

Wiring Guide for LG battery with SH5K / SH5K+

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

1 Cable Wiring Procedure

1.1 LG Generation II and SH5K

The LG Generation II battery communicates with the Sungrow SH5K V11 inverter via an Ethernet cable. Prepare the following materials and tools before wiring.

- Ethernet cables,
- RJ45 Crimpable plugs, and
- an RJ45 Crimping tool.

Step 1 Use the crimping tool to cut into the Ethernet cable plastic sheath about 1 inch (2.5 cm) from the end of the cut cable (Figure 1).

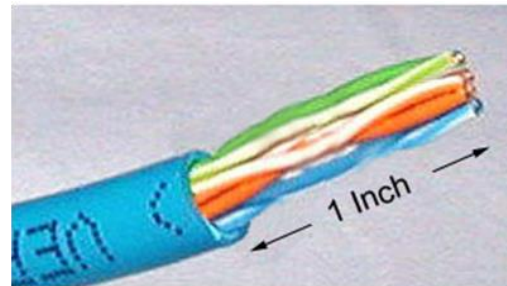


Figure 1 Cut cable end and leave 1 inch

Step 2 Pinch the wires between your fingers and straighten them out. Carefully push all 8 unstripped coloured wires into the RJ45 plug as shown for T568B and T568A (Figure 2).

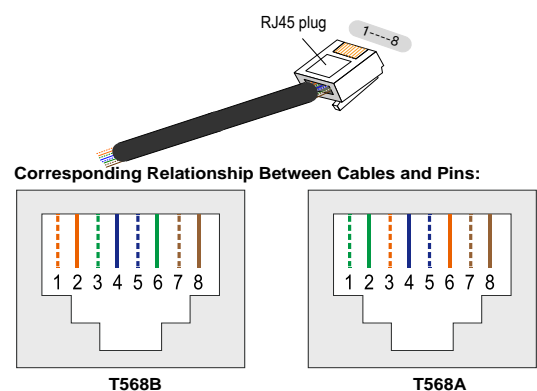


Figure 2 Colour cable order for the Ethernet cable

Step 3 Insert the RJ45 plug into the battery port until it makes a clicking sound (Figure 3).

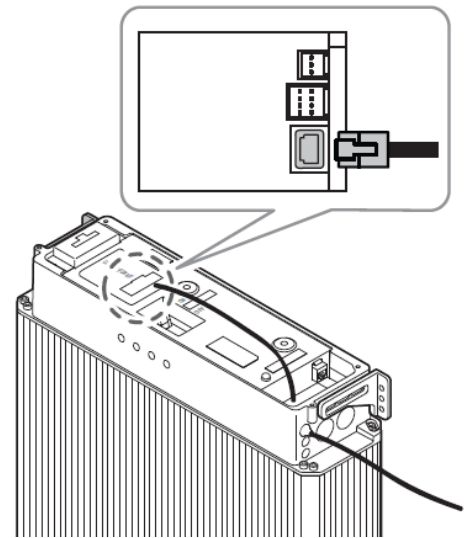


Figure 3 Insert RJ45 plug into battery port

Step 4 Insert the RJ45 plug into the BAT_Com. port (Figure 4) on the configuration circuit board until it makes a clicking sound

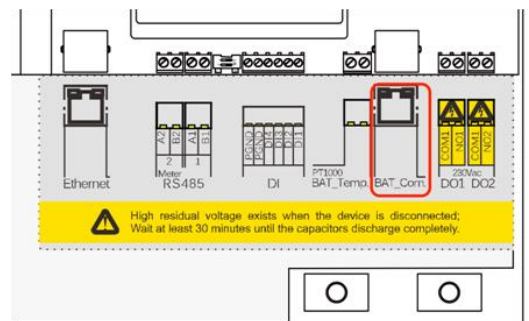


Figure 4 BAT_Com. port in the inverter

1.2 LG Generation II and SH5K+

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

The CAN wire is included in the delivery, as shown in Figure 5.

CANH: Blue and Green

CANL: Blue-white and Green-white



Figure 5 CAN wire in the delivery

Step 1 Insert the RJ45 plug into the battery port until it makes a clicking sound (Figure 6).

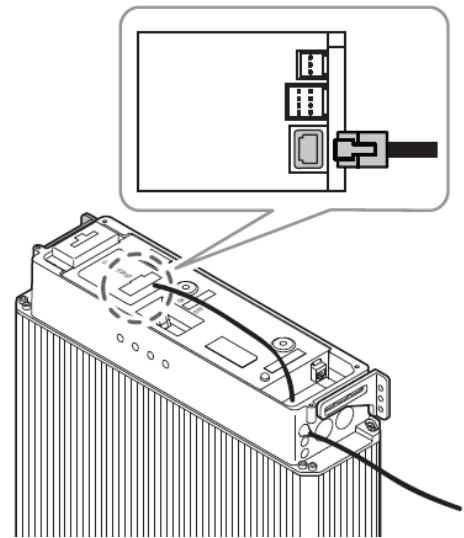


Figure 6 Insert RJ45 plug into battery port

Step 2 Plug CANH into the CANH port and plug CANL into the CANL port of the configuration circuit board of SH5K+ (Figure 7).

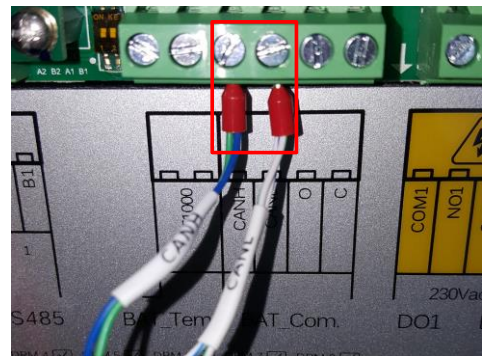


Figure 7 Insert CANH and CANL pins to SH5K+ circuit board

2 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).

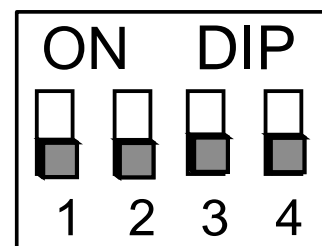


Figure 8 Initial Setting

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).

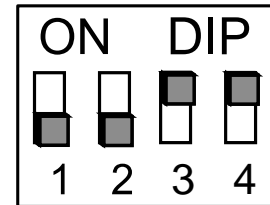


Figure 9 Setting for one battery pack

Refer to manufacturer's documents for two battery packs.

3 Inverter Settings

Select the correct battery model and the capacity composition (Figure 10).

For SH5K V11 LCD:

Main Screen (Press **ENTER**) → Menu (Press **▼** × 2) → Settings (Press **ENTER**) → Input password 111 (Press **ENTER**) → Settings (Press **▼** × 5) → Battery Type (Press **ENTER**)

For SH5K+ LCD:

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

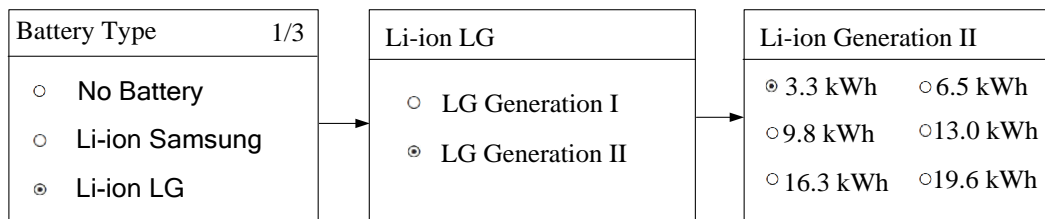


Figure 10 Setting battery type and capacity

Note:

Watch the SH5K home screen. If you see '--', the communication is not correctly connected (Figure 11).

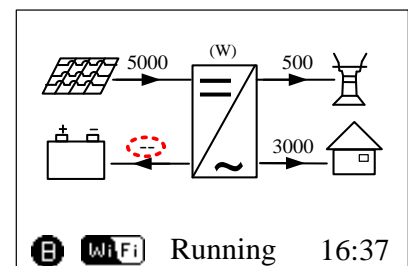
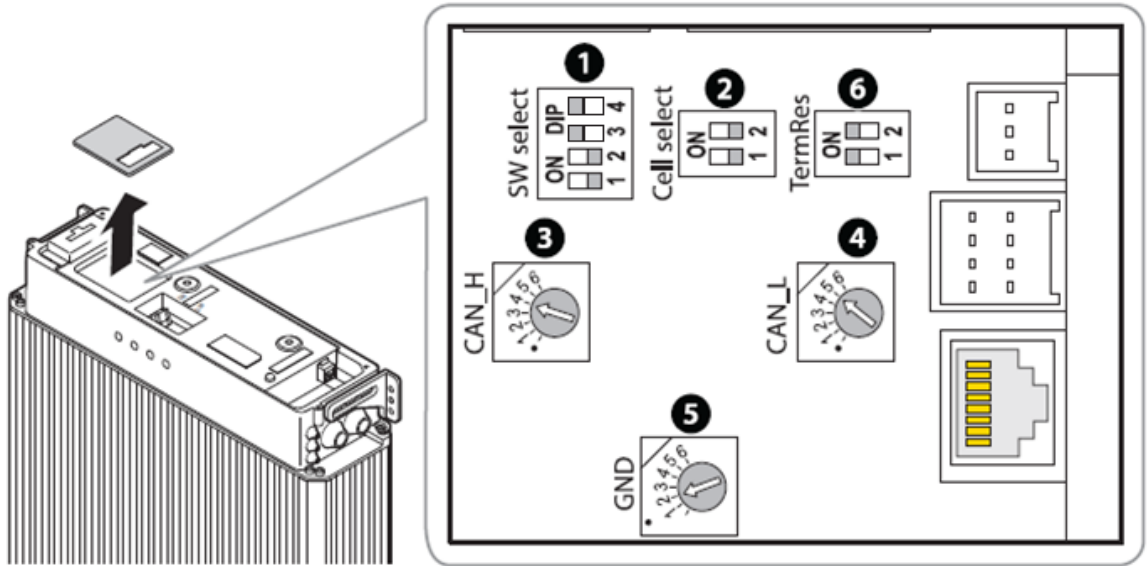


Figure 11 Inverter Home Screen

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

Rotary switch (③, ④, ⑤) settings:

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