

How to add Hybrid Inverter FOX ESS G-Max C&I to Reduxi controller

Connect a FOX ESS G-Max C&I hybrid inverter to the Reduxi Controller via Modbus TCP/IP, activate remote control on the inverter and add it in the Configurator.

🕒 approx. 15–20 min

🔧 FOX ESS G-Max · Reduxi Controller

🌐 Modbus TCP/IP (LAN)

🔋 Battery control via strategies



FOX ESS G-Max series

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1 Technical documentation

The FOX ESS G-Max is a C&I hybrid inverter. The Reduxi Controller communicates with it over the local network via **Modbus TCP/IP**, reads the measured values and sends the commands of the Reduxi strategies. The settings on the inverter are made directly on its interface.

DEVICE TYPE Hybrid inverter	INTERFACE Modbus TCP/IP · LAN	TCP PORT 502	UNIT ID 1 (default, same as on the inverter)
RATED POWER Enter as on the inverter (example: 100 kW)	REDUXI TYPE FOX ESS G-Max		

Manufacturer documents:

- [FOX ESS website](#) – product information and contact (web, EN)
- [FOX ESS downloads](#) – datasheets, manuals and other documents (web, EN)

2 Required equipment

- ☐ Reduxi Controller (installed and online)
- ☐ FOX ESS G-Max hybrid inverter, commissioned
- ☐ LAN connection of the inverter to the same network as the Reduxi Controller (router or switch)
- ☐ Access to the inverter interface to change the network settings and the control type
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

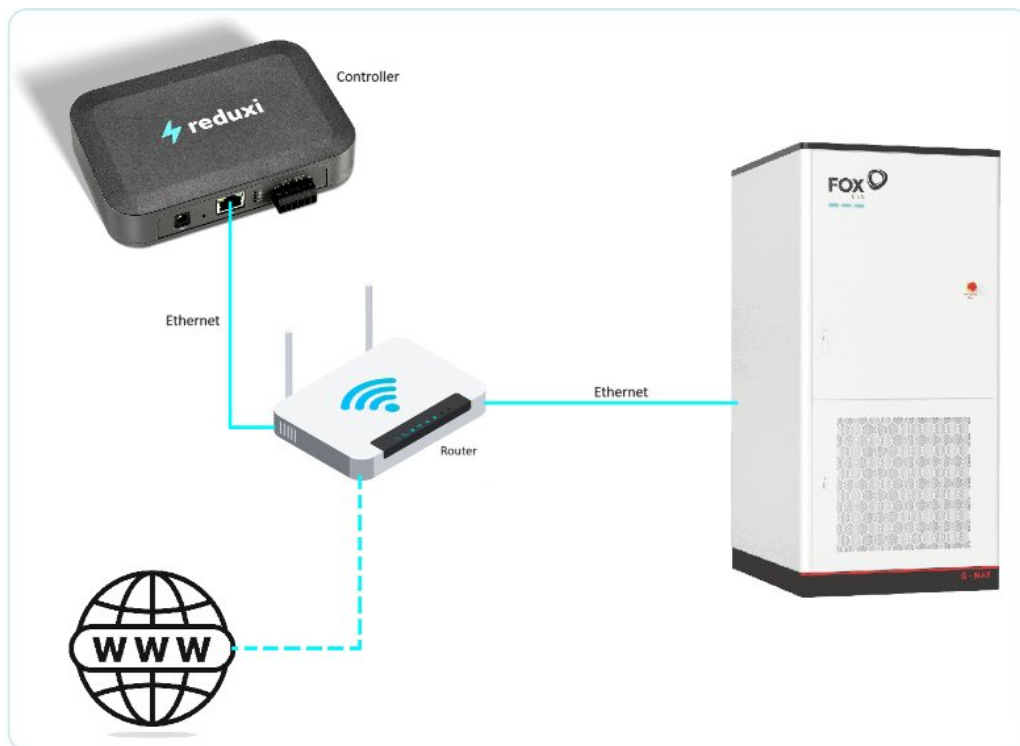


The IP address must be static

The Reduxi Controller finds the inverter by its IP address. Set a fixed address on the inverter ([Point 4.1](#)) or reserve one in the router. If the address changes, the connection is lost.

3 System overview & wiring

The Reduxi Controller and the inverter communicate over the local network. No extra gateway is needed. The router also connects the system to the internet.



Reduxi Controller and FOX ESS G-Max connected through the router (Ethernet, Modbus TCP/IP)

CONNECTION	FROM	TO	NOTE
LAN (Modbus TCP/IP)	Reduxi Controller	Router / switch	Same network as the inverter
LAN (Modbus TCP/IP)	FOX ESS G-Max	Router / switch	Port 502 , static IP address
LAN	Router	Internet	Needed for the Reduxi Cloud and the app

4 Configure the inverter

Two settings on the inverter are needed before Reduxi can connect. Both are made directly on the inverter interface.

4.1 Set a static IP address

1 Open the network settings

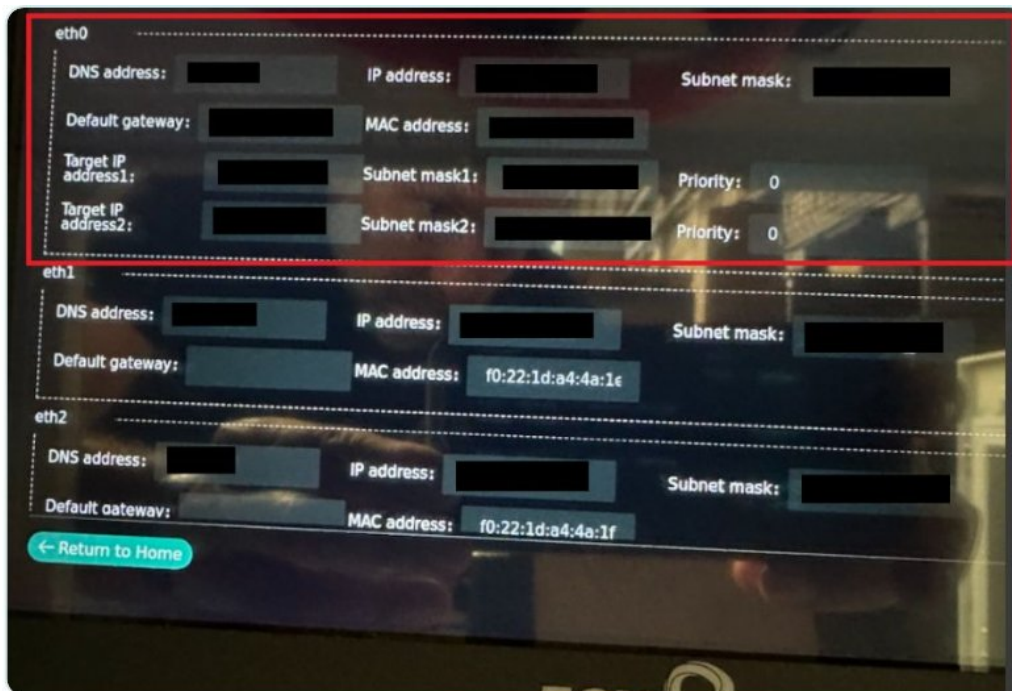
On the main page, press the **Menu** button in the upper right corner and select **Network settings**.

2 Enter the network data

Enter the settings that match your local network and confirm them. Use a fixed IP address and write it down, you need it in Reduxi.

3 Return to the main page

Go back to the **Home** page.



Network settings on the inverter

4.2 Activate remote control

1 Open the control type

On the main page, the control type is set in the upper left field.

2 Switch on remote control

Activate the **remote** button in the central terminal tab.



Both settings are required

Without a static IP address the connection can be lost after a router restart, and without remote control the inverter does not follow the commands of the Reduxi strategies.

5 Log in to the Reduxi web interface

The device is added in the **Configurator**, the web interface of the Reduxi Controller. You do not add it in the Reduxi app itself or in the Reduxi Cloud. You can open it in two ways:



Reduxi app

Opens the Configurator through the tunnel connection, from anywhere.

RECOMMENDED



Web browser

In the same network as the controller, via its IP address or **`http://reduxi.local`**.

5.1 Via the Reduxi app

1 Open the app and log in

Log in with your Reduxi account.

2 Open Reduxi devices

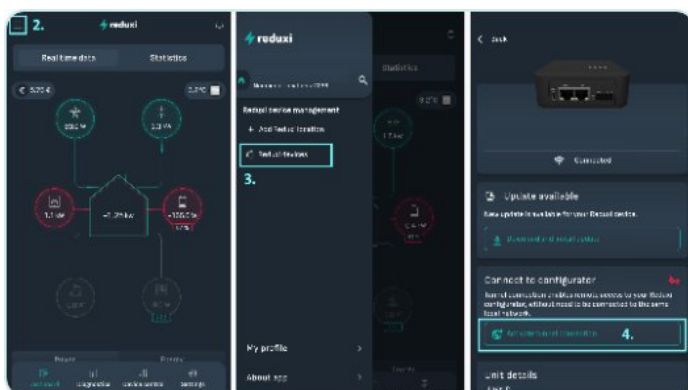
Tap the menu icon top left, then **Reduxi devices**, and select the location.

3 Switch on the tunnel connection

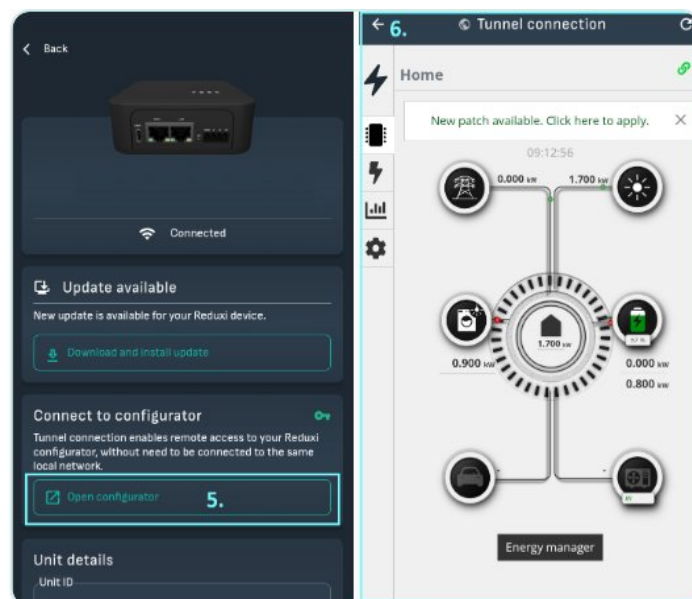
Switch on the tunnel and wait about 30 seconds.

4 Open the Configurator

Tap **Open configurator**. You are logged in automatically.



Reduxi devices with the tunnel switch



Open configurator



On a computer, away from the site

In the Reduxi Cloud (reduxi.app) open the location, then **Manage location** → **OEM devices** → **Activate tunnel connection**, confirm with **OK** and wait about 30 seconds. Then click **Go to controller**. The Configurator opens in a new tab without a password.

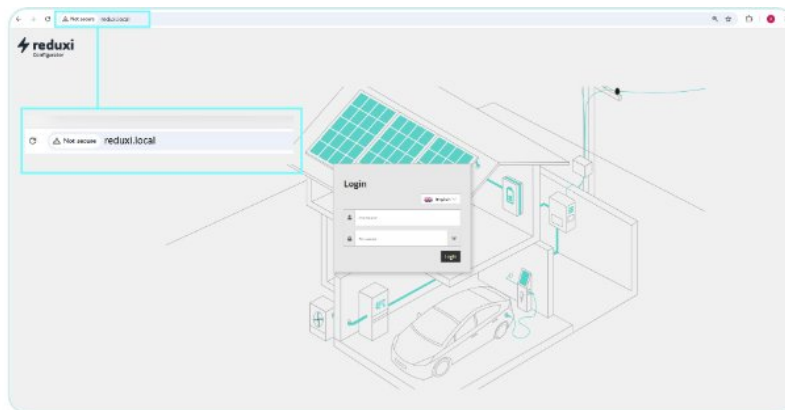
5.2 Via a web browser

1 Open the login page

In the same network, enter the controller's IP address or `http://reduxi.local`. The IP address is in the router's device list or in the app under **Reduxi devices**.

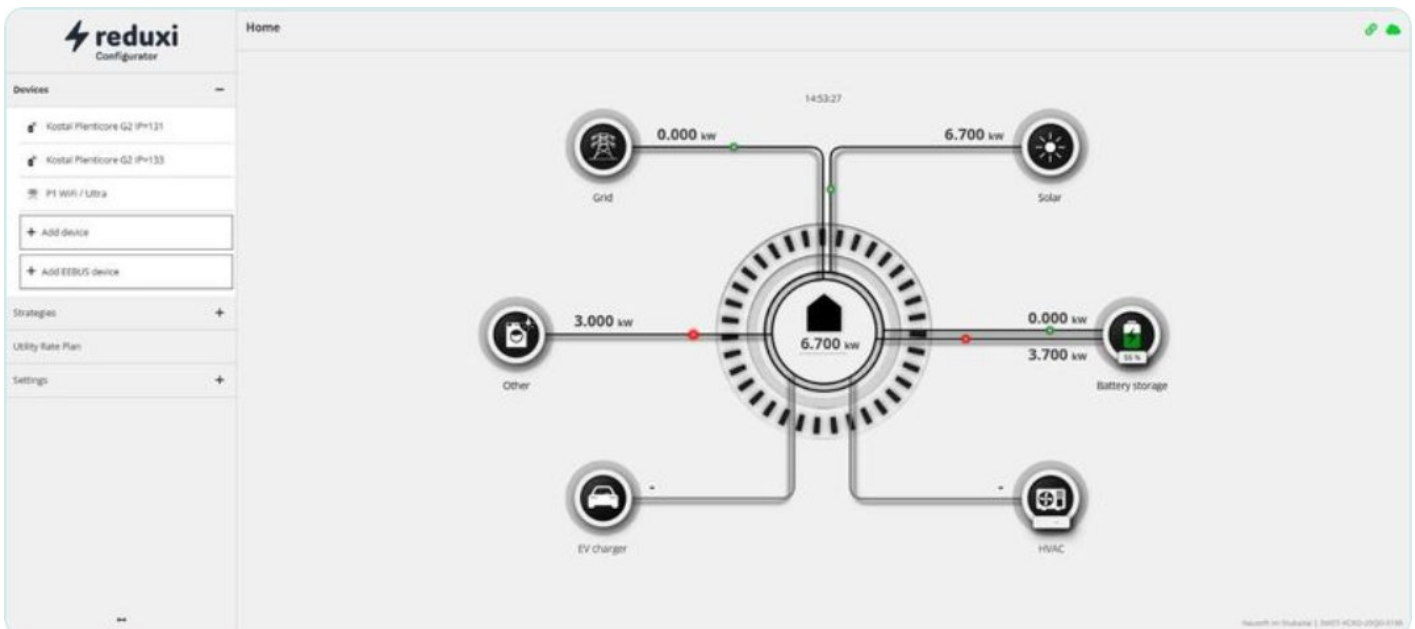
2 Log in

Username `admin` · Password `admin` (factory default). If it was changed during installation, use that one. This is not your Reduxi account password.



Login screen of the Reduxi Controller

This is what you should see:



Configurator home screen with the device list on the left



Common stumbling blocks

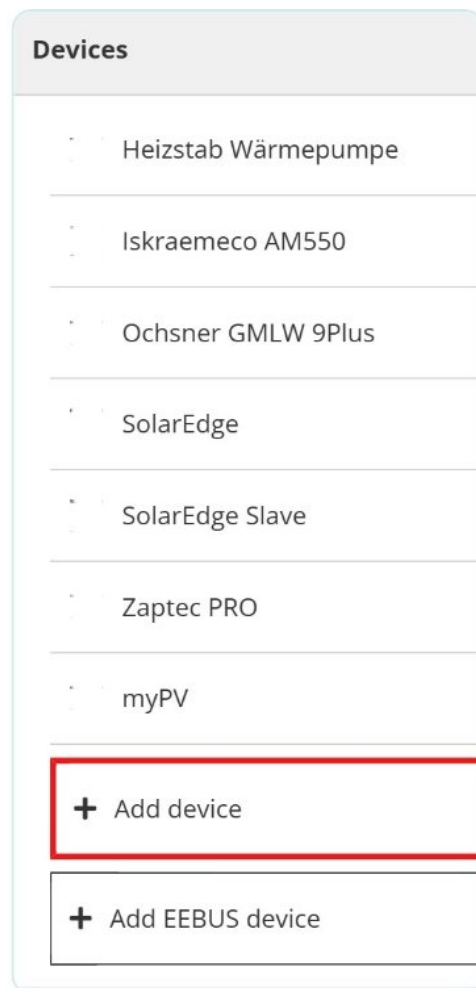
The tunnel needs about 30 seconds before the Configurator opens. The `admin` login is not your Reduxi account. `reduxi.local` only works in the same network as the controller.

6 Add the device to Reduxi

Open the Configurator first, see [Point 5](#). The device is added with the wizard in two steps.

6.1 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 G-MAX**.
- 4 Name and strategies**
Enter a clear name, for example **FOX ESS G-Max**. Tick the strategies the inverter should take part in, then click **Next**.



+ Add device below the device list (marked in red)

1

2

Communication channel

Basic settings

Device type *

Hybrid inverter

Type *

FOXESS G -MAX

Name *

FOX ESS G-MAX

Include to strategy

Strategy	Measurement devices	Regulated devices
Energy manager new	☒	☒

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[How to configure?](#)

Next

Basic settings: Hybrid inverter, FOX ESS G-MAX, name

6.2 Communication settings

The second step sets up the communication channel for Modbus TCP/IP between the Reduxi Controller and the inverter.

PARAMETER	VALUE
Connection	TCP/IP
IP	IP address of the FOX ESS G-Max (the static address from Point 4.1). Scan for IP can search for it in the network.
Port	502 (default)
Extended IP recovery	Leave switched on (default)
Modbus unit ID	The same ID as set on the inverter (default 1)
Rated power of inverter	According to the inverter (default 100 kW)
Is electricity meter installed? / Is PV installed?	Set according to your system (both are on by default)

1

2

Communication channel and device configuration

Connection *

TCP/IP

IP *

Scan for IP

Port *

502

Extended IP recovery ⓘ

Yes

Modbus unit ID *

1

Rated power of inverter *

100

kW

Is electricity meter installed?

Yes

Is PV installed?

No

PV (monitoring only): Measurements only; active power setpoint cannot be written

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Test communication

Done

Communication settings: IP, port, unit ID and rated power

6.3 Test communication

Click **Test communication** at the bottom of the wizard. It checks the Modbus TCP/IP connection once and saves nothing. If the result is fine, click **Done**. Only **Done** creates the device.



Test communication

Communication channel and device configuration

Connection *
TCP/IP

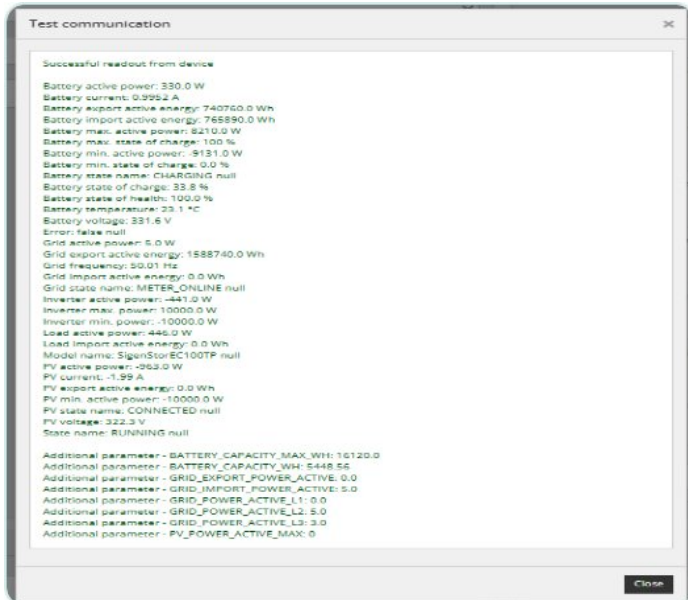
IP *
192.168.20.248

Port *
502

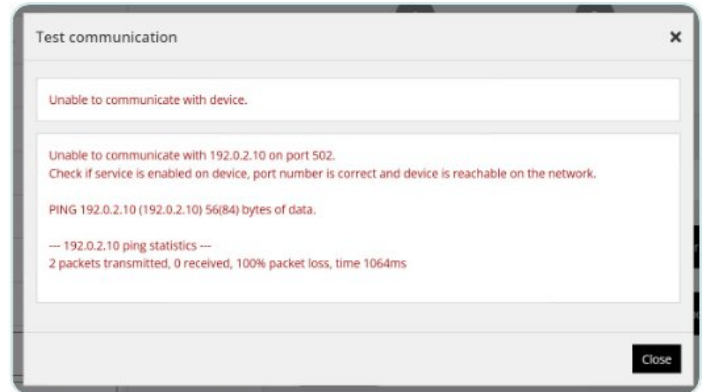
Modbus unit ID *
1

Back Test communication Done

Done



Successful response (example)



Unsuccessful response: Unable to communicate with device

7 Check the readings

7.1 Check the readings

Open **Devices** → **FOX ESS G-Max** → **Last measurements**. The values show whether the inverter communicates correctly.

Last measurementsAnalysisArchive

Without refreshing

42

Current type

AutoManual

14.03.2023 12:48:13

PV

PV active power

-1.0^W

14.03.2023 12:48:13

PV current

-1.98^A

14.03.2023 12:48:13

PV voltage

327.63^V

14.03.2023 12:48:13

PV export active energy

587.0^{Wh}

14.03.2023 12:48:13

PV min. active power

-10.0^W

14.03.2023 12:48:13

PV export active power limit

0^W

14.03.2023 12:48:13

Communication PV (ST401, ST402)

CONNECTED

14.03.2023 12:48:13

Load

Load active power

0.4^W

14.03.2023 12:48:13

Load import active energy

1,109.2^{Wh}

14.03.2023 12:48:13

Battery

Battery active power

0.4^W

14.03.2023 12:48:13

Battery current

1.09^A

14.03.2023 12:48:13

Battery voltage

331.60^V

14.03.2023 12:48:13

Battery state name

CHARGING

14.03.2023 12:48:13

Battery state of charge

33.80[%]

14.03.2023 12:48:13

Battery min. state of charge

0.00[%]

14.03.2023 12:48:13

Battery max. state of charge

100.00[%]

14.03.2023 12:48:13

Battery import active energy

765.9^{Wh}

14.03.2023 12:48:13

Battery export active energy

740.8^{Wh}

14.03.2023 12:48:13

Battery max. active power

-9.1^W

14.03.2023 12:48:13

Battery min. active power

8.2^W

14.03.2023 12:48:13

Battery active power capacity

1.0^W

14.03.2023 12:48:13

Inverter

Inverter active power

-0.4^W

14.03.2023 12:48:13

Inverter max. active power

10.0^W

14.03.2023 12:48:13

Inverter min. active power

-10.0^W

14.03.2023 12:48:13

Inverter state

RUNNING

14.03.2023 12:48:13

Grid

OFF

14.03.2023 12:48:13

Grid

Grid frequency

49.990^{Hz}

14.03.2023 12:48:13

Grid active power

0.0^W

14.03.2023 12:48:13

Grid export active power limit

0^W

14.03.2023 12:48:13

Grid import active power limit

0^W

14.03.2023 12:48:13

Measurement GND (ST401, ST402)

METER_ONLINE

14.03.2023 12:48:13

Grid export active energy

1,588.7^{Wh}

14.03.2023 12:48:13

Grid import active energy

0.0^{Wh}

14.03.2023 12:48:13

Other

Battery state estimate

100.00[%]

14.03.2023 12:48:13

Battery temperature

23.10^{°C}

14.03.2023 12:48:13

Module name

SignenStorEC100TP

14.03.2023 12:48:13

Communication error

OFF

14.03.2023 12:48:13

Control type

MANUAL

14.03.2023 12:48:13

Module name address

SELF_CONSUMPTION

14.03.2023 12:48:13

Last measurements of the FOX ESS G-Max

7.2 Control behaviour

For control by the Reduxi strategies, open **Devices** → **FOX ESS G-Max** in [the Reduxi Configurator](#) and set the control type to **AUTO**. Only then do the strategy commands affect the battery.

To reduce energy costs with dynamic prices and tariffs, define the strategy as described in [Strategies for Reduxi controller](#). After the device has been added, you can monitor and control it in [the Reduxi application](#).

✓ Summary

Preparation (Points 1–3): Check the manufacturer information, connect the Reduxi Controller and the inverter to the same network and note the IP address of the inverter.

FOX ESS G-Max (Point 4): Set a static IP address and activate remote control on the inverter.

Add to Reduxi (Points 5–6): Open the Configurator, add a Hybrid inverter of type FOX ESS G-Max, enter IP, port **502**, unit ID and rated power, run Test communication and click Done.

Go live (Point 7): Check the last measurements and set the control type to **AUTO** so that the strategies can control the battery.

→ Common issues

ISSUE	SOLUTION
Test communication fails	Check that the IP address in Reduxi is the current address of the inverter, the port is 502 and the unit ID matches the inverter (default 1). Controller and inverter must be in the same network, and remote control must be active on the inverter (Point 4.2).
The device goes offline after some time or after a router restart	The IP address of the inverter has probably changed. Set a static IP address on the inverter or a DHCP reservation in the router (Point 4.1) and enter the new address in Reduxi.
Strategy commands have no effect on the battery	Set the control type of the device to AUTO in the Configurator (Point 7.2) and check that remote control is active on the inverter.
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 admin is rejected	The password was changed during installation. Ask the installer. The Reduxi account password does not work there.
reduxi.local does not load	You are not in the same network. Use the IP address or the tunnel.
Communication test fails, device offline	Check reachability, IP, port 1502 and unit ID 71 , and that Modbus is enabled on the inverter.

→ Related articles

Matching guides from the Reduxi knowledge base:



FOX ESS

Manufacturer website with product information and downloads



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