

How to connect SolarEdge inverter (serial connection) with Reduxi controller

Reduxi and SolarEdge plants let you optimize power production, increase flexibility, lower costs and improve sustainability.



🔧 SolarEdge inverters · Reduxi Controller

🌐 Modbus TCP and Modbus RTU (RS485)

📄 SunSpec (Non-SE logger) · Device ID per slave inverter

📄 IN THIS ARTICLE

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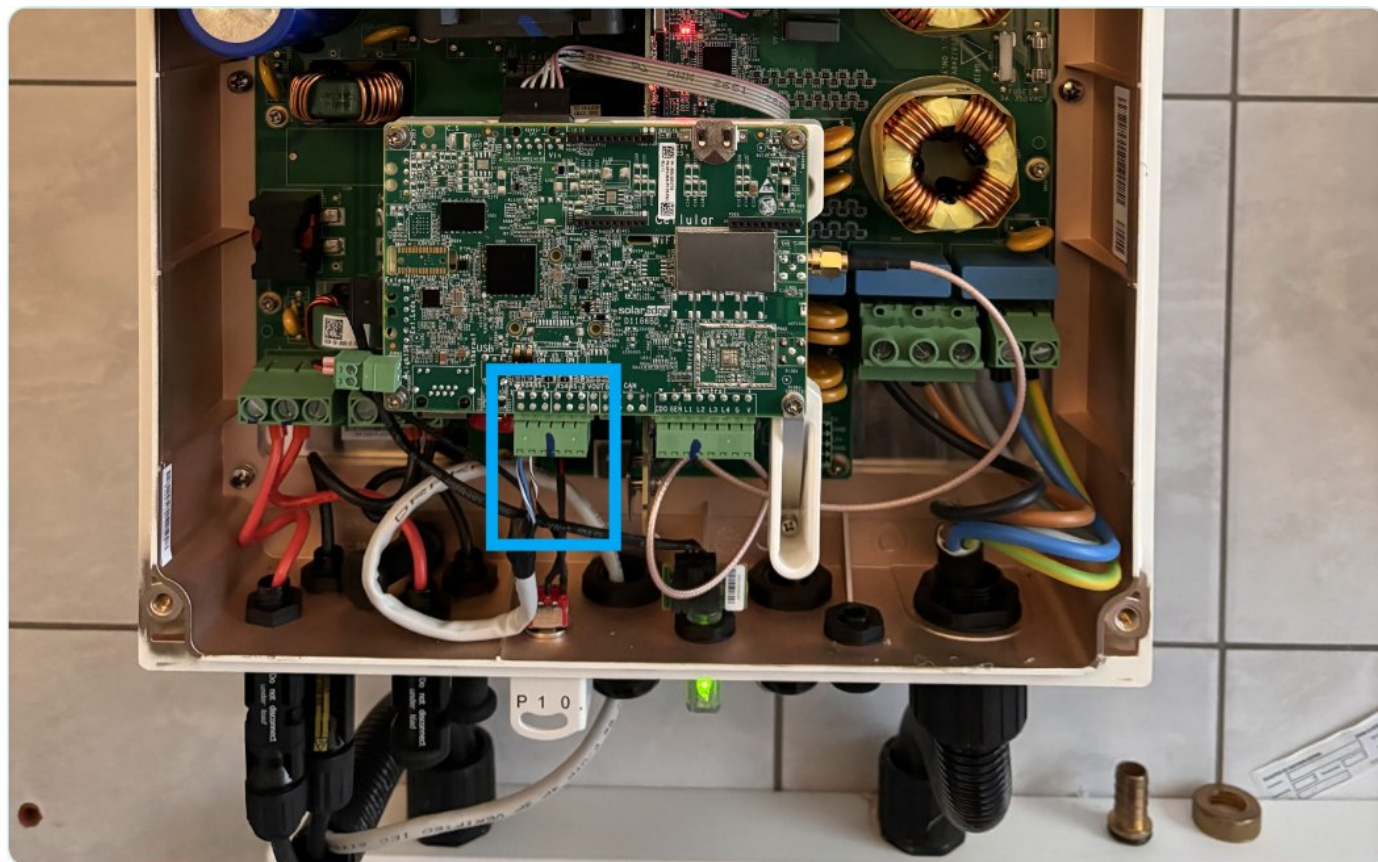
1 Connect the Reduxi Controller to the inverter

1.1 SolarEdge documentation

SolarEdge describes in detail how to connect several inverters with different communication options. See the application note: [SolarEdge communication options \(PDF\)](#).

1.2 Physical connection between Reduxi and the inverter

Connect the Reduxi Controller to the contacts on the circuit board of the inverter as shown in the image.



Connection of the Reduxi Controller to the inverter

Text description of this image

2 BUS (serial) connection of master and slave inverters

This example shows how to create a serial connection between several inverters. One inverter works as master, the others as slaves.

The image shows one RS485 BUS connection from the slaves to a master. The master is connected to the internet.

Multiple Devices, RS485 Bus, Wired Ethernet (LAN) Connection

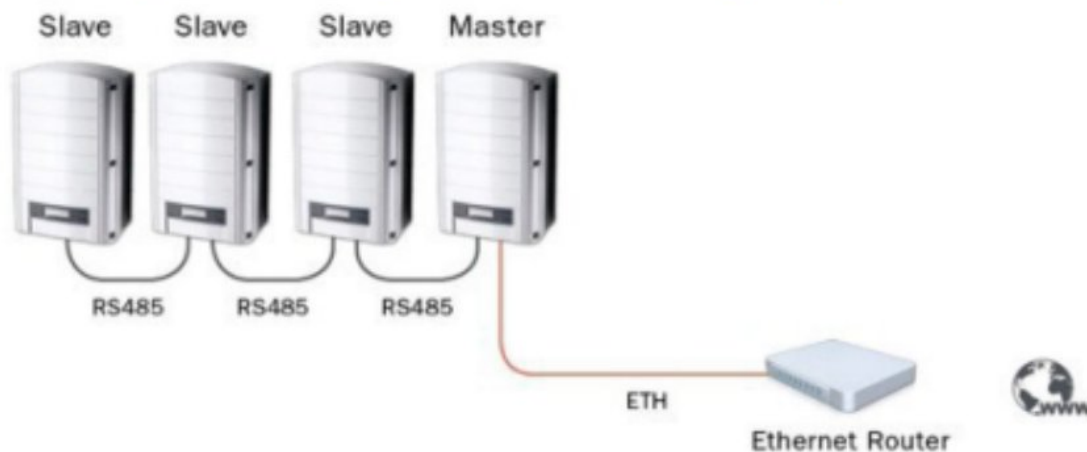


Figure 8: Multiple devices, RS485 bus, wired Ethernet connection.

RS485 BUS connection between slave inverters and the master inverter

Text description of this image

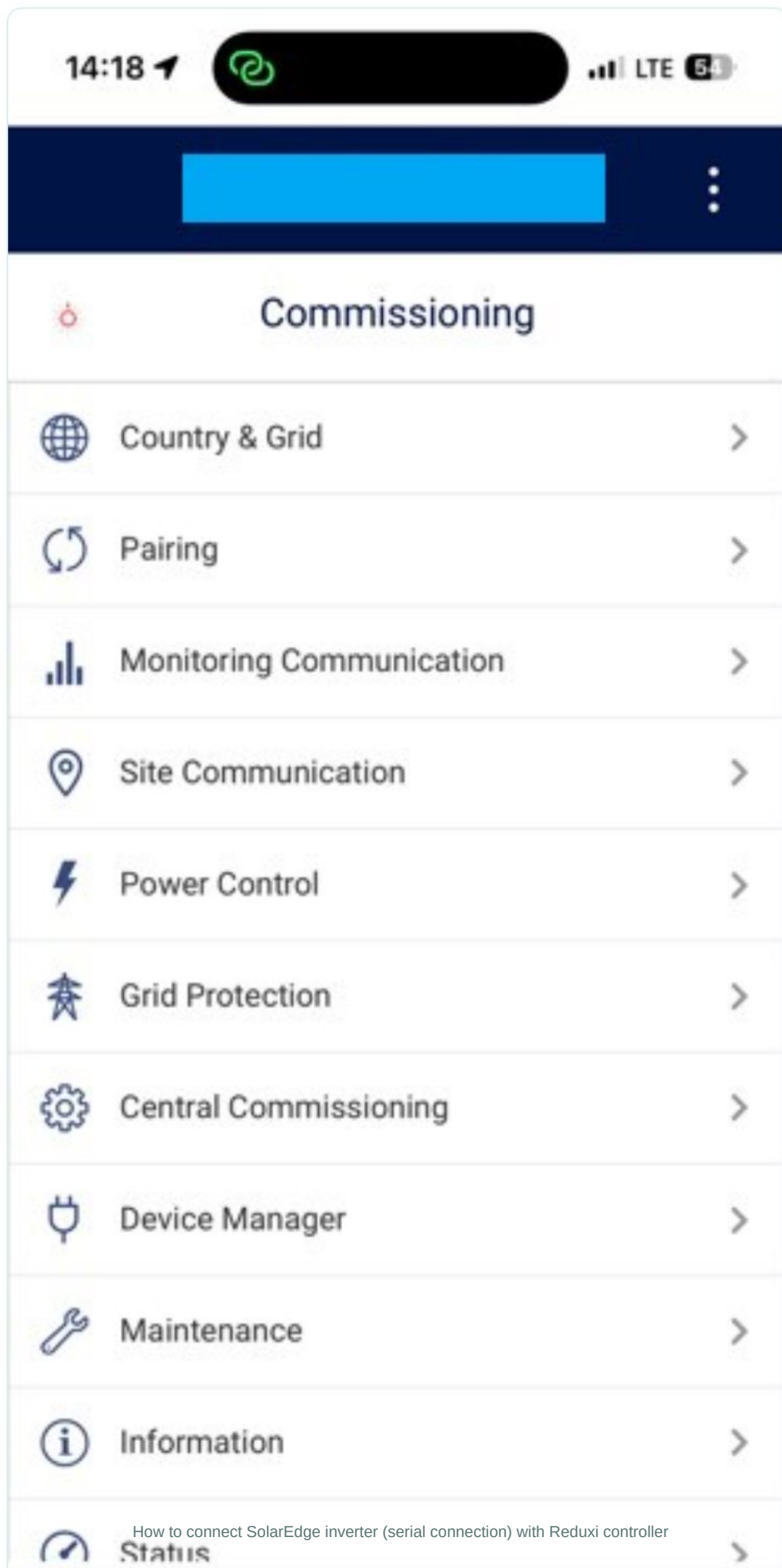
2.1 Settings for slave devices

After the physical connections are made, define the address of each slave. Follow these steps on each slave inverter:

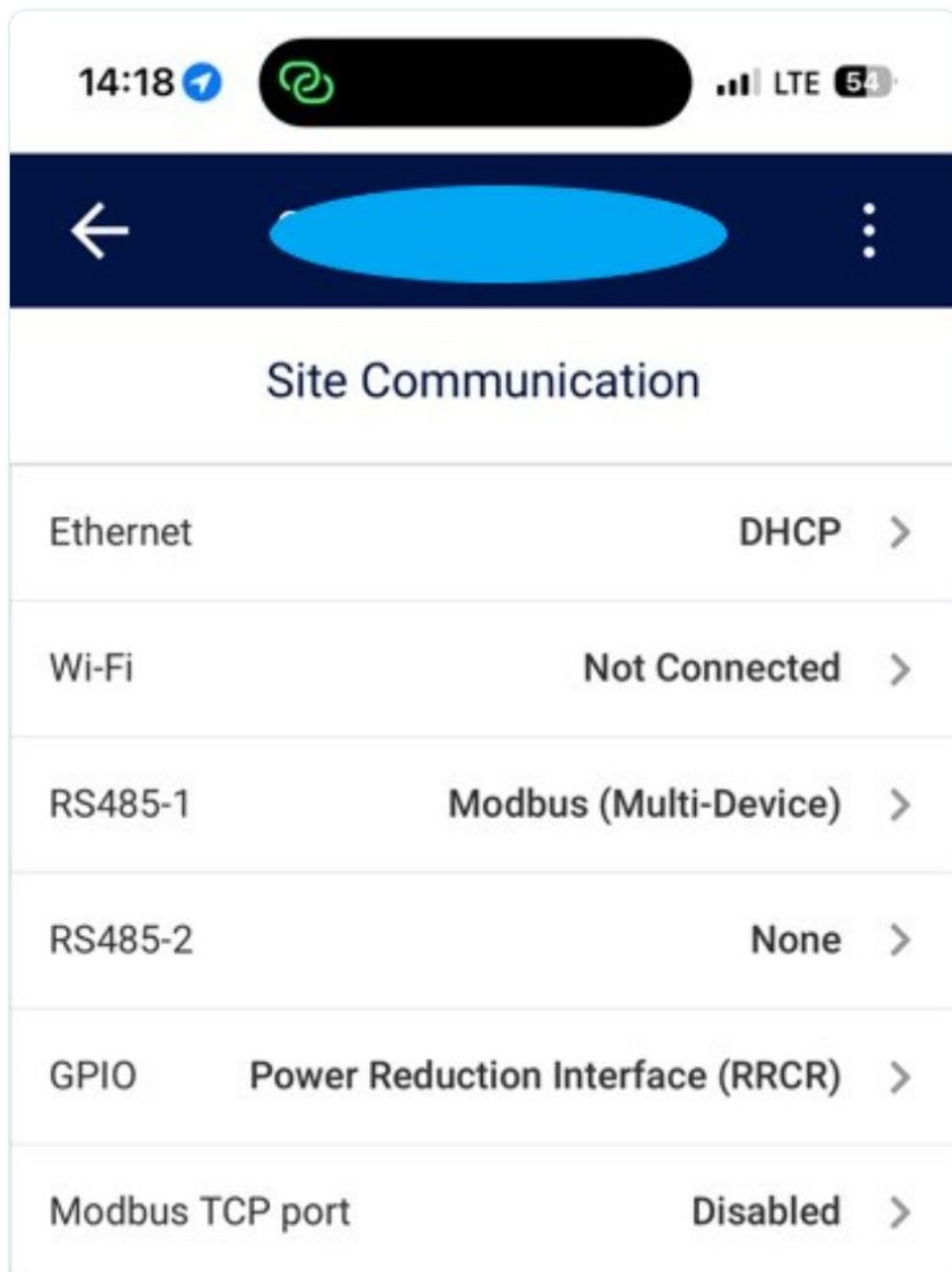
1

Open the inverter interface

Open the interface of the slave inverter.



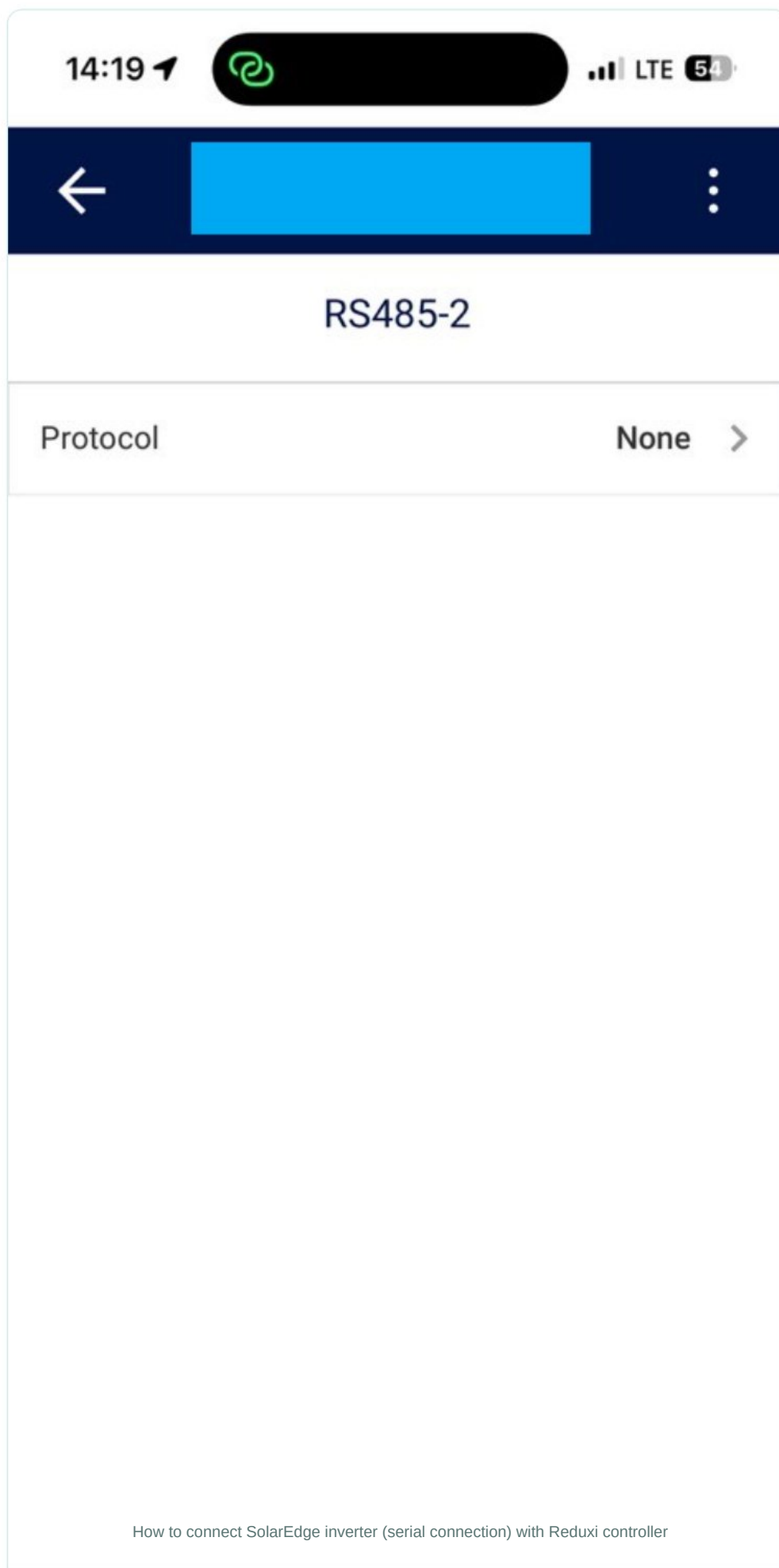
Select **Site communication**.



3

Open RS485-2

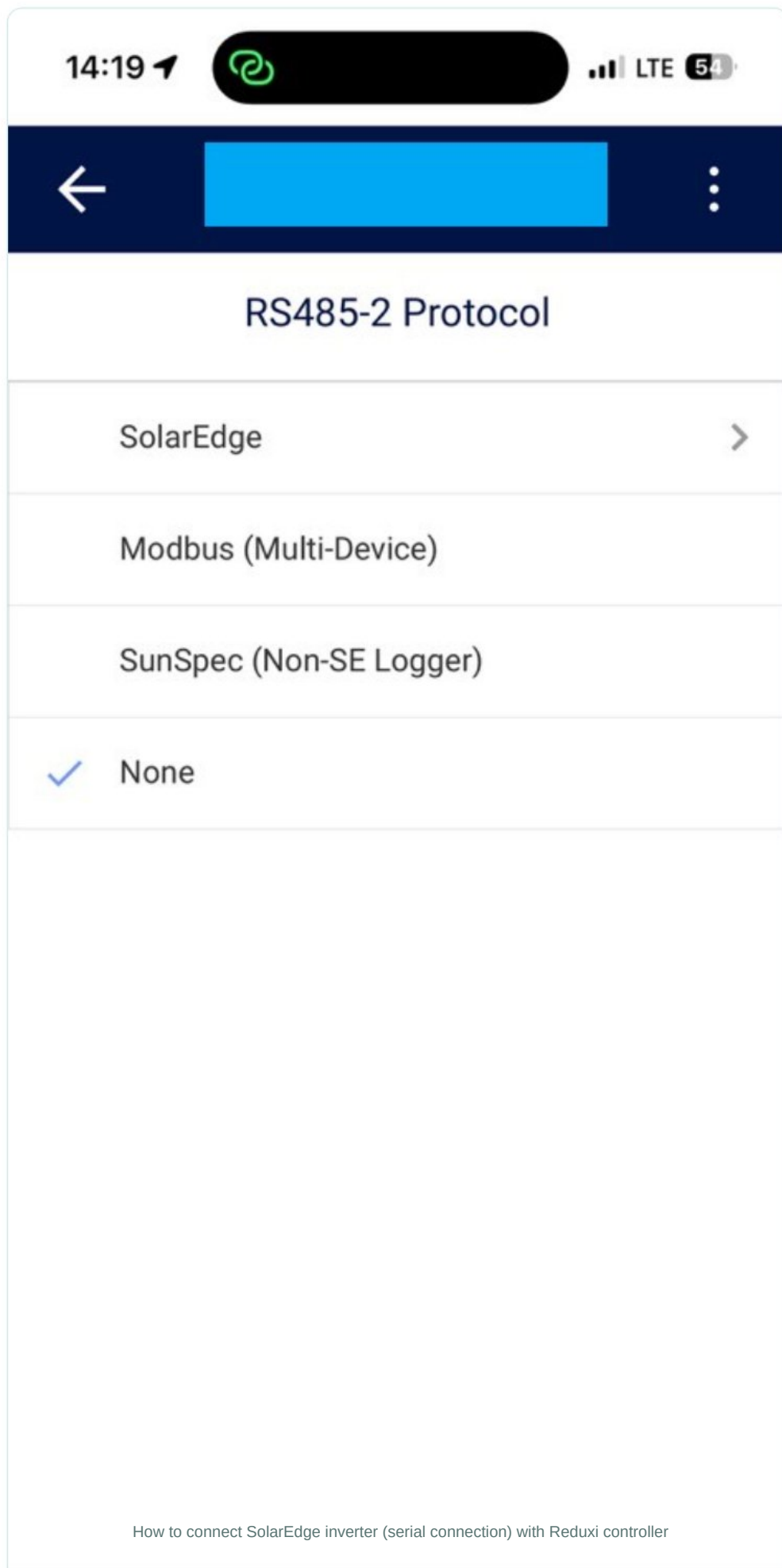
Select RS485-2.



4

Open protocol

Select **Protocol**.



5

Select SunSpec and define the Device ID

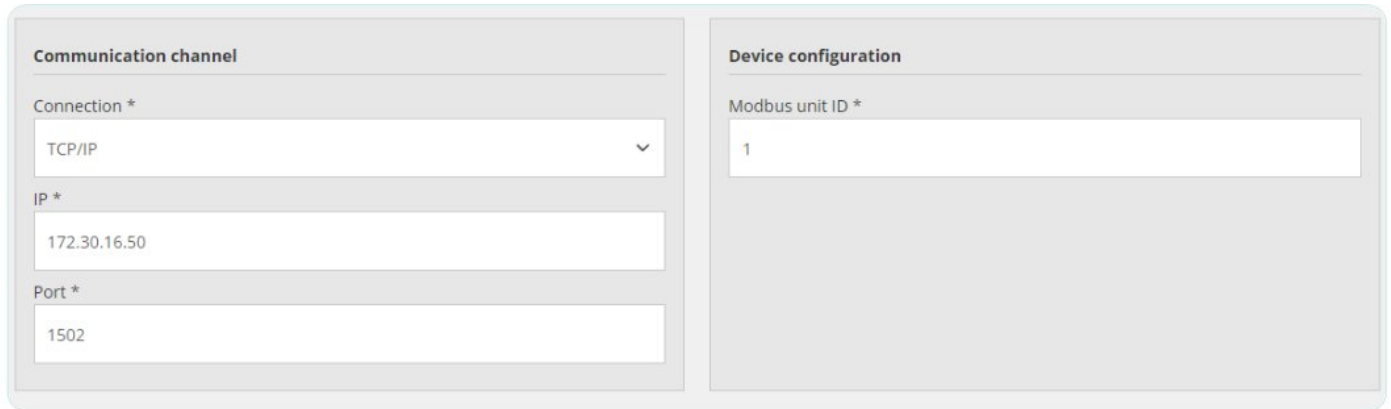
Select **SunSpec (Non-SE logger)** and define the **Device ID**.

RS485-2	
Protocol	SunSpec (Non-SE Logger) >
Device ID	1 >
Baud Rate	115200 >

3 Connect the master inverter to the Reduxi Controller via Modbus TCP

To connect the master inverter via Modbus TCP with a defined IP address, follow [SolarEdge Master Configuration](#).

The image shows an example of the Modbus TCP settings on the Reduxi Controller side.



The image shows a screenshot of the Reduxi Configurator interface. It is divided into two main sections: 'Communication channel' and 'Device configuration'. In the 'Communication channel' section, the 'Connection *' dropdown is set to 'TCP/IP'. The 'IP *' field contains the address '172.30.16.50', and the 'Port *' field contains '1502'. In the 'Device configuration' section, the 'Modbus unit ID *' field contains the value '1'.

Modbus TCP settings in the Reduxi Configurator

Text description of this image

4 Connect the master inverter to the Reduxi Controller via Modbus RTU

You can also connect the master inverter to the Reduxi Controller via a serial connection (Modbus RTU).

Multiple Inverters, RS485 Bus, Non-SolarEdge Logger



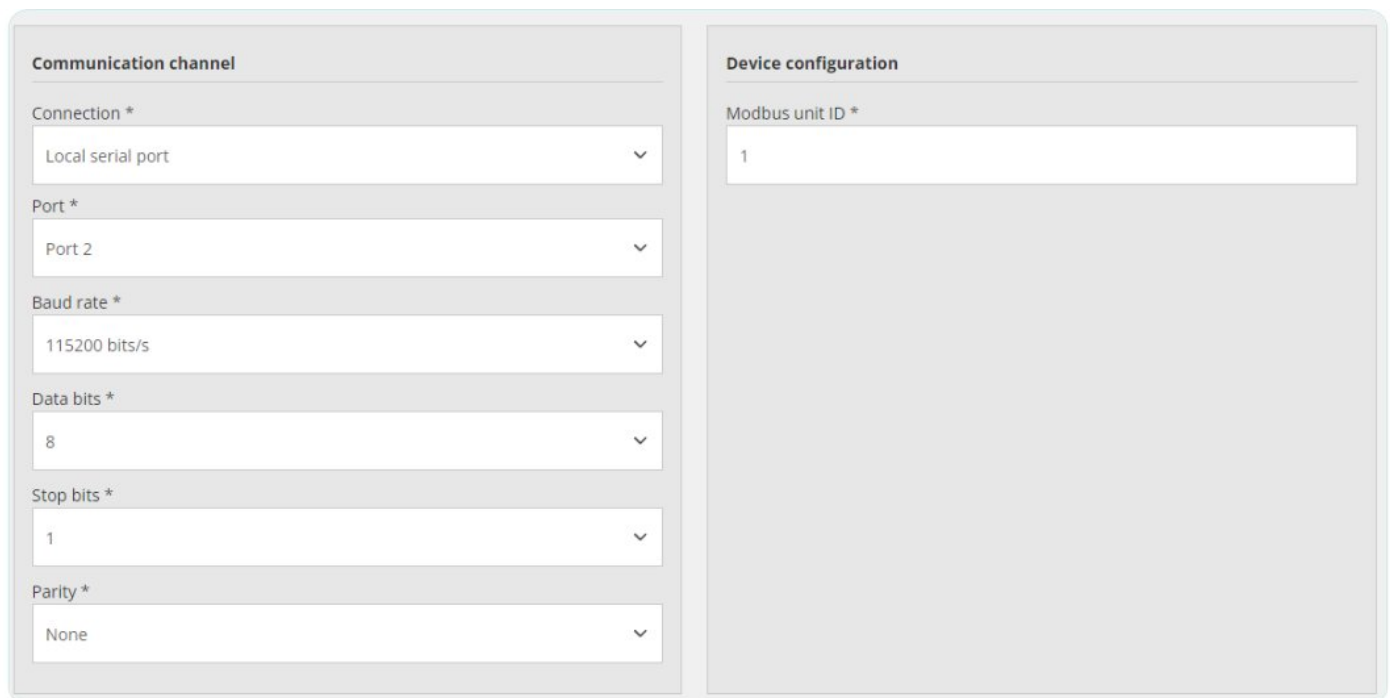
Figure 20: Multiple inverters, RS485 bus, non-SolarEdge logger

Serial connection (Modbus RTU) between master inverter and Reduxi Controller

Text description of this image

Configure the slave inverters in the same way as in [Point 2](#), section 2.1 Settings for slave devices.

The image shows an example of the Modbus RTU settings on the Reduxi Controller side.



Communication channel	Device configuration
Connection *	Modbus unit ID *
Local serial port	1
Port *	
Port 2	
Baud rate *	
115200 bits/s	
Data bits *	
8	
Stop bits *	
1	
Parity *	
None	

Modbus RTU settings in the Reduxi Configurator

Text description of this image

For more information on how to configure the device in Reduxi, see the [Reduxi Configurator](#) guide. For the Reduxi Cloud application, see [Reduxi Cloud](#).

✓ Summary

Connection (Point 1): Connect the controller to the inverter contacts as shown in the image. The SolarEdge application note describes all communication options.

Slave inverters (Point 2): Connect slaves to the master via RS485. Set protocol **SunSpec (Non-SE logger)** and a Device ID on each slave.

Master via Modbus TCP (Point 3): Connect the master with a defined IP address. Follow the SolarEdge Master Configuration guide.

Master via Modbus RTU (Point 4): Alternatively connect the master via a serial connection. Slave settings stay the same as in Point 2.

→ Common issues

ISSUE	SOLUTION
Slave inverter is not read	Check that every slave has its own Device ID and the protocol SunSpec (Non-SE logger) under Site communication – RS485-2 (see Point 2).
Master inverter is not reachable via Modbus TCP	Check the IP address of the master. Follow the SolarEdge Master Configuration guide (see Point 3).

→ Related articles

Matching guides from the Reduxi knowledge base:



SolarEdge Master Configuration

Add a SolarEdge inverter with the SetApp application to the Reduxi Controller.



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