

How to connect Huawei SUN2000 inverter battery with Reduxi controller

Add a Huawei SUN2000 inverter with battery to the Reduxi Controller.

🔌 Huawei SUN2000 inverter with battery · Reduxi Controller

🔌 Modbus unit ID: normally 1

🌐 Modbus TCP via Smart Dongle (SDongleA-05)



📖 IN THIS ARTICLE

1. Technical documentation
2. Required equipment
3. Device configuration (Huawei SUN2000)
 - Connect and configure
 - Enable Modbus TCP on the Smart Dongle
4. Log in to the Reduxi web interface
 - Via the Reduxi app
 - Via a web browser
5. Add the device to Reduxi
 - Basic settings
 - Communication settings
 - Advanced settings
 - Test communication
6. Check the readings
7. Summary
8. Common issues
9. Related articles

1 Technical documentation

Huawei documents for the inverter and the Modbus TCP interface:

- [Huawei support: SUN2000](#) – Manufacturer page with the instructions for connecting and configuring the inverter.
- [SDongleA-05 MODBUS TCP Guide \(Issue 01, 2021-11-07\)](#) – How to enable Modbus TCP on the Huawei Smart Dongle.
- [SUN2000MA Modbus Interface Definitions \(Issue 08, 2024-11-07\)](#) – Modbus register definitions of Huawei inverters, including battery registers.

2 Required equipment

- ☐ Huawei SUN2000 inverter with a connected battery
- ☐ Reduxi Controller
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

3 Device configuration (Huawei SUN2000)

3.1 Connect and configure the inverter

Find the instructions on the manufacturer web page:

<https://support.huawei.com/enterprise/en/fusionsolar/sun2000-pid-7551590>

3.2 Enable Modbus TCP on the Smart Dongle

If the inverter communicates over Modbus TCP through the Huawei Smart Dongle (SDongleA-05), enable Modbus TCP first. The Smart Dongle must stay powered on, and the dongle and the Reduxi Controller must be in the same local network. For the dongle itself, see [How to connect Huawei SUN2000 \(Smart Dongle WLAN-FE / 4G\) with Reduxi controller](#).

1 Check the versions

Minimum versions: SDongleA-05 V100R001C00SPC124, SUN2000L V200R001C00SPC115, SUN2000MA V100R001C00SPC139. The SUN2000 app must be version 3.2.00.015 or later.

2 Connect the app to the inverter

Connect to the inverter in the SUN2000 app over WLAN and log in as installer.

3

Open the Modbus-TCP setting

Go to **Home – Settings – Communication configuration – Dongle parameter settings – Modbus-TCP**.

4

Choose the access mode

Restriction: enter one trustlist IP address. Only that client has access. **Unrestricted:** any client in the same LAN has access, but only one client at a time.



Important

If Modbus TCP is disabled, devices such as the Reduxi Controller cannot access the inverter. In **Restriction** mode, enter the IP address of the Reduxi Controller.

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

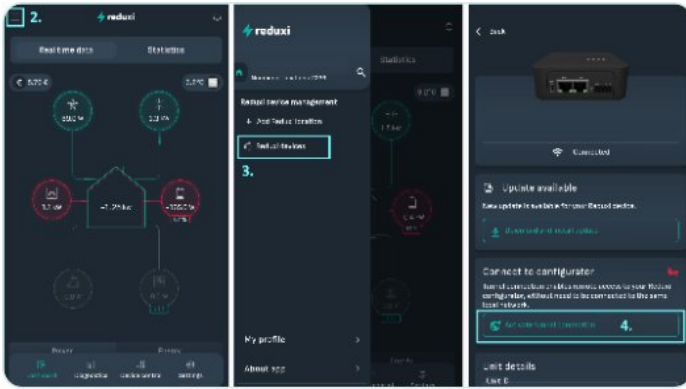
Activate the tunnel connection

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

4

Open the configurator

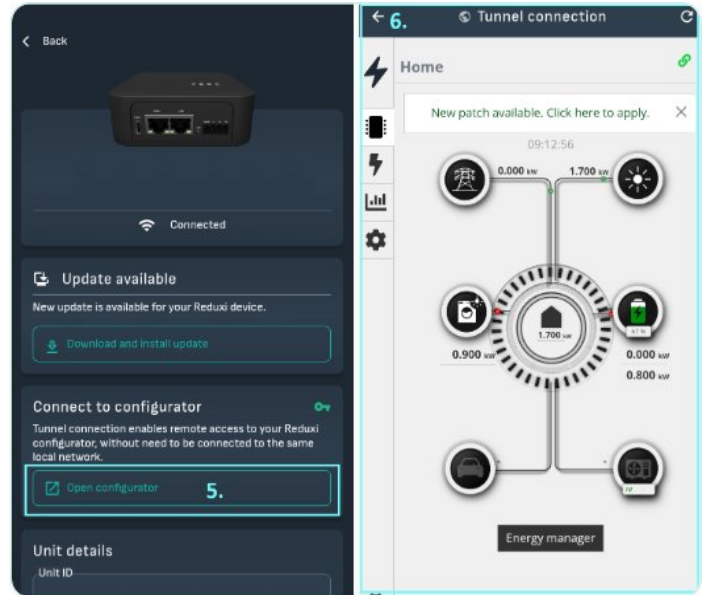
Tap **Open configurator**. The Reduxi web interface opens.



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)

Text description of this image

Screenshot of the Reduxi mobile app showing the 'Update available' screen and the 'Tunnel connection' screen.

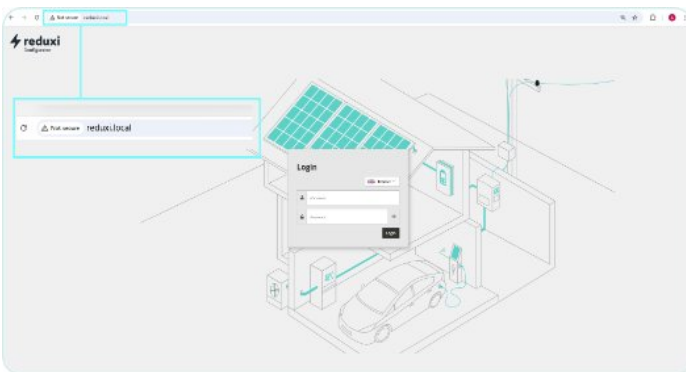
4.2 Via a web browser

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**.

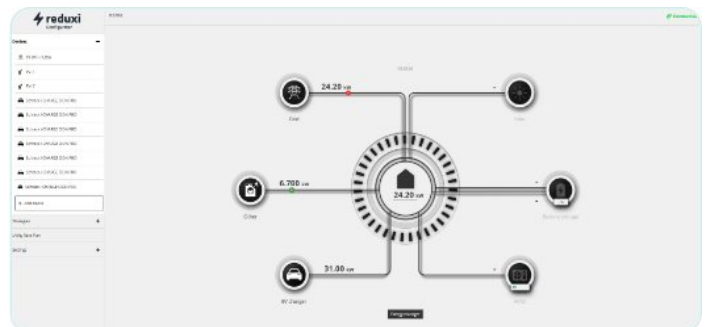
2 Log in

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

5.1 Basic settings

Log in locally to the [Reduxi Configurator via the browser](#) (see [Point 4](#)) and click **+ Add device**. Enter the basic settings of the device.

5.2 Communication settings

Select the communication channel and enter the device configuration:

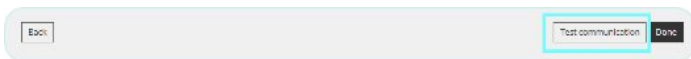
PARAMETER	VALUE
Communication channel	Select the channel used for the inverter
Modbus unit ID	Normally 1

5.3 Advanced settings

Enter and choose the advanced settings.

5.4 Test communication

Click **Test communication** at the bottom of the wizard. It reads the Huawei SUN2000 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

After communication is established, check the values of the device under **Devices** in the Reduxi Configurator.

6.2 Enable control by Reduxi

Set the **control type** to **AUTO**. Only then do strategy commands affect the device. To define a strategy, see [Strategies for Reduxi controller](#).

✓ Summary

Preparation (Points 1–2): Find the Huawei documents and prepare the equipment.

Huawei SUN2000 (Point 3): Connect and configure the inverter. Enable Modbus TCP on the Smart Dongle if you use it.

Add to Reduxi (Points 4–5): Log in to the Reduxi Configurator, add the device with Modbus unit ID 1 and test communication.

Go live (Point 6): Check the readings and set the control type to AUTO.

→ Common issues

ISSUE	SOLUTION
Modbus-TCP is not shown in the SUN2000 app	Check the versions of the inverter, the Smart Dongle and the app (Point 3.2).
The Reduxi Controller cannot reach the inverter	Check that Modbus TCP is enabled. In Restriction mode, only the trustlisted IP address has access (Point 3.2).
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:



How to connect Huawei SUN2000 (Smart Dongle WLAN-FE / 4G) with Reduxi controller

Set up the Huawei Smart Dongle on a SUN2000 inverter.



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