

Integrating Bluesun battery BSC-125kW (BESS)

Connect a Bluesun BSC-125KW-261KWH battery energy storage system to the Reduxi Controller.

🔧 Bluesun BSC-125KW-261KWH · Reduxi Controller

🔋 125 kW · 261 kWh · liquid cooled

🌐 Modbus (register map from Bluesun)



Bluesun BSC-125KW-261KWH liquid-cooled energy storage system

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1 Technical documentation

The Bluesun BSC-125KW-261KWH is a liquid-cooled battery energy storage system (BESS) for commercial and industrial use. The data below comes from the Bluesun datasheet.

MODEL BSC-125KW- 261KWH	RATED POWER 125 kW (maximum 138 kW)	RATED ENERGY 261 kWh	AC GRID 230/400 V, 50/60 Hz, three-phase (3W+PE or 3W+N+PE)
BATTERY VOLTAGE 832 VDC rated, 728– 910 VDC range	BATTERY COMMUNICATION CAN	COOLING AND PROTECTION Liquid cooling, IP66	OPERATING TEMPERATURE Charging 0 to 50 °C, discharging –10 to 50 °C

Manufacturer documents:

- [Bluesun Liquid Cooling Storage System 125KW/261KWH](#) – datasheet (PDF, EN)
- [125kW 261kWh Liquid-Cooled Energy Storage System](#) – product page (web, EN)

2 Required equipment

- ☐ Reduxi Controller (installed and online)
- ☐ Bluesun BSC-125KW-261KWH, commissioned
- ☐ Connection between the system and the Reduxi Controller (see [Point 3](#))
- ☐ Modbus register map of the system from Bluesun
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

3 System overview and wiring

A battery energy storage system must support Modbus communication with a complete register map for monitoring and control. The requirements are in [Integration requirements for battery energy storage system \(BESS\)](#).

Per the datasheet, each rack contains the battery modules and a 125 kW inverter. The system uses CAN for battery communication. Remote data access runs over Wi-Fi, 4G, 5G or LAN through the Bluesun ESS Cloud. The EMS offers peak shaving, self-consumption and UPS modes.

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

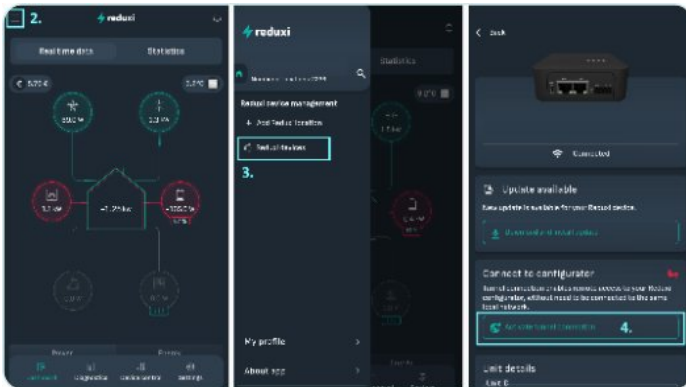
Activate the tunnel connection

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

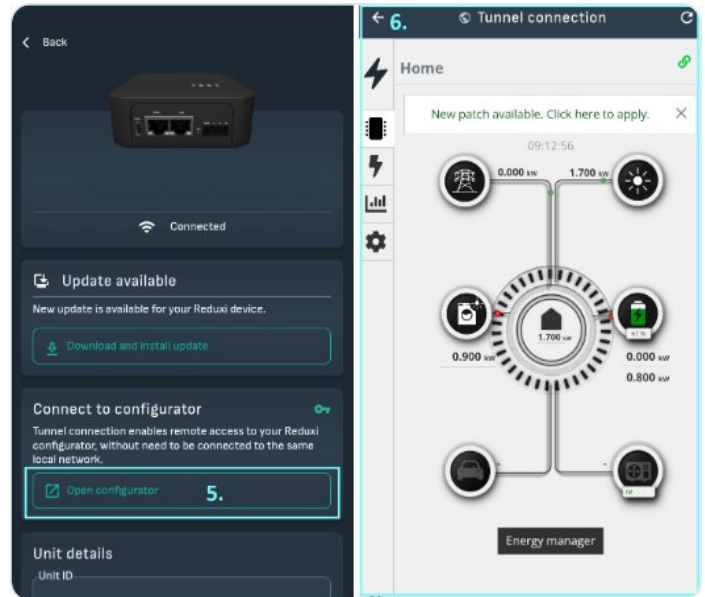
4

Open the configurator

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



Activate the tunnel connection (step 3)



Open configurator (step 4)

4.2 Via a web browser

1

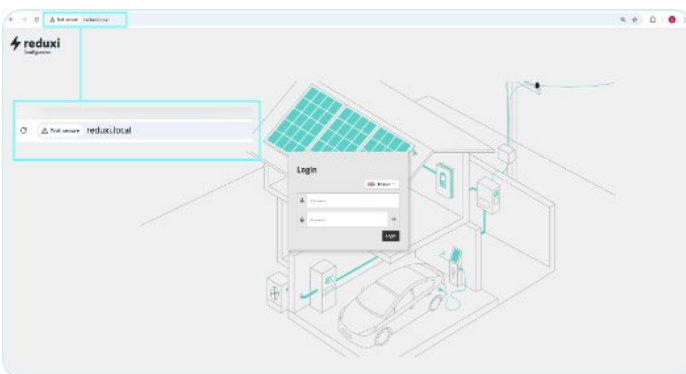
Open the login page

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**.

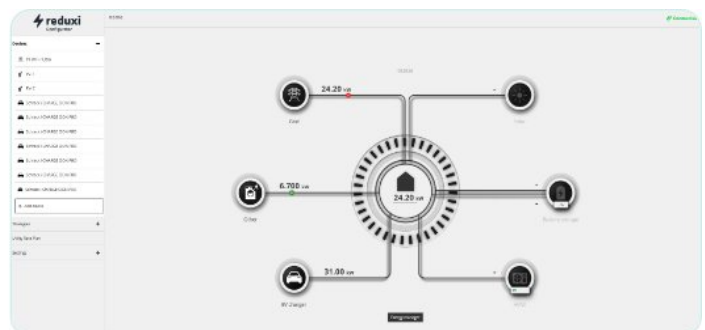
2

Log in

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



Reduxi Controller login screen



Controller web interface after login

5 Add the device to Reduxi

Open the Configurator first, see [Point 4](#). The device is added with the wizard in two steps.

5.1 Basic settings

1 Click + Add device

In the left menu the section **Devices** lists all devices (click it if it is collapsed). **+ Add device** sits directly below the list. Do not use **+ Add EEBUS device**.

2 Device type and type

Select the device type and type of the Bluesun system. Only types listed in the **List of supported devices** can be selected.

3 Name and strategies

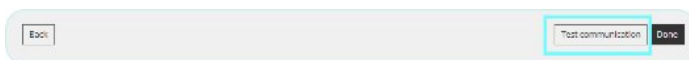
Enter a clear name, for example **Bluesun BSC-125kW**. Tick the strategies the device should take part in, then click **Next**.

5.2 Communication settings

The second step sets up the Modbus communication between the Reduxi Controller and the system. Enter the connection type, the address and the Modbus unit ID as they are set on the system.

5.3 Test communication

Click **Test communication** at the bottom of the wizard. It reads the Bluesun BSC-125kW once and saves nothing. If the test succeeds, click **Done**: only **Done** creates the device.



The **Test communication** button

A dialog box titled 'Communication channel and device configuration'. It contains four input fields: 'Connection *' (dropdown menu), 'IP *' (text field with '192.168.20.248'), 'Port *' (text field with '202'), and 'Modbus unit ID *' (text field with '1'). There are 'Test for IP' and 'Test port' buttons next to the IP and Port fields respectively. At the bottom, there are 'Back', 'Test communication', and 'Done' buttons. The 'Done' button is highlighted with a red rectangular box.

The **Done** button

6 Check the readings

6.1 Last measurements

Open **Devices** → **your Bluesun device** → **Last measurements** in the Configurator. The values show whether the system communicates correctly.

6.2 Control behaviour

For control by the Reduxi strategies, open **Devices** and your Bluesun device in **the Reduxi Configurator** and set the control type to **AUTO**. Only then do strategy commands affect the battery.

To reduce energy costs with dynamic prices and tariffs, define the strategy as described in **Strategies for Reduxi controller**.

✓ Summary

Preparation (Points 1–2): Check the datasheet. Get the Modbus register map from Bluesun and prepare the equipment.

Bluesun BSC-125KW-261KWH (Point 3): Connect the system to the Reduxi Controller. The system must support Modbus.

Add to Reduxi (Points 4–5): Open the Configurator, add the device, enter the communication settings, run Test communication and click Done.

Go live (Point 6): Check the last measurements and set the control type to **AUTO**.

→ Common issues

ISSUE	SOLUTION
Test communication fails	Check the connection type, address and Modbus unit ID against the settings on the system. Controller and system must be able to reach each other.
The type of the Bluesun system is not selectable	Only types listed in the List of supported devices can be selected. The system must support Modbus (see Integration requirements for BESS).
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:



Bluesun energy storage

Product page of the 125kW 261kWh liquid-cooled energy storage system



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