

How to connect Carlo Gavazzi EM300/ET300 energy meter with Reduxi controller

Connect your Carlo Gavazzi EM300/ET300 energy meter to the Reduxi Controller.

🔌 Carlo Gavazzi EM300/ET300 · Reduxi Controller

🌐 Modbus RTU (RS485) 📄 Modbus unit ID: normally 1



Carlo Gavazzi ET340 (ET300 series)

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1 Technical documentation

Manufacturer documents for the Carlo Gavazzi EM300 and ET300 series (EM330, EM340, ET330, ET340):

- [EM300 Series and ET300 Series Communication Protocol](#) – Modbus RTU parameters, function codes and register tables.
- [Communication protocol \(Carlo Gavazzi Sweden\)](#) – Instructions on the manufacturer web page, as linked in the earlier version of this guide.
- [EM330 instruction manual](#) – Connection diagrams and parameter menu.
- [ET340 instruction manual](#) – Connection diagrams and parameter menu.
- [ET340 datasheet](#) – Specifications of the ET340.

2 Required equipment

- ☐ Carlo Gavazzi EM300 or ET300 series energy meter with Modbus RS485 interface, installed by a qualified electrician
- ☐ RS485 cable
- ☐ Reduxi Controller
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

3 Connect and configure the meter

Find the instructions to connect and configure the meter in the documents of Point 1.

3.1 RS485 connection

- The RS485 interface uses the lines A-, B+, GND and T.
- Terminate the bus on the last device only: connect A- and T on that device.
- Use a signal repeater for runs over 1000 m.
- Cable according to the communication protocol: balanced pair AWG24 plus a third wire for GND.



Terminal numbers

The terminal numbers differ between models. Use the connection diagram of the instruction manual of your model.

3.2 Modbus settings on the meter

Set the Modbus parameters in the parameter menu of the meter. The values of the Modbus RTU communication protocol:

PARAMETER	VALUES
Modbus address	1 to 247. Default: 1
Baud rate	9.6 (default), 19.2, 38.4, 57.6 or 115.2 kbps
Parity	None (default) or even
Stop bits	1 (default). 2 only with parity none.

You need the Modbus address of the meter in the Reduxi Configurator. Normally, 1 is used.

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 redux.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

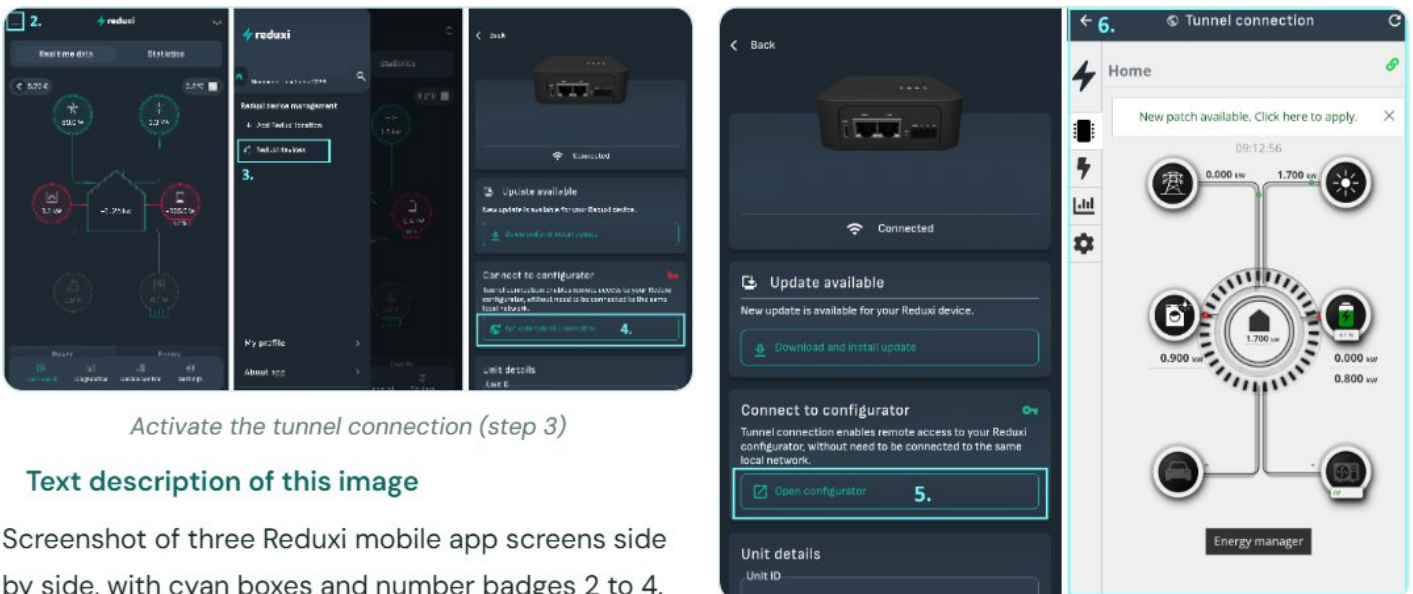
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

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)

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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)

2. Text description of this image

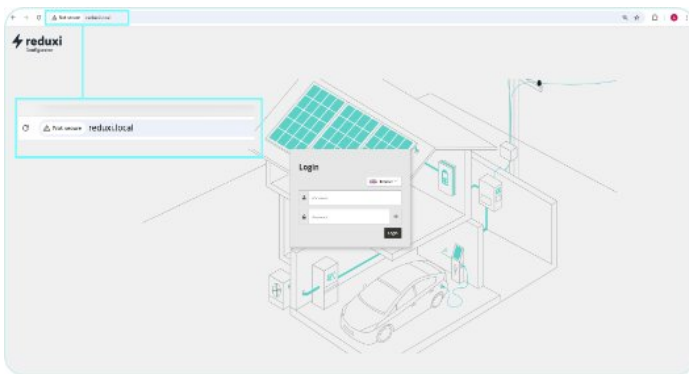
4.2 Via a web browser

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**.

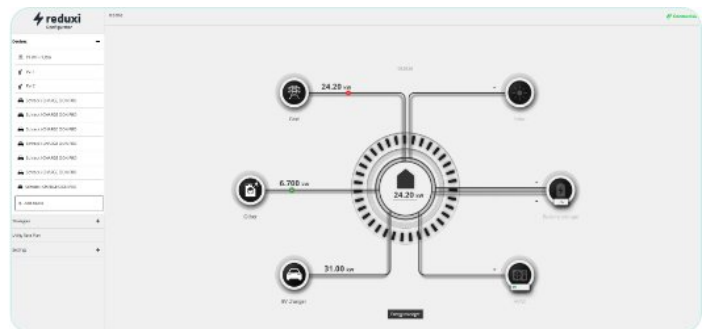
2 Log in

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



Reduxi Controller login screen

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Controller web interface after login

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Screenshot of the Reduxi Configurator web interface

5 Add the meter to Reduxi

Use these steps to add a new meter or to edit an existing one.



Read only

In the List of supported devices, the Carlo Gavazzi EM300/ET300 is listed with the protocol Modbus and with read access.

5.1 Basic settings

Log in to the [Reduxi Configurator via the browser](#) (see [Point 4](#)) and click **Add device**.

In the first step, enter the basic settings of the device. Then click **Next**.

5.2 Communication settings

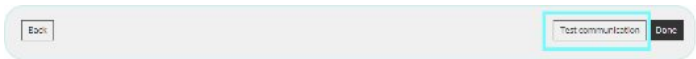
Select the communication channel. Then enter the device configuration:

PARAMETER	VALUE
Modbus unit ID	Normally 1

Then enter and choose the advanced settings. Serial parameters, if requested, must match the settings of the meter (see [Point 3](#)).

5.3 Test communication

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



The **Test communication** button

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Screenshot of the bottom button bar of a Reduxi Configurator page. Left: button 'Back'. Right: button 'Test communication' (marked with a cyan box) and dark button 'Done'.



The **Done** button

2. Text description of this image

6 Check the readings

6.1 Last measurements

After communication is established, check the values under **Devices** in the Reduxi Configurator. Reduxi only reads the meter.

✓ Summary

- Preparation (Points 1–2):** Read the Carlo Gavazzi documents and prepare the equipment.
- Carlo Gavazzi meter (Point 3):** Connect the meter via RS485. Set the Modbus parameters and note the Modbus address.
- Add to Reduxi (Points 4–5):** Log in to the Reduxi Configurator, add the meter with its Modbus unit ID and test the communication.
- Go live (Point 6):** Check the readings. Reduxi reads the meter.

→ Common issues

ISSUE	SOLUTION
Test communication fails	Check that the Modbus unit ID in Reduxi equals the Modbus address of the meter (1 to 247, default 1). Check that the serial parameters match.
The meter does not respond on the RS485 bus	Check the RS485 lines A-, B+ and GND. Terminate the last device on the bus: connect A- and T.
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:



EM300 Series and ET300 Series Communication Protocol

Carlo Gavazzi document with the Modbus RTU parameters.



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