CONFIGURATION MANUAL

ITR 2.0

HUAWEI SUN2000

(+ SMARTLOGGER)

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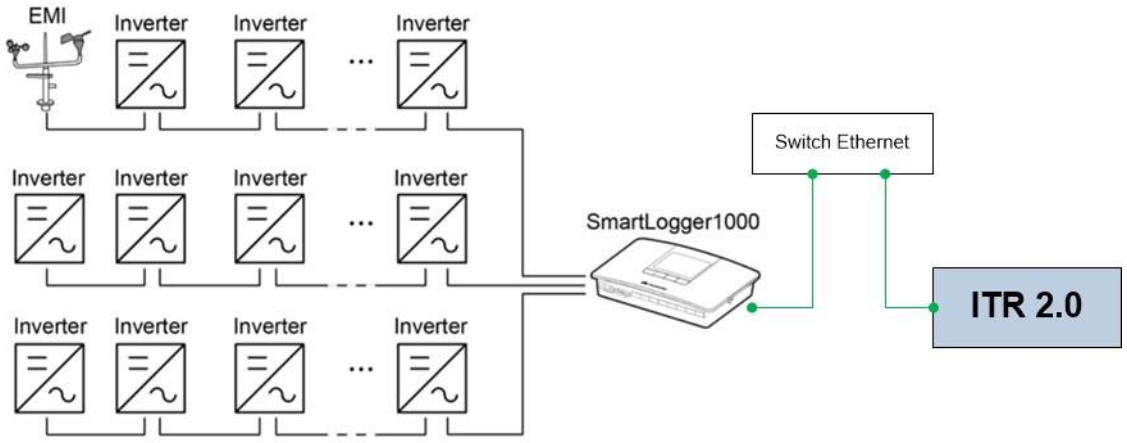
2 INTRODUCTION

The ITR 2.0 can establish communication and control the PV production of HUAWEI's SUN2000 inverters through its SmartLogger monitoring device. The connection to this device will be made through the local network, using the RJ45 connector available on the ITR.

	**This manual is a supplement to the manuals of the inverter manufacturer and the ITR 2.0 itself.** The information presented in this manual covers the particular details of the communication of the ITR 2.0 with HUAWEI inverters using the SmartLogger, but does not replace the manufacturer's and ITR manuals, which should be consulted for the installation of the system.

3 CONNECTION

The SmartLogger and the ITR 2.0 must be connected on the same local Ethernet network using standard network devices, such as routers or switchers. The inverters will communicate with the SmartLogger via the RS485 bus.



To configure the system it will also be necessary to connect a personal computer in the same local network, accessing through a browser to the ITR and SmartLogger configuration WEB servers through their respective IPs.

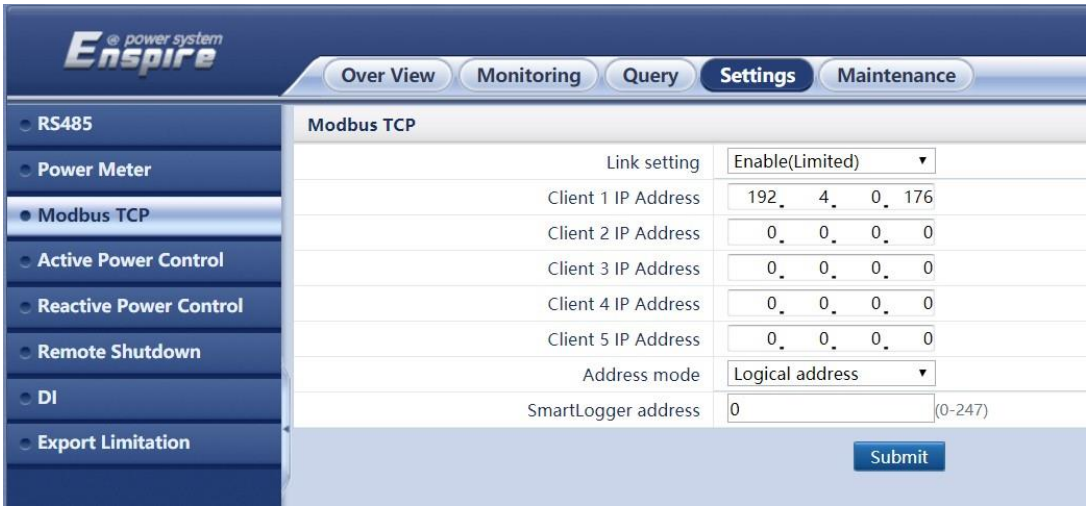
If the local network has internet access, once the system is connected and correctly configured the inverters can send their information to the HUAWEI monitoring portal, and the ITR will send the operating data of the entire installation to its own WEB platform.

4 SMARTLOGGER CONFIGURATION

The first step is to access the SmartLogger configuration WEB page using the '**Special User**' account.

Next, in the settings menu, the Modbus TCP communication will be enabled, setting the different options as shown in the following image.

	The IP assigned in the '**Client 1 IP Address**' field must correspond to the IP of the ITR 2.0 in the local network.

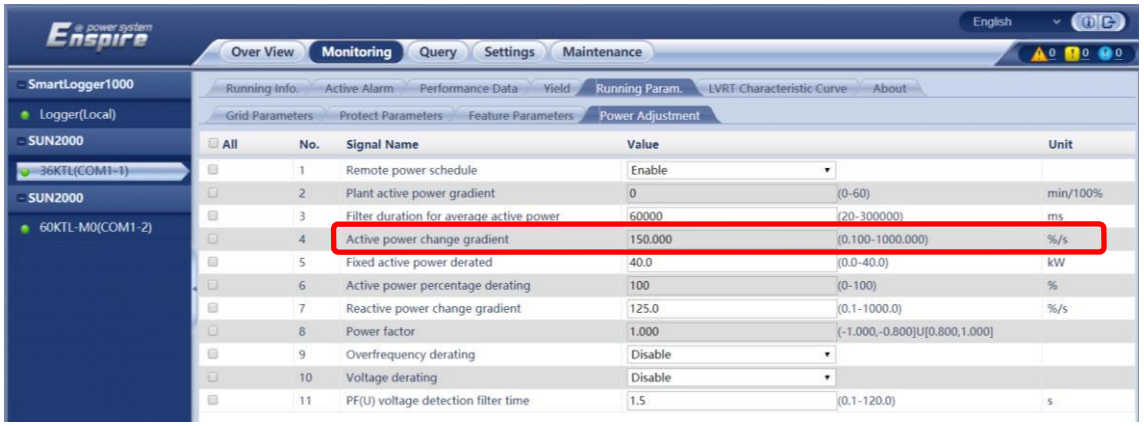


	Depending on the firmware version of the SmartLogger it may be necessary to log in as '**Advanced User**' in order to access this option.

The next step will be to enable the active power control, also in the settings menu, as shown in the pictures below depending on the SmartLogger version.

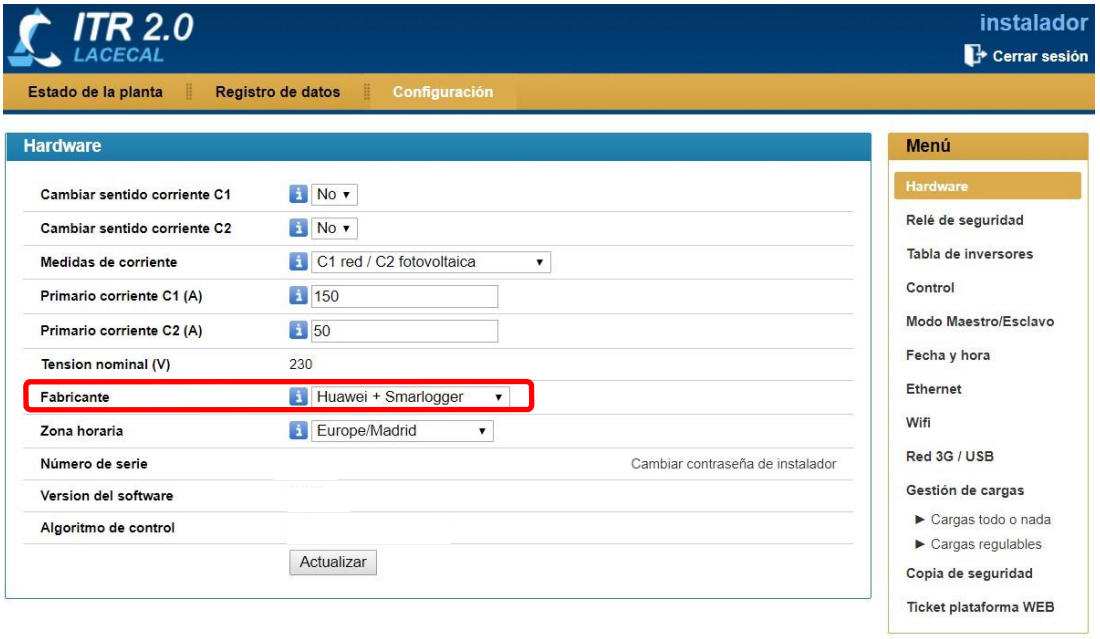
Finally, it is advisable to verify in each inverter of the plant that the parameter that controls the active power change gradient is set to a value of 150 %/s or higher.

Access to this parameter is found in the Monitoring menu and then, with the desired inverter selected in the left sidebar, in the 'Running Param. -> 'Power Adjustment'.



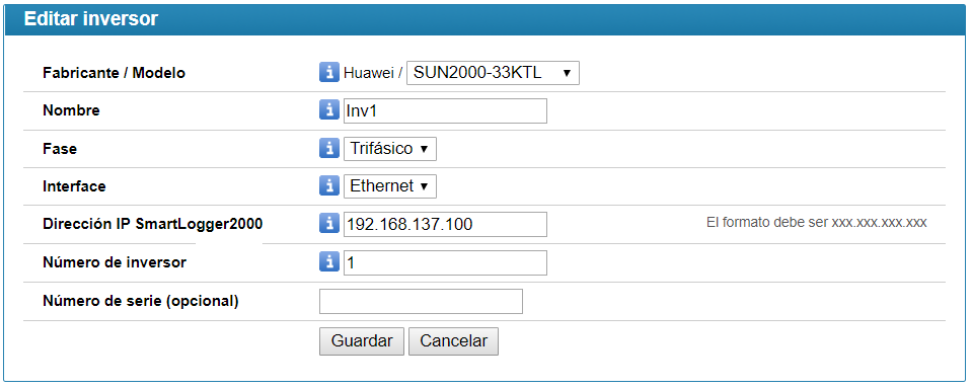
5 ITR 2.0 CONFIGURATION

To configure the inverters in the ITR 2.0 the first step is to select from the list of manufacturers the option '**Huawei + Smartlogger**' in the menu 'Configuration' -> 'Hardware'.

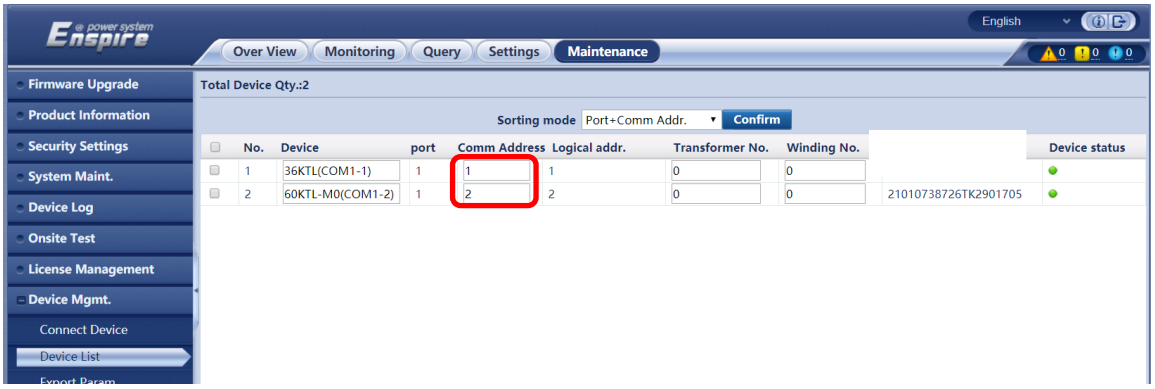


Next, in the 'Inverter table', the 'Add new inverter' button will be used to configure all the inverters in the plant.

The following window will then appear, where the particular data of the inverter must be entered:

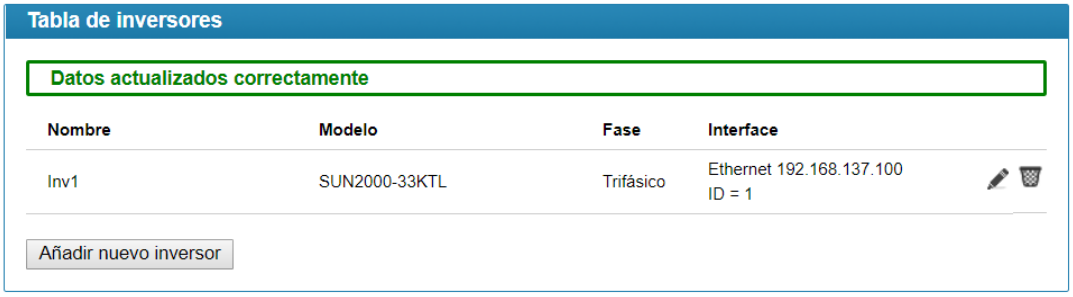


- Model: The inverter model will be selected by means of the drop-down menu.
- Name: This is the name assigned to the inverter and will be used to identify it later in the data registry.
- Phase: If the inverter is three-phase there is no possibility to change the selection. If the inverter is single-phase, the grid phase in which it is connected will be indicated.
- Interface: In this case the communication with the inverter will always be
    - Ethernet (through the SmartLogger) and cannot be modified.
- SmartLogger IP address: This is the IP address assigned to the SmartLogger on the local network.
- Inverter number: This is the communication address of the inverter. It is imperative that all devices connected to the SmartLogger have unique addresses, even if they are on different serial ports. The list of connected devices and their assigned addresses can be found on the maintenance menu page of the SmartLogger:



- Serial number: This is an optional field to identify the inverter.

Once all the data has been configured, the inverter will be added by pressing the 'Add' button, which will automatically return to the 'Inverter Table'.



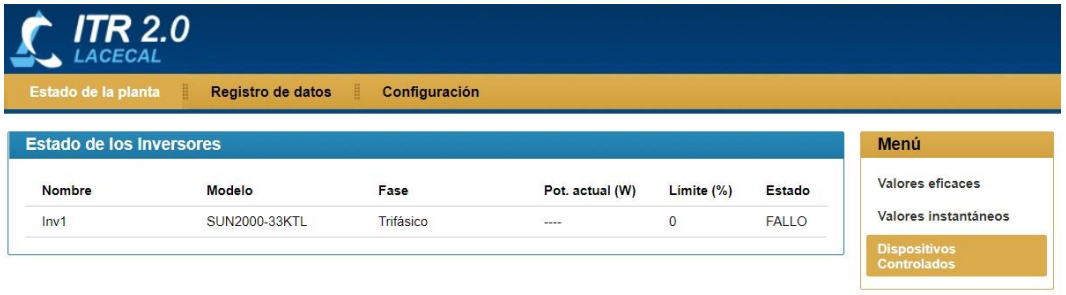
The same process must be repeated for each inverter in the plant.

6 FUNCTIONAL CHECK

Finally, once the entire system has been configured, it is advisable to perform some checks to verify that it is working properly.

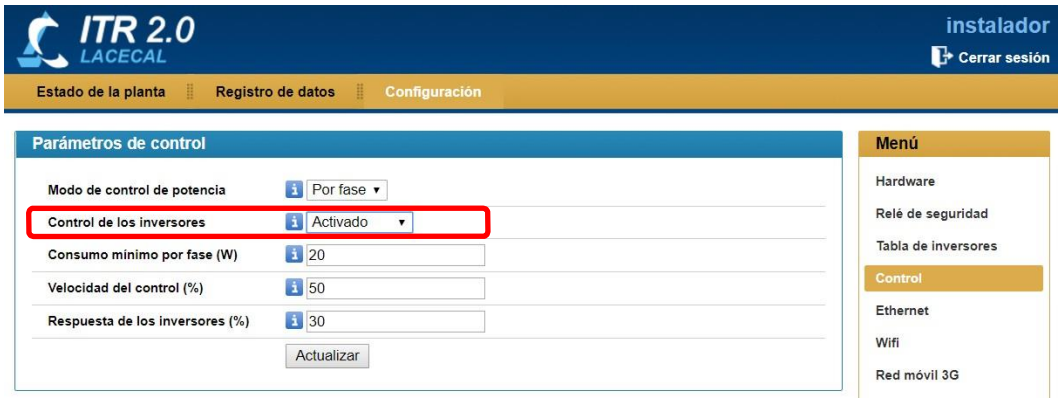
6.1 INVERTER COMMUNICATION

The first step is to verify that the communication with all inverters is correct. To do this, access the menu 'Plant Status' -> 'Controlled Devices', where a list of all inverters will appear. This list shows the percentage of regulation applied and the status of communication with the inverter.



6.2 POWER REGULATION

It is also possible to verify that the power regulation is working. To do this, access the 'Configuration' -> 'Control' menu.



The default situation is that the inverter control is active to avoid dumping energy into the power grid. However, it can be temporarily deactivated to verify that the inverters adjust their production to the selected value.

To do this, select 'Disabled' in the 'Inverter control' option and then enter the maximum power percentage (with respect to the nominal power of each inverter) that is allowed to be generated. Values between 0% (off) and 100% can be selected.

	**Do not forget to return this option to its original setting to perform the zero injection control.**