

Reduxi with Sungrow

Connect Sungrow string inverters, hybrid inverters and ST batteries to the Reduxi Controller via Modbus TCP/IP (WiNet-S/S2, Data Logger or LC300) for maximum flexibility and lower energy costs.

🔌 Sungrow string, hybrid inverter and ST battery · Reduxi Controller

🌐 Modbus TCP/IP via WiNet-S/S2, Data Logger 1000/4000 or LC300

📡 Modbus TCP port 502 · Modbus ID from the device

SUNGROW

IN THIS ARTICLE

1. Technical documentation
2. Supported devices and required equipment
 - Supported Sungrow devices
 - Required equipment
3. Connect the string or hybrid inverter
 - Connection through the WiNet-S/S2 dongle
 - Install the WiNet-S/S2
 - Open Modbus TCP locally
 - Open Modbus TCP via iSolarCloud
 - Connection through Data Logger 1000/4000
4. Connect the ESS C&I (ST battery series) through the LC300
 - LAN connection
 - Communication parameters
 - System parameters
5. Log in to the Reduxi web interface
 - Via the Reduxi app
 - Via a web browser
6. Add the Sungrow device to Reduxi
 - Basic settings
 - Communication settings
 - Test communication
7. Check the readings
8. Summary
9. Common issues
10. Related articles

1 Technical documentation

Manufacturer manuals for the Sungrow communication devices:

- [User manual WiNet-S/S2](#) – Dongle for Wi-Fi or LAN connection of the inverter
- [User manual Data Logger 1000](#) – Logger for LAN connection of the inverters
- [User manual Data Logger 4000](#) – See chapter 2.2 of the manual
- [User manual LC300](#) – Local controller for the ST battery series

2 Supported devices and required equipment

2.1 Supported Sungrow devices

The connection method depends on the device type:

TYPE	MODELS	CONNECTION TYPE
Sungrow String Inverter 3p	SGXXX-XX Series	WiNet-S/S2 (see Point 3) Data Logger (see Point 3)
Sungrow Hybrid Inverter 3p	SH Series	WiNet-S/S2 (see Point 3) Data Logger (see Point 3)
ESS C&I	STXXX kWh series / Power stack	Sungrow LC300 Local Controller (see Point 4)

2.2 Required equipment

- ☐ Reduxi Controller
- ☐ Sungrow string or hybrid inverter, or ST battery (ESS C&I)
- ☐ WiNet-S/S2 dongle, Data Logger 1000/4000 or LC300 (depending on the device)
- ☐ Ethernet cable (RJ45)
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

3 Connect the string or hybrid inverter

3.1 Connection through the WiNet-S/S2 dongle

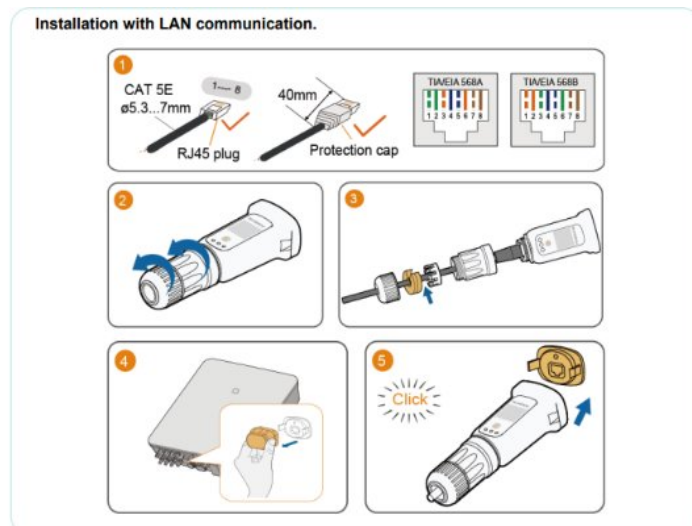
The [WiNet-S/S2](#) dongle connects the inverter to the local network via Wi-Fi or LAN.

3.2 Install the WiNet-S/S2 on the inverter

The pictures show the generic installation of the WiNet on a Sungrow inverter, first with WLAN communication, then with LAN communication. For details, see the manuals in [Point 1](#).



Installation with WLAN communication

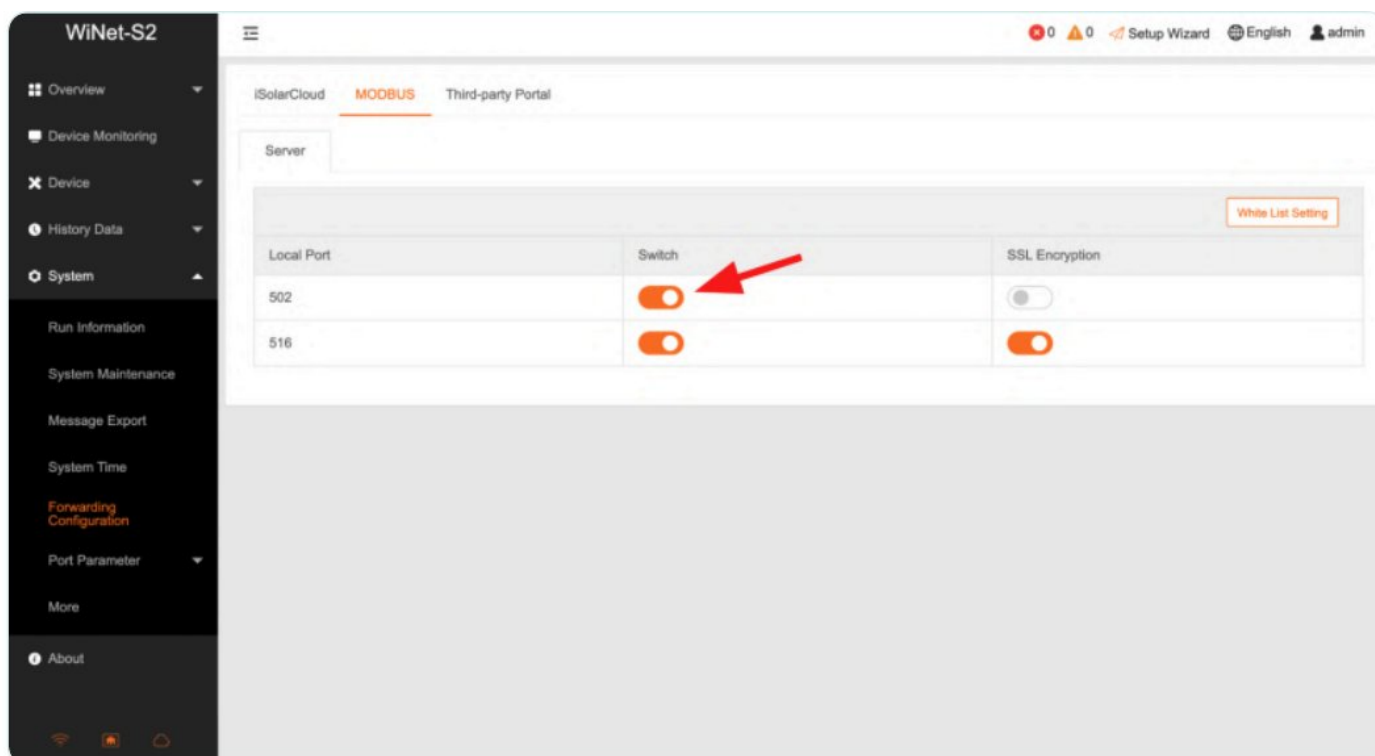


Installation with LAN communication

3.3 Open Modbus TCP locally on the WiNet-S/S2

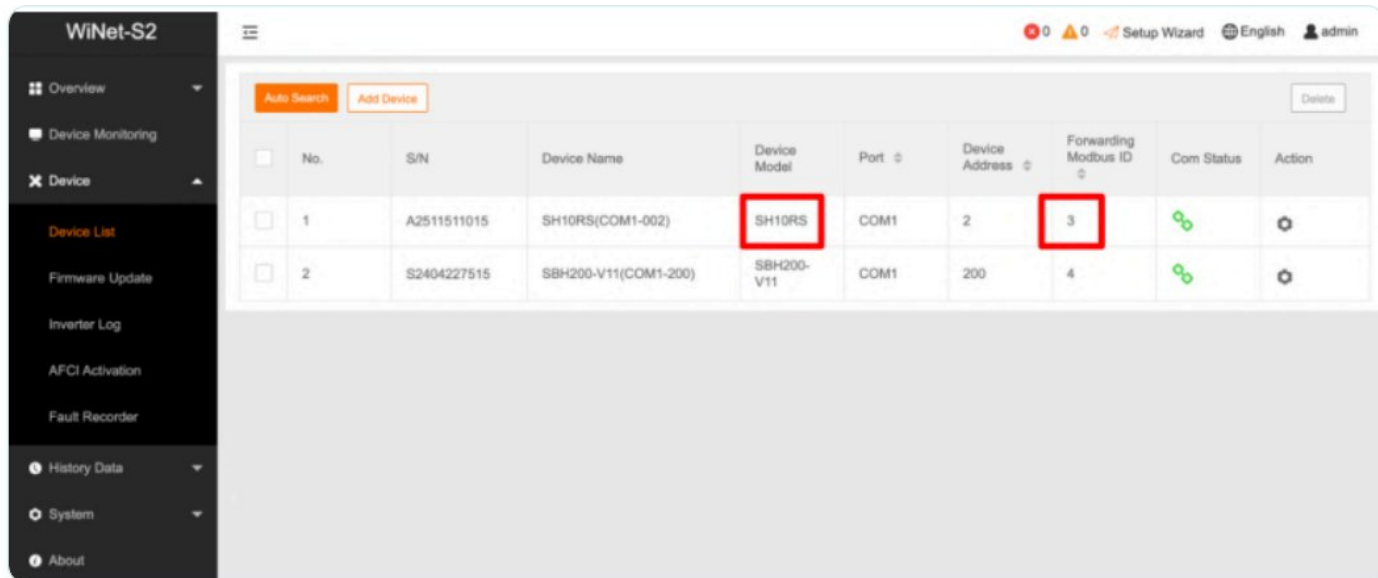
Reduxi can only communicate with the Sungrow inverter if Modbus TCP is enabled on port 502. You can set this locally in the WiNet web interface (this point) or in the iSolarCloud web app (see Point 3.4).

- Connect to the WiNet-S/S2 web interface.
- Go to **System – Forwarding Configuration** and enable **port 502**.



Forwarding Configuration: port 502 enabled

To find the Modbus unit ID of the inverter, go to **Device – Device List** and check the **Forwarding Modbus ID** of the inverter.



No.	S/N	Device Name	Device Model	Port	Device Address	Forwarding Modbus ID	Com Status	Action
1	A2511511015	SH10RS(COM1-002)	SH10RS	COM1	2	3		
2	S2404227515	SBH200-V11(COM1-200)	SBH200-V11	COM1	200	4		

Device List: Forwarding Modbus ID

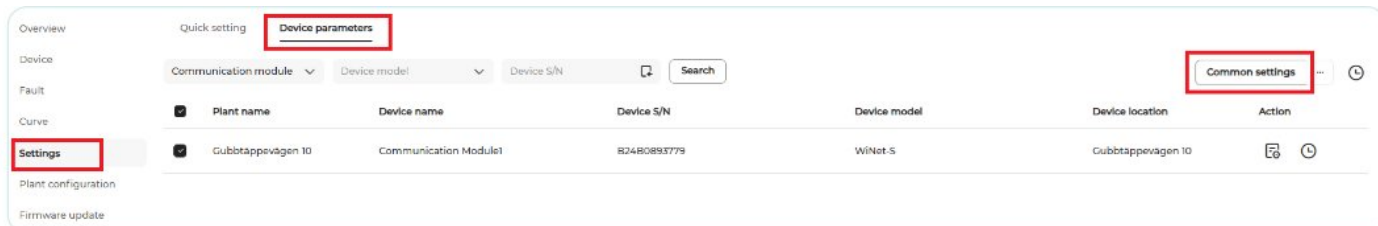


Modbus ID

Enter the same Modbus ID in the Reduxi Configurator (see [Point 6](#)).

3.4 Open Modbus TCP via the iSolarCloud web app

- Log in to the iSolarCloud web app on your computer.
- Go to **Settings – Device parameters – Common Settings** of the WiNet dongle.



Plant name	Device name	Device S/N	Device model	Device location	Action
Gubbtäppegården 10	Communication Module1	82480893779	WiNet-S	Gubbtäppegården 10	

Settings – Device parameters

In the common settings of the WiNet dongle, set **Modbus TCP 502 Port on/off** to **open**.

Common settings

No.	Parameter name	Value
1	AP hotspot	Please select ▼
2	O&M	Please select ▼
3	Update to previous (or same) version	Please select ▼
4	Reset login password	Please select ▼
5	Modbus TCP 502 port on/off	Please select ▲
6	Remote device restart	Please select Open Disable

Modbus TCP 502 Port: open

3.5 Connection through Data Logger 1000/4000

For details, see the Sungrow documentation for [Data Logger 1000](#) and [Data Logger 4000](#).

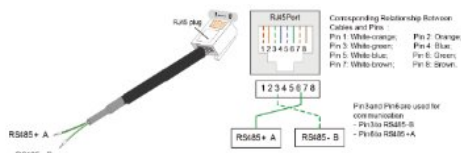
Step 1. Connect the Data Logger to the inverters with an Ethernet cable (RJ45).

Communication cable specification:

Cable	Type
RJ45 communication cable	Shielded twisted pair Ethernet cable

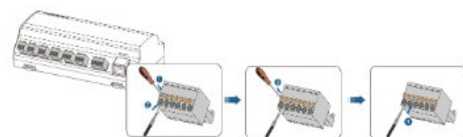
step 1 Lead the RJ45 communication cable from the inverter to the wiring area of Logger1000.

step 2 Strip the insulation layer of the communication cable with an Ethernet wire stripper, and lead the corresponding RS485A/B signal cables out. Insert cord end terminals into signal cable RS485+ A and signal cable RS485- B, and crimp them with a crimper. Cut off the redundant signal cable and wrap it with a heat-shrink tubing. If the communication cable is Shielded Ethernet cable, white-green wire 3 is defined as RS485- B wire and the green wire 6 as RS485+ A wire.

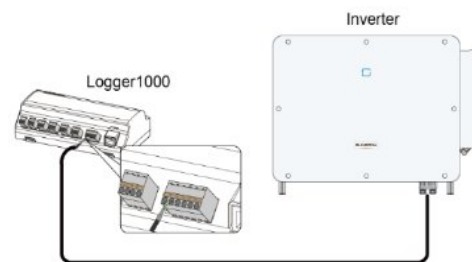


Cable specification and wiring

step 3 Connect the communication cable to the RS485 ports of the Logger1000, as shown in the figure below.

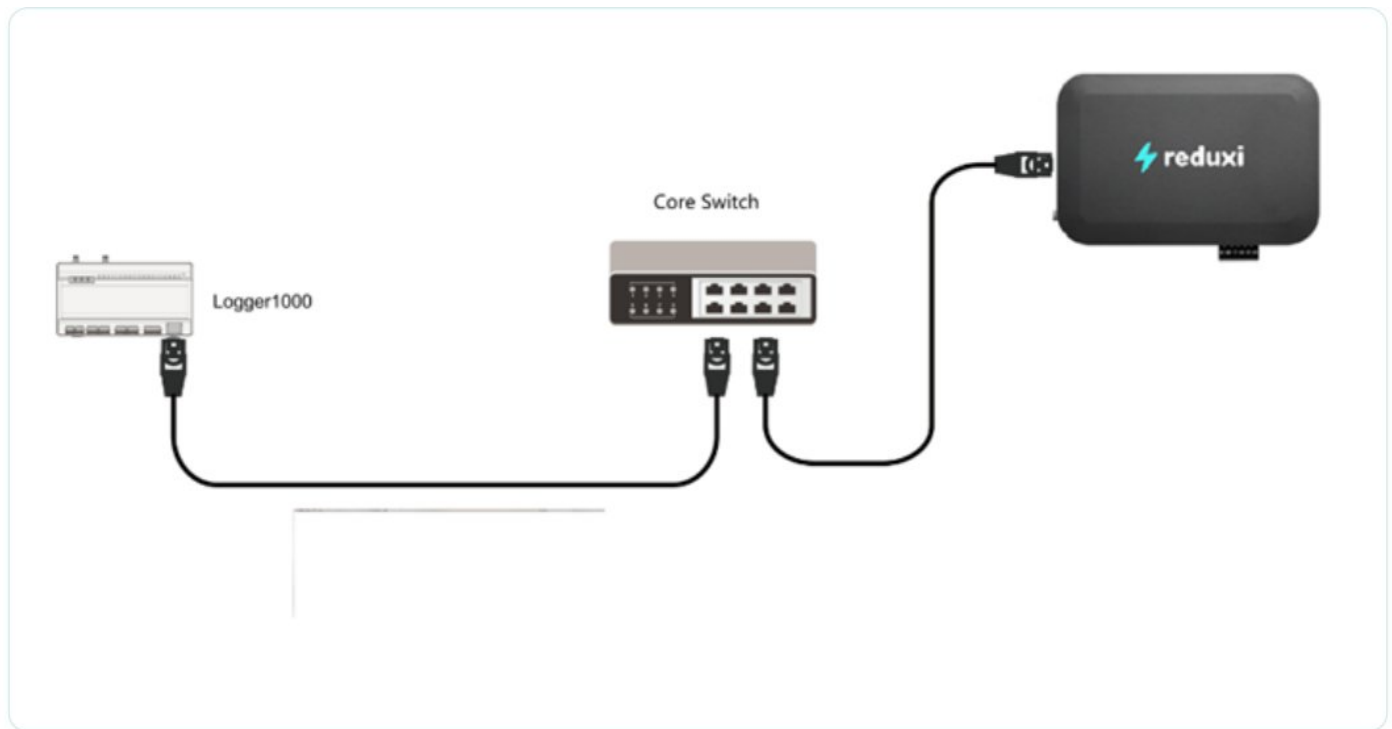


step 4 Connect the Logger1000 to the inverter.



Connection to the Logger1000 and the inverter

Step 2. Connect the Data Logger 1000/4000 to the Reduxi Controller with an Ethernet cable.

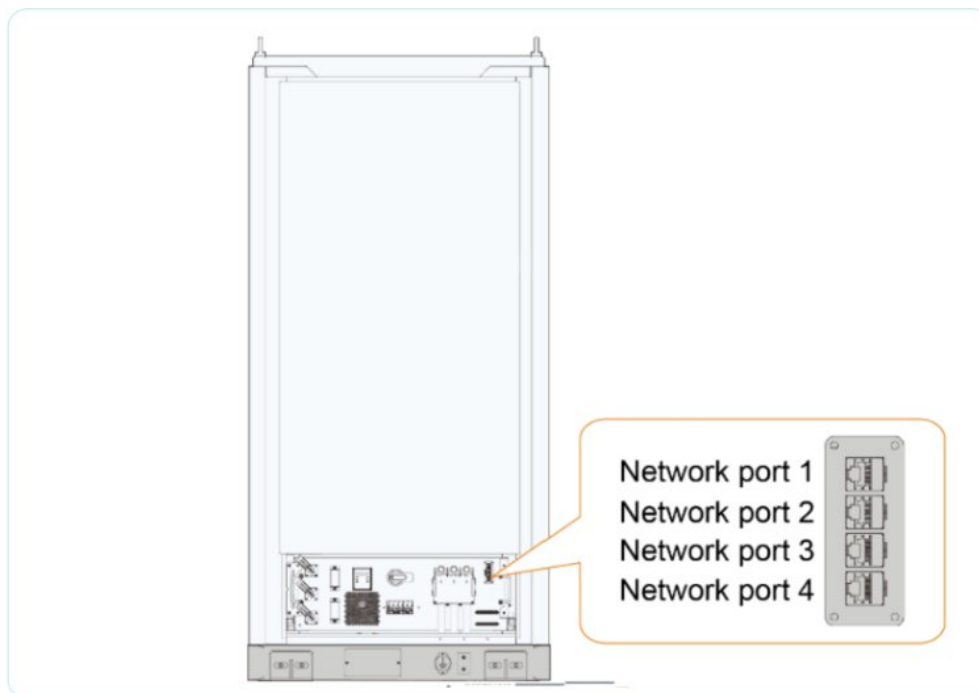


Logger1000, core switch and Reduxi Controller

4 Connect the ESS C&I (ST battery series) through the LC300

4.1 Connect the LC300 to the battery and the Reduxi Controller

Connect the [LC300](#) on the ST battery directly to the Reduxi Controller through Ethernet. The figure shows the positions of the **Ethernet communication ports**.

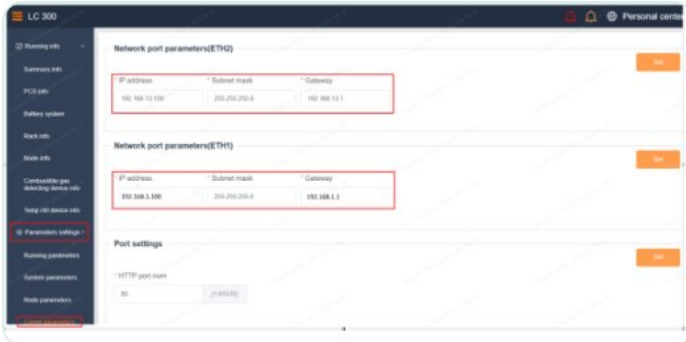


Positions of the Ethernet communication ports

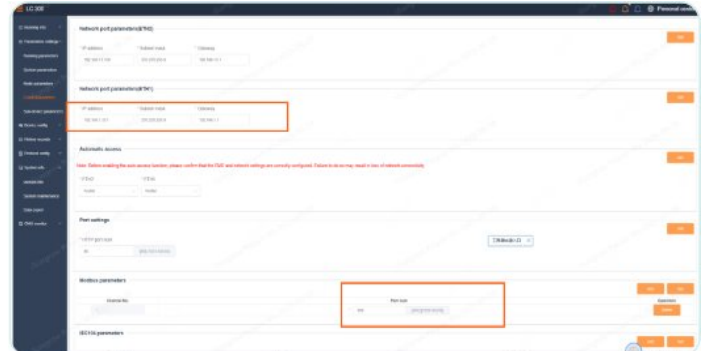
4.2 Set the communication parameters

Log in to the LC300 web interface and go to **Parameter Settings – Comm Parameters**. Make sure the **IP address**, **Subnet mask** and **Gateway** match the local network for Ethernet.

The Modbus port is set to **502** and is open by default, as the pictures show. Save the settings.



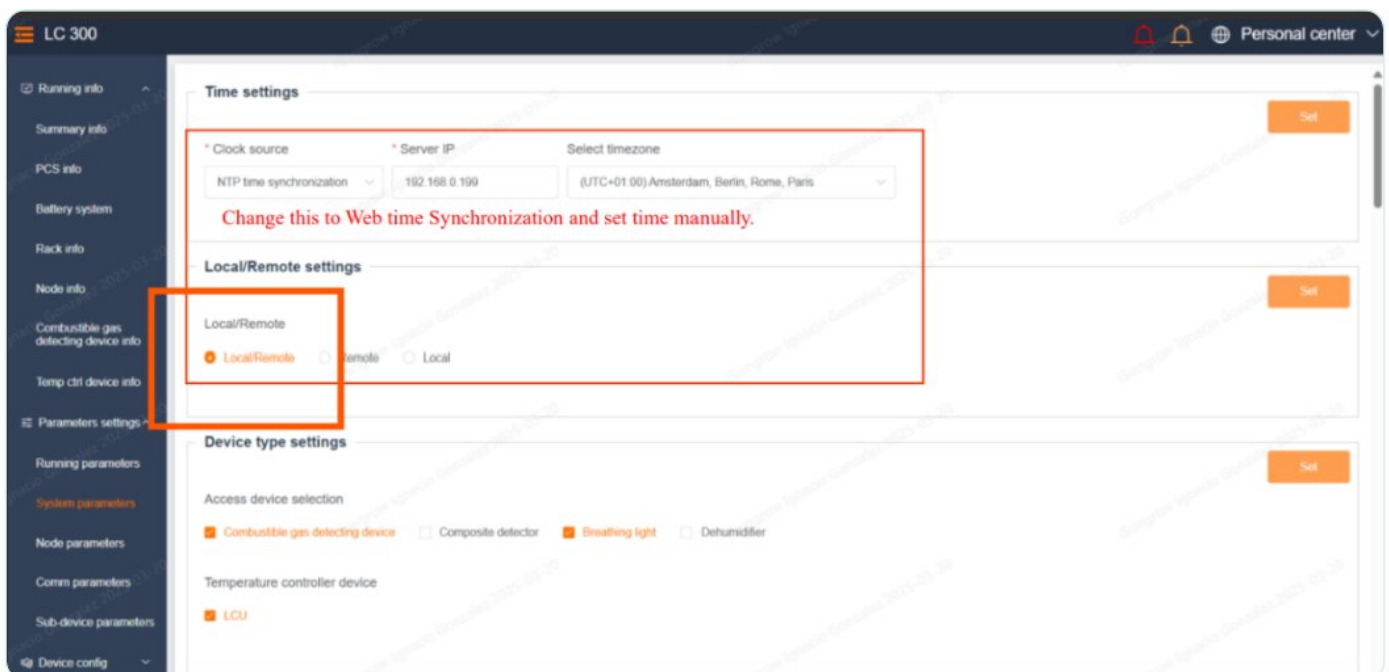
Network port parameters



Modbus port 502

4.3 Set the system parameters

Go to **System Parameters** and set the local/remote setting to **Local/Remote**. Change the time setting to **Web Time Synchronization** and set the time manually.



Time settings

5 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

5.1 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

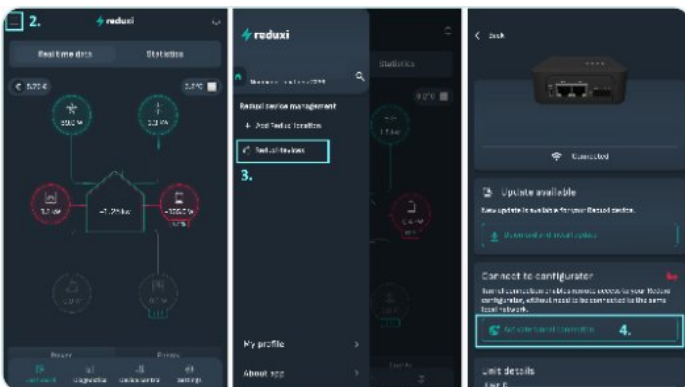
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

3 Activate the tunnel connection

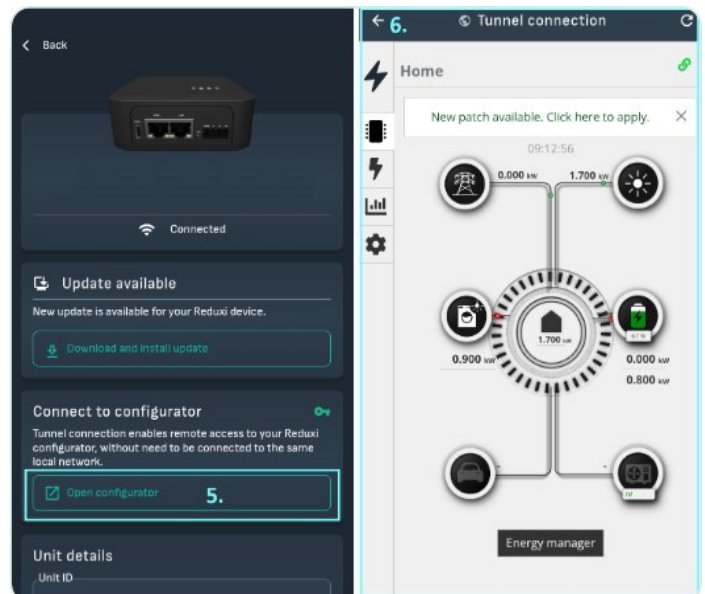
Switch on the tunnel connection and wait a moment until it is active.

4 Open the configurator

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



Activate the tunnel connection (step 3)



Open configurator (step 4)

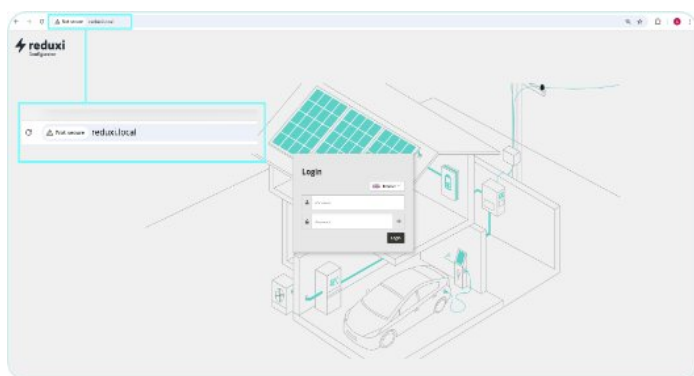
5.2 Via a web browser

1 Open the login page

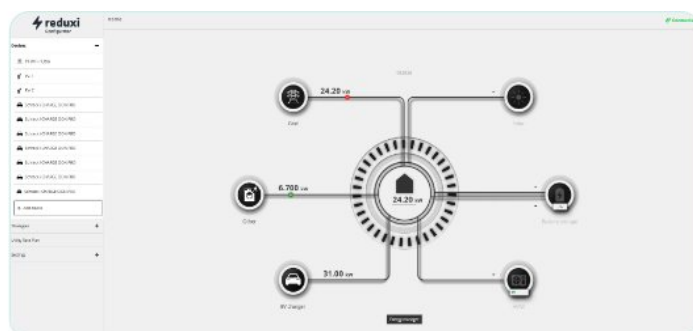
On a device in the same network, open a web browser and enter the controller's IP address or `http://reduxi.local`. You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

2 Log in

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



Reduxi Controller login screen



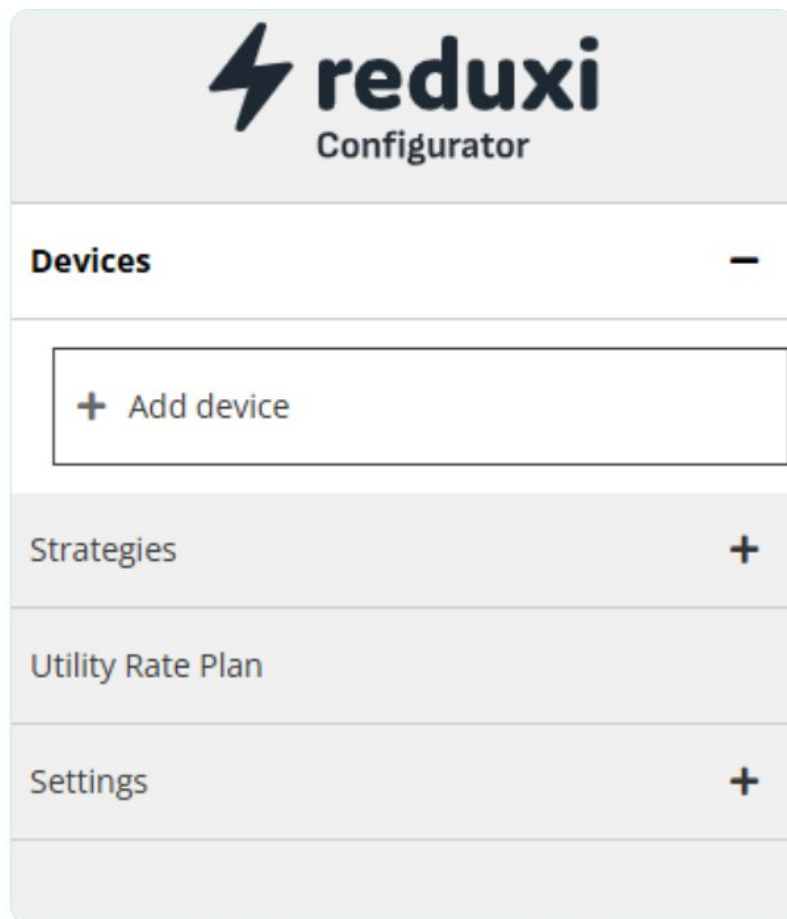
Controller web interface after login

6 Add the Sungrow device to Reduxi

Use these steps to add a new Sungrow device or to edit an existing one.

6.1 Basic settings

Log in locally to the [Reduxi Configurator](#) on the controller (see [Point 5](#)) and click **+ Add device**.

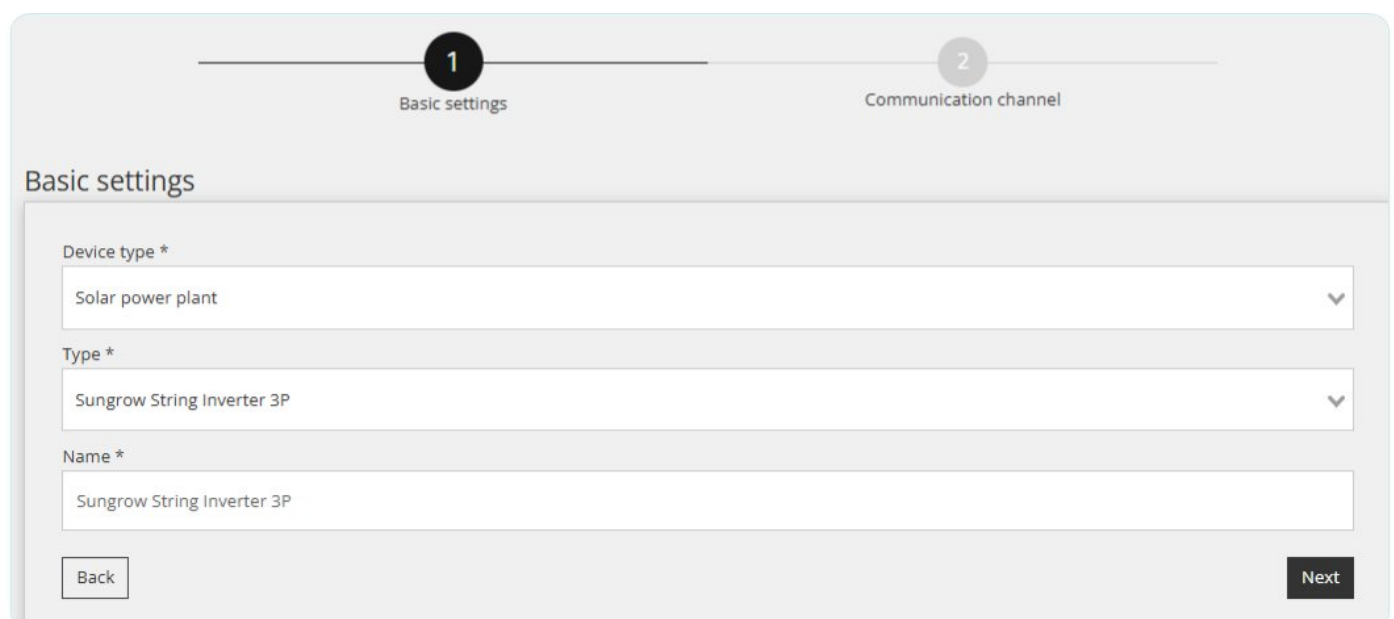
The image shows the Reduxi Configurator main menu. At the top is the Reduxi logo, which consists of a lightning bolt icon followed by the word "reduxi" in a bold, sans-serif font, and "Configurator" in a smaller font below it. Below the logo is a horizontal bar with the word "Devices" on the left and a minus sign on the right. Underneath this bar is a large rectangular button with a plus sign and the text "Add device". Below the button are three more horizontal bars: the first has "Strategies" on the left and a plus sign on the right; the second has "Utility Rate Plan" on the left; the third has "Settings" on the left and a plus sign on the right.

The + Add device button

In the first step, define the basic settings.

Sungrow string or hybrid inverter

- Device type: **Solar Power Plant** or **Hybrid** , depending on the system
- Type: **Sungrow string/hybrid inverter 3p**
- Name: a name of your choice

The image shows the "Basic settings" form in the Reduxi Configurator. At the top, there is a progress bar with two steps: "1 Basic settings" (active) and "2 Communication channel". Below the progress bar, the title "Basic settings" is displayed. The form contains three input fields: "Device type *" with a dropdown menu showing "Solar power plant", "Type *" with a dropdown menu showing "Sungrow String Inverter 3P", and "Name *" with a text input field containing "Sungrow String Inverter 3P". At the bottom left is a "Back" button, and at the bottom right is a "Next" button.

Basic settings: Sungrow string/hybrid inverter

Sungrow ESS C&I (ST battery series)

- Device type: **Battery**
- Type: **Sungrow ST**
- Name: a name of your choice

1 Basic settings 2 Communication channel

Basic settings

Device type *

Battery

Type *

Sungrow ST

Name *

Sungrow ST

Back Next

Basic settings: Sungrow ST battery

Click **Next**.

6.2 Communication settings

In the second step, define the communication channel between the Reduxi Controller and the Sungrow device.

Sungrow string or hybrid inverter

PARAMETER	VALUE
Connection	TCP
IP	IP address of the inverter
Modbus ID	The Modbus ID from the WiNet-S/S2 or Data Logger (see Point 3)

1

Basic settings

2

Communication channel

Communication channel and device configuration

Connection *

TCP/IP
▼

IP *

Port *

502

Modbus unit ID *

1

Back

Test communication

Done

Communication settings: Sungrow string/hybrid inverter

Sungrow ESS C&I (ST battery series)

PARAMETER	VALUE
Connection	TCP/IP
IP	IP address of the LC300. Click Scan for IP to find it.
Modbus ID	The Modbus ID from the LC300 web interface

1

Basic settings

2

Communication channel

Communication channel and device configuration

Connection *

TCP/IP ▼

IP *

Scan for IP

Port *

502

Modbus unit ID *

1

Back

Test communication

Done

Communication settings: Sungrow ST battery

6.3 Test communication

Click **Test communication** below the communication parameters. It checks whether the Modbus connection works. It reads the device once and saves nothing. If the test succeeds, click **Done**: only **Done** creates the device.

Modbus unit ID *

1

Rated power of inverter [kW] *

kW

Back

Test communication

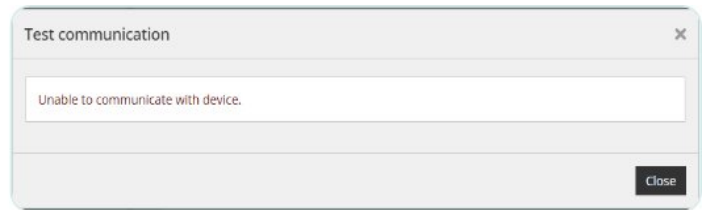
Done

*The **Test communication** button*

The test returns one of two results:



1. Successful readout: the connection works



2. Failed test: the connection does not work

7 Check the readings

7.1 Last measurements

After communication is established, check the values under **Devices – Sungrow – Last Measurements** in the [Reduxi Configurator](#) as an additional test.

Last measurements | Analyze | Archive | Details

Control type: **Auto** | Manual | OFF | Boost

26. 09. 2025 14:32:53

Current		
PV current	17.26 A	26. 09. 2025 14:33:20

Voltage		
PV voltage	229.33 V	26. 09. 2025 14:33:20
Voltage L1	233.80 V	26. 09. 2025 14:33:20
Voltage L2	235.80 V	26. 09. 2025 14:33:20
Voltage L3	233.70 V	26. 09. 2025 14:33:20

Power		
Active power	-13.9 kW	26. 09. 2025 14:33:20
Export active power	13.9 kW	26. 09. 2025 14:33:20
Export active power limit	43.9 kW	26. 09. 2025 14:33:20
Import active power	0.0 kW	26. 09. 2025 14:33:20
Max. active power	0.0 kW	26. 09. 2025 14:33:20
Min. active power	-44.0 kW	26. 09. 2025 14:33:20
Power factor	1.00	26. 09. 2025 14:33:20

Energy		
Export active energy	34,321.3 kWh	26. 09. 2025 14:33:20

Other		
Communication error	OFF	26. 09. 2025 14:33:19
Control type	AUTO	26. 09. 2025 14:33:20
Inverter temperature	45.90 °C	26. 09. 2025 14:33:20

(Please enable control in Settings) | HTTP-4002-440C-046C7

Last measurements of the Sungrow device

7.2 Enable control by Reduxi

For advanced battery and inverter control, integrate the device into the Reduxi strategy. Under **Devices – Sungrow** in the [Reduxi Configurator](#), set the **control type** to **AUTO**. Only then do strategy commands affect the inverter.

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 have added the device, you can also monitor and control it via the [Reduxi application](#).

✓ Summary

Preparation (Points 1–2): Check the manufacturer manuals. Choose the connection method: WiNet-S/S2 or Data Logger for string and hybrid inverters, LC300 for ST batteries.

Sungrow (Points 3–4): Open Modbus TCP on port **502** and note the Modbus ID of the device. For the ST battery, set IP address, subnet mask and gateway on the LC300.

Add to Reduxi (Points 5–6): Log in to the Configurator, add the device, enter IP and Modbus ID, run **Test communication** and click **Done**.

Go live (Point 7): Check the last measurements and set the **control type** to **AUTO** .

→ Common issues

ISSUE	SOLUTION
Test communication fails with a WiNet-S/S2 or iSolarCloud connection	Modbus TCP is not open. Enable port 502 under System – Forwarding Configuration in the WiNet web interface, or set Modbus TCP 502 Port on/off to open in iSolarCloud (see Point 3).
Test communication fails although port 502 is open	Check the Modbus ID. Read the Forwarding Modbus ID under Device – Device List and enter the same value in the Reduxi Configurator.
The LC300 is not reachable	Check IP address , Subnet mask and Gateway under Parameter Settings – Comm Parameters (see Point 4). In the Configurator, click Scan for IP to find the LC300.
Strategy commands have no effect	Set the control type of the device to AUTO (see Point 7). For the ST battery, check that the local/remote setting of the LC300 is Local/Remote (see Point 4).
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 here.
reduxi.local 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:



Sungrow WiNet-S/S2 user manual

Installation and settings of the WiNet-S/S2 dongle from the manufacturer



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