PARALLEL Introduction

H3 PRO

2024.02.22

CONTENTS

01

FOX ESS

General Introduction

01

FOX ESS

General Introduction

On-Grid Parallel Connection

H3/AC3-Pro series Inverter provides the parallel connection function which should make ten inverters maximumly connected in one system when the grid is on. In this system, one inverter will be connected to the EMS Box, which through WIFI-485 in the COM_24 port, each inverter's connected through parallel CAN communication. EMS Box will control every invert's energy management and dispatch control. The meter needs to be connected EMS Box 485A1/B1 and communicate with it, only one meter needs to be connected in this system.

Off-Grid Parallel Connection

H3/AC3-Pro series Inverters provide the parallel connection function which should make four inverters maximumly connected in one system when the grid is off. In this system, one inverter will be set as the "Master inverter" which will control every other inverter's energy management and dispatch control. and all other slaver inverter communicate with "Master inverter" by CAN communication-parallel connection. Please note the parallel connection function can only be used when the grid is off.

02

FOX ESS

Required Devices

H3 PRO(2~10 pieces)

Datalogger(1 pieces)

T568B (1~9 Piece)

Three phase Meter (1 pieces)

CT(3 Piece)

03

FOX ESS

System Wiring

NOTE

Note1
Parallel must ensure that the EPS port and GRID port of each machine are connected one by one. That is, EPS port L1 of each inverter must correspond to L1 on the network side, L2 must correspond to L2 on the network side, L3 must correspond to L3 on the network side, and N must correspond to N on the network side. Fox ESS does not assume any responsibility for machine damage or safety accidents caused by Wiring error for offline and parallel operation.

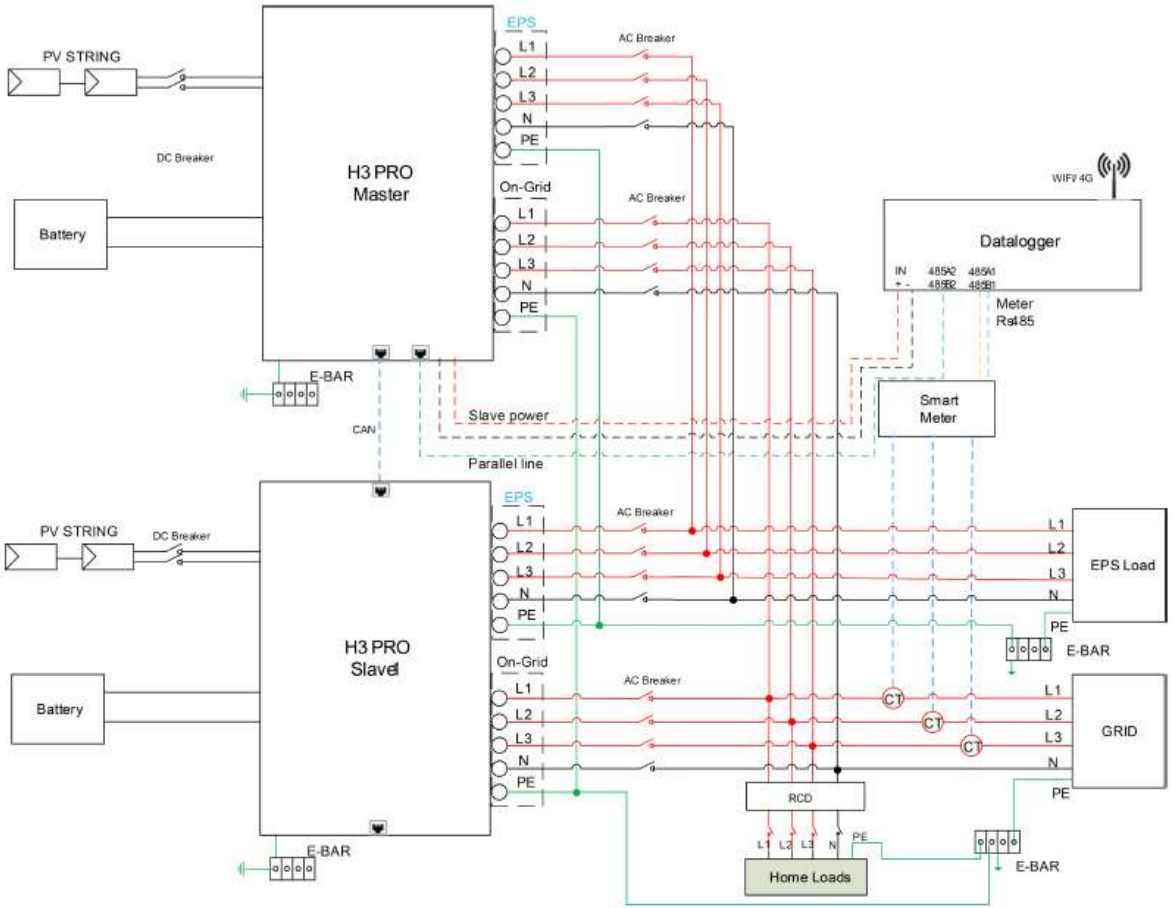
Note2
The meter connections need to correspond to each other's R/S/T of the machine

Note3
Before operation, please ensure that all the inverters' software version must be the same, otherwise this function cannot be use.

Note4
It's a brief description,please contact our technical support team or check the user manual for more details if you want to use this function

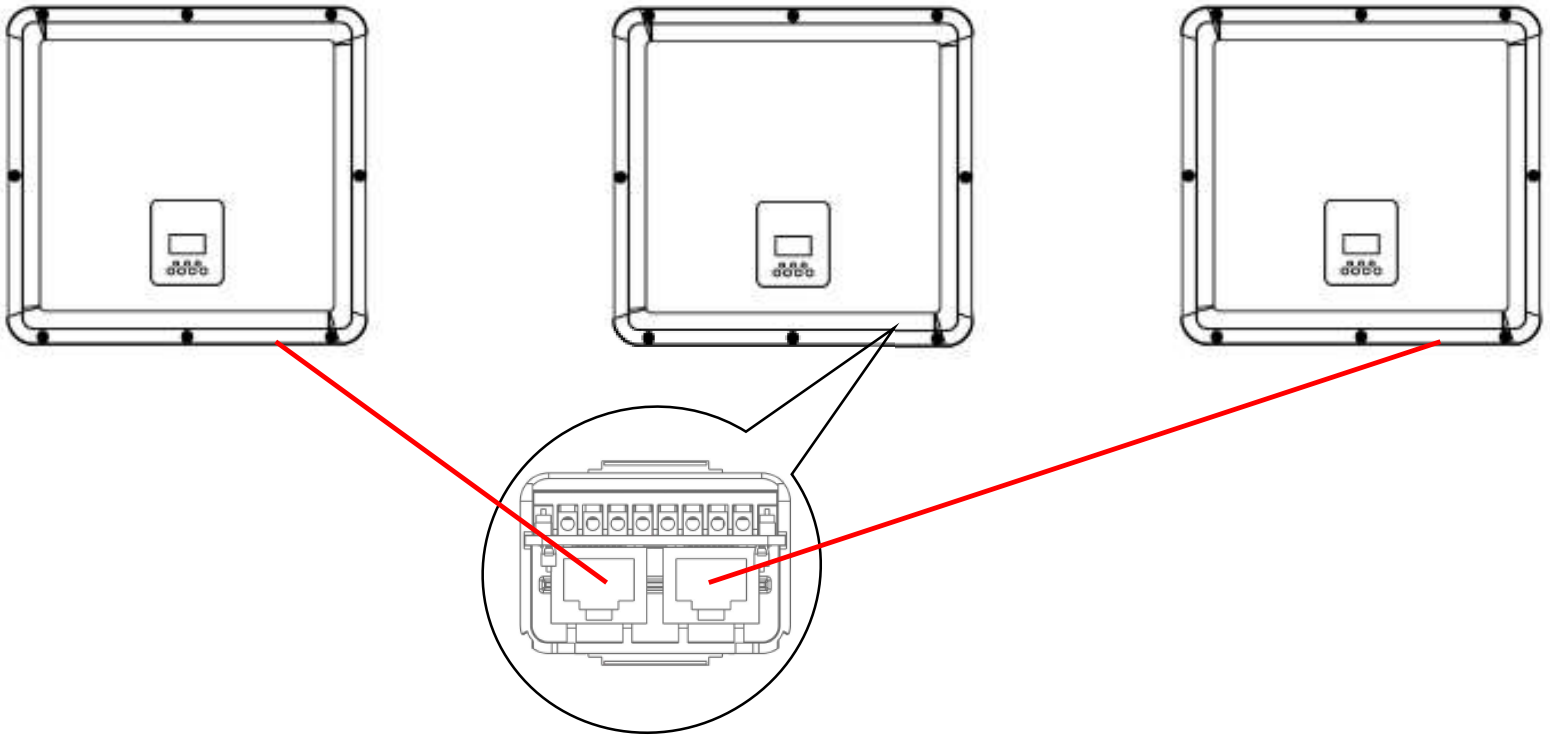
General Wiring System

Here is the parallel system of H3 PRO:



Parallel Wiring System

Parallel 1/2 are the ports used in parallel as shown below:
Connect Parallel port 1 to the previous H3 PRO, connect parallel port 2 to the next H3 PRO.

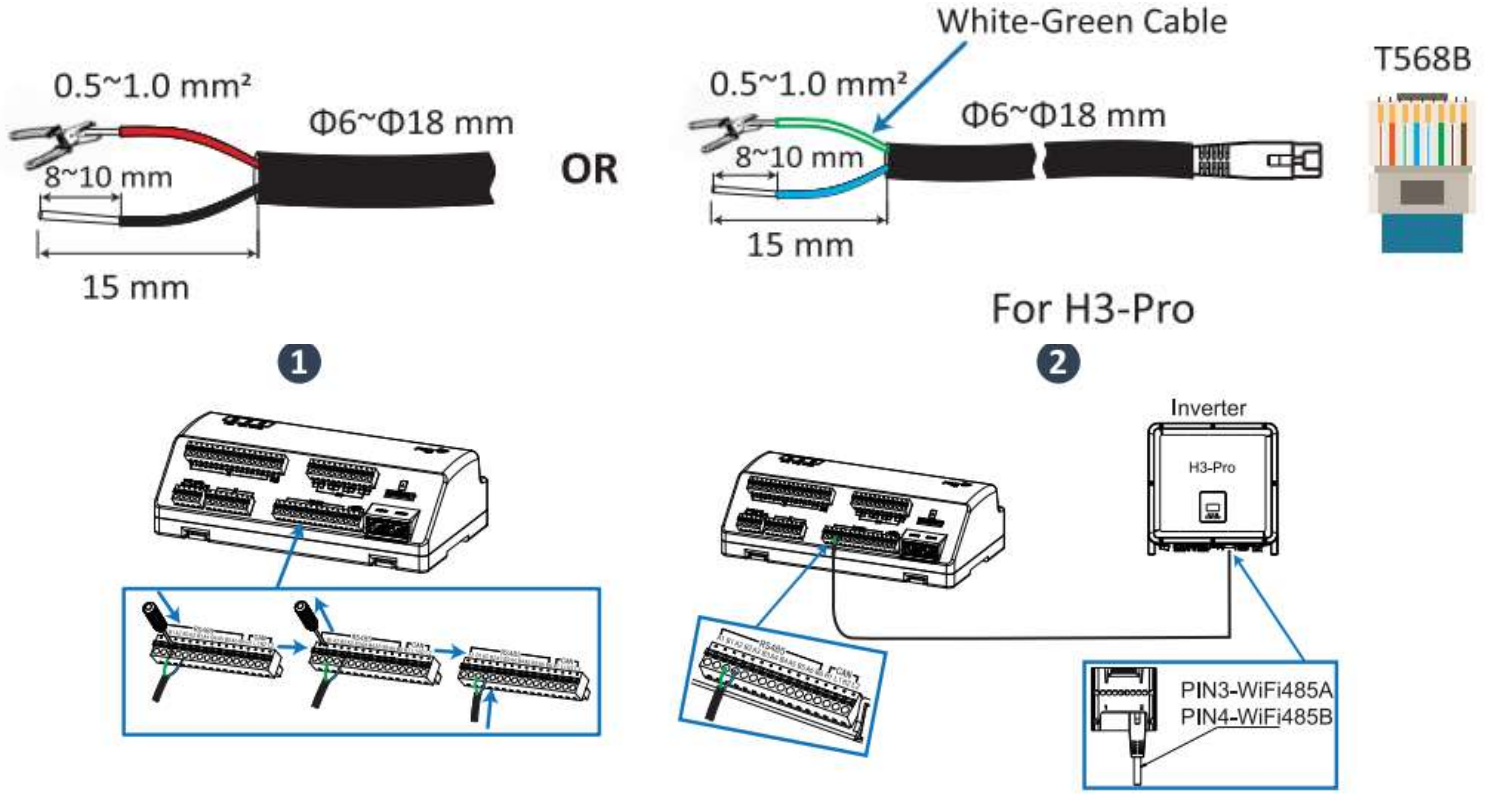


An resistor should be inserted into inverter excepting H3-Pro in CAN connection.

Datalogger Wiring System

1、Inverter Connection

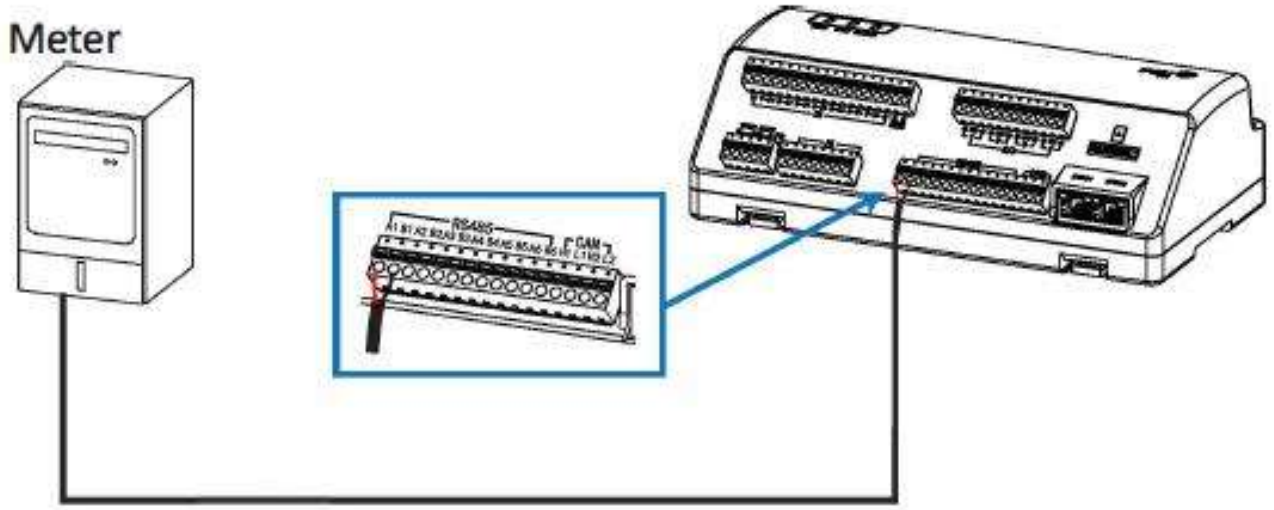
Connect the inverter to terminal RS485A2 and RS485B2 of EM Box via cable. This guide uses the H3-Pro model as example to illustrate the RS485 connection between the EM Box and inverter.



Datalogger Wiring System

2、Meter Connection

Connect the meter to terminal RS485Al and RS485B1 of EM Box via cable



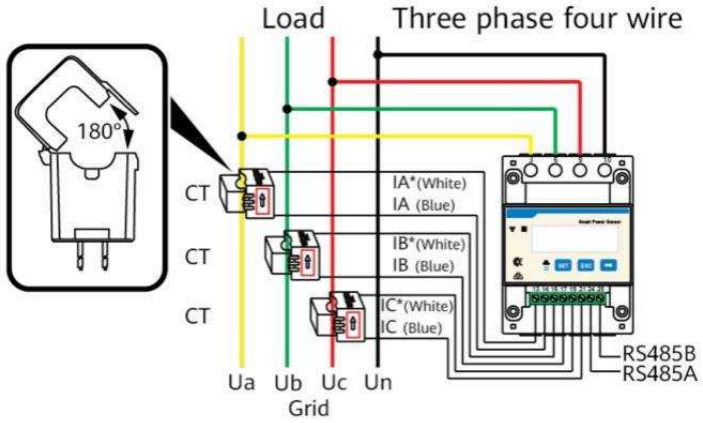
Datalogger Wiring System

3、Meter installation

Three-phase Meter should be installed the same way as for one H3 PRO three-phase used as a single unit. Please install the Meter referring to the correct way in the user manual.

Note:
1. Meter model: DTSU666 1.5(6)A
2. Meter here is to detect the load, please install on the outer side of the load, inner side fo the grid.

- Meter_A (A+/A-) connect to the phase with L1
- Meter_B (B+/B-) connect to the phase with L2
- Meter_C (C+/C-) connect to the phase with L3

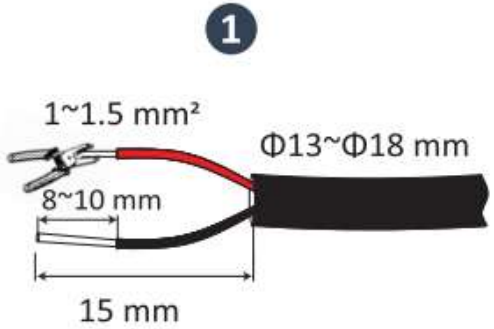


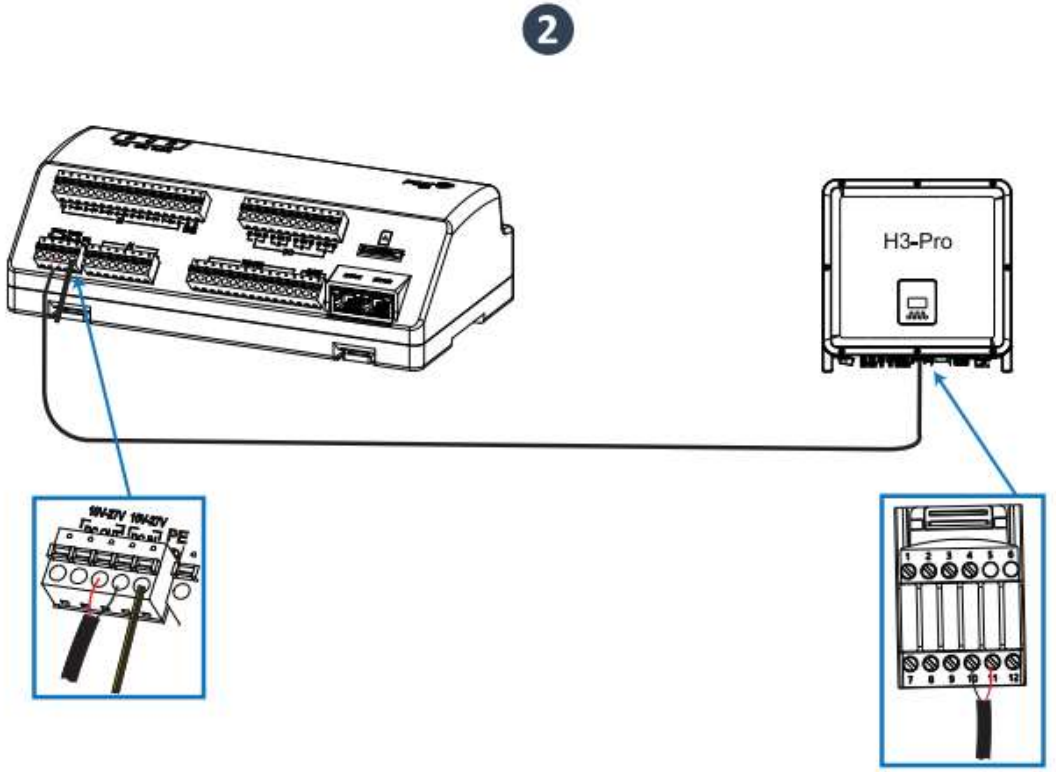
Please also keep the right direction of Meter according to the installation instructions of Meter you choose.

Datalogger Wiring System

4、Power Supply

Connect the inverter to terminal DC IN of EM Box via cable. This guide uses the H3-Pro model as example to illustrate the +12V SELV/GND connection between the EM Box and inverter.



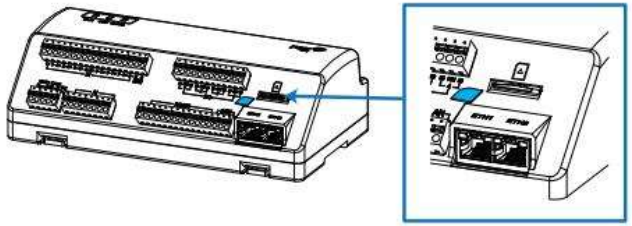


Datalogger Wiring System

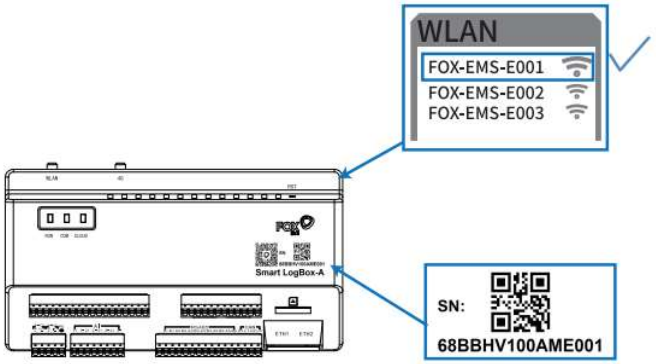
5、Internet Connection

Please read the network instructions in the logger user manual carefully

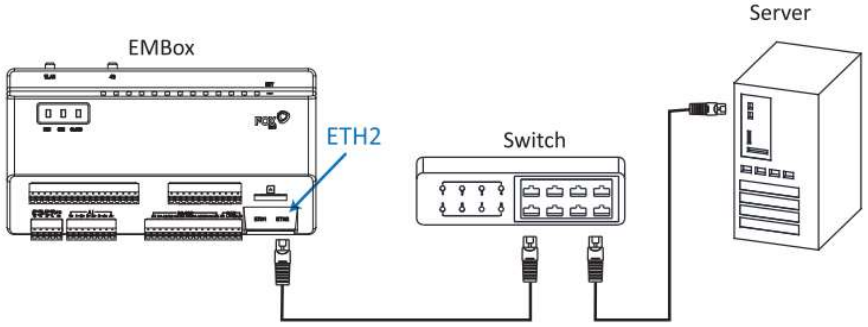
Method 1: 4G



Method 2: WLAN



Method 3: Ethernet



04

FOX ESS

System Commissioning

Inverters Parallel- ID Setting

- From LCD display only

Settings

Enter Password

Communication

RS485

ID2  001…002…003

Inverters Parallel- Master Setting（Off-Grid）

- From LCD display only

Settings

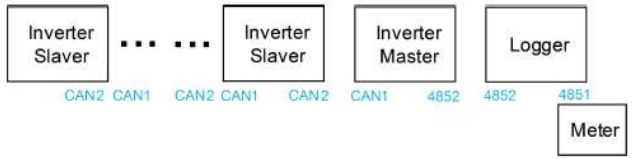
Enter Password

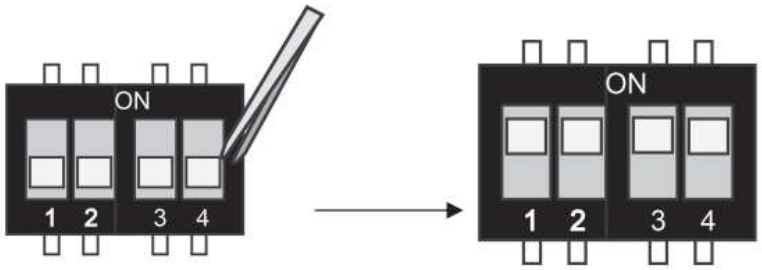
Parallel

Master/ Free Mode

Master Mode inverter

Note: PV and battery should both be connected to the inverter with meter cable plugged.



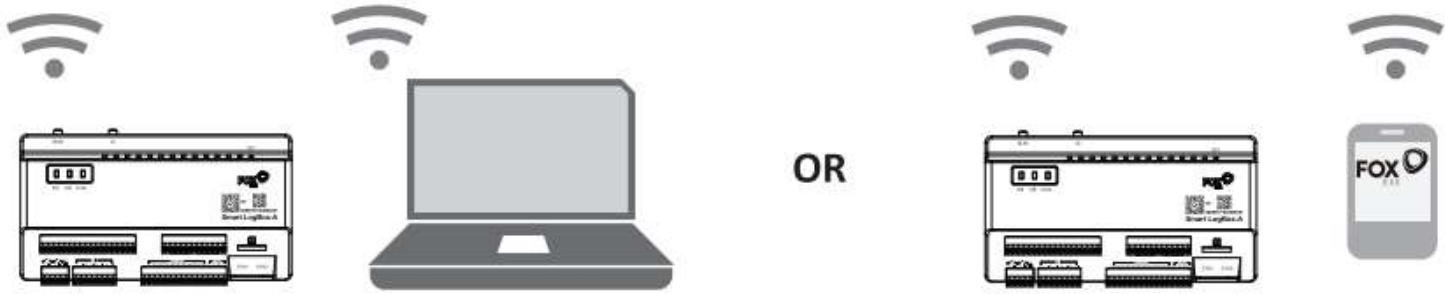


- Connect all inverters by CAN ports
- Set the DIP switch on

Monitoring of H3 PRO

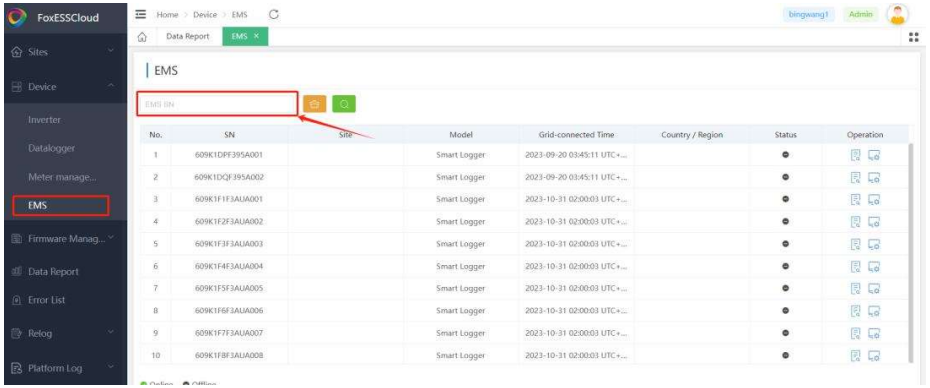
Use FoxCould App to do the monitoring of each inverter separately via Fox Smart Wi-Fi or LAN or 4G from each inverter.

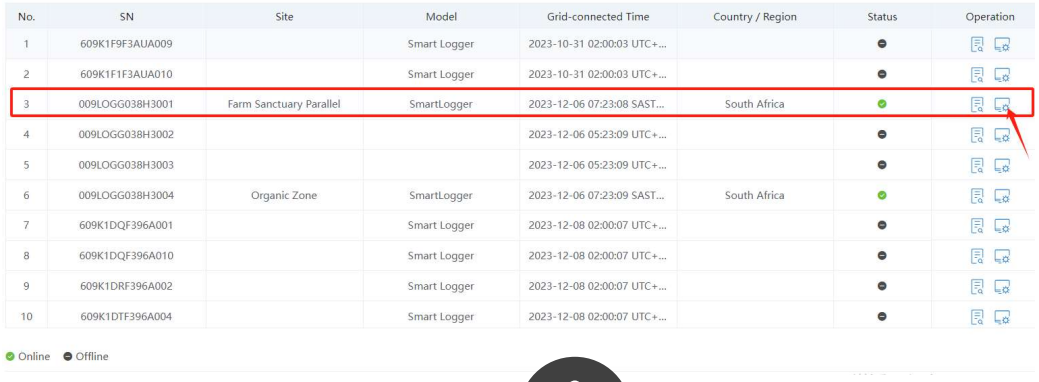
Please read the network instructions in the logger user manual carefully

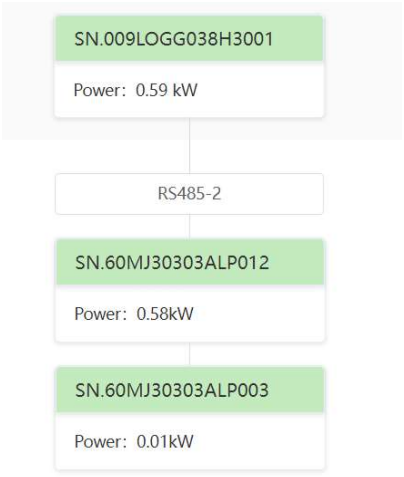


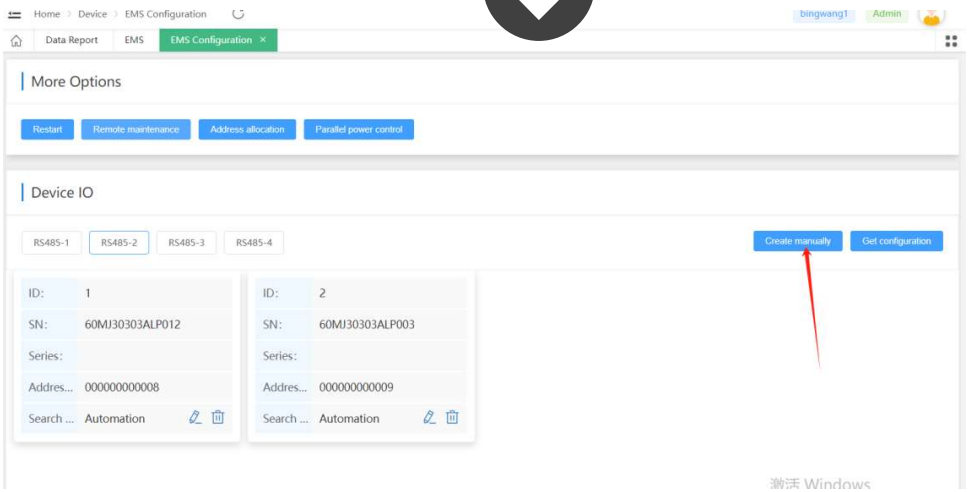
H3 PRO Parallel WEB Setting

Note: please contact our technical support team for more details if you setting.

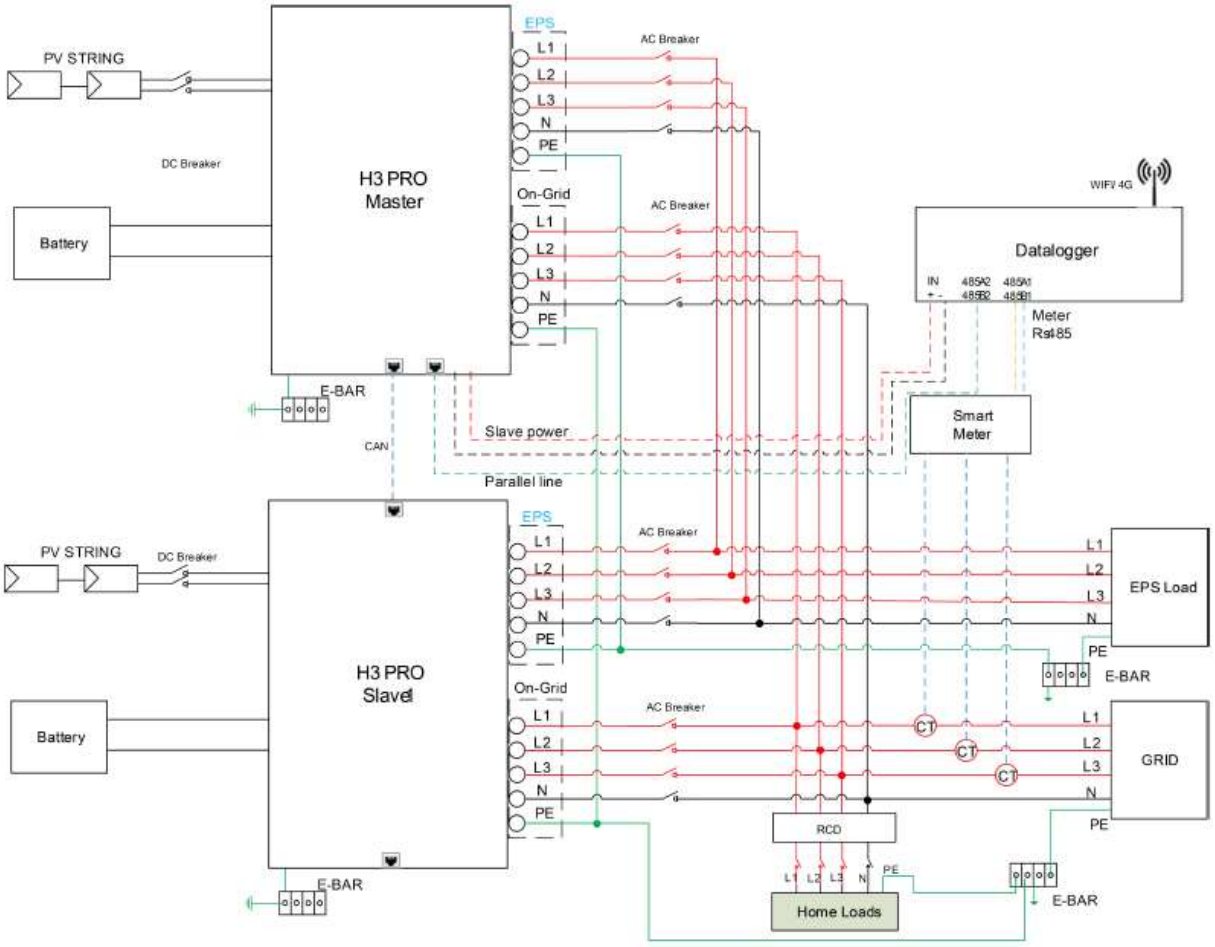








Parallel System diagram



H3 PRO Parallel Exit

■ How to exit from parallel system

If one inverter wants to exit from this parallel system, please follow the steps below:

Step1: Disconnect all the network cables on the CAN port.

Step2: Enter setting page and click parallel setting, and choose "Free".

Note!

- If a slaver inverter is set to "Free" mode but not disconnect the network cable, this inverter will return to "Slaver "mode automatically.
- If a slaver inverter is disconnected with other inverter but not be set to "Free" mode, this inverter will stop working and maintain "waiting" status.

FOX ESS

THANKS