Quick Installation Guide

X1-SPLIT 3.0KW-7.0KW

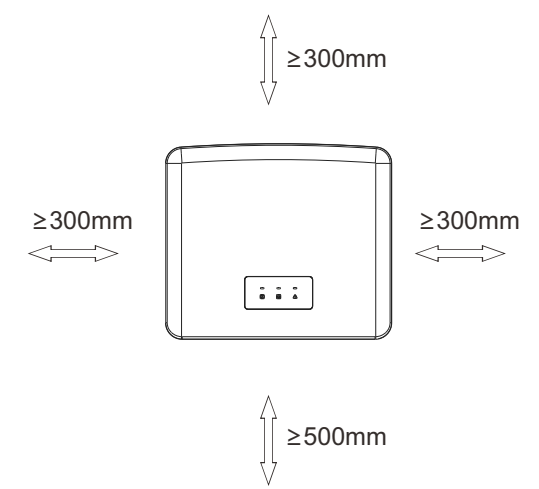SOLAX POWER

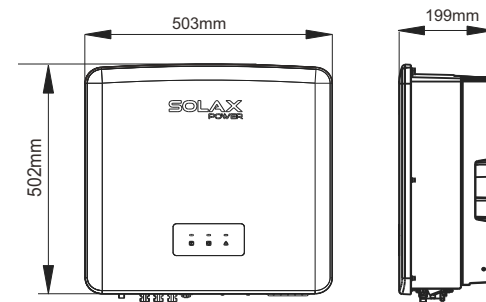---

II Installation

Size

X1-SPT 3K/3.6K
482mm · 417mm · 181mm

X1-SPT 6K/7K
503mm · 502mm · 199mm
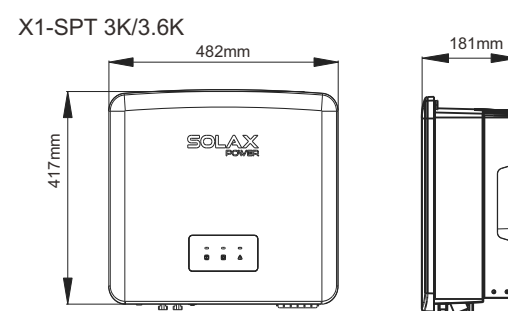
Space

Reserve enough space when installing inverter (at least 300mm) for heat dissipation.

≥300mm
≥300mm ≥300mm
≥500mm

I Packing List

Inverter	Bracket	Waterproof Connector
M5 bolt*1	Connector with Rj45 (COM/CAN/CT)*3	Battery terminal (Positive*1 Negative*1)

Common material
- Rj45 terminal*1
- User manual
- Installation guide
- Rj45 connector
- CT

difference material for X1-SPT 3k/3.6k
- PV terminal (Positive*2 Negative*2)
- PV pin terminal (Positive*2 Negative*2)
- 10AWG terminal*8
- Expansion combination*3
- 10AWG protective line casing*8

difference material for X1-SPT 6k/7k
- PV terminal (Positive*3 Negative*3)
- (Expansion bolt, Gasket, Self-tapping bolt)*5
- PV pin terminal (Positive*2 Negative*2)
- 10AWG terminal*5
- 8 AWG terminal*3
- 10AWG protective line casing*5
- 8 AWG protective line casing*3

III Mounting Steps

a) Use a marker to mark drilling holes of the bracket on the wall .(X1-SPT 6-7k need 5 holes)Drill holes at marked spots with depth of 65mm.

65.00 mm

Φ8 Hammer drill
a)

b) Insert expansion bolt into the hole, use rubber hammer to knock the expansion screw bolt into the wall. The bracket is aligned with the screw uses the inner hexagonal wrench to screw the tapping screw until the expansion bolt "bang" is heard.

X1-SPT 3K/3.6K
- Expansion bolts
- Rubber hammer
- Gasket
- Self-tapping screws
- Outer hexagon wrench (Torque : 9±0.2 N· m)

X1-SPT 6K/7K
- Expansion bolts
- Rubber hammer
- nut, Gasket
- Outer hexagon wrench (Torque : 9±0.2 N· m)

c) Hang the buckle on the X1-SPT inverter to the corresponding position of the backplane.Use the inner hexagonal wrench to tighten the inner hexagonal screw on the right side of the inverter.

X1-SPT 3K/3.6K
e1) · f1)
Hexagon keys (Torque: 1.2±0.1N· m)

X1-SPT 6K/7K
e2) · f2)
Hexagon keys (Torque: 1.2±0.1N· m)

IV PV Connection

Step 1. Turn o ffthe DC switch, connect the PV module, prepare a 12 AWG PV cable, and find the PV (+) terminal and PV (-) terminal in the package.

PV cable · PV pin · Negative terminal Positive terminal

Step 2. Use a wire stripper to strip the 7mm insulation layer of the wire end.

Wire stripper · 7.0mm
Positive PV pin · Negtive PV pin

Step 3. The PV connector is divided into 2 parts, to the plug and the fastening head. Pass the cable through the fastening head and the alignment plug. Note that the red and black lines correspond to different pairs of plugs. Finally force the cable into the plug and hear a "click" to indicate that the connection is complete.

Positive metal terminal · Negative metal terminal · Crimping Tool

Positive terminal · Negative terminal · click!

Step 4. Tighten the fastening head and into insert the corresponding positive and negative (PV-/PV+) parts of the inverter.

Positive · Negative
PV1+ · PV2+ · PV1- · PV2-
X1-SPT 3K/3.6K · X1-SPT 6K/7K
PV1 · PV2 · PV1 · PV2

V Grid and Load Output Connection

Step 1. Prepare a Grid cable (three-core wire) and an Load cable (two-core wire), and then find the European terminal and waterproof cover in the accessory bag.

X1-SPT 3K/3.6K
Grid&Load(Double Core Cable)10AWG*3 · Waterproof cover

X1-SPT 6K/7K
Grid(Triple Core Cable) 8AWG*3 · Load(Double Core Cable)10AWG*3 · Waterproof cover

Grid Cable and Micro-breaker recommended

Model	X1-SPT-3K	X1-SPT-3.6K	X1-SPT-6K	X1-SPT-7K
Cable (copper)	5.5mm²		8mm²	
Micro-Breaker	40A		50A	

Load Cable and Micro-breaker recommended

Model	X1-SPT-3K	X1-SPT-3.6K	X1-SPT-6K	X1-SPT-7K
Cable (copper)	5.5mm²		8mm²	
Micro-Breaker	20A		30A	

Step 2: The Grid and Load cables go through the corresponding Grid and Load ports of the waterproof cover. Remove the 12mm insulation layer at the end of the wire. Insert the European-style terminals respectively, and make sure that the stripped ends are inserted into the European-style terminal ,and finally use crimping pliers to press tightly.

Step 3. Find the location of the AC interface on the inverter, insert the crimped terminals into the UW10 terminals L1, N, and L2 according to the wire sequence, and use a flat-blade screwdriver to tighten the screws. (Torque: 0.2±0.1N ·m) Install the AC waterproof cover, and tighten the screws on the four sides of the waterproof cover with an Allen wrench. Tighten the waterproof fastening head.

X1-SPT 3K/3.6K · Diagonal plier · Crimping Tool · 70 mm · 12 mm
X1-SPT 6K/7K

X1-SPT 3K/3.6K
Hexagon keys (Torque: 0.8±0.1N· m)
X1-SPT 6K/7K
Hexagon keys (Torque: 0.8±0.1N· m)

VI Battery Connection

Step 1. Prepare 8 AWG battery power line, find the DC plug (+), DC plug (-) in the accessory bag.

Diagonal pliers · 8 AWG · 15.0mm
Power line · BAT plug (+) · BAT plug (-)

Step 2. Insert the striped cables into the DC plug (-) and DC Plug (+) respectively.

Spring · Cavity
DC plug (-) · DC plug (+)
The cable must pass through here

Step 3. Press down on the spring by hand, you can hear a click sound, then push the ends together, and tighten the screw joints.

Spring · Spring · Crack

Step 4. Insert the battery power lines into the corresponding BAT port (+), (-) of the inverter.

X1-SPT 3K/3.6K
BAT

X1-SPT 6K/7K

Note: BAT port, not PV port!
Note: The positive and negative wires of the battery are not allowed to be reversed!

Notice!
After the BMS communication between the battery and the inverter is finished, the battery will work normally.

VII Communication Connection

CT connection

X1-SPT 3K/3.6K
Grid · L1 (U) · N (O) · L2 (W) · CT(U) · CT(W) · Loads
Note: The arrow on the CT must point at the public grid.
CT port is at the bottom of the inverter.
Public grid electricity · L Line · CT

X1-SPT 6K/7K
Grid · L1 (U) · N (O) · L2 (W) · CT(U) · CT(W) · Loads
Note: The arrow on the CT must point at the public grid.
CT port is at the bottom of the inverter.
Public grid electricity · L Line · CT

BMS connection

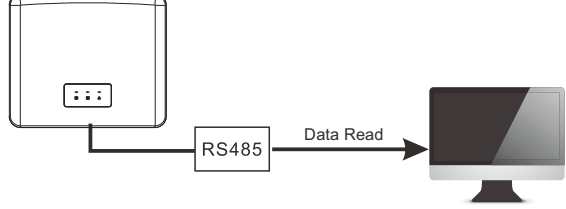| 1	2	3	4	5	6	7	8
BAT_TEMP	GND	GND	BMS_CANH	BMS_CANL	X	BMS_485A	BMS_485B

Notice: The BMS port on the inverter is the communication port for connecting the battery.
The communication port on the lithium battery must be consistent with the definition of pins 4, 5, 7, and 8 above;

VIII Communication Connection

COM Communication

External communication equipment controls the inverter:

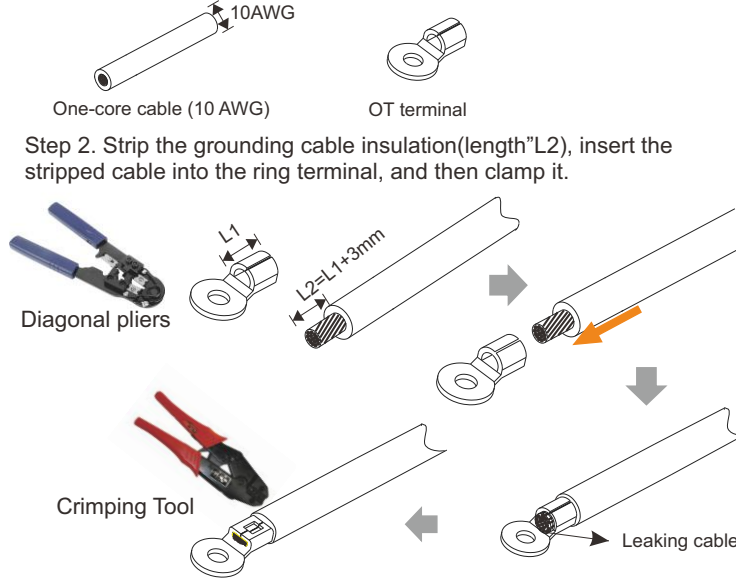

RS485 → Data Read

Inverter communication control external equipment:

COM PIN Definition

1	2	3	4	5	6	7	8
Drycontact_A(in)	Drycontact_B(in)	+13V	485A	485B	GND	Drycontact_A(out)	Drycontact_B(out)

Customers can communicate or control the inverter and external devices through the COM interface. Professional users can use pins 4 and 5 to realize data acquisition and external control functions. The communication protocol is Modbus RTU. For details, please contact SolaX. If the user wants to use the inverter dry contact to control external equipment (such as a heat pump), it can be used with SolaX's Adapter Box. For details, please refer to the Quick Installation Manual of the Adapter Box.tery must be consistent with the definition of pins 4, 5, 7, and 8 above;

X Grounding Connection(manodatory)

Step 1. Prepare a one-core cable (10AWG), and then find the ground terminal in the accessories.

10AWG

One-core cable (10 AWG)   OT terminal

Step 2. Strip the grounding cable insulation(length"L2), insert the stripped cable into the ring terminal, and then clamp it.

L1
L2=L1+3mm

Diagonal pliers

Crimping Tool

Leaking cable

Step 3. Find the ground connection port on the inverter, and screw the ground wire on the inverter with an M5 Allen key.
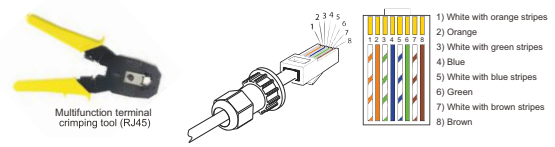

X1-SPT3K/3.6K

Hexagon keys
Torque: 1.5±0.2N·m

X1-SPT6K/7K
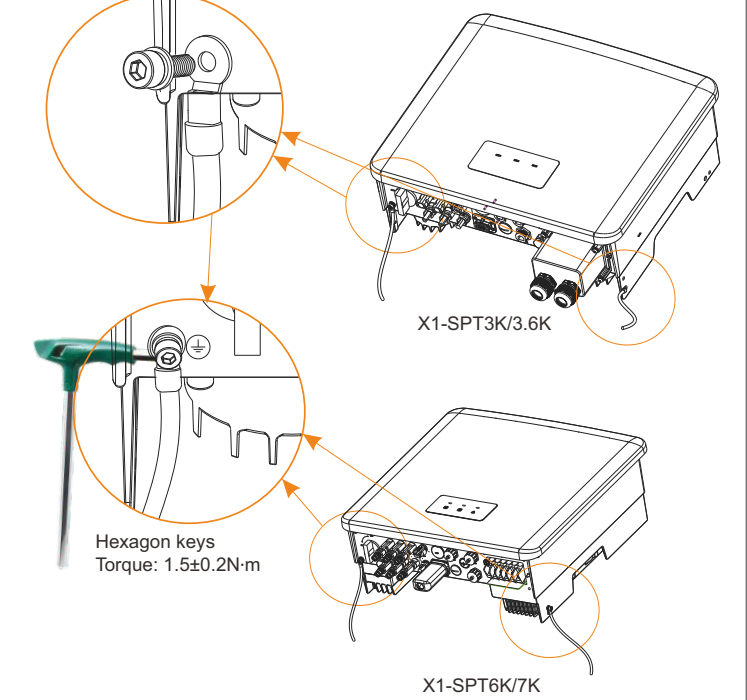
IX COM Connection Steps

Step 1. Prepare a communication cable, and then find the communication adapter in the accessory bag.

Communication cable   Waterproof connector with RJ 45
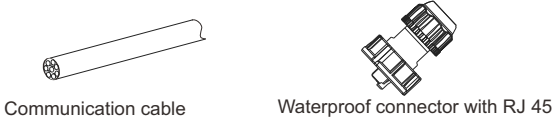
Step 3. Insert the prepared communication cables into the RJ45 terminals in sequence, and then use network cable crimping pliers to press them tightly.

Multifunction terminal crimping tool (RJ45)

1) White with orange stripes
2) Orange
3) White with green stripes
4) Blue
5) White with blue stripes
6) Green
7) White with brown stripes
8) Brown

Step 5. Finally, find the corresponding BMS / Meter / CT / COM ports on the inverter and insert the communication cable into the corresponding ports.

X1-SPT 3K/3.6K

Ra485
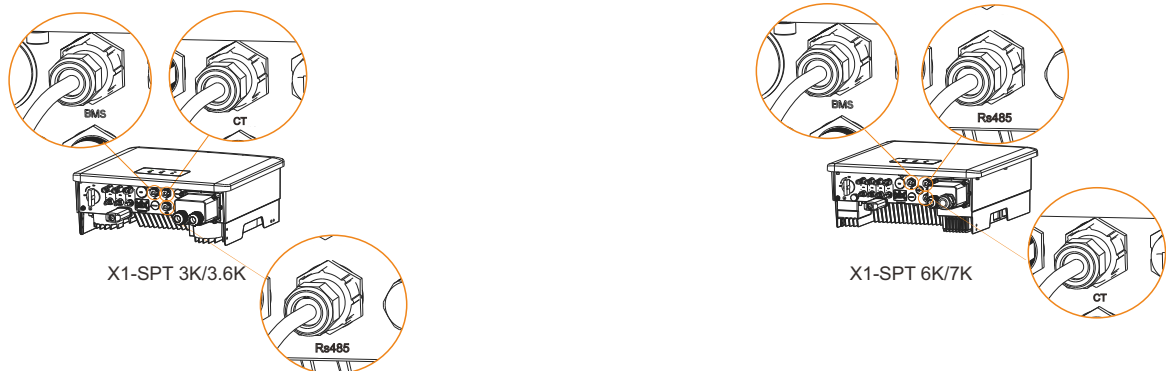
Step 2. Insert the communication cable through the communication adapter, and peel o ffthe outer insulation layer of 15mm.
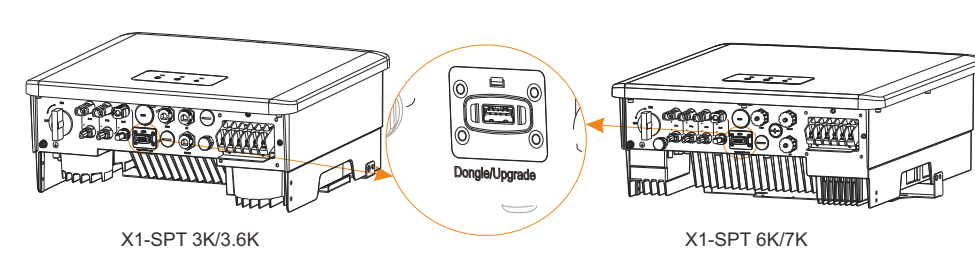
Diagonal pliers
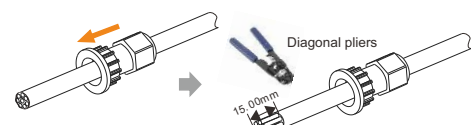
Step 4. Tighten the completed BMS / CT / COM communication line and tighten the waterproof plug.

BMS   Ra485

X1-SPT 6K/7K

CT
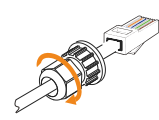
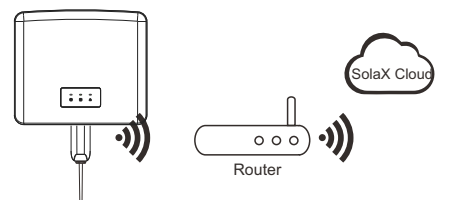## XI Monitoring Operation

Wireless monitoring accessories connection steps:

Step 1.First find the DONGLE port of the inverter.

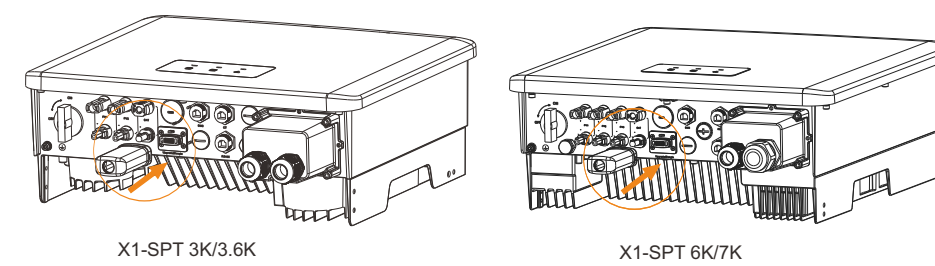X1-SPT 3K/3.6K   DongleUpgrade   X1-SPT 6K/7K

Step 2. Plug Pocket WiFi into the DONGLE port.
Please check the Pocket wi fiuser manual/Pocket LAN user manual /4G user manual for more details.

X1-SPT 3K/3.6K   X1-SPT 6K/7K

DONGLE connection diagram

SolaX Cloud

Router

XII Start the Inverter

After the inverter is checked, then conduct the following steps

❶ Make sure that the inverter is fixed on the wall.
❷ Ensure that all ground wires are grounded.
❸ Confirm that all DC lines and AC lines are connected.
❹ Make sure the CT is connected.
❺ Make sure the battery is well connected.
❻ Turn on the Grid switch and Load switch.
❼ Turn on the battery switch.

Start the inverter
• Steps to start the inverter
  - Turn on the AC switch between the X1-SPT and the power grid.
  - (Optional) Remove the locking screw from the DC switch.
  - Turn on the DC switch between the PV string and the X1-SPT if there is any.
  - Turn on the DC switch at the bottom of the X1-SPT .
• When the photovoltaic panel generates enough power, the inverter will start automatically.
  Check the status of the LED screen, the LED is green.
• If the LED is not green, please check the following:
• -All connections are correct.
  All external disconnect switches are closed.
  -The DC switch of the inverter is set to the "ON" position.
  -All external disconnect switches are closed.
  -The DC switch of the inverter is set to the "ON" position.

XIII Firmware Upgrading

Upgrade steps

Step 1. Please save the "Upgrade" firmware in your U disk , and insert the USB flash drive.
Step 2. Observe the LED indicator light.
Note: The upgrade sequence is: DSP program, battery master control, battery slave control (twice), ARM program.

(X1-SPT 3k/3.6k)

Upgrade progress	
0%-33%	Blue flashing, Green off, Red o ff
33%-66%	Blue on, Green flashing, Red off
66%-99%	Blue on, Green on, Red flashing
Current object upgrade complete	Blue on, Green on, Red on
All objects upgrade complete	Blue flashing, Green flashing, Red flashing
Upgrade failed	Blue flashing, Green flashing, Red off
Battery upgrade failed	Blue off, Green flashing, Red flashing

(X1-SPT 6k/7k)

Upgrade progress	
33%	Green flashing, Blue off, Red o ff
33%-66%	Green on, Blue flashing, Red off
66%-99%	Green on, Blue on, Red flashing
Current object upgrade complete	Green on, Blue on, Red on
All objects upgrade complete	Green flashing, Blue flashing, Red flashing
Upgrade failed	Green flashing, Blue flashing, Red off
Battery upgrade failed	Green off, Blue flashing, Red flashing

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XIV Safety Instructions

Indicates that the product must not be processed with household waste. It must be brought to an electric and electronic waste collection point for recycling and disposal.By ensuring the appropriate disposal of this product you also help in preventing potentially negative consequences for the environment and human health. The recycling of materials helps preserve our natural resources. For further information regarding the recycling of this product, please contact your municipality, local waste disposal centre or the store where the products was purchased.

Please contact us if you have any further confusions