

How to connect Growatt string inverters with Reduxi controller

Integrate the Growatt MAX 100-150KTL3-X string inverter with the Reduxi Controller via Modbus RTU. This gives you maximum flexibility and lower energy costs.



🔧 Growatt MAX 100-150KTL3-X · Reduxi Controller

🌐 Modbus RTU (RS-485)

🔌 Inverter port 485-1 · Reduxi Port 1 (A+ / B-)



Growatt MAX 100-150KTL3-X string inverter

Text description of this image

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1 Preparation

1.1 Technical documentation

The Growatt website lists all Growatt inverters and installation guides. The user manual of the Growatt MAX 100-150KTL3-X is an example of an installation guide.

- [Growatt products](#) – Full list of Growatt inverters and installation guides
- [Growatt MAX 100-150KTL3-X LV/MV user manual \(EN, 2025-07\)](#) – Installation guide for the Growatt MAX 100-150KTL3-X
- [Growatt MAX 100-150KTL3-X LV product page](#) – Product page with current manuals and quick guide

| 1.2 Required equipment

- ☐ Reduxi Controller
- ☐ Growatt MAX 100-150KTL3-X string inverter
- ☐ Twisted-pair shielded cable for the RS-485 communication line (recommended)
- ☐ Laptop or tablet with internet access to configure the device in Reduxi

2 Connect the inverter to the Reduxi Controller via RS-485 Modbus RTU

Modbus RTU is used to access the interface of the string inverter. You must therefore make a physical connection.

| 2.1 Find the RS-485 connector on the inverter

The Modbus communication connectors are on the bottom of the inverter. The RS-485 connector is at location **H** in the picture (bottom view of the terminals).

Front view:

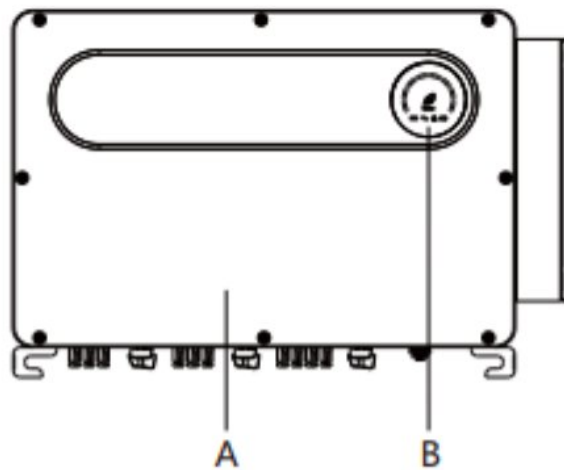
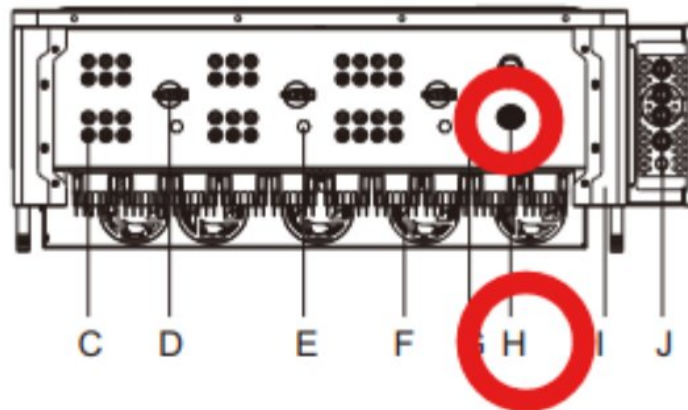


Fig 3.1

Bottom view(Termial):



Bottom view of the terminals, RS-485 at location H

Text description of this image

1 Open the COM interface

Unscrew the waterproof cover of the COM interface (H in the picture) and remove it.

2 Connect the RS-485 line

Connect the RS-485 communication line to the port **485-1**.

3 Know the port functions

RS485-1 can be used for multi-machine parallel communication and multi-machine countercurrent prevention. RS485-2 can be used for multi-machine parallel communication and single-machine countercurrent prevention.

4

Chain the inverters

The inverters are connected one after the other through the RS485 communication line. The end of the communication line 485_A/B is connected to the monitoring equipment for multi-machine remote monitoring.

2.2 Connection of a single inverter

- Use twisted-pair shielded wire for the RS-485 communication line (recommended).
- For single-machine communication, connect the communication line to pin 3/4 and its shielding layer to pin 1.
- The figure shows the RS-485 terminal types: terminal type 1 and terminal type 2.

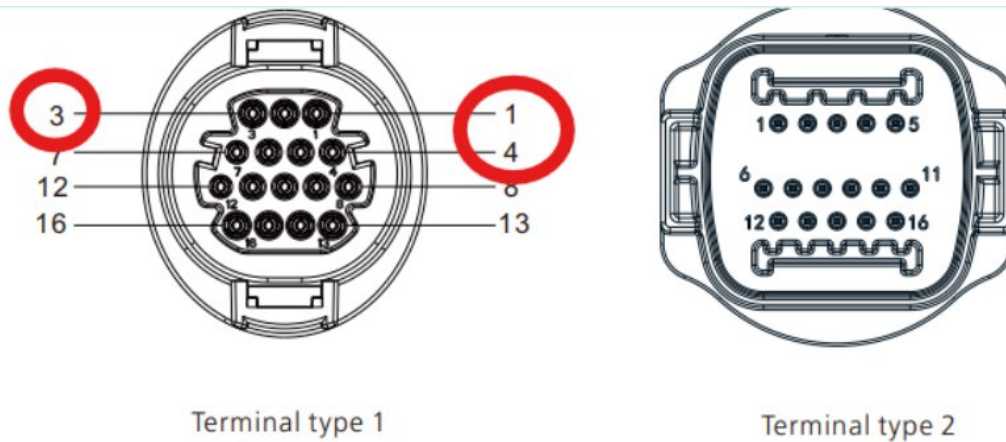


Fig 6.6

Port	PIN	Description	Port	PIN	Description
Shield ground	1/2	485-1 / 485-2 PE shield	DRMS	9	DRM1/5
RS485-1 IN	3	485-1 A1		10	DRM2/6
	4	485-1 B1		11	DRM3/7
RS485-1 OUT	5	485-1 A1		12	DRM4/8
	6	485-1 B1		13	REF/GEN
RS485-2	7	485-2 A1		14	DRM0/COM
	8	485-2 B1	RS485-1 Matching resistance	15/16	485-1 Matching resistance

RS-485 terminal type 1 and terminal type 2

Text description of this image

Connect the inverter to the Port 1 or Port 2 interface of the Reduxi Controller. In the picture, 485-1 A1 connects to A+ (Port 1) and 485-1 B1 connects to B- (Port 1).

GROWATT INVERTER	REDUXI CONTROLLER
485-1 A1	A+ (Port 1)

485-1 B1	B- (Port 1)
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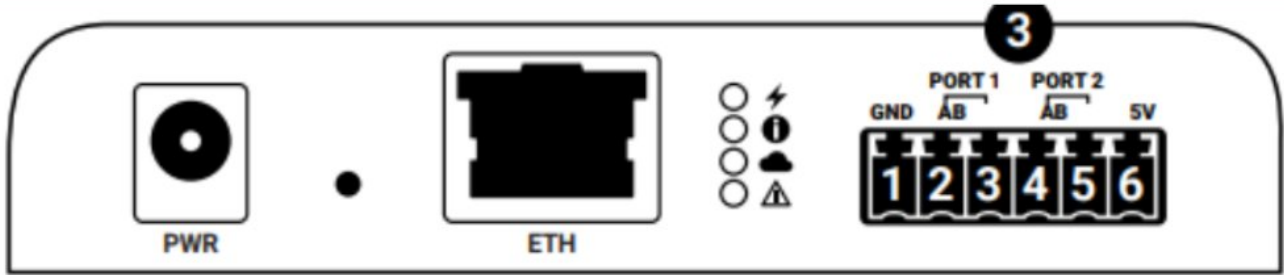


Figure 3: Communication interfaces pinout (marked as number 3).

- | | |
|------------------|----------------------------|
| 1. Common ground | 4. A + (port 2) |
| 2. A + (port 1) | 5. B – (port 2) |
| 3. B – (port 1) | 6. Auxiliary +5V DC output |

Inverter RS-485 connected to Port 1 of the Reduxi Controller

Text description of this image

2.3 Connection of multiple inverters in parallel

- Use twisted-pair shielded wire for the RS-485 communication line (recommended).
- Link RS485 OUT (pin 5 = A, pin 6 = B) of the first inverter to RS485 IN (pin 3 = A, pin 4 = B) of the next inverter.
- Repeat the daisy-chain connection for all additional inverters (A to A, B to B).
- Enable the termination resistor (pins 15/16) on the last inverter in the chain.

3 Log in to the Reduxi web interface

You can open the Reduxi web interface in two ways:

 Reduxi app Via tunnel connection · works from anywhere	 Web browser In the local network · via IP address or reduxि.local
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3.1 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

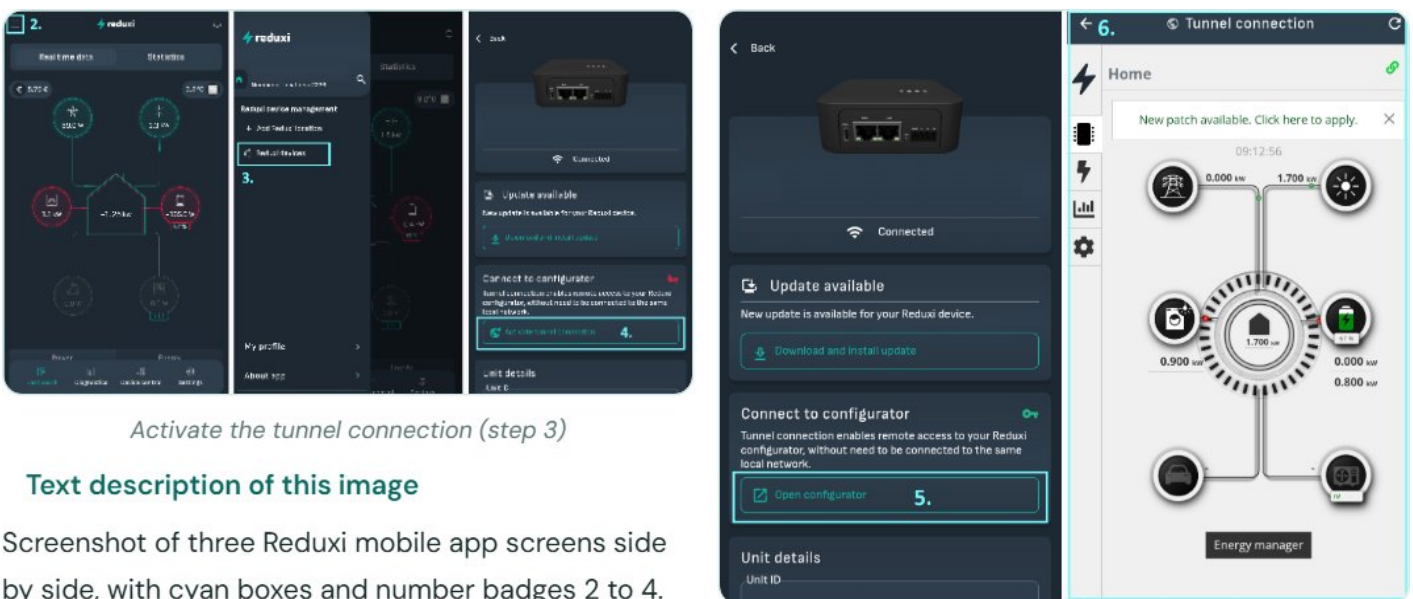
Tap the menu icon (three lines, top left) and select **Reduxi devices**.

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)

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

2. Text description of this image

3.2 Via a web browser

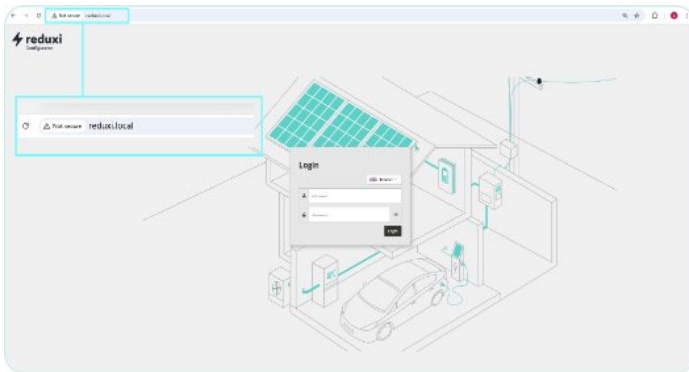
1 Open the login page

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

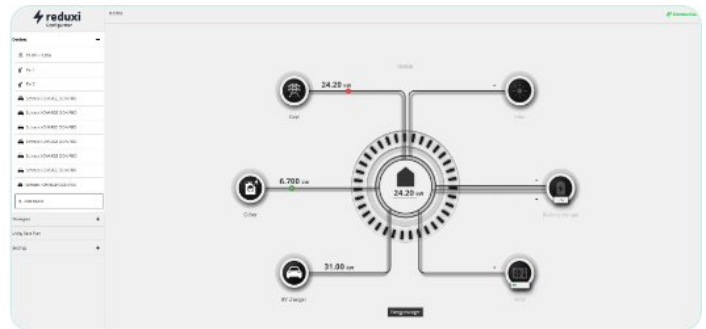
Log in

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

4 Add the inverter to Reduxi

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

4.1 Basic settings

Log in locally to the [Reduxi Configurator](#) on the controller (see [Point 3](#)) and click **+ Add device**.



Devices



+ Add device

Strategies



Utility Rate Plan

Settings



The Add device button

Text description of this image

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

- Device type: Hybrid inverter
- Type: Growatt
- Name: a name of your choice

1

Basic settings

2

Communication channel

Basic settings

Device type *

Hybrid inverter

Type *

Growatt

Name *

Growatt MAX 100-150KTL3-X

Back

Next

Basic settings: device type, type and name

Text description of this image

4.2 Communication settings

The second step sets up the communication channel between the Reduxi Controller and the Growatt string inverter. These settings are for RS-485 Modbus RTU. Define these fields:

PARAMETER	VALUE
Modbus Unit ID	Modbus unit ID of the inverter
Inverter Type	Select the inverter type
Battery Type	Select the battery type

Communication channel and device configuration

Connection *

Local serial port

Port *

Port 1

Baud rate *

9600 bits/s

Data bits *

8

Stop bits *

1

Parity *

None

Modbus unit ID *

1

Inverter type *

MAX TL3-X

Select the type of inverter.

Battery type *

SPH

Select the type of battery.

Back

Test communication

Done

Communication settings

Text description of this image

4.3 Test communication

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



The **Test communication** button

Text description of this image

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

5 Check the readings

5.1 Last measurements

After communication is established, check the values under **Devices – Growatt** in the [Reduxi Configurator](#) as an additional test.

5.2 Enable control by Reduxi

To integrate the inverter into the Reduxi strategy, set the **control type** under **Devices – Growatt** to **AUTO**. Only then do strategy commands affect the inverter.

To achieve maximum flexibility and energy cost reduction with dynamic prices and dynamic tariffs, define a strategy as described in [Strategies for Reduxi controller](#).

✓ Summary

Preparation (Points 1–2): Use the Growatt documentation. Connect the RS-485 line from port 485-1 of the inverter to Port 1 or Port 2 of the Reduxi Controller (A1 to A+, B1 to B-).

Growatt inverter (Point 2): For several inverters, daisy-chain RS485 OUT to RS485 IN and enable the termination resistor (pins 15/16) on the last inverter.

Add to Reduxi (Points 3–4): Log in to the Reduxi web interface. Add the device, set Modbus Unit ID, Inverter Type and Battery Type, and run Test communication.

Go live (Point 5): Check the readings. Set the control type to AUTO and define a strategy.

→ Common issues

ISSUE	SOLUTION
Test communication fails	Check the RS-485 wiring: 485-1 A1 to A+ and 485-1 B1 to B- on Port 1 of the Reduxi Controller. Check the Modbus Unit ID.
Several inverters do not respond	Check the daisy chain (RS485 OUT to RS485 IN, A to A, B to B). Enable the termination resistor (pins 15/16) on the last inverter.
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:



Growatt MAX 100-150KTL3-X

Growatt product page with manuals and quick guide.



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