1 Overview

(1) Front panel
(2) Mounting plate
(3) Mounting bracket
(4) Heat sink
(5) LED
(6) DC switch (DC SWITCH)
(7) DC input terminals (PV+/PV–)
(8) Battery terminals (BAT+/BAT–)
(9) COM port (COM)
(10) AC output port (AC)
(11) Ventilation valve
(12) Antenna port (ANT)
(13) Alarm port (ALARM)
(14) Ground point

⚠ **NOTICE**

1. The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.
2. Before installing the device, closely read the user manual to get familiar with product information and safety precautions. You can log in to http://support.huawei.com/carrier/, and search for the device model on the **Product Support** tab page to view or obtain the user manual.
3. Only certified electricians are allowed to operate the device. Operation personnel must wear proper personal protective equipment (PPE) all the time.
4. Before installing the device, check that the package contents are intact and complete against the packing list. If any damage is found or any component is missing, contact your dealer.
5. The device warranty does not cover the following situations:
   - The warranty label is removed.
   - The device is damaged due to violation of the storage, transportation, installation, and operation regulations specified in this document and user manual.
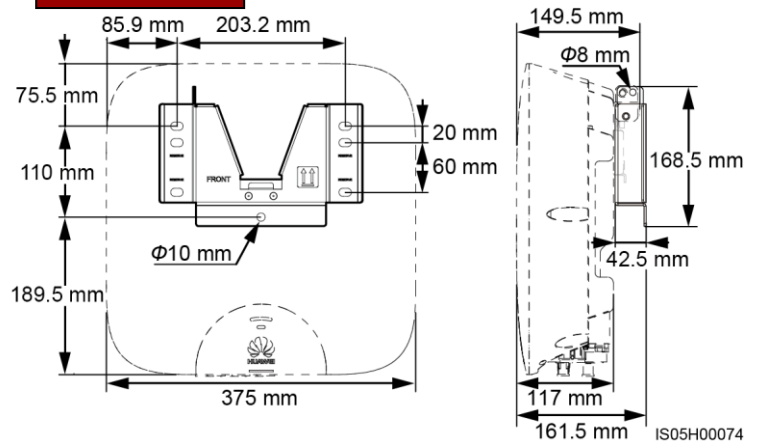
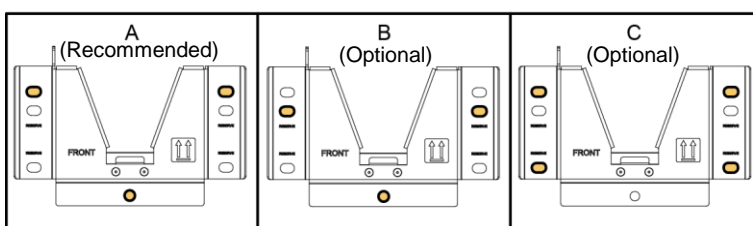# 2 Installing the Device

2.1 Installation Requirements

Tilt and Space
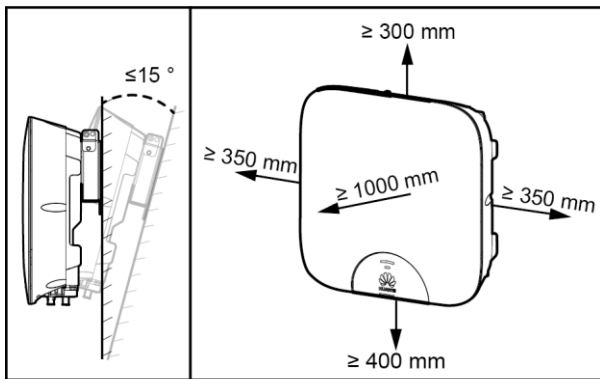
Dimensions
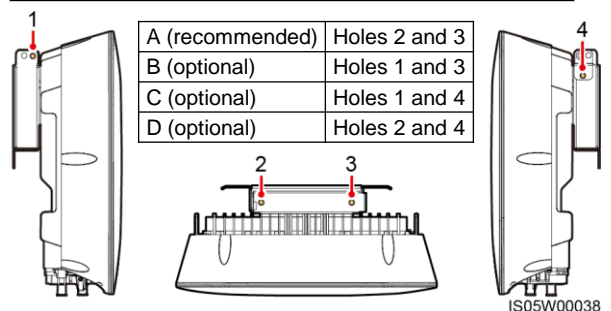

Hole Combinations for Fixing the Mounting Bracket
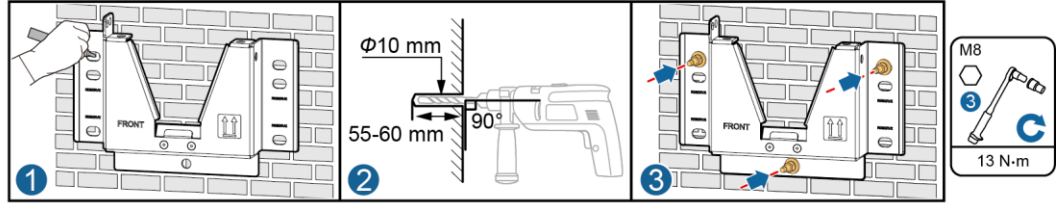

Hole Combinations for Fixing the SUN2000L

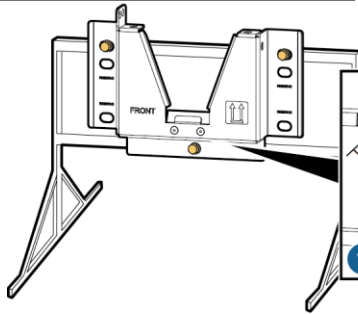| A (recommended) | Holes 2 and 3 |
B (optional)	Holes 1 and 3
C (optional)	Holes 1 and 4
D (optional)	Holes 2 and 4

2.2 Installing the Mounting Bracket

**Wall-mounted Installation**

⚠️ **DANGER**

Avoid drilling holes in the utility pipes and/or cables attached to the back of the wall.

Support-mounted Installation

Prepare M8 stainless bolt assemblies (including flat washers, spring washers, and M8 bolts) with appropriate lengths as well as matched flat washers and nuts based on the support specifications.
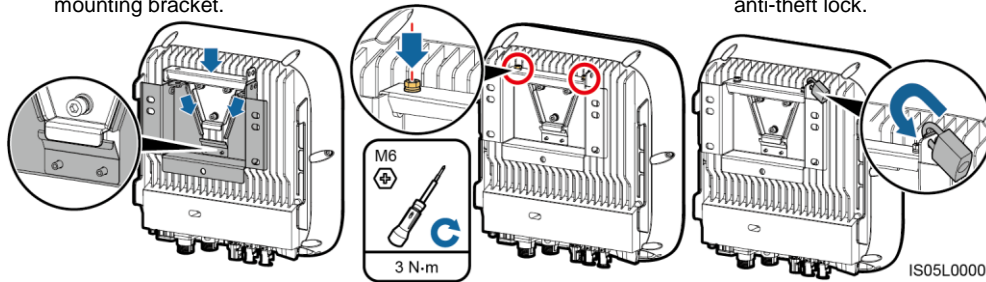

You are advised to apply anti-rust paint on the hole positions for protection.
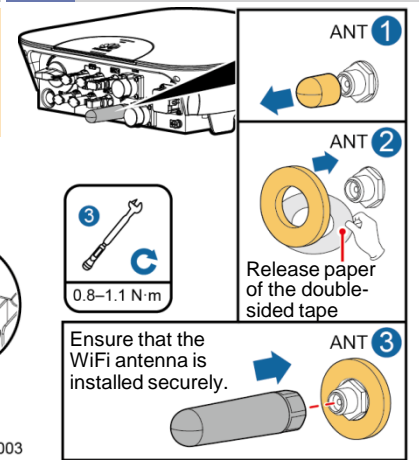
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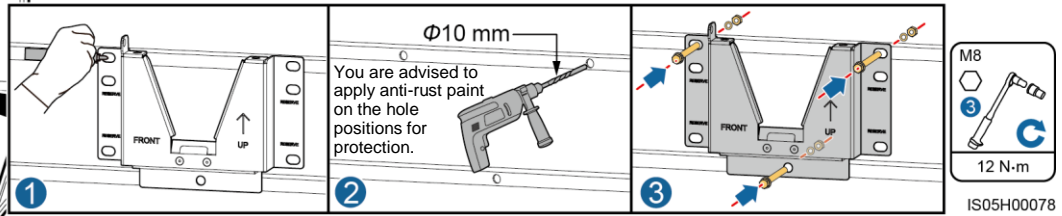
2.3 Installing the SUN2000L

⚠️ **NOTICE**

- If the bottom of the mounting plate does not snap into place, push the SUN2000L from the front until the bottom of the mounting plate snaps into the mounting bracket.
- The anti-theft lock needs to be prepared by the customer.

1. Install the SUN2000L on the mounting bracket.
2. Tighten screw assemblies.
3. (Optional) Install an anti-theft lock.

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2.4 Installing the WiFi Antenna

Release paper of the double-sided tape

Ensure that the WiFi antenna is installed securely.

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3 Connecting Cables

3.1 Preparing Cables

Prepare cables based on site requirements.

No.	Cable	Type	Conductor Cross-sectional Area Range	Outer Diameter
1	PE cable	Single-core outdoor copper cable	4–10 mm^2	N/A
2	AC output power cable	Two-core (L and N) outdoor copper cable or three-core (L, N, and PE) outdoor copper cable	4–6 mm^2	10–21 mm
3	DC input power cable or battery cable (optional)	Standard outdoor PV cable in the industry (recommended model: PV1-F)	4–6 mm^2	4.5–7.8 mm
4	Signal cable (optional)	Four-core outdoor shielded twisted pair	0.25–1 mm^2	4–11 mm

⚠️ **NOTICE**

- Connect cables in accordance with the installation laws and regulations of the country or region where the SUN2000L is located.
- Before connecting cables, ensure that the DC switch on the SUN2000L and all the switches connecting to the SUN2000L are OFF. Otherwise, the high voltage of the SUN2000L may result in electric shocks.

3.3 Installing the AC Output Power Cable

⚠️ **NOTICE**

Ensure that the protection layer of the AC output power cable is in the connector, and that the exposed core wire is totally inserted into the cable hole and connected securely. Failing to do so may cause SUN2000L malfunction or damage.

3.2 Installing the PE Cable

⚠️ **DANGER**

Do not connect the neutral wire to the enclosure as a PE cable. Otherwise, electric shocks will be caused.

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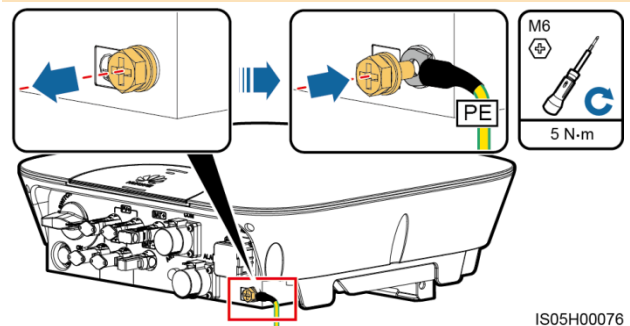
📖 **NOTE**

- The PE point at the AC output port is used only as a PE equipotential point, and cannot substitute for the PE point on the enclosure.
- Recommended: Apply silica gel or paint around a ground terminal after connecting the ground cable.

1. Connect the AC output power cable to the AC connector.
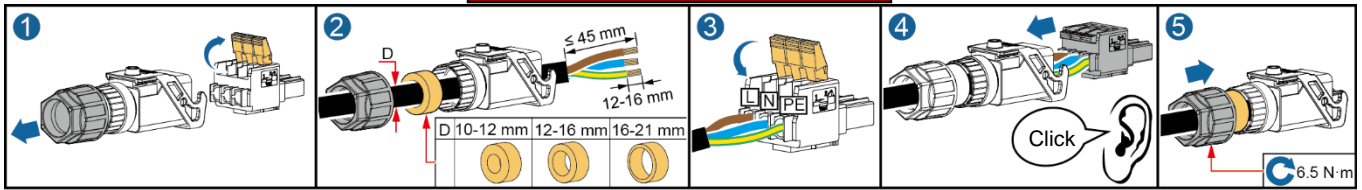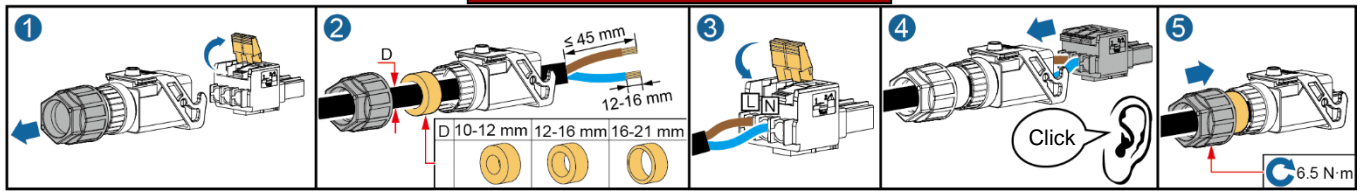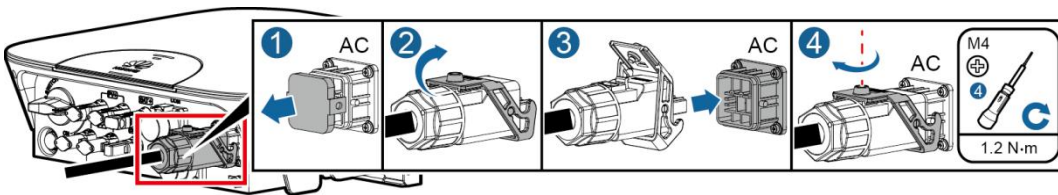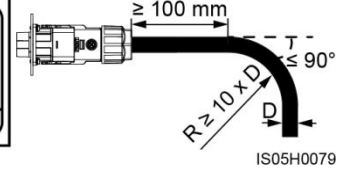
Three-Core Cable (L, N, and PE)

❶ ❷ D ≤ 45 mm | 12-16 mm | D 10-12 mm | 12-16 mm | 16-21 mm ❸ N L PE ❹ Click ❺ 6.5 N·m

Two-Core Cable (L and N)

❶ ❷ D ≤ 45 mm | 12-16 mm | D 10-12 mm | 12-16 mm | 16-21 mm ❸ L N ❹ Click ❺ 6.5 N·m

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2. Connect the AC connector to the AC output port.

❶ AC ❷ ❸ AC ❹ AC M4 1.2 N·m

3. Check the route of the AC output power cable.
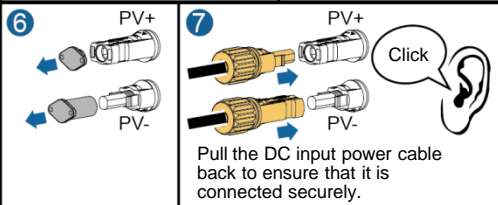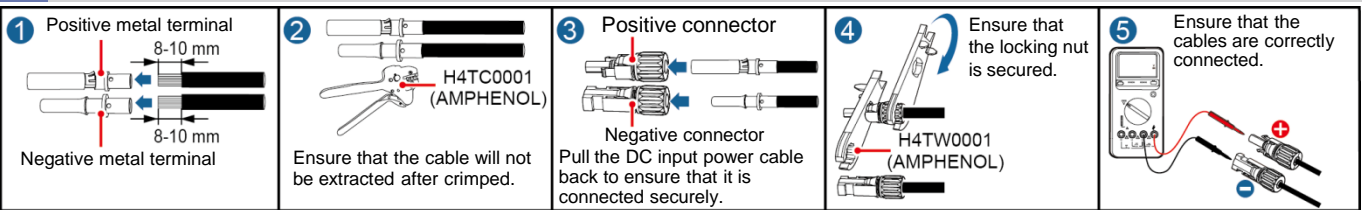
≥ 100 mm | T ≤ 90° | R ≥ 10 × D | D

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📖 **NOTE**

To remove the AC connector from the SUN2000L, perform the operations in reverse order. The right figure shows how to remove a plug insert.

❶ ❷
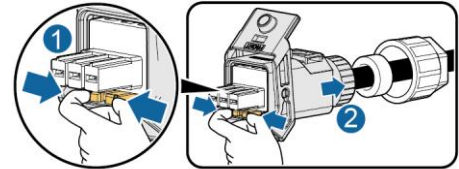
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3.4 Installing the DC Input Power Cable

❶ Positive metal terminal
8-10 mm
8-10 mm
Negative metal terminal

❷ H4TC0001 (AMPHENOL)
Ensure that the cable will not be extracted after crimped.

❸ Positive connector
Negative connector
Pull the DC input power cable back to ensure that it is connected securely.

❹ Ensure that the locking nut is secured.
H4TW0001 (AMPHENOL)

❺ Ensure that the cables are correctly connected.

❻ PV+ PV-

❼ PV+ PV- Click
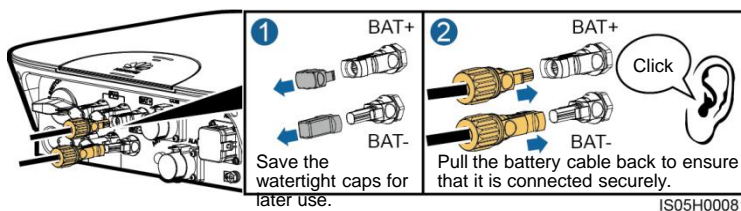Pull the DC input power cable back to ensure that it is connected securely.

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⚠ **NOTICE**
1. Ensure that the PV module output is well insulated to ground.
2. The SUN2000L DC input voltage must always be lower than or equal to 600 V DC.
3. Before installing the DC input power cable, label the cable polarities correctly to ensure correct cable connections.
4. Use the positive and negative metal terminals and black DC connectors supplied with the SUN2000L. Using other models of positive and negative metal terminals and DC connectors may result in serious consequences. The caused device damage is not covered under any warranty or service agreement.
5. If polarity of the DC input power cable is reversed and the DC switch is ON, do not turn off the DC switch immediately or unplug positive and negative connectors. The device may be damaged if you do not follow the instruction. This damage is not covered under any warranty or service agreement. Wait until the solar irradiance declines at night and the PV string current reduces to below 0.5 A, and then turn off the DC switch and remove the positive and negative connectors. Correct the string polarity before reconnecting the string to the SUN2000L.

3.5 (Optional) Installing the Battery Cable

Assemble the blue positive and negative connectors by following the instructions in section 3.4 "Installing the DC Input Power Cable."


❶ BAT+ BAT-
Save the watertight caps for later use.

❷ BAT+ BAT- Click
Pull the battery cable back to ensure that it is connected securely.

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⚠ **DANGER**
• The battery voltage will result in fatal injury. Use dedicated insulation tools to terminate cables.
• Ensure that the battery cable is correctly connected. Avoid reverse polarity.

3.6 (Optional) Installing the Signal Cable

⚠ **NOTICE**
• When laying out signal cables, separate them from power cables to avoid strong signal interference sources.
• The protection layer of the signal cable is in the connector. Surplus core wires are cut off from the protection layer. The exposed core wire is totally inserted into the cable hole and connected securely.
• Do not confuse the connector to the COM port and the connector to the ALARM port.
• If a connector needs to connect to only one signal cable, block the unused cable hole in the seal using a cap and tighten the cable gland.
• If a connector needs to connect to two signal cables, ensure that the cables have the same outer diameter.

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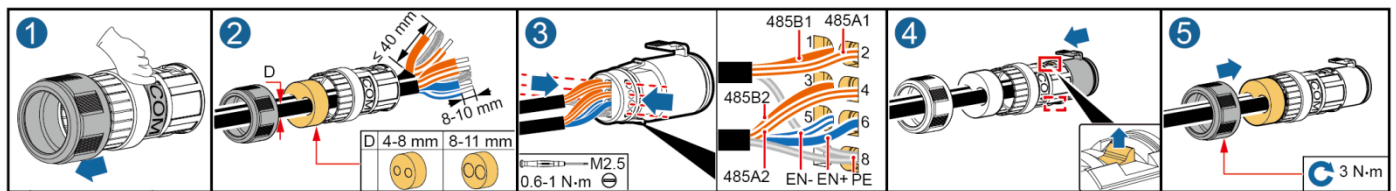
COM Port Pin Definitions

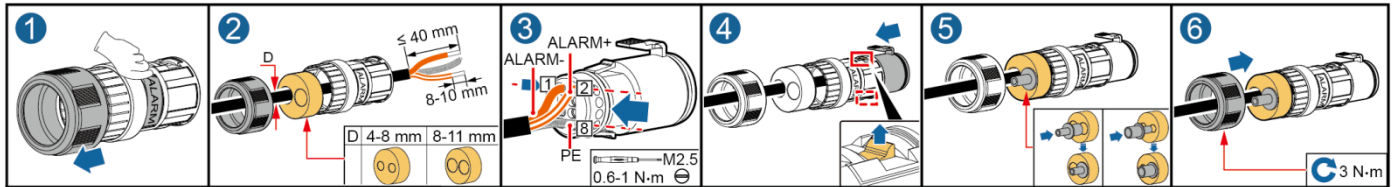| No.	Label	Definition	No.	Label	Definition
1	485B1	RS485B, RS485 differential signal–	2	485A1	RS485A, RS485 differential signal+
3	485B2	RS485B, RS485 differential signal–	4	485A2	RS485A, RS485 differential signal+
5	EN–	Enable signal–	6	EN+	Enable signal+
7	N/A	N/A	8	PE	Grounding the shield layer
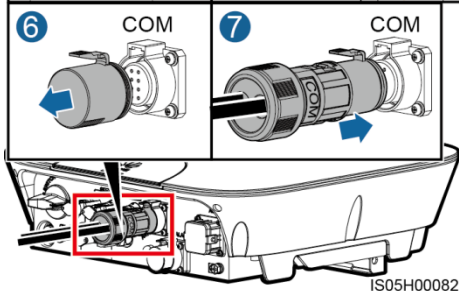
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ALARM Port Pin Definition

No.	Label	Definition	No.	Label	Definition
1	ALARM–	Alarm signal–	2	ALARM+	Alarm signal+
3	485B3	RS485B, RS485 differential signal– (reserved)	4	485A3	RS485B, RS485 differential signal– (reserved)
5	12V–	Negative of the 12 V power supply (reserved, power ≤ 3 W)	6	12V+	Positive of the 12 V power supply (reserved, power ≤ 3 W)
7	N/A	N/A	8	PE	Grounding the shield layer
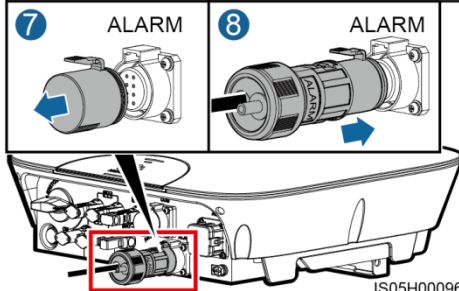
4　Verifying the Installation

No.	Acceptance Criteria
1	The SUN2000L is installed correctly and securely.
2	The WiFi antenna is installed correctly and securely.
3	Cables are routed properly as required by the customer.
4	Cable ties are secured evenly and no burr exists.
5	The ground cable is connected correctly and securely.
6	The DC switch and all the switches connecting to the SUN2000L are OFF.
7	The AC output power cable, DC input power cable, battery cable, and signal cable are connected correctly and securely.
8	Unused terminals and ports are locked by watertight caps.
9	The installation space is proper, and the installation environment is clean and tidy, without foreign matter.

Customer Service Contact Information		
Region	**Country**	**Service Support Mailbox**
Europe	All countries	eu_inverter_support@huawei.com
Asia Pacific	Australia	au_inverter_support@huawei.com
	Other countries	MYEnterprise_TAC@huawei.com
Japan and Korea	Japan and Korea	E-Support.JP@ms.huawei.com
China	China	solarservice@huawei.com
India	India	in_inverter_support@huawei.com
North America	The United States and Canada	na_inverter_support@huawei.com
Latin America	All countries	la_inverter_support@huawei.com
The Middle East and Africa	All countries	mea_inverter_support@huawei.com

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5　Powering On the System

⚠ **NOTICE**

Before turning on the AC switch between the SUN2000L and the power grid, check that the AC voltage on the power grid side of the AC switch is within the specified range.

1. Turn on the AC switch between the SUN2000L and the power grid.
2. Turn on the DC switch between the PV string and the SUN2000L if there is any.
3. Turn on the DC switch at the bottom of the SUN2000L.
4. If a battery connects to the battery terminals, turn on the power switch on the battery, and then turn on the battery switch.
5. Perform quick setting over the app by referring to the *SUN2000L App Quick Guide*.
6. (Optional) Measure the temperatures at the joints between the DC terminals and the connectors using a point-test thermometer.

📖 **NOTE**

Under normal operation conditions of the SUN2000L, the temperature rise at DC connectors should remain below 30°C at all time.

7. Observe the LEDs to check the SUN2000L operating status.

Type	Status (Blinking at Long Intervals: On for 1s and then Off for 1s; Blinking at Short Intervals: On for 0.2s and then Off for 0.2s)		Meaning
Running indication LED1　LED2	LED1	LED2	N/A
	Steady green	Steady green	The SUN2000L is exporting power to the power grid.
	Blinking green at long intervals	Off	The DC is on and the AC is off.
	Off	Blinking green at long intervals	The DC is off and the AC is on.
	Blinking green at long intervals	Blinking green at long intervals	Both the DC and AC are on, and the SUN2000L is not exporting power to the power grid.
	Off	Off	Both the DC and AC are off, or the SUN2000L is in low power consumption mode.
	Steady red	Steady red	The SUN2000L is faulty.
Communication indication	LED3		N/A
	Blinking green at short intervals		The SUN2000L is in communication.
	Blinking green at long intervals		The SUN2000L has connected to the mobile phone.
LED3	Off		Others

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