REDUXI CONTROLLER · KNOWLEDGE BASE

Reduxi with Stiebel Eltron Heatpump

Save up to 30% on energy costs: use the SG-ready contacts of your Stiebel Eltron heat pump via the Reduxi Gateway. Dynamic control follows fluctuating energy prices.

Stiebel Eltron heat pump · Reduxi Controller · Reduxi Gateway

SG-ready contacts · X1.13 connector

3x (30:1A) current sensors

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1 Technical documentation

Manufacturer documents for Stiebel Eltron heat pumps:

- **Stiebel Eltron heat pumps** – Product information on the manufacturer website
- **Instruction manuals** – Installation and operating manuals of the heat pump
- **Downloads** – Further documents and downloads from Stiebel Eltron

2 Required equipment

Two components connect the Reduxi Controller to the Stiebel Eltron heat pump:

- [ ] Reduxi Controller
- [ ] Reduxi Gateway device with 3x (30:1A) current sensors (CTs)
- [ ] Laptop or tablet with internet access to configure the device in Reduxi

Add the Reduxi Gateway device to the Reduxi Controller first. Only then you can control the operation modes of the heat pump. The connection is wireless (WLAN) or wired via a UTP cable (LAN). More information: **Gateway to Controller connection**.

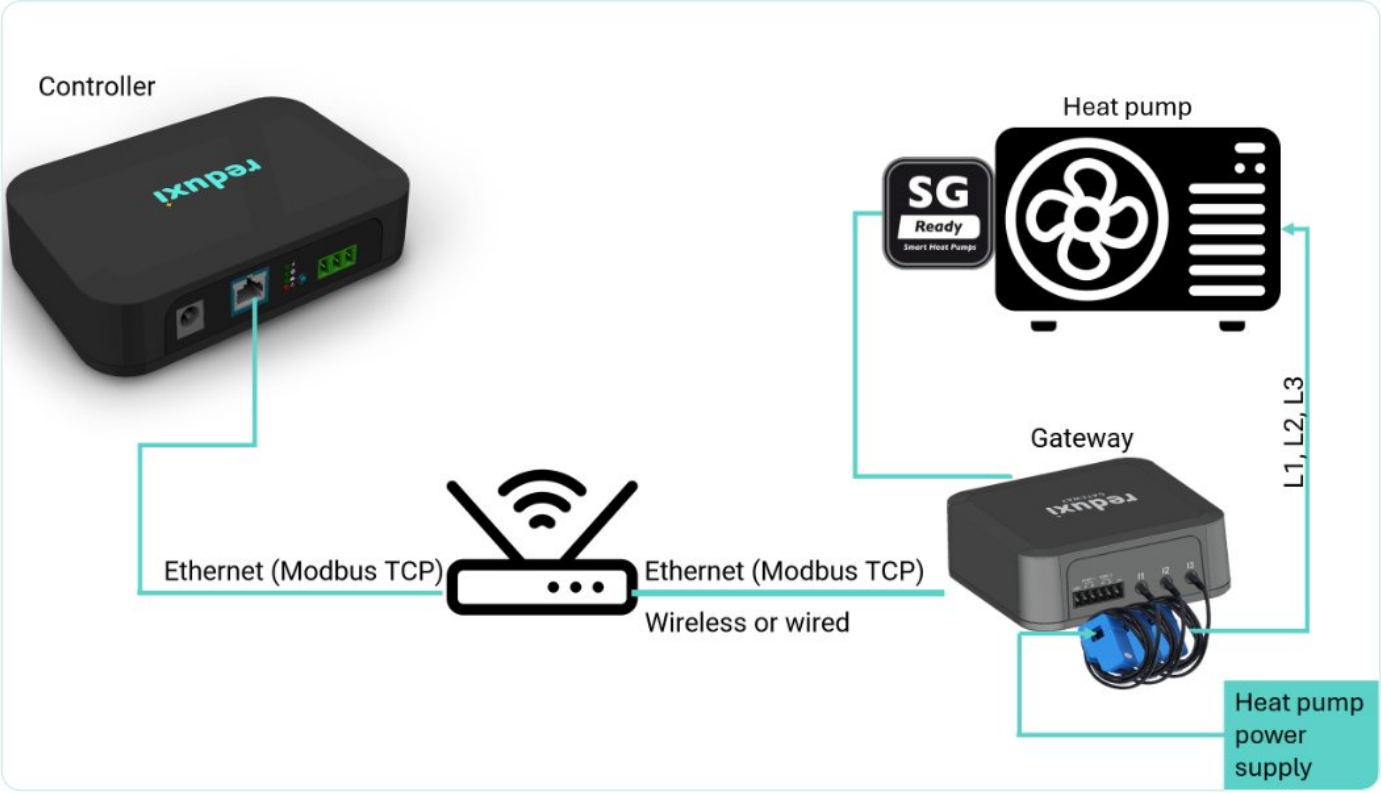
The Reduxi Gateway device has two functions:

- Its 3x (30:1A) current sensors (transformers) measure the electrical current, and so the power, of each phase of the heat pump.
- Its two relay outputs generate the signals for the SG-ready contacts. The signals change the operation mode of the heat pump.

3 Connect the Reduxi Gateway to the heat pump

3.1 Overview of the connection

The picture shows the entire connection from the Reduxi Controller to the heat pump.

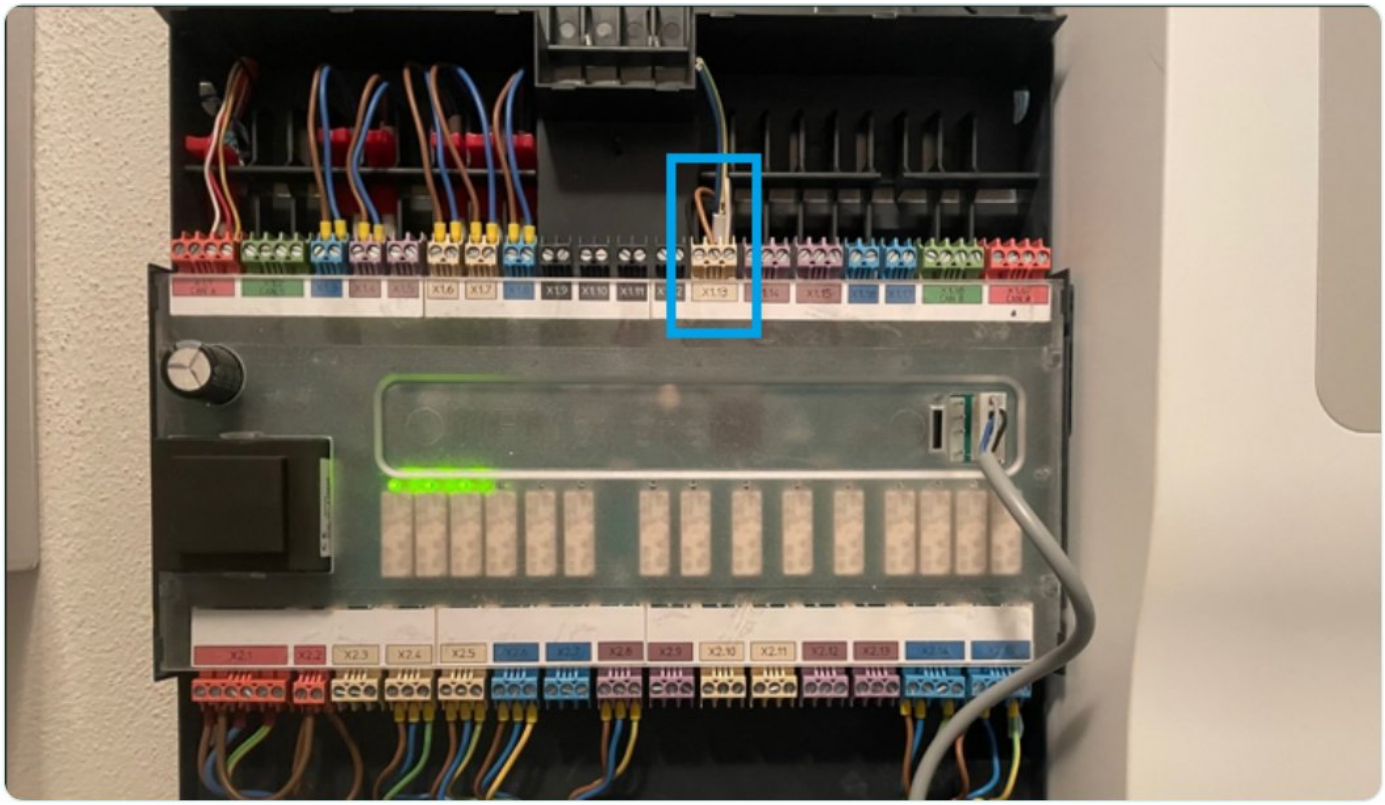


Connection from the Reduxi Controller to the heat pump

Further information on connecting the Reduxi Gateway device: **How to configure Reduxi Gateway**.

3.2 Connect the relays to the SG-ready contacts

First find the SG-ready contacts on the circuit board of the heat pump. They are on the **X1.13 connector**. The first image shows the location. The second image shows the connections from the relays to the SG-ready contacts.



Location of the SG-ready contacts (X1.13 connector)

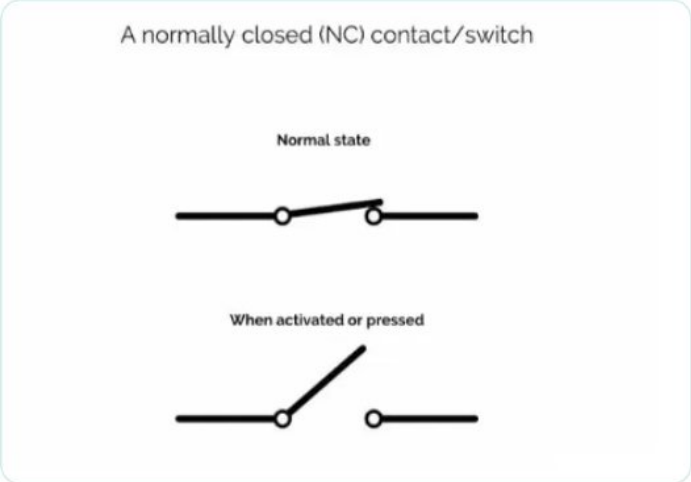
REDUXI GATEWAY DEVICE	CONTACT ON X1.13 CONNECTOR	WIRE
NO contact of the first relay	First contact	Black
COM contact of both relays	Second contact	Brown
NO contact of the second relay	Third contact	White



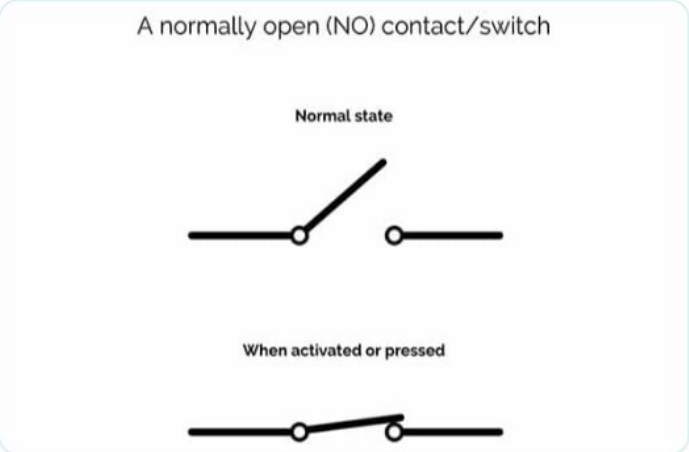
Connection from the Reduxi Gateway device to the SG-ready contacts

Note

The Reduxi Gateway device allows relay outputs to be permanently closed (**Normally Closed - NC**) or open (**Normally Open - NO**). The Stiebel Eltron heat pump uses the **NO** contacts of the relays.



Normally Closed (NC)



Normally Open (NO)

3.3 Connect the current sensors

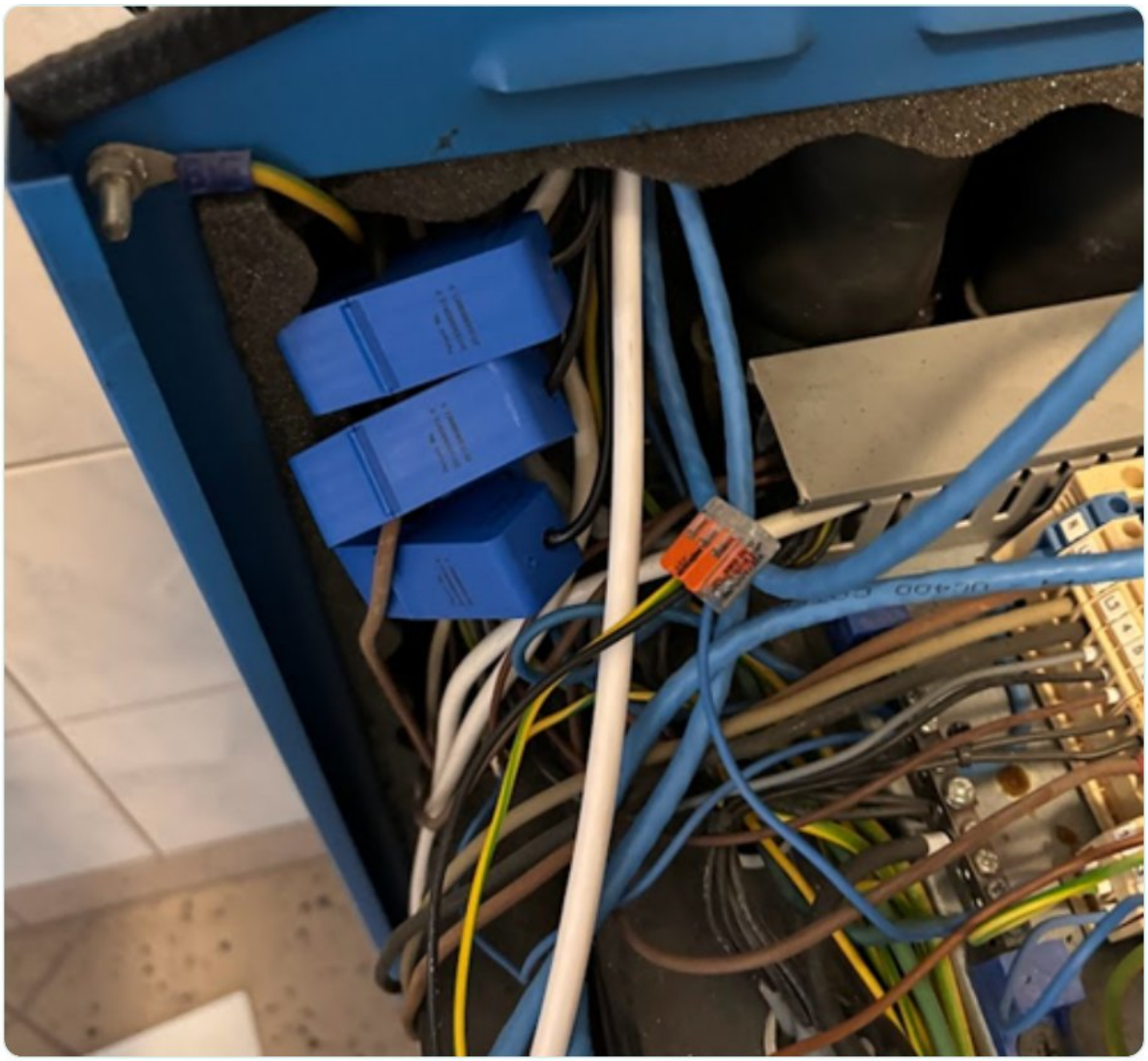
The current sensors measure the current of the heat pump. They provide real-time data on its power consumption. Voltage readings come from the Reduxi Controller. If they are not available, a default voltage of 230 V is used.

Connect the three current sensors (CTs) of the Reduxi Gateway kit to the three inputs, one for each phase, as shown below.



Current sensor inputs of the Reduxi Gateway device

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



Current sensors on the phase wires

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 reduxi.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

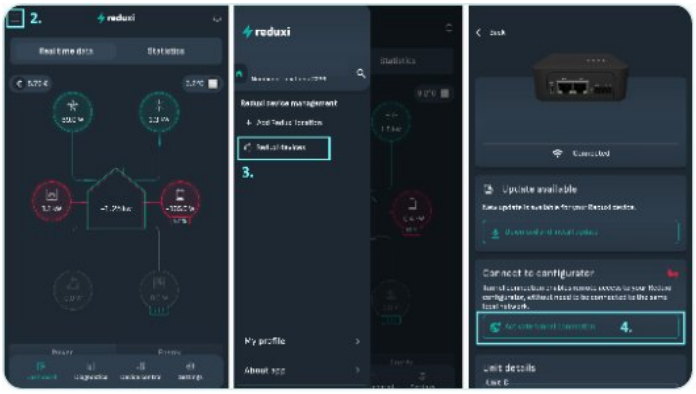
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

3 Activate the tunnel connection

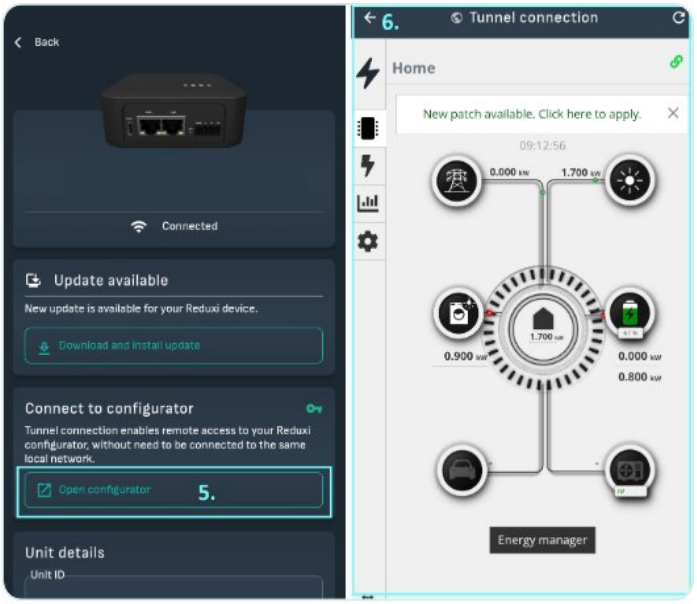
Switch on the tunnel connection and wait a moment until it is active.

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

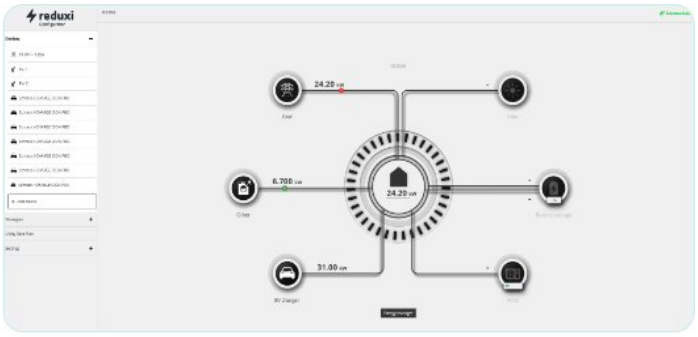
On a device in the same network, open a web browser and enter the controller's IP address or `http://reduxi.local`. You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

2 Log in

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



Reduxi Controller login screen



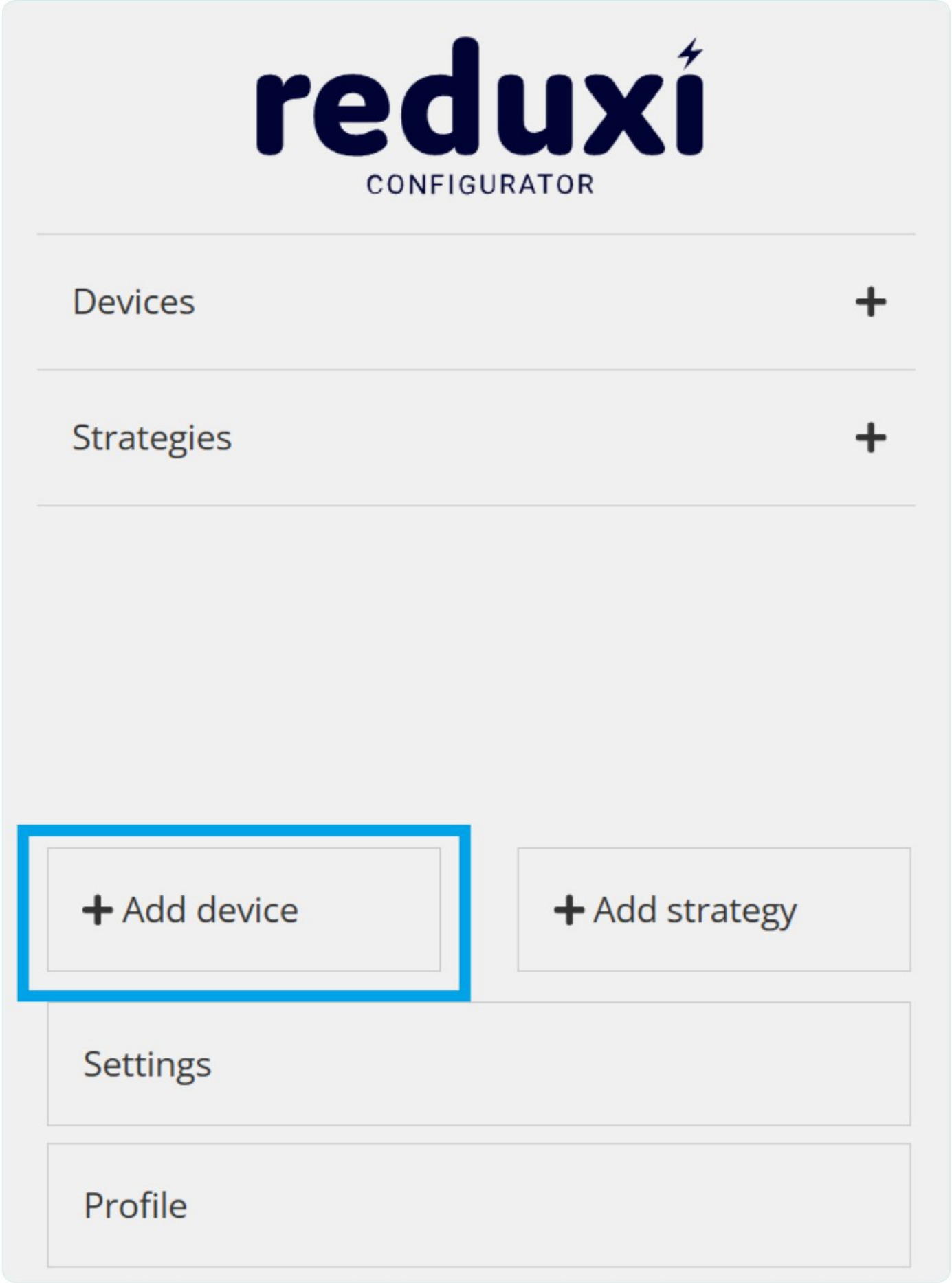
Controller web interface after login

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

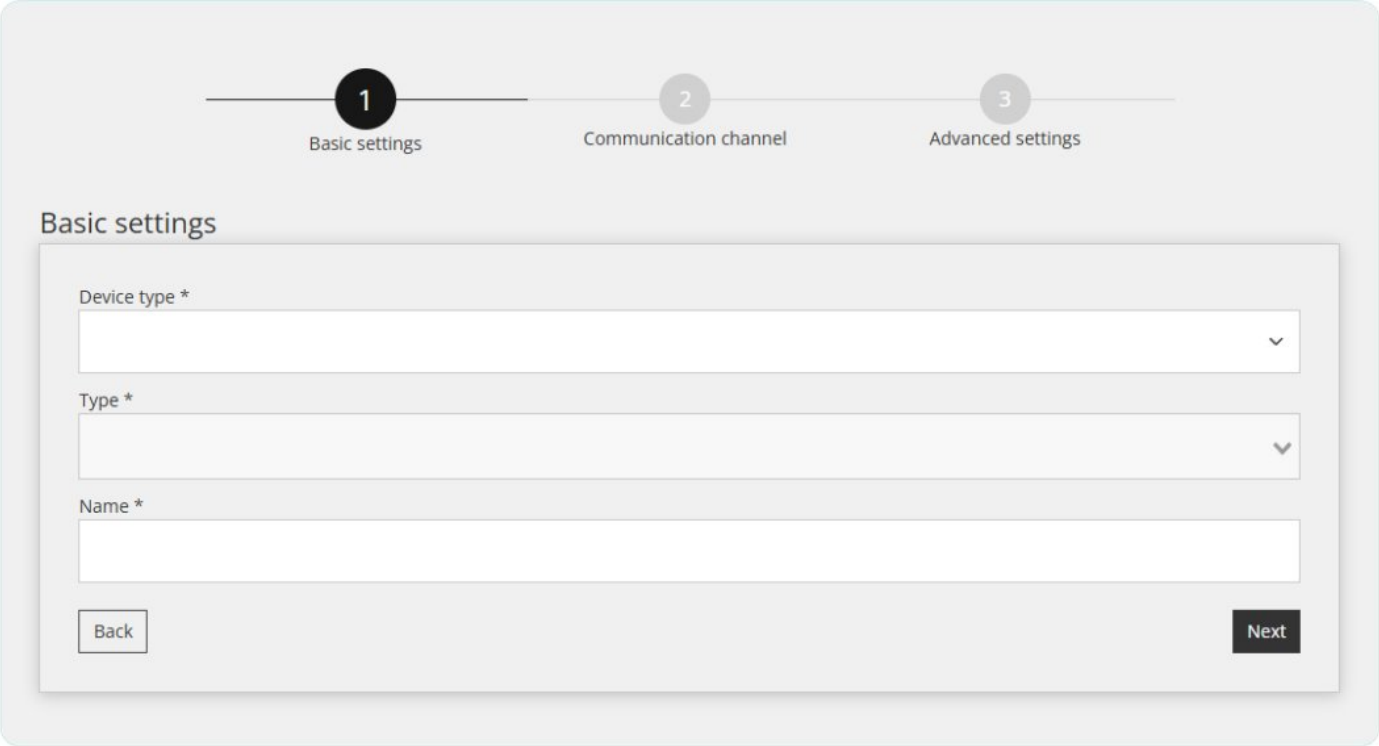
Log in locally to the **Reduxi Configurator** on the controller (see **Point 4**) and click **+ Add device**.



*The **Add device** button*

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

- Device type: `HVAC`
- Type: `Reduxi Meter`
- Name: a name of your choice, for example **Stiebel Eltron HP**

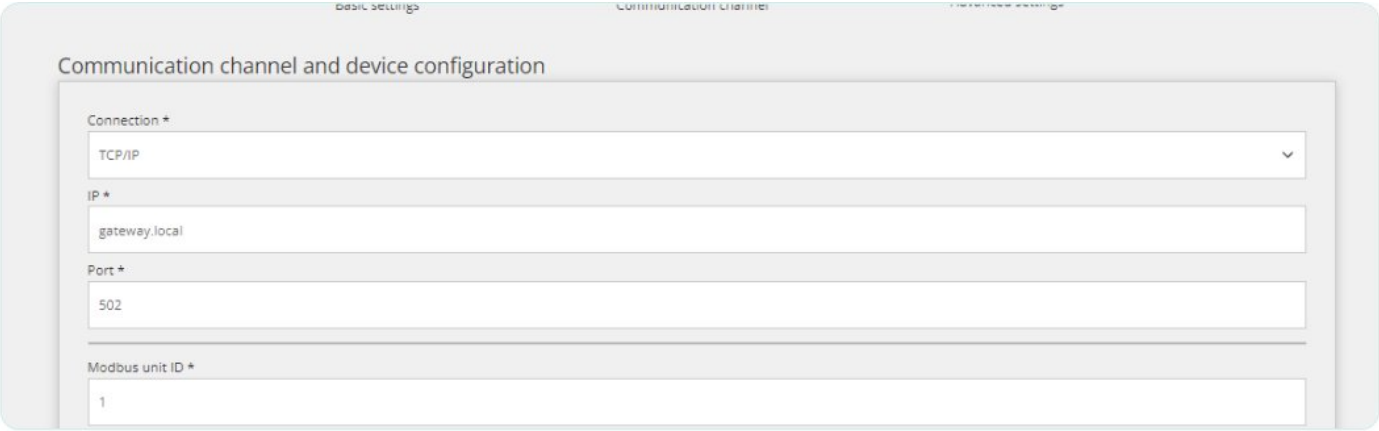


Basic settings: device type, type and name

5.2 Communication settings

The communication channel has three parts.

Part 1: connection between the Reduxi Gateway device and the Reduxi Controller. The fields are populated automatically. Fill them in as shown below.



Part 1: communication channel to the Reduxi Gateway device

Part 2: current sensor settings of the Reduxi Gateway device. Choose **Auto detect from gateway** for all current sensors.

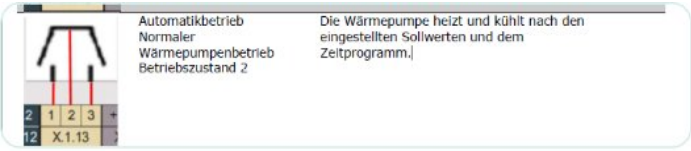


Part 2: current sensors

Part 3: signals of the relays of the Reduxi Gateway device. The combination of the two relay states sets the SG-ready mode of the heat pump:

MODE	MEANING	RELAY 1	RELAY 2
ON	Normal operation	NO (open)	NO (open)
OFF	No operation	NO (open)	NC (closed)
ECO	Slightly increased power operation	NC (closed)	NO (open)
BOOST	Increased power operation	NC (closed)	NC (closed)

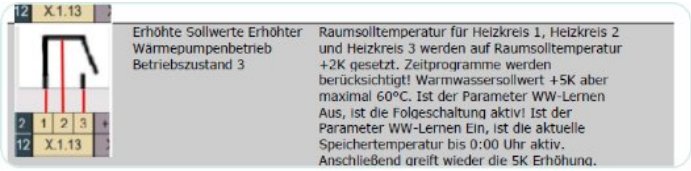
NO stands for **normally open**, NC for **normally closed**. The pictures show the setting of each mode.



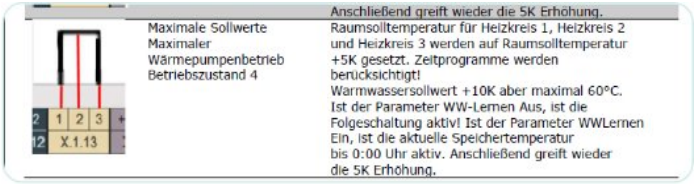
ON: both relays open (NO)



OFF: first relay NO, second relay NC



ECO: first relay NC, second relay NO



BOOST: both relays closed (NC)

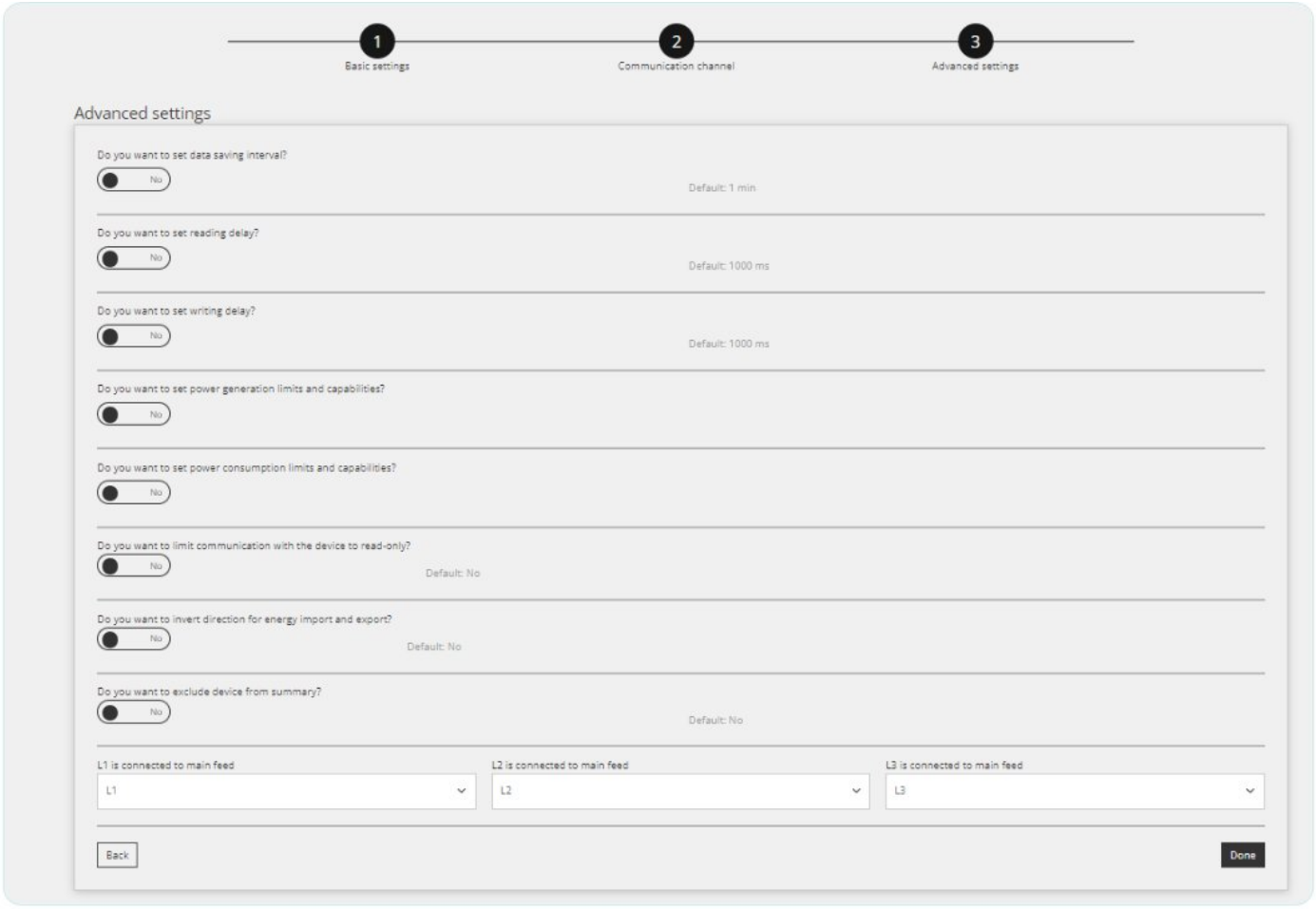
Complete configuration of the relay signals in the Reduxi Configurator:



Complete relay signal configuration

5.3 Advanced settings

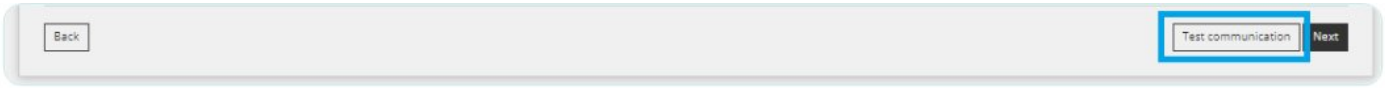
Advanced settings are optional. They depend on the needs of the location where the Reduxi Controller is installed. After you finish them, click **Done** at the lower right.



Advanced settings

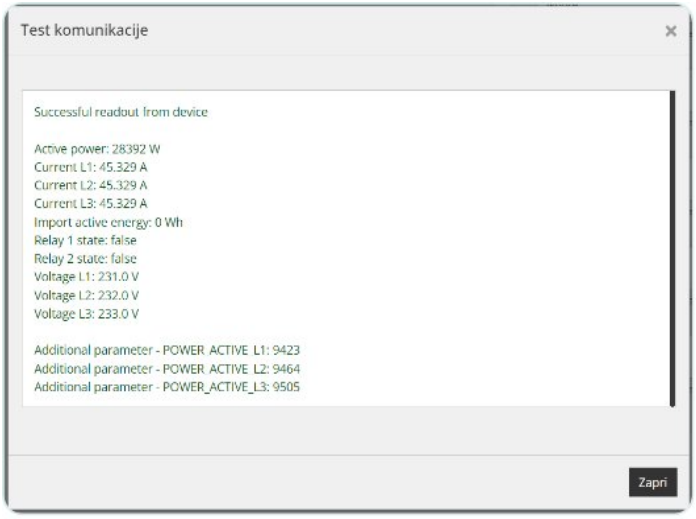
5.4 Test communication

Click **Test communication** at the lower right, below the communication parameters. It reads the device once and saves nothing. If the test succeeds, click **Done**: only **Done** creates the device.

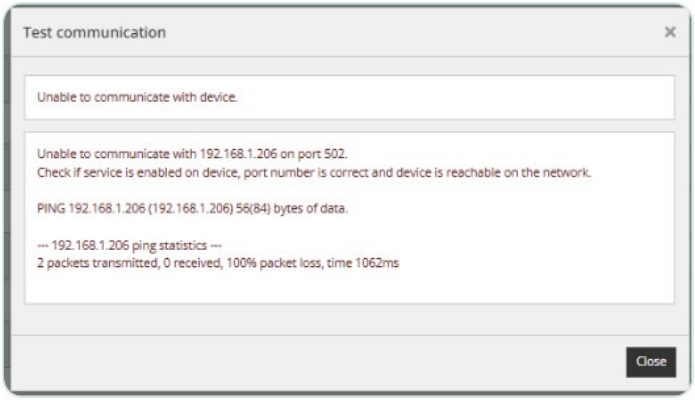


*The **Test communication** button*

The test returns one of two results:



1. Communication works properly

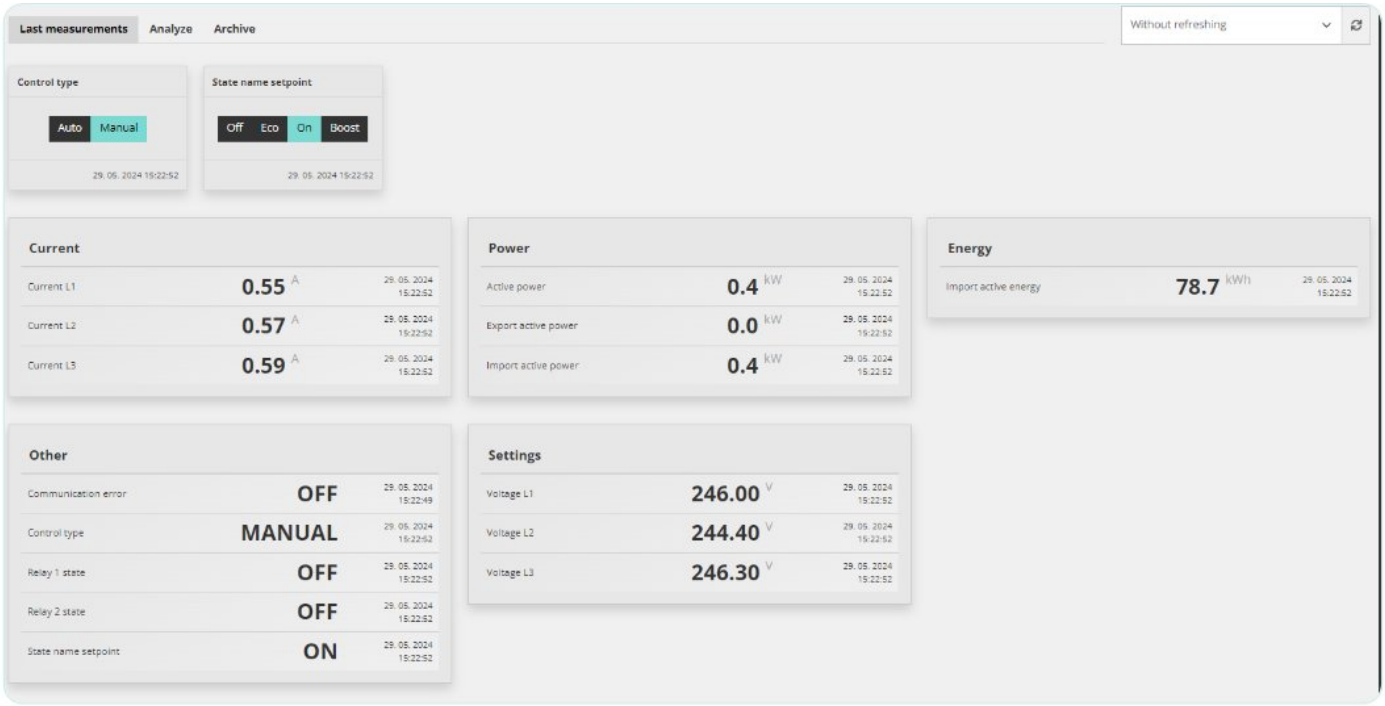


2. Communication does not work properly

6 Check the readings

6.1 Last measurements

After communication is established, check the values under **Devices – Stiebel Eltron HP** in the **Reduxi Configurator** as an additional test.



Last measurements of the heat pump

6.2 Enable control by Reduxi

For advanced heat pump control, integrate the device into the Reduxi strategy. Under **Devices – Stiebel Eltron HP** in the Reduxi Configurator, set the **control type** to **AUTO**. Only then do strategy commands affect 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 also inspect and control it in **the Reduxi application**.

✓ Summary

Preparation (Points 1–2): Get the Stiebel Eltron documents. Prepare the Reduxi Controller, the Reduxi Gateway device with 3 current sensors and a laptop or tablet.

Heat pump (Point 3): Wire the NO contacts of both relays to the X1.13 connector. Mount the current sensors on L1, L2 and L3.

Add to Reduxi (Points 4–5): Log in to the Reduxi web interface. Add the device as HVAC, type Reduxi Meter. Set the three parts of the communication channel. Run Test communication, then click Done.

Go live (Point 6): Check the last measurements. Set the control type to AUTO. Define a strategy.

Common issues

ISSUE	SOLUTION
Relay modes do not match the heat pump behaviour	Check the relay wiring on the X1.13 connector (black, brown, white wire) and the relay settings of the ON, OFF, ECO and BOOST modes in Point 5.
No power values of the heat pump	Check that each current sensor covers one phase wire (L1, L2, L3) and that all current sensors are set to Auto detect from gateway.
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:

Stiebel Eltron instruction manuals
Installation and operating manuals of the heat pump.

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