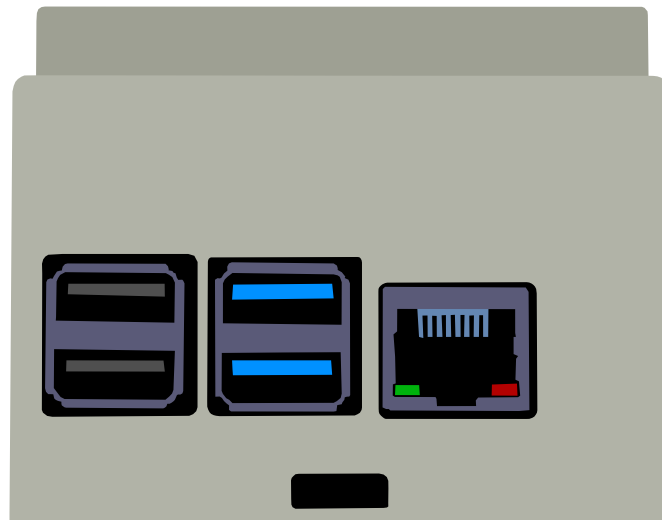




Operator Manual

RPi Monitoring System



Version : As of: 06/23/2026

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The RPi Monitoring System collects data from the Solarinvert inverter. The data can be viewed in a browser for various time periods in different formats.

1 Commissioning

The RPi Monitoring System is available in two versions with different housings: one in a black aluminum housing (see Figure 3) and another model in a gray housing that can be mounted on a DIN rail (see Figure 2). Both versions are based on a Raspberry Pi 4 with 1 GB of RAM.

1.1 Connect

The RPi Monitoring System is connected to the Solarinvert inverter using the USB-RS485-RJ45 service cable (see Figure 1 on the right). The USB-A plug is inserted into a USB port on the RPi Monitoring System (see Figure 2 or Figure 3 on the left), and the RJ45 plug is inserted into the inverter.

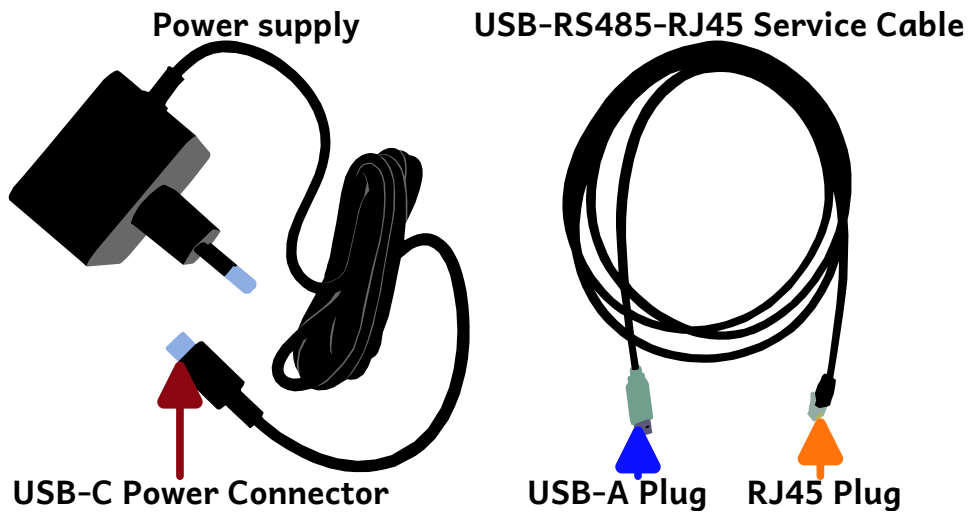


Figure 1: Cable

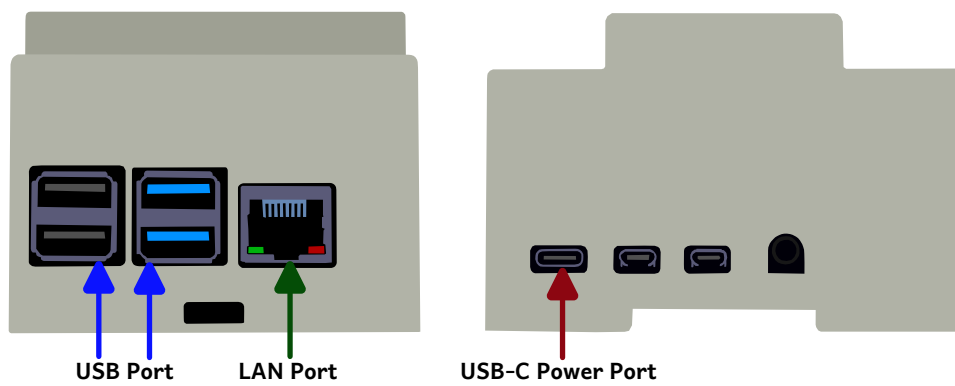


Figure 2: DIN rail enclosure

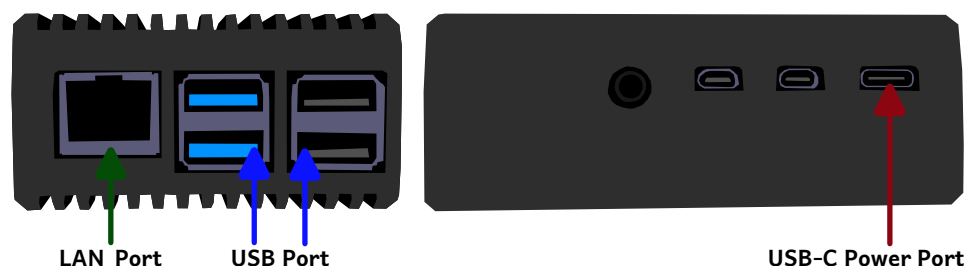


Figure 3: aluminum enclosure

Warning

Do not connect the RPi Monitoring System and the inverter using an LAN cable via the RPi Monitoring System's LAN port. Use only the USB-RS485-RJ45 service cable provided for this purpose.

Power the RPi Monitoring System using the power supply (see Figure 1 on the left) via the USB-C power port (see Figure 2 or Figure 3 on the right).

1.2 Shutdown**Warning**

To prevent damage to the RPi Monitoring System's operating system, shut down the system properly before disconnecting the power.

To do this, unplug the USB connector of the USB-RS485-RJ45 service cable from the RPi Monitoring System. The system will shut down after approximately 100 seconds. If you plug the USB connector back in before the 100 seconds have passed, the shutdown process will not be completed.

You can tell that the system is shutting down by the steady, brief flashing of the green LED. Once the system has shut down, the green LED is off and only the red LED remains lit. You can now disconnect the RPi Monitoring System from the power source.

	Green LED	Red LED	LAN LED (connected via LAN)
Normal operation	blinking slowly	always on	blinking fast
Shut down now	blinking fast	always on	off
Has shut down	off	always on	off
No power	off	off	off

To reactivate it, reconnect the USB-C power connector and the USB-A connector of the USB-RS485-RJ45 service cable. Wait at least 5 seconds between unplugging and plugging the power back in.

If the RPi Monitoring System is used solely for wind monitoring without an inverter, it will start up even without the special USB-RS485 service cable.

2 Connect RPi Monitoring System to the home network

The RPi Monitoring System must be connected to your home network. To do this, you can either connect the RPi Monitoring System to your router using an Ethernet cable or connect the RPi Monitoring System to the router via Wi-Fi. Either connection method is sufficient.

2.1 Connecting RPi Monitoring System via LAN

Connect the RPi Monitoring System's LAN port (see Figure 2 or Figure 3 on the left) to your home network using an Ethernet cable.

2.2 Connect RPi Monitoring System via Wi-Fi

You can use the RPi Monitoring System's access point to configure the RPi Monitoring System to access your home network's Wi-Fi. To make the access point visible, the RPi Monitoring System must not be connected via LAN and must not be connected to another Wi-Fi network. You can use a network-enabled device (e.g., a mobile phone) to enter the settings. The system's Wi-Fi is activated cyclically: it is visible for 5 minutes and then hidden for 5 minutes.

Access Point Login Credentials	
SSID:	[REDACTED]
Password :	[REDACTED]

On your network-enabled device, open the list of available Wi-Fi networks and monitor the list for up to 5 minutes until the network with the SSID [REDACTED] appears. Connect to the Wi-Fi network (SSID: [REDACTED]) and enter the password [REDACTED].

2.2.1 Open the Connect website

Once you are connected to the RPi Monitoring System Wi-Fi network, the **Connect website** opens automatically on many devices (see Figure 4).

If the website does not open automatically:

1. Open a web browser (such as Chrome, Safari, or Edge).
2. Enter the following address: [REDACTED]

2.2.2 Connect Website

Enter your home Wi-Fi login credentials:

1. SSID (Name of your Wi-Fi network)
2. Password (the Wi-Fi password for your Wi-Fi network)

You can usually find this information on the back of your router.

Then click **Connect**.

You will see this message (see Figure 5).



Hi! Please choose your WiFi from the list

SSID*
 ▼

Passphrase
 🔒

Connect

Figure 4: Connect Website

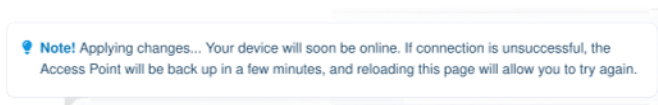


Figure 5: Connect Success message

The RPi Monitoring System will now connect to your home Wi-Fi network. Your device can then switch back to your regular Wi-Fi network. If this does not happen automatically, simply reconnect your device to your home Wi-Fi network.

2.2.3 Tips for Troubleshooting Wi-Fi Issues

- The RPi Monitoring System's Wi-Fi network isn't showing up: Wait up to 5 minutes and refresh the Wi-Fi list.
- The RPi Monitoring System's Wi-Fi network still does not appear: Check whether the RPi Monitoring System is already connected via an Ethernet cable or to a Wi-Fi network.
- The Connect website won't open: Enter the address ██████████ manually in your browser.

3 View data

The data can be viewed locally on the RPi Monitoring System and on the server. You can use any device with a web browser to do so.

3.1 Local

To view the data locally, the RPi Monitoring System and your device must be on the same home network.

Open your browser and go to the website [REDACTED]

Zugangsdaten local	
Url:	[REDACTED]
Username :	[REDACTED]
Password :	[REDACTED]

3.2 Server

The Solarinvert Server can be accessed from anywhere. To do so, open your browser and go to the website [REDACTED]

Zugangsdaten Server	
Url:	[REDACTED]
Username :	[REDACTED]
Password :	[REDACTED]

3.3 How to Use Grafana

Click **Dashboards** in the left sidebar. If the left sidebar isn't visible, click the ⚙ icon in the top-left corner to display it.

Under **Dashboard**, you'll find at least three dashboards to choose from in the middle.

- Solar: If you are using the inverter with solar panels.
- Wind: If you are using the inverter with a wind turbine.
- Wind_only: If you only want to view wind data.

Click on the appropriate dashboard.

3.3.1 Update data regularly

You can refresh the dashboard data regularly by clicking the down arrow next to **Refresh** in the upper-left corner (see Figure 6 on the right). A menu will open where you can select the desired time interval. The data on the server is refreshed every 5 seconds.

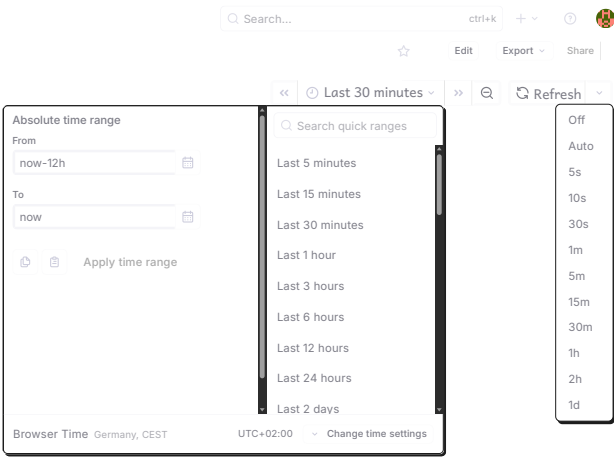


Figure 6: Grafana Menu

3.3.2 Select time interval

The dashboard data is always displayed for a specific time range. The current time range is shown in the top-right corner (to the left of **Refresh**) (see Figure 6 on the left). Clicking on it opens a menu where you can select the desired time range. If you click the **<<** icon or the **>>** icon, you can navigate backward and forward within the displayed time range.

If you select a range in a chart by holding down the left mouse button, that range becomes the new range being displayed.

3.3.3 View the dashboard in full-screen mode

Click the round icon in the upper-right corner and select **Enable kiosk mode** to hide the Grafana menu. Press **F11** to enter full-screen mode. Press **ESC** to display the Grafana menu again. Press **F11** to return the browser to windowed mode.

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