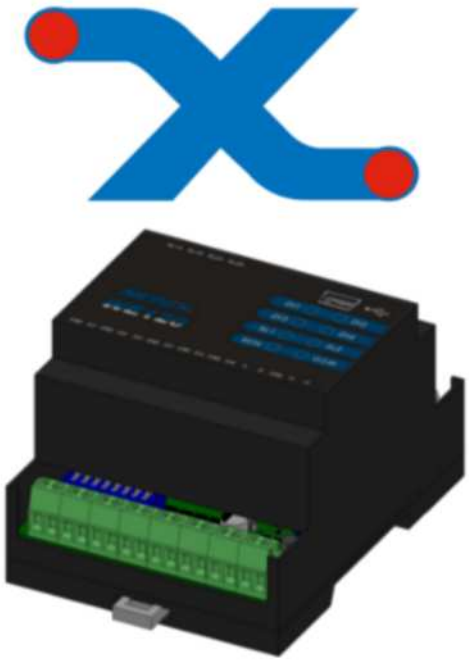
(http://nethix.com)

Genesys 3



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1. Overview

Genesys is a Nethix Software that offers to the user a simple, intuitive and user-friendly interface for configuring the WE120. The WE120 manual can be found in the WE120 (we120_manual.html#we120-manual).

It's a lightweight software compatible with the following operating systems:

- Windows
- OS X
- Linux

It allows to configure almost all aspects of the WE120:

- The basic parameters of the device
- The advanced parameters of the device
- Users
- I/O
- Alarms
- Expansion modules

In addition it allows to:

- Control inputs and outputs
- Upgrade the device
- Make a factory reset

Genesys communicates with WE120 through the **RS232** Serial Port or through the **USB mini-B port**.

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2. Installation

Note

The application program Genesys works properly only on a 64bit system.

2.1. Windows

- Download the USB driver (we120_downloads.html#we120-downloads-drivers-windows) for the Windows operating system, extract the files and run the file **install.bat**.
- Download the lastest version of the Genesys 3 (we120_downloads.html#we120-downloads-genesys-windows) for Windows.
- Double click on the downloaded executable file.
- Follow the installation wizard.
- Click on **Next**.
- Select the destination directory and click on **Install**.
- Once the installation is completed an icon will appear on the desktop.
- Connect the WE120 to the PC through USB or RS232.
- Turn-on the WE120.
- Start up the **Genesys 3** by double clicking on the  icon available on the desktop.

2.2. OS X

- Download the latest version of Genesys 3 (we120_downloads.html#we120-downloads-genesys-osx) for OS X systems
- Extract the files
- Connect the WE120 to the Mac through the USB port
- Turn-on the WE120
- Start up the **Genesys 3**

2.3. Linux

- Download the latest version of Genesys 3 (we120_downloads.html#we120-downloads-genesys-linux) for Linux systems.
- Install the prerequisites using the Linux distribution package manager:
  - For Ubuntu, Mint and Debian:

    ```
    sudo apt-get install libQt5SerialPort
    ```

  - For Open SuSE and CentOS:

    ```
    sudo yum install Qt5WebKitWidgets
    ```

  - For Fedora:

    ```
    sudo yum install qt5-qtwebkit.x86_64
    sudo yum install qt5-qtserialport.x86_64
    ```

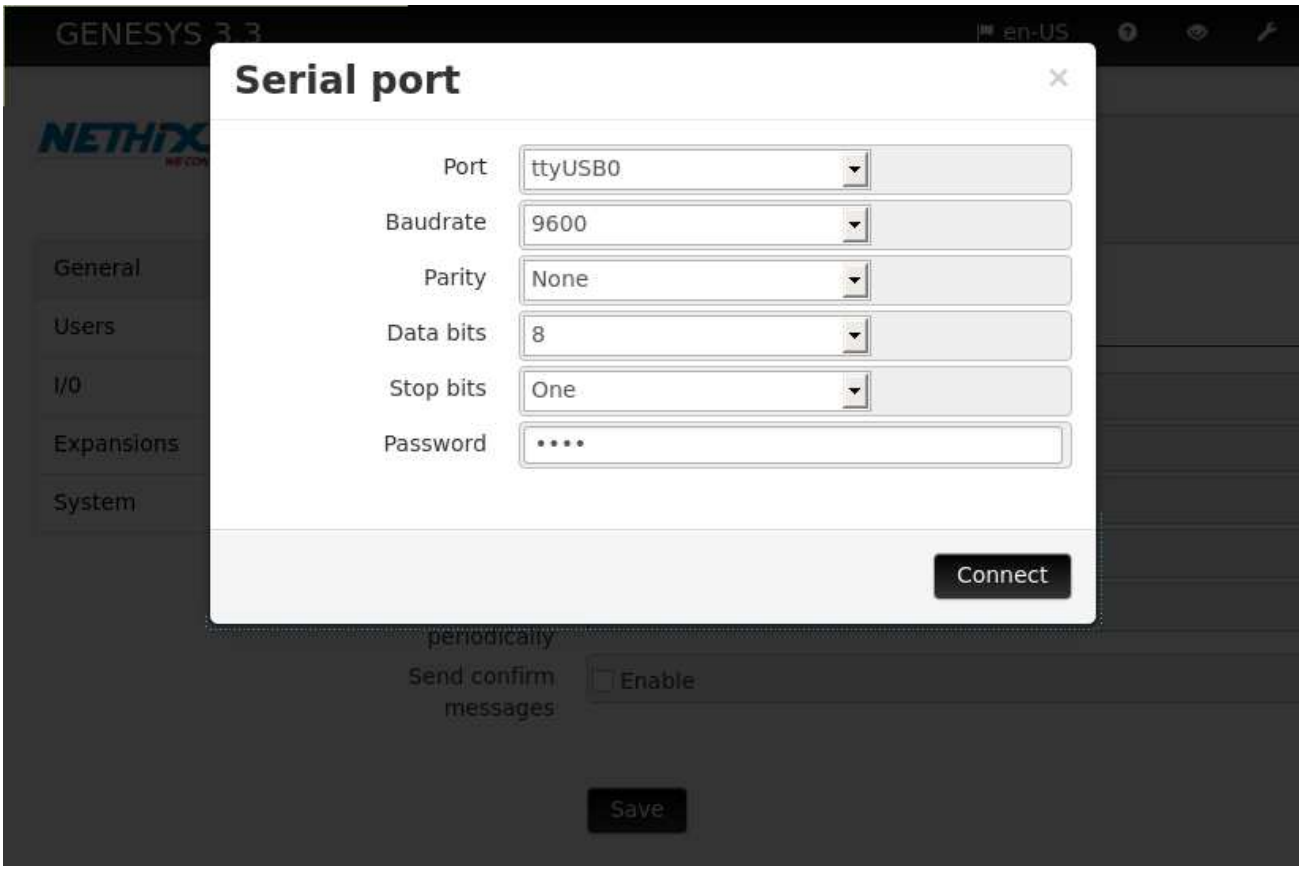
- Give permissions to the user for accessing the serial port of the PC. Modify through the preferred text editor the file /etc/group and add your user to the dialout group:

  ```
  sudo vi /etc/group
  dialout:x:20:utente
  ```

- Logout and login
- Connect the WE120 through the RS232 Port
- Switch on the WE120
- Run the **Genesys 3**

3. Communication initialization

At the start up of Genesys the following window will be displayed:



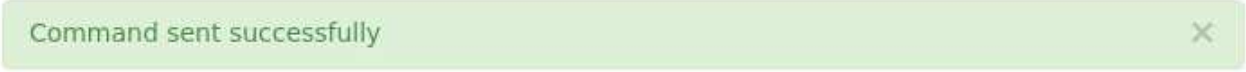
The parameters of the port used for the communication between the WE120 and the PC must be entered.

The default parameters are:

- Porta: It may vary. For example, in windows the port could be COM0 whilst in Linux it could be ttyS0
- Baudrate: **9600**
- Parity: **None**
- Data bits: **8**
- Stop bit: **Uno**
- Password: **0000**

Once entered the correct data, click on the tab **Connect**.

If the initialization is successful, the following message will appear:



Otherwise the following message will be displayed:

The communication is not successful if

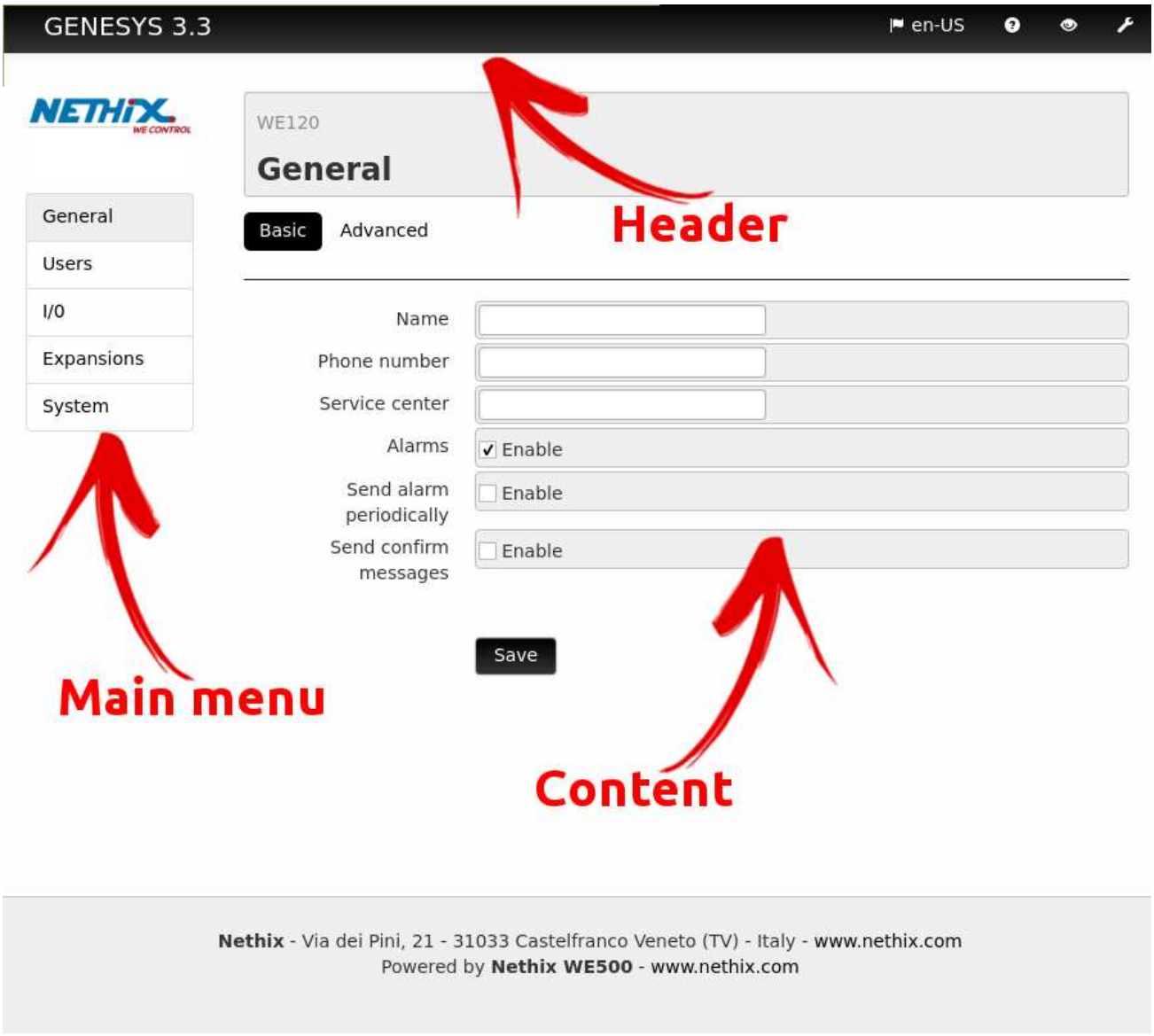
- The WE120 is switched off
- The WE120 is not connected to the PC
- The wrong Port has been selected
- The Baudrate or some other serial communication parameters are not correct

Once the communication has been successfully initialized, it's possible to start the configuration of the WE120.

4. User interface

Let's start to familiarize with the web interface and its different sections and components.

Each page of the interface is divided into three sections, as indicated below: header, main menu and content.

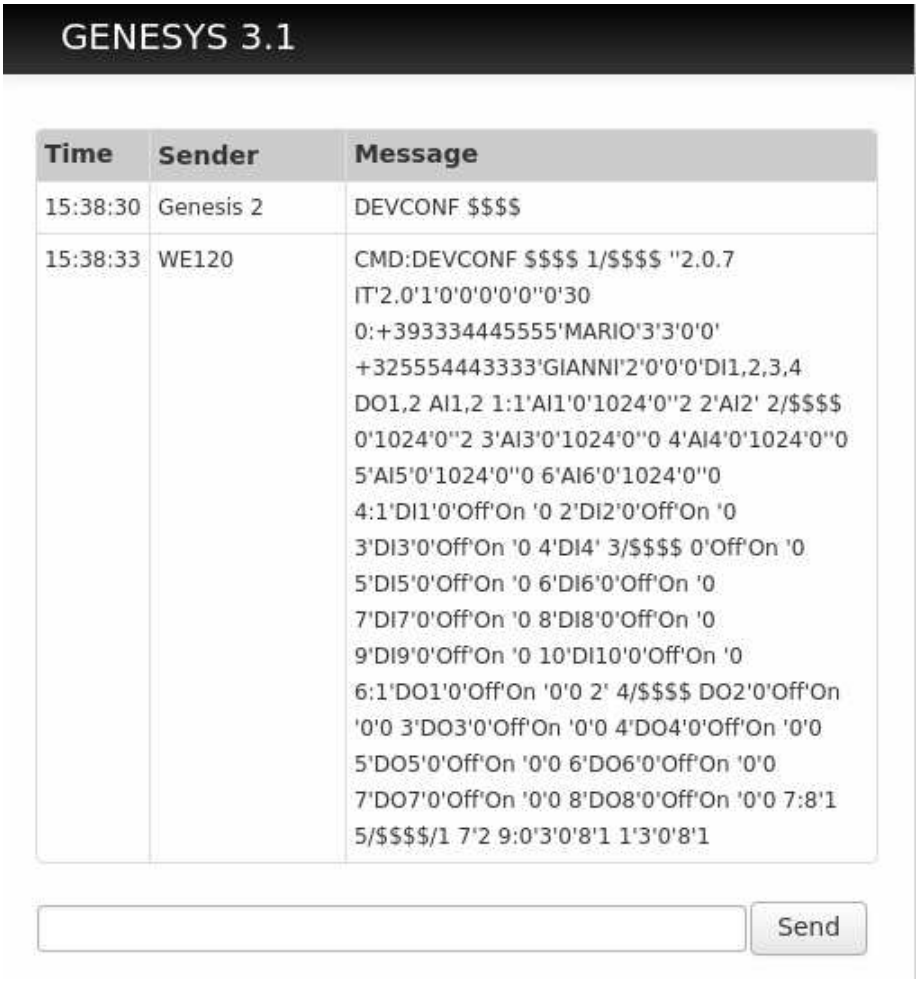


4.1. Header

This element remains always visible on the upper part of the page.

On the right end corner the operator can easily change the language through the icon, obtain information from the tutorial or from the site through the icon, open the window of the serial port through the icon or recall the page for configuratiog the serial port through the icon.

This is the window for the serial port: The serial port window window shown below displays all the read and write commands that Genesys execute. Another interesting feature is that at the bottom of this window it is also possible to write the commands available on 6. Command description (we120_manual.html#we120-manual-commands).



4.2. Main menu

The main menu area shows the Nethix Logo and all available options for browsing inside Genesys:

- General
- Users
- I/O
- Expansions
- System

4.3. Content

From this section the user can configure all the parameters of the WE120. This area changes dynamically according to the menu that the user wants to diplay. In this section the result of all executed commands will be displayed:

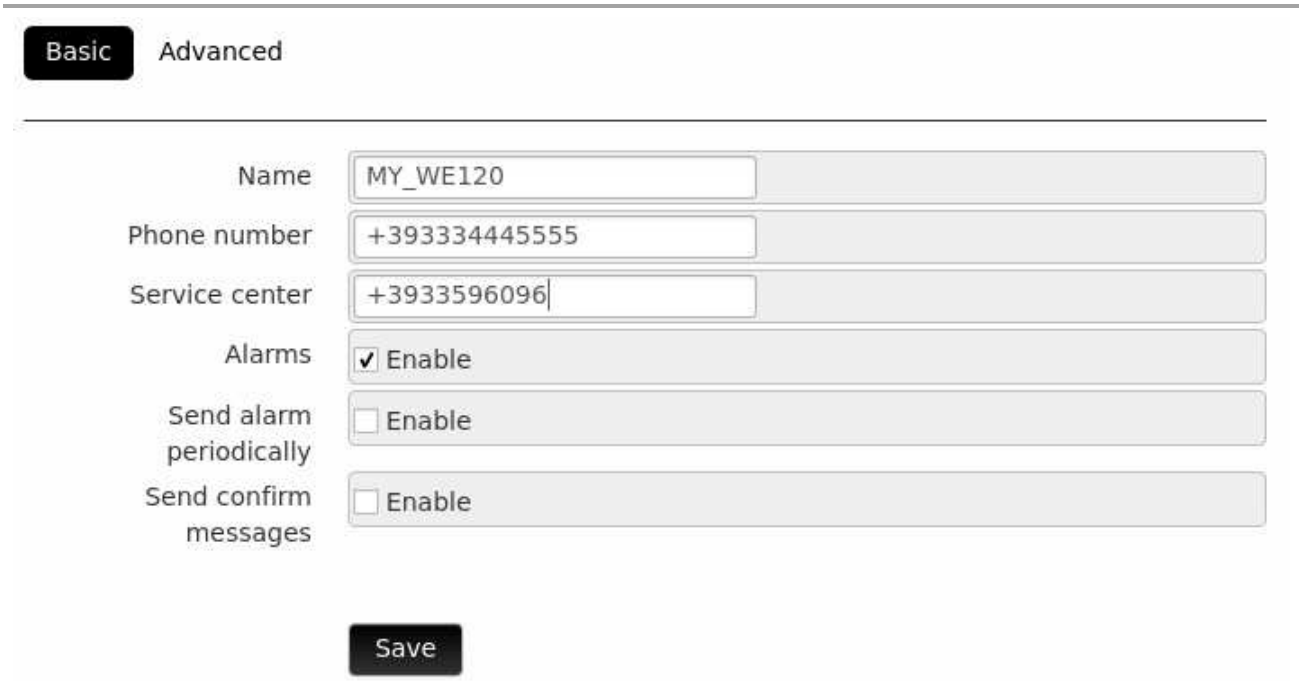
- green: the operation has been successfully completed

- red: the operation has not been successfully completed due to an error condition

5. General settings

In this section is possible to configure all general and basic parameters of the device, such as the name or the SIM number, or all the advanced parameters such as the activation of the only modem mode.

5.1. Basic settings



This area allows to set the general basic parameters of the WE120:

- Name: The name to be assigned to the device. Only alphanumeric characters [aA-zZ] and underscore _ are allowed.
- Telephone: The telephone number of the device, preceded by the plus sign **+** and the **country code**. For example, in Italy the telephone number starts with +39.
- Service Center: The SIM Provider Service Center
- Alarms: enables The sending of alarms to the user via SMS or Ring
- Sends alarms periodically: Enables the sending of a periodical message in case of alarm
- Sends confirmation message: Enables the sending of a confirmation message for each executed command

After completing all the fields, it's necessary to press **Save** in order to save the settings.

5.2. Advanced settings

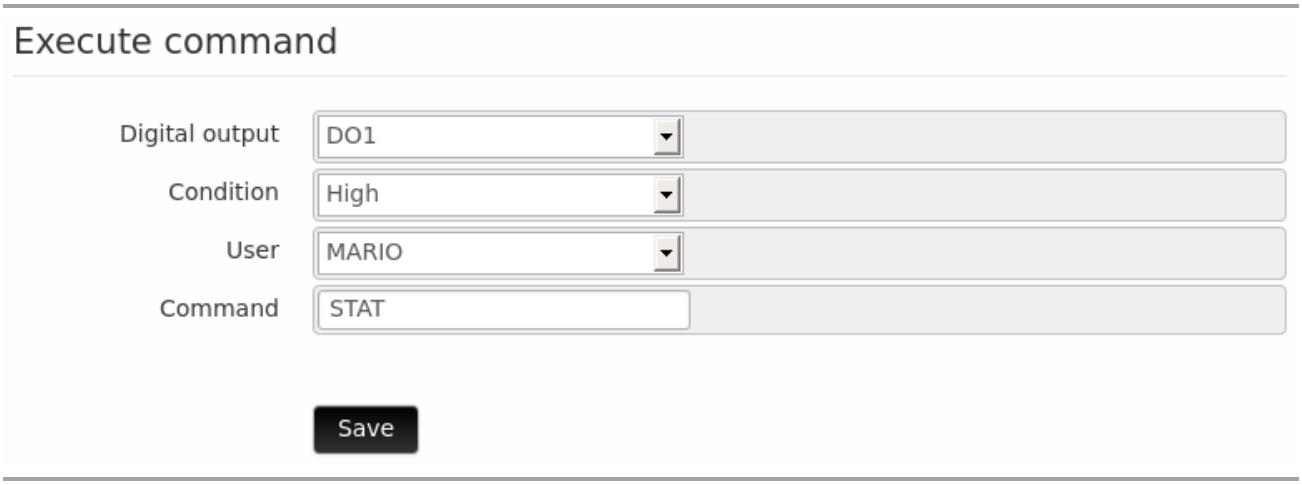
In this section is possible to set the general advanced parameters of the WE120.

5.2.1. Advanced

It is possible to set the following options:

- Enable all: Any telephone number (even if they are not registered in the device) can send/receive messages to/from the WE120.
- Send boot status: Send an SMS at every start up of the device.
- Only modem: Enables the only modem mode.

5.2.2. Execute command



From this area it is possible to allow the WE120 to execute a command when a digital input reaches a defined value.

The result of the command will then be sent to the specified user.

- Digital output: The digital output associated to the command
- Condition: The required status of the output to execute the command
- User: The telephone number or name of a registered user
- Command: The command to be executed

5.2.3. RS232

In this section the parameters of the RS232 serial port are configured:

- Baudrate
- Parity
- Data bit
- Stop bit

5.2.4. RS485

In this section the parameters of the RS485 serial port are configured:

- Baudrate
- Parity
- Data bit
- Stop bit

6. Users

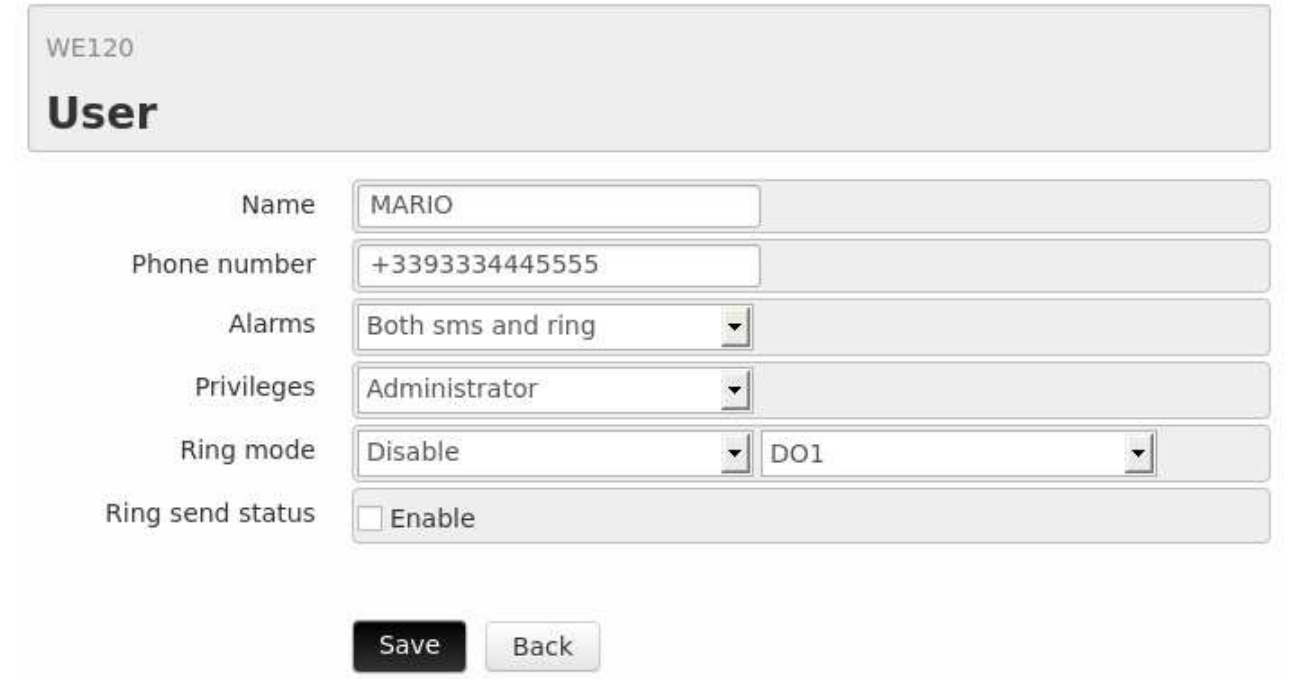
This page shows the list of all users registered in the device.

A table complete with name, telephone number and users privileges is given.

It's possible to delete a user just by selecting it on the column Delete of the table and then clicking on the **Delete** button.

To add a new user it's sufficient to click on the **Add** button; for editing just click on the user to be modified.

The page for adding or editing a User is the following:



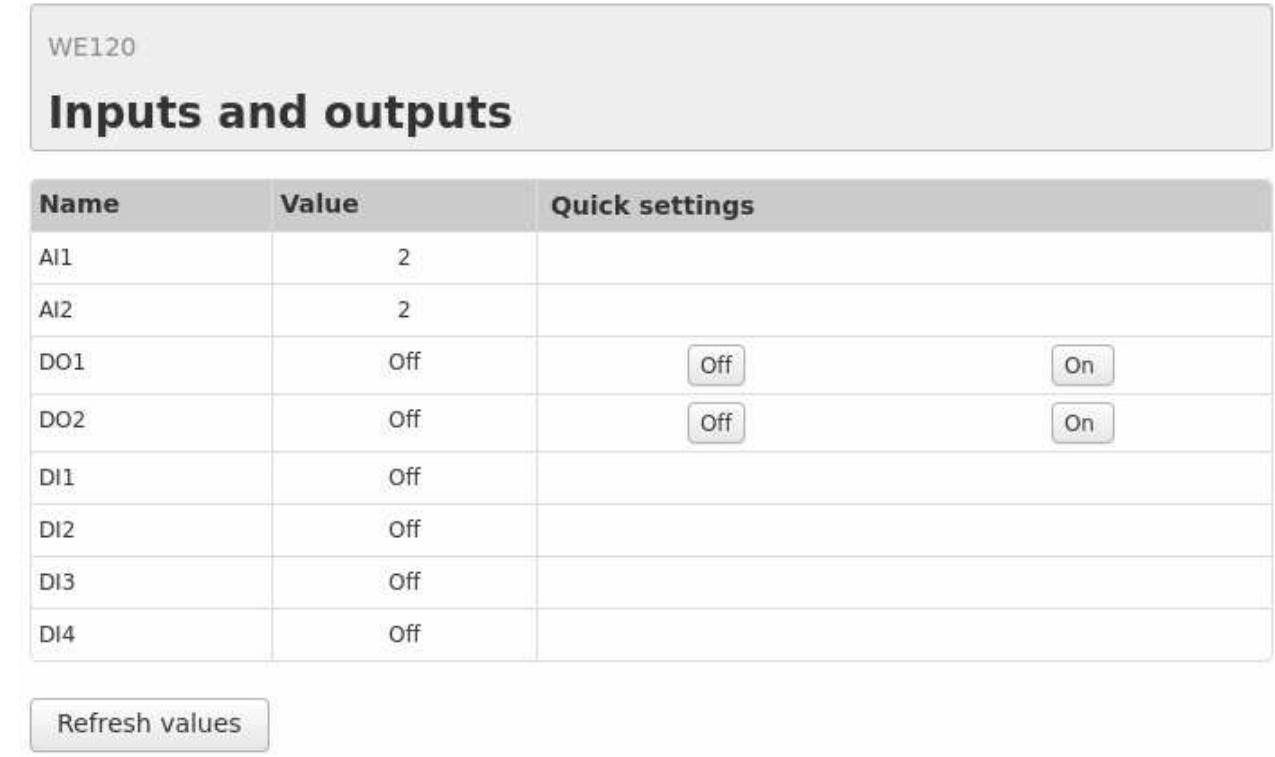
It allows to set the following parameters:

- Name: The user name.
- Telephone: User telephone number preceded by the plus sign **+** and the **country code**. For example, in Italy the telephone number starts with +39.
- Alarms: Select the type of alarm to be sent to the user:
  - No alarm
  - Only SMS alarms
  - Only ring alarms
  - Both SMS and Rings
- Privileges: The user's privileges:

    - Read only: The user can only read the I/O status.
    - Administrator: The user can both read and configure the I/O; it can also configure the WE120.
    - Standard: The user can read and configure only the inputs and outputs selected on the field variables.
- Ring Mode: Turn- on/off or switch the status of an output through a Ring
- Send status through Ring: It enables the sending of the I/O status through a Ring.

7. I/O

This section shows the list of all the available inputs and outputs of the WE120.

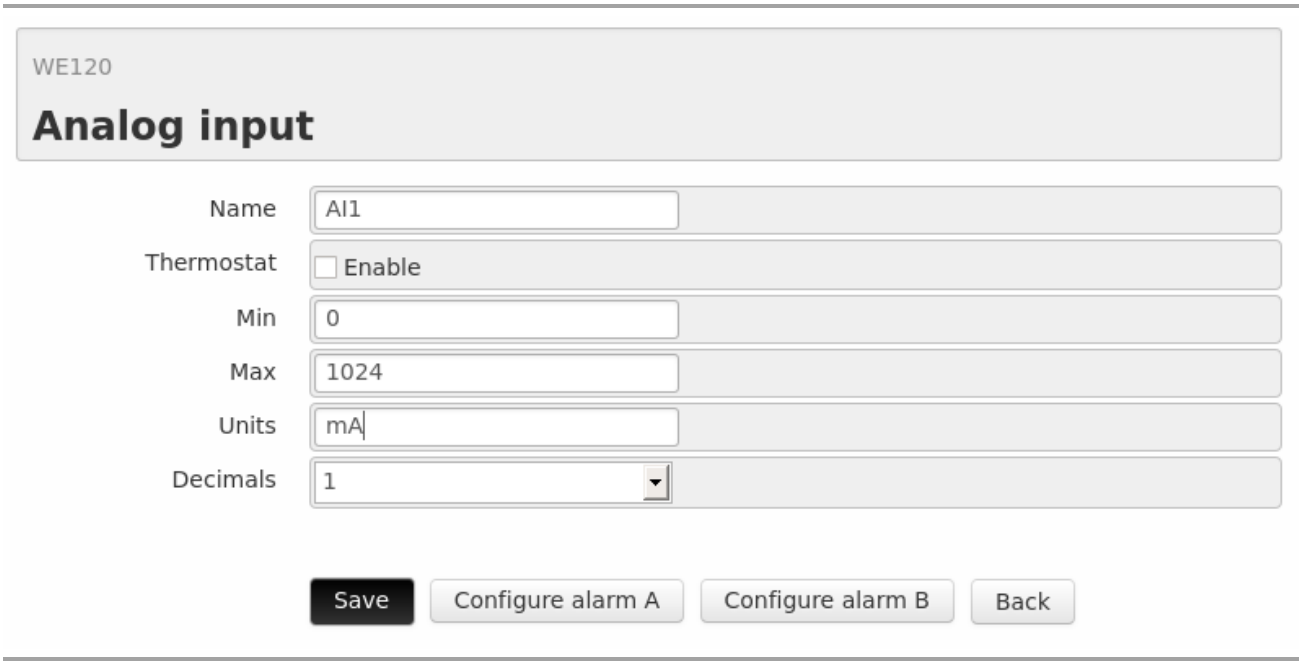


In the table is given the name and the value and, in case of the digital outputs, also a tab for activating or deactivating the output.

On the lower part of the table there is an **Update values** button that allows to update the I/O status.

7.1. Analogue inputs

For entering the configuration page of an analogue input, click on the relevant line of the table. The following page will be displayed:



From this page it's possible to configure:

- Name: The name of the analogue input.
- Thermostat: Enable the thermostat function

If the thermostat function is enabled, the following parameters will be shown:

- Threshold: The threshold activation of the analogue output.
- Digital output: The output to be activated.
- Digital input: The digital input that allows to enable/disable the thermostat function.

If the thermostat function is not enabled, the following parameters will be shown:

- Minimum: The minimum value that the input can read.
- Maximum: The maximum value that the input can read.
- Unit of measurement: The measurement unit of the input.
- Decimals: Number of decimals to be displayed.

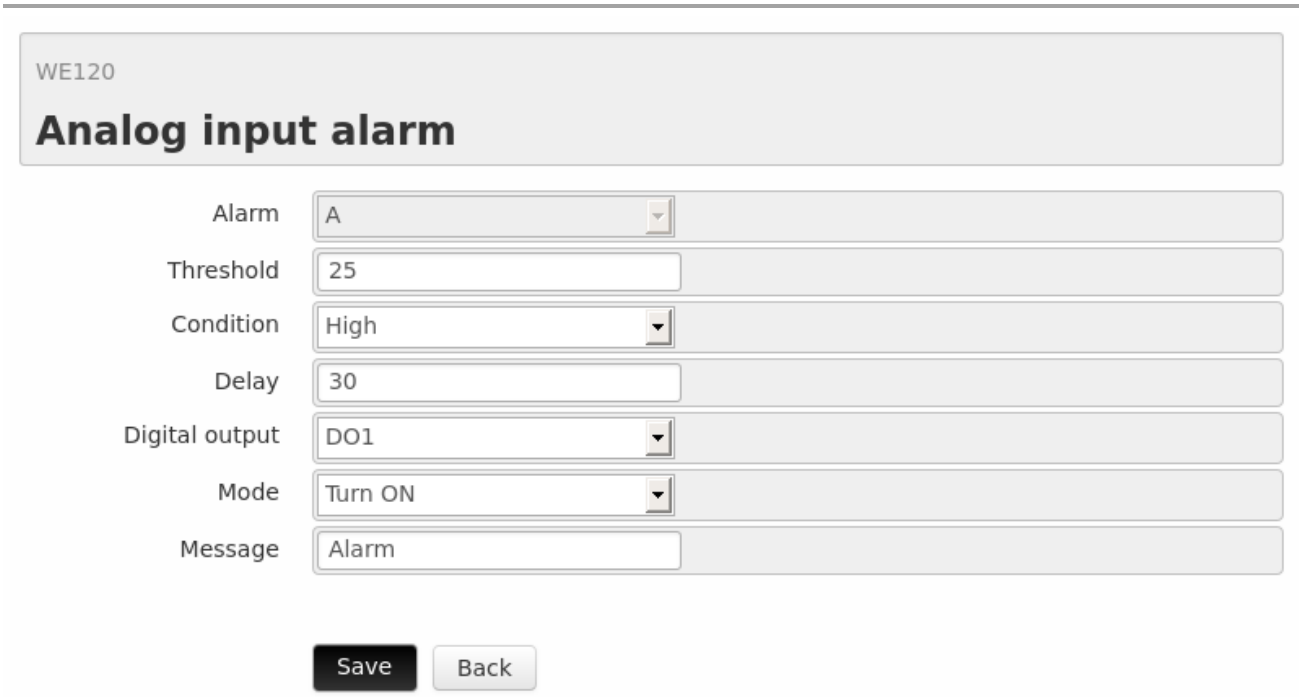
By clicking on the **Save** button the modifications of the parameters will be applied.

It's possible to set up to two alarms (A/B) on each analogue input from the relevant page by clicking **Set alarm A** and **Set alarm B**, respectively.

Warning

Before setting the alarm it's necessary to configure the input.

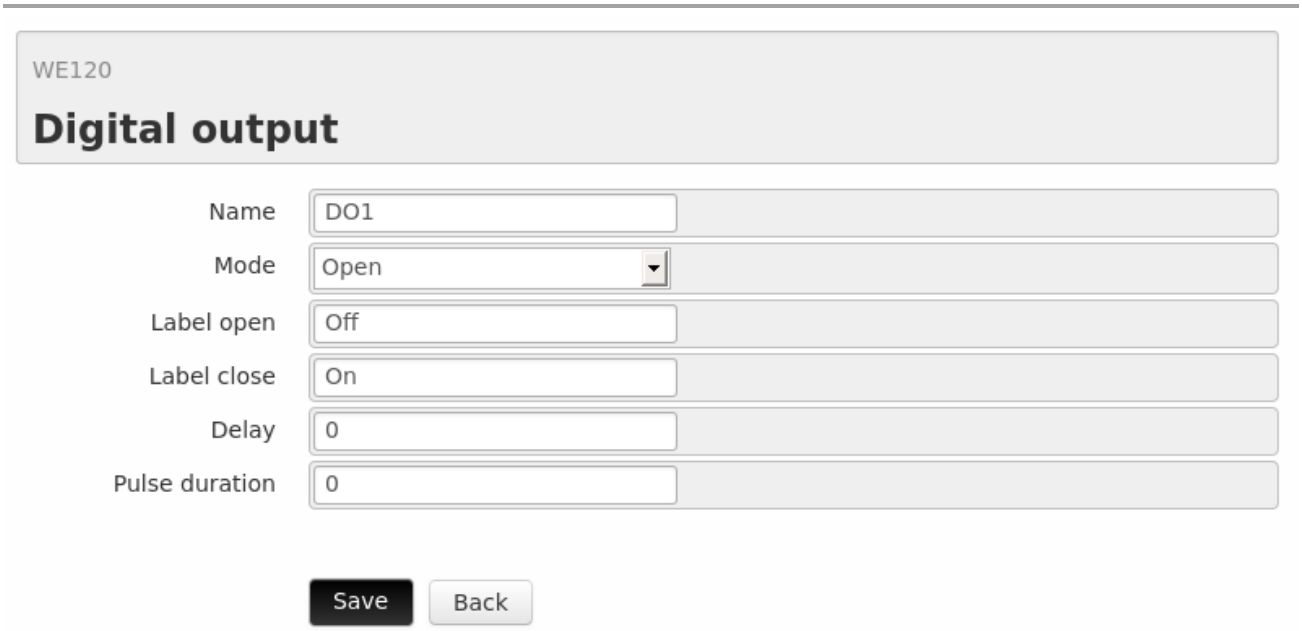
7.1.1 Analogue inputs alarms



From this configuration page it is possible to program an alarm on an analogue input, setting the following parameters:

- Threshold: The alarm triggering threshold.
- Condition: The condition of the analogue input's value with respect to the threshold:
  - High: The alarm is triggered when the value of the analogue input is **higher** than the preset threshold.
  - Low: The alarm is triggered when the value of the analogue input is **lower** than the threshold.
- Delay: The delay, expressed in seconds, of the alarm triggering after the preset condition is reached.
- Digital output: the digital output to be activated at alarm triggering.
- Mode: Digital output activation mode:
  - Enable: Enable the output.
  - Disable: Disable the output.
  - Enable only if in alarm state, otherwise disable it: If the alarm is triggered, the output is enabled, then it will disable it when the alarm is off.
- Message: The text of the message to be sent to the users.

7.2 Digital outputs



For entering the configuration page of a digital output, click on the relevant line of the table.

From this page it is possible to configure following parameters:

- Name: The digital output name.
- Mode: Activation mode of the output:
  - Open: Opens the relay
  - Closed: Closes the relay
  - Pulse open: Opens the relay for X seconds
  - Pulse close: Closes the relay for X seconds
- Label open: The string to be displayed when the relay is open
- Label closed: The string to be displayed when the relay is closed
- Delay: The number of seconds between the command and the activation of the relay
- Pulse duration: Duration of the pulse, expressed in seconds

By clicking on the **Save** button the modifications of the parameters will be applied.

7.3. Digital inputs

For entering the configuration page of a digital output, click on the relevant line of the table.

From this page it is possible to configure following parameters:

- Name: The digital input name.
- Mode: The mode of the input:
  - Reset: When the digital input is enabled, the digital outputs are reset
    - Label open: The string to be displayed when the digital input is activated
    - Label closed: The string to be displayed when the digital input is deactivated
  - Counter: the device counts how many times the digital input closes
    - Start: The initial number when starting to count
    - End: The counter will restart when reaching this number.
    - Delivery frequency: The number of seconds elapsed between the sending of the input status messages.
    - Digital output: The digital output to be activated when the counter reaches the End value.
  - Normal
    - Label open: The string to be displayed when the digital input is enabled
    - Label closed: The string to be displayed when the digital input is disabled

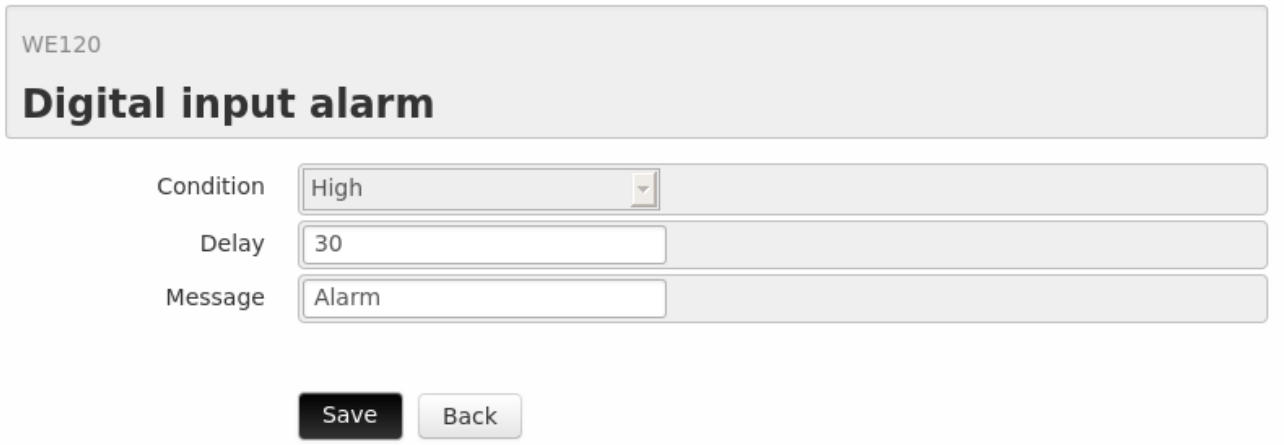
By clicking on the **Save** button the modifications of the parameters will be applied.

It's possible to set an alarm both on the high threshold and on the low threshold from the relevant page by clicking on **Set alarm high** and **Set alarm low**, respectively.

Warning

Before setting the alarm it's necessary to configure the input.

7.3.1 Digital inputs alarms



Note

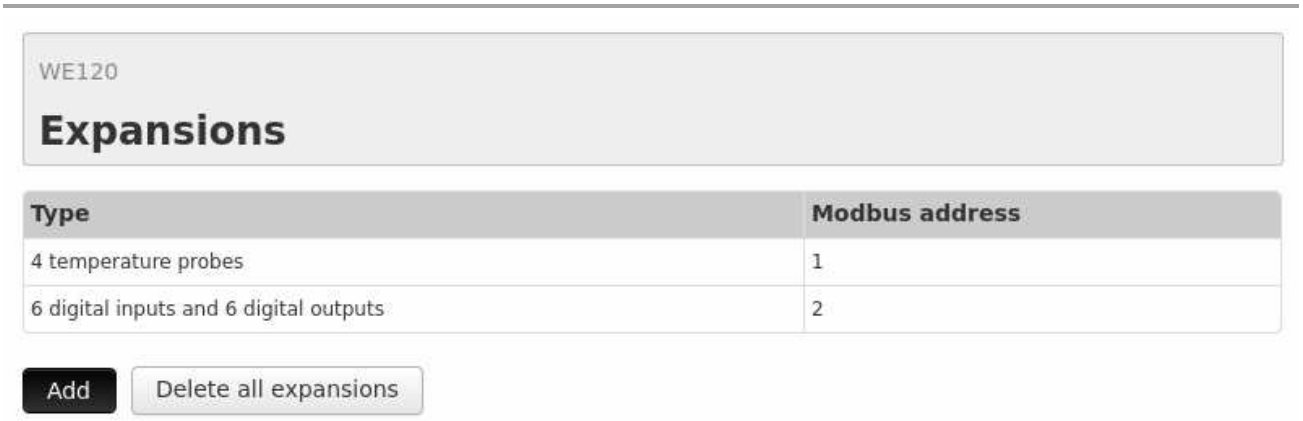
If the digital input variable is saved after setting the relevant associated alarms, these will be reset.
The allarms are disabled when the digital input variable is associated to an analogic thermostat variable.

From this configuration page it is possible to program an alarm on a digital input, setting the following parameters:

- Delay: The delay, expressed in seconds, elapsed between the condition and the alarm triggering.
- Message: The text of the message to be sent to the users.

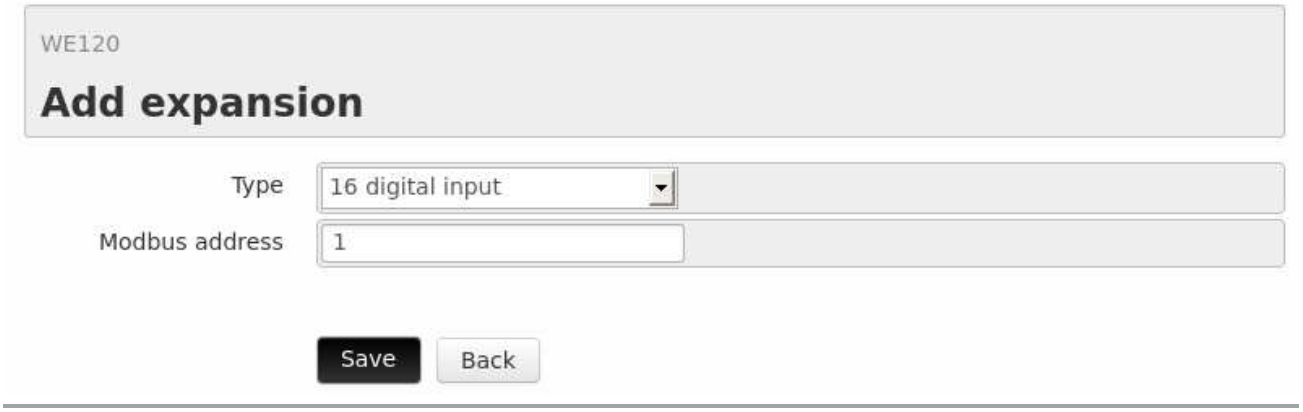
8. Expansions

This pages shows a table with the connected expansions and their respective Modbus addresses.



It is possible to add new expansions by clicking in the **Add** button, whilst all the expansion can be removed at once by clicking in the Delete all expansions button.

8.1. Adding expansions



To add a new expansion the following parameters must be set:

- Type: The type of expansion:
  - 16 digital input
  - 6 digital input and 6 digital output
  - 4 analog inputs
  - 4 analog inputs black
  - 4 temperature probes
- Modbus address: The expansion's Modbus address

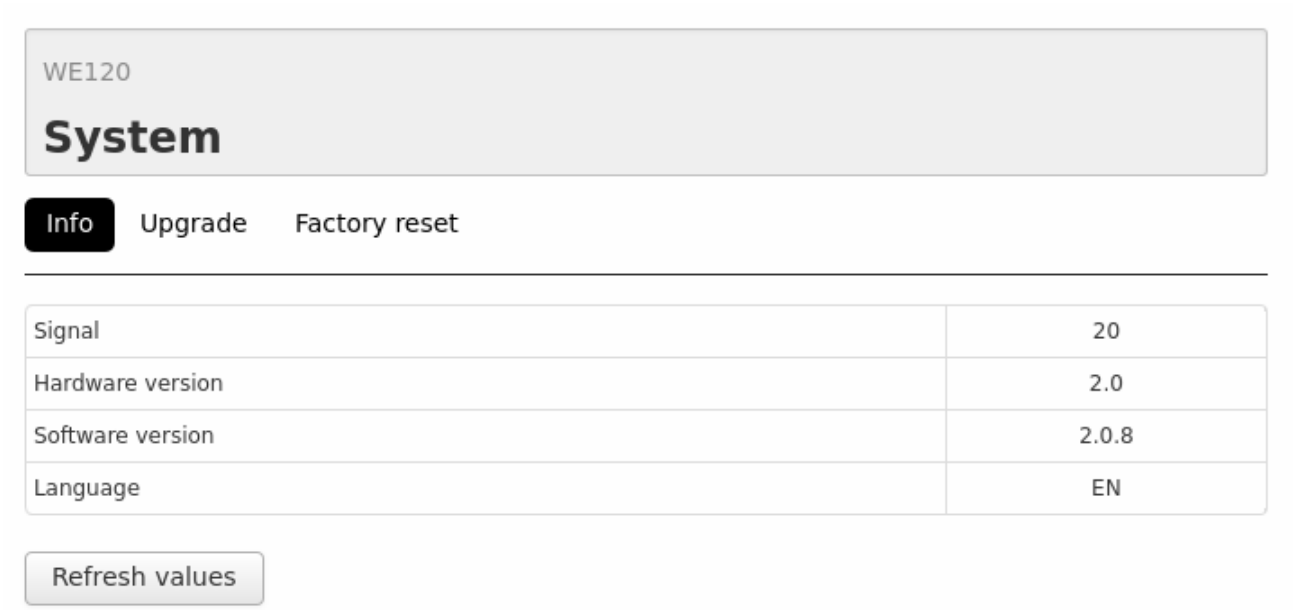
Once an expansion has been added, the 7. I/O page will display the new inputs and/or outputs that corresponds to this expansion.

9. System

This chapter is dedicated in three areas:

- Info
- Upgrade
- Factory reset

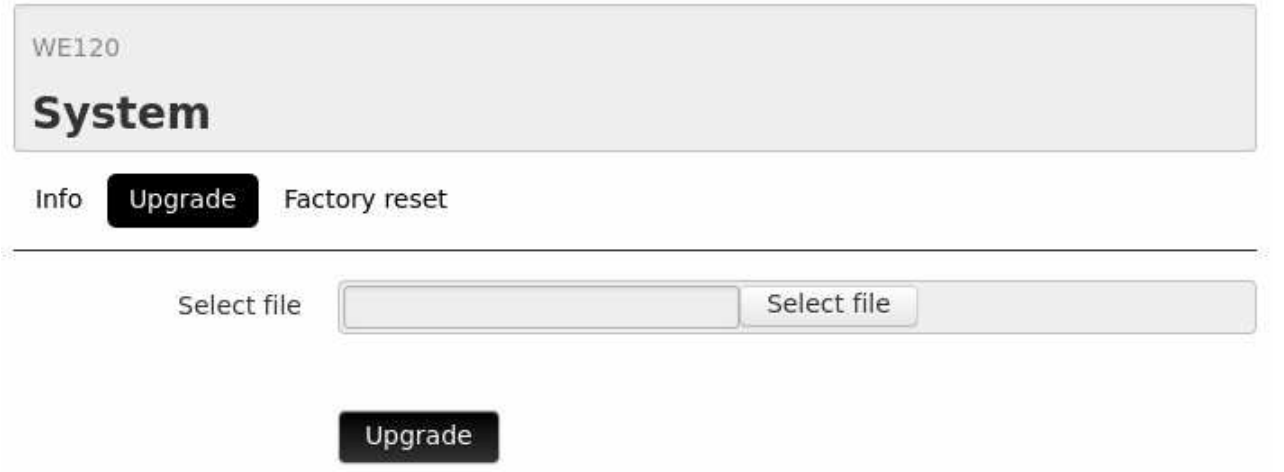
9.1. Info



In this area is displayed the following information that regards the device:

- Signal: The GSM signal level. The signal number can be interpreted as follows:
  - 1 to 7: GSM signal is too low for a correct operation of the device
  - 8 to 12: GSM signal is low
  - 13 to 18: GSM signal is good
  - Higher than 18: GSM signal is very good
- Hardware version
- Software version
- Language: The software language currently installed in the WE120. The SMS messages that are sent/received by the WE120 depend on this setting. For example, if the EN language is set, the WE120 will expect message commands written in English.

9.2. Update



In this area the WE120 firmware can be updated.

This is a quick and simple procedure:

- Download the latest firmware file firmware (we120_downloads.html#we120-downloads-fw)

- Select the just downloaded file in the **Select file** field
- Click on the **Upgrade** button.
- Turn-off the WE120
- Turn-on the WE120
- Wait for the update procedure to finish. It typically takes ~3 minutes.

For details, please read the firmware update guide (we120_fw_upgrade.html#we120-fw-upgrade).

9.3. Factory reset

Using this button it is possible to clean all the device configuration. All the previous configuration will be lost except the serial port parameters. If a firmware upgrade was executed before the factory reset, that firmware will remain.