REDUXI CONTROLLER · KNOWLEDGE BASE

How to connect my-PV AC•THOR, AC•THOR 9s and AC ELWA 2 with Reduxi controller

Integrate my-PV power controllers and heating rods into the Reduxi Controller via Modbus TCP – so PV surplus automatically goes into hot water and heating.

⏱ approx. 15–20 min

🔧 Reduxi Controller · my-PV AC•THOR / AC•THOR 9s / AC ELWA 2

🌐 Modbus TCP (LAN / Wi-Fi via router)

🔢 Up to 250 my-PV devices per controller

my-PV AC ELWA 2, AC•THOR and AC•THOR 9s with heating rods

Text description of this image

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1 Technical documentation

Before commissioning, read the installation instructions supplied with the device and the current my-PV operating manual:

- AC•THOR / AC•THOR 9s – operating manual (PDF, EN)
- AC ELWA 2 – online manual (EN)
- my-PV downloads – data sheets, installation instructions, wiring diagrams

2 Required equipment

- [ ] **Reduxi Controller** – Stand Alone or DIN rail
- [ ] **Grid measurement** at the grid connection point: if a PV inverter is connected to Reduxi and its smart meter is read via the inverter, **no additional meter** is needed. If the my-PV device is the only device on the Reduxi Controller, install an energy meter or smart meter – see the list of supported devices
- [ ] **my-PV AC•THOR, AC•THOR 9s or AC ELWA 2** with the latest firmware
- [ ] **Network connection** (LAN or Wi-Fi) – my-PV device and Reduxi Controller in the same network, connected via a router
- [ ] Laptop, tablet or smartphone with internet access

3 System overview

The AC•THOR or AC ELWA 2 and the Reduxi Controller are connected to the same network via a router. Over this network, the Reduxi Controller tells the my-PV device via Modbus TCP how much power to consume – for example the current PV surplus.

AC•THOR / AC•THOR 9s via router

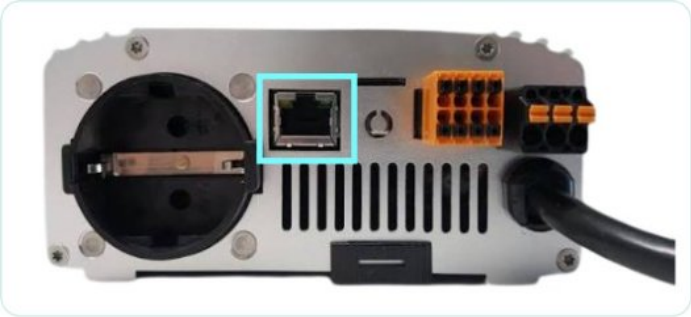
AC ELWA 2 via router

Text description of this image

2. **Text description of this image**

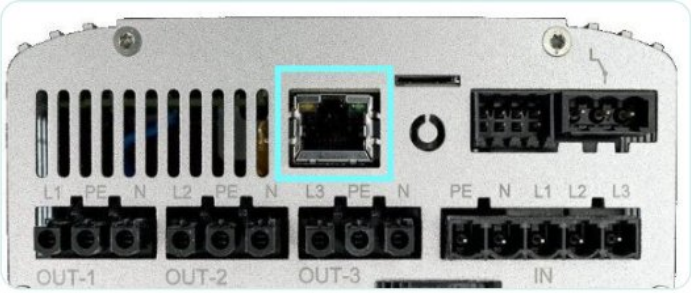
Diagram on a white background. Top left: a dark grey

Connect the my-PV device to the router with a network cable or via Wi-Fi. The LAN port (marked) is on the underside of the device:



AC•THOR

Text description of this image



AC•THOR 9s

2. Text description of this image

Photo of the underside connector side of a light grey

AC ELWA 2

Text description of this image

> ⚠️ **Do not also connect the my-PV device directly to the inverter or battery system**
> The my-PV device is controlled exclusively by the Reduxi Controller. Additional direct control by an inverter or battery system leads to conflicting setpoints.

> ℹ️ **Up to 250 devices**
> In theory, one Reduxi Controller can control up to 250 my-PV devices.

4 Configure the my-PV device

Prepare the my-PV device first. Then continue with **Point 5**.

4.1 Set the control type to "Modbus TCP"

The photos show an AC•THOR 9s with the display language set to German – the menu items are in the same place in other languages.

1 **Open the setup menu**

On the home screen, tap the **gear icon** at the bottom.

2 Open "Steuerung" (Control)

Use the arrow keys to page to **Setup 5/10** and tap **Steuerung** (Control).

3 Select Modbus TCP

Use the arrow keys to page to **Steuerung 9/15** and tap `Modbus TCP`. The selected entry is highlighted in green.

1 – Home screen: tap the gear icon

Text description of this image

2 – Setup 5/10: Steuerung (Control)

3 – Steuerung 9/15: Modbus TCP selected

Text description of this image

Photo of the colour display of a device, blue

2. Text description of this image

> ℹ️ **Alternative: my-PV web interface**
> The same setting can also be made in the my-PV web interface. Setting it on the display is usually quicker, because you are at the device anyway and do not need its IP address yet.

4.2 Assign a fixed IP address

The IP address of the AC•THOR or AC ELWA 2 must be **static**. Otherwise the Reduxi Controller loses the connection as soon as the router assigns a new address. There are two ways to do this:

- **Recommended – DHCP reservation in the router:** leave the my-PV device on DHCP and reserve its current IP address in the router.
- **Static IP on the device:** on the display, page to **Setup 3/10**, set **IP DHCP/statisch** to static and enter **IP Adresse** (IP address), **Subnetz Maske** (subnet mask) and **Gateway Adresse** (gateway address). Choose an address outside the router's DHCP range.

Setup 3/10 – network settings on the display

Text description of this image

> ✅ **Note down the IP address**
> You will need it in **Point 6.2**.

5 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`

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

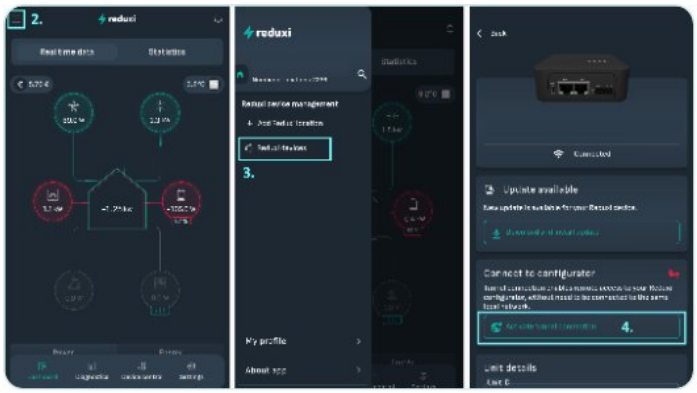
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

3 Activate the tunnel connection

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

4 Open the configurator

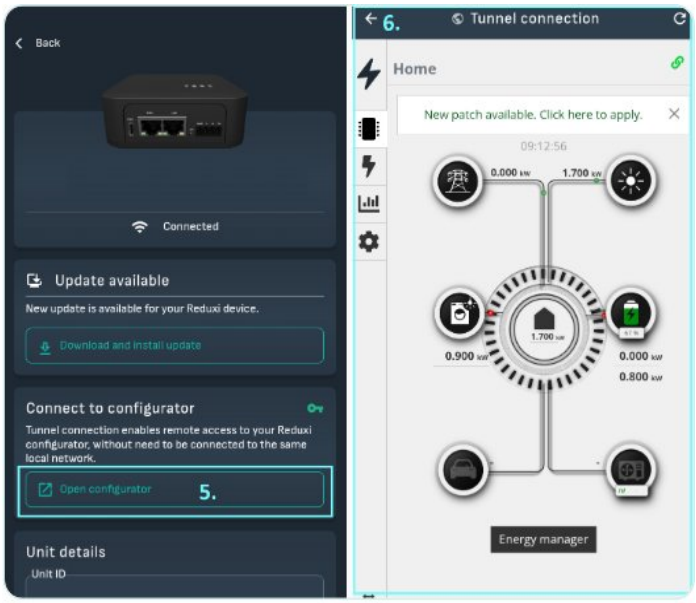
Tap **Open configurator**. The Reduxi web interface opens.



Activate the tunnel connection

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

2. Text description of this image

5.2 Via a web browser

1 **Open the login page**

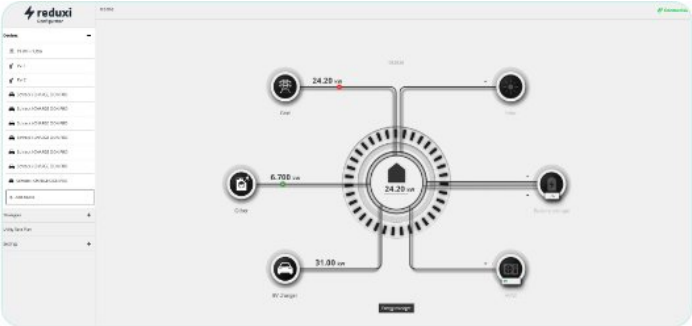
On a device in the same network, open a web browser and enter the controller's IP address or `http://reduxi.local`.
You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

2 **Log in**

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

Reduxi Controller login screen

Text description of this image



Web interface after login

2. Text description of this image

Screenshot of the Reduxi Configurator web interface

6 Add the my-PV device to Reduxi

> **Note**
> Further information and images were kindly provided to my-PV by Reduxi. my-PV accepts no liability for the accuracy of the information or for the screens being up to date.

6.1 Basic settings

1 **Click + Add device**

On the controller's main page, select **+ Add device**.

2 Define the device

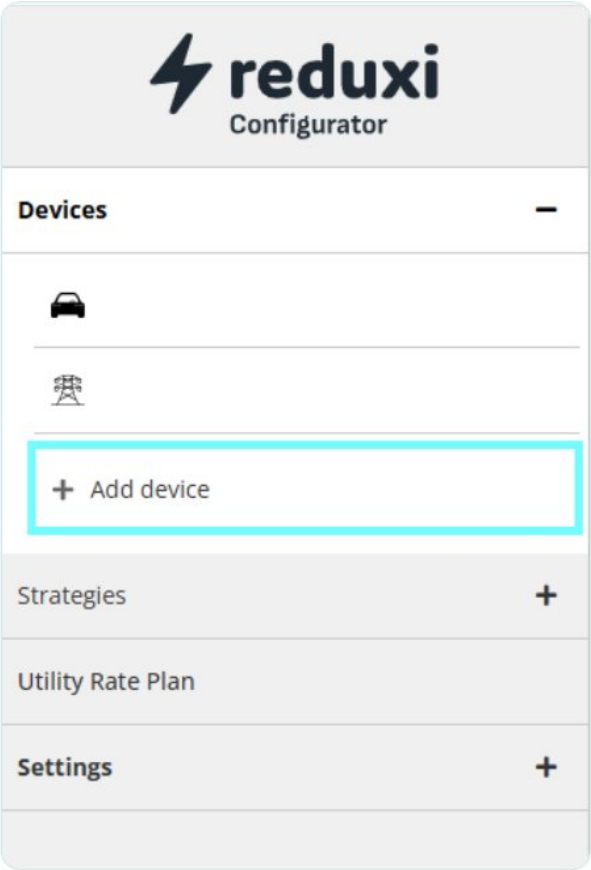
Device type: `HVAC`

Type: `myPV`

Name: any name, e.g. `myPV AC Thor 9s`

Include to strategy: tick **Regulated devices** for the strategy that should control the my-PV device.

Confirm with **Next**.



+ Add device

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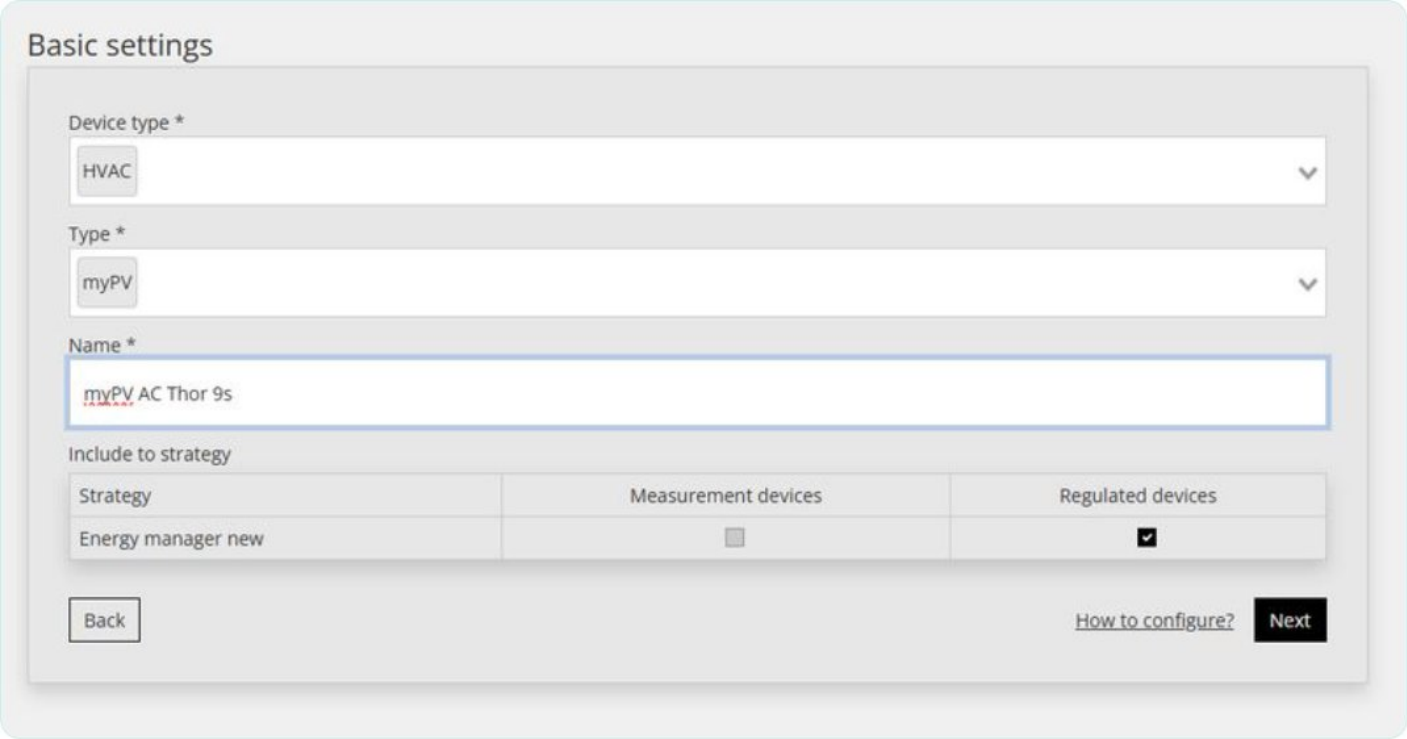


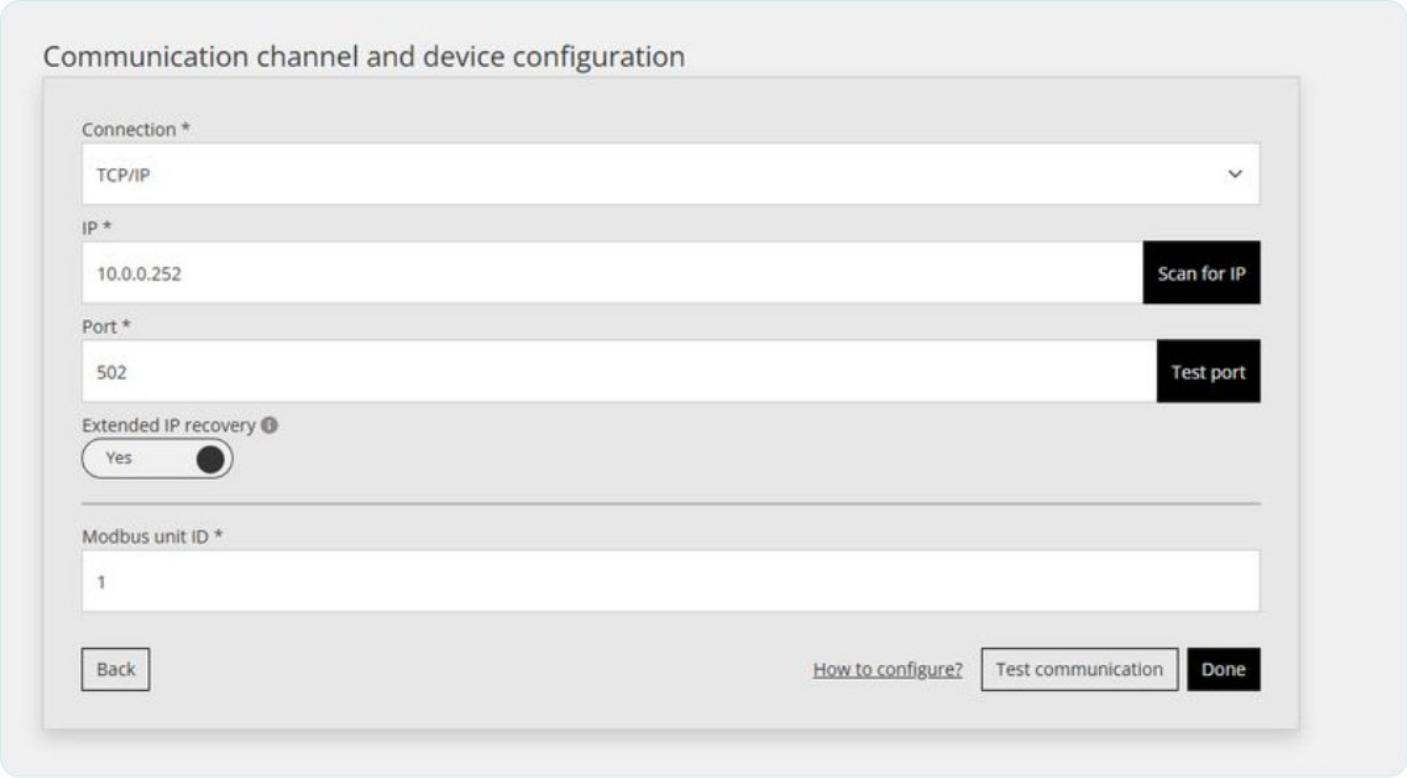
Device type HVAC, type myPV, name and strategy

Text description of this image

6.2 Communication settings

In the next window, enter the IP settings. Port and Modbus unit ID are filled in automatically.

PARAMETER	VALUE
Connection	`TCP/IP`
IP	IP address of the my-PV device (fixed, see **Point 4.2**)
Port	`502` (filled in automatically)
Extended IP recovery	`Yes`
Modbus unit ID	`1` (filled in automatically)



Communication channel and device configuration

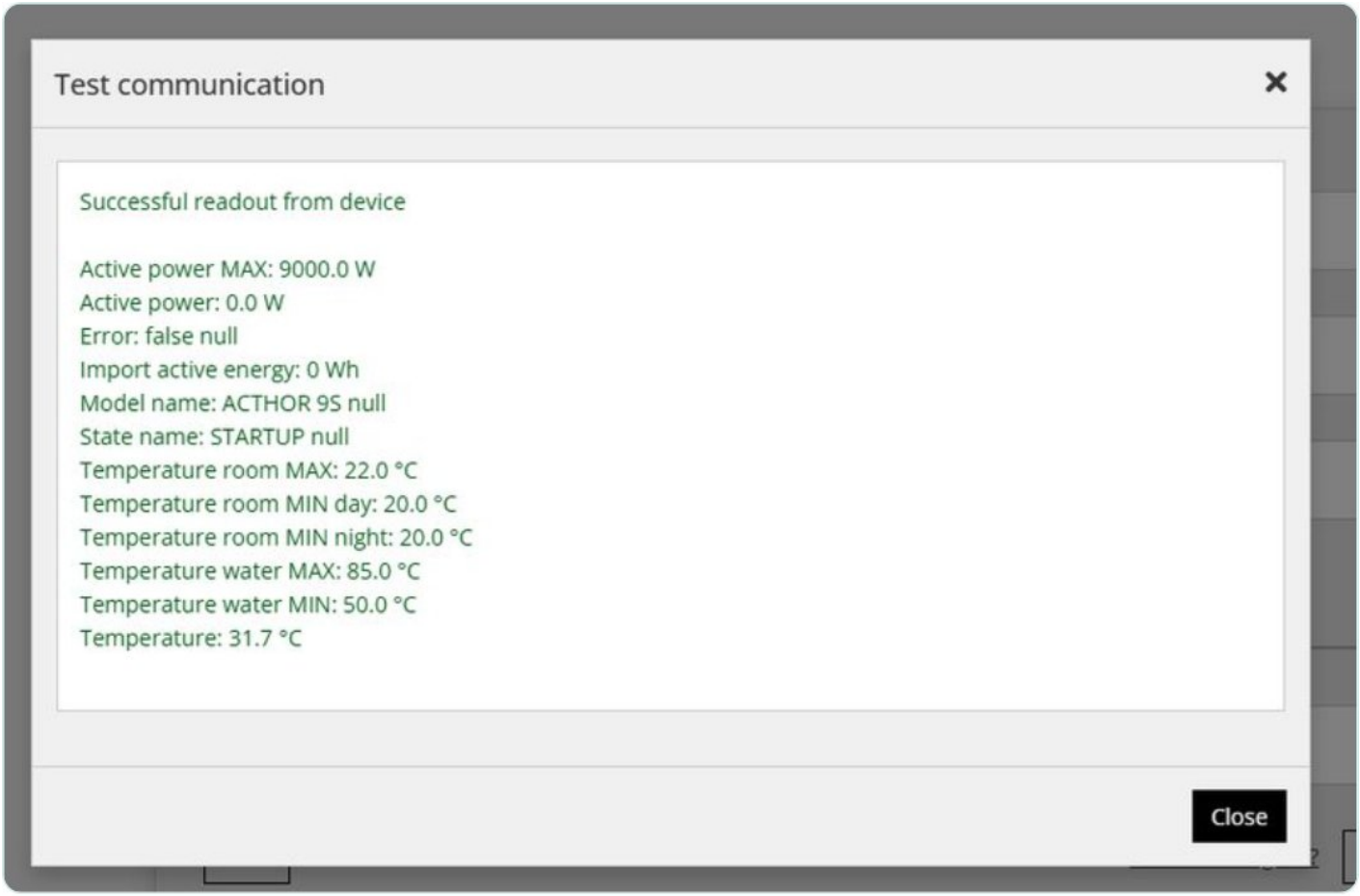
Text description of this image

> **IP address unknown?**
> Click **Scan for IP** next to the IP field to list the devices in the network, or check the device list in your router. **Test port** checks whether port `502` is reachable.

6.3 Test communication

Click **Test communication** to check whether the Reduxi Controller can read data from the my-PV device.

> **Test successful**
> The window shows "Successful readout from device" with the current values of the my-PV device (e.g. model name, power and temperatures). Close the window and confirm your entries with **Done**.

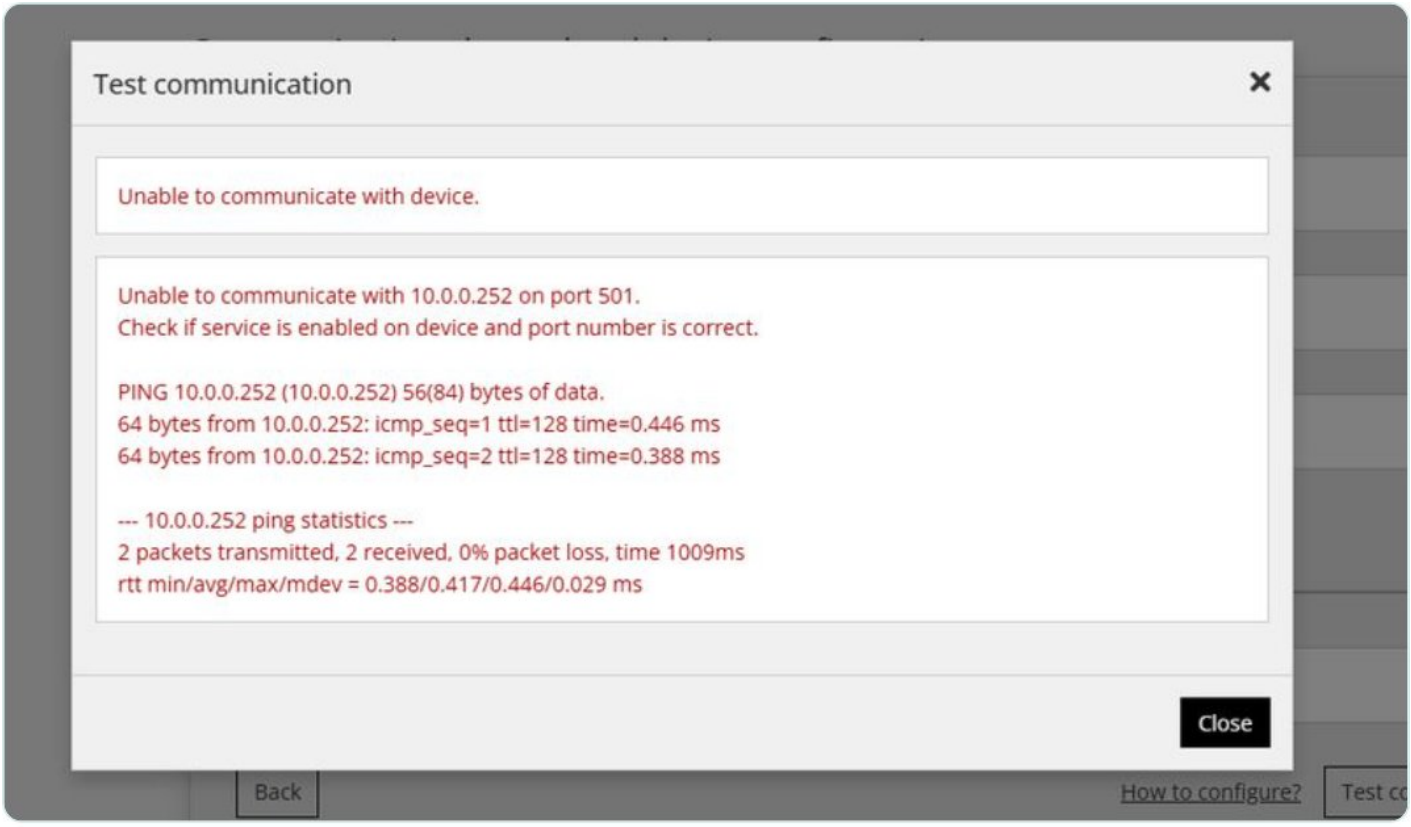


Successful test result (AC•THOR 9s)

Text description of this image

Test failed

Close the window and check the port (`502`), the IP address and the control type `Modbus TCP` on the my-PV device. Then repeat the test. If the ping in the result is successful, the network connection works and the cause is the port or the Modbus setting on the my-PV device. See also **Common issues**.



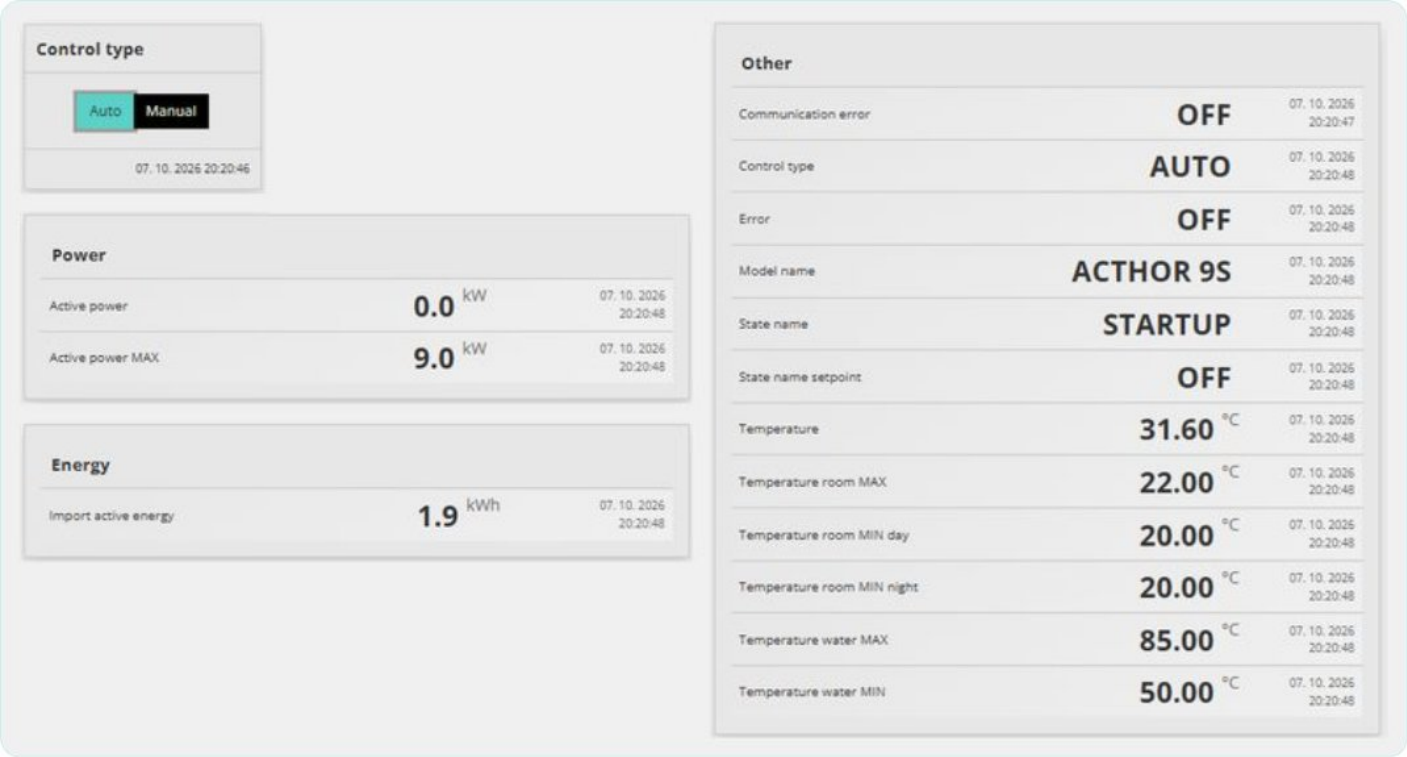
Unsuccessful test result – here with the wrong port 501

Text description of this image

7 Check readings & enable control

7.1 Check the readings

In the Reduxi web interface, open **Devices** → **[name of the my-PV device]** → **Last measurement**.



Last measurement of the AC•THOR 9s – control type Auto, no communication error

Text description of this image

WHAT YOU SEE	MEANING
Communication error OFF, values are read	Communication works.
Communication error ON, all values are 0	No communication – the settings do not match. Check Point 4 and Point 6.2, or see Common issues.

7.2 Enable control by Reduxi

In the **Control type** box of the device view, select `Auto`. Only then do the commands of the Reduxi strategy reach the my-PV device. With `Manual`, the device is not controlled by the strategy.

> ℹ️ **Prerequisite: grid measurement**
> Control based on PV surplus needs the power at the grid connection point. It comes either from the smart meter of the PV system, read via the inverter, or – if the my-PV device is the only device on the Reduxi Controller – from a separate energy meter / smart meter. Either way, it must already be set up in the Reduxi web interface and deliver values.

Next step: choose and configure the strategy – see **Strategies for the Reduxi Controller** under Related articles.

✓ Summary

Preparation (Points 1–3): Have the my-PV manual, a Reduxi Controller, grid measurement (smart meter of the PV inverter or a separate meter) and a my-PV AC•THOR, AC•THOR 9s or AC ELWA 2 ready. The my-PV device and the controller are in the same network via a router.

my-PV device (Point 4): Set the control type to `Modbus TCP` on the display (or in the my-PV web interface) and reserve a fixed IP address in the router.

Add to Reduxi (Points 5–6): Open the Reduxi web interface via the app (tunnel) or a browser, add device type `HVAC` / type `myPV`, enter the IP (port `502`, Modbus unit ID `1`) and run the communication test.

Go live (Point 7): Check the last measurement (communication error OFF), set the control type to `Auto` and configure the strategy. Grid measurement (smart meter of the PV inverter or a separate meter) must already be set up.

→ Common issues

ISSUE	SOLUTION
Test fails with "Unable to communicate … on port 501", ping is successful	The network works, but the port is wrong or Modbus TCP is not active. Set the port to `502` and check that the control type on the my-PV device is `Modbus TCP`.
Test fails, ping is not successful	The my-PV device is not reachable: check the IP address, and that the device and controller are in the same network.
Connection worked, then stopped	The my-PV device probably received a new IP address from the router. Reserve a fixed IP in the router and enter it in the Reduxi web interface.
Readings are shown, but the device doesn't follow the strategy	Set the control type to `Auto`, check that **Regulated devices** is ticked for the strategy, that a strategy is active and that the grid measurement delivers values.
my-PV device receives conflicting setpoints	Make sure the device is not also controlled directly by an inverter or battery system – only the Reduxi Controller sets the power.
Can't open the controller via `reduxi.local`	Enter the controller's IP address instead (router device list or Reduxi app → Reduxi devices), or use the tunnel connection in the Reduxi app.

Related articles

Matching guides from the Reduxi knowledge base:

my-PV manuals and downloads
Data sheets, manuals and wiring diagrams

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