



GEN24 Offline Causes and solutions

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Business Unit Solar

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1 Introduction

If data from a photovoltaic system is not displayed or not displayed correctly in the Fronius Solar.web online portal, the reasons for this can be divided into three categories:

- The online status of the PV system is **Offline**
- No **energy balance data** has been uploaded
- The **data transfer** to Solar.web is sporadically interrupted at times

Each of these categories can have different causes, which can be listed as follows.

Category			Cause
Offline	Energy balance	Data transfer	
✓	✓		Network router has been replaced
✓	✓		WLAN password or WLAN network name changed
✓	✓		Network changed from "WLAN" to "LAN" or vice versa
✓	✓	✓	Signal from WLAN network is too weak
✓	✓	✓	Incorrect Ethernet/LAN socket used in inverter
✓	✓		Ethernet cable (LAN cable) or Ethernet socket damaged
✓	✓	✓	LAN and WLAN have been configured on the inverter
✓	✓	✓	Inverter software version not up to date
✓	✓	✓	Too many third-party queries
✓	✓	✓	Network firewall blocking communication
✓	✓	✓	General communication problem with the network (router) or with the inverter

In the following sections we will now describe how the different causes can be identified and resolved.

2 Network router has been replaced

2.1 Cause

Since the inverter is still configured on the old network router, no data can be sent to Solar.web.

2.2 The solution

The network setting on the inverter must be changed.

2.3 Procedure

2.3.1 How-to video

You can find a detailed [how-to video](#) on how to implement the change [here](#).

2.3.2 Brief explanation

To change the network configuration of the inverter after replacing your router, please proceed as follows:

- Connect to the user interface of the inverter

You can find a [how-to video](#) [here](#).

- Activate the WLAN access point on the inverter by tapping the optical sensor in the middle of the device once.

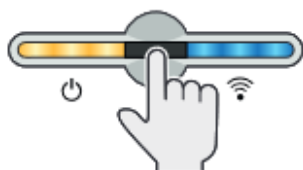


Figure 1 Activating the WLAN access point

- After tapping the sensor once, the right LED will start to flash blue and the WLAN access point is active.
- Now search for a network with the name "FRONIUS_3XXXXXXX" on your device (smartphone/tablet/laptop).
- Connect to this WLAN network by entering the network key "12345678".

Note

For computers running Windows 10, you must click "Connect using a security key instead" and enter the password "12345678". If you enter the password under PIN, it will not be accepted.

- Now open an internet browser on your device and enter the following IP address in the address bar: **192.168.250.181**
- The user interface of the inverter is now displayed.

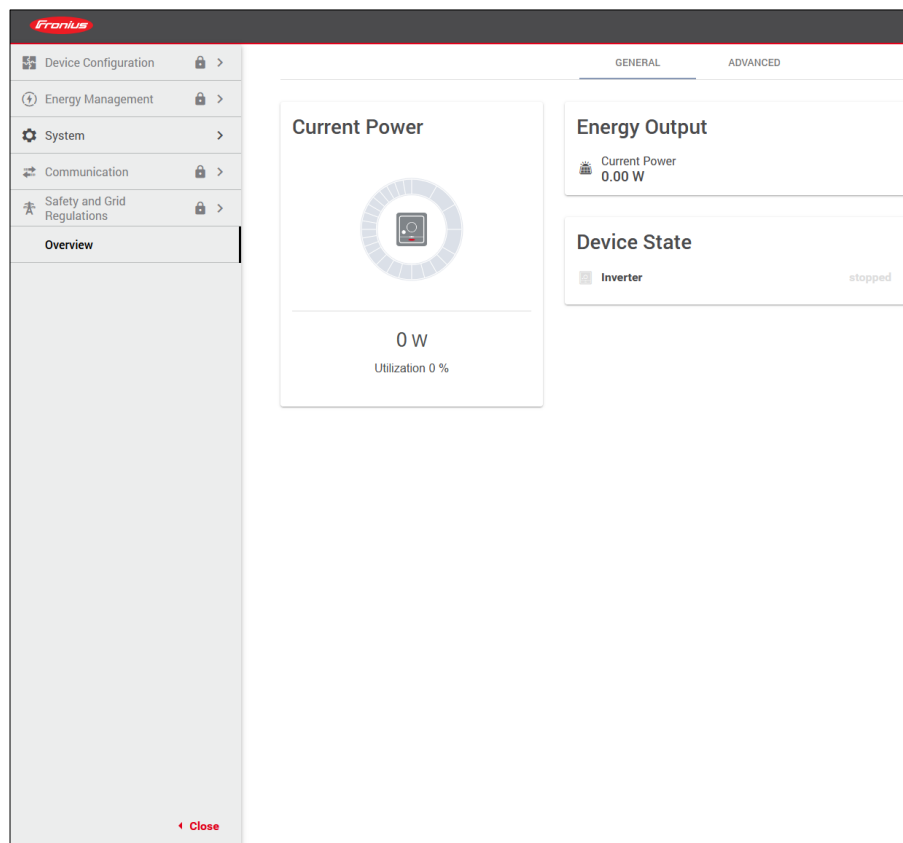


Figure 2 User interface of the inverter

2.4 Setting up a WLAN connection

On the user interface of the inverter, you can set up the WLAN connection under the following point. Go to...

- Communication
- Network
- WLAN

... to select the new WLAN network.

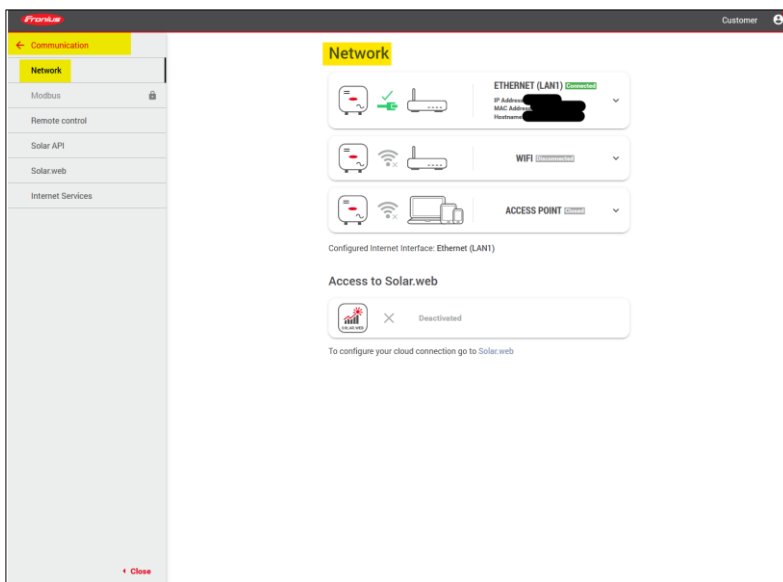


Figure 3 Setting up the network

Clicking on "WLAN" now displays the available WLAN networks.

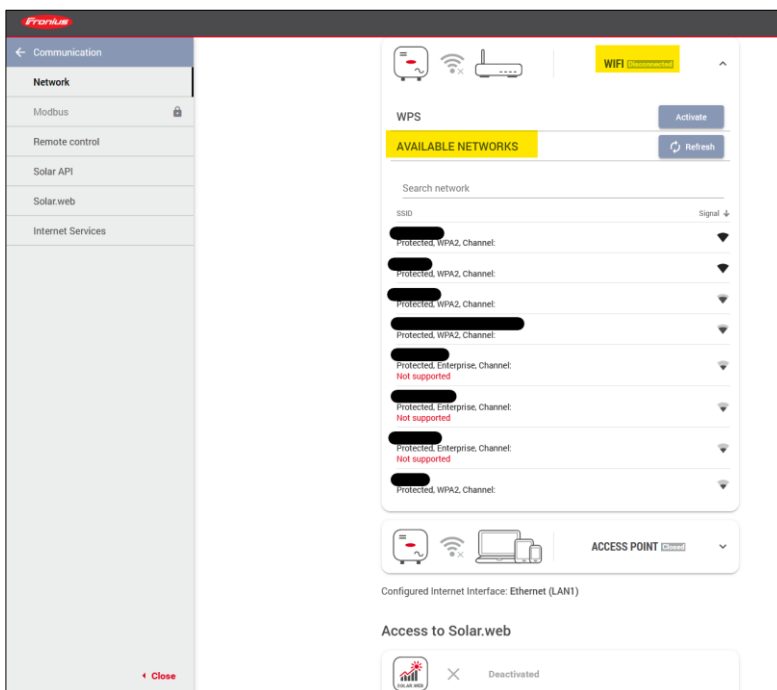


Figure 4 Available networks

After connecting to the new WLAN network, check after a few minutes whether your photovoltaic system is recording data in the Solar.web portal and whether energy flows are visible in the overview (bubble diagram). You can also access Solar.web under...

- Settings

– Components

... and check that the "Data source ID" has an active connection.

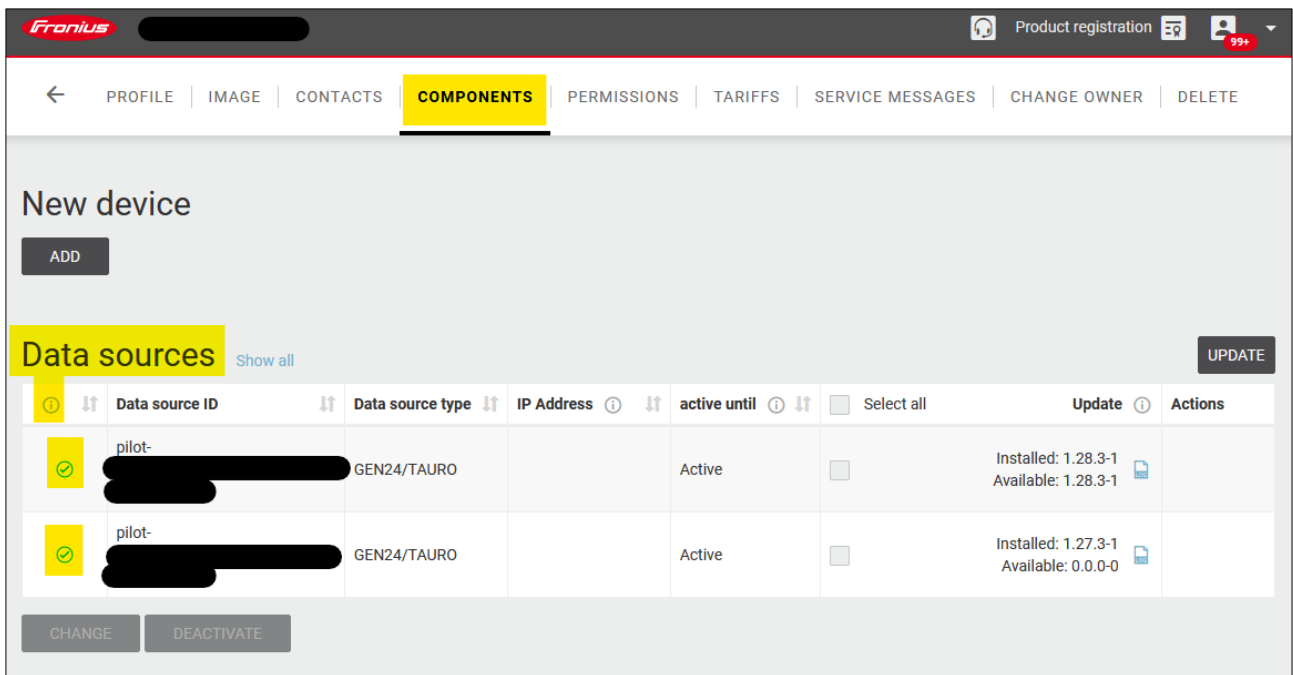


Figure 5 GEN24/Tauro is actively connected

Note

If your network is not listed among the available networks, please check the internet signal strength at the inverter. You can find out more here under [Point 5](#).

If the IP address is assigned statically, check whether the gateway and DNS addresses are stored correctly. Alternatively, you can leave the IP address on "automatic" (DHCP) and carry out a provisional check to see whether data is being transferred with this setting.

2.5 LAN connection

You can check the LAN network configuration on the user interface of the inverter and adapt it to the new network router (gateway, DNS, etc.) if necessary.

This is sometimes necessary if a static IP address was previously stored and the stored network addresses cannot be used due to the new gateway and DNS addresses.

Note

When using FRITZ!Box products, internet access must be configured without any restrictions or limitations. You can make this setting in the web interface of the FRITZ!Box.

3 WLAN password or WLAN network name changed

3.1 Cause

If the WLAN password or the WLAN network name is changed, the network settings must be adjusted on the inverter.

3.2 The solution

The network settings must be changed.

3.3 Procedure

3.3.1 How-to video

You can find a detailed [how-to video](#) on how to implement the change [here](#).

3.3.2 Brief explanation

A brief explanation can be found under Point 2 "[Network router has been replaced](#)".

Note: When using FRITZ!Box products, internet access must be configured without any restrictions or limitations. You can make this setting in the web interface of the FRITZ!Box.

4 Network changed from "WLAN" to "LAN" or vice versa

4.1 Cause

The connection type between the inverter and the network has been changed.

4.2 The solution

The network settings must be changed.

4.3 Procedure

4.3.1 How-to video

You can find a detailed [how-to video](#) on how to implement the change [here](#).

4.3.2 Brief explanation

A brief explanation can be found under Point 2 "[Network router has been replaced](#)".

Note: When using FRITZ!Box products, internet access must be configured without any restrictions or limitations. You can make this setting in the web interface of the FRITZ!Box.

5 Signal from WLAN network is too weak

5.1 Cause

Poor WLAN reception can cause the inverter to go intermittently or permanently offline.

5.2 The solution

The WLAN signal can be amplified on the inverter by changing the position of the network router or by adding WLAN repeaters.

5.3 Procedure

Start by checking the WLAN signal strength on the user interface of the inverter. You can test this under:

- Communication
- Network
- WLAN

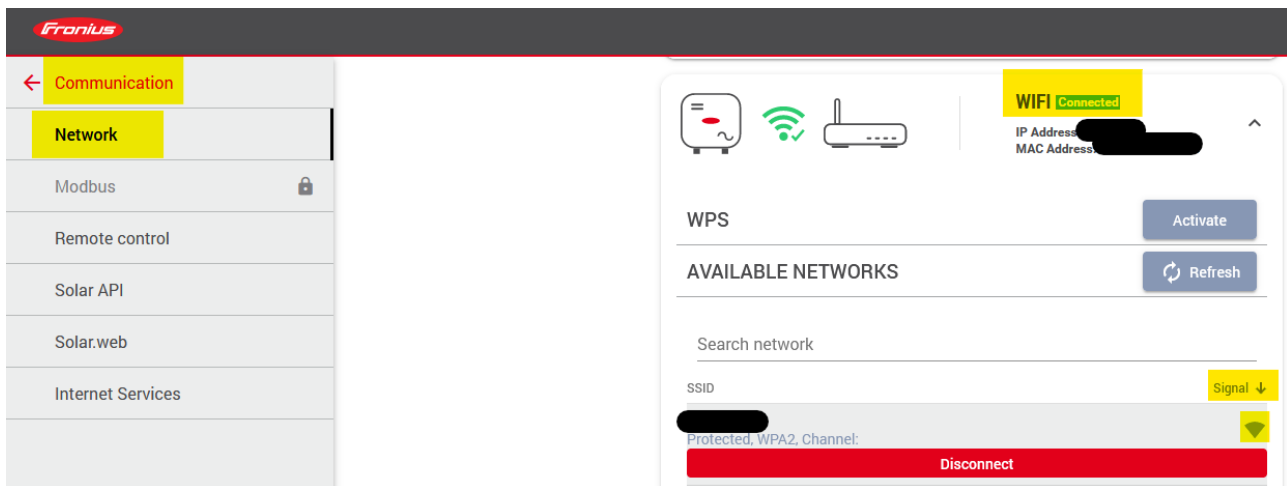


Figure 6 WLAN signal strength

If the area is completely black, the WLAN signal is at full strength. If gray bars are displayed in the area, the WLAN signal is at less than full strength.

The WLAN strength on the inverter can be increased by changing the position of the network router or by extending the WLAN network with WLAN repeaters.

Avoid connecting to a guest WLAN, as this access may be restricted.

Note:

When the network is saved, the color changes to light blue.

Tip:

A connection via WLAN can cause recurring problems. We therefore recommend that a connection be established between the network router and the inverter via Ethernet/LAN.

6 Incorrect Ethernet/LAN socket used in inverter

6.1 Cause

A connection to the network cannot be established when using the wrong Ethernet socket (LAN 2) in the inverter. The LAN 2 Ethernet socket is reserved for future functions.

6.2 The solution

Ensure that the LAN 1 Ethernet socket is used.



Figure 7 Socket LAN 1

Note

The Symo GEN24, Primo GEN24, and Tauro inverter generation must **not** be connected to other inverter series (SnapINverter, IG Plus, etc.) via the LAN 1 or LAN 2 interface!

7 Ethernet cable (LAN cable) or Ethernet socket damaged

7.1 Cause

A break in the cable or damage to the Ethernet socket can cause the inverter to go offline.

7.2 The solution

There are several ways to get to the bottom of the problem. These include:

- Changing the Ethernet/LAN socket on the network router
- Replacing the Ethernet cable
- Checking the Ethernet socket on the inverter

8 LAN and WLAN have been configured on the inverter

8.1 Cause

Both internet connection options (LAN and WLAN) have been configured in the inverter and are also available (a LAN cable is connected to the LAN 1 socket).

8.2 The solution

Use either LAN or WLAN to connect your device to the internet.

Tip:

A connection via WLAN can cause recurring problems. We therefore recommend that a connection be established between the network router and the inverter via Ethernet/LAN.

8.3 Procedure

Disconnect from the WLAN network if the LAN connection is mainly used and then, in the user interface of the inverter under...

- Communication
- Network
- LAN

click on "Connect" again under "LAN".

9 Inverter software version not up to date

9.1 Cause

An older software version on the inverter may result in the network function not working properly.

9.2 The solution

Update your inverter's software to the latest version.

9.3 Procedure

You can initiate the update via the user interface of the inverter (this would be a local update) or online via Solar.web under...

- Settings
- Components
- Update

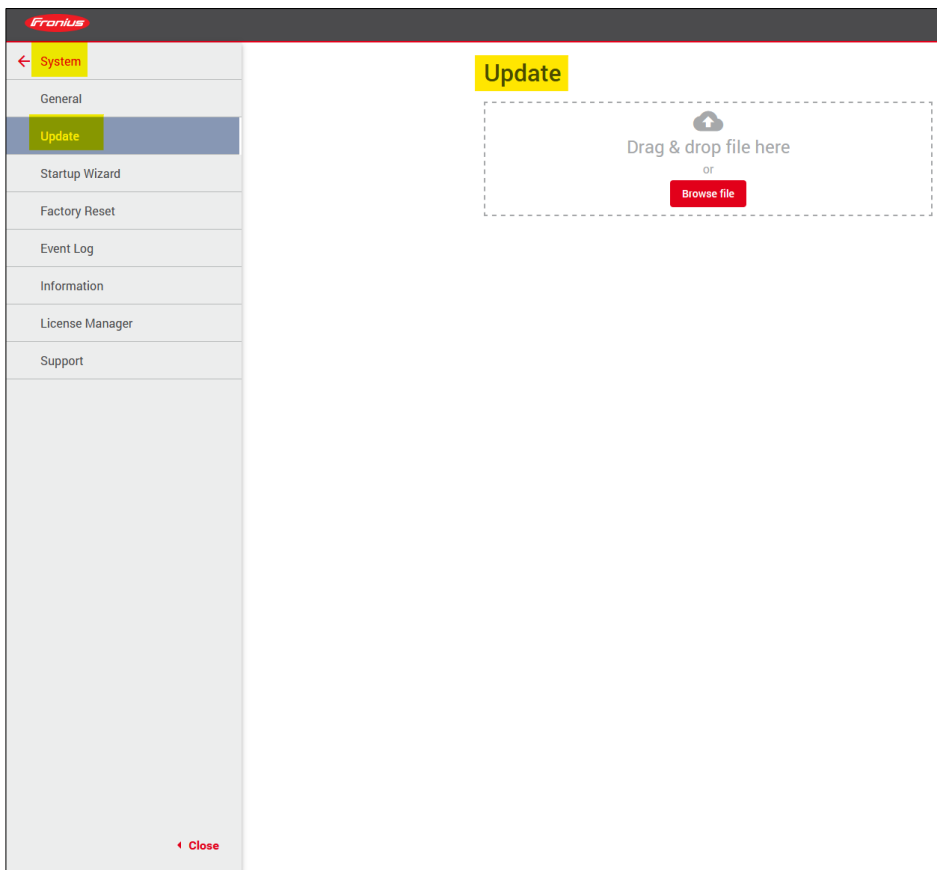


Figure 8 Update directly on the inverter

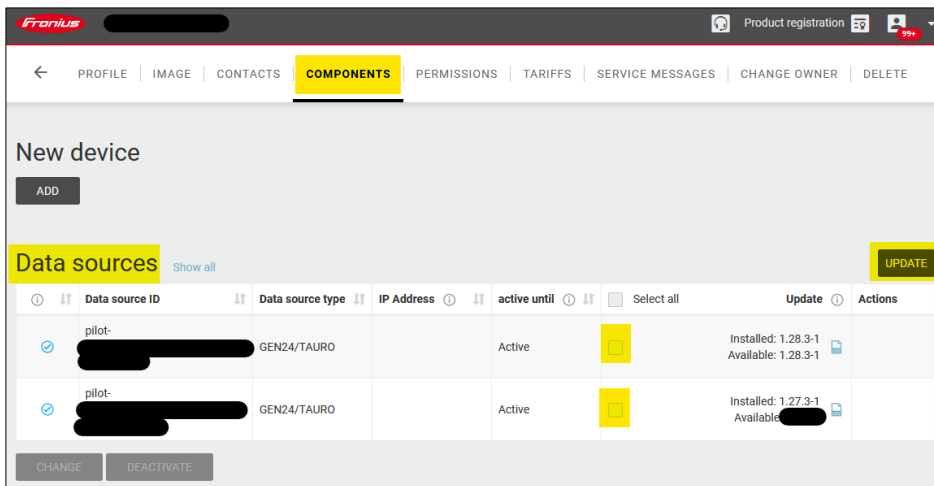


Figure 9 Update via Solar.web

9.3.1 How-to video – online update

You can find a detailed [how-to video](#) about the update via Solar.web [here](#).

9.3.2 Local update (offline)

- Download the required [firmware file](#)
- Open the user interface of the inverter
 - You have two options here to open the user interface of the inverter—see access via WLAN and access via Ethernet/LAN

Access via WLAN

Connect to the user interface of the inverter via WLAN.

You can find a [how-to video here](#).

A short description can be found under "[Network router has been replaced](#)".

Access via Ethernet/LAN

Connect your PC/laptop to the inverter (LAN 1) using a network cable (CAT5 or higher).

Briefly touch the sensor on the front of the inverter once to activate the WLAN access point. Once the right LED starts flashing, enter the following IP address in the address bar of your browser: "**169.254.0.180**".

Then, in the user interface of the inverter, go to:

- System
- Update

To start the update, click on "Select file" and select the downloaded update file (.swu) or drag and drop this file into the "Drop file here" area. The update starts automatically.

Note

During the update process, do not reload the browser page (unless you are instructed to do so during the update process) and do not switch off the inverter.

10 Too many third-party queries

10.1 Cause

Excessive query cycles from third-party applications can cause a communication overload in the inverter, which can also impair the network capability.

10.2 The solution

Check whether data is being requested from the inverter by third-party components (home automation monitoring, electric car charging station, heat pump, etc.). Check the time interval at which these queries occur.

Query cycles of >7000 ms / >7 seconds are recommended.

After adjusting the query interval time, the power to the inverter should be switched off on the AC and DC sides for about 1 minute.

Note

Before switching on the inverter again, all LEDs on the device must be dark.

You can temporarily disable the open interfaces on the web user interface of the inverter under "Communication" (Solar.API and Modbus Slave TCP) and observe the behavior without the active open interfaces.

After deactivating the third-party interfaces, the power to the inverter should be switched off for approx. 1 minute and then switched on again.

Note

Before switching on the inverter again, all LEDs on the device must be dark.

You can find out how to connect to the user interface of the inverter under "[Network router has been replaced](#)" starting at [Point 2.3.2](#).

11 Network firewall blocking communication

11.1 Cause

Communication with Solar.web cannot be established due to incorrect firewall settings.

11.2 The solution

Check the settings of your firewall. Certain protocols, server addresses, and ports must be enabled for a successful data transfer in your network.

An up-to-date list can be found at the following link:

["Change log for firewall rules" document](#)

Note

When using FRITZ!Box products, internet access must be configured without any restrictions or limitations. You can make this setting in the web interface of the FRITZ!Box.

12 General communication problem with the network (router) or with the inverter

12.1 Cause

A wide variety of problems in the home network or on the inverter can cause communication issues.

12.2 The solution

12.2.1 Problems with the home network

Note

When using FRITZ!Box products, internet access must be configured without any restrictions or limitations. You can make this setting in the web interface of the FRITZ!Box.

When entering the network configuration manually (static IP address):

- Check that the gateway IP address and the DNS address are correctly stored and do not deviate from the network
- Check if the IP address is already taken
- In a corporate network: Check whether the set IP address, DNS, and gateway have been enabled by the network administrator and can use the ports without restriction ([see Point 11](#)).

When assigning a DHCP IP address (automatic IP address):

- Check whether your network (router) can assign a DHCP IP address to the inverter and check whether the inverter is listed as a "device" with an IP address in the list of home networks.
- Remove any network restrictions or guest access restrictions (e.g., MAC address filtering, DHCP range too small, all DHCP addresses assigned, etc.)

After correcting or adjusting the settings, restart your network router and inverter and observe the behavior.

Instructions for restarting the inverter:

- Switch the inverter to standby
- Open the AC fuse in the switch cabinet
- Turn the DC switch on the inverter to the "0" position
- Wait until all LEDs on the inverter have gone out
- Reactivate the AC fuse
- Turn the DC switch on the inverter to the "1" position

If necessary, contact a network technician and arrange for a network check.

Alternatively, you can connect your inverter to another network (WLAN box or WLAN hot spot of a smartphone) to rule out the network as the source of the problem.

12.2.2 Problems with the inverter

If all the above items have been checked and you have not identified a problem with the network (router, switch, ports, etc.), proceed as follows to download the support file on the interface of the inverter:

- Open the WLAN access point by tapping the optical sensor in the middle of the device.
- After tapping the sensor once, the right LED will flash blue. The WLAN access point is opened.
- On your end device (smartphone/tablet/laptop), search for a WLAN network with the name "FRONIUS_serialnumber" and connect to this WLAN network. The network key is "12345678".
- Open a browser on your device (smartphone/tablet/laptop) and enter the address **192.168.250.181** in the address bar.
- In the menu navigation, go to:
 - System
 - SupportYou may need to enter customer or technician login details here.
- Click "Generate support info"

Downloading the file can take several minutes. Please do not refresh or close the page.

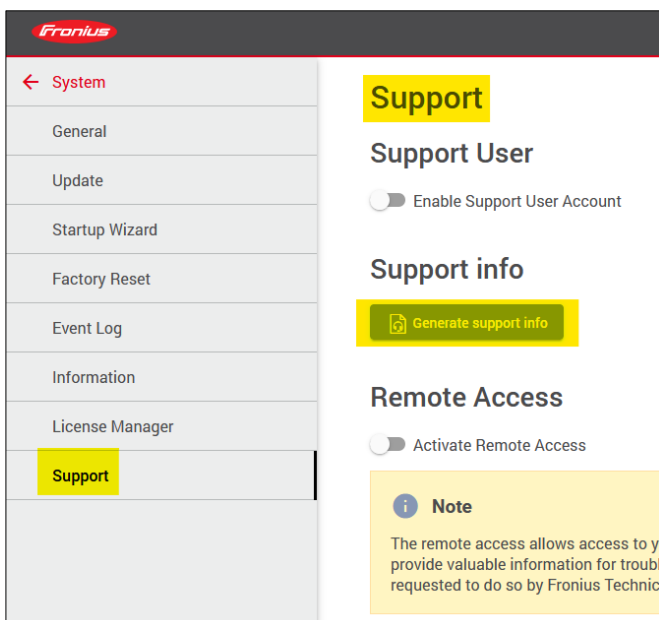


Figure 10 Generate support info

- Send us the support file for analysis.

13 Further information

13.1 Support for system owners

Do you have questions or need help solving a problem? Visit the [Support area for PV system owners](#) to find a wide range of information and support for system owners interested in learning more

13.2 Support videos

Have you already seen our **how-to videos** on YouTube©?

If not, [click here](#) and we'll hopefully be able to help you with any questions you might have.