

How to connect ABB Terra Wall Box with Reduxi controller

Integrate the ABB Terra Wall-Box charger with Reduxi via Wi-Fi, using Modbus TCP/RTU or OCPP. Reduxi's flexibility allows cost reductions of up to 30%.



🔧 ABB Terra AC Wall-box · Reduxi Controller

🌐 OCPP 1.6 JSON or Modbus TCP/IP (RTU) via Wi-Fi

📱 Modbus ID 1 (default) 📱 TerraConfig app

IN THIS ARTICLE

1. Technical documentation
2. Required equipment
3. Install the TerraConfig app
4. Configure the charger in TerraConfig
 - Log in to the app
 - Charger basic settings
 - OCPP server parameters
 - Energy management
 - Modbus settings
 - Connect to Wi-Fi
5. Log in to the Reduxi web interface
 - Via the Reduxi app
 - Via a web browser
6. Add the charger to Reduxi via OCPP 1.6 JSON
 - Basic settings
 - Communication settings
 - OCPP settings in TerraConfig
 - Test communication
7. Add the charger to Reduxi via Modbus TCP/IP
 - Basic settings
 - Communication settings
 - Test communication
 - Advanced settings
8. Check the readings
9. Summary
10. Common issues
11. Related articles

1 Technical documentation

Documents and tools for the ABB Terra AC Wall-box:

- [ABB Terra AC Wall-box: Modbus communication \(v1.7\)](#) – Modbus RTU and Modbus TCP/IP interfaces and register map
- [TerraConfig platform](#) – Web login of the TerraConfig platform
- [TerraConfig on Google Play](#) – App for Android
- [TerraConfig on the Apple App Store](#) – App for iOS

2 Required equipment

You need these components:

- ☐ ABB Terra AC Wall-box charger
- ☐ Reduxi Controller
- ☐ Smartphone with the TerraConfig app (Android or iOS)
- ☐ Wi-Fi network for the charger
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

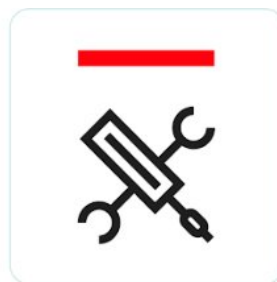
The charger connects to Reduxi via Wi-Fi. Choose one protocol:

- OCPP 1.6 JSON (see [Point 6](#))
- Modbus TCP/IP (see [Point 7](#))

3 Install the TerraConfig app

3.1 TerraConfig platform

<https://abb.installer.chargedot.com/#/login>



TerraConfig

Text description of this image

3.2 Google Play

The application is available on Google Play: <https://play.google.com/store/apps/details?id=com.abbemobility.terraconfig>

3.3 Apple App Store

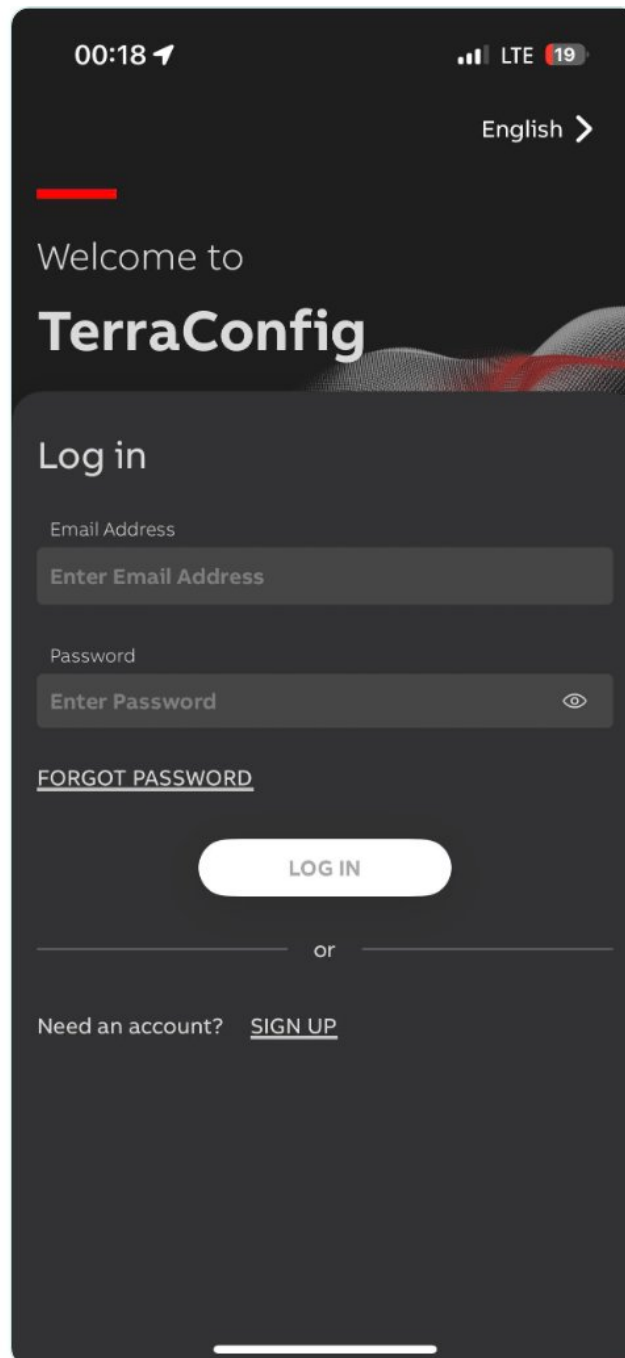
The application is available on the Apple App Store:

<https://apps.apple.com/us/app/terraconfig/id6443887124>

4 Configure the charger in TerraConfig

4.1 Log in or register in the TerraConfig app

Open the application. Log in, or click **SIGN UP** to register a new account and then log in.



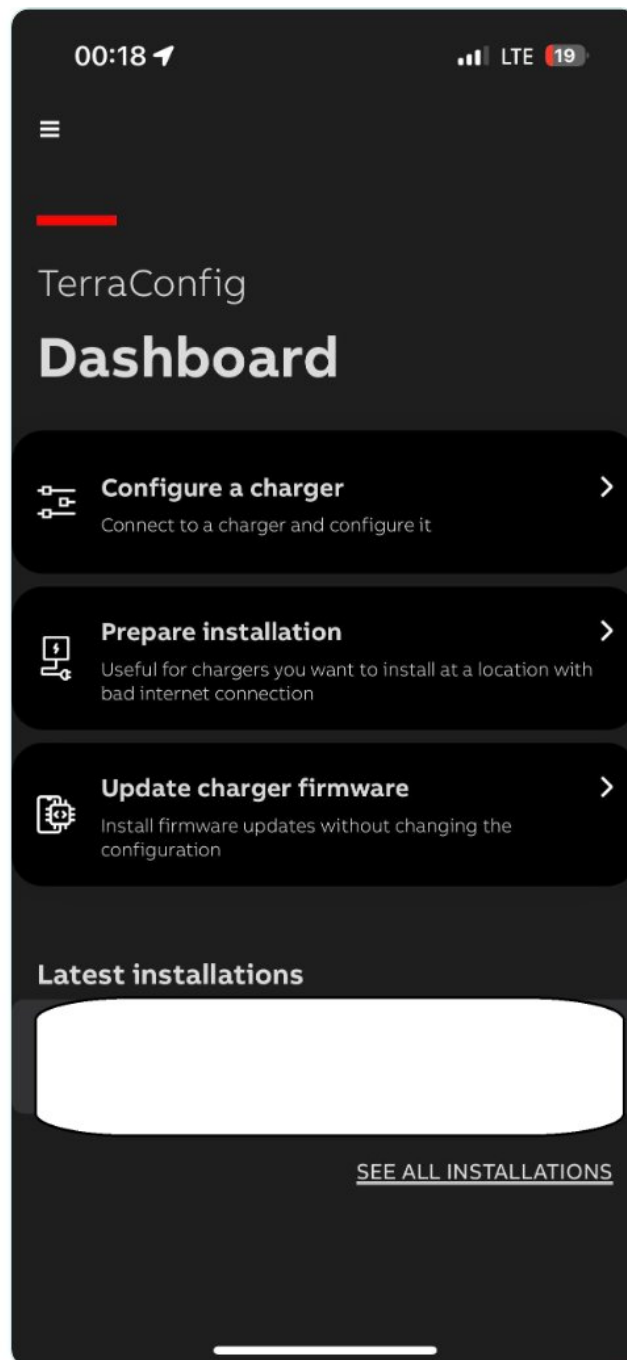
TerraConfig login screen

Text description of this image

4.2 Charger settings

After login, configure the charger in the app:

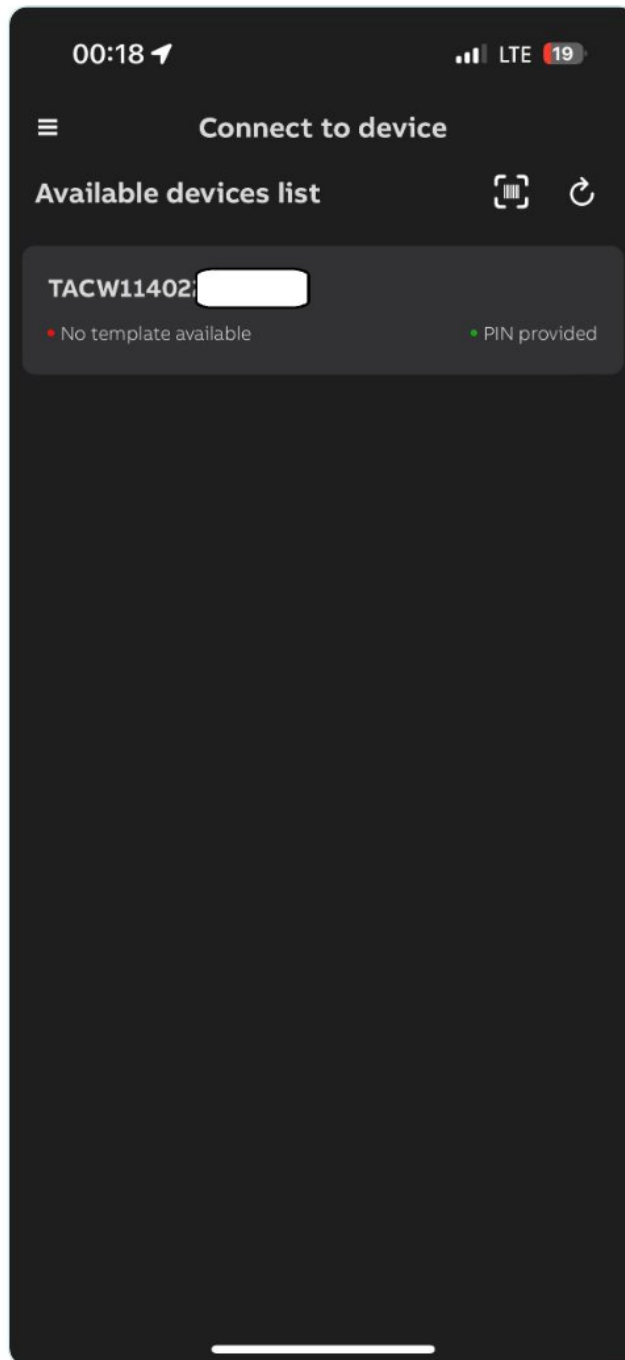
On the dashboard, click **Configure a charger**.



TerraConfig dashboard

Text description of this image

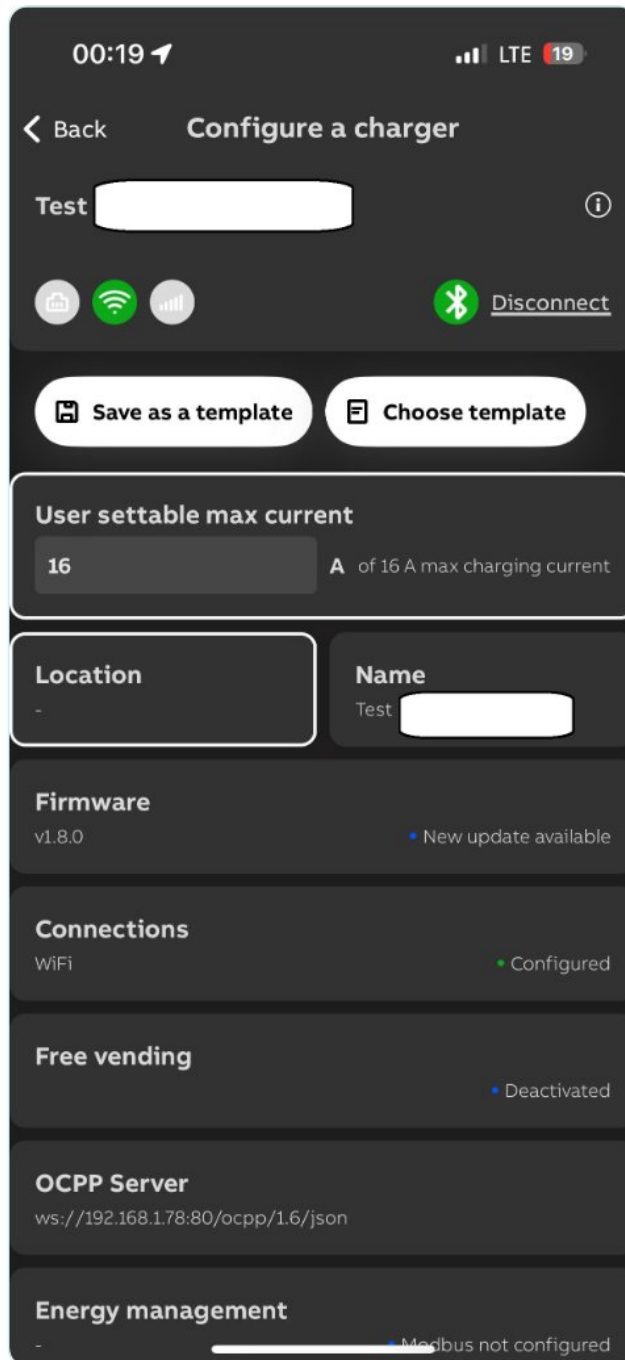
Connect to the charger from the list of available devices.



Available devices list

Text description of this image

Fill in the basic settings.



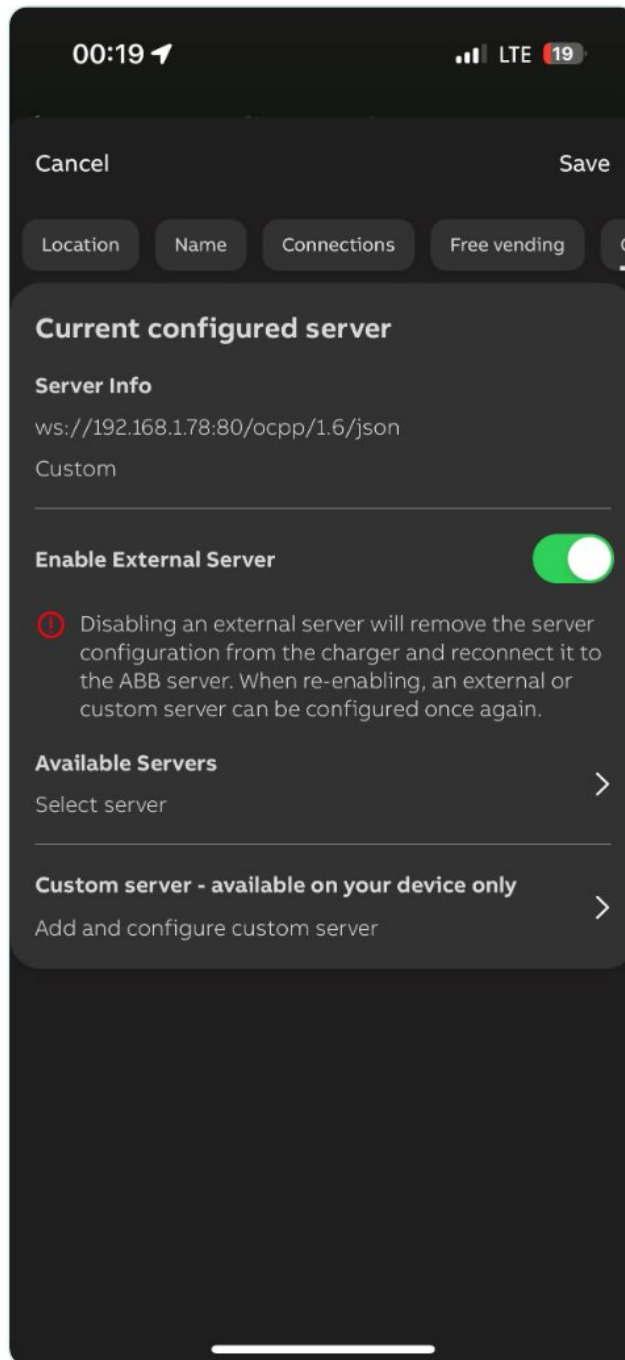
Basic settings of the charger

Text description of this image

4.3 OCPP server parameters

Enable the **External Server**.

You obtain the OCPP server URL from the Reduxi controller (see [Point 6](#)).

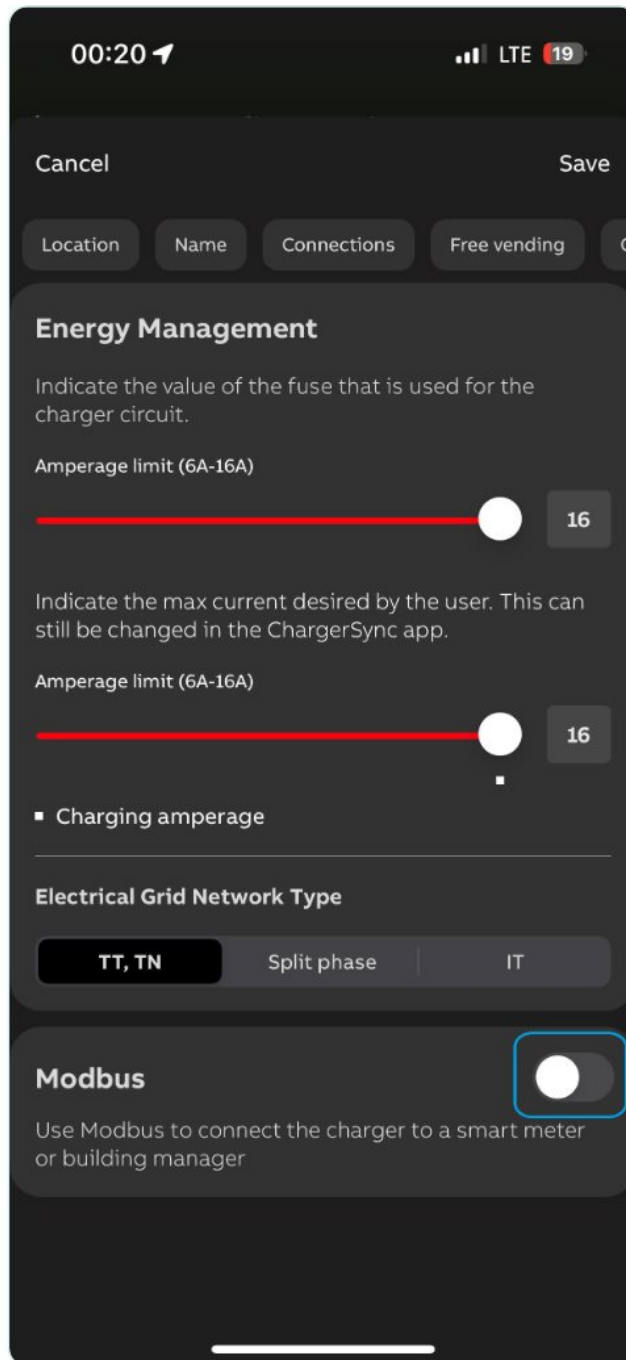


External server and OCPP server URL

Text description of this image

4.4 Energy management

Fill in the Energy Management parameters and **enable Modbus**.

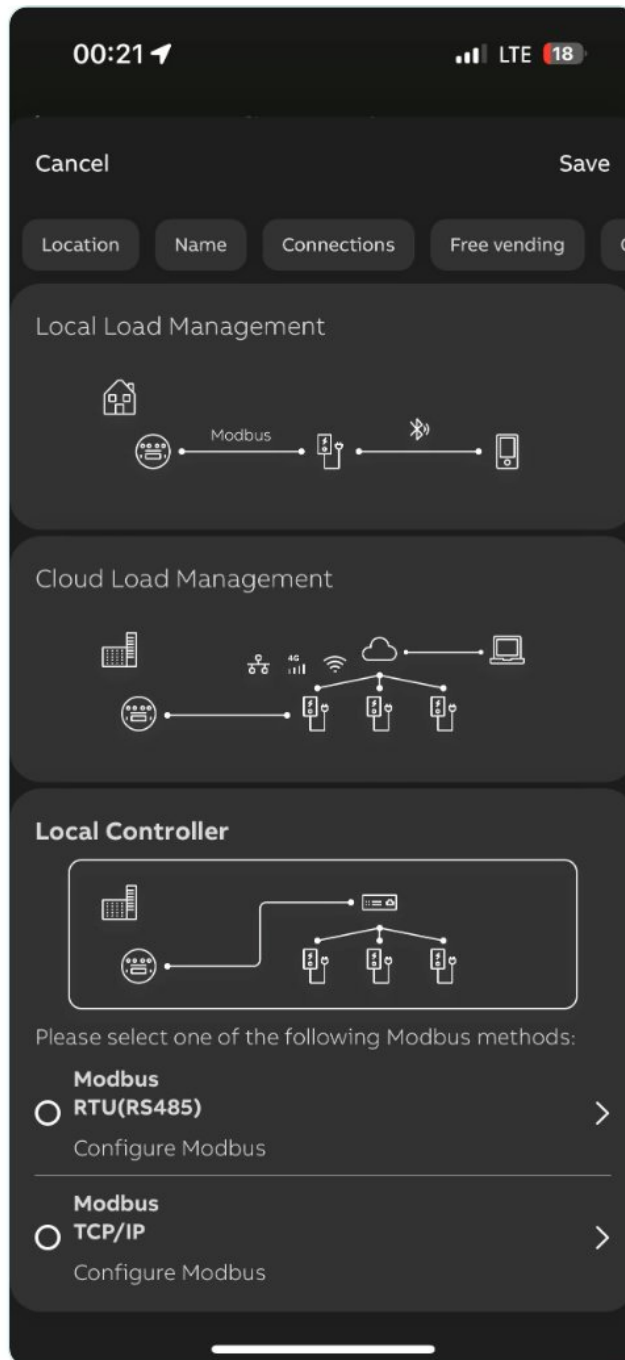


Energy Management parameters

Text description of this image

4.5 Modbus settings

Choose **Local Controller**.



Choose Local Controller

Text description of this image

Modbus RTU: apply the same settings on the Reduxi Controller for RS485 port 1 or port 2.

00:21 LTE 18

Configure Modbus Cancel

Local controller - Modbus RTU(RS485)
Multiple chargers - charger as secondary

Communication Settings

Modbus Address
1

Baud Rate
9600

Parity
☐ None ☐ Odd ☒ Even

Stop Bit
☒ 1 ☐ 2

Data Bit
8

SAVE

Modbus RTU (RS485) settings

Text description of this image

Modbus TCP/IP: set the parameters for the communication with the Reduxi Controller.

00:21   LTE  18

Configure Modbus Cancel

Local controller - Modbus TCP/IP
Multiple chargers - charger as secondary

Communication Settings

IP Address
E.g. 192.168.0.4

Mask Address
E.g. 255.255.255.0

Gateway Address
E.g. 192.168.0.1

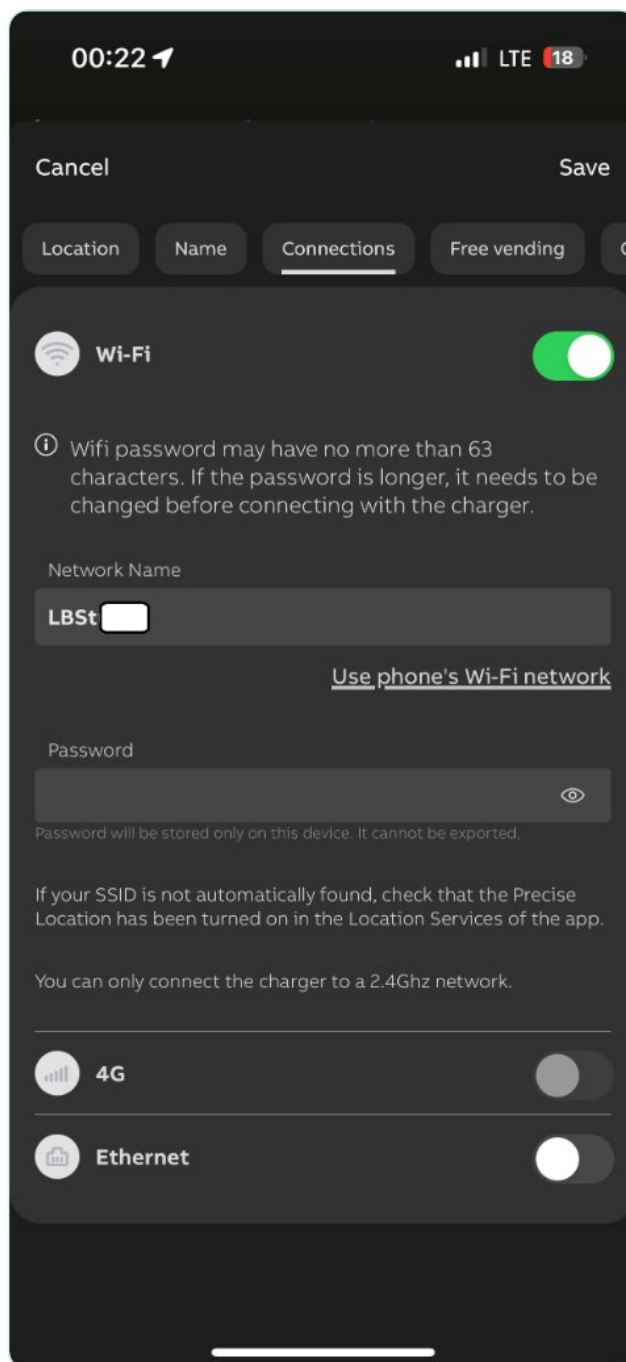
Server port
E.g. 500

SAVE

Modbus TCP/IP settings

Text description of this image

4.6 Connect the charger to Wi-Fi



Wi-Fi settings of the charger

Text description of this image

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 reduxि.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

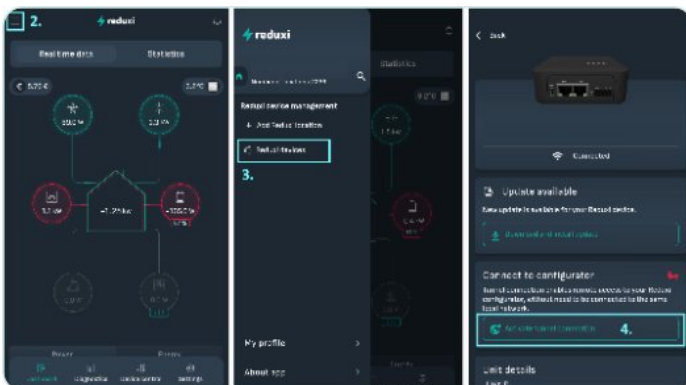
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

3 Activate the tunnel connection

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

4 Open the configurator

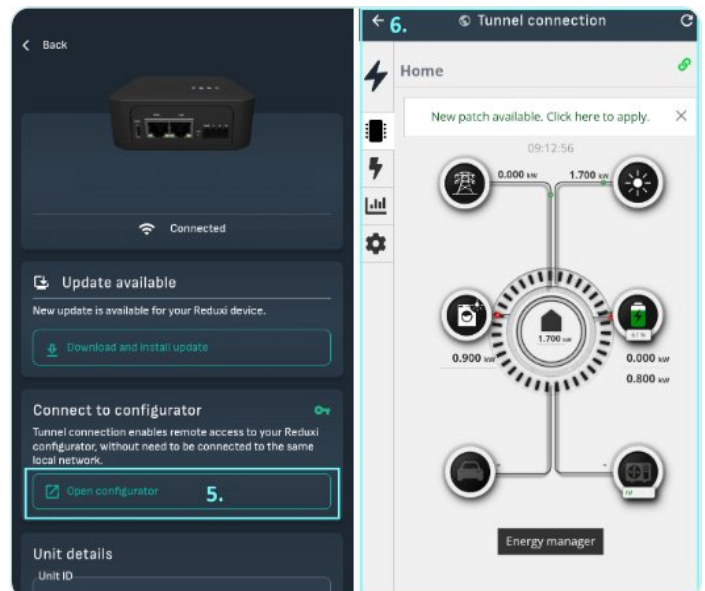
Tap **Open configurator**. The Reduxi web interface opens.



Activate the tunnel connection (step 3)

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; 'reduxि' logo; tabs 'Real time data' (active) and 'Statistics'; price 5.79



Open configurator (step 4)

2. Text description of this image

5.2 Via a web browser

1

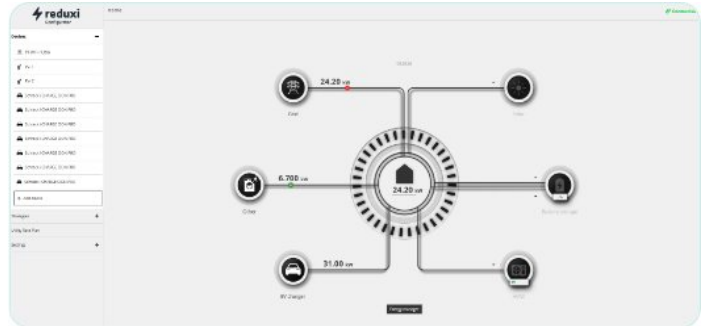
On a device in the same network, open a web browser and enter the controller's IP address or `http://reduxi.local`. You can find the controller's IP address in your router's device list or in the Reduxi app under **Reduxi devices**.

2

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



Reduxi Controller login screen



Controller web interface after login

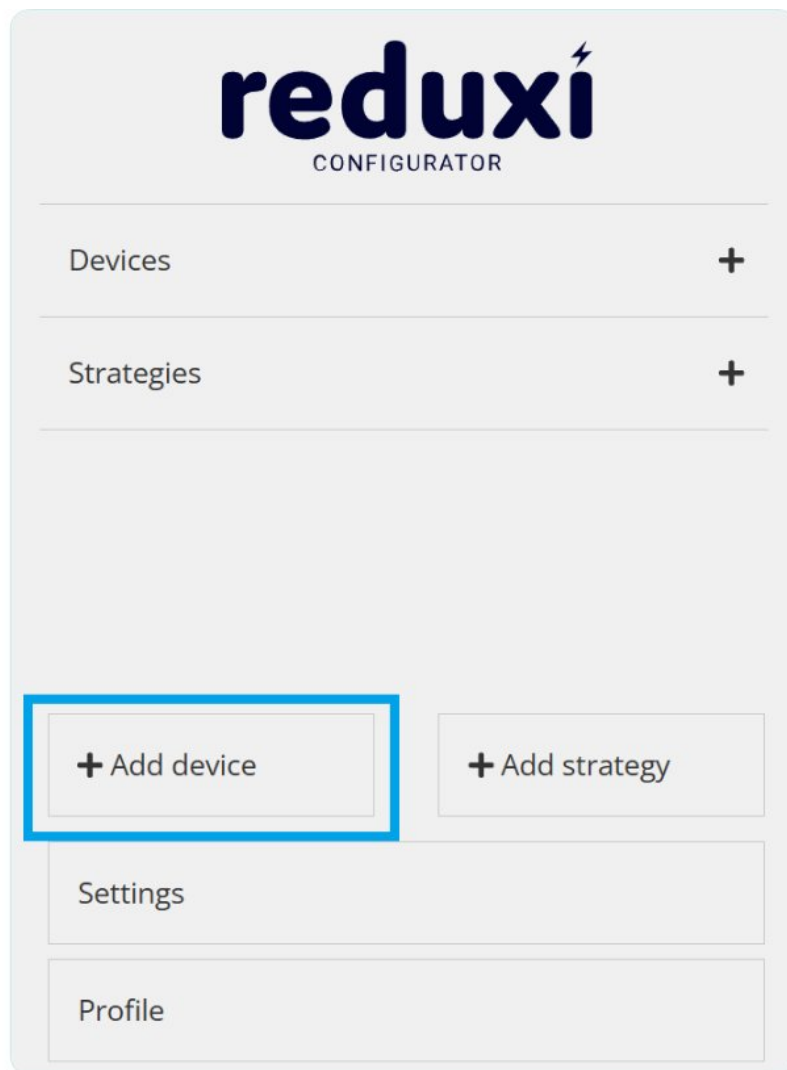
2. Text description of this image

Screenshot of the Reduxi Configurator web interface

6

6.1 Basic settings

Log in locally to the **Reduxi Configurator** on the controller (see **Point 5**) and click **+ Add device**.



*The **Add device** button*

Text description of this image

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

- Device type: **EV charger**
- Type: **OCPP 1.6 - JSON**
- Name: a name of your choice

1 Basic settings 2 Communication channel 3 Advanced settings

Basic settings

Device type *

Type *

Name *

Back Next

Basic settings: device type, type and name

Text description of this image

6.2 Communication settings

The second step is the communication channel. First fill in the **Device identifier**. The Device ID (unique OCPP ID) is printed on the right side of the charger and starts with **TACW11-4-.....**. It is also shown in the TerraConfig app. Enter it in the communication channel.

The OCPP 1.6 JSON protocol needs the server OCPP URL. The Reduxi Controller generates it. Copy it from the communication channel.



Example URL

`ws://192.168.1.200/ocpp/1.6/json/`

1
Basic settings
2
Communication channel
3
Advanced settings

Communication channel and device configuration

Device identifier *

my_station_ID1

Connector *

1

Charger type *

AC

Energy counter

Default

Allocate power to EVSE when EV is not connected to EVSE

Default

Per phase max. current *

Manual override

Per phase max. current manual override

32

In effect when manual override is selected

Forward communication to backend OCPP server

Forward measurements to backend OCPP server once every

Allow new charging session

Always

Controller OCPP JSON 1.6 URL

ws://192.168.1.200/ocpp/1.6/json

Back

Test communication

Next

Communication channel for OCPP

Text description of this image

6.3 Configure the OCPP settings in TerraConfig

Enter the server URL in the charger: see [Point 4](#), section 4.3 (OCPP server parameters).

6.4 Test communication

Click **Test communication** at the lower right, below the communication channel fields. It reads the charger once and saves nothing. If the test succeeds, click **Next**, complete the advanced settings (see [Point 7](#), section 7.4) and click **Done**. Only **Done** creates the device.

1 Basic settings 2 Communication channel 3 Advanced settings

Communication channel and device configuration

Device identifier *

my_station_ID1

Connector *

1

Charger type *

AC

Energy counter

Default

Allocate power to EVSE when EV is not connected to EVSE

Default

Per phase max. current *

Manual override

Per phase max. current manual override

32

In effect when manual override is selected

Forward communication to backend OCPP server

Allow new charging session

Always

Controller OCPP JSON 1.6 URL

ws://192.168.1.200/ocpp1.6/json

Back Test communication Test

The **Test communication** button

Text description of this image

The test returns one of three results:

Case 1: communication works properly.

AC

Test communication

Successful readout from device

Current L1: 0.0 A
Current L2: 0.0 A
Current L3: 0.0 A
Import active power: 0.0 W
Max. active power: 22080.0 W
Max. current per phase: 32.0 A
Min. active power: 0 W
State name: AVAILABLE

Close

Case 1: communication works

Text description of this image

Case 2: unable to communicate with the device. The ID of the device is not set or is different.



Case 2: device identifier not set or different

Text description of this image

Case 3: no device with OCPP 1.6 communication is found.



Case 3: no OCPP 1.6 device found

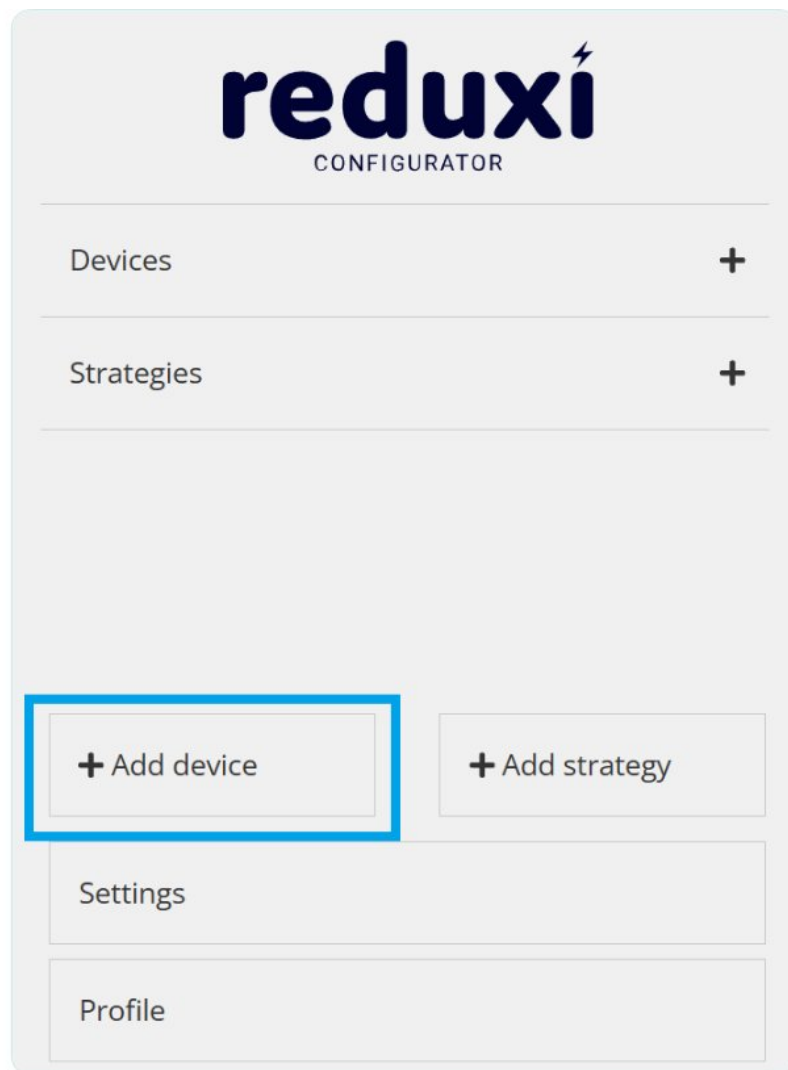
Text description of this image

7 Add the charger to Reduxi via Modbus TCP/IP

ABB describes the Modbus interface in the [Modbus communication document](#) (see [Point 1](#)).

7.1 Basic settings

Log in locally to the [Reduxi Configurator](#) on the controller (see [Point 5](#)) and click **+ Add device**.



*The **Add device** button*

Text description of this image

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

- Device type: **EV charger**
- Type: **ABB Terra AC Wall-box**
- Name: a name of your choice

1

2

3

Basic settings

Communication channel

Advanced settings

Basic settings

Device type *

EV charger

Type *

ABB Terra AC wallbox

Category *

EV charger

Name *

ABB Terra AC wallbox

Back

Next

Basic settings: device type, type and name

Text description of this image

7.2 Communication settings

The second step is the communication channel. Enter the IP address of the ABB Terra AC Wall-box and the Modbus ID. The default Modbus ID is **1**.

PARAMETER	VALUE
Connection	TCP/IP
IP	The IP address of the charger, for example 192.168.2.201
Port	The Modbus TCP port set in TerraConfig (502 in the example screenshots)
Modbus ID	Default 1

1 Basic settings 2 Communication channel 3 Advanced settings

Communication channel and device configuration

Connection *
TCP/IP

IP *

Port *
502

Modbus unit ID *
1

Back Test communication Next

Communication channel for Modbus TCP/IP

Text description of this image

7.3 Test communication

Click **Test communication** at the lower right, below the communication channel fields. It reads the charger once and saves nothing. Example IP: **192.168.2.201** .

Communication channel and device configuration

Connection *
TCP/IP

IP *
192.168.2.201

Port *
502

Modbus unit ID *
1

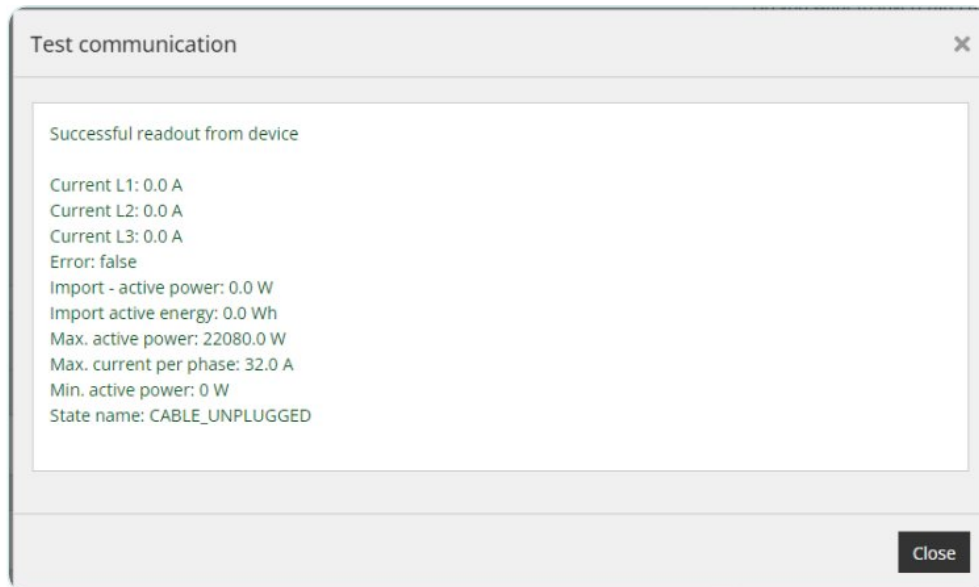
Back Test communication Next

The **Test communication** button

Text description of this image

The test returns one of three results:

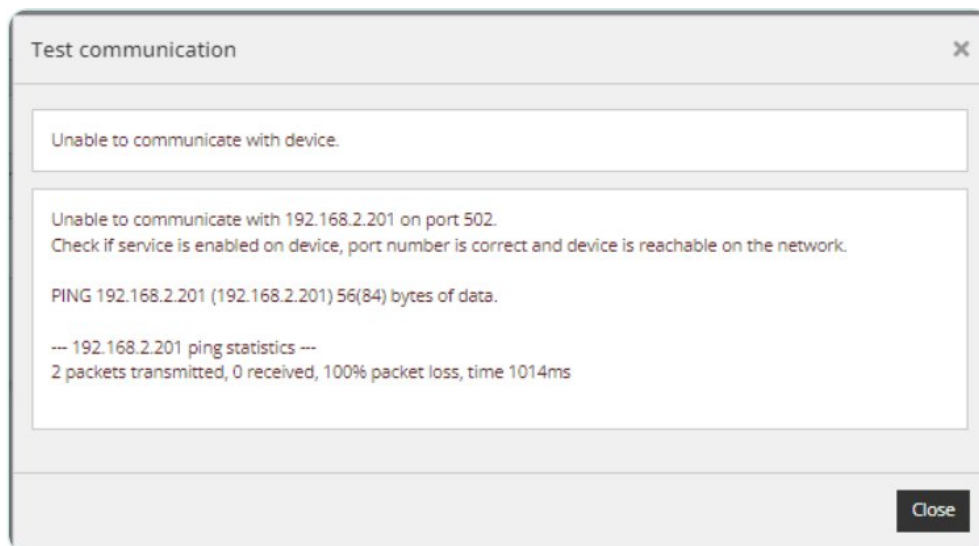
Case 1: communication works properly and the readout succeeds.



Case 1: communication works

Text description of this image

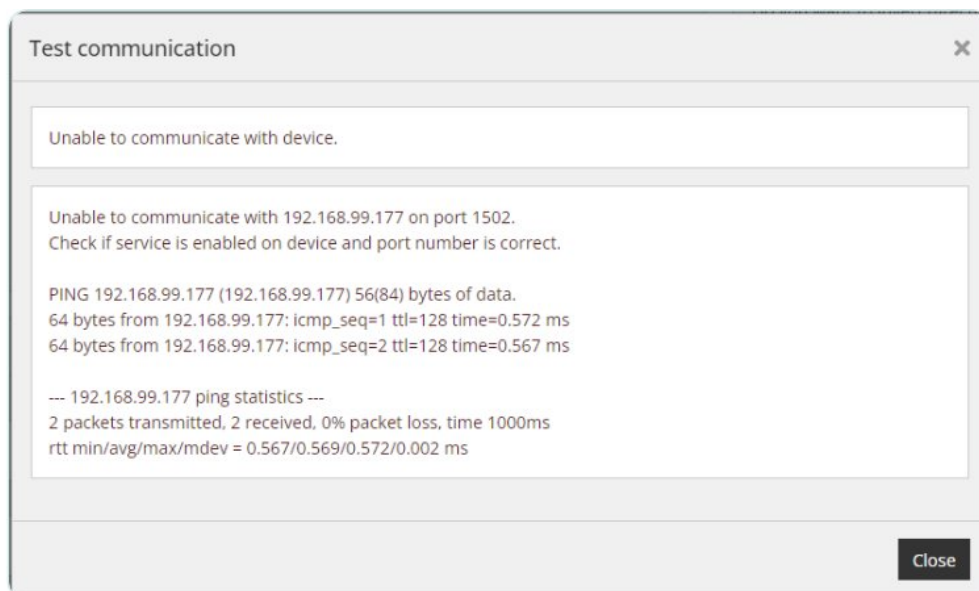
Case 2: unable to communicate with the device on IP 192.168.2.201. The IP of the device is different.



Case 2: IP address not correct

Text description of this image

Case 3: the chosen port is not correct. Check the port for Modbus TCP/IP.



Case 3: port not correct

Text description of this image

7.4 Advanced settings and default parameters

Fill in the advanced settings and choose the parameters shown in the image. The settings can vary depending on the needs of the location. When you are done, click **Done**.

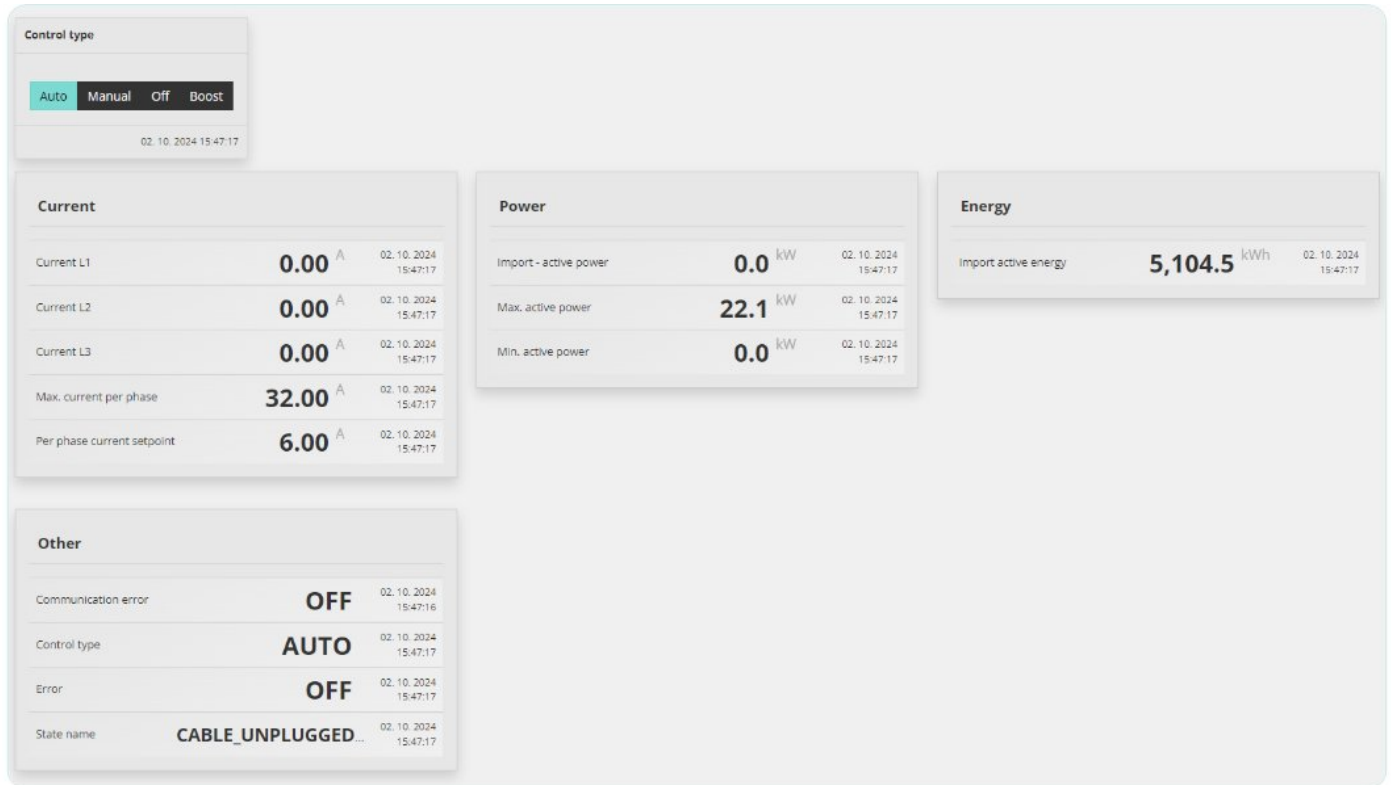
Advanced settings

Text description of this image

8 Check the readings

8.1 Last measurements (OCPP or Modbus TCP/IP)

Check the readings of the charger under **Device – Last measurements** in the [Reduxi Configurator](#).



Readings from the charger

Text description of this image

After you have added the device, you can also monitor it in the [Reduxi cloud application](#).

8.2 Control with strategies

To control the charger with Reduxi strategies, set the **control type** of the device to **AUTO**. Define a strategy as described in [Strategies for Reduxi controller](#).

✓ Summary

Preparation (Points 1–3): Get the ABB documents. Prepare the charger, the Reduxi Controller, a smartphone and a laptop or tablet. Install the TerraConfig app.

ABB charger (Point 4): Log in to TerraConfig. Enable the external OCPP server or Modbus, choose Local Controller and connect the charger to Wi-Fi.

Add to Reduxi (Points 5–7): Log in to the Reduxi web interface. Add the charger via OCPP 1.6 JSON or Modbus TCP/IP. Run Test communication, then click Done.

Go live (Point 8): Check the last measurements. Set the control type to AUTO. Define a strategy.

→ Common issues

ISSUE	SOLUTION
OCPP test: unable to communicate, device ID not set or different	Enter the device identifier from the right side of the charger (starts with TACW11-4-) in the communication channel (see Point 6).
OCPP test: no device with OCPP 1.6 found	Check that the External Server is enabled in TerraConfig and that the OCPP server URL of the Reduxi Controller is entered (see Point 4).
Modbus TCP/IP test: IP address not correct	Check the IP address of the charger in TerraConfig and in the communication channel (see Point 7).
Modbus TCP/IP test: port not correct	Check the Modbus TCP port set in TerraConfig and enter the same port in the communication channel.
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:



ABB Terra AC Modbus communication

Modbus RTU and Modbus TCP/IP interfaces and register map from ABB.



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