SOLAR RELAY

INVERTER CONTROL
with
FRONIUS PRIMO / GEN 24

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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.
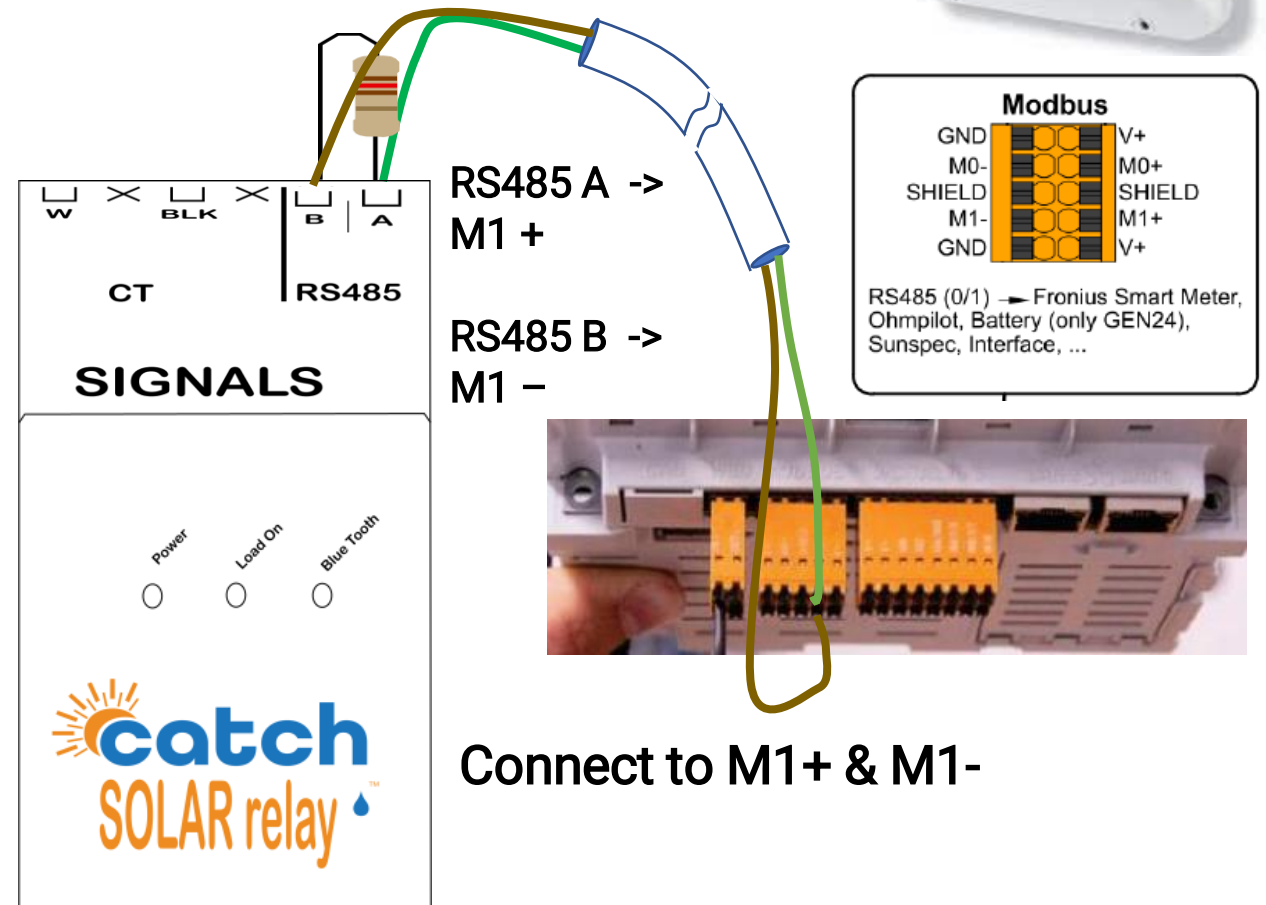

RS485 A -> D+
RS485 B -> D-
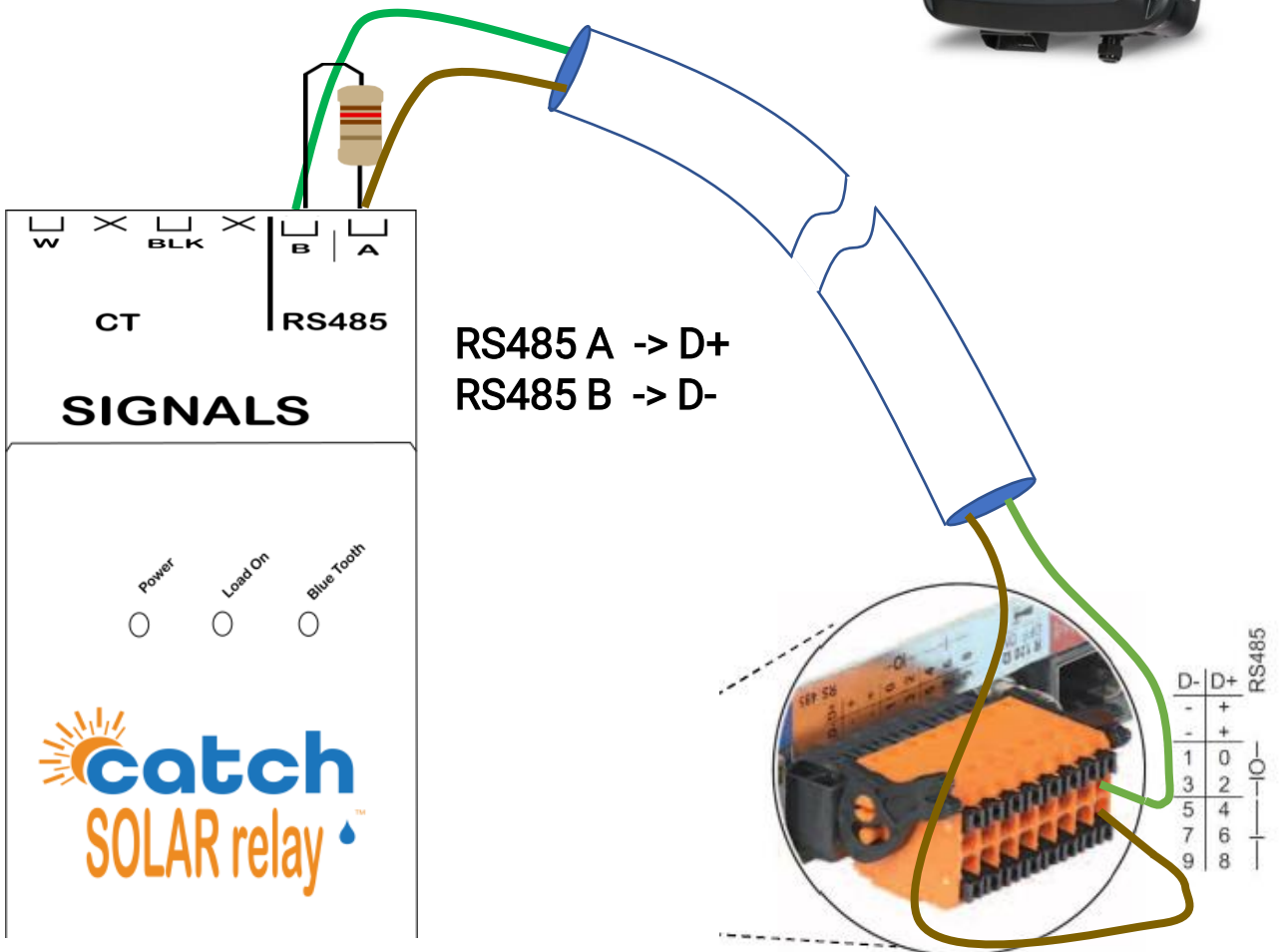
This guide discusses the specific wiring and configuration need to implement inverter control. Ensure the installation guide for both products is also followed.

Wiring Instructions – FRONIUS GEN 24

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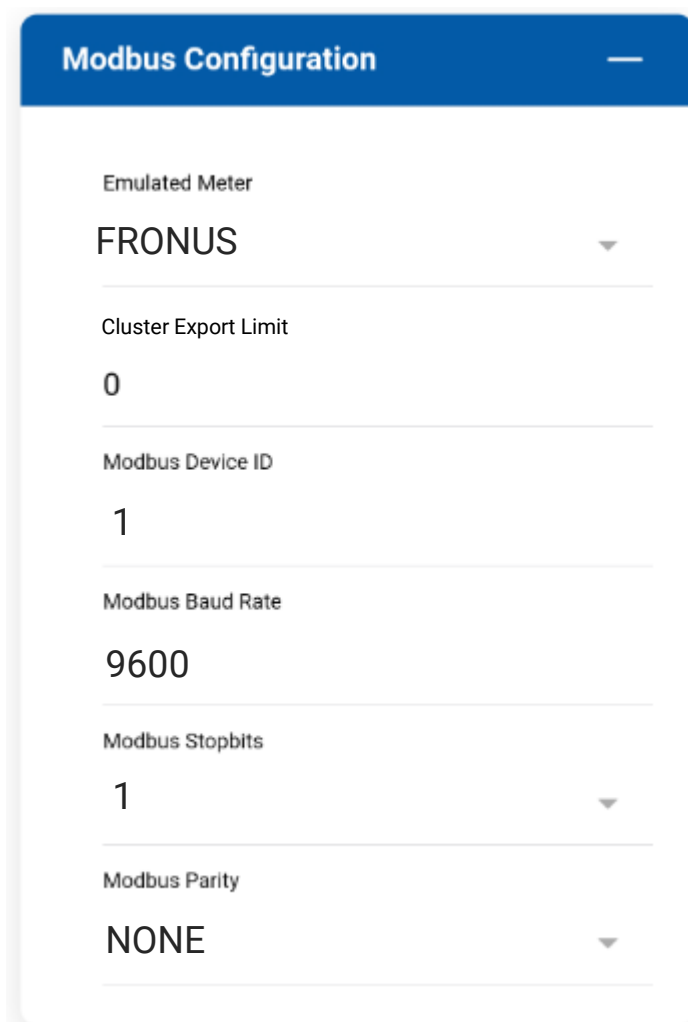
Connect the RS485 Cable to the Fronius Data Manager 2 as shown.

RS485 A -> M1 +

RS485 B -> M1 −

Modbus

GND		V+
M0−		M0+
SHIELD		SHIELD
M1−		M1+
GND		V+

RS485 (0/1) → Fronius Smart Meter, Ohmpilot, Battery (only GEN24), Sunspec, Interface, ...

SIGNALS

W   BLK   B   A

CT   RS485

Power   Load On   Blue Tooth

catch SOLAR relay™

Connect to M1+ & M1-

SOLAR RELAY Setup

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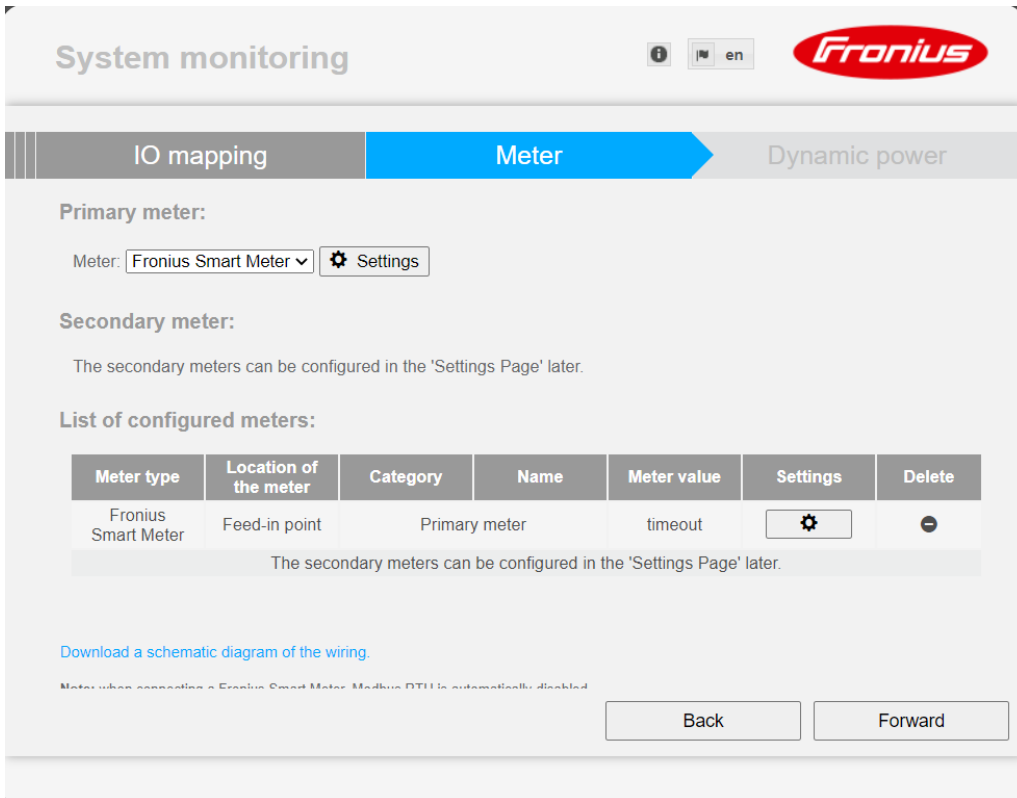
Save your changes.

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.

Inverter Setup

Change these to suite your requirements

Inverter Setup

Enter "Further Settings"

Inverter Setup

1. Click On the Meter Tab

System monitoring

2. Click On "Settings"

Settings

GENERAL

PASSWORDS

FRONIUS SENSOR CARDS

ENERGY MANAGEMENT

PUSH SERVICE

MODBUS

METER

DNO EDITOR

SOLAR.WEB WIZARD

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	⚙	⊖

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.

PV generator

External producer

Generator meter
3000 W

DNO grid

Primary meter

Consumer

Consumption meter
1000 W

Inverter Setup

A message will appear as shown below. This will happen until the inverter has connected to the meter.
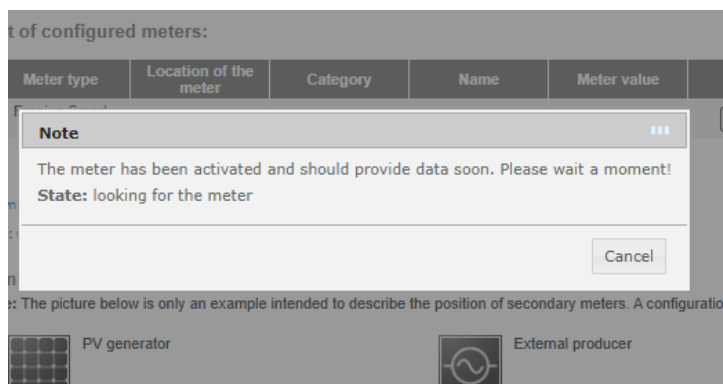
Once the inverter has successfully connected to the Solar Relay you will see this message.

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

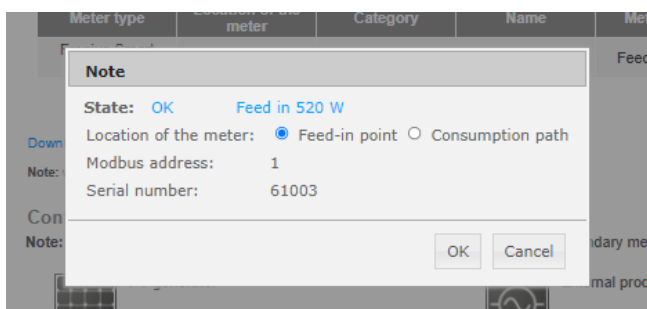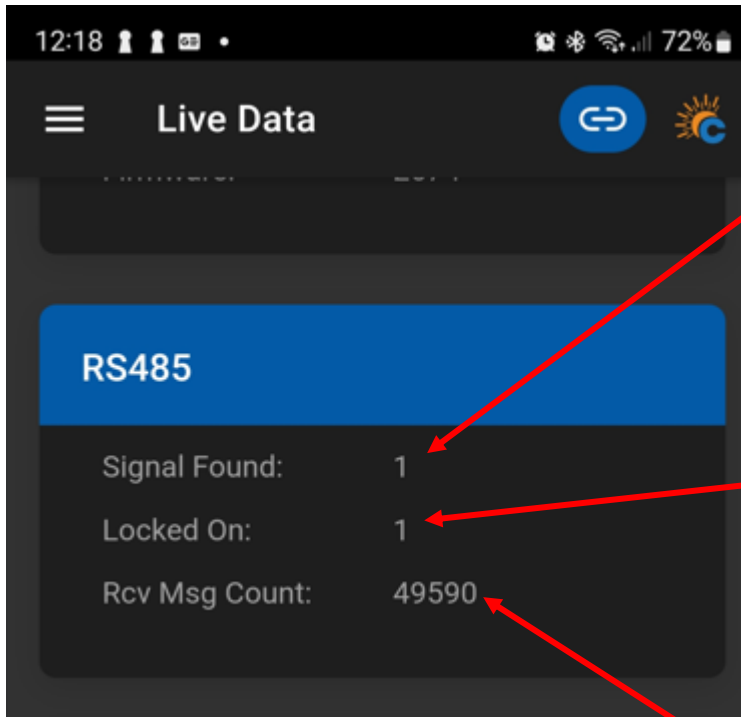Indicates the inverter is transmitting data on the RS485 cable.

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.

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

RTU Control
DYNAMIC / FLEXIBLE Export Control

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.
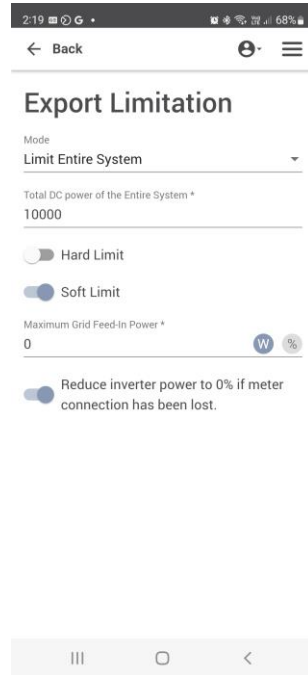
- Set the Hard Export Limit (if required)
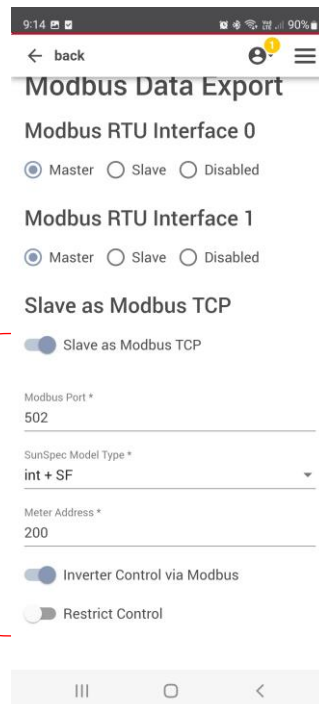

— COMPLETE —

GEN24 setup via solar.start app

1. Set the Export limit to ZERO

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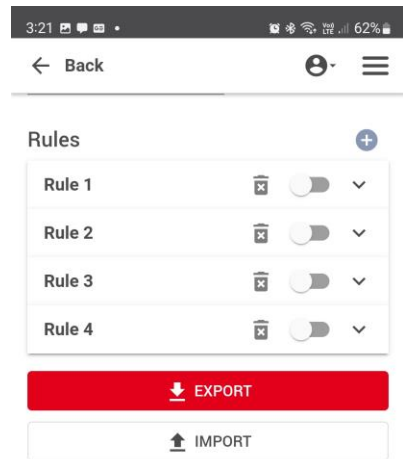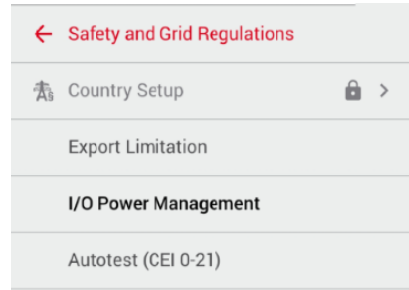- export limit to ZERO
- Power down when meter fault.

Export Limitation

Mode
Limit Entire System

Total DC power of the Entire System *
10000

Hard Limit

Soft Limit

Maximum Grid Feed-In Power *
0   W %

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

2. Turn on modbusTCP

Modbus Data Export

Modbus RTU Interface 0
◉ Master ○ Slave ○ Disabled

Modbus RTU Interface 1
◉ Master ○ Slave ○ Disabled

Slave as Modbus TCP

Slave as Modbus TCP

Make sure the numbers
are set as shown

Modbus Port *
502

SunSpec Model Type *
int + SF

Meter Address *
200

Inverter Control via Modbus

Restrict Control

GEN24 setup via solar.start app

3. Set modbusTCP priority to High

← Safety and Grid Regulations

Country Setup 🔒 >

Export Limitation

I/O Power Management

Autotest (CEI 0-21)

3:21 📷 📱 📷 •   🔋 ❋ 🔽 📶 62%🔋

← Back   👤▾   ☰

Rules   ⊕

Rule 1	🗑	⬤▢	⌄
Rule 2	🗑	⬤▢	⌄
Rule 3	🗑	⬤▢	⌄
Rule 4	🗑	⬤▢	⌄

⬇ EXPORT

⬆ IMPORT

Controlling Priorities
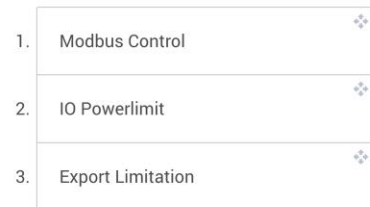
Move Modbus Control from position 3 to Position 1

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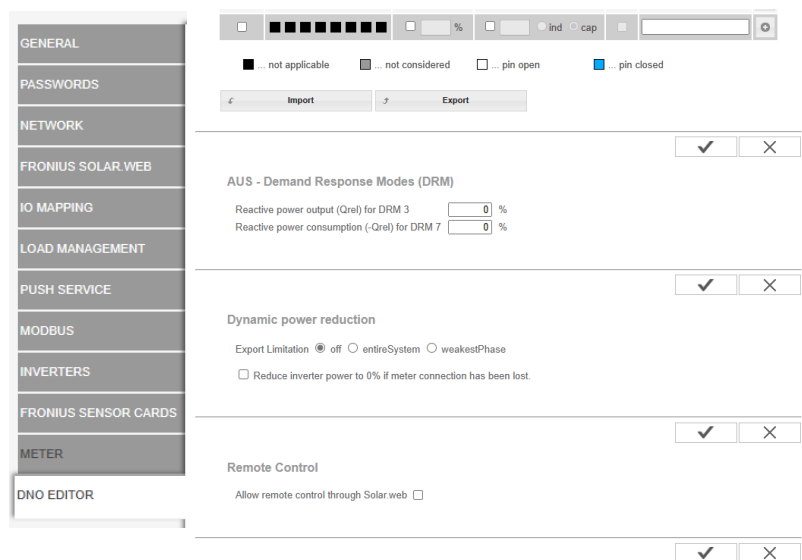3. Export Limitation

‖‖ ◯ ‹

DYNAMIC / FLEXIBLE EXPORT CONTROL

PRIMO SNAP-IN setup

1. Turn On Modbus TCP

Turn on the MODBUS over TCP and make sure settings are exactly as shown
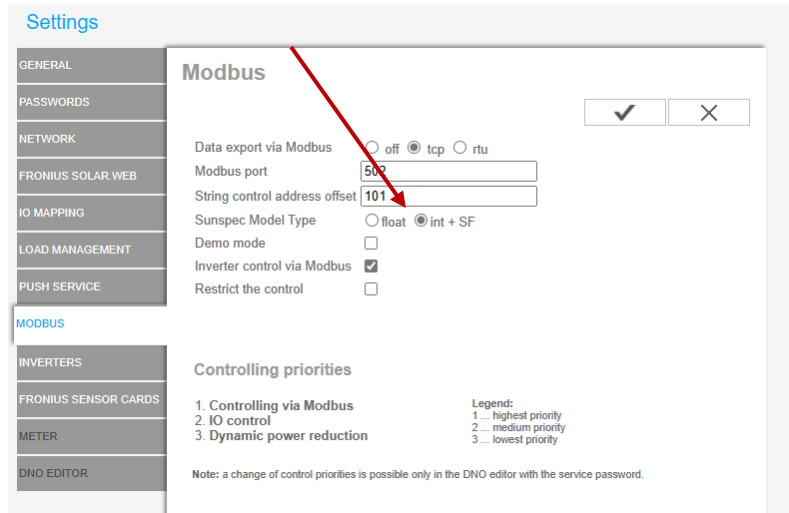
2. Make the Modbus Highest Priority

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

Enable Sunspec on the CATCH Relay

Contact CATCH Power for details are how to do this.

DYNAMIC / FLEXIBLE EXPORT CONTROL

DYNAMIC / FLEXIBLE EXPORT CONTROL

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