

Short instructions for setting up the Pilot device inverter (Gen24, Tauro, Verto) for work in the microgrid system with Victron.

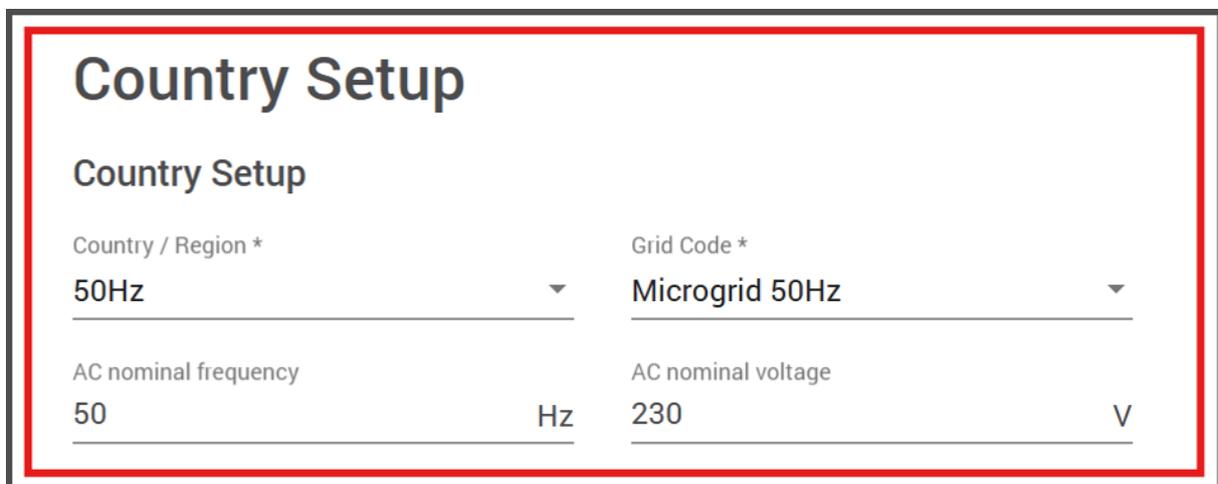
For proper operation, all devices in the system (Fronius and Victron) must be updated to the latest firmware version before setting up the Microgrid solution - [instructions for updating the firmware](#).

- [AC-coupled PV with Fronius PV Inverters](#)
- [AC-coupling and the Factor 1.0 rule](#)

MG operation with Victron: for frequency regulation in backup mode (when AC-in1 and AC-in2 are disabled) - Victron inverters create an AC grid for the operation of the Fronius inverter. Setting that needs to be done from the Fronius side:

### 1. Select country code MG50Hz:

- > Pilot WebUI main menu (login as "Technician" user account)
- > Safety and Grid Regulations (menu on the left side)
- > Country Setup -> enter code 77634
- > Country Setup Selection
- > Select (Region: 50Hz, Grid Code: Microgrid 50Hz)
- > Click on "Reload current Country Setup" button + "Save" button



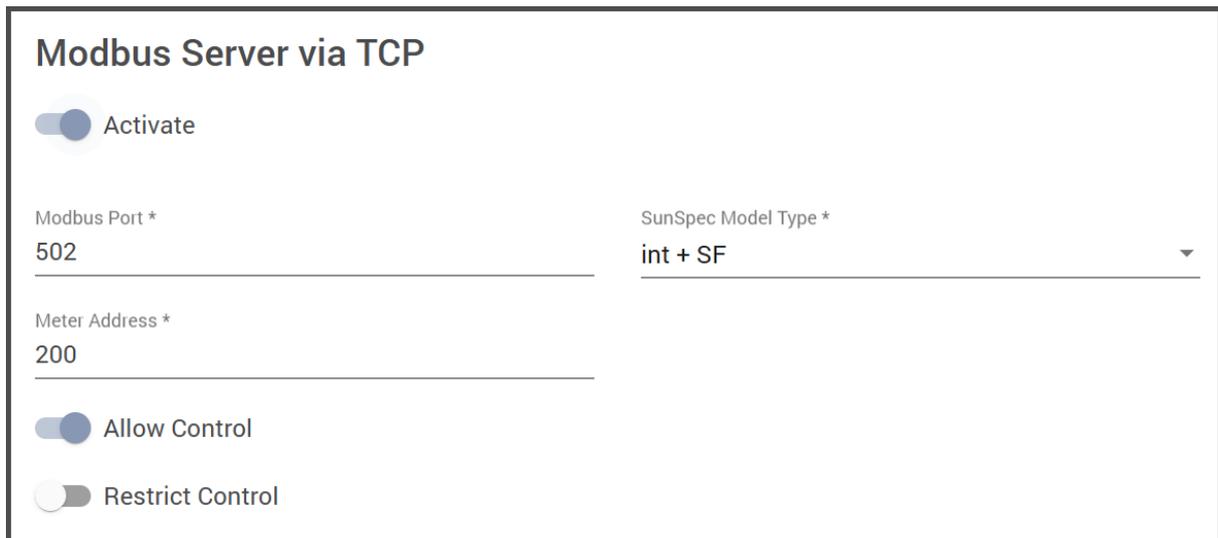
The screenshot shows a web interface titled "Country Setup". It contains two columns of settings. The first column has "Country / Region \*" set to "50Hz" and "AC nominal frequency" set to "50 Hz". The second column has "Grid Code \*" set to "Microgrid 50Hz" and "AC nominal voltage" set to "230 V".

Country / Region *	Grid Code *
50Hz	Microgrid 50Hz
AC nominal frequency	AC nominal voltage
50 Hz	230 V

### 2. Activate Modbus TCP settings:

- > Pilot WebUI main menu (login as "Technician" user account)
- > Communication (menu on the left side)
- > Modbus
- > Modbus Server via TCP -> Activate
- > Select (Modbus Port: 502, SunSpec Model Type: int + SF, Meter Address: 200, Allow control - active)

-> Click on "Save" button



**Modbus Server via TCP**

Activate

Modbus Port \*  
502

SunSpec Model Type \*  
int + SF

Meter Address \*  
200

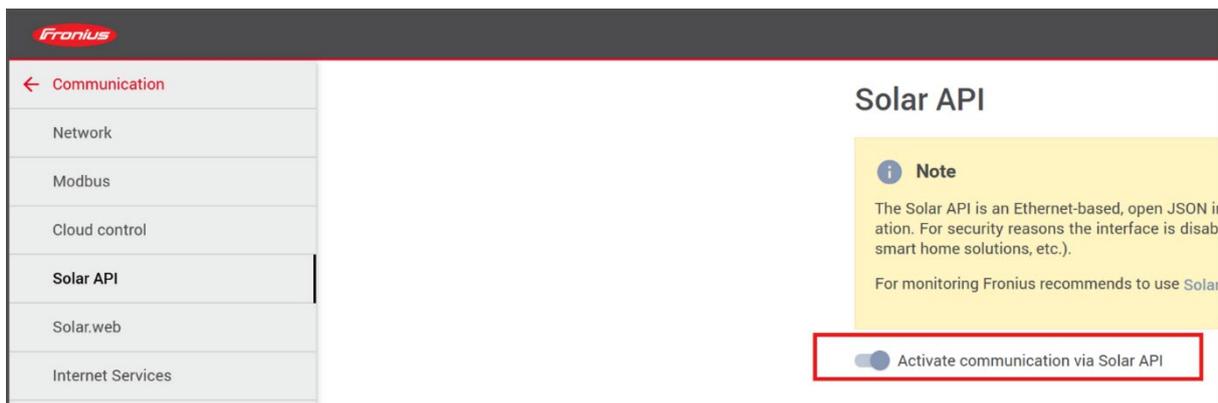
Allow Control

Restrict Control

### 3. Additional settings:

#### 3.1. Activate Solar API:

- > Pilot WebUI main menu (login as "Technician" user account)
- > Communication (menu on the left side)
- > Solar API
- > Activate communication via Solar API
- > Click on "Save" button



**Fronius**

← Communication

Network

Modbus

Cloud control

**Solar API**

Solar.web

Internet Services

## Solar API

**Note**

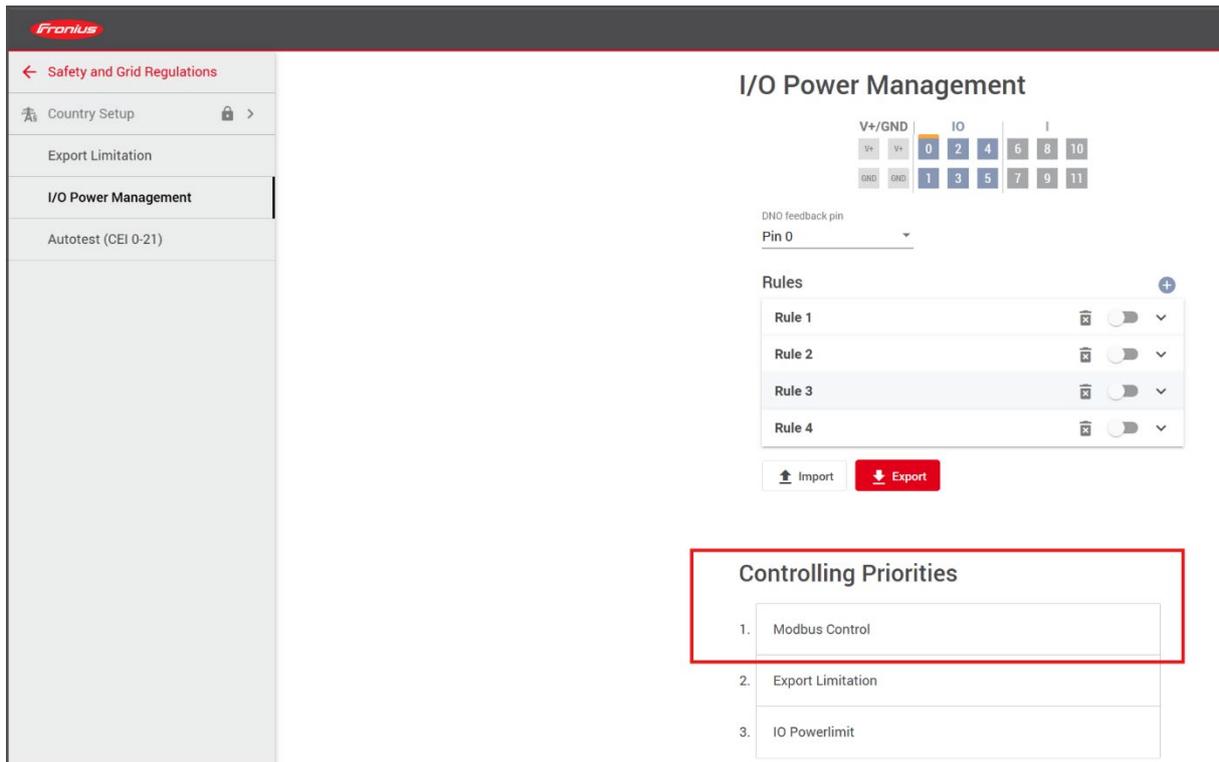
The Solar API is an Ethernet-based, open JSON interface for integration with smart home solutions, etc.).

For monitoring Fronius recommends to use Solar API.

Activate communication via Solar API

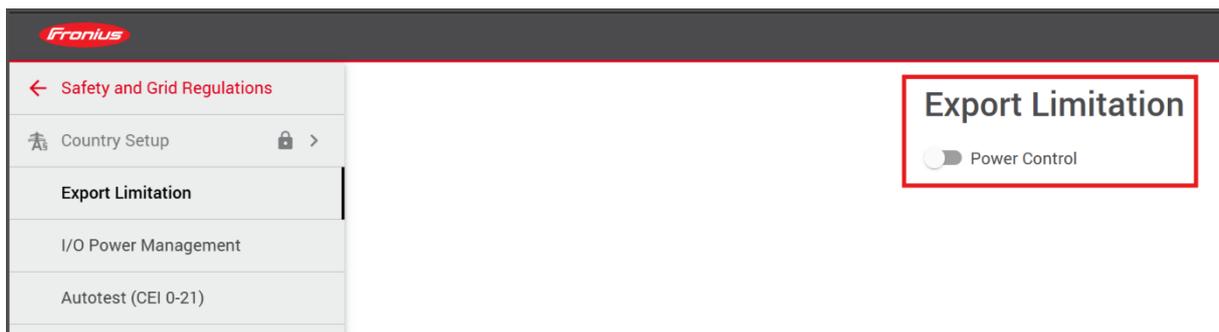
#### 3.2. Set controlling priorities:

- > Pilot WebUI main menu (login as "Technician" user account)
- > Safety and Grid Regulations (menu on the left side)
- > I/O Power Management
- > make sure that option "Modbus Control" is set to be priority 1
- > Click on "Save" button



### 3.3. Check power control settings:

- > Pilot WebUI main menu (login as "Technician" user account)
- > Safety and Grid Regulations (menu on the left side)
- > Export Limitation
- > Make sure that "Power control" is deactivated (this is the default).
- > Click on "Save" button



\* Only in case if you wish for the Fronius to stop generating if communications are lost (and no longer receiving instructions from Modbus control), then additionally Export Limitation and Power control also needs to be configured (only Soft limit).

← Safety and Grid Regulations

Country Setup >

**Export Limitation**

I/O Power Management

Autotest (CEI 0-21)

## Export Limitation

Power Control

Power Reduction

**Total Power Limit** ▾

Total DC power of the Entire System \*

20000 W

Export Limit Control (Soft Limit)

Maximum grid feed-in power \*

0 W %

Export Limit Protection (Hard Limit Trip)

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

Limit multiple inverters (only Soft Limit)