

Wiring Guide for LG battery with SH5K+ / SH5K-20

This document describes the wiring and setup procedure for a single LG battery pack. Refer to manufacturer’s documents for multiple parallel connections.

Cable Wiring Procedure

1.1 LG Generation II and SH5K+ / SH5K-20

The LG Generation II battery communicates with the Sungrow SH5K+ / SH5K-20 inverter via an Ethernet cable (CAN wire).

The CAN wire is included in the delivery, as shown in Figure 1.

CANH: Blue and Green

CANL: Blue-white and Green-white



Figure 1 CAN wire in the delivery

Step 1 Insert the RJ45 plug into the battery port until it makes a clicking sound (Figure 2).

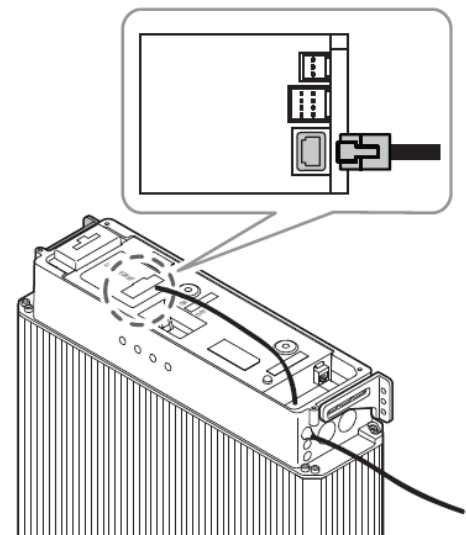


Figure 2 Insert RJ45 plug into battery port

Step 2 Plug CANH into the CANH port and plug CANL into the CANL port of the configuration circuit board of SH5K+ / SH5K-20 (Figure 3).

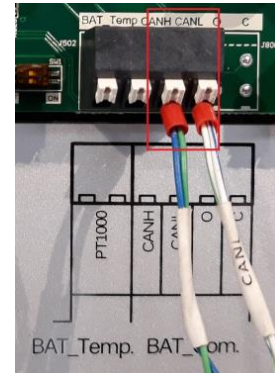


Figure 3 Insert CANH and CANL pins to SH5K+ circuit board

1.2 Using your own cable

If the cable provided has been lost or is not long enough, you can use a patch lead to make your own wire for communication between the SH5K inverter and the LG battery.

The LG Generation II battery communicates with the Sungrow SH5K inverter via a CAN cable. Prepare the following materials and tools before wiring.

- CAN Patch cables,
- Cable Cutting tools.

Step 1 Cut into one side of the patch cable plastic sheath and leave about 1 inch (2.5 cm) from the end of the cut cable (Figure 4).

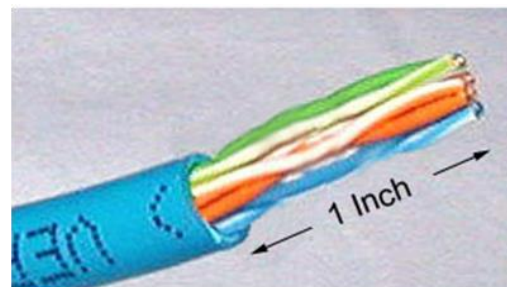


Figure 4 Cut cable end and leave 1 inch

Step 2 Insert the RJ45 plug into the battery port until it makes a clicking sound (Figure 5).

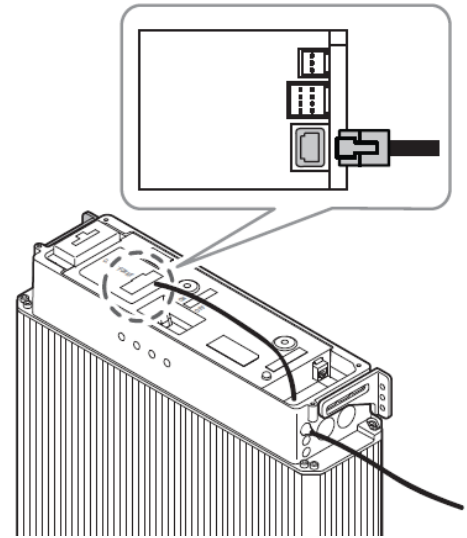


Figure 5 Insert RJ45 plug into battery port

Step 3 Use the pin configuration stated below for CANH and CANL terminals. Please refer to Figure 6 for configuration of the plug.

CANH: Pins 4 and 6 (Blue and Green for T568B configuration)

CANL: Pins 3 and 5 (Blue-white and Green-white for T568B configuration)

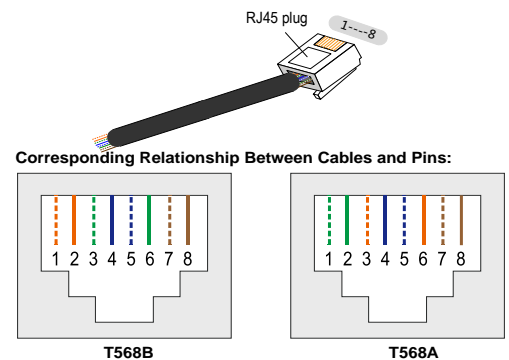


Figure 6 Colour order for the patch Ethernet cable

Step 4 Plug CANH wires into the CANH port and plug CANL wires into the CANL port of the configuration circuit board of SH5K+/SH5K-20 (Figure 7).

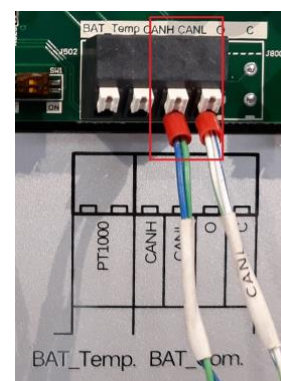


Figure 7 BAT_Com. port in the inverter

Setting for communication interface

Remove the switch cover by pulling it up to expose the circuit board.

This **SW select** DIP switch is initially set to 0000 (Figure 8).

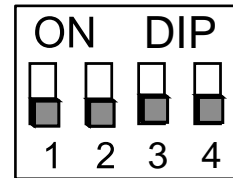


Figure 8 Initial Setting

When there is only one battery pack, the battery pack is directly connected to the inverter, the **SW select** DIP switch should be set to 0011 (Figure 9).

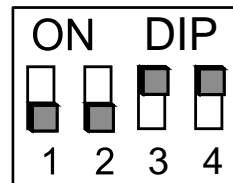


Figure 9 Setting for one battery pack

Refer to manufacturer’s documents for two battery packs.

Inverter Settings

Before changing the battery type settings, please ensure you have **key-stop** the inverter in the main menu (Select **OFF**).

For SH5K-20 LCD:

Only the battery type needs to be selected (Figure 10). The inverter will automatically detect the capacity.

Main Screen (Press **ENT**) → Menu (Press **▼** × 2) → Settings (Press **ENT**) → Input password 111 (Press **ENT**) → Settings (Press **▼** × 3) → Battery Type (Press **ENT**)

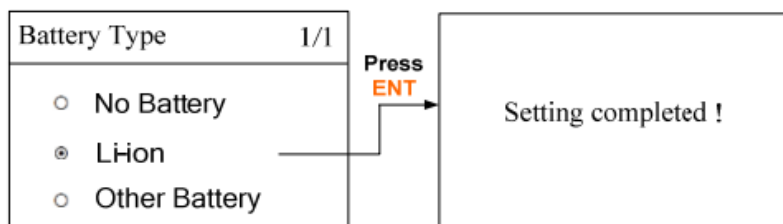


Figure 10 Setting battery type

For SH5K+ LCD:

Select the correct battery model and the capacity composition (Figure 11).

Main Screen (Press **ENT**) → Menu (Press **▼** × 2) → Settings (Press **ENT**) → Input password 111 (Press **ENT**) → Settings (Press **▼** × 8) → Battery Type (Press **ENT**)

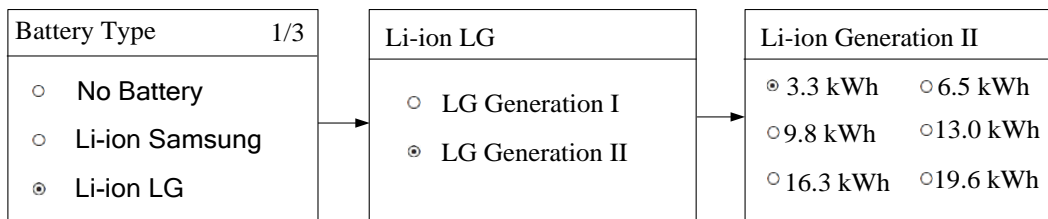


Figure 11 Setting battery type and capacity

Note:

Watch the SH5K home screen. If you see '--', the communication is not correctly connected (Figure 12).

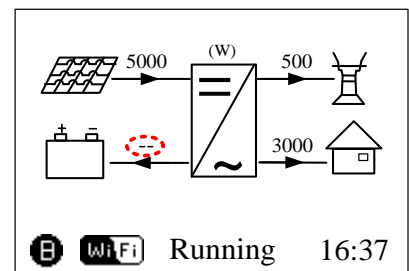
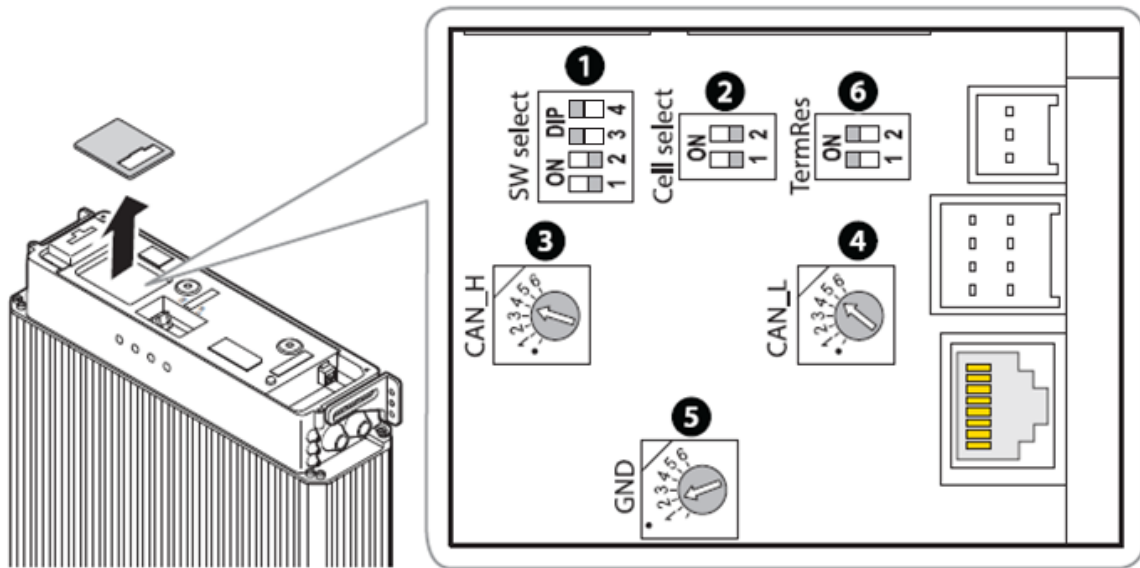


Figure 12 Inverter Home Screen

Remove the switch cover on the battery by pulling it up to expose the circuit board.
 Check the settings.



Dip switches (1, 2, 6) settings:

SW1 (SW Protocol)	SW2 (Cell Type)	SW6 (Terminal Resistor)
One battery pack: 0011	00	11

Rotatory switch (3, 4, 5) settings:

SW3 (CAN_H)	SW4 (CAN_L)	SW5 (GND)

Figure 13 DIP Switch Configuration

If the issue continues to persist, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au.