Sunpower L1-INT Reserve Enrgy Storage System Installation Guide

Contents

SUNPOWER®

Sunpower L1-INT Reserve Enrgy Storage System

Product Information

Specifications

- Product Name: SunPower Reserve Home Energy Storage System
- Model: RESERVE-INV-1-P5-L1-INT
- Dimensions: WxHxD = 483x380x190mm

Product Overview

The SunPower Reserve Home Energy Storage System is equipped with the following components:

- Grid connector
- Backup connector
- BAT + (Battery positive terminal)
- BAT – (Battery negative terminal)
- Battery circuit breaker
- PV connectors
- PV switch
- Wi-Fi port
- Communication ports
- LED display

Confirmation of Accessories and Tools

Scope of Delivery

The following items are included in the package:

- Inverter (RESERVE-INV-1-P5-L1-INT)
- TOP decoration plate
- Cable cover
- Inverter base
- PV MC4 connector pair (x2)
- Grid connector
- Backup connector
- AUX connector
- M5*12 Screw (x16)
- Grid-CT (Grid current transformer)
- PV-CT (PV current transformer)
- Grid CT Cable
- PV CT Cable
- WiFi Module
- Screw M4*10 (x2)
- Battery Communication Cable
- Battery Positive Power Cable
- Battery Negative Power Cable
- Grounding Cable
- Inverter Quick Installation Guide

Additional Materials Required for Installation

- Three-core outdoor copper cable
- Grid Cable: 6-8mm2
- AC Backup Cable: 4-6mm2
- DC Cable: PV1-F Conductor cross section: 4-6mm2
- Conduits
- Ethernet Cables Cat5e, UTP, UV-resistant for outdoor use
- RJ45 Plugs
- PE Terminal

Product Usage Instructions

Connecting the Grid Power Cable

1. Strip approximately 14mm of the cable insulation.
2. Connect the PE (Protective Earth) wire to the designated terminal.
3. Connect the L (Line) and N (Neutral) wires to their respective terminals.
4. Tighten the screws to secure the connections.

Connecting the AC Backup Power Cable

1. Strip approximately 24mm of the insulation from the L and N wires.
2. Connect the PE wire to the designated terminal.
3. Assemble the locking cap, threaded sleeve, and swivel nut together.
4. Plug the connector into the socket and tighten firmly.

Connecting the BAT Power Cable

1. **CAUTION:** Switch OFF the battery breaker located on the right side of the battery.
2. Connect the BAT- (Black) wire to the BAT- terminal.
3. Connect the BAT+ (Red) wire to the BAT+ terminal.

Installing the Inverter

1. Ensure that the battery is properly installed. Refer to the Battery Quick Installation Manual or Safety and Installation Instructions for more details.
2. Install the base of the inverter.
3. Tighten the right screws.
4. Tighten the left screws.

Electric Shock Hazard Warning:
Before doing any electrical connection, ensure that the PV switch, AC, and BAT circuit breakers are switched OFF and cannot be reactivated.

Frequently Asked Questions (FAQ)

Q: Where can I find more information or contact support?
A: For more information or to contact support, please visit our official website: **https://sunpower.maxeon.com**

SunPower Reserve
Home energy storage system

NEED MORE HELP?
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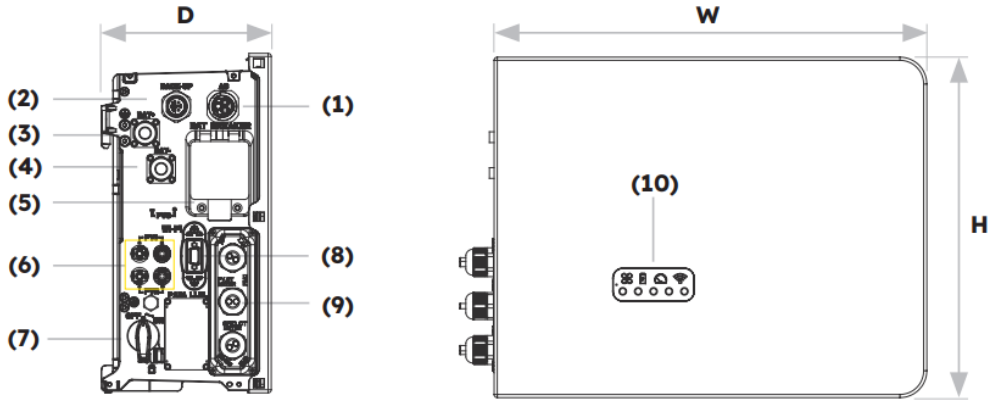
Product Overview

1. Grid connector
2. Backup connector
3. BAT +
4. BAT –
5. Battery circuit breaker
6. PV connectors
7. PV switch
8. Wi-Fi port
9. Communication ports

10. LED display

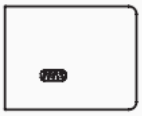
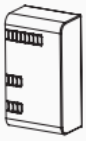
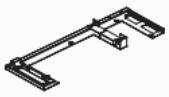
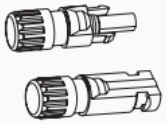
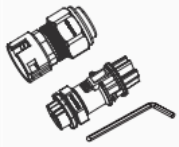
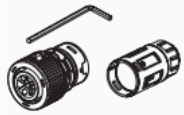
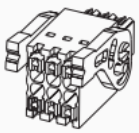
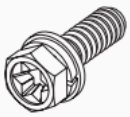
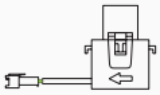
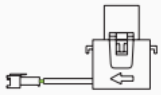
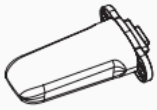
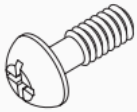


Dimensions: WxHxD = 483x380x190mm

Confirmation of Accessoires and Tools

Scope of Delivery

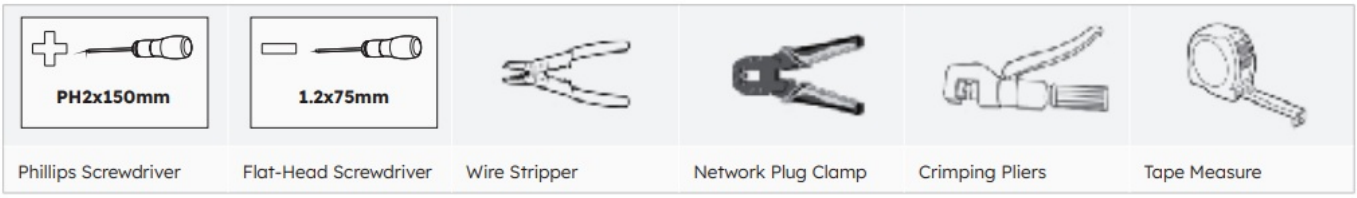
Inverter (RESERVE-INV-1-P5-L1-INT)

						
RESERVE-INV-1-P5-L1-INT (x1)	TOP decoration plate (x1)	Cable cover (x1)	Inverter base (x1)	PV MC4 connector pair (X2)	Grid connector (x1)	BACK UP Connector (x1)
		 Grid-CT	 PV-CT			
AUX Connector (x1)	M5*12 Screw (x16)	Grid CT (x1)	PV CT (x1)	Grid CT Cable (x1)	PV CT Cable (x1)	WiFi Module (x1)
						
Screw M4*10 (x2)	Battery Communication Cable (x1)	Battery Positive Power Cable (x1)	Battery Negative Power Cable (x1)	Grounding Cable (x1)	Inverter Quick Installation Guide (x1)	

Additional Materials Required for Installation

					
Three-core outdoor copper cable Grid Cable: 6-8mm² AC Backup Cable: 4-6mm²	DC Cable: PV1-F Conductor cross-section: 4-6mm²	Conduits	Ethernet Cables Cat5e, UTP, UV-resistant for outdoor use	RJ45 Plugs	PE Terminal

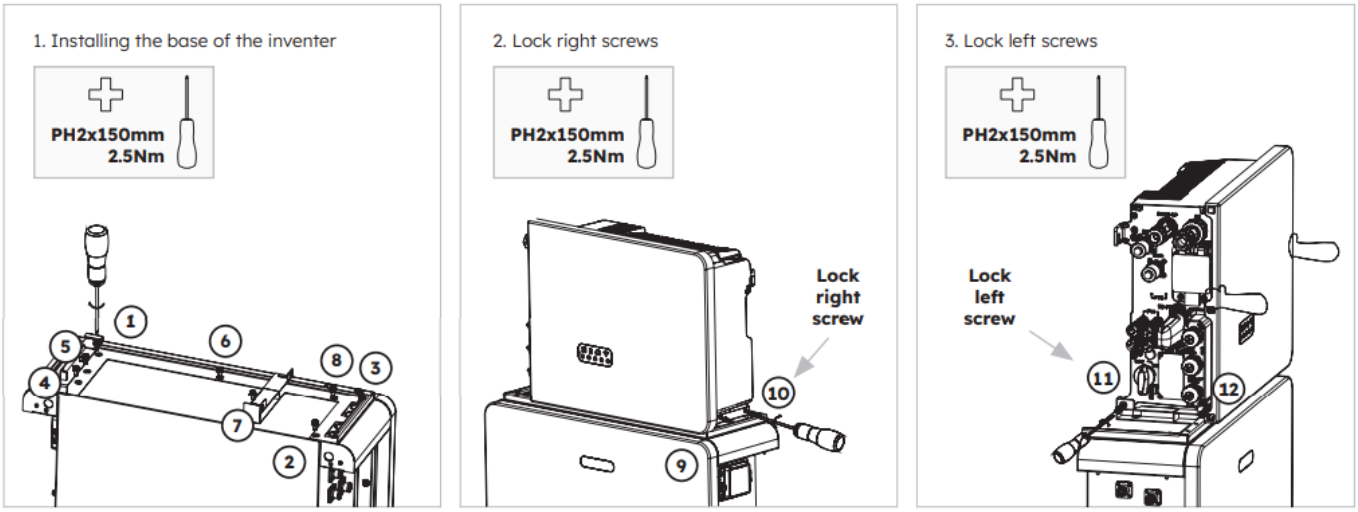
Installation Tools



Installing the Inverter

Before installing the inverter ensure that the battery is properly installed. For more details refer to Battery Quick Installation Manual or Safety and Installation Instructions.

Installing the inverter



DANGER

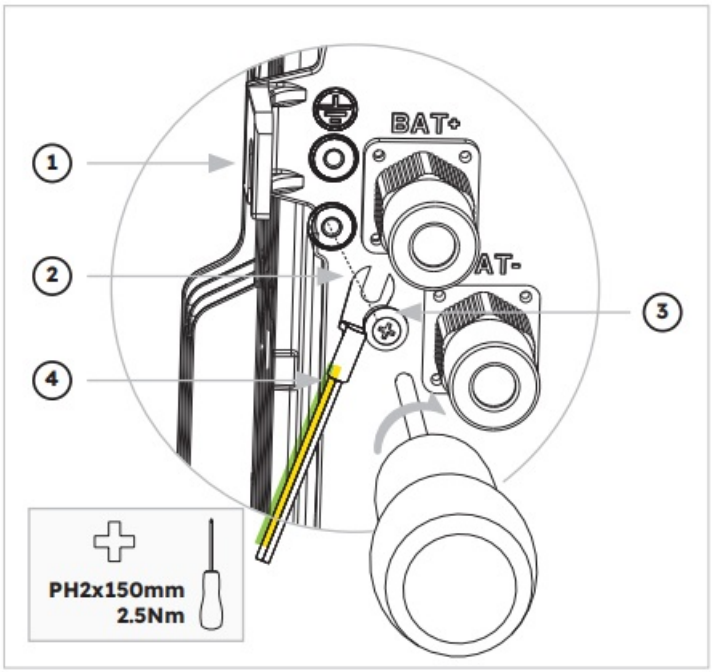
Electric Shock Hazard:
Bore doing any electrical connection, ensure the PV switch, AC and BAT circuit breaker are switched OFF and cannot be reactivated.

Electrical Connections

Installing the PE cable

Description	Breaker Specification
Grid side	32/40/50 A
Backup side	32A

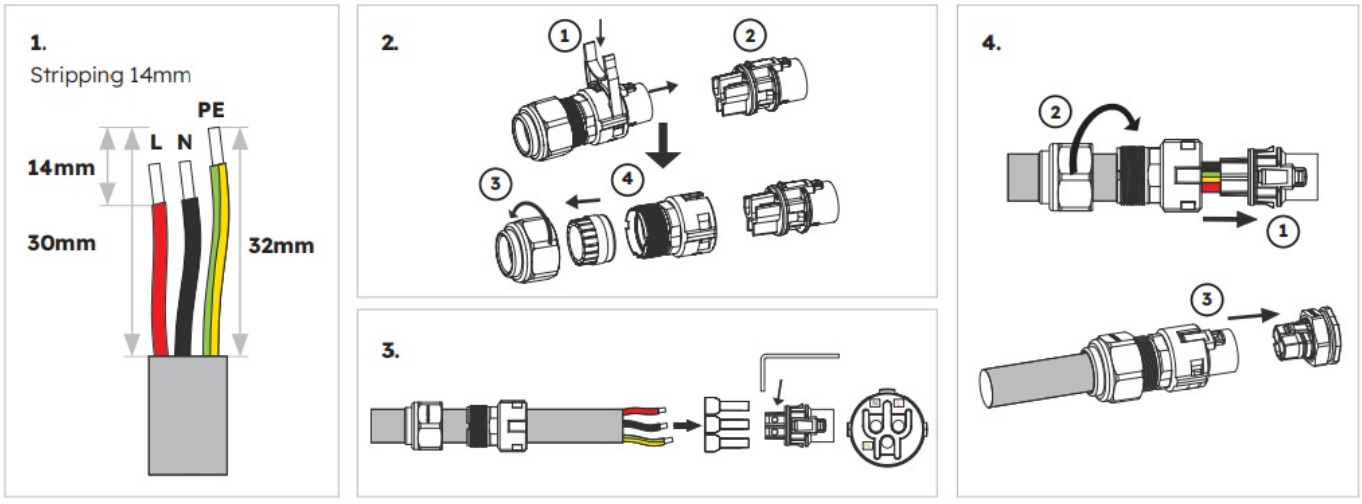
Position	Designation
1	Housing
2	M5 terminal lug with protective conductor
3	M5x12 PH2 head screw
4	PE cable



DANGER
You must protect each inverter with an individual AC circuit breaker in order to ensure that the inverter can disconnected safely.

Selecting a circuit breaker and copper cross-section
The maximum allowable grid circuit breaker specification is 50 A when the copper conductor cross section for grid connection is 10 mm2 and factors influencing the ampacity of the cable, other influences on dimensioning must be considered. You may use SunPower One installer dashboard to adjust the grid circuit breaker specification from 32A to 40A, otherwise the circuit breaker may trip under normal operation conditions.

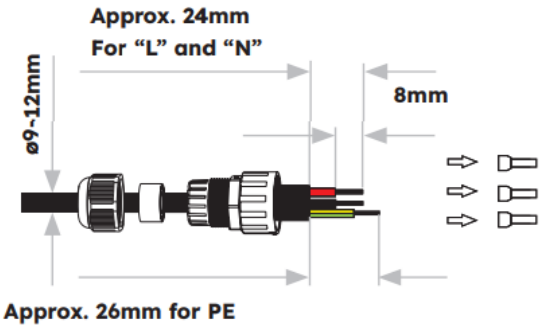
Connecting the Grid Power Cable



Connecting the AC Backup Power Cable

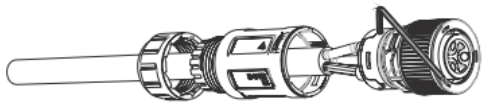
1. Three-core (L, N and PE) outdoor copper cable Conductor cross-section: 4-6mm²
2. Insert the crimped conductors, L, N and PE into the corresponding terminals and tighten the screws (torque 1.5±0.1N-m)
   Assemble the locking cap, threaded sleeve and swivel nut together
3. Plug the connector into the socket and tighten firmly

1.

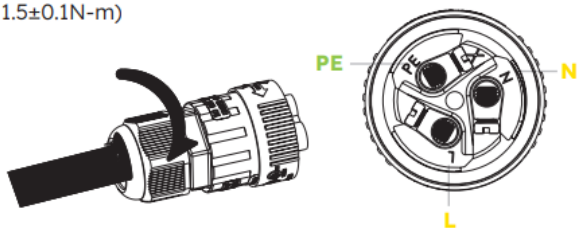


Three-core (L, N and PE) outdoor copper cable
Conductor cross-section: 4-6mm²

2.

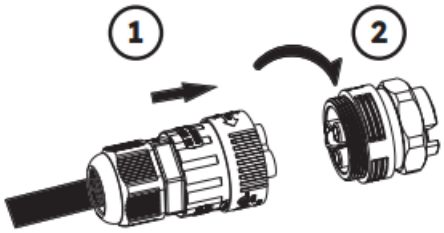


Insert the crimped conductors, L, N and PE into the corresponding terminals and tighten the screws (torque 1.5±0.1N-m)



Assemble the locking cap, threaded sleeve and swivel nut together

3.

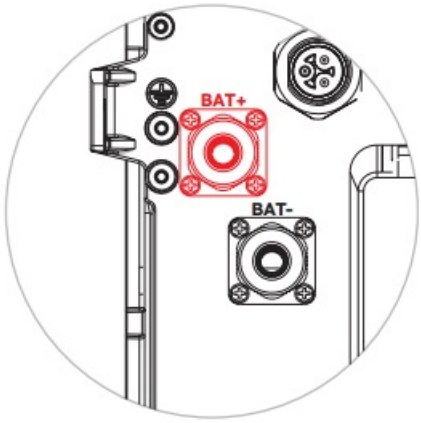


Plug the connector into the socket and tighten firmly

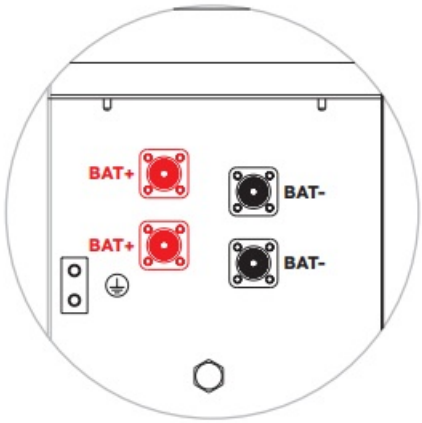
Connecting the BAT Power Cable

CAUTION

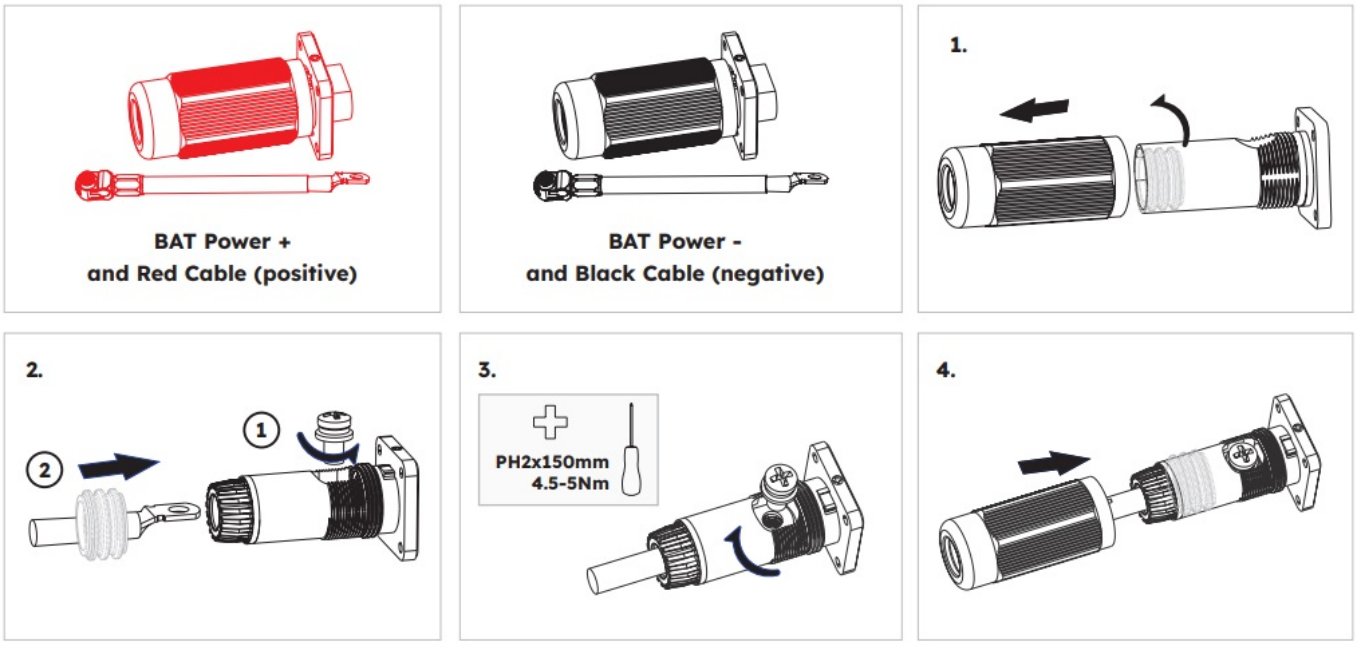
1. Switch OFF the battery breaker which is located on the right side of the battery
2. Connect the BAT- wire first (Black) then the BAT+ wire (Red)



Inverter side



BAT side



DANGER

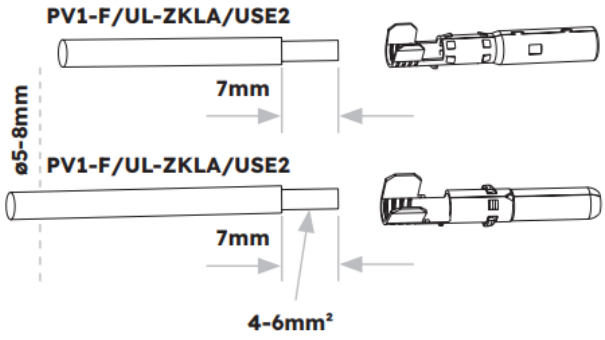
Danger to life due to short-circuiting of the battery

- Touching a shorted battery connection may result in lethal injuries due to electric shock and massive energy release.
- Switch off the battery breaker which is located on the lower left of the inverter.
- Connect both end of one battery power cable completely before connecting the next power cable to avoid short-circuiting of the positive and negative battery pwer cables.

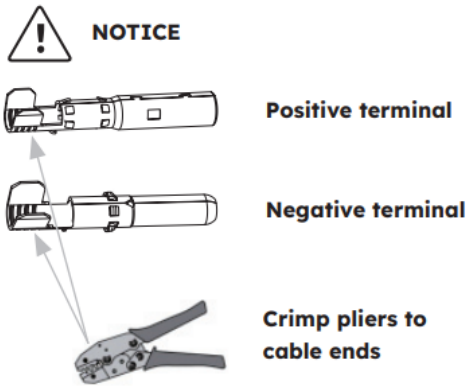
Connecting the PV Power Cable

1. Strip off the insulation.
2. Assemble the MC4 cable ends.
3. Assemble the connectors.
   Please check if the cables are securely installed by pulling outwards.
4. Check the polarities of the PV strings. Check the open-circuit voltage is less than 580V.
5. Remove the waterproof caps.
   If there is a used terminal, please seal with the cap.
6. Insert the connectors into the terminal until an audible click is heard.

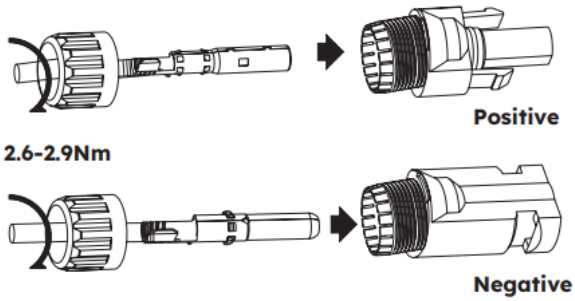
1. Strip off the insulation.



2. Assemble the MC4 cable ends.



3. Assemble the connectors.



Please check if the cables are securely installed by pulling outwards.

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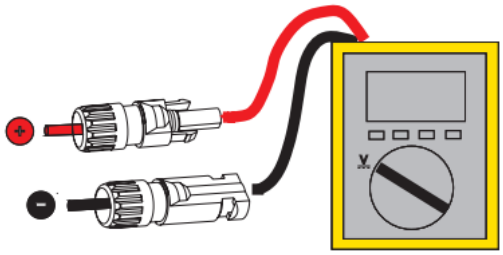
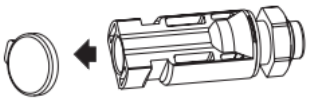
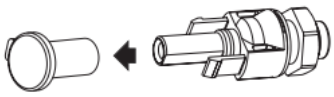


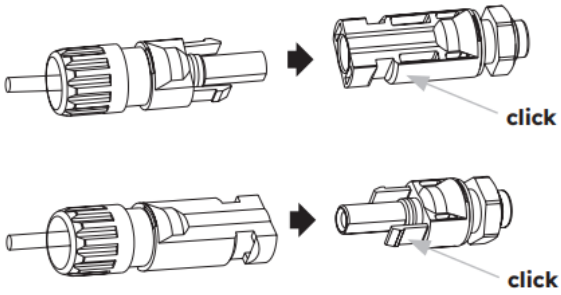
5.
Remove the waterproof caps.



If there is a used terminal, please seal with the cap.

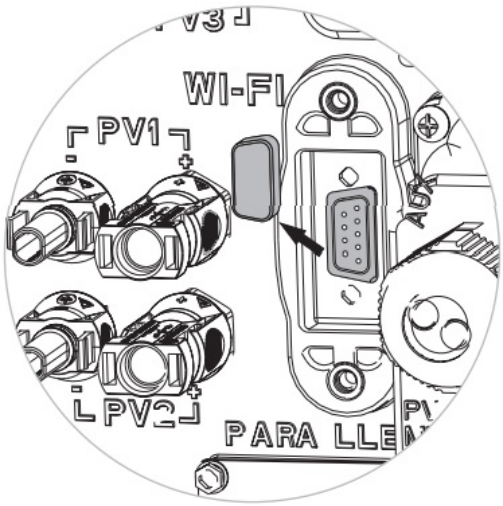


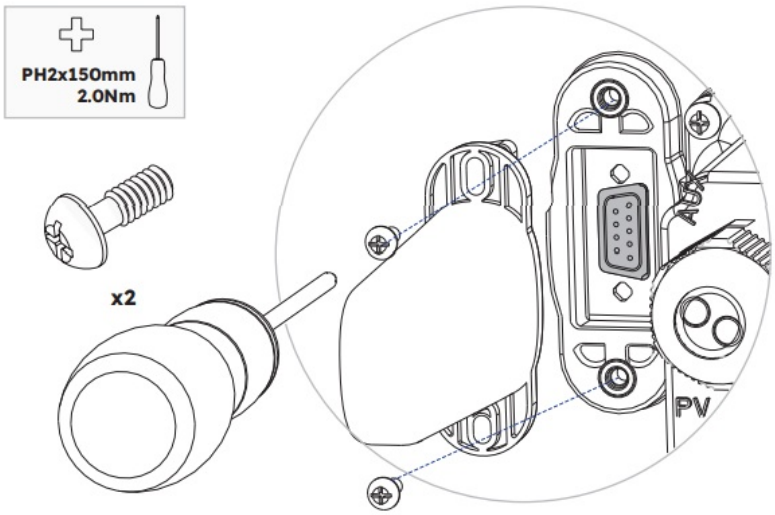
6.
Insert the connectors into the terminal until an audible click is heard.



Communication Connection

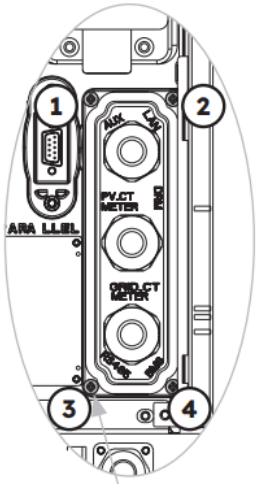
Wi-Fi module Connection

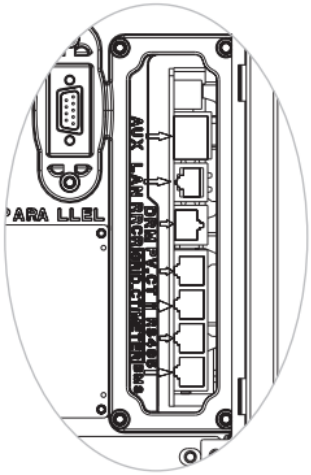


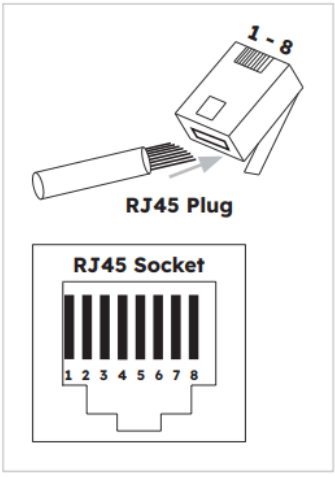


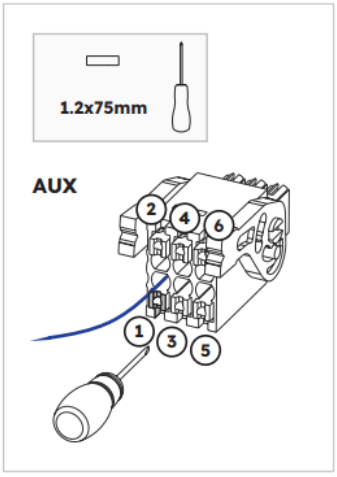
AUX/LAN/PV-CT Meter/DRM/GRID-CT Meter/RS485/BMS Connection

Communincation connection part as follows:



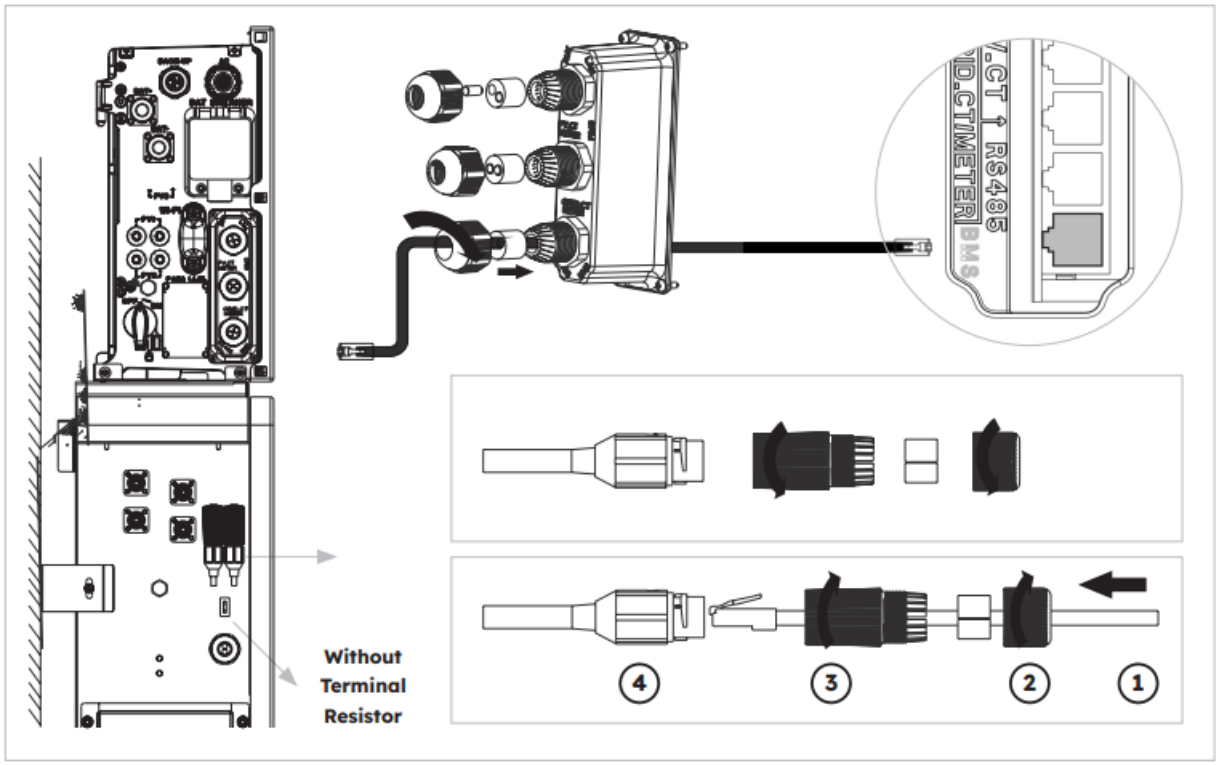




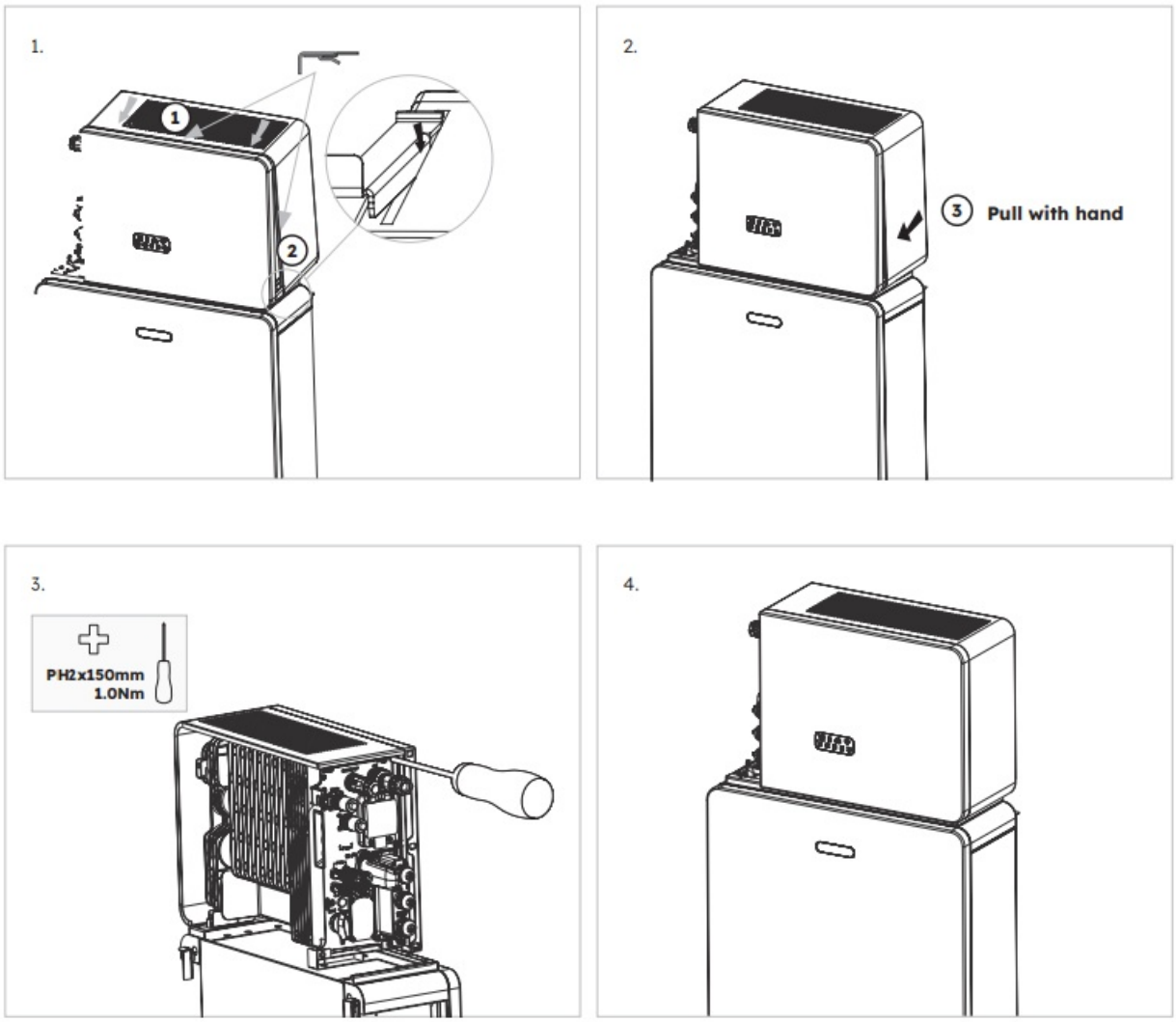


Item No.	1	2	3	4	5	6	7	8
BMS	NC	RS485_A4	NC	CAN1_H	CAN1_L	NC	RS485_B4	NC
RS485	12V	NC	GND	RS485_B5	RS485_A5	NC	NC	NC
GRID_CT/METER	GRID_CT-	GRID_CT+	RS485_A7	NC	NC	RS485_B7	NC	NC
PV_CT	PV_CT-	PV_CT+	RS485_A7	NC	NC	RS485_B7	NC	NC
DRM	DRED1/5	DRED2/6	DRED3/7	DRED4/8	REFGEN/0	COMLOAD/0		
AUX	DO1_NO	DO1_COM	DO1_NC	DI_NEGATIVE	DI_POSITIVE	GND		

Wiring the Communication Cables between Inverter and Battery (EMS)



Install top cover



DANGER
Before turning on power, ensure that all the electrical connections are secure.

Commissioning
To set up the inverter as part of a SunPower Reserve installation, follow the commissioning steps as outlined in the Reserve Safety and Installation Instructions.

Power ON / OFF the Product Procedure

DANGER
Ensure a reliable and correct installation and electrical connection before power on.

Power ON procedure

1. Switch ON the BATTERY CIRCUIT BREAKER on the right side of the battery. Repeat for additional batteries in sequential order.
2. Switch ON the BATTERY SYSTEM ISOLATOR which is on the left side of the inverter under housing top cover.
3. Press the BATTERY START BUTTON for 1s on BATTERY 1. It is located next to the battery circuit breaker(s). Repeat for additional batteries in sequential order, within 5s.
4. Switch ON the AC GRID SUPPLY to the inverter.
5. Switch ON the AC BACKUP SUPPLY from the inverter if installed.
6. Switch ON the PV ISOLATOR on the left side of the inverter if PV connected to the inverter directly.

Power OFF procedure

1. Set the Changeover switch to MAINS to supply loads from the GRID, if installed.
2. Switch OFF the AC BACKUP SUPPLY from the inverter if installed.
3. Switch OFF the AC GRID SUPPLY to the inverter.
4. Switch OFF the PV ISOLATOR on the left side of the inverter if PV connected to the inverter directly.
5. Switch OFF the BATTERY SYSTEM ISOLATOR which is on the left side of the inverter.
6. Switch OFF the BATTERY CIRCUIT BREAKER for each battery.
7. Hold the battery start button in for 6s to turn off each battery. It is located next the BATTERY CIRCUIT BREAKER.

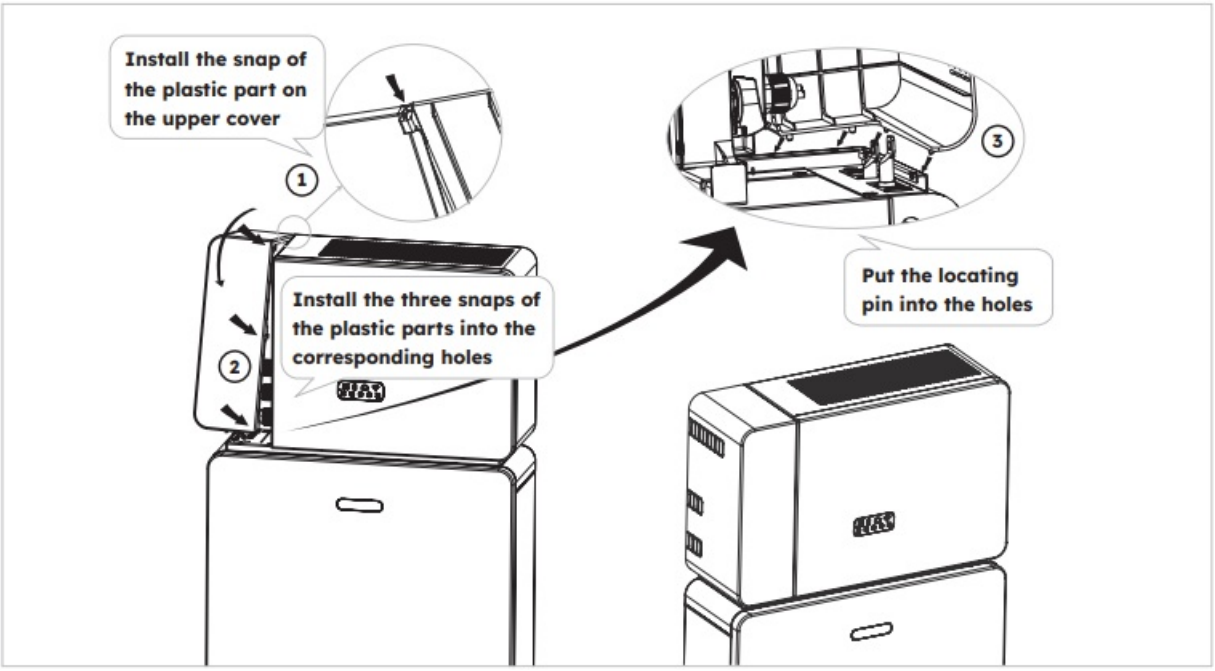
For more information, refer to the Safety and Installation Instructions.

CAUTION

Disclaimer:
This Quick Installation Guide is not replacing the Safety and Installation Instructions, it is a short introduction to the product installation. The reference remains the Safety and Installation Instructions

Installing the plastic part

Make sure all the wiring is secure and the system is working properly and then install the plastic parts on the left side of the inverter.



Refer to Safety and Installation Instructions to commission the whole system.

NEED MORE HELP?
If you would like to contact us directly, please visit our offcial website: **https://sunpower.maxeon.com** for more information.
Safety and Installation Instructions for SunPower Reserve

Documents / Resources

	Sunpower L1-INT Reserve Enrgy Storage System [pdf] Installation Guide L1-INT Reserve Enrgy Storage System, L1-INT, Reserve Enrgy Storage System, Enrgy Storage System, Storage System, System

References

- Global Solar Energy Company | Solar Panels | Maxeon US
- Compañía de paneles solares en España | SunPower España
- User Manual