

Reduxi with Daikin ETV/ETB, ELV/ELB and EHV/EHB

Save up to 30% on energy costs: use the SG-ready contacts of your Daikin ETV/ETB, ELV/ELB or EHV/EHB heat pump via the Reduxi Gateway. Dynamic control follows fluctuating energy prices.

🔧 Daikin ETV/ETB, ELV/ELB, EHV/EHB · Reduxi Controller + Gateway

🔌 SG-ready contacts X5M (5, 6 and 9, 10)

🔌 3x current sensors (30:1A)



Daikin Altherma 3 R indoor unit (illustration)

IN THIS ARTICLE

1. Preparation

- Technical documentation
- Required equipment

2. Connect the Reduxi Controller and Gateway to the local network

3. Connect the Gateway relays to the SG-ready contacts

- SG-ready contacts on the circuit board
- Relay connections
- NO and NC contacts

4. Use the Reduxi Gateway as a meter with current sensors

5. Log in to the Reduxi web interface

- Via the Reduxi app
- Via a web browser

6. Add the heat pump to Reduxi

- Basic settings
- Communication settings
- Test communication

7. Check the readings

8. Summary

9. Common issues

10. Related articles

1 Preparation

1.1 Technical documentation

Documentation for the Daikin ETV/ETB, ELV/ELB and EHV/EHB heat pumps is available at the Daikin Technical Data Hub.

- [Daikin Technical Data Hub](#) – Documentation for Daikin ETV/ETB, ELV/ELB and EHV/EHB

1.2 Required equipment

Two Reduxi components connect the Daikin heat pump to the Reduxi system:

- ☐ Reduxi Controller
- ☐ Reduxi Gateway device with 3x (30:1A) current sensors (CTs)
- ☐ Wires for the SG-ready contacts of the heat pump
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

The Reduxi Gateway device must first be added (connected) to the Reduxi Controller. Only then can you commission the heat pump operating modes. The connection works wirelessly (WLAN) or wired via a UTP cable (LAN). More information: [Gateway to Controller connection](#).

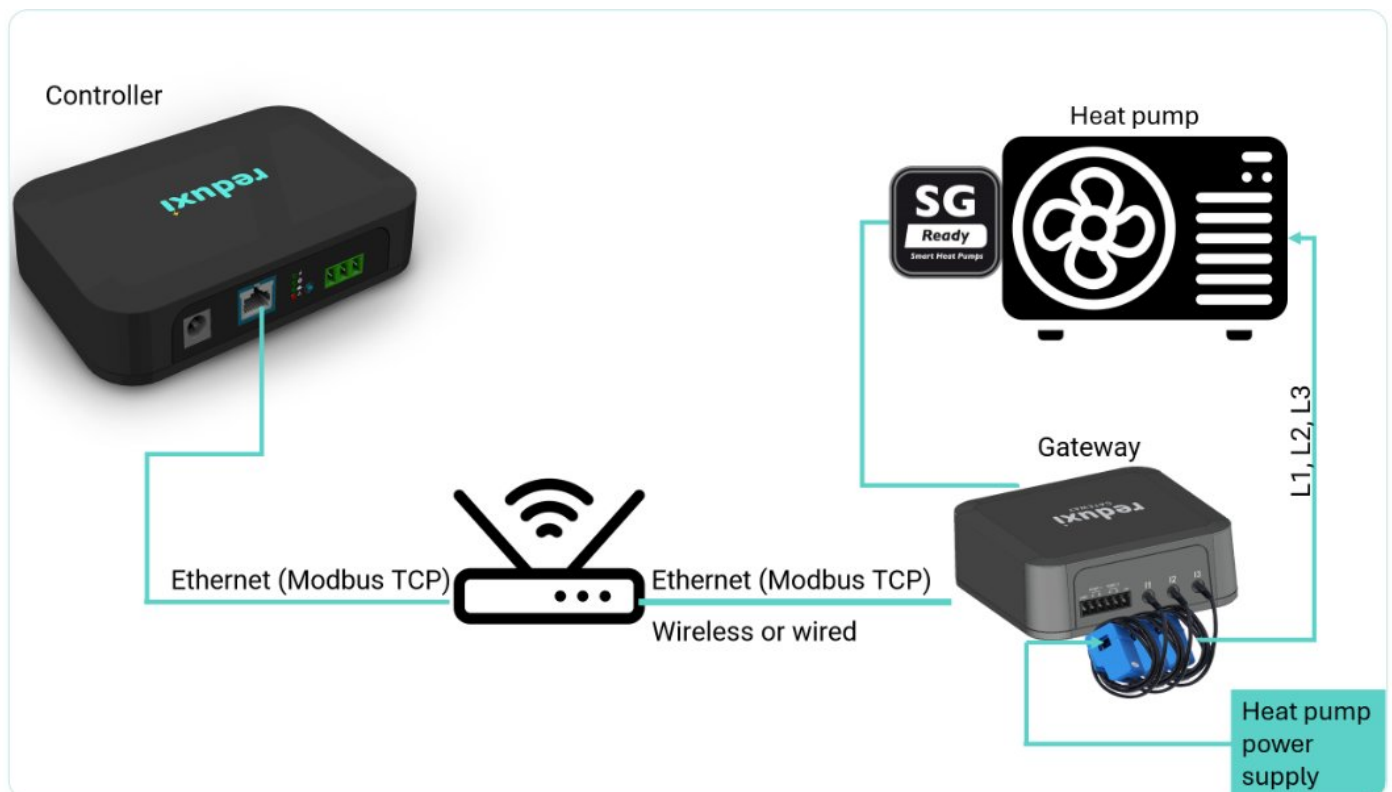
The Reduxi Gateway device has two functions:

- 3x (30:1A) current sensors (transformers) measure the electrical current, and with it the power, of each phase of the heat pump.
- Two relay outputs generate the signals for the SG-ready contacts. These signals change the operating modes of the heat pump.

2 Connect the Reduxi Controller and Gateway to the local network

2.1 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

2.2 Configure the Reduxi Gateway

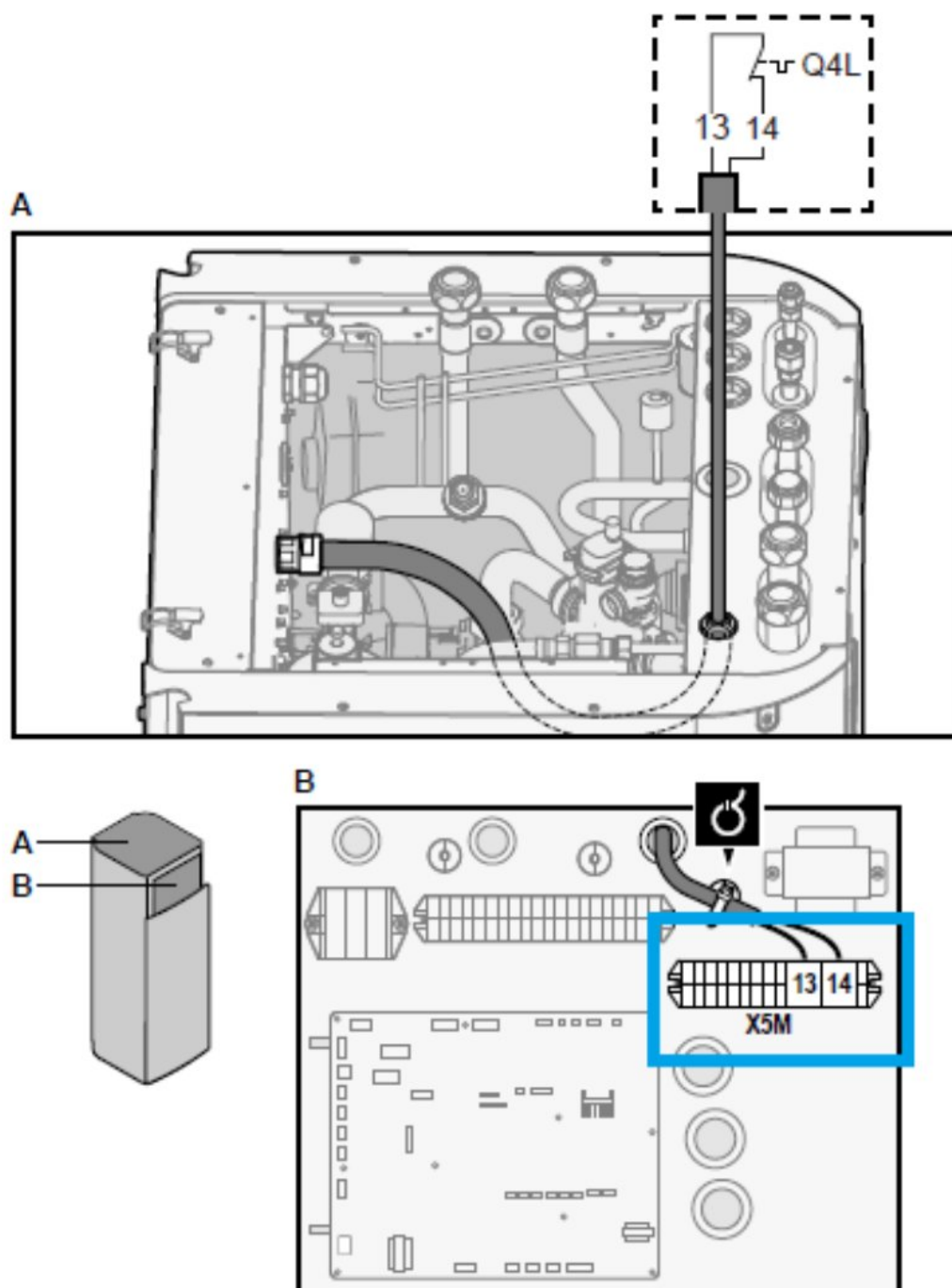
To connect the Reduxi Gateway device, follow the guide [How to configure Reduxi Gateway](#).

3 Connect the Gateway relays to the SG-ready contacts

First find the exact location of the SG-ready contacts on the circuit board of the heat pump. The first image shows the location on the Daikin circuit board. The second image shows the connections from the relays to the SG-ready contacts.

3.1 SG-ready contacts on the circuit board

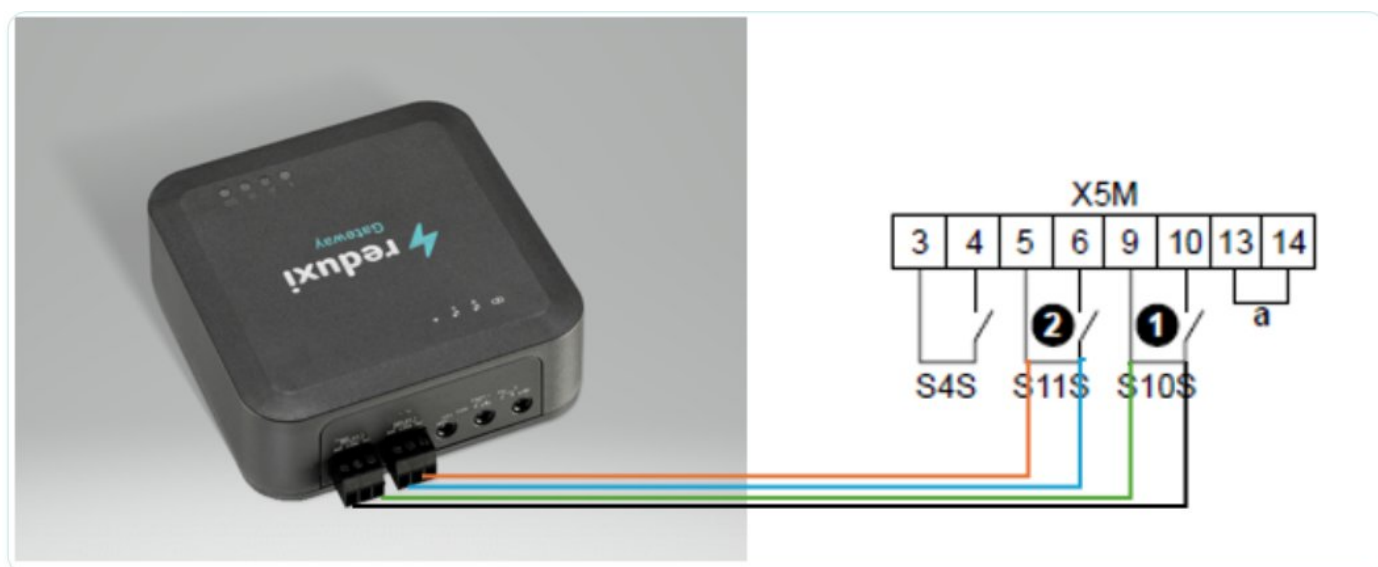
The SG-ready contacts are on connector **X5M**, contacts 5, 6 and 9, 10.



SG-ready contacts X5M on the heat pump circuit board

3.2 Connect the relays of the Reduxi Gateway

REDUXI GATEWAY RELAY	CONTACT ON X5M	WIRE COLOUR
Relay 1, NO contact	Contact 6	Blue
Relay 1, COM contact	Contact 5	Brown
Relay 2, NO contact	Contact 10	Black
Relay 2, COM contact	Contact 9	Green



Connection from the relays to the SG-ready contacts

3.3 Use the NO contacts

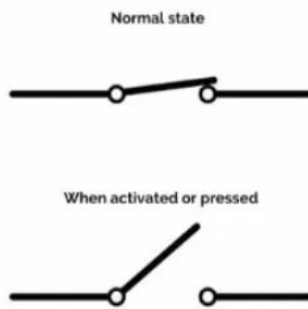
The relay outputs of the Reduxi Gateway can be used as permanently closed (**Normally Closed, NC**) or open (**Normally Open, NO**) contacts.



Daikin heat pump

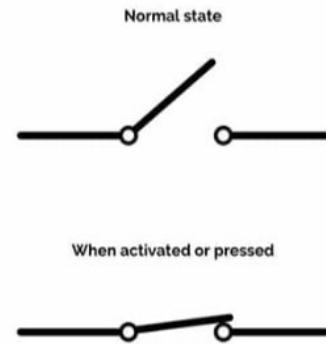
The Daikin heat pump uses the **NO** contacts.

A normally closed (NC) contact/switch



Normally Closed (NC)

A normally open (NO) contact/switch



Normally Open (NO)

4 Use the Reduxi Gateway as a meter with current sensors

4.1 What the current sensors measure

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

4.2 Connect the current sensors

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



Current sensor inputs on the Reduxi Gateway

4.3 Place the current sensors on the phase wires

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



Current sensors on the phase wires of the heat pump

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 `reduxi.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

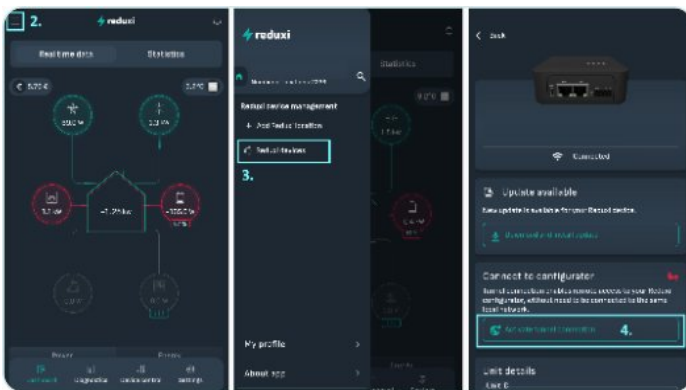
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

3 Activate the tunnel connection

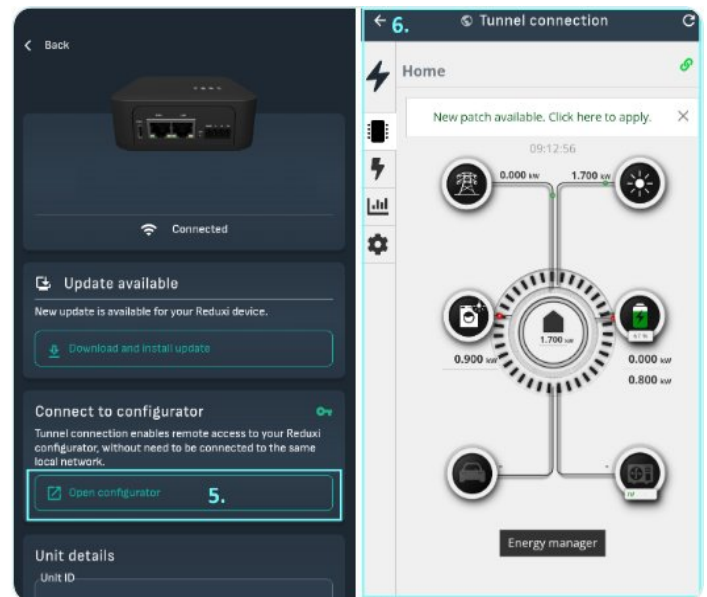
Switch on the tunnel connection and wait a moment until it is active.

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

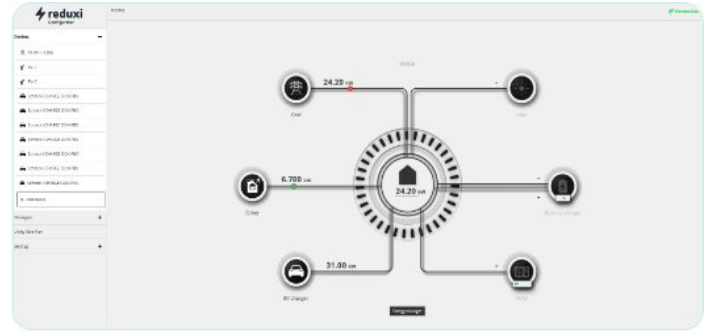
On a device in the same network, open a web browser and enter the controller's IP address or **`http://reduxi.local`**. You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

2 Log in

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



Reduxi Controller login screen



Controller web interface after login

6 Add the heat pump to Reduxi

Use these steps to add a new heat pump 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**.



Devices



+ Add device

Strategies



Utility Rate Plan

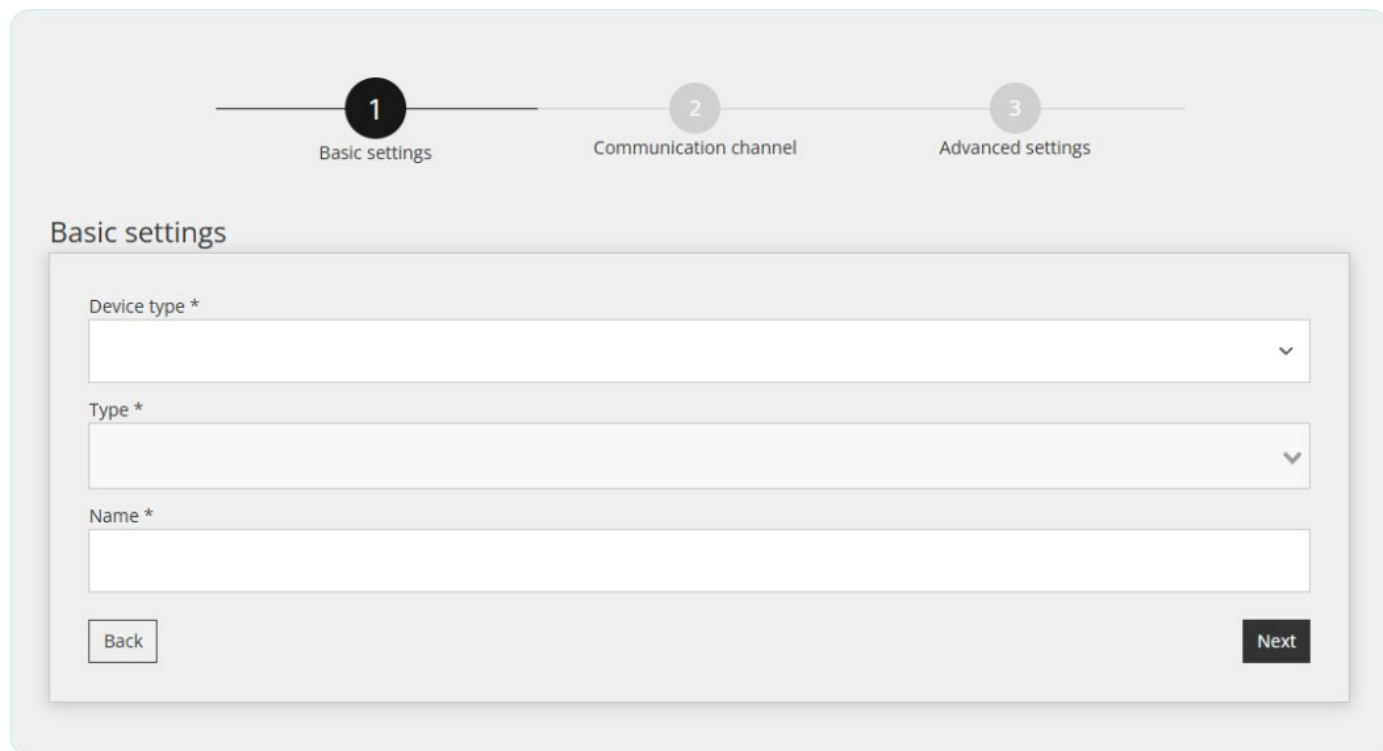
Settings



The Add device button

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

- Device type: HVAC
- Type: Daikin ETV/ETB , Daikin ELV/ELB or Daikin EHV/EHB
- Name: a name of your choice



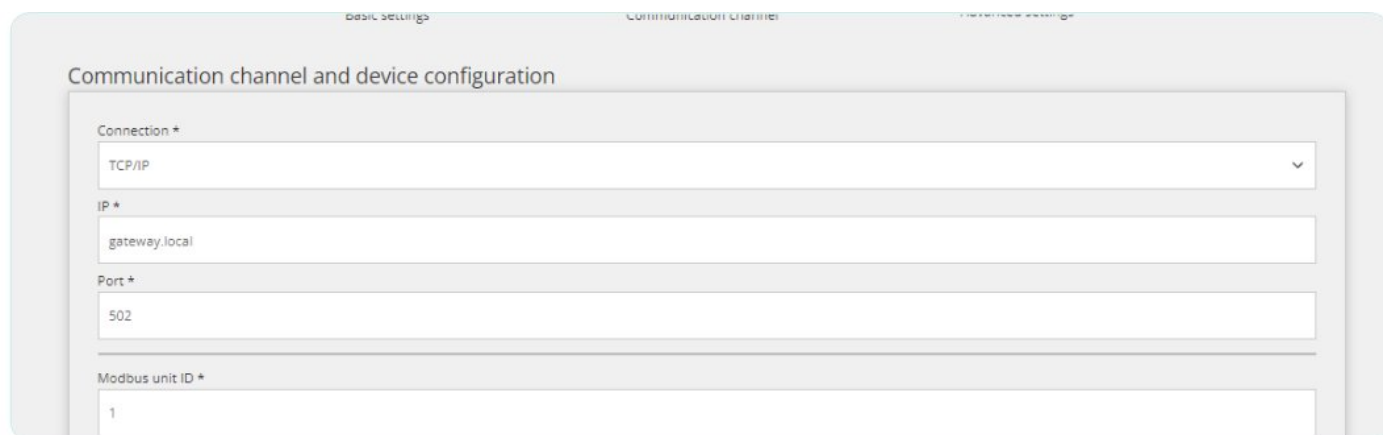
The image shows a configuration interface with three steps: 1. Basic settings, 2. Communication channel, and 3. Advanced settings. The 'Basic settings' step is active. It contains three dropdown menus labeled 'Device type *', 'Type *', and 'Name *'. At the bottom, there are 'Back' and 'Next' buttons.

Basic settings: device type, type and name

6.2 Communication settings

The communication channel has three parts.

Part 1: the connection between the Reduxi Gateway and the Reduxi Controller. The fields are filled in automatically. Check them against the image.



The image shows the 'Communication channel and device configuration' screen. It contains four dropdown menus: 'Connection *' (set to TCP/IP), 'IP *' (set to gateway.local), 'Port *' (set to 502), and 'Modbus unit ID *' (set to 1).

Communication channel, part 1

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



The image shows a list of three current sensors (CT-11, CT-12, CT-13) with their respective settings. All three are set to 'Auto detect from gateway'.

Communication channel, part 2: current sensors

Part 3: the last field sets how the contacts are positioned. Choose **Default** or **Reversed**. If you connect contact 1 on the gateway to contact 2 on the heat pump, use this toggle to flip the orientation of the connection.

6.3 Test communication

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



7 Check the readings

7.1 Last measurements

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

Last measurements

Analyze

Archive

Without refreshing

Control type

Auto

Manual

29. 05. 2024 19:22:52

State name setpoint

Off

Eco

On

Boost

29. 05. 2024 19:22:52

Current

Current L1	0.55 A	29. 05. 2024 19:22:52
Current L2	0.57 A	29. 05. 2024 19:22:52
Current L3	0.59 A	29. 05. 2024 19:22:52

Power

Active power	0.4 kW	29. 05. 2024 19:22:52
Export active power	0.0 kW	29. 05. 2024 19:22:52
Import active power	0.4 kW	29. 05. 2024 19:22:52

Energy

Import active energy	78.7 kWh	29. 05. 2024 19:22:52
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Other

Communication error	OFF	29. 05. 2024 19:22:49
Control type	MANUAL	29. 05. 2024 19:22:52
Relay 1 state	OFF	29. 05. 2024 19:22:52
Relay 2 state	OFF	29. 05. 2024 19:22:52
State name setpoint	ON	29. 05. 2024 19:22:52

Settings

Voltage L1	246.00 V	29. 05. 2024 19:22:52
Voltage L2	244.40 V	29. 05. 2024 19:22:52
Voltage L3	246.30 V	29. 05. 2024 19:22:52

Last measurements of the heat pump

| 7.2 Enable control by Reduxi

For advanced heat pump control, integrate the device into the Reduxi strategy. Under **Devices – Daikin** 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 add the device and check the values, you can also inspect and control it in [the Reduxi application](#).



Summary

Preparation (Points 1–2): Check the Daikin documentation. Prepare the Reduxi Controller, the Reduxi Gateway with 3 current sensors and the wires.

Daikin heat pump (Points 3–4): Connect the two Gateway relays (NO contacts) to the SG-ready contacts on X5M. Place the 3 current sensors on the phase wires.

Add to Reduxi (Points 5–6): Log in to the Reduxi web interface. Add the HVAC device, check the communication channel and run Test communication.

Go live (Point 7): Check the last measurements. Set the control type to AUTO and define a strategy.

→ Common issues

ISSUE	SOLUTION
Test communication fails	Check the connection between the Reduxi Gateway and the Reduxi Controller (WLAN or LAN). Check the three parts of the communication channel.
No heat pump power readings	Check that the current sensors sit on the phase wires L1, L2, L3 and that "Auto detect from gateway" is selected for all of them.
Heat pump mode does not change	Check the wiring to X5M contacts 5, 6 and 9, 10 and that the NO contacts are used. Try the Default / Reversed toggle in the communication settings.
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:



Daikin Technical Data Hub

Documentation for Daikin ETV/ETB, ELV/ELB and EHV/EHB heat pumps.



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