

# How to connect FOX ESS AIO-H3 system (battery, hybrid inverter, energy meter) with Reduxi controller

Connect a FOX ESS AIO-H3 all-in-one system (battery, hybrid inverter, energy meter) to the Reduxi Controller via Modbus.



🔧 FOX ESS AIO-H3 · Reduxi Controller    🌐 Modbus

🔋 LFP battery · 5–10 kW three-phase

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## 1 Technical documentation

The FOX ESS AIO-H3 is a three-phase all-in-one energy storage system: hybrid inverter and lithium iron phosphate (LFP) battery in one system. The data below comes from the FOX ESS datasheet.

### MODELS

AIO-H3-5.0, AIO-H3-6.0, AIO-H3-8.0, AIO-H3-10.0

### RATED OUTPUT POWER

5000, 6000, 8000, 10000 W

### GRID

Three-phase, 3L/N/PE

### BATTERY

Prismatic LFP, module FOX ESS HV2600, battery voltage 180–234 V

### INTERFACES

Inverter: 2×RS485, DRM, ripple control, USB. Battery: CAN, RS485. Monitoring module: Wi-Fi, LAN, 4G (optional)

### PROTECTION

IP65, outdoor installation

### Manufacturer documents:

- [AIO H3 datasheet V3.5](#) – datasheet (PDF, EN, 2024-11-08)
- [FOX ESS downloads](#) – datasheets, manuals and other documents (web, EN)

## 2 Required equipment

- ☐ Reduxi Controller (installed and online)
- ☐ FOX ESS AIO-H3 system, commissioned
- ☐ Connection between the inverter and the Reduxi Controller (see [Point 3](#))
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

## 3 System overview and wiring

The Reduxi Controller reads the measured values of the AIO-H3 and sends the commands of the Reduxi strategies. Reduxi lists the AIO-H3 with the **Modbus** protocol in the List of supported devices.

| INTERFACE                 | WHERE             | NOTE                                          |
|---------------------------|-------------------|-----------------------------------------------|
| LAN, Wi-Fi, 4G (optional) | Monitoring module | Network connection of the system              |
| 2×RS485                   | Inverter          | Serial interfaces of the inverter             |
| CAN, RS485                | Battery           | Communication battery – inverter, BMS upgrade |
| DRM, ripple control, USB  | Inverter          | Grid operator interfaces and service          |

## 4 Log in to the Reduxi web interface

You can open the Reduxi web interface in two ways:


REMOTE

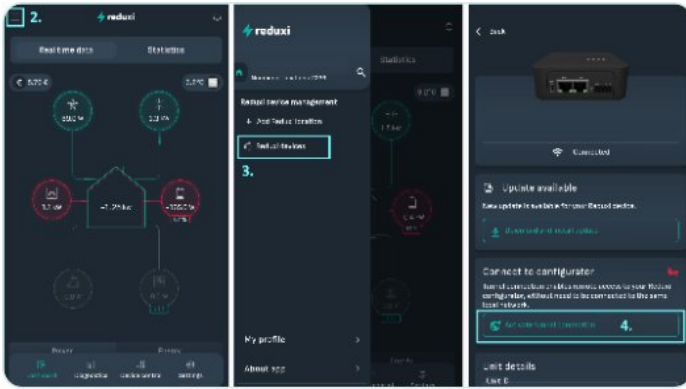
**Reduxi app**  
Via tunnel connection · works from anywhere



**Web browser**  
In the local network · via IP address or reduxि.local

### 4.1 Via the Reduxi app

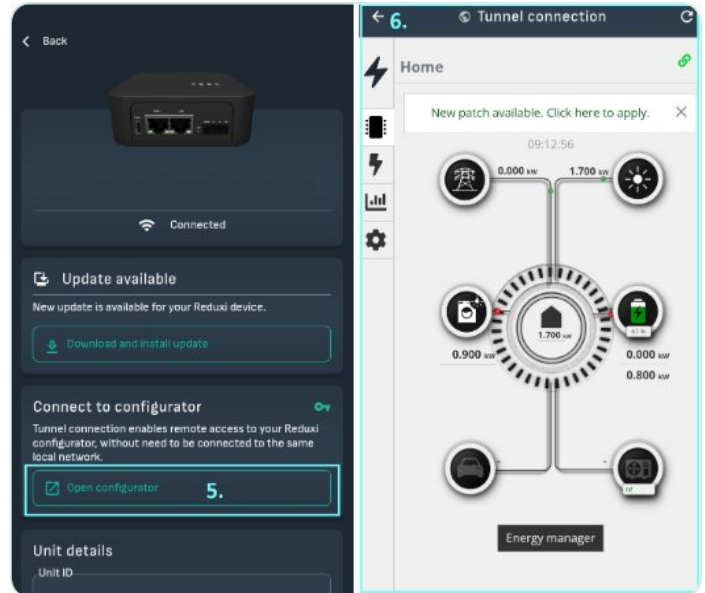
- 1 Open the app and log in**  
Launch the Reduxi app on your smartphone or tablet and log in with your credentials.
- 2 Open Reduxi devices**  
Tap the menu icon (three lines, top left) and select **Reduxi devices**.
- 3 Activate the tunnel connection**  
Switch on the tunnel connection and wait a moment until it is active.
- 4 Open the configurator**  
Tap **Open configurator**. The Reduxi web interface opens.



Activate the tunnel connection (step 3)

### Text description of this image

Screenshot of three Reduxi mobile app screens side by side, with cyan boxes and number badges 2 to 4. Left screen (dashboard, dark theme): menu icon at top left marked with a box and badge 2; 'reduxi' logo; tabs 'Real time data' (active) and 'Statistics'; price 5.79



Open configurator (step 4)

### 2. Text description of this image

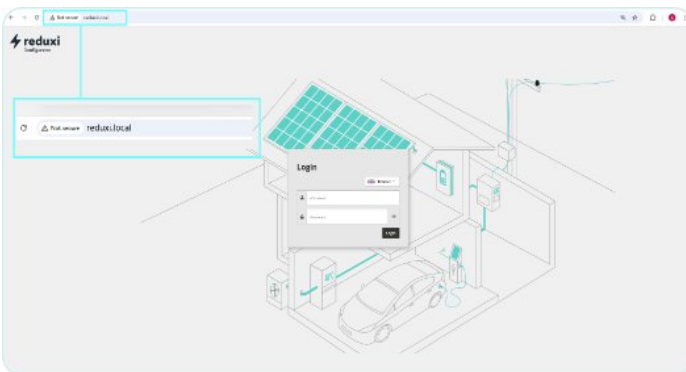
## 4.2 Via a web browser

### 1 Open the login page

On a device in the same network, open a web browser and enter the controller's IP address or <http://reduxi.local>. You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

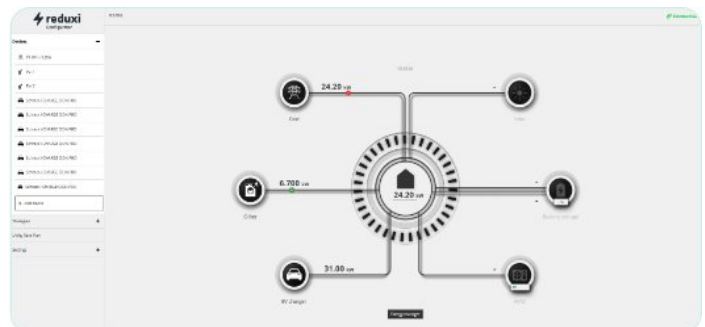
### 2 Log in

Username: **admin** · Password: **admin** (factory default)



Reduxi Controller login screen

### Text description of this image



Controller web interface after login

### 2. Text description of this image

Screenshot of the Reduxi Configurator web interface

## 5 Add the device to Reduxi

Open the Configurator first, see [Point 4](#). The device is added with the wizard in two steps.

### 5.1 Basic settings

- 1 Click + Add device**  
In the left menu the section **Devices** lists all devices (click it if it is collapsed). **+ Add device** sits directly below the list. Do not use **+ Add EEBUS device**.
- 2 Device type**  
Select **Hybrid inverter**.
- 3 Type**  
Select **FOX ESS AIO-H3**.
- 4 Name and strategies**  
Enter a clear name, for example **FOX ESS AIO-H3**. Tick the strategies the device should take part in, then click **Next**.

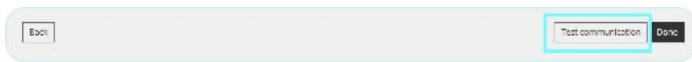
The List of supported devices also contains the entry **FOX ESS AIO H3** for the energy meter.

### 5.2 Communication settings

The second step sets up the Modbus communication between the Reduxi Controller and the AIO-H3. Enter the connection type, the address and the Modbus unit ID as they are set on the system.

### 5.3 Test communication

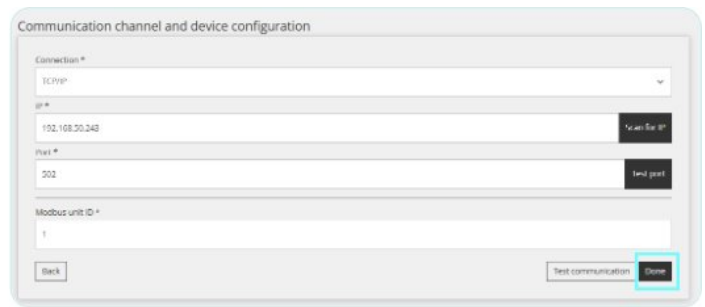
Click **Test communication** at the bottom of the wizard. It reads the FOX ESS AIO-H3 once and saves nothing. If the test succeeds, click **Done**: only **Done** creates the device.



The *Test communication* button

### Text description of this image

Screenshot of the bottom button bar of a Reduxi Configurator page. Left: button 'Back'. Right: button 'Test communication' (marked with a cyan box) and dark button 'Done'.



The *Done* button

## 2. Text description of this image

Communication channel and device configuration

## 6 Check the readings

### 6.1 Last measurements

Open **Devices** → **FOX ESS AIO-H3** → **Last measurements** in the Configurator. The values show whether the system communicates correctly.

### 6.2 Control behaviour

The List of supported devices shows per device type whether Reduxi reads only or reads and controls. Where control is available, open **Devices** → **FOX ESS AIO-H3** in [the Reduxi Configurator](#) and set the control type to **AUTO**. Only then do strategy commands affect the system.

To reduce energy costs with dynamic prices and tariffs, define the strategy as described in [Strategies for Reduxi controller](#).

## ✓ Summary

**Preparation (Points 1–2):** Check the datasheet and prepare the equipment.

**FOX ESS AIO-H3 (Point 3):** Connect the system to the Reduxi Controller. Reduxi reads it through Modbus.

**Add to Reduxi (Points 4–5):** Open the Configurator, add a Hybrid inverter of type FOX ESS AIO-H3, enter the communication settings, run Test communication and click Done.

**Go live (Point 6):** Check the last measurements. Where control is available, set the control type to **AUTO**.

## → Common issues

| ISSUE                                          | SOLUTION                                                                                                                                          |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Test communication fails                       | Check the connection type, address and Modbus unit ID against the settings on the system. Controller and system must be able to reach each other. |
| The device goes offline after some time        | Check that the connection settings of the system did not change, for example the IP address after a router restart.                               |
| Open configurator does not open or stays empty | The tunnel is not active yet. Wait about 30 seconds and check that the controller is online.                                                      |
| Login with <code>admin</code> is rejected      | The password was changed during installation. Ask the installer. The Reduxi account password does not work here.                                  |
| <code>reduxi.local</code> does not load        | Your device is not in the same network as the controller. Use the IP address or the tunnel connection.                                            |
| Communication test fails, device shows offline | Check reachability, IP address / port / unit ID, and that the protocol is enabled on the device.                                                  |

## → Related articles

Matching guides from the Reduxi knowledge base:



### FOX ESS downloads

Datasheets, manuals and other documents of FOX ESS



### Device setup guides

All step-by-step guides for connecting devices to the Reduxi Controller



### Strategies for the Reduxi Controller

Energy manager and other strategies explained