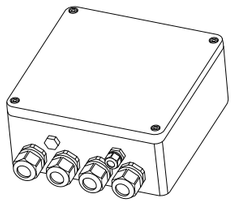
SUNGROW

Quick Installation Guide

STB5K

Backup box



STB5K -QIEN-Ver14-201803 Version: 1.4

With the backup box STB5K connected into the PV ESS, the system is capable of operating as an off-grid system to ensure an emergency power supply for emergency appliances in the event of a grid interruption or blackout.

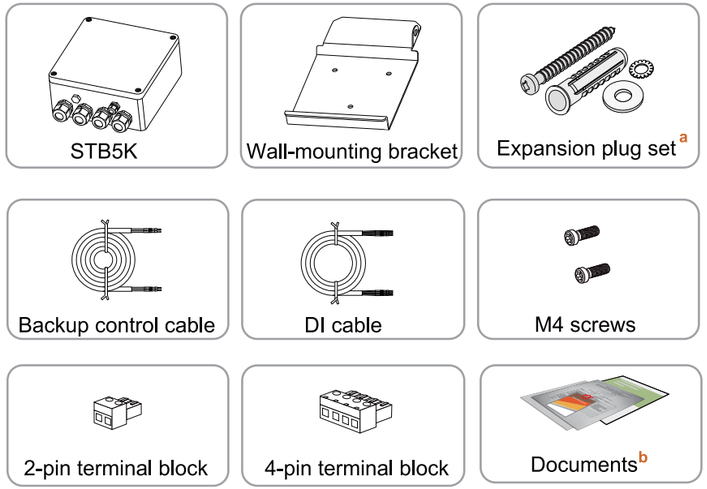
This guide provides a general installation instruction for the STB5K.

⚠ NOTICE

- In no case shall this guide substitute for the user manual or related documents on the device.
- Make sure to read over, fully understand and strictly follow the detailed instructions of the user manual and other related regulations.
- Any violation could result in personal death or injury or device damage.

The latest version and other manuals can be acquired at www.sungrowpower.com.

1 Unpacking and Inspection



* Image shown here is for reference only. Actual product you receive may differ.

a) Each set includes a self-tapping screw, a spring washer, a fender washer, and an expansion tube.

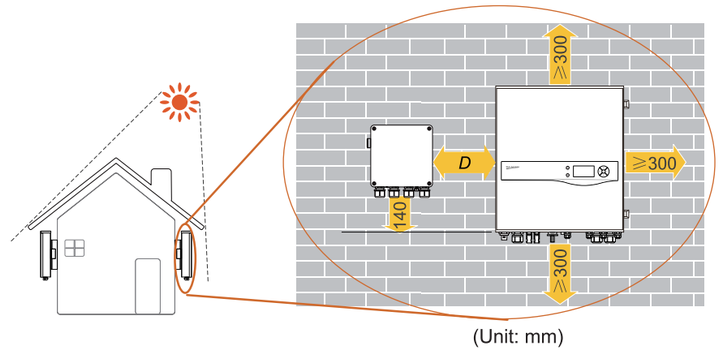
b) The documents include the Quick Installation Guide, quality certificates, packaging list and test reports.

Contact SUNGROW or the distributor in case of any damage or missing components.
A damaged STB5K can not be connected to the system.

2 Installation

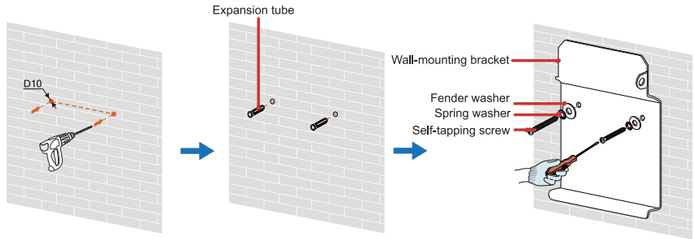
NOTE

The STB5K and inverter are suggested to be installed on the same wall, with the STB5K on the left and the inverter on the right. The space between them should be proper for the cable connection (300 mm ≤ D ≤ 400 mm).

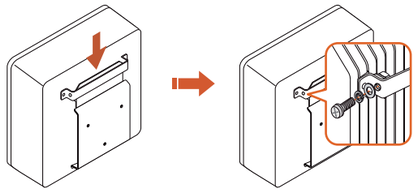


(Unit: mm)

Step 1 Secure the wall-mounting bracket to the wall with the supplied expansion bolt sets. Torque of the bolt is 35 N.m.

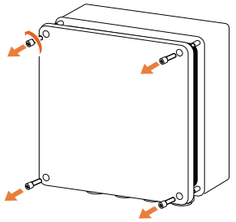


Step 2 Mount the STB5K to the wall-mounting bracket and secure it with the M4 screw.

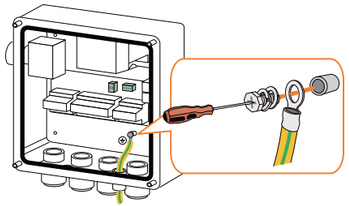


3 Cable Connection

Step 1 Loosen the inner hexagon screws and remove the enclosure lid.



Step 2 Connect the Protective Earth (PE) cable. The M4 screw is included in the delivery.

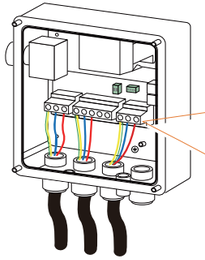


Step 3 Connect the power cables to the grid, the load and the inverter SH5K respectively.

WARNING

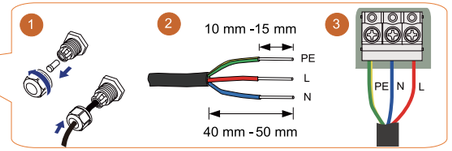
Risk of inverter damage due to incorrect cable connection. Do not connect the grid power wires to LOAD terminals.

A residual current device (RCD) should be required on the LOAD port of the backup box.



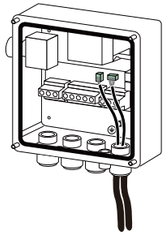
Grid Load SH5K AC

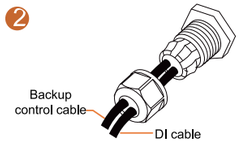
Cross-section: 4 mm², cable diameter: 11 mm–14 mm

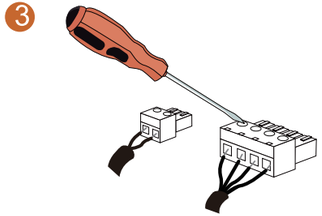


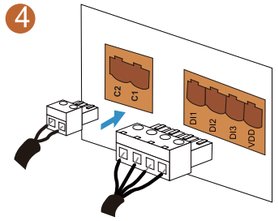
The neutral lines for the grid, the loads and the inverter AC terminals are all inter-connected inside the STB5K. And it is the same for the PE lines.

Step 4 Connect the control cable and the DI cable. The cables and the terminal blocks are included in the delivery.

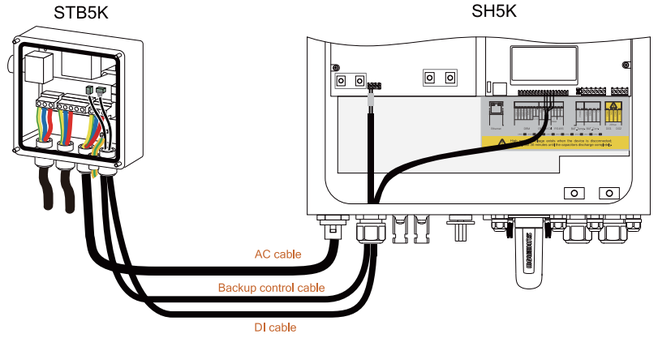




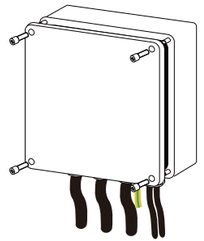




The following figure shows the cable connection between the box and the inverter.



Step 5 Reinstall the enclosure lid and fasten the screws.



4 Commissioning

4.1 Inspection before Commissioning

Before starting up the backup box, you should check the following items.

1. The box is firmly secured and the site is accessible for operation, maintenance and service.
2. Room for ventilation is provided and nothing is left on top of the box.
3. The box and the meter, the inverter are correctly connected. Cables are routed in a safe place and protected against mechanical damage.
4. Warning signs and labels are suitably affixed and durable.

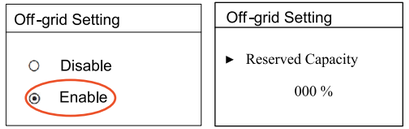
4.2 Commissioning Procedure

Step 1 Connect the AC circuit breaker.

Step 2 (**Optional**) Rotate the DC switch to “ON”. The DC switch may be integrated in SH5K or installed by the customer.

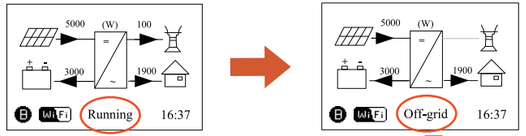
Step 3 Refer to the User Manual or Quick User Manual of inverter to complete the initial settings. Enable the EPS function and set the reserved capacity for Li-ion batteries.

The reserved capacity is the on-grid minimum battery discharge level. The reserved battery capacity will be supplied to the emergency loads in the off-grid system.



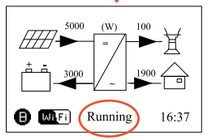
Step 4 Press the button on the left side of the STB5K to enable the off-grid function. The system is disconnected from the grid. Check the state on the main screen.

The inverter state is switched from “**Running**” to “**Off-grid**” .
If not, check the cable connection of the STB5K.



Step 5 Press the button again to disable the off-grid function The system is switched from “Off-grid” to on-grid “**Running**” state. Check the state on the main screen.

If the state is still “Off-grid”, please check and ensure that the SUNGROW meter is installed between the grid and the STB5K.



If there is any fault during the commissioning, the icon ⚠ will appear on the middle of the main screen. Press ▼ to view the current faults. Refer to the SH5K manual for troubleshooting.

QIEN M-H-000482