

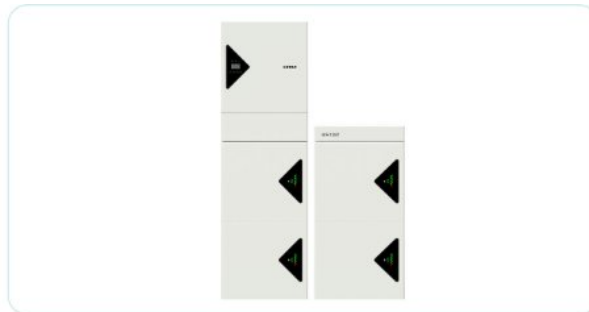
How to connect KSTAR hybrid inverter with Reduxi controller

Integrate the KSTAR hybrid inverter with the Reduxi Controller via Modbus TCP/IP. This gives you maximum flexibility and cost and energy reductions of up to 30%.

KSTAR

🔧 KSTAR hybrid inverter · Reduxi Controller

🌐 Modbus TCP/IP 📡 IP address from the inverter HMI



KSTAR hybrid inverter

Text description of this image

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1 Preparation

1.1 Technical documentation

For further information about the settings of the KSTAR hybrid inverter, see the manufacturer manual.

- [KSTAR hybrid inverter user manual \(E 8-12 KT, EN, V1.0\)](#) – Inverter settings, including the HMI

1.2 Required equipment

- ☐ Reduxi Controller
- ☐ KSTAR hybrid inverter, connected to the Reduxi Controller
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

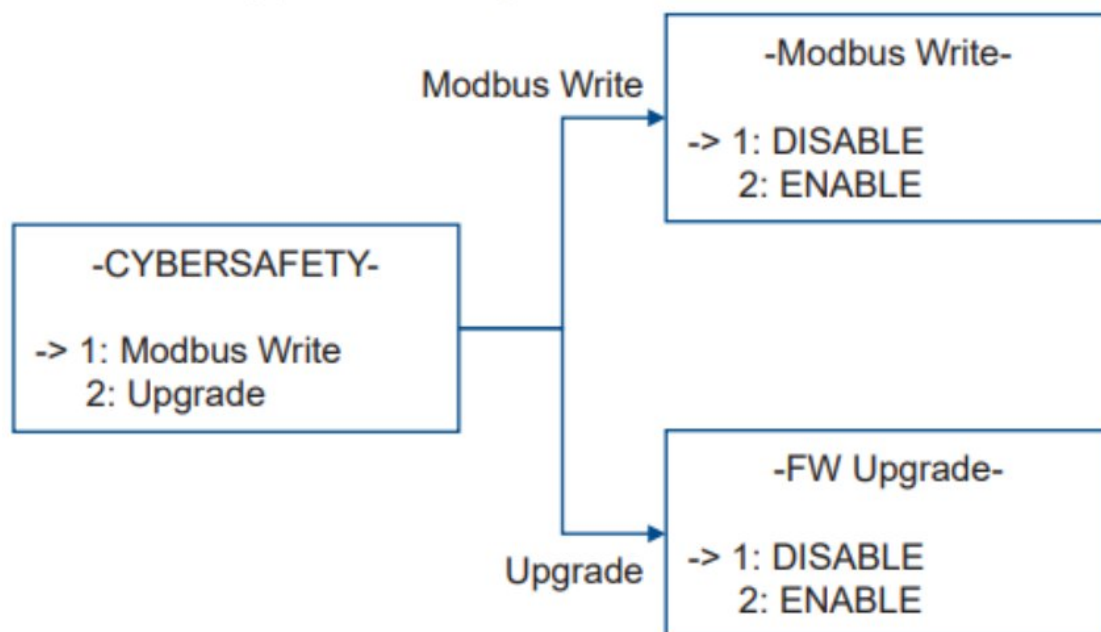
2 Configure the KSTAR hybrid inverter

2.1 Enable Modbus TCP/IP on the inverter

On the HMI of the inverter, enable the Modbus TCP/IP communication settings as shown in the image.

On the **CYBERSAFETY** page, you have two options:

- **Modbus Write:** To enable or disable remote control of the inverter. When this feature is enabled, you can control the inverter on the data-monitoring page.
- **Upgrade:** When this feature is enabled, you can upgrade the firmware of the inverter or the battery packs remotely.



Modbus TCP/IP settings on the inverter HMI

Text description of this image

2.2 Find the IP address



Important

Read the IP address of the KSTAR hybrid inverter from its HMI. You need it in the communication settings in the Reduxi Configurator (see [Point 4](#)).

3 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

3.1 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

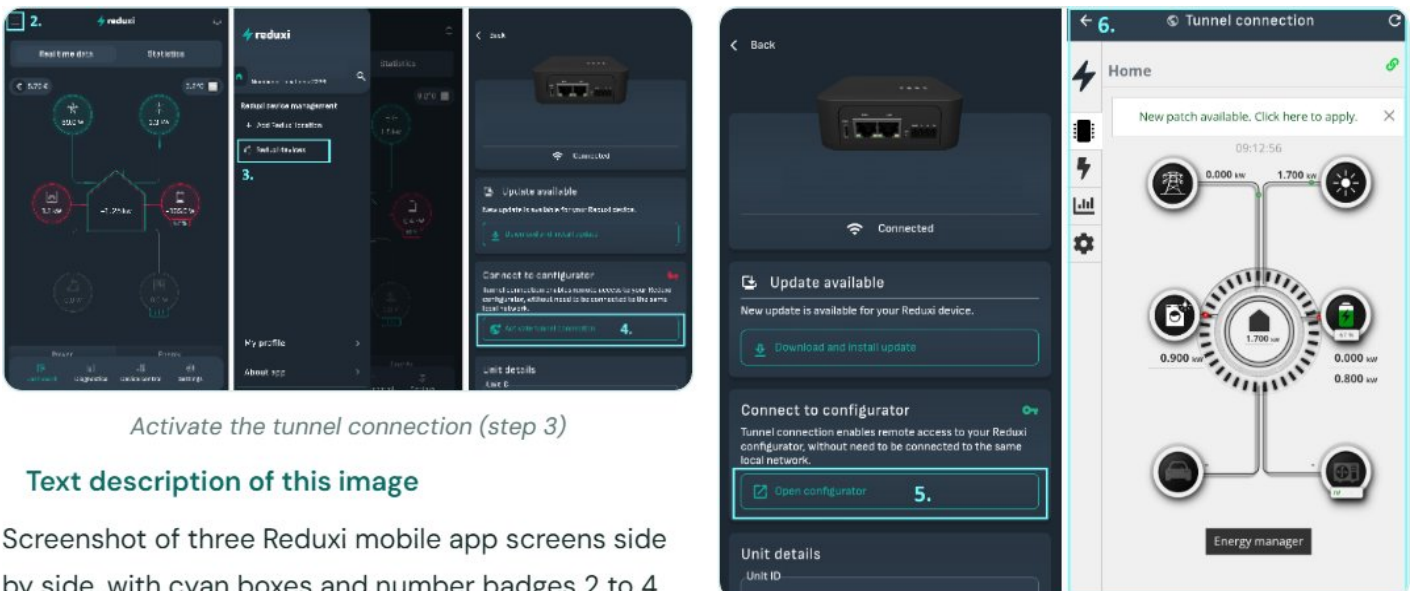
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

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; 'reduxि' logo; tabs 'Real time data' (active) and 'Statistics'; price 5.79

Open configurator (step 4)

2. Text description of this image

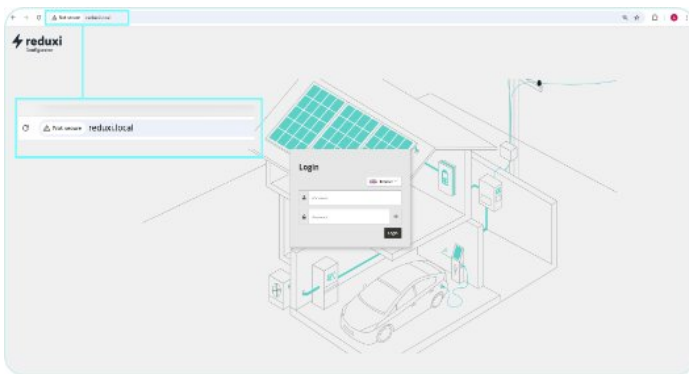
3.2 Via a web browser

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**.

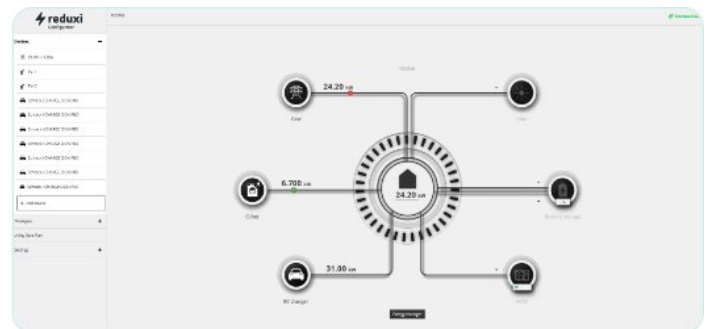
2 Log in

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

4 Add the KSTAR hybrid inverter to Reduxi

After you connect the Reduxi Controller and the KSTAR hybrid inverter, register the inverter as a new device.

4.1 Basic settings

Log in locally to the [Reduxi Configurator](#) on the controller (see [Point 3](#)) and click **+ Add device**.

reduxi[⚡]

CONFIGURATOR

Devices



Strategies



+ Add device

+ Add strategy

Settings

Profile

The Add device button

Text description of this image

In the first step (basic settings), select the basic parameters of the device:

- Device type: **Hybrid Inverter**
- Type: **KSTAR Hybrid**
- Name: a name of your choice

The image shows a web-based configuration interface for a KSTAR Hybrid Inverter. At the top, there is a progress bar with three steps: 1. Basic settings (highlighted with a black circle), 2. Communication channel, and 3. Advanced settings. Below the progress bar, the 'Basic settings' section is displayed. It contains four input fields: 'Device type *' with a dropdown menu showing 'Hybrid Inverter', 'Type *' with a dropdown menu showing 'KSTAR', 'Categories *' with three checkboxes labeled 'Solar power plant X', 'Battery X', and 'Grid X', and 'Name *' with a text input field containing 'KSTAR'. At the bottom of the form, there are two buttons: 'Back' on the left and 'Next' on the right.

Basic settings: device type, type and name

Text description of this image

4.2 Communication settings

The second step sets up the communication channel between the Reduxi Controller and the KSTAR hybrid inverter. This step is essential for Modbus TCP/IP communication. The image shows the settings of the communication channel.



Note

Read the IP address from the HMI of the KSTAR hybrid inverter (see [Point 2](#)).

1 Basic settings 2 Communication channel 3 Advanced settings

Communication channel and device configuration

Connection *
TCP/IP

IP *
192.168.2.210

Port *
2000

Modbus unit ID *
1

Back Test communication Next

Communication settings

Text description of this image

4.3 Test communication

Click **Test communication** at the bottom of the wizard. It reads the KSTAR hybrid inverter once and saves nothing. If the test succeeds, click **Done**: only **Done** creates the device.

Back Test communication Done

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'.

Communication channel and device configuration

Connection *
TCP/IP

IP *
192.168.20.248 Scan for IP

Port *
202 Find port

Modbus unit ID *
1

Back Test communication Done

The *Done* button

2. Text description of this image

4.4 Advanced settings

Use the advanced settings only if the location has special needs. By default, you do not need to change anything.

1
2
3

Basic settings
Communication channel
Advanced settings

Advanced settings

Do you want to set data saving interval?

☒ No
 Default: 1 min

Do you want to set reading delay?

☒ No
 Default: 1000 ms

Do you want to set writing delay?

☒ No
 Default: 1000 ms

Do you want to set power generation limits and capabilities?

☒ No

Do you want to set power consumption limits and capabilities?

☒ No

Do you want to limit communication with the device to read-only?

☒ No
 Default: No

Do you want to invert direction for energy import and export?

☒ No
 Default: No

L1 is connected to main feed

L1
▼

L2 is connected to main feed

L2
▼

L3 is connected to main feed

L3
▼

Back
Done

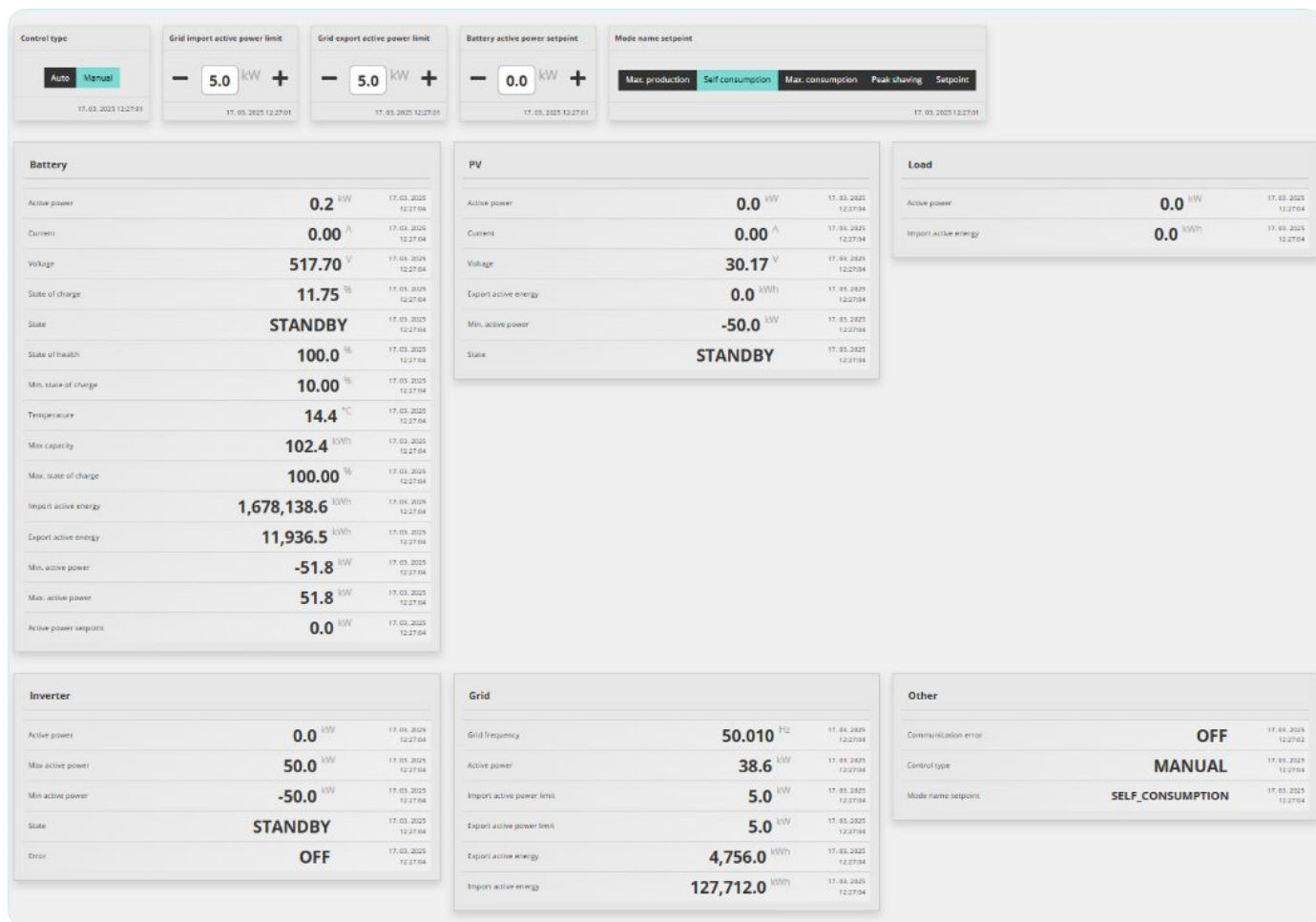
Advanced settings

Text description of this image

5 Check the readings

5.1 Last measurements

After communication is established, check the readings under **Devices – KSTAR Hybrid Inverter – Last measurement** in the [Reduxi Configurator](#).



Last measurements of the KSTAR hybrid inverter

Text description of this image

5.2 Enable control by Reduxi

For advanced control, integrate the device into the optimization modes of the Reduxi system. Under **Devices – KSTAR Hybrid** in the [Reduxi Configurator](#), set the **control type** to **AUTO**. Only then do strategy commands affect the battery.

To achieve maximum flexibility and energy cost reduction with dynamic prices and dynamic tariffs, define a strategy as described in [Strategies for Reduxi Controller](#).

After you add the device, you can also monitor and control it in [the Reduxi application](#).

✓ Summary

Preparation (Points 1–2): Use the KSTAR manual. Connect the inverter to the Reduxi Controller.

KSTAR hybrid inverter (Point 2): Enable Modbus TCP/IP on the inverter HMI. Read the IP address from the HMI.

Add to Reduxi (Points 3–4): Log in to the Reduxi web interface. Add the device with type KSTAR Hybrid, enter the IP address and run Test communication.

Go live (Point 5): Check the last measurements. Set the control type to AUTO and define a strategy.

→ Common issues

ISSUE	SOLUTION
Test communication fails	Check that Modbus TCP/IP is enabled on the inverter HMI. Check that the IP address in the communication settings matches the IP address shown on the HMI.
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:



KSTAR hybrid inverter user manual

Manufacturer manual with the inverter HMI settings.



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