



# SOLAR RELAY

INVERTER CONTROL  
with  
FRONIUS PRIMO / GEN 24



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**IMPORTANT**



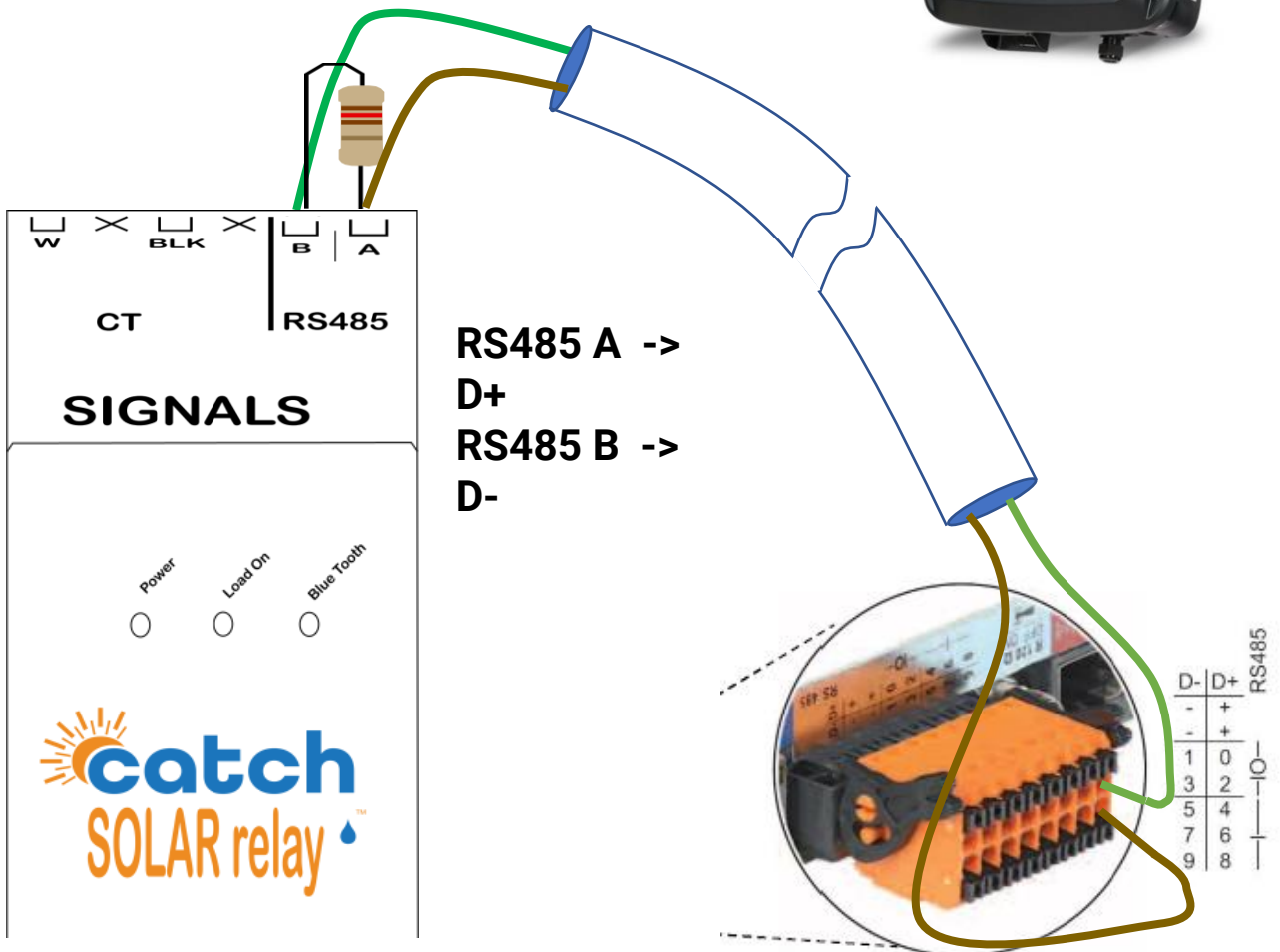
This guide discusses the specific wiring and configuration need to implement inverter control. Ensure the installation guide for both products is also followed.

## Wiring Instructions – FRONIUS PRIMO

Ensure the data cable is rated for the voltages it will be in close proximity to.

A 120 Ohm terminating resistor may be required at the CATCH Relay terminals as shown in the diagram below if the cable run is longer than 10m.

Connect the RS485 Cable to the Fronius Data Manager 2 as shown.



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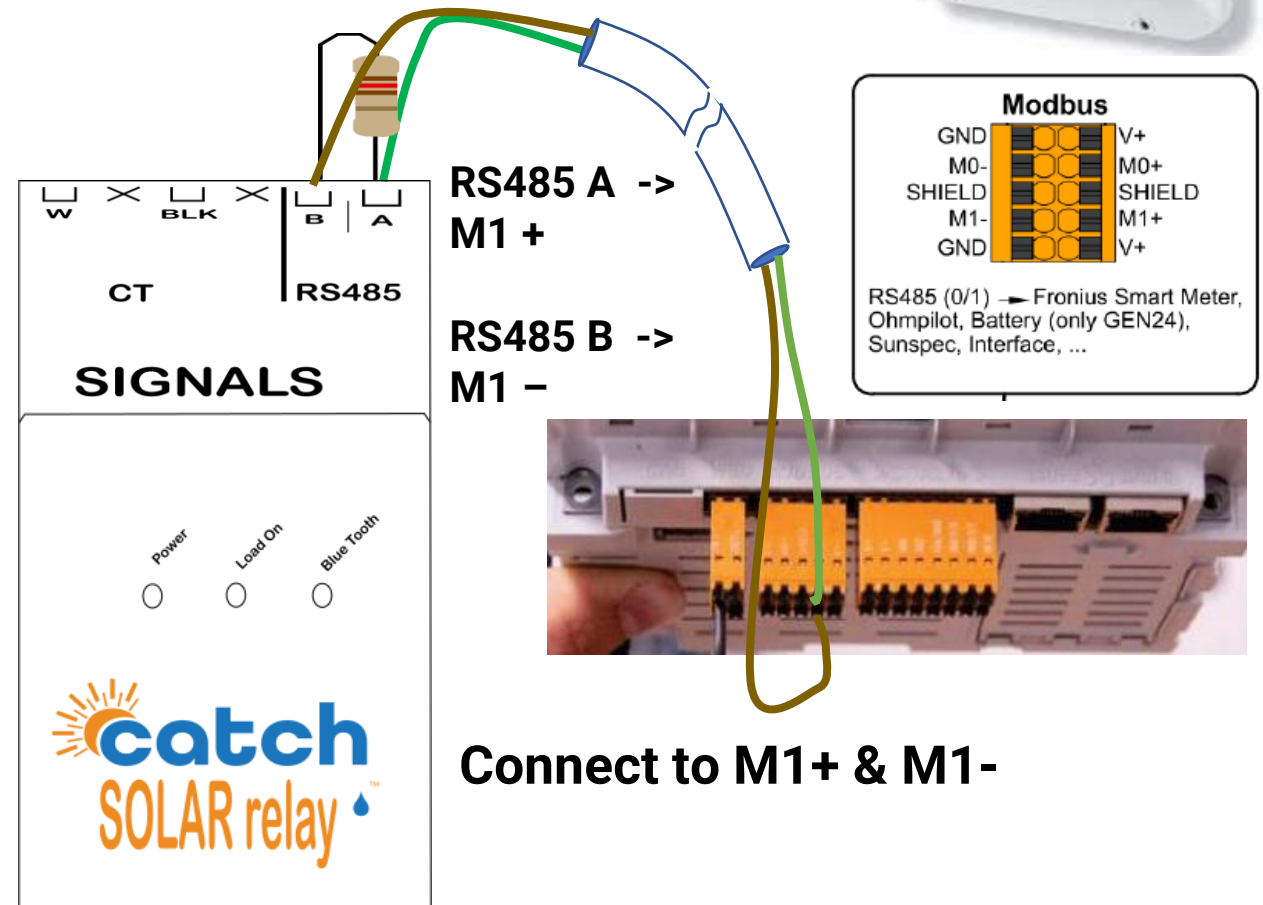
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## Wiring Instructions – FRONIUS GEN 24

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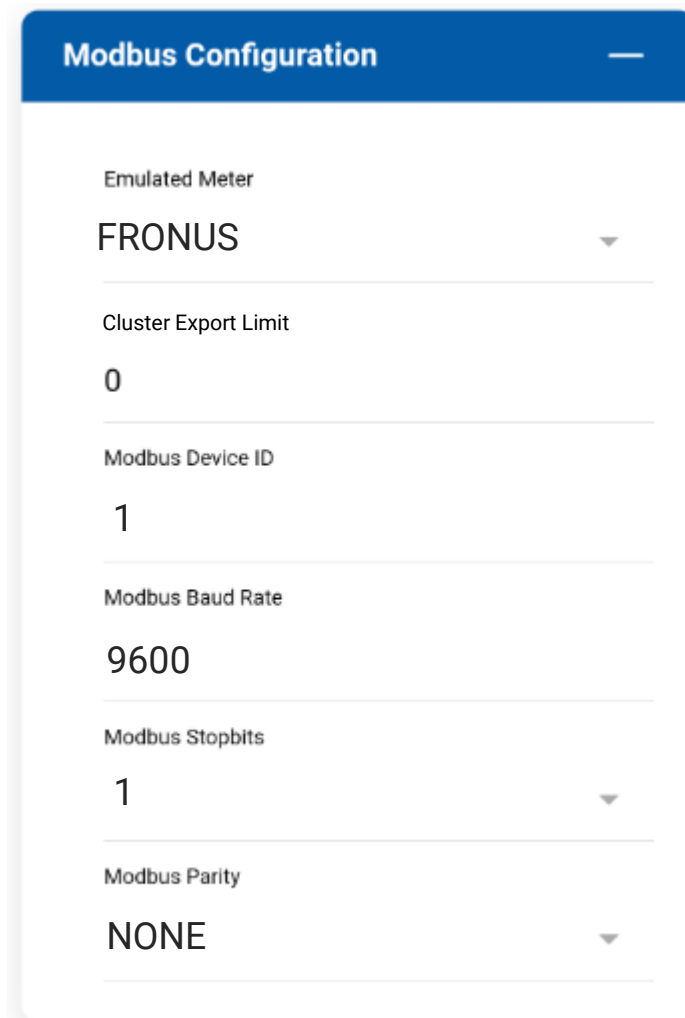
Connect the RS485 Cable to the Fronius Data Manager 2 as shown.



# SOLAR RELAY Setup

Navigate to the Configuration screen and expand the Modbus Configuration section. Fill it out using the details below.

Save your changes.

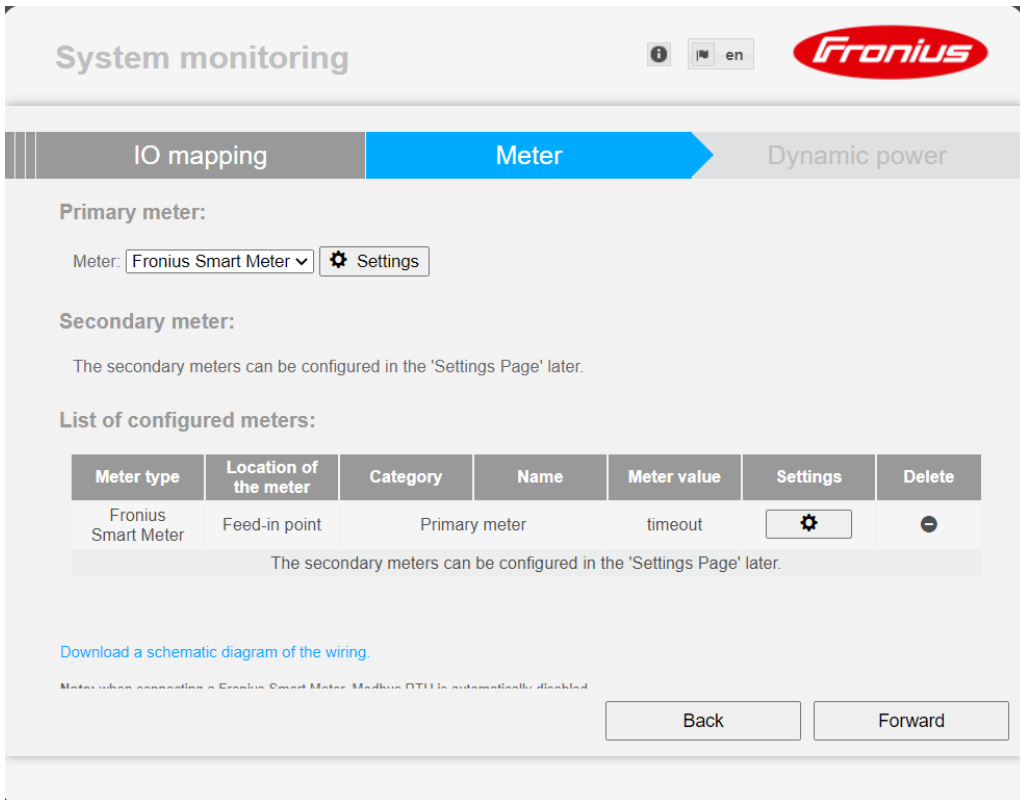
A screenshot of the Modbus Configuration screen. The screen has a blue header with the text "Modbus Configuration" and a minus sign on the right. Below the header, there are several configuration fields, each with a label and a value. The fields are: "Emulated Meter" with a dropdown menu showing "FRONUS"; "Cluster Export Limit" with a text input field containing "0"; "Modbus Device ID" with a text input field containing "1"; "Modbus Baud Rate" with a text input field containing "9600"; "Modbus Stopbits" with a dropdown menu showing "1"; and "Modbus Parity" with a dropdown menu showing "NONE".

Field	Value
Emulated Meter	FRONUS
Cluster Export Limit	0
Modbus Device ID	1
Modbus Baud Rate	9600
Modbus Stopbits	1
Modbus Parity	NONE


# Inverter Setup

Setup the Inverter for export control exactly the same way you do with a regular Fronius Smart Meter.

1. Connect to the Web Configuration UI (<http://192.168.250.181>) and run the Technical Wizard.
2. When you get to the Meter setup enter the details as shown below.



The screenshot shows the 'System monitoring' web interface for a Fronius inverter. The page has a navigation bar with 'IO mapping', 'Meter' (highlighted in blue), and 'Dynamic power'. The 'Meter' section is active, showing a 'Primary meter' dropdown set to 'Fronius Smart Meter' with a 'Settings' button. Below this, the 'Secondary meter' section states that secondary meters can be configured in the 'Settings Page' later. A 'List of configured meters' table is shown with one entry: 'Fronius Smart Meter' at 'Feed-in point' location, categorized as 'Primary meter' with a 'timeout' value. The table includes 'Settings' and 'Delete' columns. At the bottom, there are 'Back' and 'Forward' buttons.

System monitoring en 

IO mapping **Meter** Dynamic power

**Primary meter:**

Meter: Fronius Smart Meter Settings

**Secondary meter:**

The secondary meters can be configured in the 'Settings Page' later.

**List of configured meters:**

Meter type	Location of the meter	Category	Name	Meter value	Settings	Delete
Fronius Smart Meter	Feed-in point	Primary meter		timeout	<span>Settings</span>	<span>Delete</span>


The secondary meters can be configured in the 'Settings Page' later.

[Download a schematic diagram of the wiring.](#)

Meter when connecting a Fronius Smart Meter, Modbus RTU is automatically disabled.

Back Forward

# Inverter Setup

System monitoring en 

IO mapping Meter **Dynamic power**

**Dynamic power reduction**

Power limit:  No limit  limit for entire system

total DC power of the system:  Wp

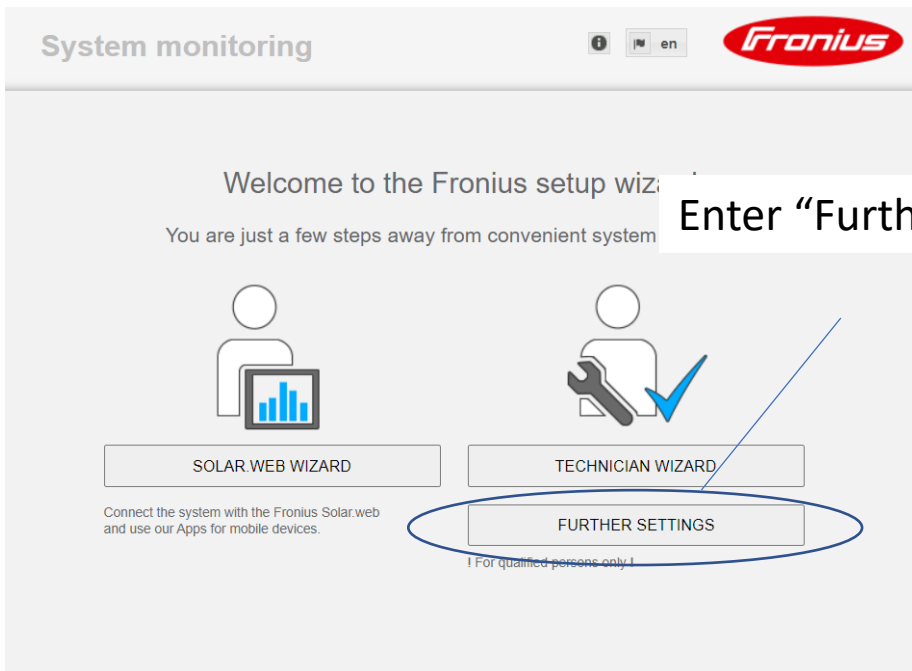
Maximum grid feed-in power:  %

Reduce inverter power to 0% if meter connection has been lost.

Back Forward

Change these to suite your requirements

# Inverter Setup



Enter "Further Settings"

# Inverter Setup

1. Click On the Meter Tab

2. Click On "Settings"

**Meter settings**

Primary meter:  
Meter: **Fronius Smart Meter** **Settings**

Secondary meter:  
Meter: **None selected** **+ Add**

List of configured meters:

Meter type	Location of the meter	Category	Name	Meter value	Settings	Delete
Fronius Smart Meter	Feed-in point	Primary meter		searching	<b>Settings</b>	<b>Delete</b>

[Download a schematic diagram of the wiring.](#)

**Note:** when connecting a Fronius Smart Meter, Modbus RTU is automatically disabled.

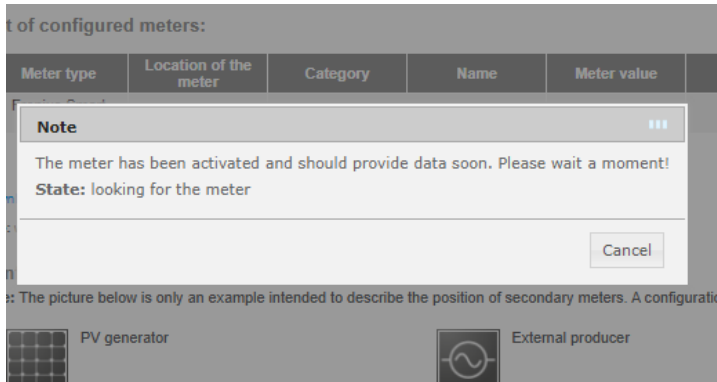
**Configuration positions**

**Note:** The picture below is only an example intended to describe the position of secondary meters. A configuration is not possible here.

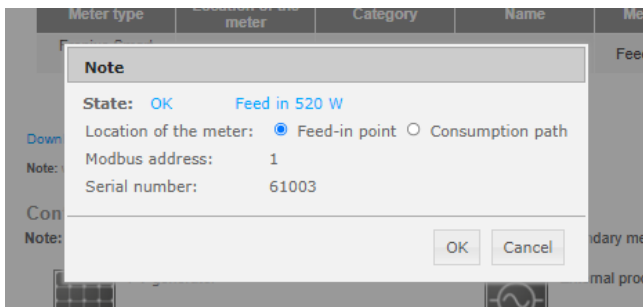


# Inverter Setup

A message will appear as shown below. This will happen until the inverter has connected to the meter.



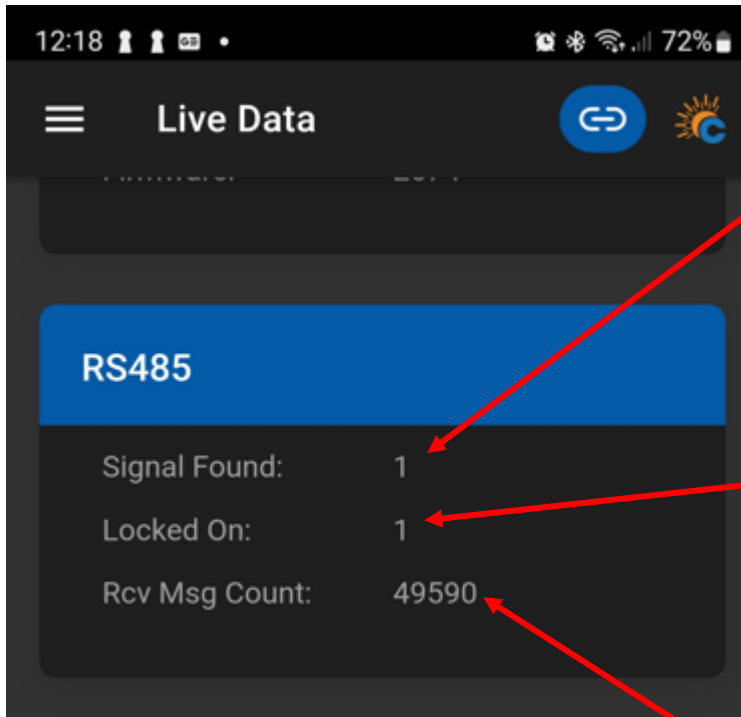
Once the inverter has successfully connected to the Solar Relay you will see this message.



# Checking the status of the RS485 interface

Within the CATCH Power app if you navigate to the bottom of the Live Data screen you will see something similar to the screen below.

The RS485 Status Can be used to confirm correct operation



Indicates the inverter is transmitting data on the RS485 cable.

If this is zero it means the inverter is not communicating or there is a break in the cable.

This indicates the inverter and the CATCH Relay are talking the same language.

If this is zero it is likely you have not chosen the correct meter when configuring the relay or the +ve and -ve wires are crossed over.

This number continually counts the number of successful messages. This number will continue to rise if communications the link is good.

THE FOLLOWING ONLY NEEDS  
TO BE FOLLOWED IF YOU ARE ENABLING  
DYNAMIC / FLEXIBLE EXPORTS



## NO NATIVE MONITORING

If you choose to use RTU Control for this inverter, the Solar.Web platform will not work



## NO BATTERIES

RTU Control cannot be used on Hybrid inverters that have a battery connected.

- Set the Soft Export Limit to ZERO

The true export limit will be fed to the inverter via the Dynamic /Flexible Exports program. Regardless of what you have been told the export limit is SET IT TO ZERO.

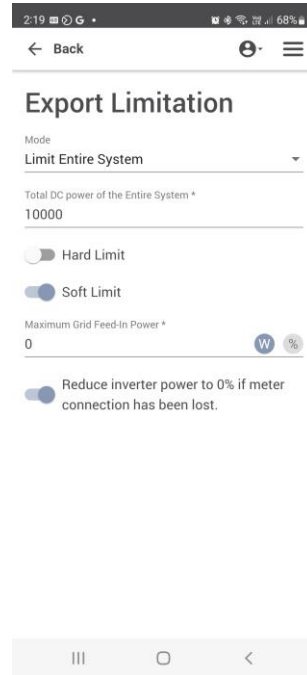
- Set the Hard Export Limit (if required)

————— COMPLETE —————

## GEN24 setup via solar.start app

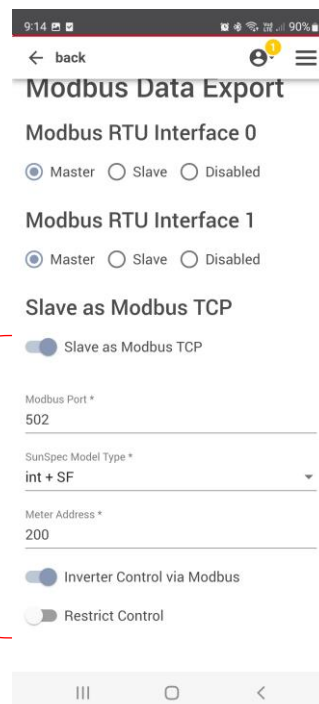
### 1. Set the Export limit to ZERO

- Hard Limit OFF
- export limit to ZERO
- Power down when meter fault.



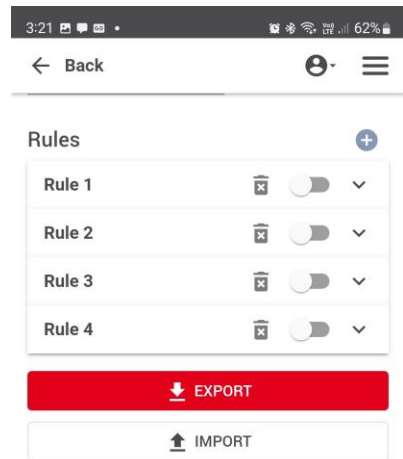
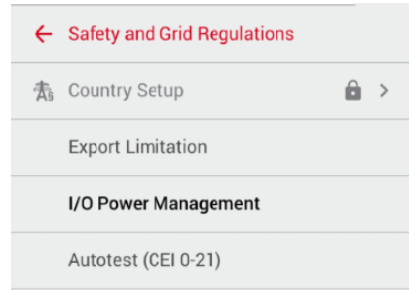
### 2. Turn on modbusTCP

Make sure the numbers are set as shown



## GEN24 setup via solar.start app

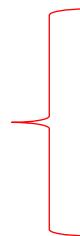
### 3. Set modbusTCP priority to High



#### Controlling Priorities

1. Modbus Control
2. IO Powerlimit
3. Export Limitation

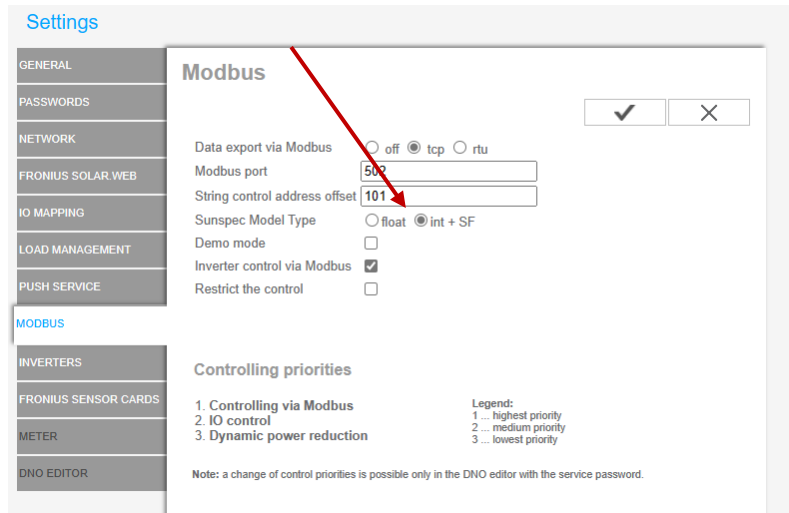
Move Modbus Control from position 3 to Position 1



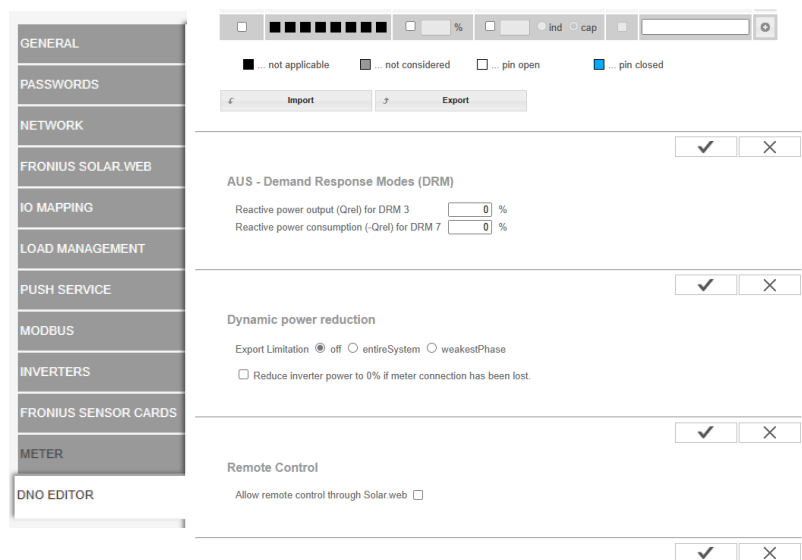
## PRIMO SNAP-IN setup

### 1. Turn On Modbus TCP

Turn on the MODBUS over TCP and make sure settings are exactly as shown



### 2. Make the Modbus Highest Priority



Within the DNO Editor  
Scroll to the bottom.  
MAKE MODBUS THE HIGHEST  
PRIORITY



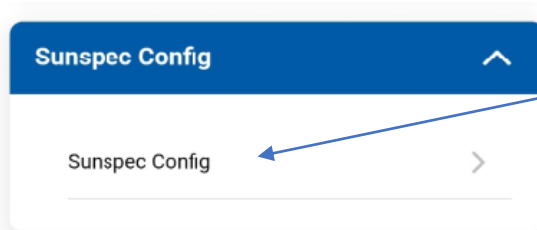
Controlling priorities

- 1. Controlling via Modbus
- 2. IO control
- 3. Dynamic power reduction

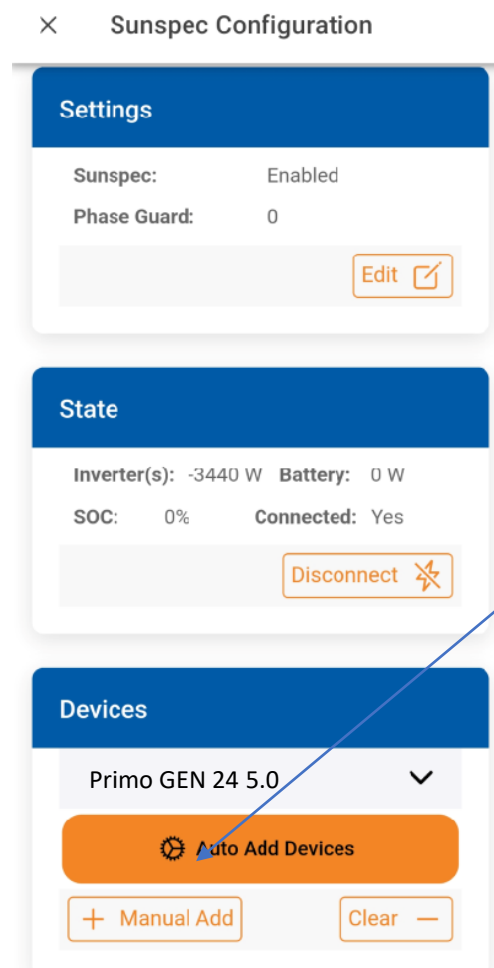
Legend:  
1 ... highest priority  
2 ... medium priority  
3 ... lowest priority

## Enable Sunspec on the CATCH Relay

Connect the relay to the inverter using SUNSPEC



1. Click here..and be a bit patient, this can take a few seconds to open the next screen.

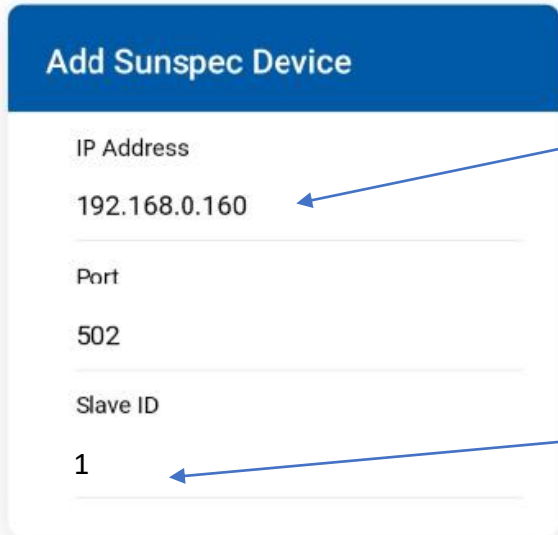


2. Click on **Manual Add**.

Do not attempt the auto scan for the inverter. It will not find it.



Connect the relay to the inverter using SUNSPEC



Type in the IP address you noted down from the inverter setup

Set the Slave ID to 1.

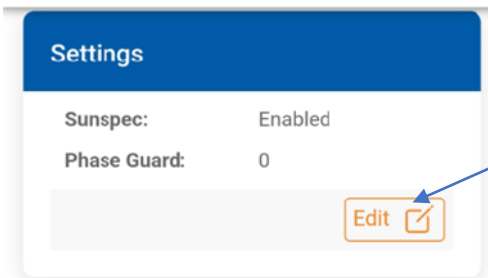
If communicate was successful a message will say 1 device added. When you close the dialog box the new unit should appear here.



The new device added

Now the inverter and relay are connected. TURN SUNSPEC ON.

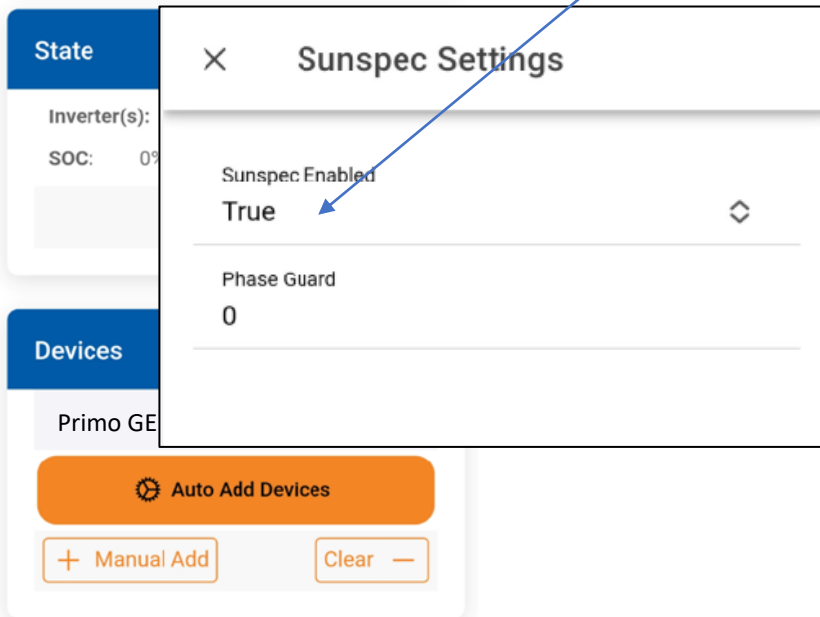
## × Sunspec Configuration



The screenshot shows the 'Settings' tab of the Sunspec Configuration interface. It displays two settings: 'Sunspec:' set to 'Enabled' and 'Phase Guard:' set to '0'. Below these settings is an 'Edit' button with a pencil icon.

Click here

Enable Sunspec Here..and press save.



The screenshot shows a 'Sunspec Settings' dialog box overlaid on the main interface. The dialog has a close button (X) and contains two settings: 'Sunspec Enabled' set to 'True' and 'Phase Guard' set to '0'. A blue arrow points from the 'True' value to the 'Sunspec Enabled' label. The background interface shows the 'State' and 'Devices' sections, with 'Inverter(s):', 'SOC: 0%', and 'Primo GE' visible.



# REGISTER SITE

DYNAMIC / FLEXIBLE Export Control

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Follow the Configuration steps in the Electricians Guide to register the site for the MONOCLE, and for Dynamic / Flexible Exports

DYNAMIC / FLEXIBLE EXPORT CONTROL

DYNAMIC / FLEXIBLE EXPORT CONTROL