

Quick Installation Guide

1. Packing List

Step 1: Please make sure the inverter will be installed with a proper distance as shown below.

Step 2: Select the installation location, place the bracket on the wall, and mark the hole positions.

Step 3: Drill the 6 holes with a  $\phi 8$  drill bit. Depth: at least 50mm. Hammer the expansion tubes.

Step 4: Installing the Bracket. Screw the expansion bolts.

Step 5: Match the inverter with wall bracket.

Step 6: Lock the screws on the side (Left and right). Make sure the inverter is firmly attached.

3. GRID Connection

Step 1: Prepare AC wire. Cable is a five-core cable with a diameter less than 9\*16 mm. Cross-sectional area of wire is shown in the following table.

| Model (MM)      | 5.0                    | 6.0                    | 8.0                    | 10.0                   | 12.0                   |
|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Cable (ON-GRID) | 4.0-6.0mm <sup>2</sup> | 4.0-6.0mm <sup>2</sup> | 5.0-6.0mm <sup>2</sup> | 5.0-6.0mm <sup>2</sup> | 5.0-6.0mm <sup>2</sup> |
| Cable (EPS)     | 4.0-6.0mm <sup>2</sup> | 4.0-6.0mm <sup>2</sup> | 5.0-6.0mm <sup>2</sup> | 5.0-6.0mm <sup>2</sup> | 5.0-6.0mm <sup>2</sup> |
| Micro-Breaker   | 32A                    | 32A                    | 63A                    | 63A                    | 63A                    |

Step 2: Prepare AC wire as shown in the picture.

Step 3: Separate the GRID connector into three parts as below. Insert sleeve into the cable.

Step 4: Connect the cable to the GRID connector according to its polarity. Tighten it.

Step 5: Push the threaded sleeve into the socket, tighten up the cap on the terminal. Make sure to hear a "click" sound during this process.

Step 6: Push the threaded sleeve to connection terminal unit both are locked tightly on the inverter. Make sure to hear a "click" sound during this process.

Notes: H3/AC3 is 3L-N-PE/TT,TN-C-S and TN-S system. N line is required. Otherwise, an sw bus voltage fault will be triggered.

4. EPS Connection

EPS wiring diagram

For countries such as China, Germany, the Czech Republic, Italy, etc, please follow local wiring regulations. This diagram is an example for an application in which neutral is separated from the PE in the distribution box.

For countries such as Australia, New Zealand, South Africa, etc, please follow local wiring regulations. According to Australian safety requirements, the N cables of the GRID side and EPS side must be connected together. Otherwise, the EPS function will not work.

Step 1: Separate the EPS connector into three parts as below. Insert sleeve into the cable.

Step 2: Connect the cable to the GRID connector according to its polarity. Tighten it.

Step 3: Push Housing into Body until hear a "click" sound.

4. EPS Connection

5. PV connection

PV Wiring (For H3 Only)

Step 1: Prepare PV wire. Choose 12 AWG wire to connect the PV module. Trim 6mm of insulation from the wire end.

Step 2: Separate the PV connector as below.

Step 3: To insert terminal. Press the wire and terminal tightly with a wire clamp. Rivet terminal. Ensure the once-nrity of metal parts and cable at same level/crimped metal parts and cable pull tension 2310N.

Step 4: Insert pin into the male or female plug. Until hear a "click". Tighten the nut on the terminal.

6. BAT connection

7. Meter connection

Meter Connection Diagram

Step 1: Prepare BAT wire. We recommend to use the original Bat-Inverter power cable and communication cable from Battery's accessory bag. If require a longer cable, please contact our sales representative to purchase.

Step 2: Connect the power line and communication line between the BMS and the inverter.

Step 3: Connect the grounding cable to ensure that all batteries are grounded. Wiring shall be connected in the sequence as shown in below.

The connection between BMS and inverter should be less than 10m. Notes: The number of battery packs cannot be less than 3 pcs.

This CT-Meter is not included on the package, please contact our sales to purchase if required.

CT to CT meter connection: CT S1/+ end access to the CT meter 1, 4, 7 ports; S2/- end access to the CT meter 3, 6, 9 ports. The following diagram shows the wiring diagram of CT to CT meter:

Step 1: Insert L1/L2/L3/N wires, CT and RS485/A/B cable into the meter. Please refer to the meter wiring diagram on side of meter itself. During CT use, the direction of the CT arrow faces the grid.

Notes: The 2,5,8 of the CT meter are connected to the three live wires L1, L2, and L3 respectively.

8. Grounding connection

Grounding Wiring

Step 1: Prepare ground wire. Strip length: 6.0mm, 4mm<sup>2</sup> (10AWG).

Step 2: To insert Earth terminal. Press the wire and terminal tightly with a wire clamp.

Step 3: screw the ground screw with screwdriver as shown below.

9. Firmware Update

Preparation: Please ensure the inverter is powered on with steady PV/BAT and AC power. Please prepare a PC and an U-Disk. Please note the U-Disk shall be less than 32GB and its formats is fat16 or fat32. Please DO NOT apply USB3.0 U-Disk on USB port, the inverter USB port only support for USB2.0 U-Disk.

Steps: Please contact our service support to get the update files, and extract it into your U-Disk as follow: update/mater/ H3\_E\_Master\_Vx.xx bin update/line/ H3\_E\_Slave\_Vx.xx bin update/manager/ H3\_Manager\_Vx.xx\_E bin Note: Vx.xx is version number.

Step 2: Unscrew the waterproof lid and insert U-disk into the "USB" port at the bottom of the inverter.

Step 3: The LCD will show the selection menu. Then press up and down to select the one that you want to upgrade and press "OK" to confirm to upgrade.

Step 4: After the upgrade is finished, pull out the U-disk. Screw the waterproof lid.

10. Inverter Start-Up

Please refer to the following steps to start up the inverter.

1. Ensure the inverter fixed well.
2. Make sure GRID and EPS wirings are completed.
3. Make sure the PV wirings is connected well.
4. Make sure the meter is connected well.
5. Make sure the battery is connected well.
6. Make sure the BMS buttons and battery switch are on.
7. Ensure accurate installation of the monitoring module to the inverter. (Refer to the installation of the monitoring module)
8. Turn on the PV/DC switch (for Hybrid version only), AC breaker, EPS breaker and battery breaker.
9. Check whether each voltage is normal and within the operating range of the machine through the screen on the machine.
10. If the main page shows "switch off", please long press "v" bottom to quickly go to the START/STOP page and set it to start. (Enter the settings page, default password is "0000").

Note: When starting inverter for the first time, the country code will be set by default to the local settings. Check if the country code is correct. Set the time on the inverter using the button or by using the APP.

11. Additional Functions

Dual meter function

A dual meter uses a second meter to detect the power generated by other power generating equipment and synchronize it to the Fox ESS platform. The wiring diagram for the dual meter function is as follows.

Wiring diagram of H3 double ammeter

Notes: It is necessary to set the machine to enable the meter2 function and set the address of meter2 to 2.

The setting method for turning on the second meter function of the machine is as follows:

Power on → Running History Settings → Running History Settings → Enter Password 0 0 0 0 → Date/Time Work Mode On-Grid →

Disable → Set → DRA0 Meter2 → Remote Control DRA0 Meter1 → Off-Grid Battery Feature →

The address setting method for the second meter is as follows:

Power on → Press for once → Measure display → codE → 60 → Add → 601 → Shift → 6 1 →

Communication address → Addr → Prot → 701 → Add → \_01 →

Off GRID and parallel function

The off network and parallel operation function requires a matching off network and parallel operation box EPS 3PH-4unit, which is a necessary equipment for off network and parallel operation. At the same time, Master is set up to connect parallel and parallel2. The specific wiring diagram is as follows:

Notes: When connecting parallel lines, please connect parallel1 to parallel2, and prohibit parallel1 from connecting parallel1.

The specific setting method for setting machines that only connect to Parallel2 as hosts is as follows:

Power on → Running History Settings → Running History Settings → Enter Password 0 0 0 0 → Date/Time Work Mode On-Grid →

Success → Master Mode Set → Master Mode → Free Mode → Battery Feature Parallel →

Introduction of EPS BOX PRO

The EPS BOX PRO is a wiring box for the H3. The box has a power distribution meter and switching device that can add all house loads to the load port and can automatically switch the load power to the EPS port of the inverter in the event of an off-grid situation. Below is the reference wiring for the EPS BOX PRO.

H3 Pin definitions of Meter/RS485 interface:

Machine settings: Power on → Running History Settings → Running History Settings → Enter Password 0 0 0 0 → Date/Time Work Mode On-Grid →

Success → Master Mode Set → Master Mode → Free Mode → Battery Feature Parallel →

12. WIFI Stick Installation

1. WIFI Stick Installation

Alarm: The collector can only be plugged into the inverter, not any other device.

Step 1: For USB Rotate the lock, make sure the triangle mark is on the front and centered. Plug the Smart WiFi into WiFi/GPRS port under the bottom (underside) of the inverter. Tighten the nut clockwise as following.

Step 2: Power on the inverter (in accordance with the start-up procedure detailed in the inverter installation manual).

2. APP Installation

Scan the QR Code below to download and install the FoxCloud APP on your smartphone.

3. Configuration

Note: The module is powered on and started, please wait for one minute to start the WiFi Config.

Web Configuration Step 1: Connect your mobile device with Smart WiFi. The SSID of the Smart WiFi is "W-xxxx" and the password is "mtm2020".

Step 2: After connecting successfully. Open browser and enter "192.168.1.1" on the address bar on top.

Step 3: Drop down the WiFi SSID menu to find house router and input the house router's password. Click "Save".

APP Configuration

Step 1: Open the APP, click "Local Distribution Network" on the login page.

Then click "Wifi Config".

Step 2: Please scan the "SN" on the collector.

Step 3: Connect your mobile device with Smart WiFi. The SSID of the Smart WiFi is "W-xxxx" and the password is "mtm2020".

Step 4: Press the "Device WiFi" and "Password", then click "OK".

Step 5: Distribution network is successful.

4. Register An Account and Create A Plant

For Installer

Register An Account

Step 1: Please click "Sign Up", enter end user's information to complete the end user account registration.

Step 2: Press the "+" icon on the homepage to add plant. Press the scan icon next to the "Datalogger List" to scan the QR code label on front side of the Smart WiFi.

Notes: After starting the APP, it will pop-up a message "Whether to allow positioning permissions", please select "Allow". For the PV Size, please fill in the actual capacity of the installed solar panels.

Create A Plant

Step 1: Open the APP, login with your installer/agent account.

Notes: After starting the APP, it will pop-up a message "Whether to allow positioning permissions", please select "Allow". For the PV Size, please fill in the actual capacity of the installed solar panels.

For End User

Register An Account

Step 1: Please click "Sign Up", enter end user's information to complete the end user account registration.

Step 2: Press the "+" icon on the homepage to add plant. Press the scan icon next to the "Datalogger List" to scan the QR code label on front side of the Smart WiFi.

Notes: After starting the APP, it will pop-up a message "Whether to allow positioning permissions", please select "Allow". For the PV Size, please fill in the actual capacity of the installed solar panels.

Create A Plant

Step 1: Open the APP, login with your end user account.

Sites

Add Datalogger

The datalogger is not associated with a site. Do you want to create a new site?

New Site

Note: If SN has been bound to the plant already, APP will go to the page as beside. If SN has not been bound before, please refer to step 3.

Step 3: After scanning code successfully, click "OK" on the top right corner of the page. APP will pop-up a message "Add Datalogger", please click "OK". Complete all required information and click "OK" on the top right corner of the page.