Solaredge SE with Ethernet - Commissioning

This brief installation instruction provides a quick overview of all the necessary steps. Additional information, references, and sources can be found in our HelpCenter. The Installation instructions are only valid for the integration of the energy management system and the configuration of relevant assets. Make sure to carefully read the safety instructions and adhere to the Infrastructural requirements for a gridBox gateway installation

Required:

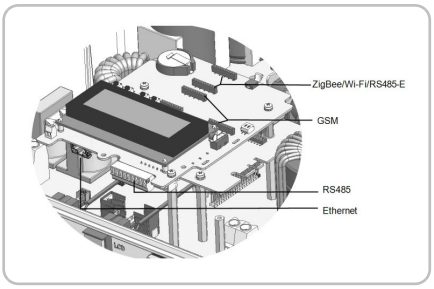
- Additional Ethernet cable
- SetApp
- Latest Firmware version
- The inverter must support a network connection via Ethernet.

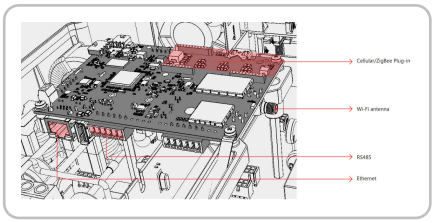
Connection

1. Connect the inverter to the local network with an Ethernet cable.
2. After connecting the inverter and powering it up, the network connection is automatically established.

Since there are inverters with and without display that feature different PCBs, both types are illustrated in the following sections.

Connection options for inverters with display:	Connection options for inverters without display:





Firmware update

1. Install the latest firmware on the inverter.
2. When using the SetApp, you can do the update via **Maintenance** > **Firmware update**.
3. For inverters that offer a display, refer to the document 'Software Upgrade using SD/MicroSD card - Application Note'

Configuration

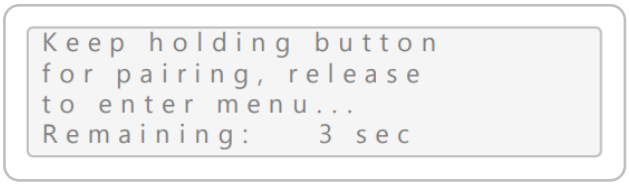
If the inverter features a display, it can be configured using the display. If no display is present, the configuration must be done with the SolarEdge “SetApp” application for mobile phones. Refer to the manufacturer's documentation to set up the app.

Enable Modbus TCP Server

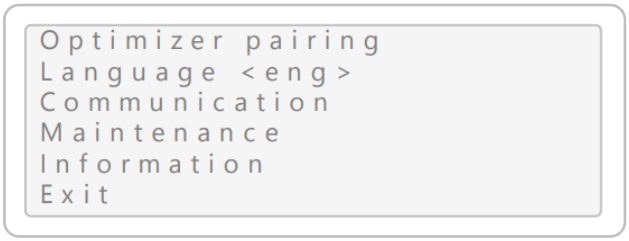
In order to communicate with the inverter, enable the Modbus TCP server. This can either be done using the integrated display or via the SetApp.

Configuration via integrated display

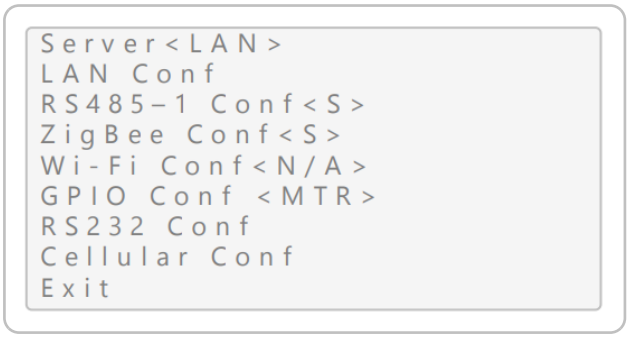
1. Turn the inverter **ON/OFF** switch to **OFF**.
2. Press and hold down the LCD light button until the following message is displayed:



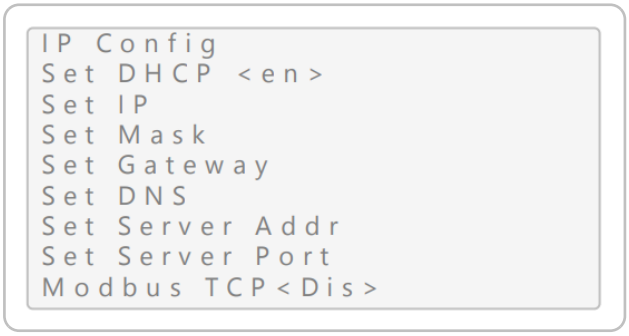
When releasing the button, the following message is displayed:



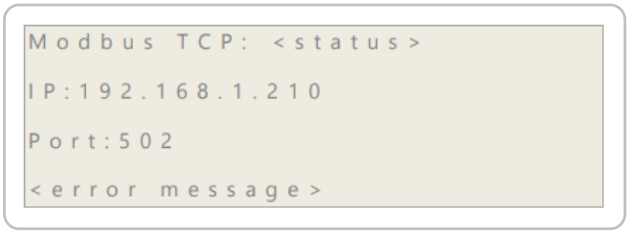
3. Short-press (one second) to scroll down to the next menu option, and long-press (three seconds) to select the item. You can use the **Exit** option in these menus to move up one menu level or to exit the setup mode from the main menu.
4. Short-press the button until the menu entry **Communication** is selected, then long-press to enter the menu:



5. Short-press the button until the menu entry **LAN Conf** is selected, long-press to enter the menu:



6. Short press the button until the menu entry **Modbus TCP <Dis>** is selected, long press to enter the menu.
7. In the **Modbus TCP <Dis>** menu, select **TCP port<502>**.
8. At this step, you can change the default TCP port number. Keep the default value (502) and confirm the activation with a long press.
9. When Modbus TCP feature is enabled, the following status screen is shown:



The following are the different <Status> states:

- Init – Initializing server – This state only happens after the first configuration until it becomes ready. Takes about 10 seconds.
- Ready – The server is up and waiting for the client to connect.
- Connected – The client has connected.
- Failed – The server is unable to accept clients (see error message).

After the configuration, the state might be **Init** for around 10 seconds. If the configuration was successful, the state must switch to either **Ready** or **Connected**. If the state is **Failed**, additional troubleshooting is necessary. The root cause for the failure can be found by investigating the shown error message, which can be one of the following:

- Disconnected – Ethernet cable is not connected, double-check the cabling from the inverter to the next network device (router or switch)
- Gateway Ping Failed – ping to the 1st router failed, double-check the cabling between the inverter and router, and the network configuration given by the DHCP server.
- No IP - either there is no DHCP config (no DHCP server that assigns an IP address) or need to define a static IP. Enable DHCP in the local router and create a static lease or set the address manually in the inverter.

Configuration with SetApp

1. After connecting the app to the inverter, go to **Site Communication** > **Modbus TCP** > **Enable**. A new port menu is added to the screen, showing the default port (1502).
2. Select **Port** and enter “502” to change the port.
3. Click on **Done** to save the configuration.

Configure export limit

1. Go to **Commissioning** > **Power Control** > **Energy Manager** > **Limit Control** > **Export limit**
2. Click on **Edit**
3. Set the option **Export Limit** to disabled