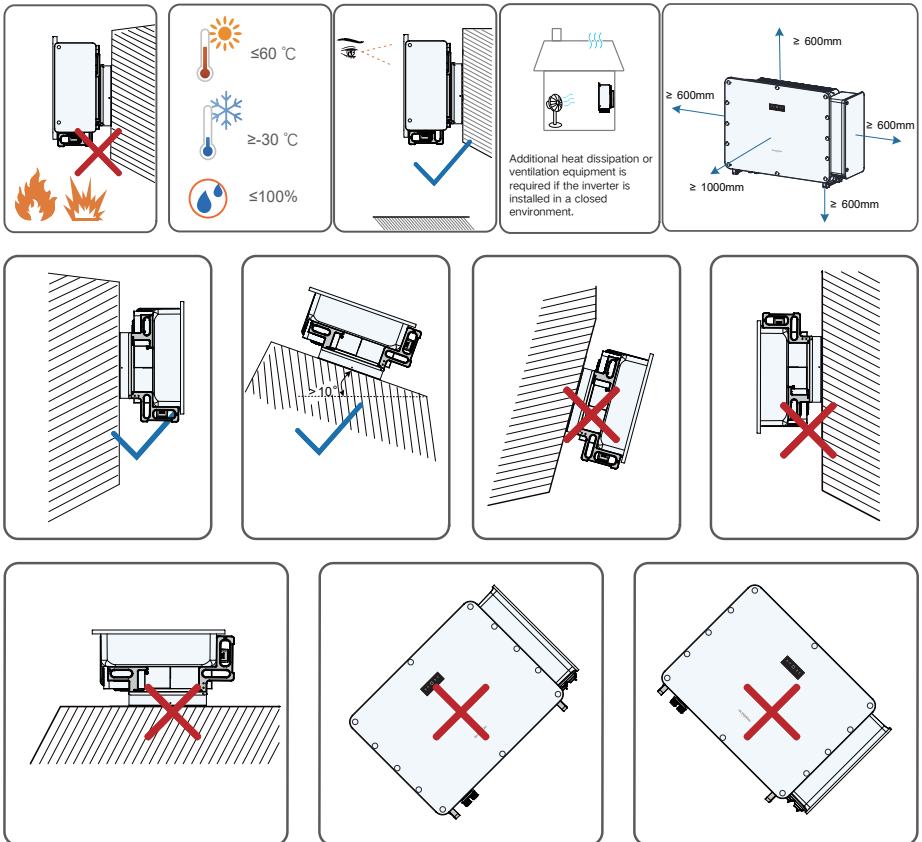
Radio technology	BLE5.0
Radio spectrum	2402 MHz -2480MHz
Maximum transmission power	< 10 mW

\*Technical parameters listed above apply to EU countries only.

## Scope of Delivery

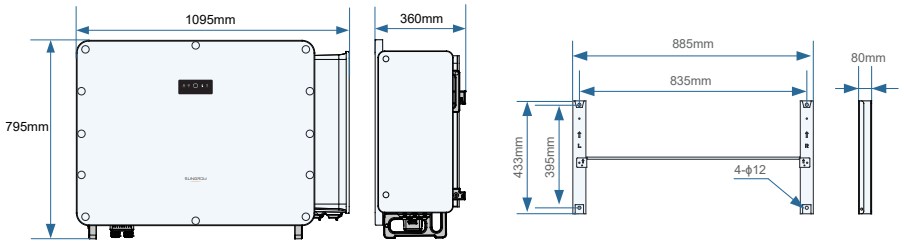


## Installation Requirements



Backward installation is not applicable for floating power plants.

## Overall Dimensions



## Inverter Mounting

**1**

⌀ M4  
C 1.5N.m

**2**

For the mounting hole position markings of the SH110CX, please refer to the section "Protective Cover Installation".

**3**

φ12

**4**

16mm  
⊙ 35N.m

**5**

**6**

M6  
C 4.5N.m

The left and right sides of the inverter must be fixed to the mounting bracket with screws, otherwise, the inverter may not stay stable.

## Grounding

**1**

$L = E + (2-3)mm$

**2**

**3**

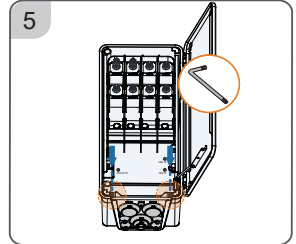
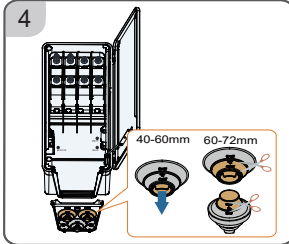
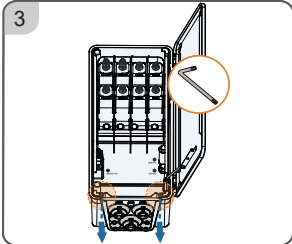
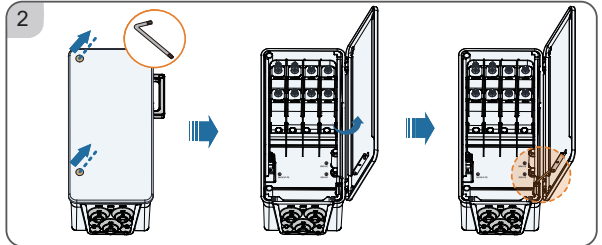
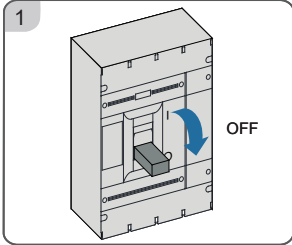
**4**

**5**

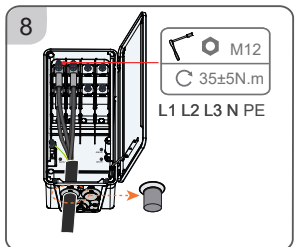
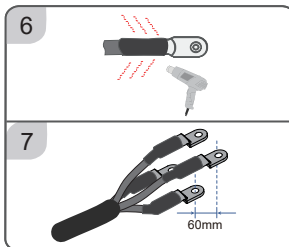
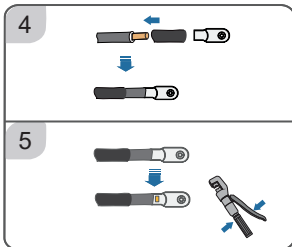
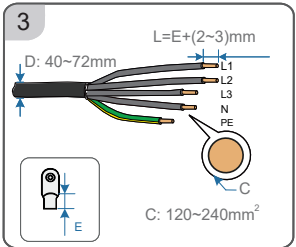
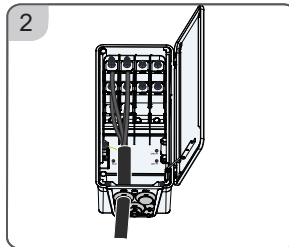
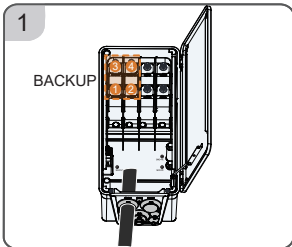
⌀ M8  
C 7~9N.m

# AC Cable Connection (For 8-hole Terminal Block/ Multi-core cable)

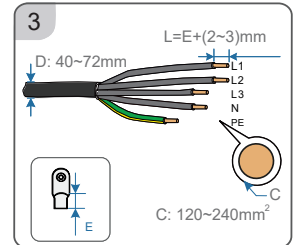
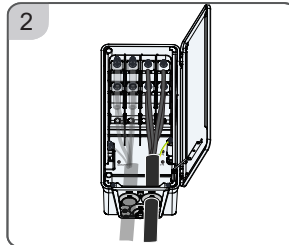
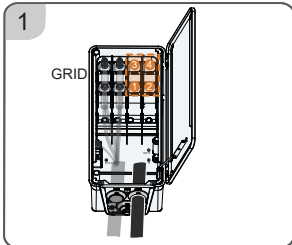
This section gives instructions on wiring using a five-core copper cable as an example.

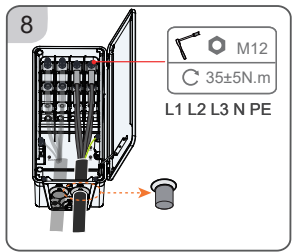
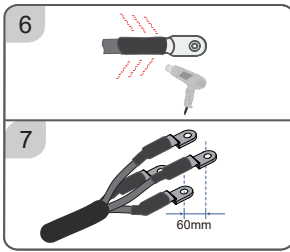
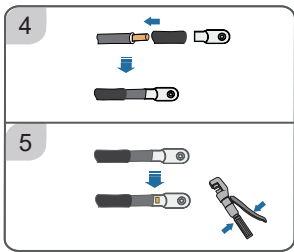


## •BACKUP Wiring



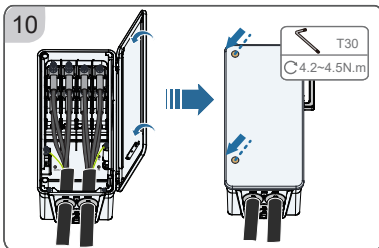
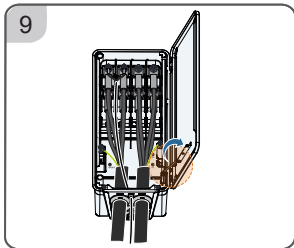
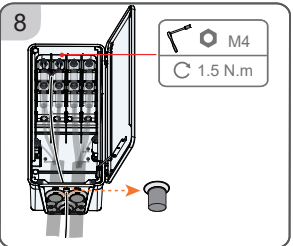
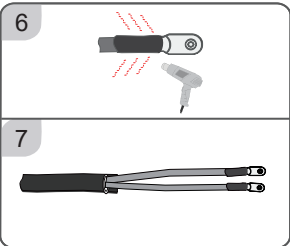
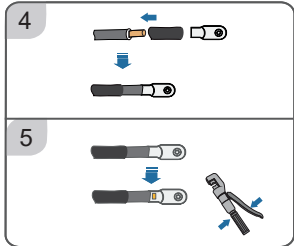
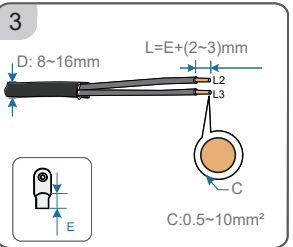
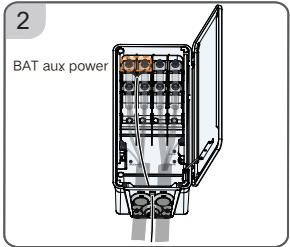
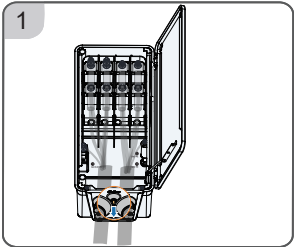
## •GRID Wiring





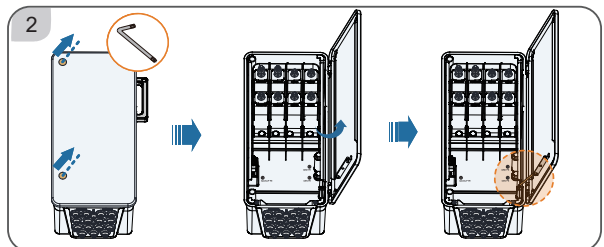
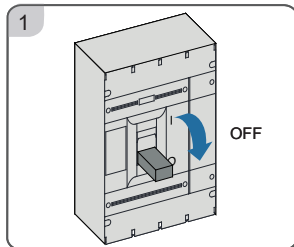
### •Battery Auxiliary Power Wiring

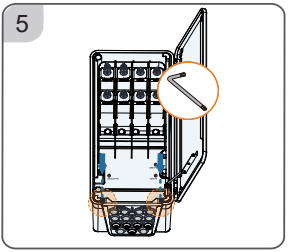
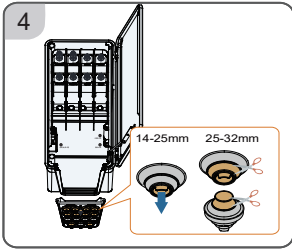
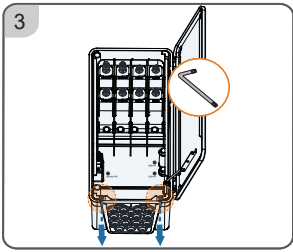
\*This step applies only to the supporting battery that needs to be powered from the BACKUP port.



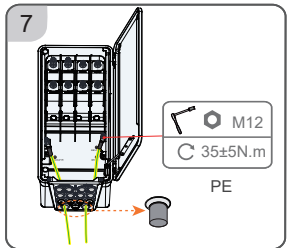
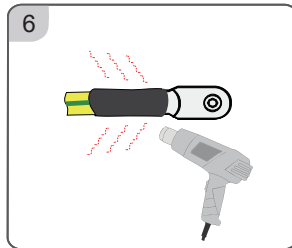
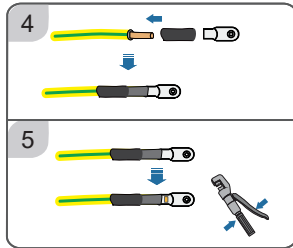
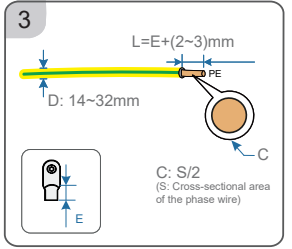
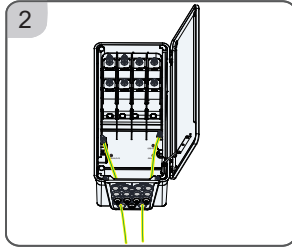
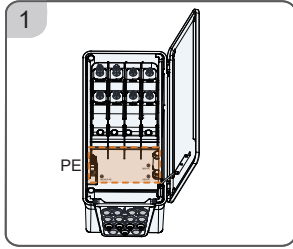
Note: For motor-type loads, wiring must strictly follow phase sequence requirements to ensure that the phase sequence remains consistent from the inverter's AC terminals to the load. Otherwise, device malfunctions may occur.

### AC Cable Connection (For 16-hole Terminal Block/ Single-core cable)

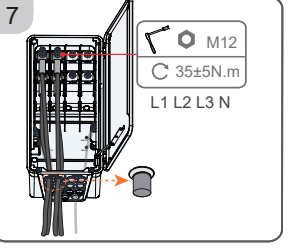
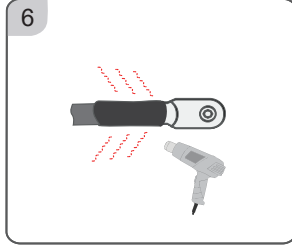
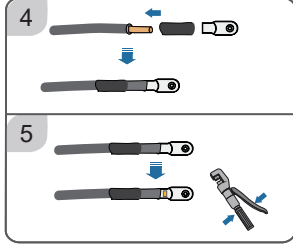
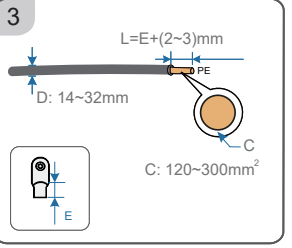
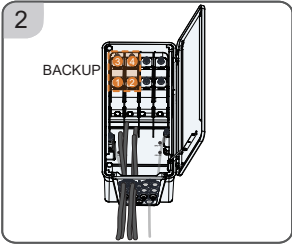
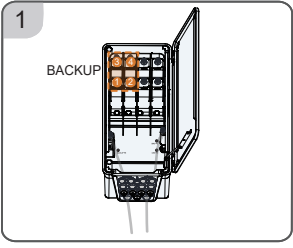




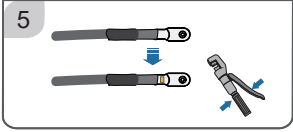
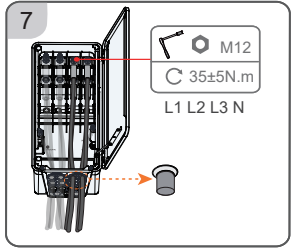
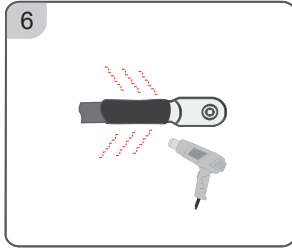
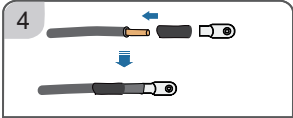
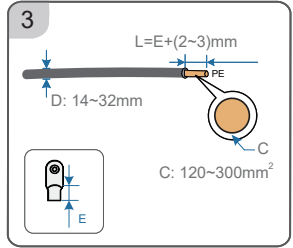
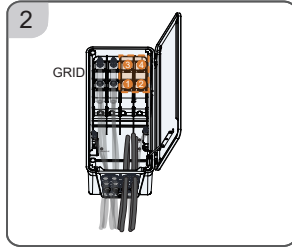
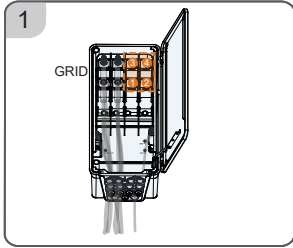
•PE Wiring



•BACKUP Wiring

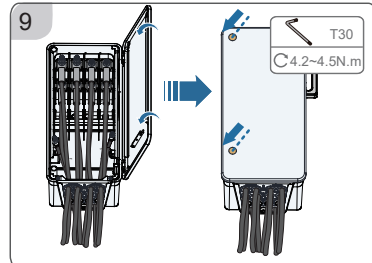
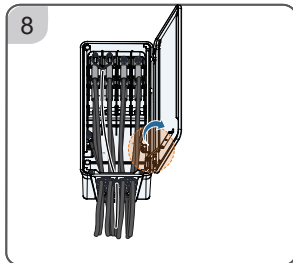
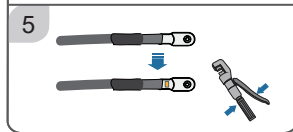
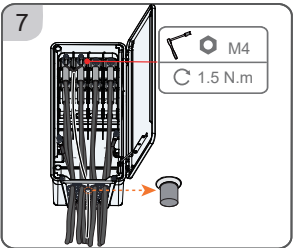
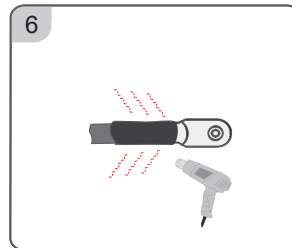
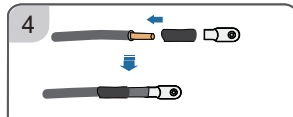
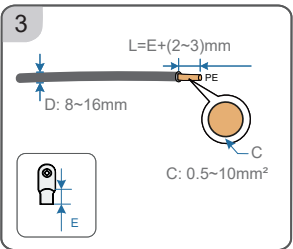
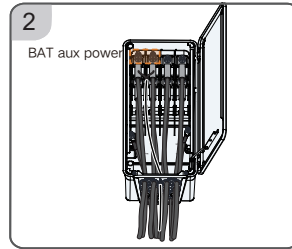
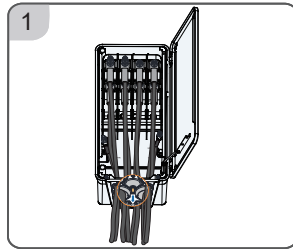


• GRID Wiring



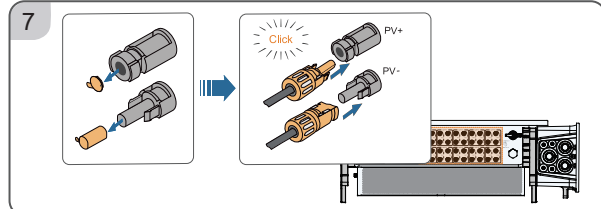
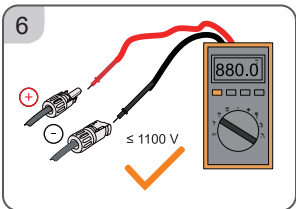
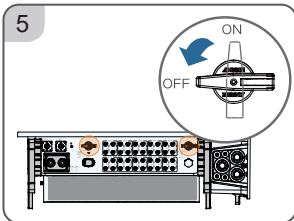
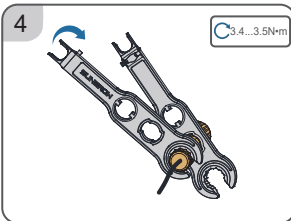
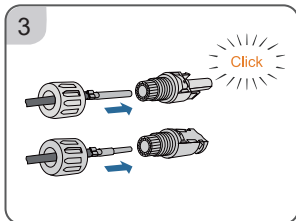
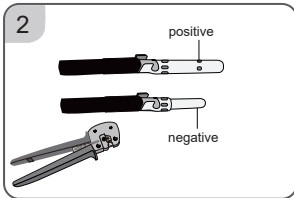
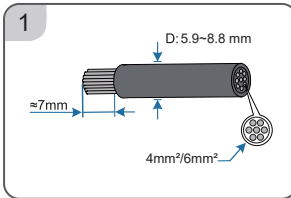
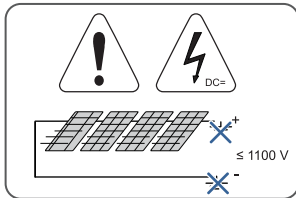
• Battery Auxiliary Power Wiring

\*This step applies only to the supporting battery that needs to be powered from the BACKUP port.

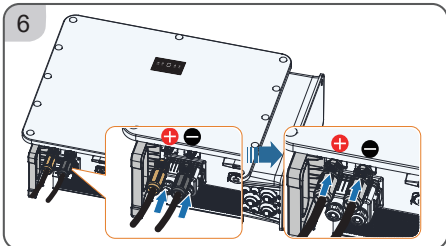
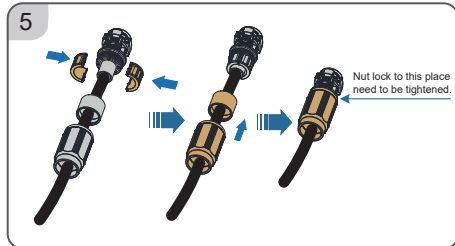
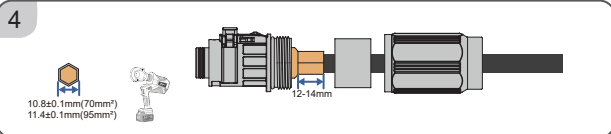
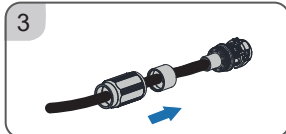
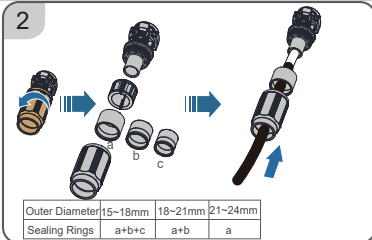
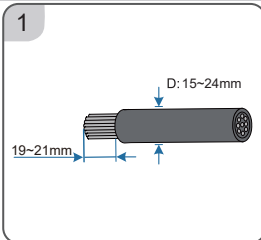
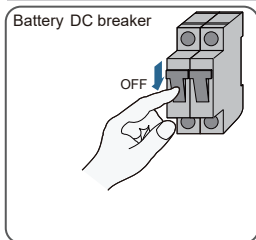


Note: For motor-type loads, wiring must strictly follow phase sequence requirements to ensure that the phase sequence remains consistent from the inverter's AC terminals to the load. Otherwise, device malfunctions may occur.

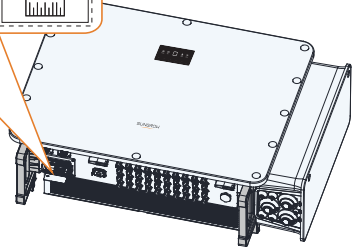
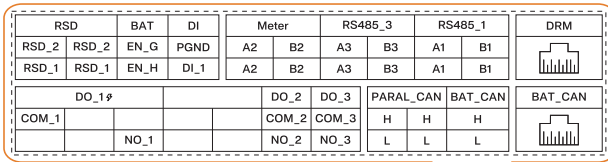
# DC Wiring



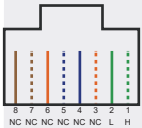
# Battery Connection



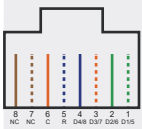
## COM2/COM3 Communication Wiring



Label	Description
RSD	Connect an external switch to enable the emergency stop function.
BAT	Reserved.
DI	Reserved.
Meter	Connect to the Smart Energy Meter.
RS485_1	The RS485 communication port is used only for the parallel connection of SUNGROW SH110CX/SH125CX hybrid inverters.
RS485_3	Reserved
DO_1	Grounding fault/alarm.
DO_2	Reserved
DO_3	Reserved
BAT_CAN	To enable the communication between the inverter and the Li-on battery.
PARAL_CAN	For parallel communication between inverters.
DRM	<ul style="list-style-type: none"> <li>•"AU"/"NZ": Demand response enabling device (DRED)</li> <li>•"DE": NS protection</li> <li>•"DE": Ripple Control Receiver (RCR)</li> </ul>

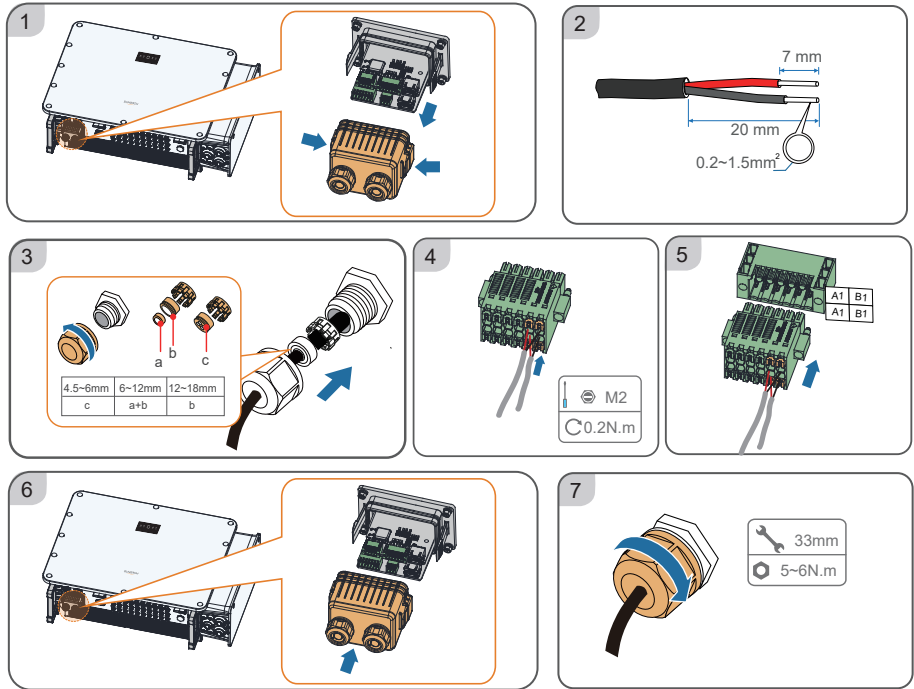


RJ45-BAT_CAN							
NC	NC	NC	NC	NC	NC	L	H
8	7	6	5	4	3	2	1

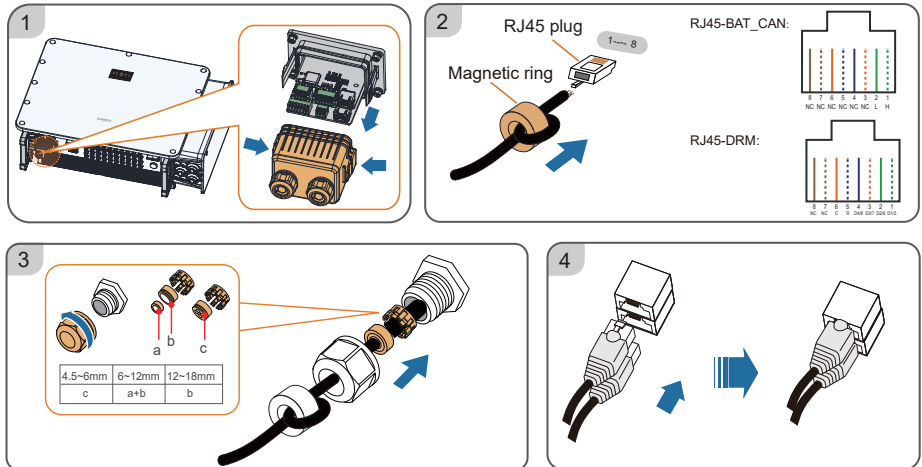


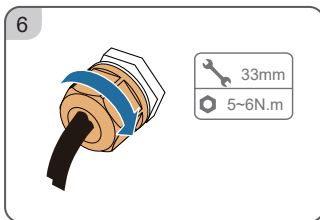
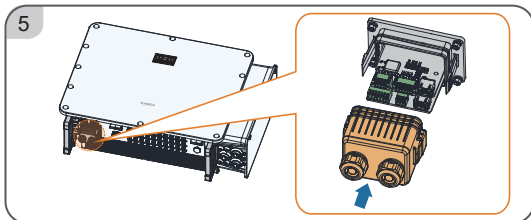
RJ45-DRM							
NC	NC	C	R	D4/8	D3/7	D2/6	D1/5
8	7	6	5	4	3	2	1

•Wiring to Terminal Block



•RJ45

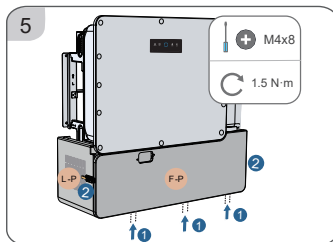
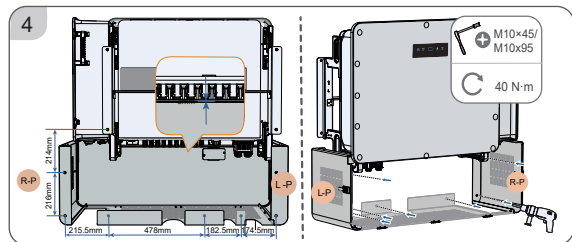
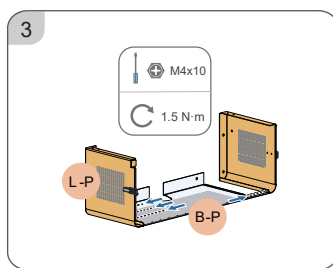
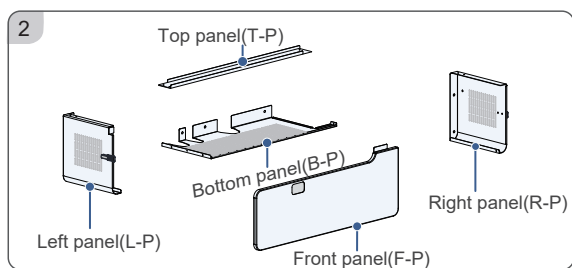
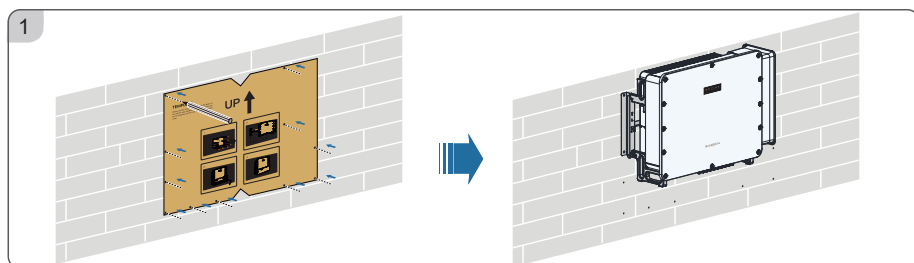


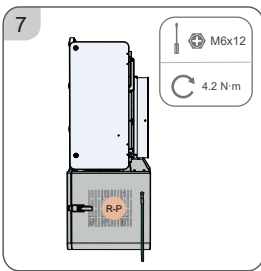
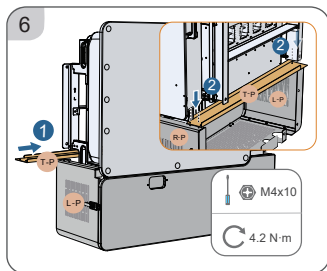


### Protective Cover Installation (Optional for SH110CX)

Material preparation:

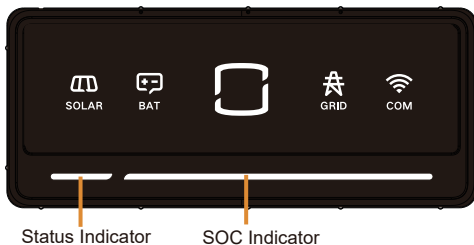
Item	Quantity	Specification	Source
⊕ countersunk screw	6	M4x8	Delivery scope
⊕ hexagon bolt assembly	8	M4x10	Delivery scope
⊕ hexagon bolt assembly	1	M6x12	Delivery scope
/ Hole-drilling template	1	/	Delivery scope
⊕ Fully-threaded bolt assembly (bracket-mounting) / Expansion bolt assembly (wall-mounting)	7	M10×45/M10x95 (recommend)	Self-prepared



























Note: Installing the protective cover may attenuate the wireless communication signal, which can subsequently reduce the effective communication range of the wireless module.

## LED Indicator

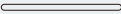







Indicator	Color	Status	Definition
 SOLAR		Steady on	PV fault.
		Steady on	PV operating normally.
		Off	PV inactive.
 BAT		Steady on	Battery fault.
		Steady on	Battery connected.
		Off	Battery not connected.
		Steady on	Inverter fault.
		Steady on	Inverter operating normally.
		Off	The AC and DC power are disconnected.
 GRID		Steady on	Inverter operating in grid-connected mode.
		Off	Grid connection anomaly.
 COM		Steady on	External data communication normal.
		Blink	Communicating via Bluetooth.
		Off	No communication.

Status Indicator:

Status indicator	Color	Status	Description
	Blue	Steady on	Battery connection.
	Red	Steady on	Battery fault.
	Grey	Off	No Battery.

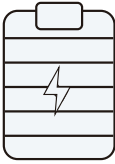
SOC Indicator:

SOC Indicator	SOC
	0
	$0 < \text{SOC} \leq 20\%$
	$20\% < \text{SOC} \leq 40\%$
	$40\% < \text{SOC} \leq 60\%$
	$60\% < \text{SOC} \leq 80\%$
	$\text{SOC} > 80\%$

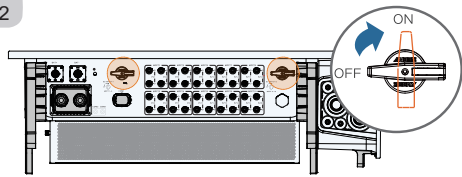
## Inverter Start-up

1

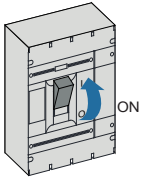
Power on Battery



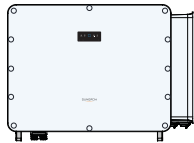
2



3



4 LED indicator

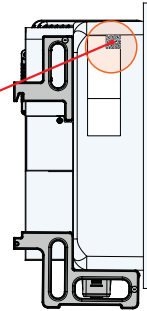
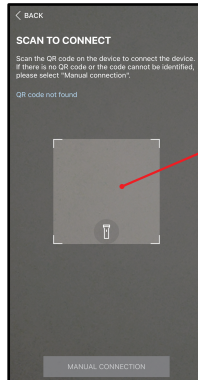
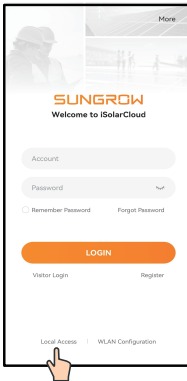


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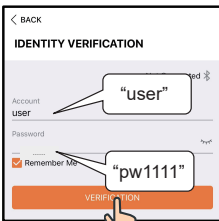


iSolarCloud

6



7



Scan the QR code to access the iSolarCloud App User Manual and complete software commissioning by referring to the Device Commissioning section.



More information in the QR code or  
at <http://support.sungrowpower.com/>

