

# How to add FOX ESS AIO-H3 System (Battery, Hybrid Inverter, Energy Meter)

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.

|                                                                                                                                     |                                                        |                                     |                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------|
| <b>MODELS</b><br>AIO-H3-5.0, AIO-H3-6.0, AIO-H3-8.0, AIO-H3-10.0                                                                    | <b>RATED OUTPUT POWER</b><br>5000, 6000, 8000, 10000 W | <b>GRID</b><br>Three-phase, 3L/N/PE | <b>BATTERY</b><br>Prismatic LFP, module FOX ESS HV2600, battery voltage 180–234 V |
| <b>INTERFACES</b><br>Inverter: 2×RS485, DRM, ripple control, USB. Battery: CAN, RS485. Monitoring module: Wi-Fi, LAN, 4G (optional) | <b>PROTECTION</b><br>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:



### Reduxi app

Via tunnel connection · works from anywhere

REMOTE



### 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

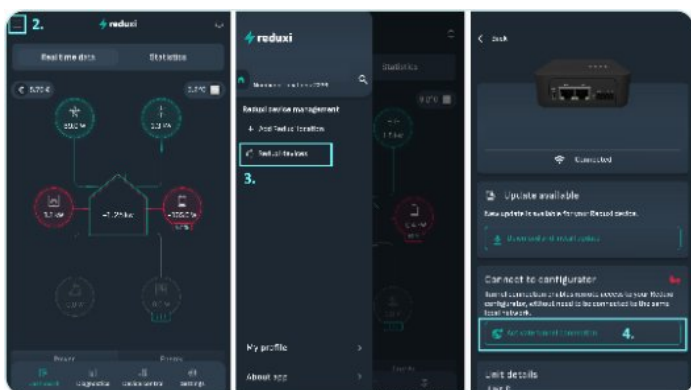
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

#### 3 Activate the tunnel connection

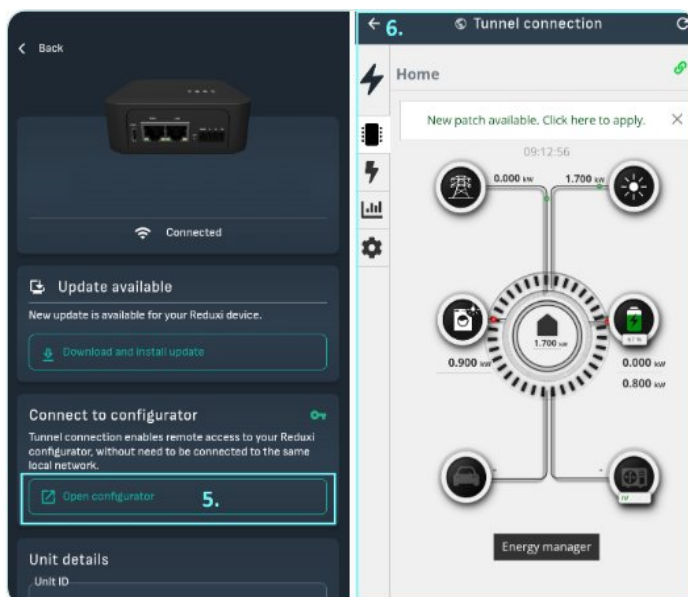
Switch on the tunnel connection and wait a moment until it is active.

#### 4 Open the configurator

Tap **Open configurator**. The Reduxi web interface opens.



Activate the tunnel connection (step 3)



Open configurator (step 4)

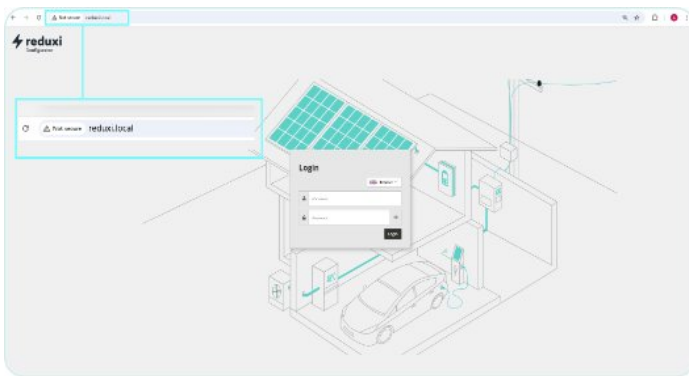
## 4.2 Via a web browser

### 1 Open the login page

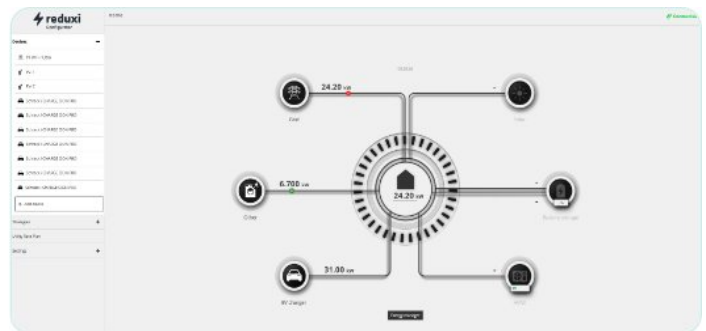
On a device in the same network, open a web browser and enter the controller's IP address or `http://reduxi.local`. You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

### 2 Log in

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



Reduxi Controller login screen



Controller web interface after login

## 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**.

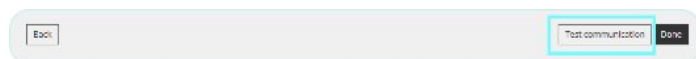
The List of supported devices also contains the entry **FOX ESS AIO H3** for the energy meter.

### 5.2 Communication settings

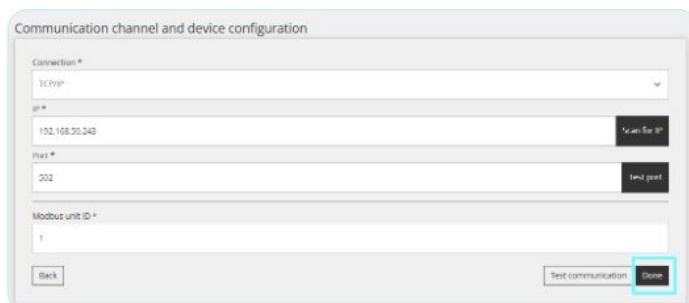
The second step sets up the Modbus communication between the Reduxi Controller and the AIO-H3. Enter the connection type, the address and the Modbus unit ID as they are set on the system.

### 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



The **Done** button

## 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



### **List of supported devices**

All devices that work with the Reduxi Controller



### **Strategies for the Reduxi Controller**

Energy manager and other strategies explained