

Kronoterm Heat pump with SG ready contacts and Reduxi

SG contacts regulate the heat pump via the relay outputs of the Reduxi Gateway. With flexible heat pumps, we can cut electricity costs by 30%.

🔌 Kronoterm heat pump · Reduxi Controller · Reduxi Gateway

🔌 SG Ready contacts D5 (reduce) and D8 (increase)

⚡ 2 relay outputs (NO) · 3 current sensors

IN THIS ARTICLE

1. Required equipment and system overview
 - Required components
 - Overview of the connection
2. Connect the Reduxi Gateway to the local network
3. Connect the relays and the current sensors
 - Relays to SG contacts
 - Current sensors
4. Log in to the Reduxi web interface
 - Via the Reduxi app
 - Via a web browser
5. Add the heat pump to Reduxi
 - Basic settings
 - Communication settings
 - Test communication
 - Advanced settings
6. Check the readings
 - Last measurements
 - Enable control by Reduxi
7. Summary
8. Common issues
9. Related articles

1 Required equipment and system overview

1.1 Required components

To connect the Reduxi Controller to the Kronoterm heat pump you need:

- ☐ Reduxi Controller, connected to the local network ([Reduxi Controller](#))
- ☐ Reduxi Gateway with 3x30 current sensors
- ☐ AC-DC adapter for the Reduxi Gateway
- ☐ UTP cable (LAN) for a wired connection of the Gateway, optional
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

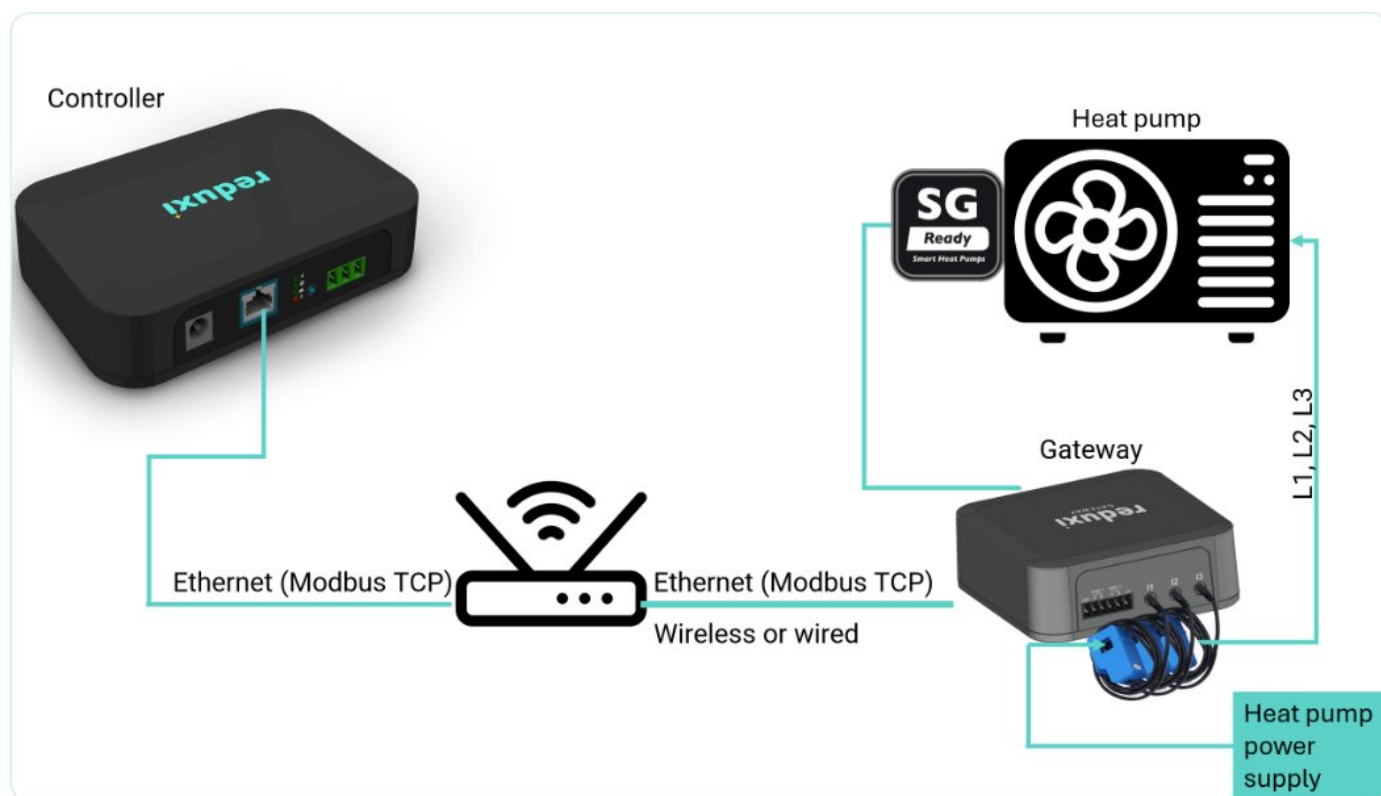
The Reduxi Gateway must be added to the Reduxi Controller to commission the heat pump. The connection can be wireless (WLAN) or wired via a UTP cable (LAN). More about the connection: [Reduxi Gateway](#).

The Reduxi Gateway with 3x30 current sensors contains:

- three current sensors, which cover the phase conductors of the heat pump
- two relay outputs, which are physically connected to the SG Ready contacts of the heat pump

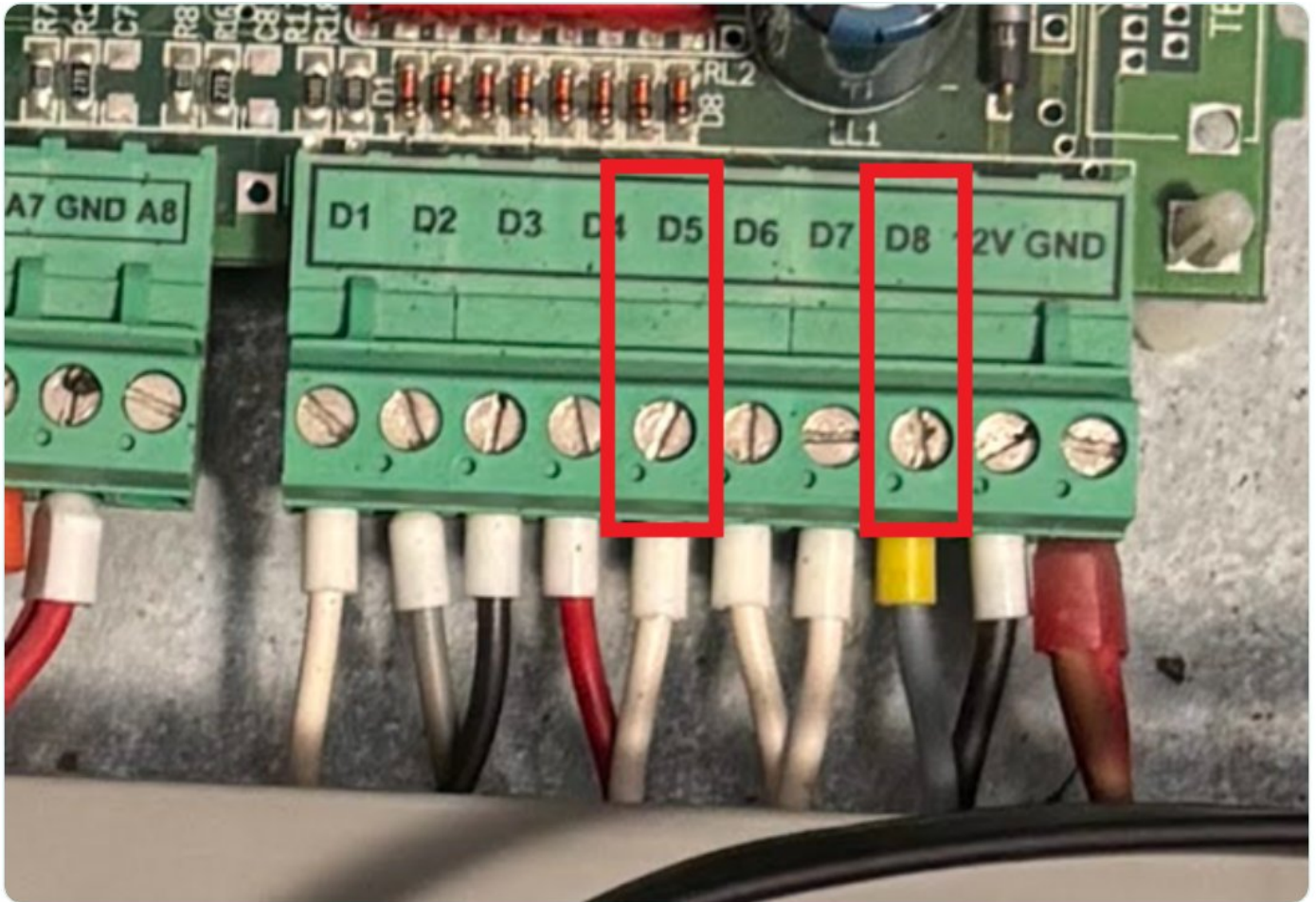
1.2 Overview of the connection

The picture shows the entire connection from the controller to the heat pump.



Connection from the Reduxi Controller to the heat pump

Before you connect the relays, check where the SG contacts are located on the heat pump circuit. The picture shows the SG contacts of a Kronoterm heat pump as an example.



SG contacts of the Kronoterm heat pump

DIGITAL INPUT D5

The SG contact reduces the operation of the heat pump.

DIGITAL INPUT D8

The SG contact increases the operation of the heat pump.

2 Connect the Reduxi Gateway to the local network

Connect the Reduxi Gateway to your local network first. The Reduxi Controller must already be connected to the same local network ([Reduxi Controller](#)).

1 Power the Gateway

Plug the AC-DC adapter into the Reduxi Gateway, then plug the adapter into the mains. The first LED from the top starts to glow green.

2 Connect to the Gateway network

On your mobile device or computer, open the Wi-Fi network settings and connect to the wireless network **Gateway**.

3

Open the Gateway page

If the popup does not appear automatically, open your browser and go to <http://gateway.local>.

4

Log in

Use the username `admin` and the password `admin`.

5

Set up the network

Connect the Reduxi Gateway to your local network. We recommend a static IP address.

- Wired network: set it up if you connect to the local network with an Ethernet cable.
- Wireless network: set it up if you connect to the local network via Wi-Fi.

6

Save

Click **Save**. Then connect your mobile device or computer to the same wired or wireless local network that you connected the Reduxi Gateway to.

Continue with the next section to connect the relay outputs and install the current sensors.

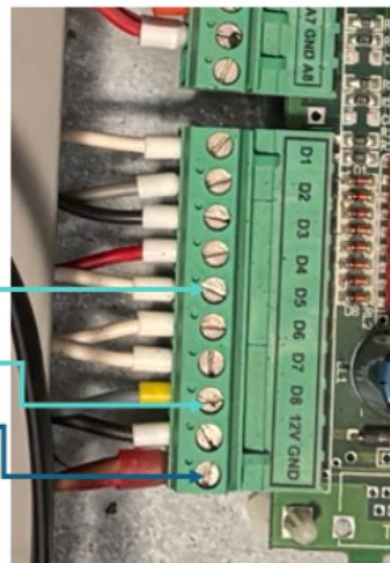
3

Connect the relays and the current sensors

3.1 Connect the Gateway relays to the SG contacts

Connect the relay outputs of the Reduxi Gateway to the SG contacts as shown in the picture.

Reduxi Gateway



SG ready contacts

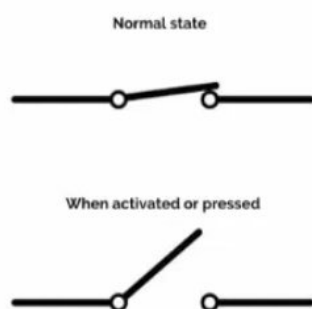
Relay outputs connected to the SG contacts



Warning

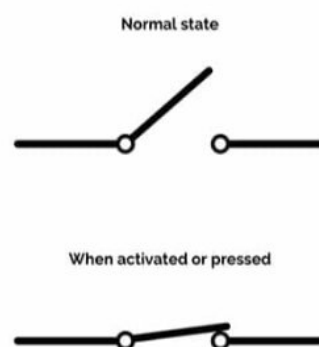
The Reduxi Gateway allows relay outputs that are permanently closed (**Normally Closed – NC**) or open (**Normally Opened – NO**). The Kronoterm heat pump uses **NO** contacts.

A normally closed (NC) contact/switch



Normally Closed (NC)

A normally open (NO) contact/switch



Normally Open (NO)

3.2 Install the current sensors

The current sensors measure the electrical power of the heat pump in real time. They are included in the Reduxi Gateway kit. Connect them to the three inputs, one per phase, as shown in the picture.



Current sensors connected to the Reduxi Gateway

Each current sensor covers one phase (L1, L2, L3) of the heat pump:



Current sensors on the phases L1, L2 and L3

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

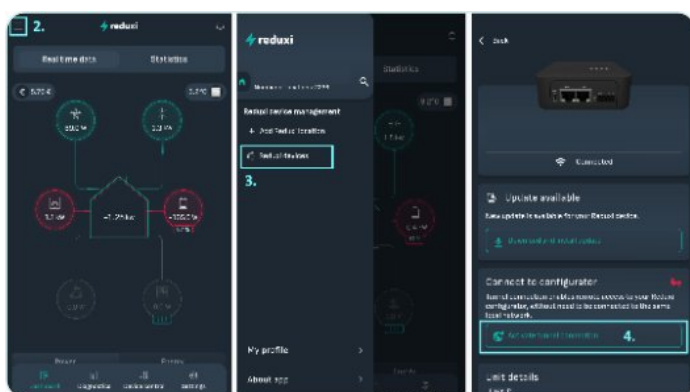
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

3 Activate the tunnel connection

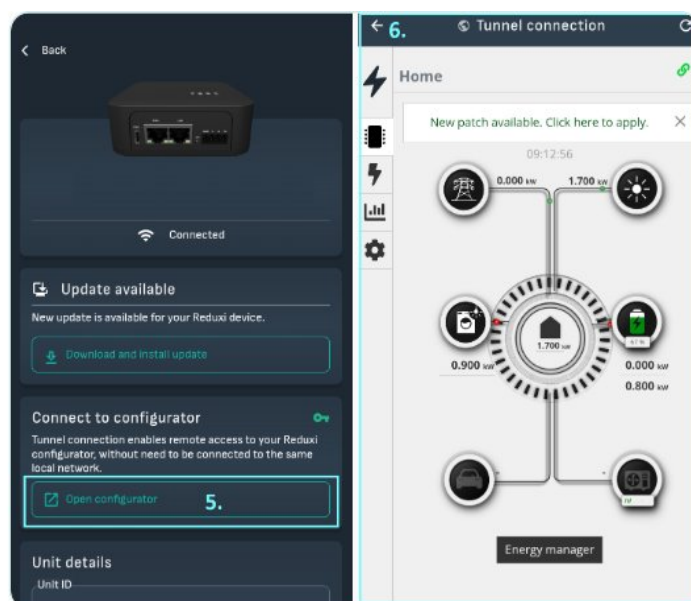
Switch on the tunnel connection and wait a moment until it is active.

4 Open the configurator

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



Activate the tunnel connection (step 3)



Open configurator (step 4)

4.2 Via a web browser

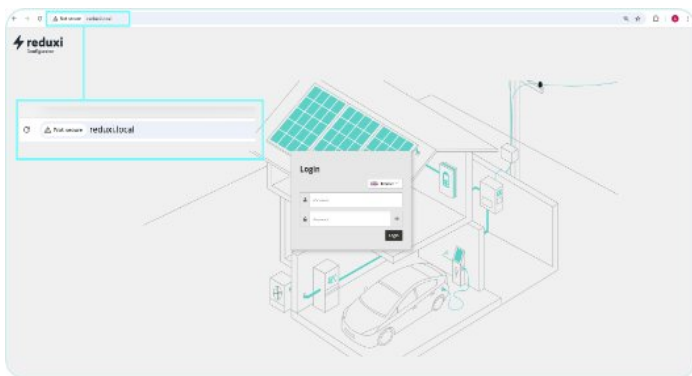
1 Open the login page

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**.

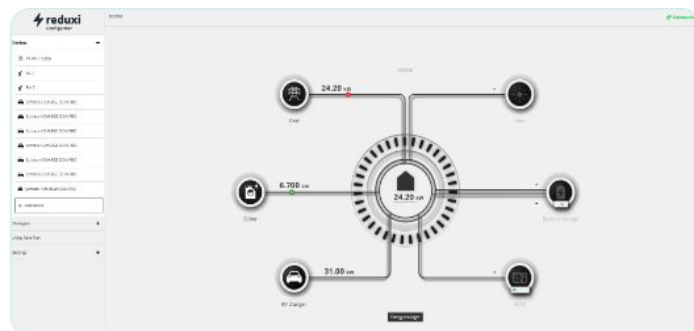
2

Log in

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



Reduxi Controller login screen



Controller web interface after login

5 Add the heat pump to Reduxi

Use these steps to add a new heat pump or to edit an existing one.

5.1 Basic settings

Log in locally to the [Reduxi Configurator](#) on the controller (see [Point 4](#)) and press the **Add device** button.

reduxi[⚡]

CONFIGURATOR

Devices



Strategies



+ Add device

+ Add strategy

Settings

Profile

*The **Add device** button*

In the first step, select the basic parameters of the device you want to add:

- Device type: **HVAC**
- Type: **Reduxi Meter**
- Name: a name of your choice

The basic settings menu gives three options. Fill in the fields as shown in the picture and name the last field as you like.

Basic settings: device type, type and name

5.2 Communication settings

The communication channel has two parts. The first part connects to the Reduxi Gateway. Its fields are filled in automatically, as shown in the picture.

Communication channel, part 1: Reduxi Gateway connection

The second part sets the current sensors of the Reduxi Gateway and the heat pump states.

Current transformer

Off - relay 1

Off

Setpoint of the relay 1 when heat pump setpoint is off

Off - relay 2

On

Setpoint of the relay 2 when heat pump setpoint is off

ECO - relay 1

On

Setpoint of the relay 1 when heat pump setpoint is ECO

ECO - relay 2

Off

Setpoint of the relay 2 when heat pump setpoint is ECO

ON - relay 1

Off

Setpoint of the relay 1 when heat pump setpoint is ON

ON - relay 2

Off

Setpoint of the relay 2 when heat pump setpoint is ON

BOOST - relay 1

On

Setpoint of the relay 1 when heat pump setpoint is BOOST

BOOST - relay 2

On

Setpoint of the relay 2 when heat pump setpoint is BOOST

Back

Test communication

Next

Communication channel, part 2: current sensors and states

For all current sensors, select **Auto detect from gateway**.

Then set the heat pump states **OFF**, **ECO**, **ON** and **BOOST**. The relay states on the Reduxi Gateway define them. Define 4 different combinations, that is 8 relay settings:

STATE	RELAY 1 / DI5	RELAY 2 / DI8
OFF	ON	OFF
ECO	ON	OFF
ON	OFF	OFF
BOOST	OFF	ON

5.3 Test communication

Click **Test communication** at the lower right, below the communication parameters. It tests the connection to the device.

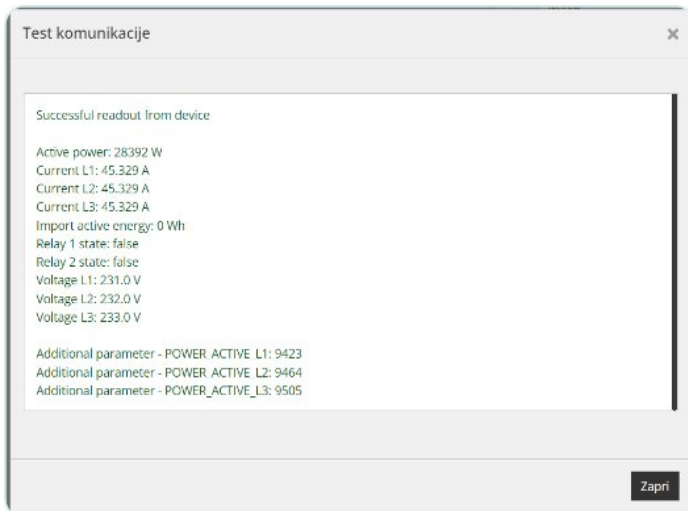
Back

Test communication

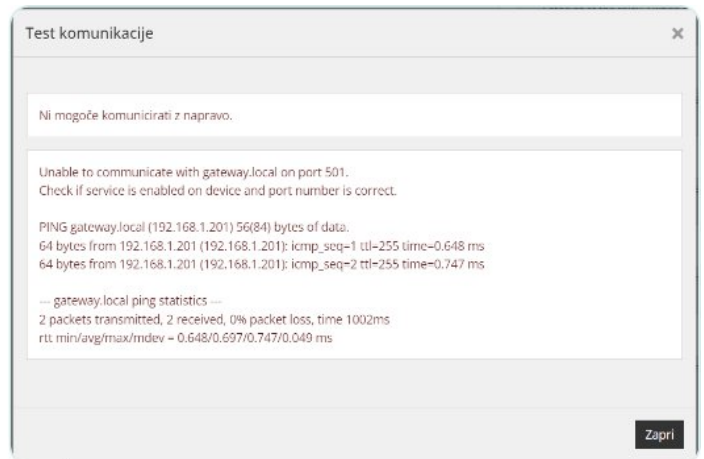
Next

The **Test communication** button

The test returns one of two results:



1. Communication works properly



2. Communication does not work properly

5.4 Advanced settings

The advanced settings are optional and depend on the needs of the location where the Reduxi Controller is installed. When you have finished them, press **Done** at the lower right.

1 Basic settings
2 Communication channel
3 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

Do you want to exclude device from summary?
☒ No Default: No

L1 is connected to main feed

L2 is connected to main feed

L3 is connected to main feed

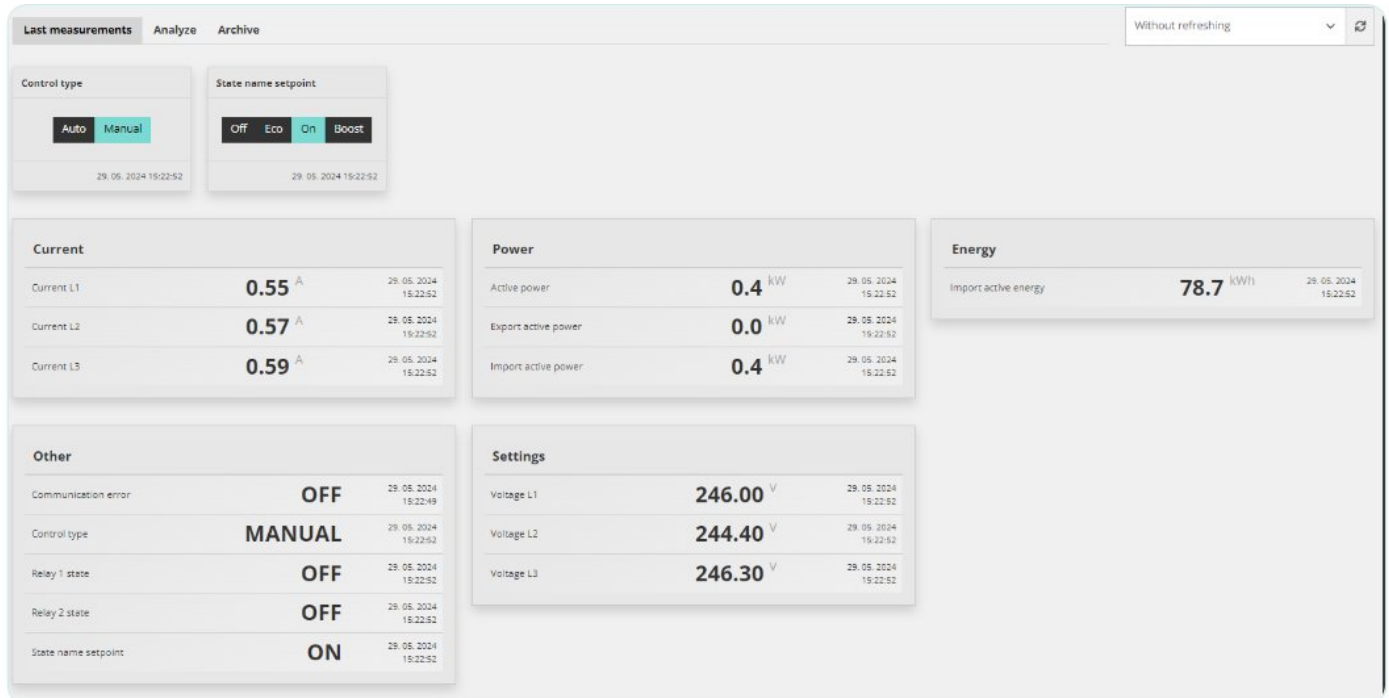
Back
Done

Advanced settings

6 Check the readings

6.1 Last measurements

After communication is established, check the values on the device as an additional test. On the home screen, open the device selection and choose the new heat pump in the tree structure.



Last measurements of the heat pump

6.2 Enable control by Reduxi

For the device to be managed by a strategy, set the management mode to **Automatic**. In manual mode you can test the different states of the heat pump.

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 and checked the values, you can inspect and control it via the [Reduxi application](#).

✓ Summary

Preparation (Points 1–2): Collect the Reduxi Controller, the Reduxi Gateway with 3x30 current sensors and the adapter. Connect the Gateway to the local network.

Kronoterm heat pump (Point 3): Connect the two Gateway relays to the SG contacts D5 and D8 (NO contacts). Install the current sensors on phases L1, L2 and L3.

Add to Reduxi (Points 4–5): Log in to the Reduxi web interface. Add the device as HVAC, set the current sensors and the states OFF, ECO, ON and BOOST, then run Test communication.

Go live (Point 6): Check the last measurements and set the management mode to Automatic so that strategies control the heat pump.

→ Common issues

ISSUE	SOLUTION
The Gateway page does not open	Connect to the wireless network Gateway first. If the popup does not appear, open <code>http://gateway.local</code> in your browser. Log in with <code>admin / admin</code> .
Test communication fails	Check that the Reduxi Gateway is powered (first LED from the top glows green) and that it is in the same local network as the Reduxi Controller. Check that the first part of the communication channel is filled in automatically.
The heat pump shows no power values	Check that each current sensor covers one phase (L1, L2, L3) and that Auto detect from gateway is selected for all current sensors.
The heat pump does not react to the strategy	Set the management mode to Automatic . Check that the relays are connected to the NO contacts: D5 reduces and D8 increases the operation of the heat pump.
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:



Reduxi Gateway

Connect the Reduxi Gateway to the Reduxi Controller.



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