

How to connect Siemens IM350/IM150 smart meters with Reduxi controller

Connect the Siemens IM350/IM150 smart meter to the Reduxi Controller via a P1 converter. You get real-time data for optimal system flexibility.

🔌 Siemens IM350/IM150 · P1 port

🌐 P1/RS485 converter or P1 Ultra Plus / Pro (Wi-Fi)

📡 RS485-1 / RS485-2 · 115200 baud, 8N1

🏷️ Device type: Energy meter

SIEMENS



PI port on the Siemens IM350

Text description of this image

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1 Technical documentation

Documents for the Siemens IM350:

- [Smart Meter IM350 flyer \(PDF, German\)](#) – Siemens flyer: meter interfaces and technical data.
- [Smart meter user guide, Siemens \(PDF\)](#) – Wiener Netze guide for the Siemens smart meter, incl. the customer interface.

2 Required equipment

To connect the Siemens IM350/IM150 smart meter, you need:

- ☐ Reduxi Controller (in some cases a Reduxi Gateway as an add-on device)
- ☐ P1 to RS485 converter, or a Reduxi P1 Ultra Plus / Pro converter (Wi-Fi)
- ☐ PoE injector with one RJ12 male and one RJ12 female connector. It supplies the data line externally.
- ☐ One cable with two RJ12 male connectors
- ☐ Laptop or tablet with internet access to configure the device in Reduxi



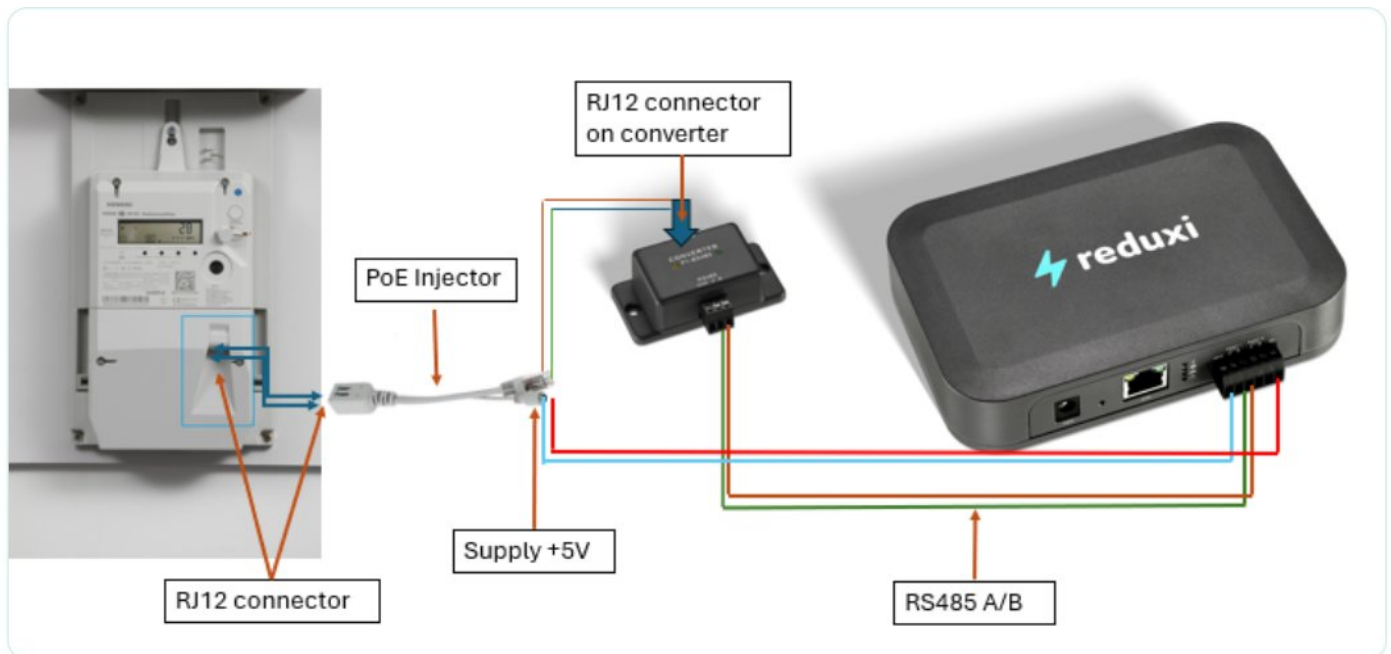
External supply required

The Siemens IM350/IM150 needs an **external supply** to activate the readings from the P1 port.

3 Connect the smart meter to the Reduxi Controller

The picture shows the P1 port on the Siemens IM350.

3.1 Connection with the P1/RS485 converter



Connection with the P1/RS485 converter

Text description of this image

1

P1 port to PoE injector

Connect the P1 port on the smart meter to the PoE injector with the cable with two male RJ12 connectors.

2

PoE injector to converter

Connect the male RJ12 connector of the PoE injector to the female connector on the P1/RS485 converter.

3

Converter to controller

Connect the RS485 A and B pins on the P1/RS485 converter to the A and B pins of RS485-1 or RS485-2 on the Reduxi Controller.

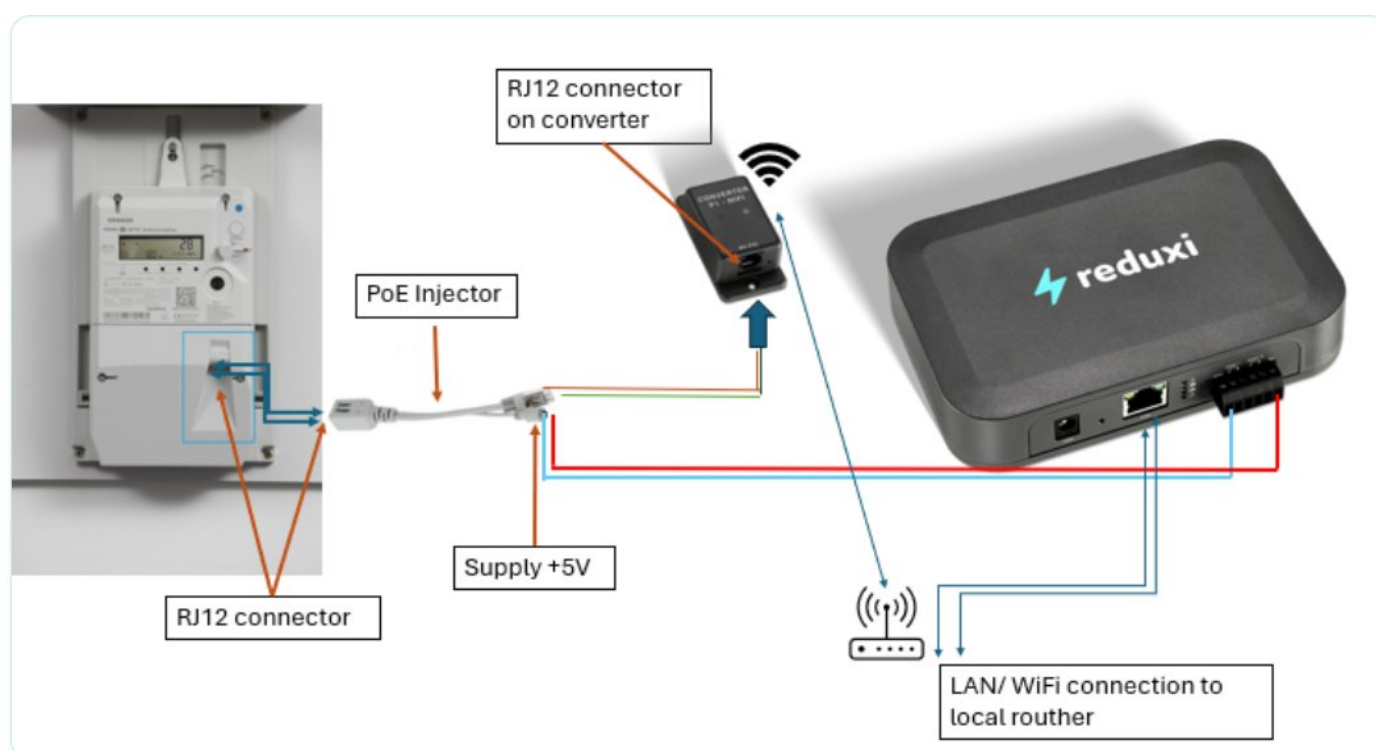
4

Supply of the data line

Connect the 0/+5 V pin of the Reduxi Controller to the supply input of the PoE injector. This is the supply connection for the data line.

To connect the Reduxi Controller to the local network, see How to connect Reduxi Controller.

3.2 Connection with the P1 Ultra Plus / Pro converter (Wi-Fi)



Connection with the Wi-Fi converter

Text description of this image

1

P1 port to PoE injector

Connect the P1 port on the smart meter to the PoE injector with the cable with two male RJ12 connectors.

2

PoE injector to converter

Connect the male RJ12 connector of the PoE injector to the female connector on the P1 Ultra Plus / Pro converter.

3

Supply of the data line

Connect the 0/+5 V pin of the Reduxi Controller to the supply input of the PoE injector. This is the supply connection for the data line.

4

Data transfer

The P1 Ultra Plus / Pro converter and the Reduxi Controller exchange data via the local network.

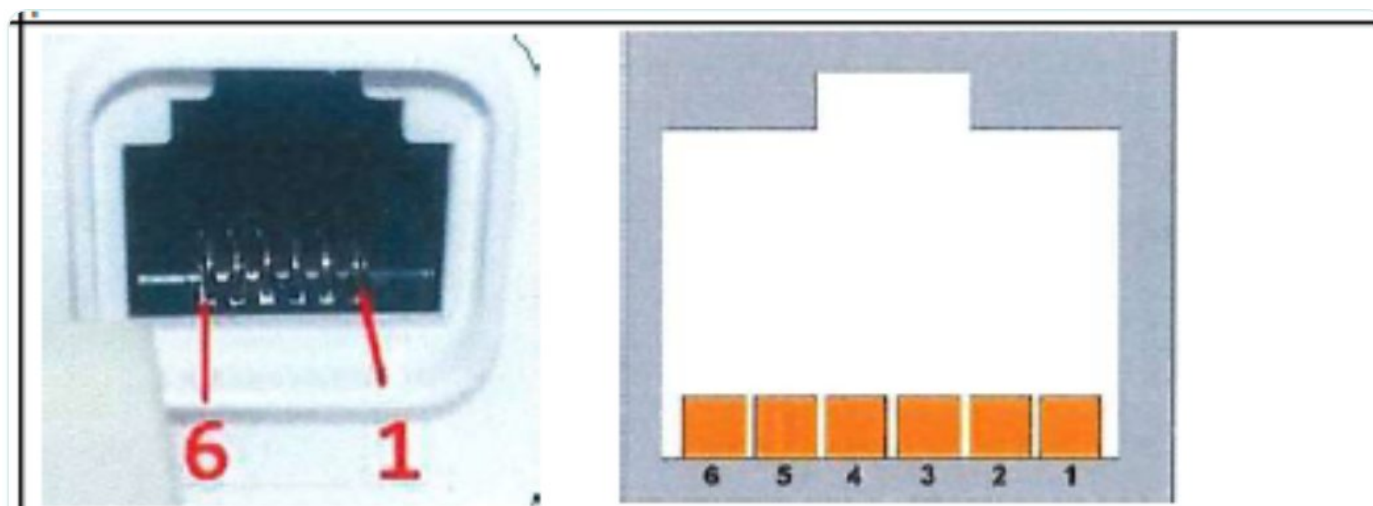
For the network connection, see How to connect the Reduxi Controller and **Reduxi Converter P1 Ultra Plus / Pro** (connect the converter to the local network).

3.3 Pin definition of the P1 port



Supply pins

The supply pins are defined as PIN 1 = +5 V and PIN 2 = 0 V.



The image shows a physical P1 port connector on the left and a corresponding pin layout diagram on the right. The physical connector has two red arrows pointing to pins labeled '6' and '1'. The diagram shows a 6-pin connector with pins numbered 6, 5, 4, 3, 2, 1 from left to right.

Pin #	Signal name	Description	Remark
1	+5 V	+5 V external power supply	Power supply line IN
2	Data Request	Data Request	Input
3	Data GND	Data Ground	
4	n.c.	Not connected	
5	Data	Data Line	Output. Open collector
6	Power GND	Power Ground	Power supply line IN

Pin definition of the P1 port

Text description of this image

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

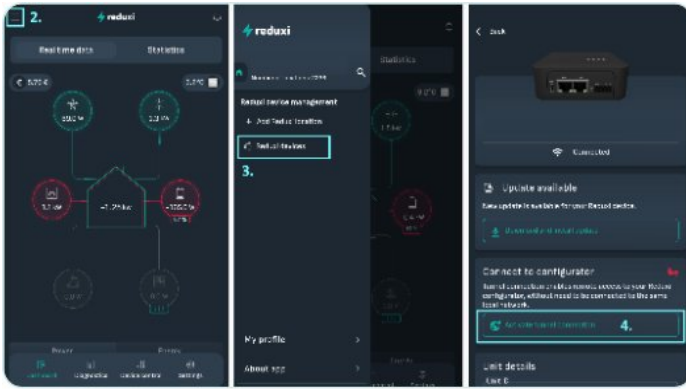
Activate the tunnel connection

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

4

Open the configurator

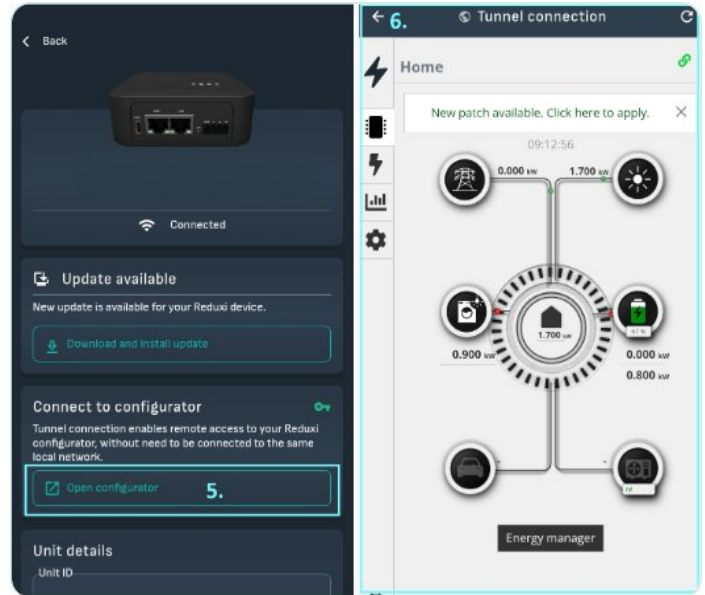
Tap **Open configurator**. The Reduxi web interface opens.



Activate the tunnel connection (step 3)

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 (step 4)

Text description of this image

Screenshot of the Reduxi mobile app showing the 'Tunnel connection' screen. The screen displays a 'New patch available' notification, a 'Connected' status, and an 'Update available' section. The 'Open configurator' button is highlighted with a cyan box and a number badge 5.

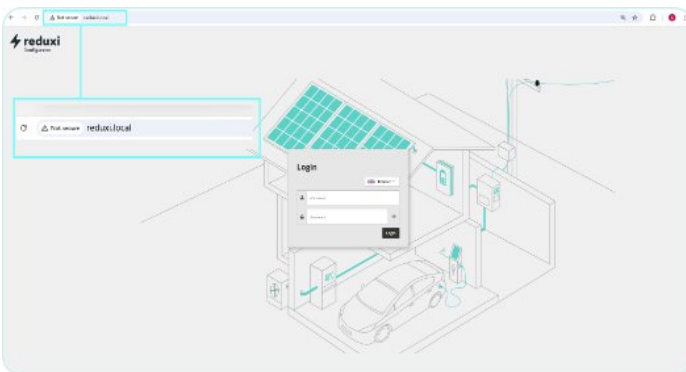
4.2 Via a web browser

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**.

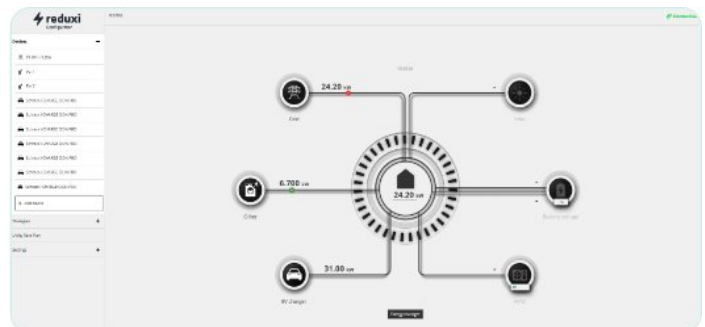
2 Log in

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



Reduxi Controller login screen

Text description of this image



Controller web interface after login

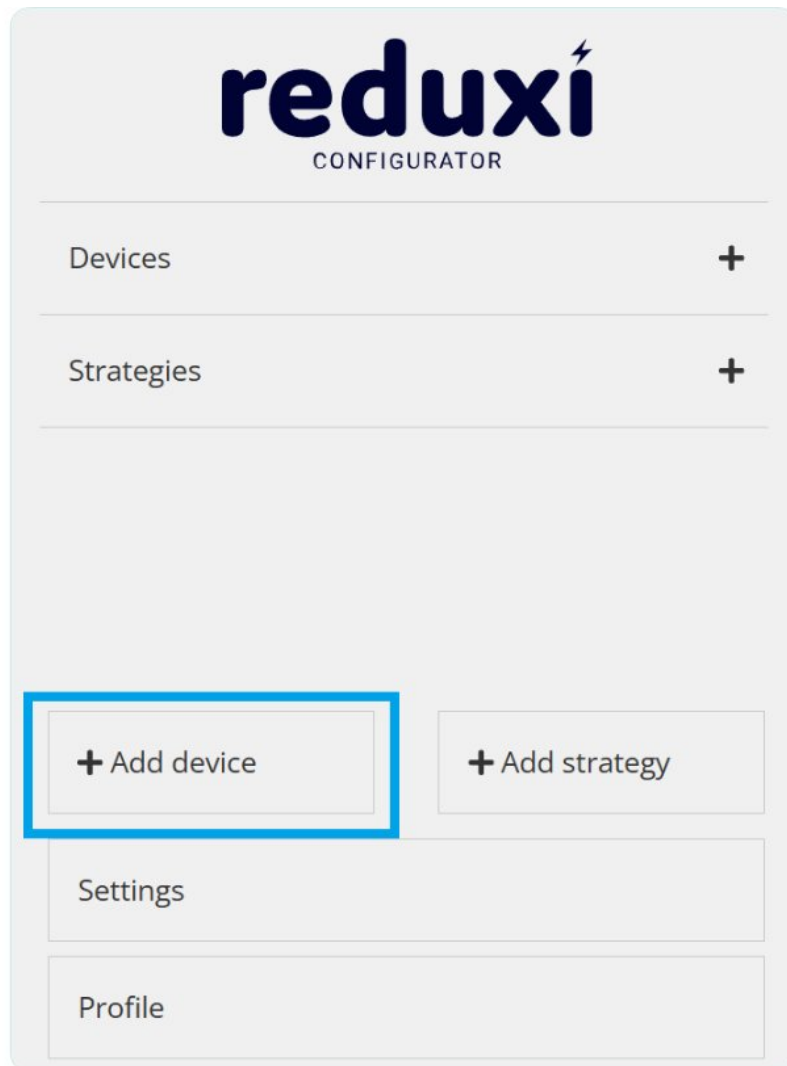
2. Text description of this image

Screenshot of the Reduxi Configurator web interface

5 Add the Siemens IM350/IM150 to Reduxi

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

Text description of this image

In the first step, select the basic settings:

- Device type: **Energy meter**
- Type: **Siemens IM350 / IM150**
- Category: **Grid**
- Name: a name of your choice

Basic settings

Device type *

Energy meter

Type *

Siemens IM350 / IM150

Category *

Grid

Name *

Siemens IM350 / IM150

Back

Next

Basic settings: device type, type, category and name

Text description of this image

5.2 Communication settings

The second step sets up the communication channel between the devices. The first part of the settings:

PARAMETER	VALUE
Connection	Local serial port
Port	The port you connected: Port 1 in the screenshot (RS485-1)
Baud rate	115200 bits/s
Data bits	8
Stop bits	1
Parity	None

Communication channel and device configuration

Connection *

Local serial port

Port *

Port 1

Baud rate *

115200 bits/s

Data bits *

8

Stop bits *

1

Parity *

None

Communication channel: first part

Text description of this image

The second part of the settings contains two extra parameters:

- **Block cipher key:** you get it from your local DSO
- **Message structure:** depends on the DSO

Interface type *

HDLC

Block cipher key

Message structure *

Austria / Karnten Netz

Back

Test communication

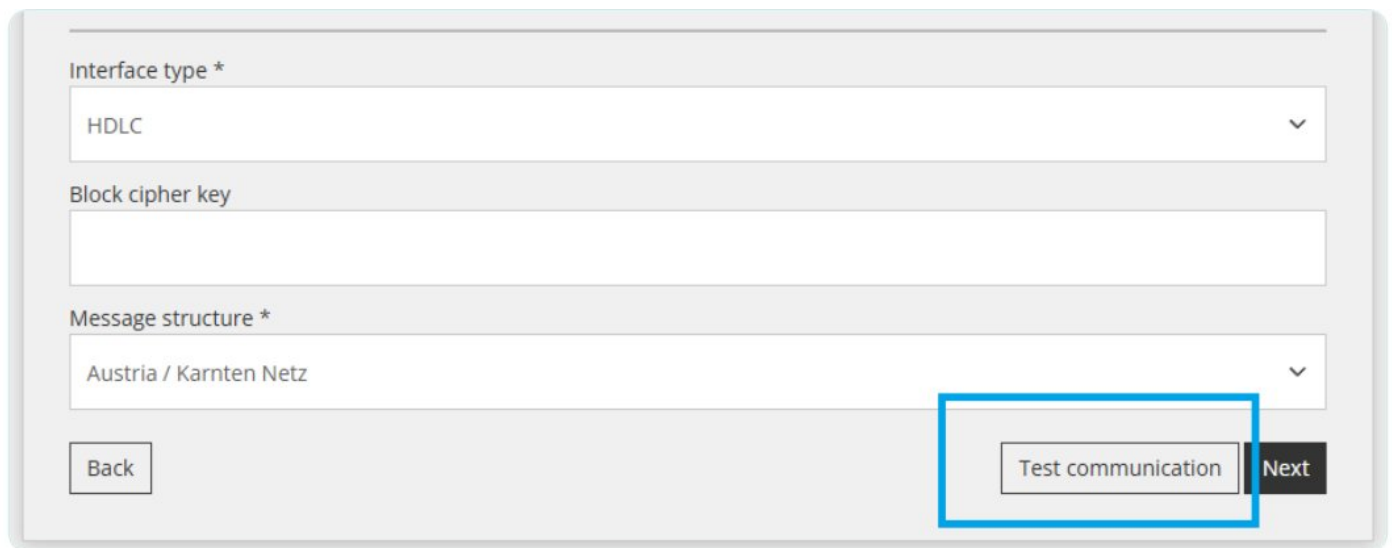
Next

Communication channel: second part (interface type, block cipher key, message structure)

Text description of this image

5.3 Test communication

Click **Test communication** below the communication fields. It checks whether the connection between the devices works. If the test succeeds, click **Done**: only **Done** creates the device.

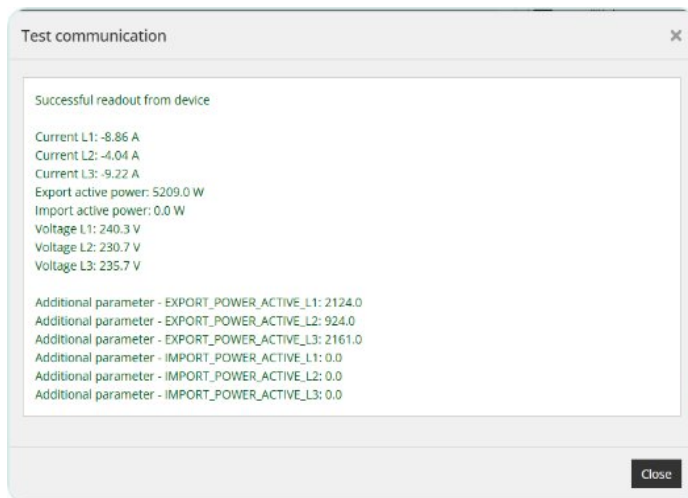


The screenshot shows a configuration form with three main sections: 'Interface type *' with a dropdown menu showing 'HDLC'; 'Block cipher key' with an empty text input field; and 'Message structure *' with a dropdown menu showing 'Austria / Karnten Netz'. At the bottom, there are three buttons: 'Back', 'Test communication' (which is highlighted with a blue rectangular box), and 'Next'.

The **Test communication** button

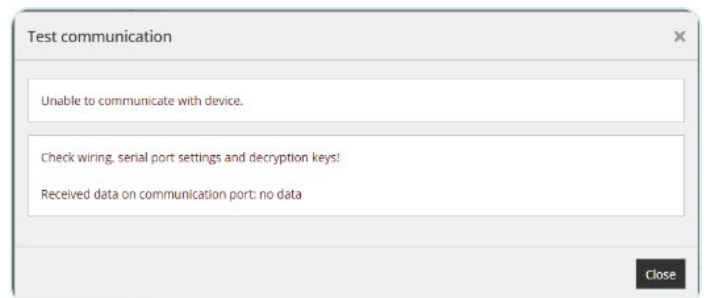
Text description of this image

The test returns one of two results:



1. Communication works properly

Text description of this image



2. Communication does not work properly

2. Text description of this image

Screenshot of a dialog titled Test communication (close X at top right). First box with red text: Unable to communicate with device. Second box with red text: Check wiring, serial port settings and decryption keys! Received data on communication port: no data

5.4 Advanced settings

Use the advanced settings only if the site has special requirements. By default, you do not change anything here.

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

L1 is connected to main feed

L2 is connected to main feed

L3 is connected to main feed

Back

Done

Advanced settings

Text description of this image

6 Check the readings

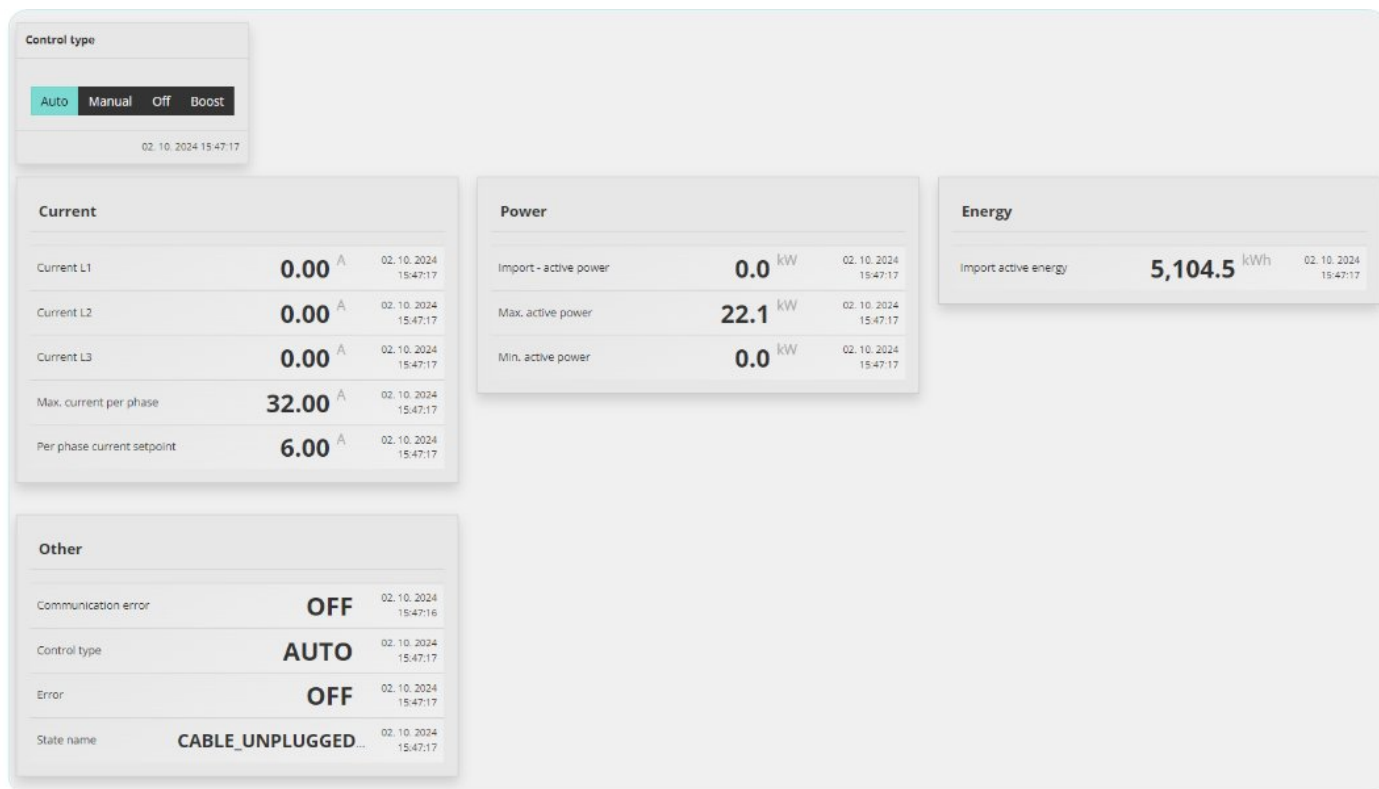
6.1 Last measurements

Check the readings of the device under **Device – Siemens IM350/150 – Last measurement** in the Reduxi Configurator.

Reduxi Knowledge Base

How to connect Siemens IM350/IM150 smart meters with Reduxi controller

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Last measurements of the smart meter

Text description of this image

6.2 Monitor in the Reduxi cloud

Once the device is added in the Configurator, you can monitor it in the [Reduxi cloud application](#).

✓ Summary

Preparation (Points 1–2): Collect the converter, the PoE injector, the RJ12 cable and a laptop or tablet. The meter needs an external supply for the P1 readings.

Siemens IM350/IM150 (Point 3): Connect the P1 port via the PoE injector and the converter to the Reduxi Controller. Supply the data line from the 0/+5 V pin of the controller.

Siemens

IM350 / IM150

run **Test communication** and click **Done**.

Go live (Point 6): Check the readings under Last measurement. Monitor the meter in the Reduxi cloud.

→ Common issues

ISSUE	SOLUTION
No readings from the P1 port	The meter needs an external supply. Connect the 0/+5 V pin of the Reduxi Controller to the supply input of the PoE injector (see Point 3).
Test communication fails	Check the block cipher key from your DSO and the message structure (see Point 5 , Point 5.2). The message structure depends on the DSO.
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 Converter P1 Ultra Plus / Pro

How to connect the P1 Ultra Plus / Pro converter to the local network.



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