
# General programming instructions

Reference: DOC0485 Rev: 1

Part of the general documentation

Part 1: Installation and starting instructions
▶ Part 2: General programming instructions
Part 3: Communication programming instructions

**General information:**

**SYCLOPE Electronique 2021®** Manual of 25/08/2021 Rev 1

Professional controller for cooling towers.
**Product line COOLTOUCH®**
Part 2: General programming instructions (Ref: DOC0485)

Editor:

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# Contents

# I. Generality

## 1) Scope

The range of **SYCLOPE COOLTOUCH®** controller you have purchased is a high-tech electronic device for the complete management of cooling tower (air/water coolers) and the risks related to the legionella.

Its remarkable adaptability to the various structures of cooling towers enables him to settle in all the difficult cases where the control of the process and the water treatment in a cooling tower are decisive.

Designed according to the needs of the customer, the **COOLTOUCH®** controller is equipped analogical and numeric inputs for specific sensors for treating water in a cooling tower and also include alarm functions and various controls with cyclic commands transmitted by means of programmable relays to control specific dosing systems used for chemical treatments.

The simplicity of the **COOLTOUCH®** controller operations, the user friendliness and the remarkable technical aspects of these controllers, will ensure you benefits from their many options, guaranteeing you full control and supervision of the quality of the water.

The following instructions contain all the information required for installation, use and maintenance of your new equipment.

- Installation
- Technical specifications
- Commissioning instructions
- Safety tips

If you would like to receive further information or if you encounter any difficulties not described in this manual, please contact your usual retailer or else directly contact the sales department of **SYCLOPE ELECTRONIQUE S.A.S.,** either at the agency or at the office for your region, or the technical/quality departments of our establishments. We will do everything in our power to help you and ensure your benefit from our advice and know-how in the field of measurement and treatment of swimming-pool water.

Contact: contact@syclope.fr

## 2) FCC conformity

The **SYCLOPE COOLTouch®** controller complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference (2) this device must accept any interference received, including interference that may cause undesired operation FCC Regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect this equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

**Remark:** To ensure compliance with the FCC regulations on electromagnetic interference for a class B device, use cables properly shielded and connected to the ground as recommended in this manual. The use of a cable that is not properly shielded or earthed for risk of violating the FCC rules.

Radio Frequency (RF) Exposure Compliance of Radiocommunication for mobile Apparatus To satisfy FCC RF Exposure requirements for mobile devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Contains:

- WiFi module: FCC ID : 2AC7Z-ESPWROOM02

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- GSM module: FCC ID: UDV-0912142009007

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. (for FCC).

### 3) Use of the document

Please read carefully the entire document before starting the installation and the commissioning of the controller device, in order to ensure the safety of swimmers, users and equipment's.

The information provided in this document must be strictly observed. **SYCLOPE Electronique S.A.S.** declines all responsibility in cases where failure to comply with the instructions of this documents.

The following symbols and pictograms will be used to facilitate reading and understanding of these instructions.

- Information
- ► Action to do
- ➢ Element of a list or enumeration

### 4) Symbols and signs

Identification of a continuous volage or current

Identification of an alternative voltage or current

Protective ground

Functional ground

Risk of injury or accident. Identifies a warning concerning a potentially dangerous risk. The documentation must be consulted by the user with each time the symbol is notified. If the instructions are not respected, this presents risks of death, physical injuries or property damages.

Electric hazard. Identifies a warning statement relative to a mortal electric danger. If the instructions are not strictly respected, this implies an inevitable risk of physical injuries or death.

Risk of incorrect operation or damage for the device

Comment or particular information.

Recyclable element

5) Storage and transport

It is important to store and to transport the **SYCLOPE COOLTOUCH** controller in its original packaging in order to minimize risk of damage.
Furthermore, the package must be stored in an environment that is protected against humidity and exposure to chemical products.

Environmental conditions for transport and storage:

Temperature: -10 °C à 70 °C
Air humidity: Maximum of 90% with no condensation

6) Packaging

The device is delivered without power cable.

Caps of the box are pre-drilled and fitted with corresponding cable glands conform to the maintenance of IP65 protection. Cables used must be adapted to them in order to respect the portion index.
Shielded cables for connecting pH and ORP electrodes are not supplied.

The controller is delivered with:

- ✓ **SYCLOPE COOLTOUCH®** central controller
- ✓ Installation and starting instructions
- ✓ General programming instructions
- ✓ Communication programming instructions (Option)

7) Warranty

The warranty is provided according to the terms of our general conditions of sale and delivery as long as the following conditions are met:

- ➢ Use of the equipment according to the instructions of this notice
- ➢ No modifications of the equipment which may modify its behaviour and no incorrect manipulation
- ➢ Respect for the electrical safety conditions

Consumable material is no longer covered by warranty as soon as it's put into service.

## II. Safety and environmental instructions

Please:

- Read this manual carefully before the unpacking, the installing or the commissioning of this equipment
- Take into account all the hazards and of recommended precautionary measures

The failure to respect these procedures can result in serious injury to users or damaging the device.

1) Use of the equipment

**SYCLOPE COOLTouch®** controller is a microprocessor equipment generating all necessary functions to control a cooling tower.

All other uses are considered to be non-conforming and must therefore be forbidden. SYCLOPE Electronique S.A.S. will not be responsible in any case for any damage that result from such uses.

The 12V Ext must not be used when the product is connected to an electrical network within the following range: 100 – 208V

Do not use the device for measurements on the network directly, but only on the secondary circuit under very low safety voltage.

2) User obligations

The user undertakes not to allow its employees to work with the **SYCLOPE COOLTOUCH®** controller described in this manual unless they:

- Are aware of the fundamental instructions relating to work safety and prevention of accidents
- Are trained in the use of the device and its environment
- Have read and understood these instructions, warnings and manipulation rules

3) Risk prevention

The installation and connection of the **SYCLOPE COOLTOUCH®** controller should be only performed by specialized personnel and qualified for this task.
The installation must comply with the current safety standards and instructions!

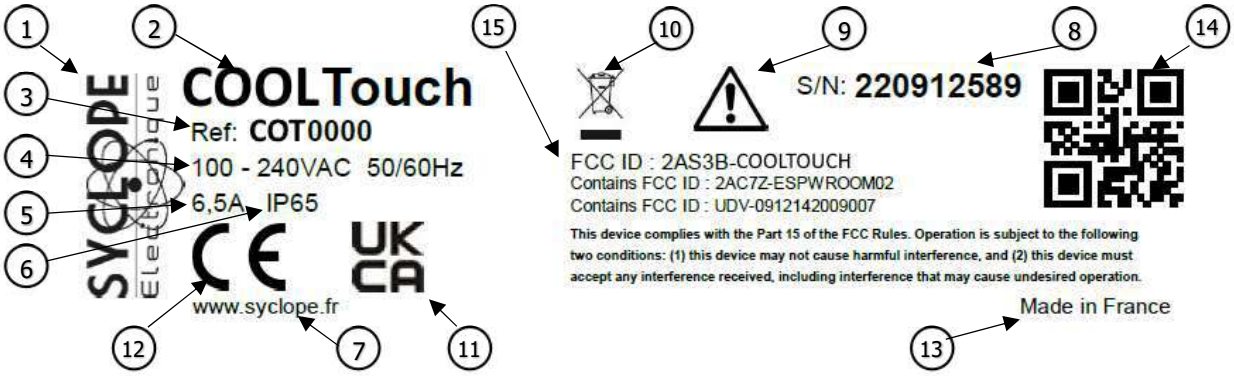
Before opening the controller or manipulate the relay outputs, always remember to switch-off the primary power supply!
Never open the controller when it is powered on!
Maintenance operations and repairs should be only performed by trained and specialized personnel!

Take care when choosing the location for installing the controller!
**SYCLOPE COOLTOUCH®** controller should not be installed in a hazardous environment and should be protected against splashing with water or chemical products. It should be installed in a dry, well-ventilated and isolated location.

Make sure that the chemical sensors used with this controller correspond well to the chemicals used. Refer to the individual technical note of each sensor. Chemistry of water is very complex, in case of doubt, contact immediately our engineering service or your approved installer/reseller.

Chemical sensors are sensitive elements using consumable parts. They must be supervised, maintained and calibrated regularly using specific calibrator systems not-provided with this equipment. In the event of defect, a surplus possible hazard of chemical injections can be noted. In the doubt, a service contract must be taken near your reseller/installer or failing this near our engineering services. Contact your approved installer/reseller or our business service for more information.

4) Identification and location of nameplate




| | |
|---|---|
| (1) Manufacturer's label | (9) Particular risk. Read the manual |
| (2) Model of the product / Trade Mark | (10) Product which can be recycled |
| (3) Reference of the product | (11) UKCA approved |
| (4) Range of power supply | (12) CE approved |
| (5) Values of maximum current | (13) Country of manufacture |
| (6) Class of protection | (14) Manufacturer square code |
| (7) Identification of the manufacturer | (15) FCC ID |
| (8) Serial number | |


5) Disposal and conformity

The recyclable packaging of the **SYCLOPE COOLTOUCH®** equipment must be disposed of according to current regulations.

Elements such as paper, cardboard, plastic or any other recyclable elements must be taken to a suitable sorting centre.

According to European directive 2012/19/EC, this symbol means that as of 4 July 2012 electrical appliances cannot be thrown out together with household or industrial waste. According to current regulations, consumers within the European Union are required, as of this date, to return their used devices to the manufacturer, who will take care of disposing them at no extra expense.

According to European directive 2011/65/EC, this symbol means that the **SYCLOPE COOLTouch®** controller is designed in compliance with the restrictions on hazardous substances.

According to low-voltage directive (2014/35/UE) and the electromagnetic compatibility directive (2014/30/UE), this symbol means that the device has been designed in compliance with the previously cited directives.

In accordance with part 15 of the FCC regulation (Federal communications commission), this symbol indicates that the device was tested and approved under the respect and the conditions of the limits for a Class B digital device.

The product complies with the requirements of IEC 61326-1 relating to immunity and emissions concerning electromagnetic compatibility in a basic environment.

According to low-voltage directive (2014/35/UE) and the electromagnetic compatibility directive (2014/30/UE), this symbol means that the device has been designed in compliance with the previously cited directives.

6) Radio technologies in equipment

| Radio technologies | | | | |
|---|---|---|---|---|
| **Technologies** | | **Number of antenna** | **Radiated powers** | **Frequency bands of use** |
| WIFI | | 1 | < 20dBm | 2400 MHz to 2483.5 MHz<br>2.4 GHz Band<br>Exclusion Band :<br>[2280 MHz – 2603.5 MHz] |
| 2G | GSM900 | 0 | 33dBm | 900MHz |
| | DCS1800 | | 30dBm | 1800MHz |

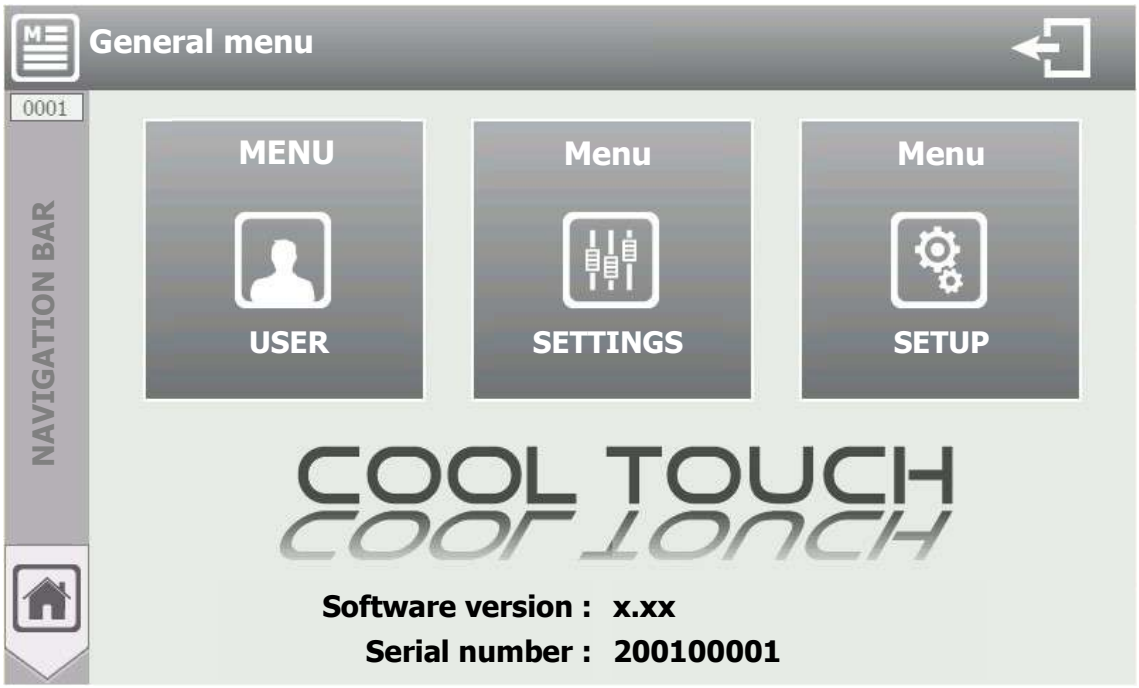
### III. Display mode and type

**SYCLOPE COOLTOUCH®** regulator are fitted with a color touch screen graphic, all programming actions are realized with by pressing the screen. The touch screen is a resistive technology, you must press firmly on the screen to validate the action.

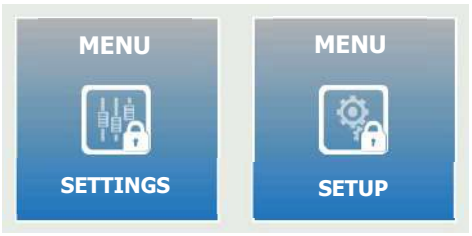
**See. DOC0450 – Installation and instructions ODITOUCH ENG Rev1**

### IV. Programming home screen [0001]

To open the programming screen, press the key  on the main display screen.




When an access code is entered to lock the "SETTINGS" or "SETUP" menu the two buttons have the appearance below:




Menus with a padlock icon are password protected.

Press the menu you want to access to open the password entry window.

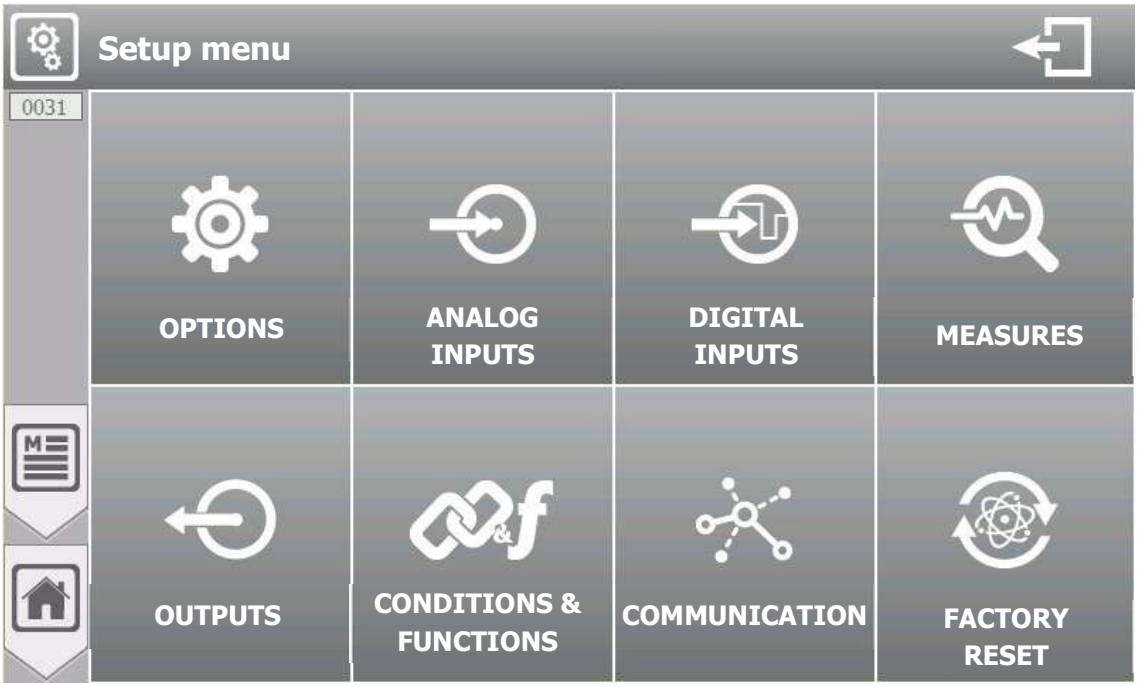
You must type the 4-digit user code then validate to access to the "SETTINGS" or "SETUP" menu

## V. Programming screen « SETUP » [0031]


« SETUP » menu will allow you to access all the configuration for the first use of your controller.

Press to open following screen.

**« SETUP » menu**

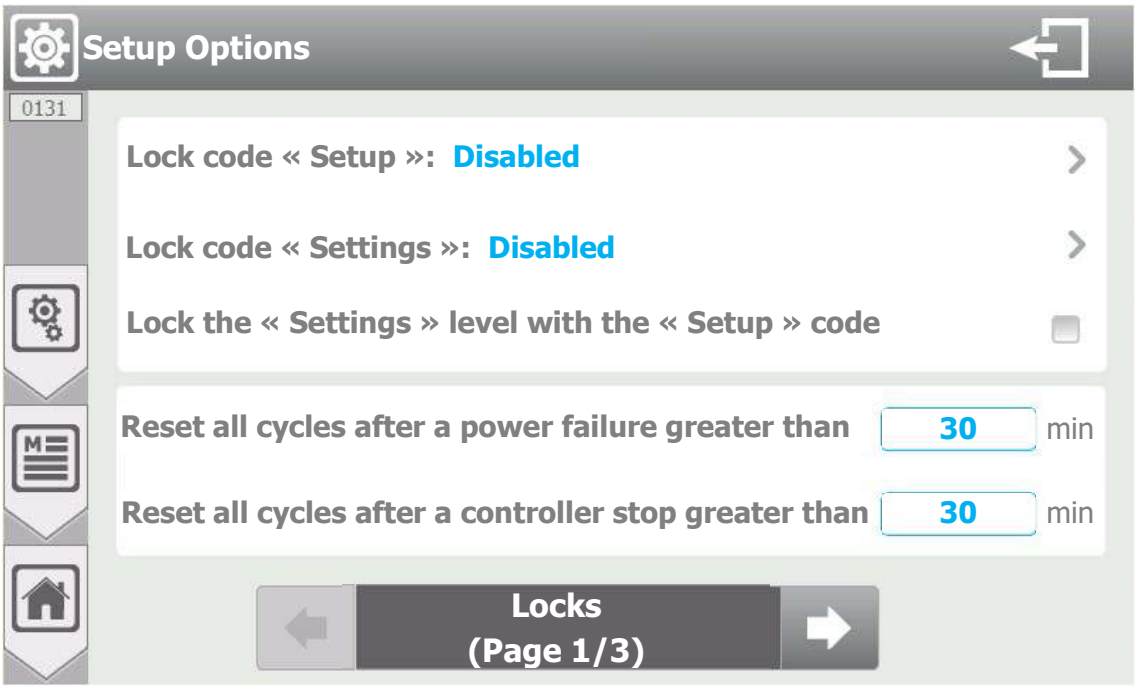




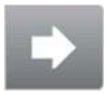
1) Menu « SETUP » - « OPTIONS » [0131] & [1131]

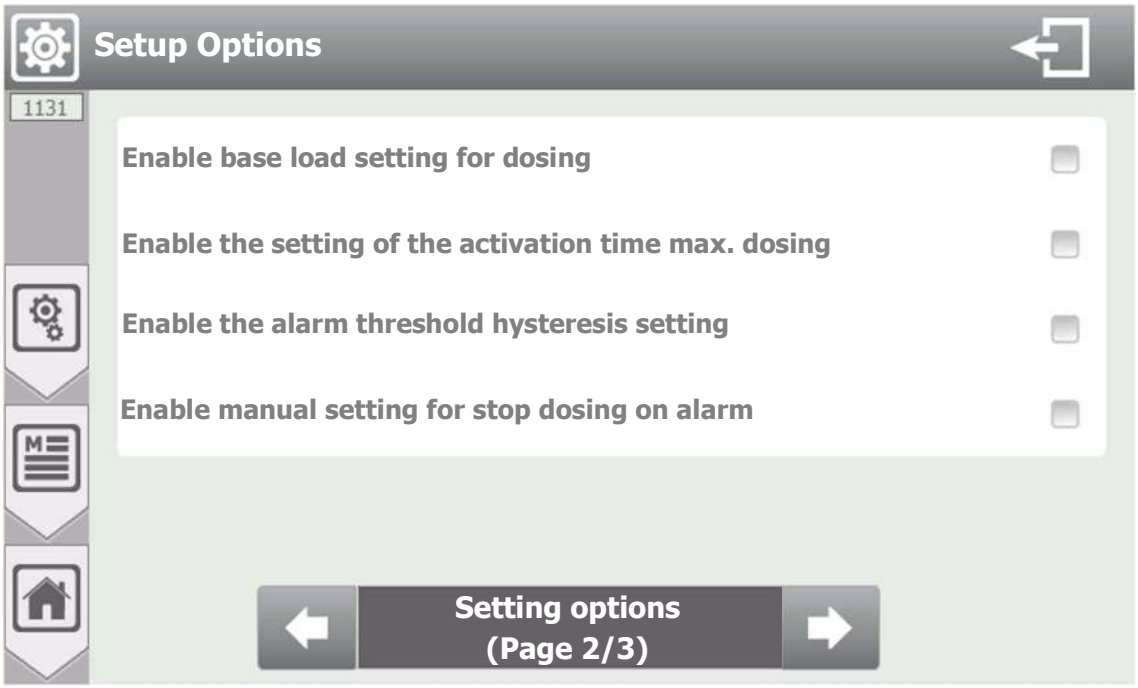
« OPTIONS » menu will allow you to access the options available in the installation part.

Press to open following screen.

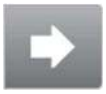


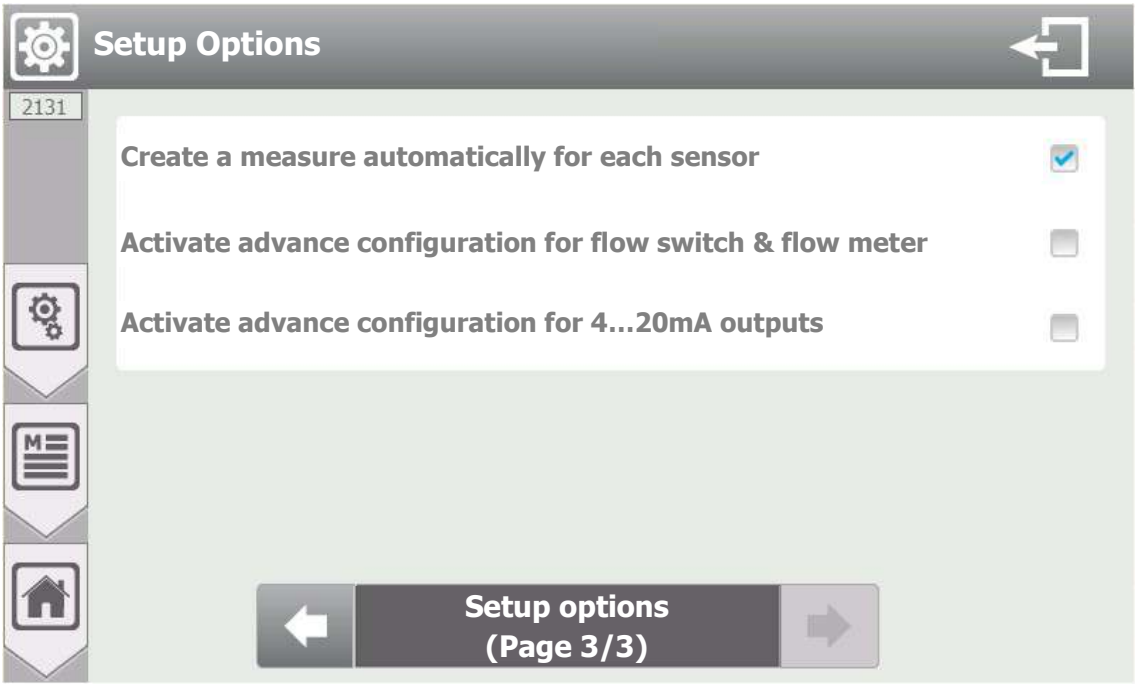
- **Lock code « Setup »**
  - Activate or deactivate the security code to access the « Setup » menu
- **Lock code « Settings »**
  - Activate or deactivate the security code to access the « Settings » menu
- **Lock the « Settings » level with the « Setup »code**
  - Use the « Setup » code to lock the « Settings » menu
- **Reset all cycles after power failure greater than** **30** min
  - Stop and cancel all peripheral cycle (Bleed, Biocide A, Biocide B, Inhibitor and dispersant), if the controller is power off more than the value of this option.
- **Reset all cycles after controller stop greater than** **30** min
  - Stop and cancel all peripheral cycle (Bleed, Biocide A, Biocide B, Inhibitor and dispersant), if the controller is in OFF mode more than the value of this option.

Press  to access to the "Setting options" page




- **Enable base load setting for dosing**
  - If this box is checked, this option allows manual adjustment of base load on dosage.
- **Enable the setting of the activation time max. dosing**
  - If this box is checked, this option allows manual adjustment of dosage time count threshold.
- **Enable the alarm threshold hysteresis setting**
  - If this box is checked, this option allows manual setting of alarm hysteresis threshold.
- **Enable manual setting for stop dosing on alarm**
  - If this box is checked, this option allows complete manual setting of stop dosage on alarm.

Press  to access to the "Setup options" page




- **Create a parameter automatically for each sensor**
  - If this option is enabled, when adding a new sensor, a measurement parameter corresponding to the type of sensor is created automatically. It's still possible to modify and / or delete this parameter in a second step.

For a « simple » installation this option allows a faster configuration.

- **Activate the advanced configuration for flow switch & flow meter**
  - If this box is checked, it's possible to manage the condition type between the water circulation detector and the flow meters to turn on or off the conditioning. The logical condition AND / OR is then configurable in the "Conditions" menu.
    If this box is unchecked the **OR** condition is active by default.

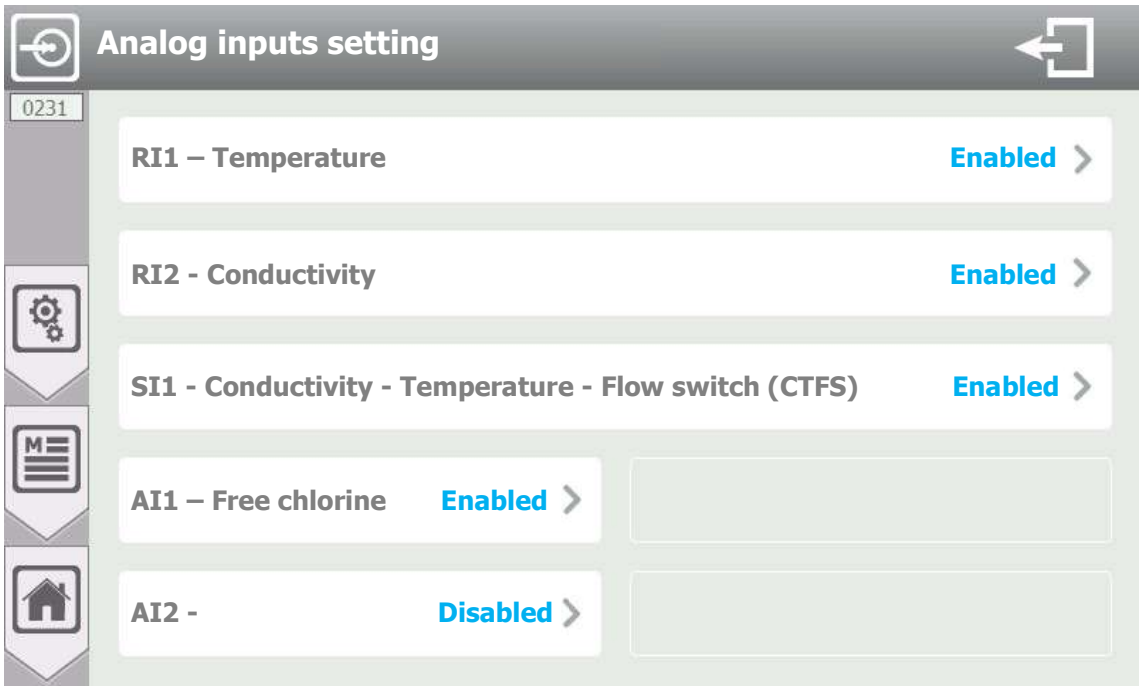
- **Active the advanced configuration of the 4...20mA outputs**
  - This option, if checked, gives access to the « special » current settings. It's then possible to define the current generated in three special cases:

- Inhibition mode:
  - None
  - 0 mA
  - Low range
  - 3.4 mA
- Default mode:
  - 0 mA
  - Low range
  - 2.6 mA
- Range overflow mode
  - Maximum
  - 20 mA
  - 20.8 mA

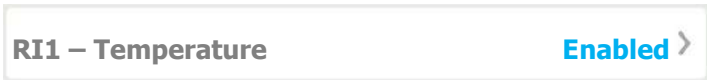

2) Menu « Setup menu » - « ANALOG INPUTS » [0231]

« ANALOG INPUTS » menu will allow you to access the configuration of the sensors that will be connected on the analog inputs.

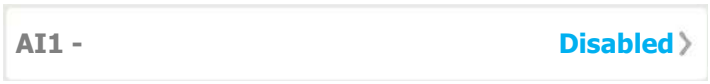
Press to open the following screen.




Screen presents analog inputs that are already configured and those that are not used. By pressing an already configured entry, you can change its configuration, or pressing an unused entry, configure its installation.




Entry already configured.
Press to edit its configuration.




Entry unused.
Press to configure its installation.

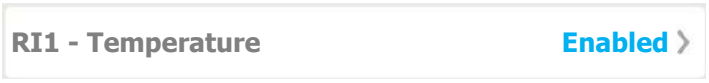


Option not available.

RI1 Temperature
RI2 Conductivity
SI1 Conductivity – Temperature – Flow switch (CTFS)
AI1 & AI2 Isolated 4…20mA inputs

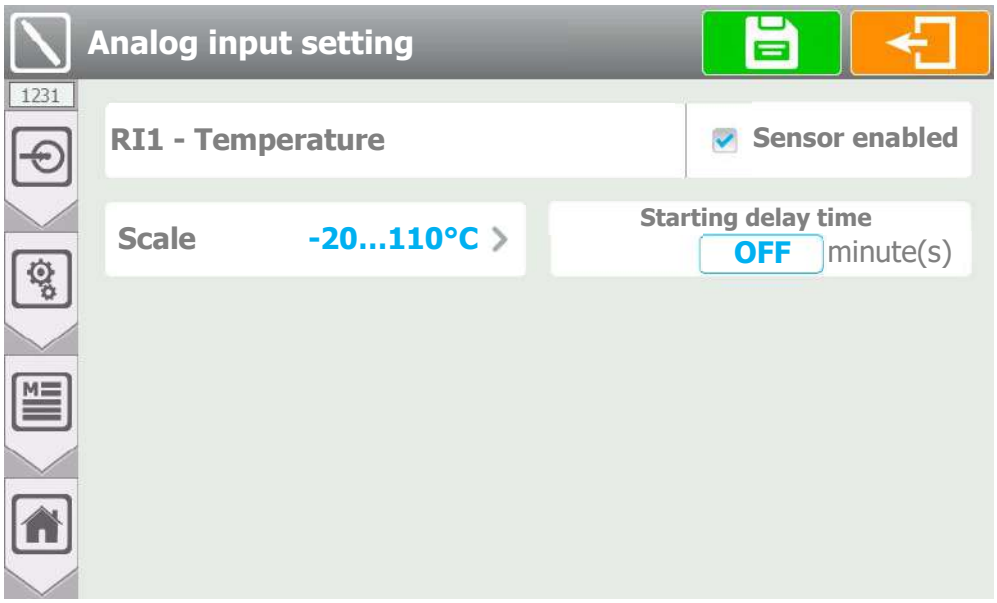
For your comfort, you will find the notation of the RIx, SIx and AIx inputs silkscreen in front of the corresponding connection terminal block of your device.

a) Temperature analog input setting [1231]




Press to open the following screen.

**« Simple » view**




➢ **RI1 – Temperature** **Sensor enabled**

- By checking or unchecking the check box you can choose to enable/disable the temperature sensor. It's disabled by default.

➢ **Scale -20...110°C**

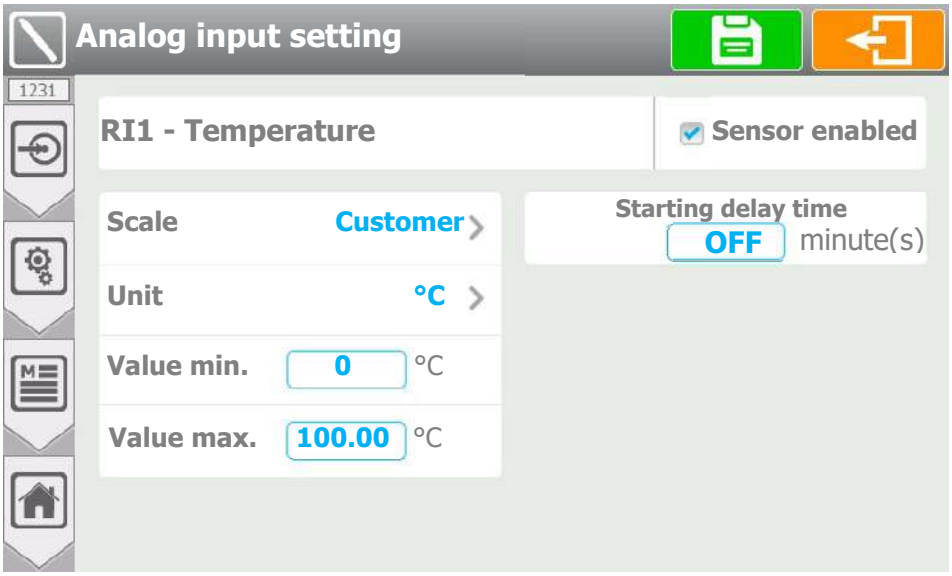
- Select the sensor measurement scale, on this selection button you will find the information of the currently selected scale (**-20...110°C**).
  Press to change it.

Each sensor has a « Customer » scale. By selecting this scale, it is then possible to select the low and high level of the scale and the unit of measurement. (See next screen)

➢ **Starting delay time OFF** Minute(s)

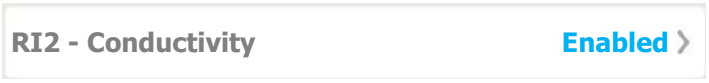
- Enter boot delay (polarization). Here disabled for this type of sensor (**OFF**).
  Press to open the numeric keyboard and enter the desired value.
  Adjustment possible from **0 à 480** Minute(s).

**« Customer » view**



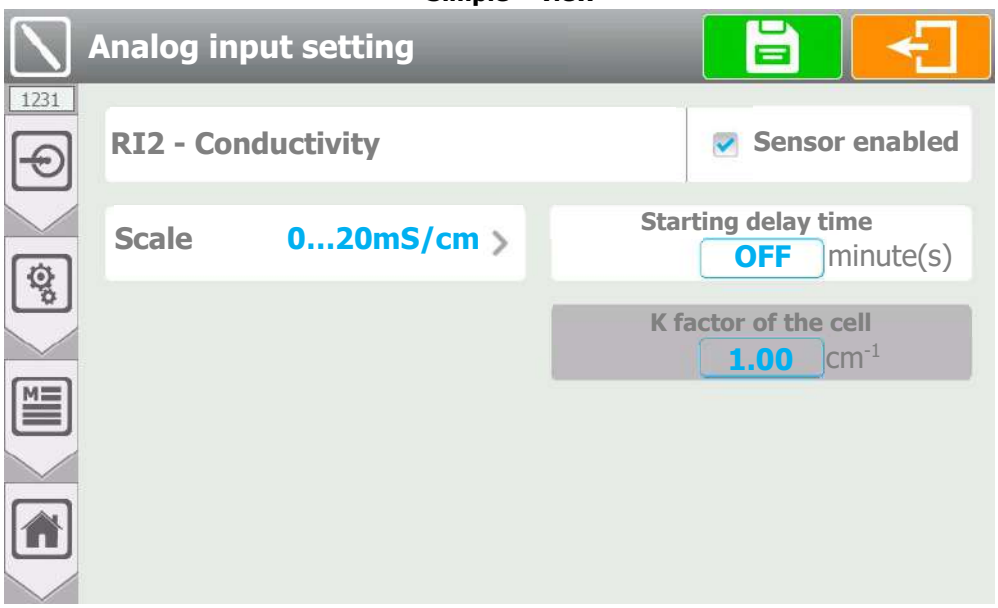

- **Sensor – Scale – Temporization**
  - See previous section.
- **Unit °C**
  - Select the unit of measurement of the sensor, on this selection button we find the information of the currently selected unit (**°C**).
    Press to change it.
- **Value min. 0** °C
  - Low sensor value input. Here the current value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
- **Value max. 100.00** °C
  - High sensor value input. Here the current value is (**14**).
    Press to open the numeric keyboard and enter the desired value.

b) Conductivity analog input setting [1231]




Press to open the following screen.

**« Simple » view**




➢ **RI2 – Conductivity** **Sensor enabled**

- By checking or unchecking the check box you can choose to enable/disable the temperature sensor. It's disabled by default.

➢ **Scale 0...20mS/cm**

- Select the sensor measurement scale, on this selection button you will find the information of the currently selected scale (**0...20mS/cm**).
  Press to change it.

Each sensor has a « Customer » scale. By selecting this scale, it is then possible to select the low and high level of the scale and the unit of measurement. (See next screen)

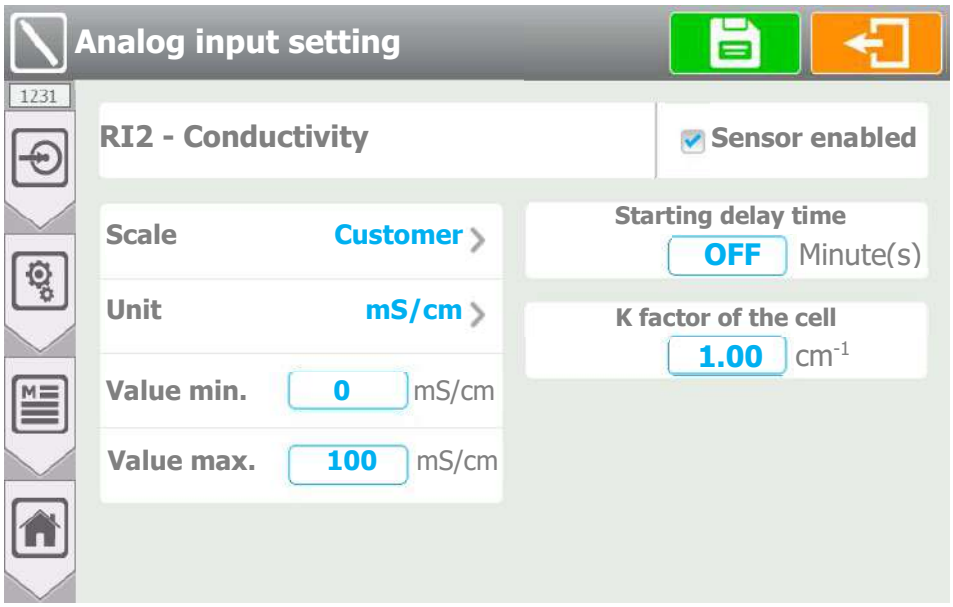
➢ **Starting delay time OFF** Minute(s)

- Enter boot delay (polarization). Here disabled for this type of sensor (**OFF**).
  Press to open the numeric keyboard and enter the desired value.
  Adjustment possible from **0 à 480** Minute(s).

➢ **K factor of the cell**

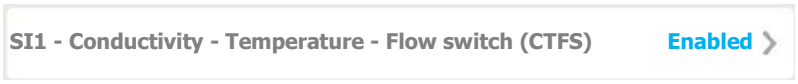
- Enter the K factor of the cell. Here the value is blocked at **1.00** $cm^{-1}$.
  If you choose a « Customer » scale you have to enter the right K factor. (See next screen)

**« Customer » view**

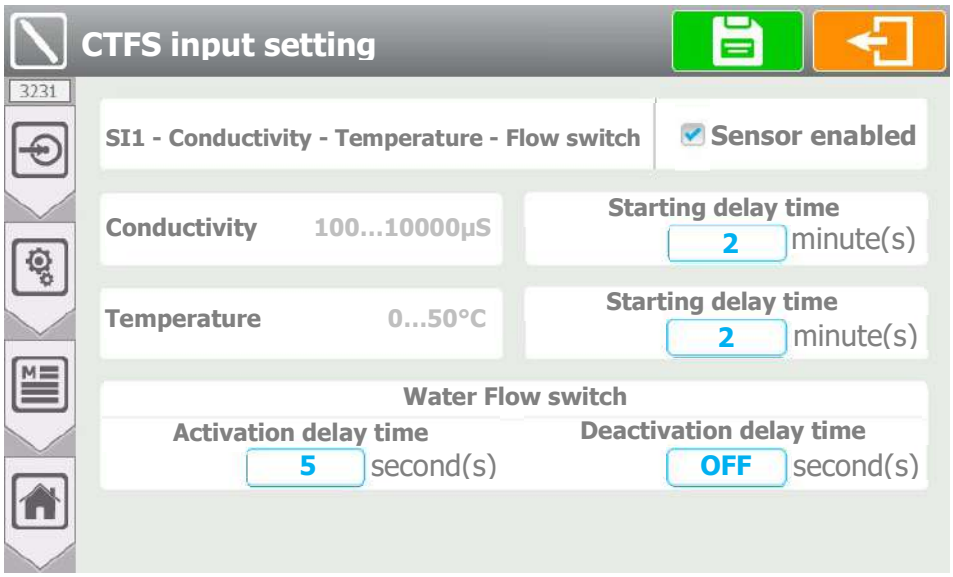



- **Sensor – Scale – Temporization**
  - See previous section.
- **Unit mS/cm**
  - Select the unit of measurement of the sensor, on this selection button we find the information of the currently selected unit (**mS/cm**).
    Press to change it.
- **Value min. 0** mS/cm
  - Low sensor value input. Here the current value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
- **Value max. 100.00** mS/cm
  - High sensor value input. Here the current value is (**100.00**).
    Press to open the numeric keyboard and enter the desired value.
- **K factor of the cell**
  - Enter the K factor of the cell. Here the current value is (**1.00**).
    Press to open the numeric keyboard and enter the desired value.

c) CTFS input setting [2231]

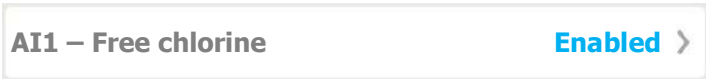



Press to open the following screen.

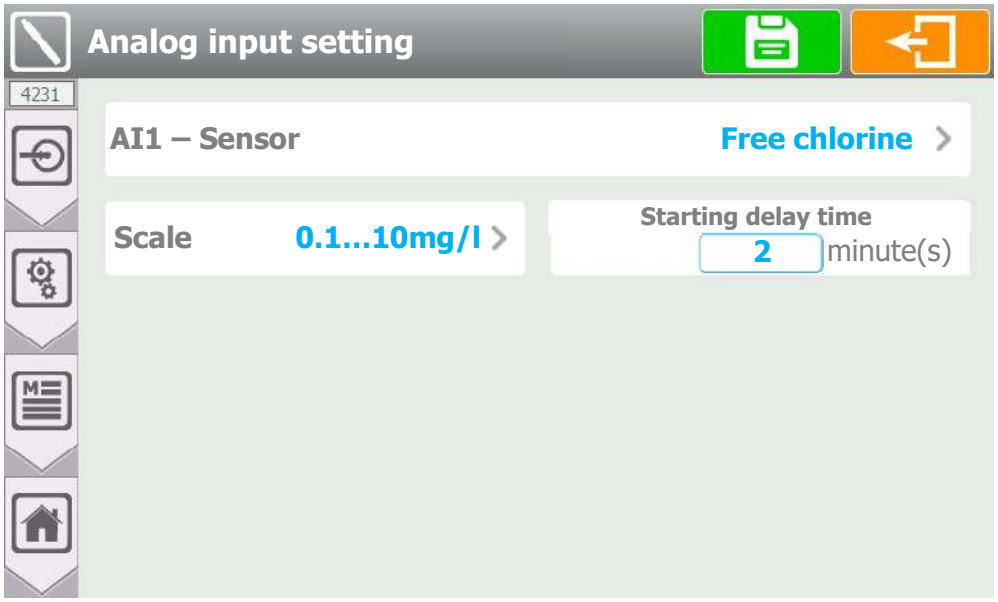



- **SI1 - Conductivity - Temperature - Flow switch**
  - By checking or unchecking the check box you can choose to enable/disable the CTFS sensor. It's disabled by default.
- **Conductivity** 100...10000µS
  - Indicate the conductivity rating scale (100...10000µS) of the CTFS sensor. This scale is block and unique.
- **Temperature** 0...50°C
  - Indicate the temperature rating scale (0...50°C) of the CTFS sensor. This scale is block and unique.
- **Starting delay time 2** minute(s)
  - Enter the time during which the conductivity or temperature value should not be taken into account. During activation of the CTFS sensor. Here it is (2) minutes.
    Press to open the numeric keyboard and enter the desired value.
    Adjustment possible from **0 to 480** minute(s)
- **Activation delay time 5** Second(s)
  - Enter the time that the input must remain during its activation before the information is taken into account. Here it is (5) seconds.
    Press to open the numeric keyboard and enter the desired value.
    Adjustment possible from **0 to 240** Second(s)
- **Deactivation delay time OFF** Second(s)
  - Same as before, but for reverse state.

d) 4…20mA analog input setting [1231]




Press to open the following screen.




➢ **AI1 – Sensor** **Free chlorine**

- Select the sensor type, on this selection button you will find the information of the input being modified (**AI1**) and the currently selected sensor type (**Free chlorine**). Press to change it.

➢ **Scale 0.1…10mg/l**

- Select the sensor measurement scale, on this selection button you will find the information of the currently selected scale (**0.1…10mg/l**).
  Press to change it.

Each sensor has a « Customer » scale. By selecting this scale, it is then possible to select the low and high level of the scale and the unit of measurement. (See next screen)

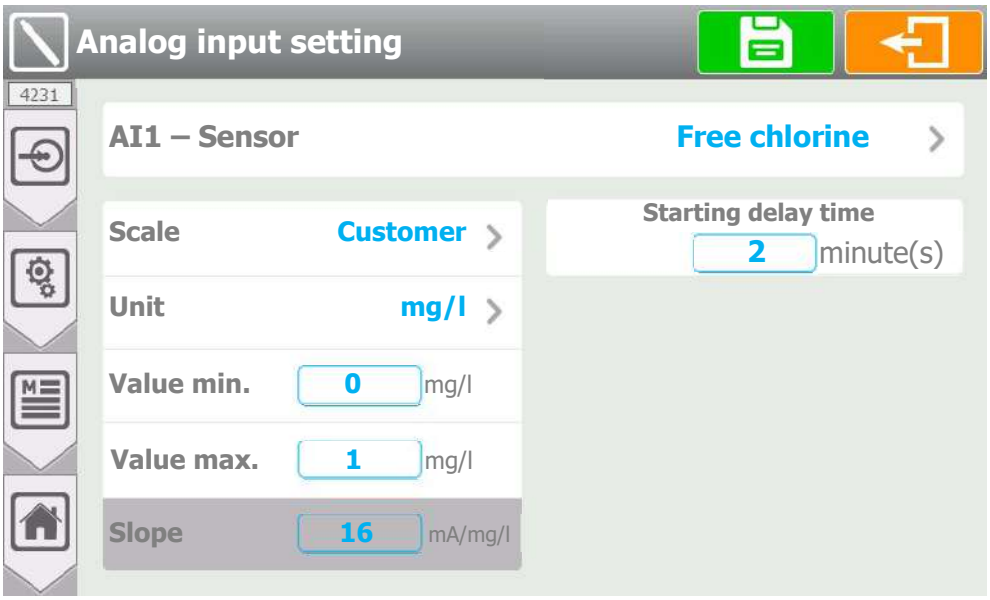
➢ **Starting delay time 2** Minute(s)

- Enter boot delay (polarization). Here disabled for this type of sensor (**2**).
  Press to open the numeric keyboard and enter the desired value.
  Adjustment possible from **0 à 480** minute(s).

**To delete a sensor**

You must select « NONE » from the sensor list and save your configuration by pressing the "SAVE" button.

**« Customer » view**




- **Sensor – Scale – Temporization – Delete & Save**
  - See previous section.

- **Unit mg/l**
  - Select the unit of measurement of the sensor, on this selection button we find the information of the currently selected unit (**mg/l**).
    Press to change it.

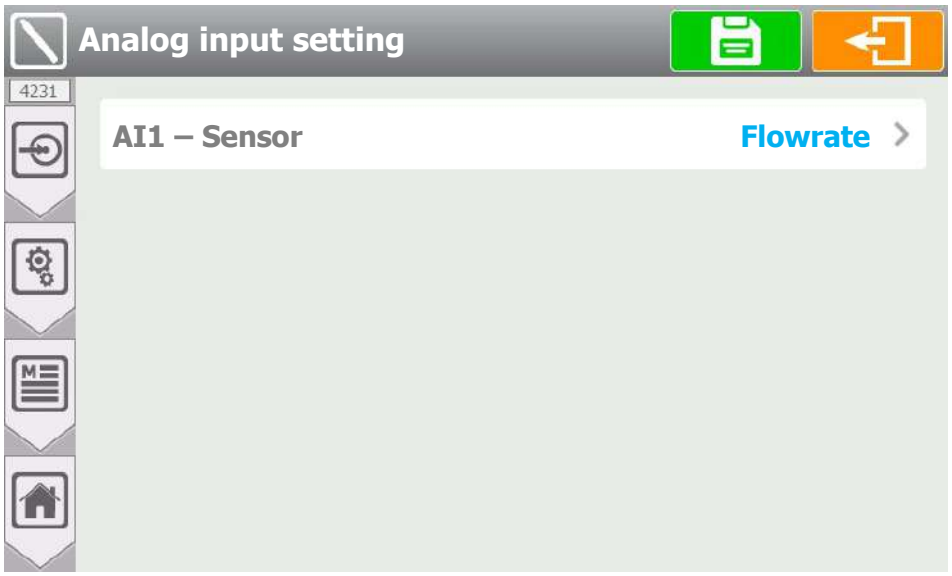
- **Value min. 0** mg/l
  - Low sensor value input. Here the current value is (**0**).
    Press to open the numeric keyboard and enter the desired value.

- **Value max. 1** mg/l
  - High sensor value input. Here the current value is (**1**).
    Press to open the numeric keyboard and enter the desired value.

- **Slope 16** mA/mg/l
  - Sensor slope value information based on min & max values entered.

  This part is greyed out (not accessible), it is calculated automatically. In our case the calculated value is (**16**)

**Special case "Flowrate"**



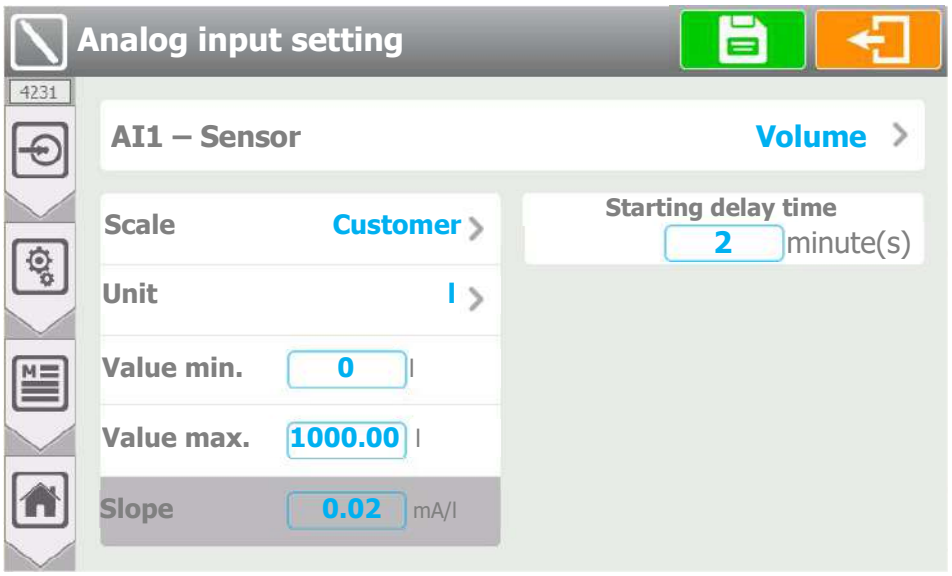

➢ **AI1 Sensor Flowrate**

- Select the sensor type, on this selection button you will find the information of the input being modified (**AI1**) and the currently selected sensor type (**Flowrate**). Press to change it.

**To delete an input contact:**

- You must select « NONE » from the list of functions and save your configuration by pressing the "SAVE" button.

**Special case "Volume"**




➢ **Sensor – Scale – Unit – Value min. – Value max. – Slope – Starting delay time**

- See "Customer view" in previous section.

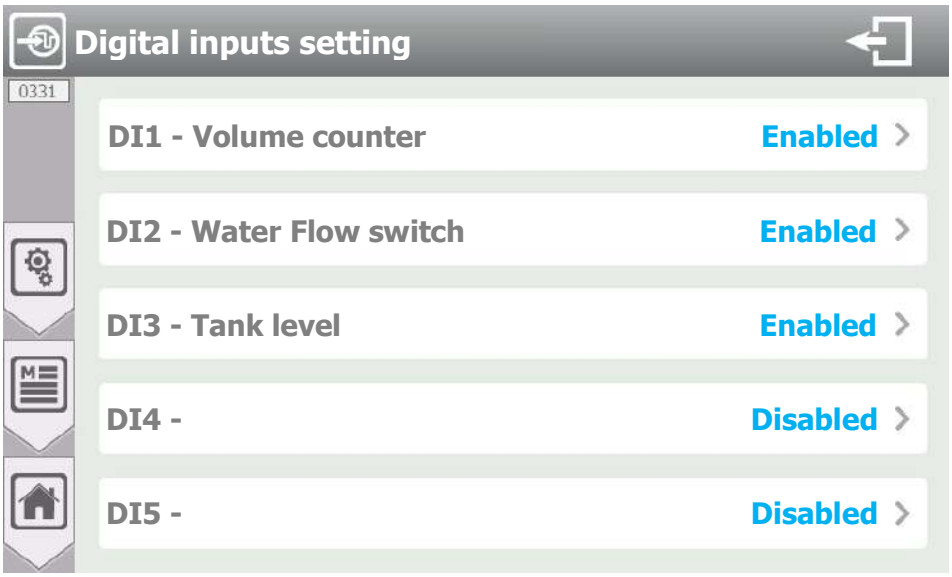
**To delete an input contact:**

- You must select « NONE » from the list of functions and save your configuration by pressing the "SAVE" button.

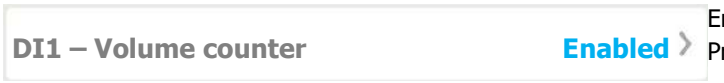
3) Menu « Setup menu » - « DIGITAL INPUTS » [0331]


« DIGITAL INPUTS » menu will allow you to access the configuration of the sensors that will be connected on the digital inputs.

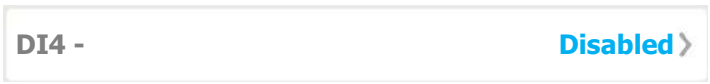
Press to open the following screen.




Screen presents digital inputs that are already configured and those that are not used. By pressing an already configured entry, you can change its configuration, or pressing an unused entry, configure its installation.




Entry already configured.
Press to edit its configuration.



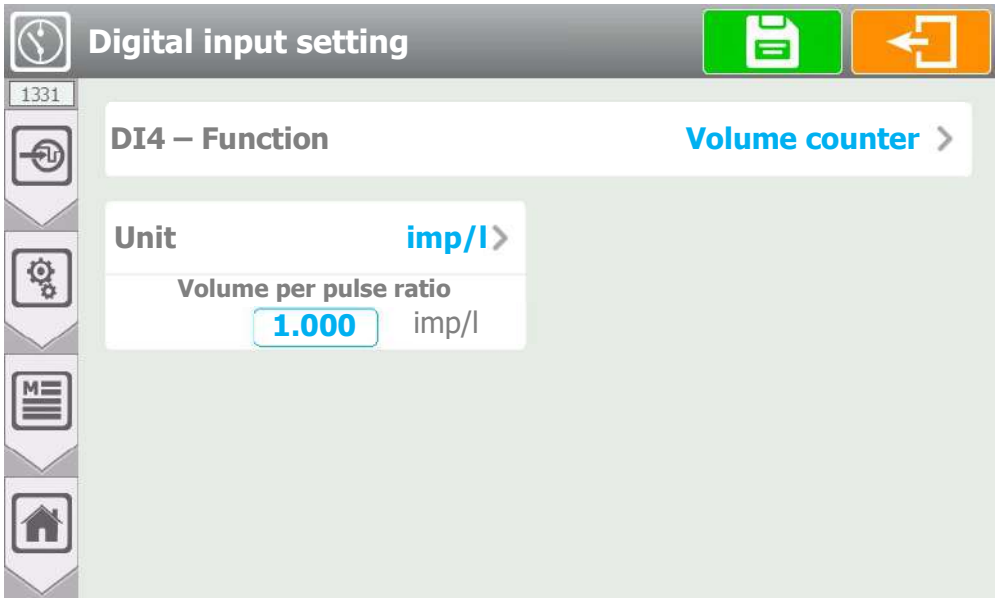

Entry unused.
Press to configure its installation.

DI1 to DI5 Water Flow switch, Remote control command, Tank level, Flow meter, Volume counter.

For your comfort, you will find the notation of the RIx, SIx and AIx inputs silkscreen in front of the corresponding connection terminal block of your device.

a) Digital input setting [1331]

**Special case of a Volume counter**



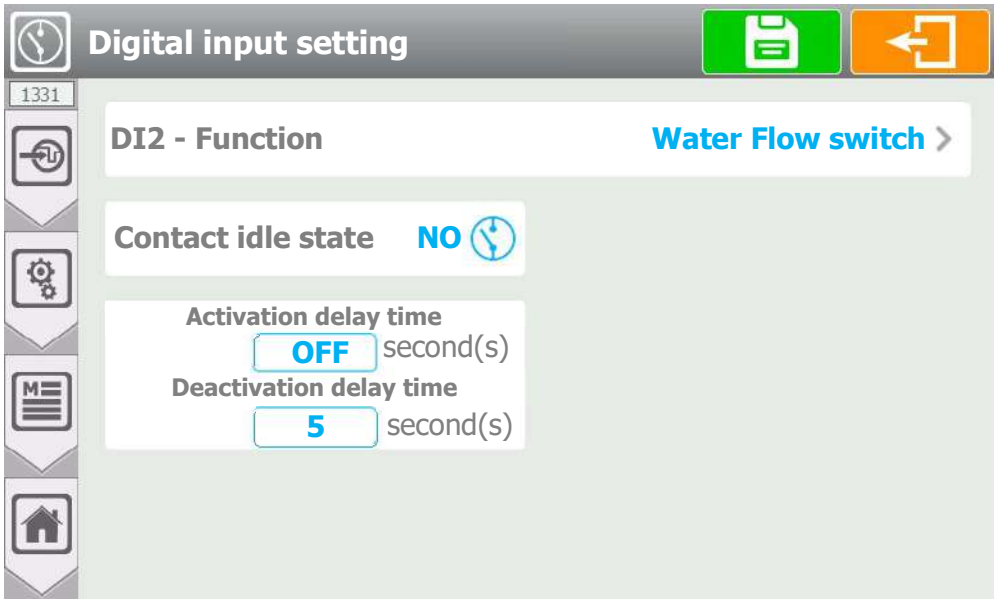

- **DI1 – Function** **Volume counter**
  - Digital input operation mode selection, on this selection button we find the information of the input in the process of modification (**DI1**) and the currently selected function (**Volume counter**). Press to change it.

- **Unit imp/l**
  - Select flowrate unit, selection button displays the information of the currently selected unit (**imp/l**). Press to change it.

- **Volume per pulse ratio 1.000** imp/l
  - Enter the pulse weight for flow calculation. Here the current value is (**1.000**).
    This value is directly related to your volume counter, to calculate it, you must refer to the volume counter documentation.
    Press to open the numeric keyboard and enter the desired value.

**To delete the input configuration:**
You must select « NONE » from the list of functions and save your configuration by pressing the "SAVE" button.

**« Special case of a Water Flow Switch »**




➢ **DI2 - Function** **Water Flow switch**

- Digital input operation mode selection, on this selection button we find the information of the input in the process of modification (**DI2**) and the currently selected function (**Water Flow switch**). Press to change it.

➢ **Contact idle state NO**

- Choice of idle state to be taken into account, this check box contains the information currently selected (**NO**).
  Press to toggle **NO** (normally open) mode to **NC** (normally closed) mode.

➢ **Activation delay time** OFF Second(s)

- Enter the time that the input must remain during its activation before the information is taken into account. Here it is (**OFF**) seconds.
  Press to open the numeric keyboard and enter the desired value.
  Adjustment possible from **0 to 240** Second(s).

➢ **Deactivation delay time 5** Second(s)

- Same as before, but for reverse state.

**To delete the input configuration:**

- You must select « NONE » from the list of functions and save your configuration by pressing the "SAVE" button.

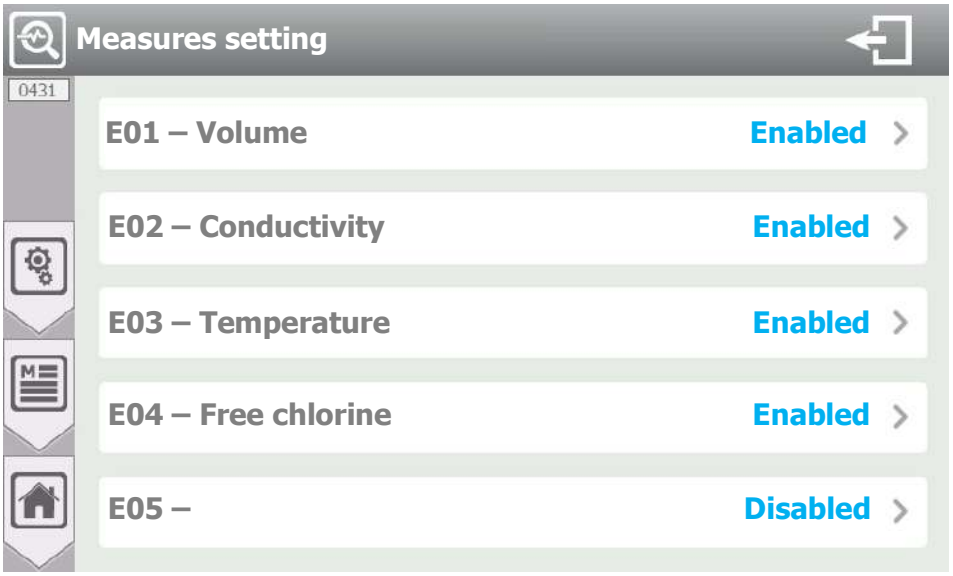
Same layout and options for Tank level, Remote control / state.

4) Menu « Setup menu » - « MEASURES » [0431]

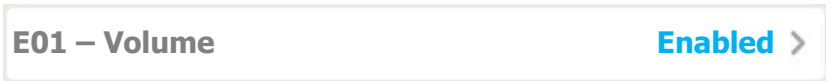

« MEASURES » menu will allow you to access the configuration of the measurements managed and displayed by the controller. This can be a "simple" measurement with a sensor or a calculation with multiple sensors. The device will give you a list of possible parameters based on the sensors you have configured previously.
Press to open the following screen.

If the option « **Create a parameter automatically for each sensor**» is enabled when opening this screen, the list of parameters "simple" will already be present.

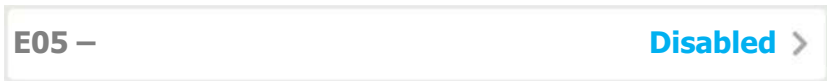
The order of the parameters is predefined.
E01 – Volume
E02 – Conductivity
E03 – Temperature
E04 & E05 – Depend of connected probes.




The screen shows the parameters that are already configured and those not used. You can, by pressing a parameter already configured; change its configuration, or by pressing a parameter not used configure it.

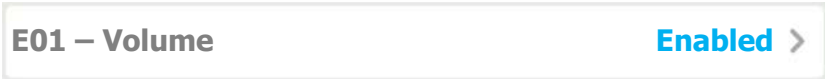



Parameter already configured.
Press to edit its configuration.

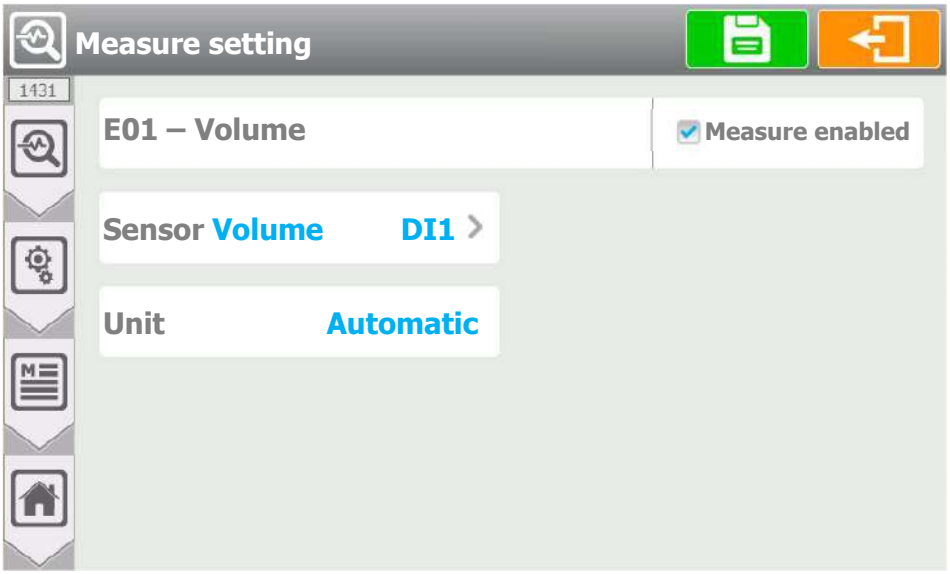



Parameter not used.
Press to start its configuration.

a) Volume measure setting configuration [1431]




Press to open the following screen.




➢ **E01 – Volume** **Sensor enabled**

- By checking or unchecking the check box you can choose to enable/disable the conductivity sensor. It's disabled by default.

➢ **Sensor Volume DI1**

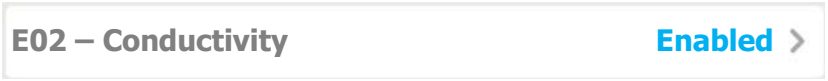
- Select the type of sensor to associate to the measurement, on this selection button we find the information of type (**Volume**) and input (**DI1**). Press to change it.

➢ **Unit Automatic**

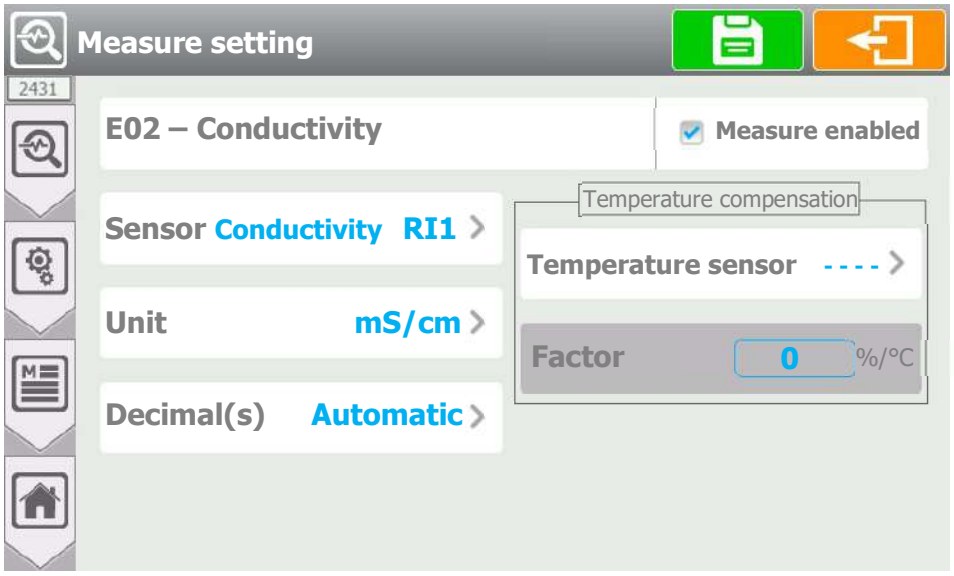
- Sensor unit measurement information. The system will adapt automatically the unit depending of the value. This option is blocked.

When selecting the measurement, the controller will automatically complete the parameter configuration files using the information from the first compatible sensor available in its list. You can change this configuration if necessary.

b) Conductivity measure setting configuration [2431]




Press to open the following screen.




- **E02 – Conductivity** **Sensor enabled**
  - By checking or unchecking the check box you can choose to enable/disable the conductivity sensor. It's disabled by default.

- **Sensor Conductivity RI1**
  - Select the type of sensor to associate to the measurement, on this selection button we find the information of type (**Conductivity**) and input (**RI1**). Press to change it.

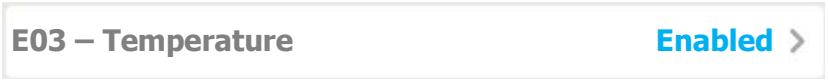
- **Unit mS/cm**
  - Sensor unit measurement selection, on this selection button we find the information of the currently selected unit (**mS/cm**). Press to change it.

- **Decimal(s) Automatic**
  - Select the number of decimals to display, on this selection button we find the number information (**Automatic**). Press to change it.

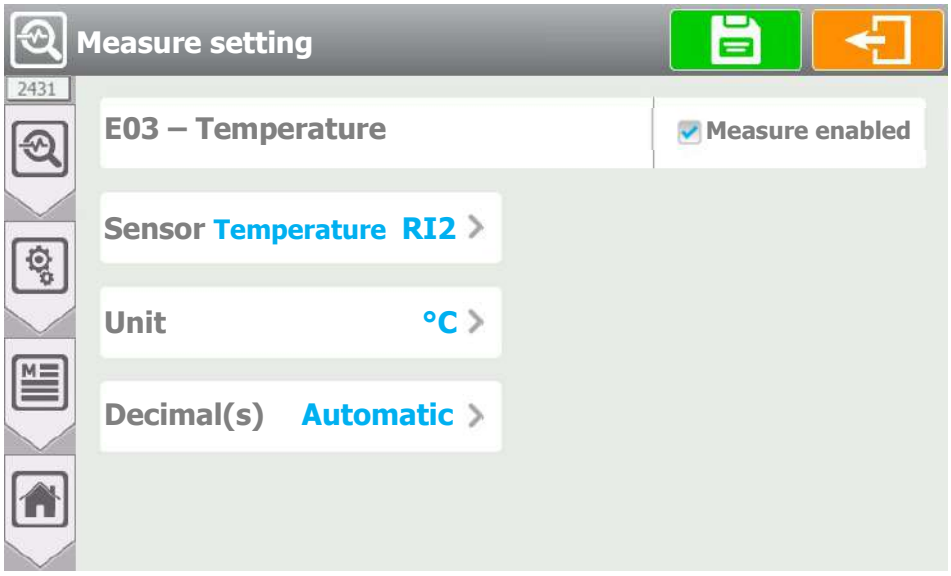
- **Temperature sensor**
  - Conductivity measurement is dependent on the temperature of the environment. Here you have the possibility to select a temperature sensor (if there is one installed) which will be used to adapt the measurement made in correlation with the temperature of the environment. The conductivity value displayed will then be the compensated value and no longer the measured value.
  - On this selection button we find the information of the used entry, here none (**- - -**). Press to change it.

- **Factor 0** %/°C
  - If you select a temperature sensor, the compensation factor input becomes active and you must enter the desired value.
    Press to open the numeric keyboard and enter the desired value.
    Adjustment possible from **-99,0 to + 99,0** %/°C.

c) Temperature measure setting configuration [2431]




Press to open the following screen.



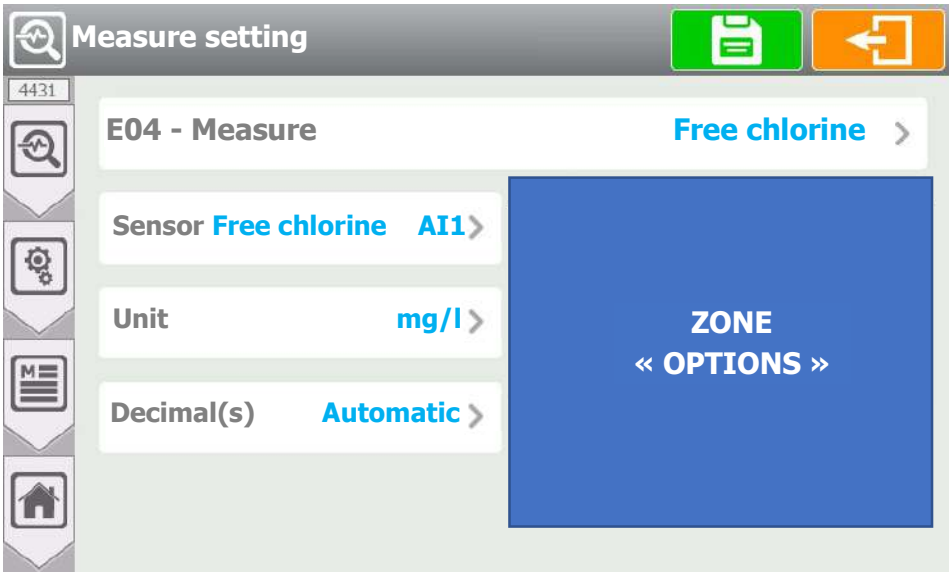

➢ **E03 – Temperature** **Sensor enabled**
- By checking or unchecking the check box you can choose to enable/disable the conductivity sensor. It's disabled by default.

➢ **Sensor Temperature RI2**
- Select the type of sensor to associate to the measurement, on this selection button we find the information of type (**Temperature**) and input (**RI2**). Press to change it.

➢ **Unit °C**
- Sensor unit measurement selection, on this selection button we find the information of the currently selected unit (**°C**). Press to change it.

➢ **Decimal(s) Automatic**
- Select the number of decimals to display, on this selection button we find the number information (**Automatic**). Press to change it.

d) Measure setting configuration [4431]




« Base » screen of a parameter configuration. Depending on the parameter chosen.

- **E04 - Measure Free chlorine**
  - Parameter type selection, on this selection button we find the information of the parameter in the process of modification (**E04**) and the currently selected measurement type (**Free chlorine**). Press to change it.

The choice of measurement is directly related to the sensors installed and configured. The controller will only give you measurements with the configured sensors.

- **Sensor Free chlorine AI1**
  - Select the type of sensor to associate to the measurement, on this selection button we find the information of type (**Free chlorine**) and input (**AI1**). Press to change it.

The choice of the sensor is directly related to the type of measurement. The controller will only offer you the sensors compatible with the selected measurement.

- **Unit mg/l**
  - Sensor unit measurement selection, on this selection button we find the information of the currently selected unit (**mg/l**). Press to change it.

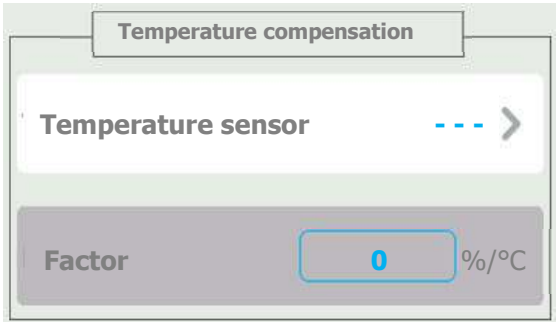
- **Decimal(s) Automatic**
  - Select the number of decimals to display, on this selection button we find the number information (**Automatic**). Press to change it.

Controller will give you the list of possible decimals.

**To delete a measurement or calculation:**

- You must select « NONE » in the measurement type and save your configuration by pressing the "SAVE" button.

e) Conductivity zone options

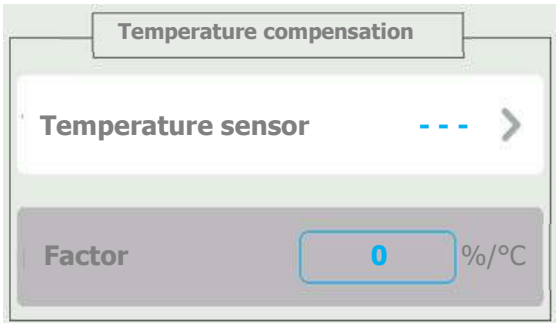


➢ **Temperature sensor**
- Conductivity measurement is dependent on the temperature of the environment. Here you have the possibility to select a temperature sensor (if there is one installed) which will be used to adapt the measurement made in correlation with the temperature of the environment. The conductivity value displayed will then be the compensated value and no longer the measured value.
- On this selection button we find the information of the used entry, here none (**- - -**).
  Press to change it.

Make sure that your sensor doesn't already have internal temperature compensation. Adding a new compensation here would distort the measurement.

➢ **Factor 0** %/°C
- If you select a temperature sensor, the compensation factor input becomes active and you must enter the desired value.
  Press to open the numeric keyboard and enter the desired value.
  Adjustment possible from **-99,0 to + 99,0** %/°C.

f) Salinity zone options




If your installation has:

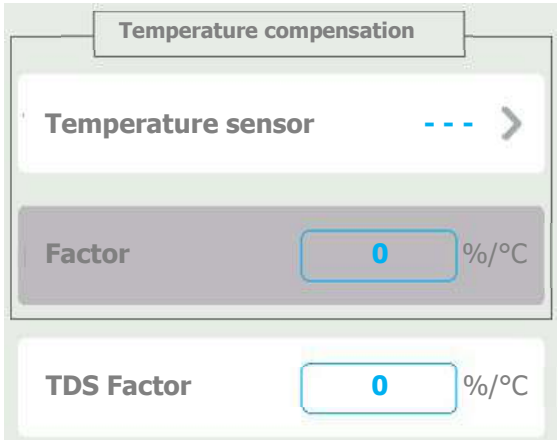
- Conductivity sensor

  ⇨ **Salinity** calculation

➢ **Temperature sensor**
- See conductivity parameter

➢ **Factor 0** %/°C
- See conductivity parameter.

g) TDS zone options




If your installation has:

- Conductivity sensor

  ⇨ **Salinity** calculation

➢ **Temperature sensor**
- See conductivity parameter

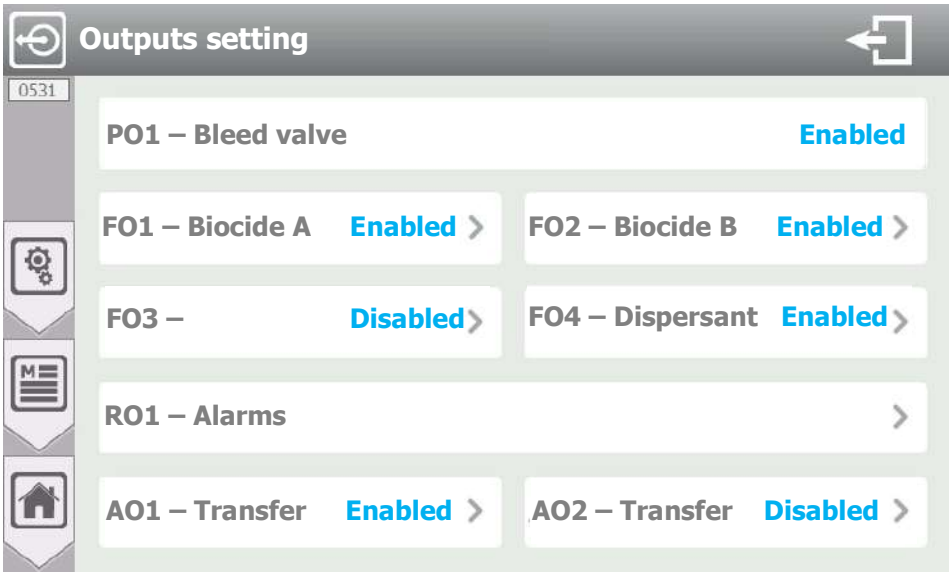
➢ **Factor 0** %/°C
- See conductivity parameter

- **Factor TDS 0** %/°C
- The TDS calculation is based on a factor that you need to fill in here.
  Press to open the numeric keyboard and enter the desired value.
  Adjustment possible from **1,0 to 444,0** %.

5) Menu « Setup menu » - « OUTPUTS » [0531]


« OUTPUTS » menu will allow you to access the configuration of relays and 4…20mA outputs that will be used.

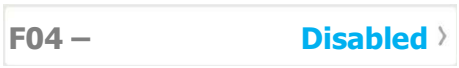
Press to open the following screen.




The screen shows the outputs that are already configured and those not used. You can, by pressing and already configured output, changing its configuration, or pressing an unused output, configure its installation.

**PO1 220V relay outputs is fixed for Bleed valve**
**FO1 & FO2 CRT relay outputs are fixed for Biocide A and Biocide B**
**FO3 CRT relay output could be used for Inhibitor or Dosing.**
**FO4 CRT relay output could be used for Dispersant or Dosing.**
**AO1 & AO2 are outputs used for transfer or dosing.**

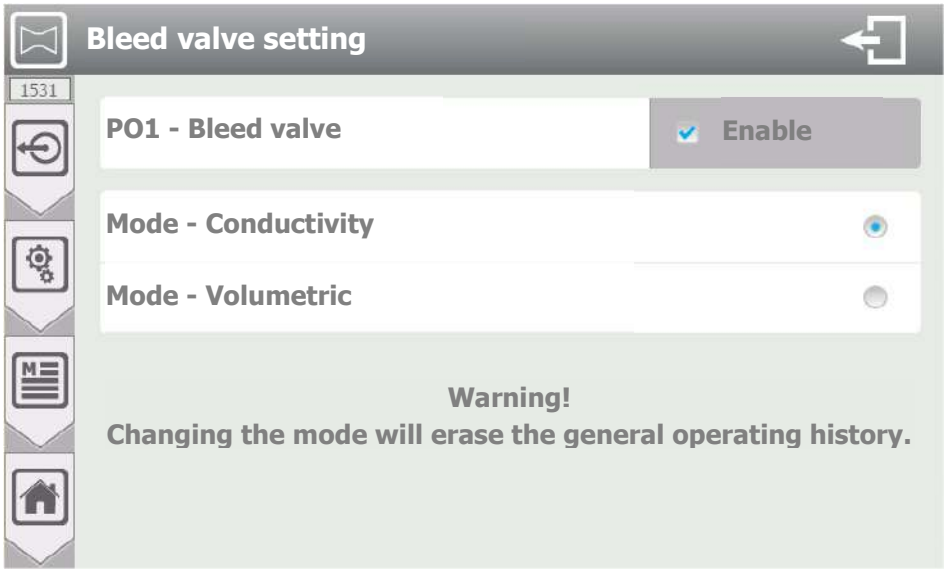

Output already configured.
Press to edit its configuration.




Output not used.
Press to configurate.

For your comfort, you will find the notation of the outputs POx, FOx, ROx, AOx screen-printed in front of the connection terminal block of your device.

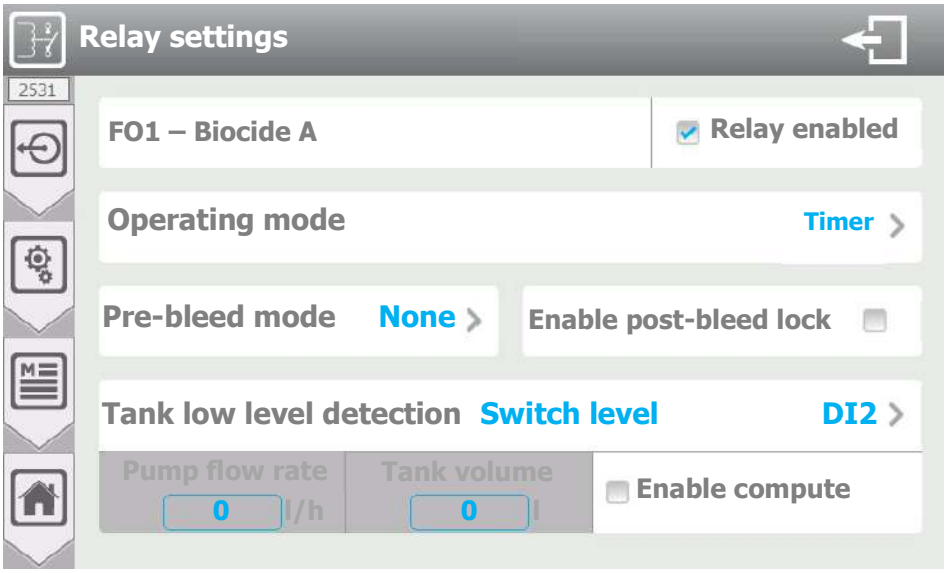
a) 220V Relay outputs [0531]




- **PO1 - Bleed valve Enabled**
  - This window shows the status of the Bleed valve. You can't change it from this window.

- **Mode - Conductivity / Volumetric**
  - Selection of the main running mode of your coolpac controller.

b) CRT Relay outputs FO1 & FO2[1531]




- **FO1 Biocide A**
  - By checking or unchecking the check box you can choose to enable/disable the Biocide A relay. It's disabled by default
- **Operating mode Timer**
  - Operating mode selection, on this selection button we find the selected operating mode information (**Timer**). Press to change it.

- **Pre-bleed mode None**
  - Pre-bleed mode selection, on this selection button we find the selected mode information (**None**). Press to change it.

- **Enable post-bleed lock**
  - By checking or unchecking the check box you can choose to enable/disable the post-bleed lock. It's disabled by default.

- **Tank low level detection** **Switch level DI2**
  - Selection of the tank low level detection to which this relay is attached, on this selection button we find the information of type of parameter (**Switch level**) and its "code" (**DI2**). Press to change it.

- **Pump flow rate 0** l/h
  - Enter the value of the pump flow rate. The value will be used in the calculation of the remaining level in the tank. Here the value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
    Possible adjustment from **0.01 to 1000.00** l/h

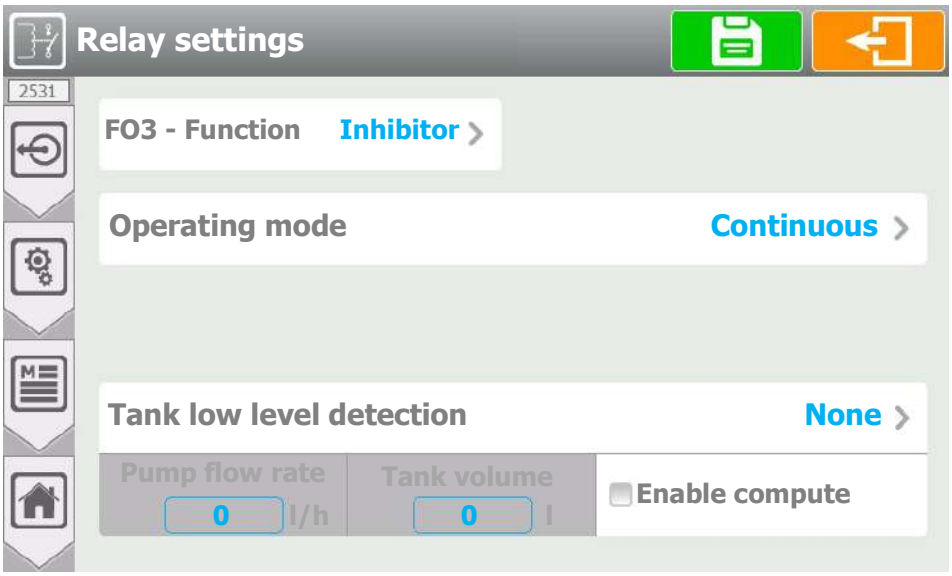
- **Tank volume 0** l
  - Enter the value of the tank volume. The value will be used in the calculation of the remaining level in the tank. Here the value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
    Possible adjustment from **0 to 65000** l

**Compute enables**

The "Pump flow rate" and "Tank volume" windows are greyed out. You must check the "Enable compute" box to make them active and to active the calculation of the remaining volume in the tank of Biocide A.

c) CRT Relay outputs FO3 & FO4 [2531]

**Special "Inhibitor" or "Dispersant" case**

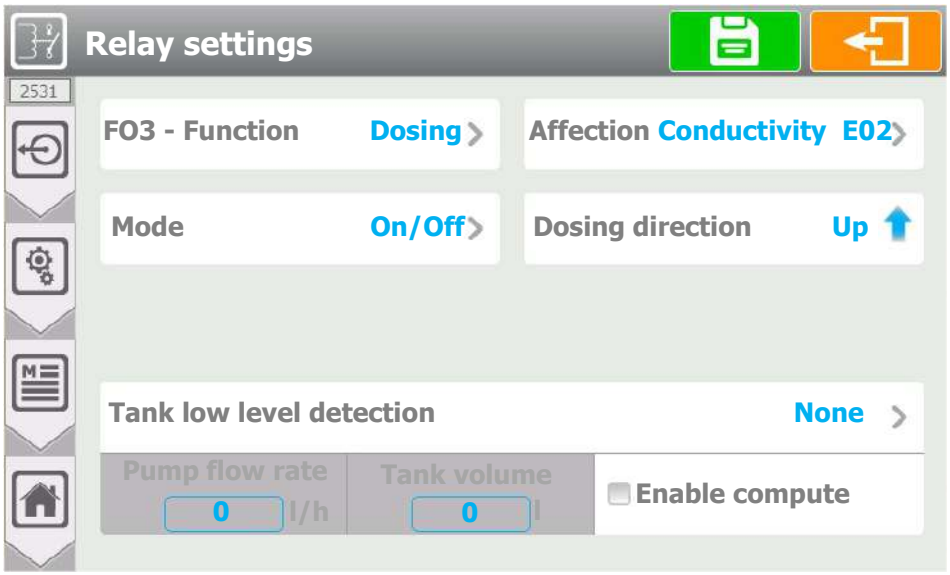



- **FO3 Function** **Inhibitor**
  - Output CRT relay operation mode selection, on this selection button we find the information of the output being modified (**FO3**) and the function currently selected (**Inhibitor**). Press to change it.

- **Operation** **Continuous**
  - Operating mode selection, on this selection button we find the selected operating mode information (**Continuous**). Press to change it

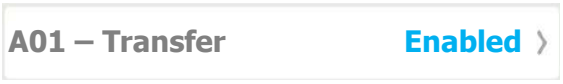
- **Tank low level detection, Pump flow rate, Tank volume, Enable compute**
  - See previous paragraph.

**Special Dosing function**



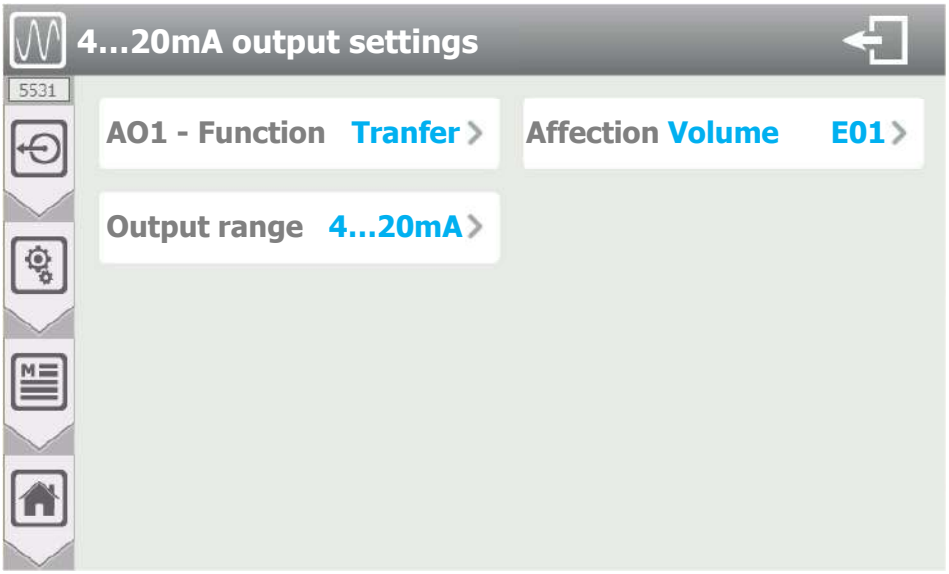

- **FO3 Function Dosing**
  - Output CRT relay operation mode selection, on this selection button we find the information of the output being modified (**FO3**) and the function currently selected (**Dosing**). Press to change it.
- **Affection Conductivity E02**
  - Selection of the parameter to which this relay is attached, on this selection button we find the information of type of parameter (**Conductivity**) and its « code » (**E02**). Press to change it
- **Mode On/Off**
  - Dose mode selection, on this selection button you will find the selected mode information (**On/Off**). Press to change it.
- **Dosing direction Up**
  - Dosage direction choice, on this selection button we find the information of the selected dosage direction (**Up**).
    Press to toggle the mode from **Up** to **Down** and change the dosage direction
- **Tank low level detection,**
  - See previous paragraph

h) 4…20mA outputs [4531]




Press to open the following screen.

**Special case of a Tranfer function**




➢ **AO1 – Function Tranfer**

- Output 4…20mA function mode selection, on this selection button you can choose the function of the 4…20mA output (**AO1**).
  Press to change it.

➢ **Affection Volume E01**

- Selection of the parameter to which this output 4…20mA is attached, on this selection button we find the configuration type information (**Volume**) and its « code » (**E01**).
  Press to change it.

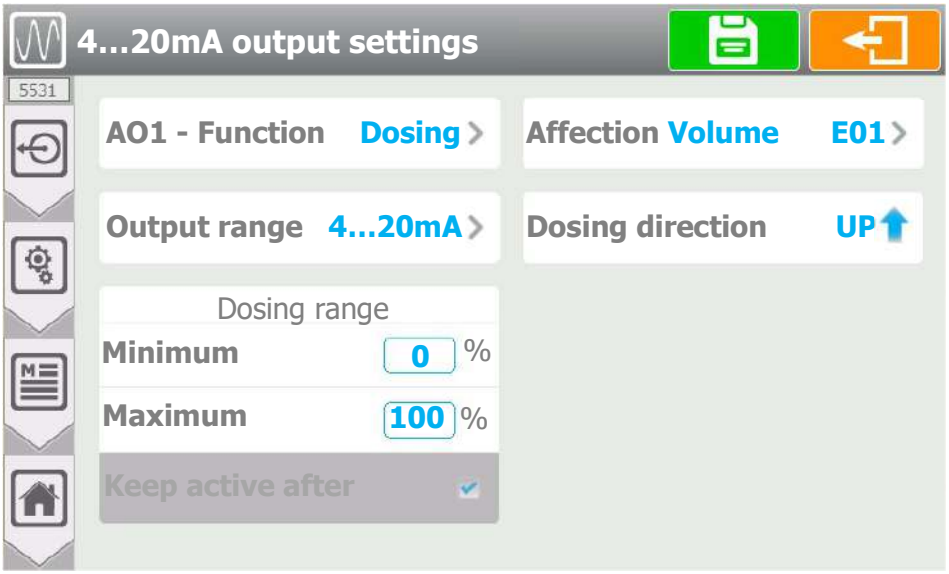
➢ **Output range 4…20mA**

- Selection of the Ooutput range.
  Press to choose between **4…20mA** and **0…20mA.**

**To delete a 4…20mA output:**

- You must select « None » in the 4…20mA output function and save your configuration by pressing the "SAVE" button.

**Special case of a Dosing function**



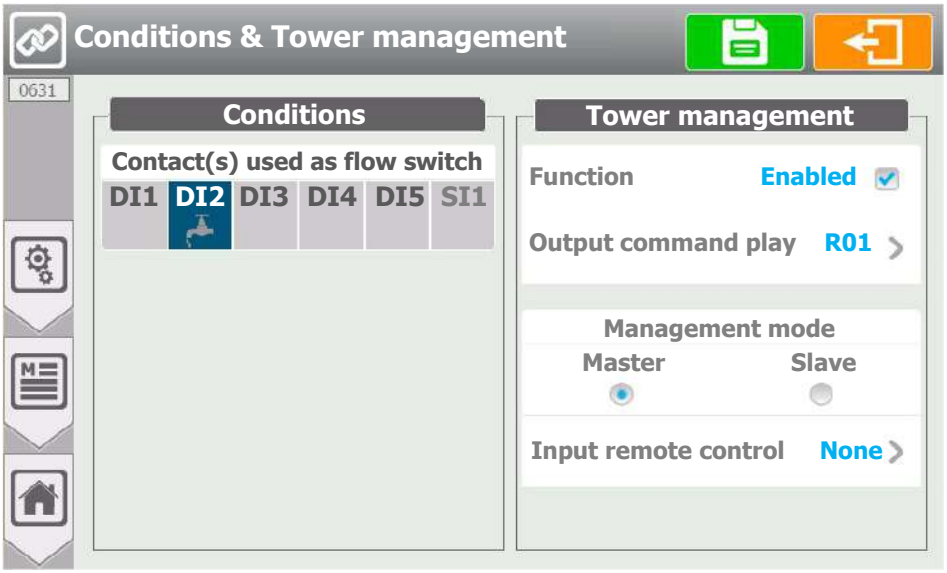

- **AO1 – Function Dosing**
  - Output 4…20mA function mode selection, on this selection button you can choose the function of the 4…20mA output (**AO1**).
    Press to change it.
- **Affection Volume E01**
  - Selection of the parameter to which this output 4…20mA is attached, on this selection button we find the configuration type information (**Volume**) and its « code » (**E01**).
    Press to change it.
- **Output range 4...20mA**
  - Selection of the Ooutput range.
    Press to choose between **4...20mA** and **0...20mA.**
- **Dosing direction Up**
  - Dosage direction choice, on this selection button we find the information of the selected dosage direction (**Up**).
    Press to toggle the mode from **Up** to **Down** and change the dosage direction.
- **Minimum 0 %**
  - Enter the value of the Minimum. Here the value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
    Possible adjustment from **0 to 100 %**
- **Maximum 0 %**
  - Enter the value of the Maximim. Here the value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
    Possible adjustment from **0 to 100 %**
- **Keep active after**
  - The box is automatically active and cannot be modified

**To delete a 4...20mA output:**
You must select « None » in the 4…20mA output function and save your configuration by pressing the "SAVE" button.

6) Menu « Setup menu » - « CONDITIONS & FUNCTIONS » [0631]


« CONDITIONS & FUNCTIONS » menu will allow you to access the configuration of the flow switch conditions.

Press to open the following screen.




Selection of the contact(s) to be taken into account, for the control of the flow switch. "Multiple" selection, press the contact you want to associate to this parameter. Here SI1 contact is selected.

a) Conditions


Contact selected.
Press to unselect the contact.


Contact not selected.
Press to select the contact


Contact not selectable.

b) Tower management

- **Function Enabled**
  - Check the box to activate the "Tower management" function
    The "Tower Management" function is disabled originally.
- **Output command relay FO4**
  - Output command relay selection, on this selection button you can choose the relay that will command the output.
    Press to change it.
- **Management mode Master Slave**
  - Choose the tower management mode associated with your controller.
    Master or Slave.
- **Input remote control / state**
  - Input remote control / state selection, on this selection button you can choose the input remote control / state.
    Press to change it

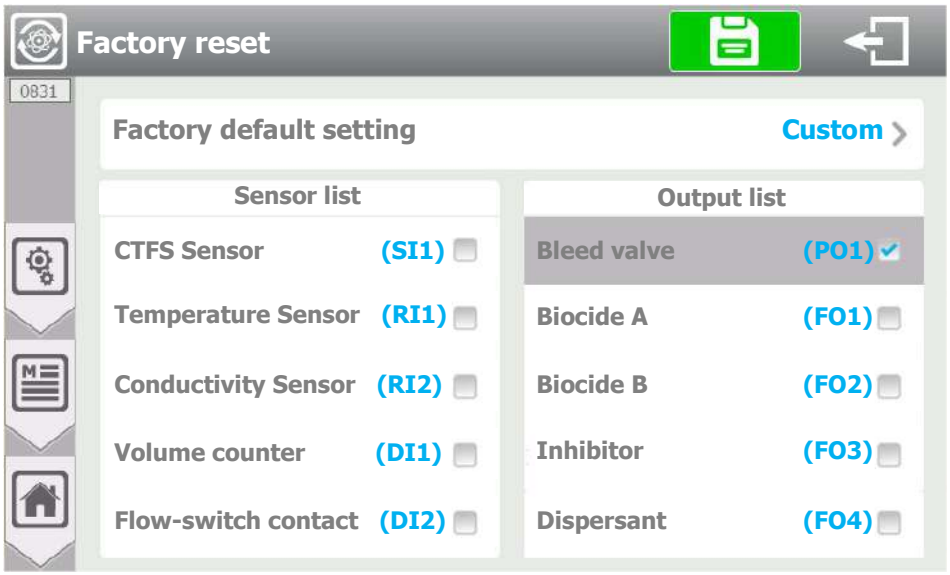
7) Menu « Setup menu » - « COMMUNICATION » [0731]


See. Part 3 « DOC0486 - Notice COOLTOUCH Partie 3 - Communication (EN)».

8) Menu « Setup menu » - « RESET FACTORY » [0831]


« RESET FACTORY » menu will allow you to reset the regulator configuration by choosing some pre-set operating options.

Press to open the following screen.




- **Factory defaut setting**
  - Click on it to select the desired default setting:
    - **Custom** (select sensors and outputs)
    - **Configuration 1 : CTFS conductivity Volume – Bio A - Inhibitor**
    - **Configuration 2 : CTFS conductivity Volume – Bio A – Inhibitor - ORP**
    - **Configuration 3 : CTFS conductivity Volume – Bio A – Inhibitor - Chlorine**
    - **Configuration 4 : Volumetric mode Volume – Bio A – Inhibitor**
    - **Configuration 5 : Resistive conductivity Volume – Bio A – Inhibitor**

- **Sensors list**
  - Select desired sensor configuration from predefined configuration:
    - **CTFS Sensor (SI1)**
    - **Temperature Sensor (RI1)**
    - **Conductivity Sensor (RI2)**
    - **Volume counter (DI1)**
    - **Flow-switch contact (DI2)**

- **Output list**
  - Select desired output configuration from predefined configuration:
    - **Biocide A (FO1)**
    - **Biocide B (FO2)**
    - **Inhibitor (FO3)**
    - **Dispersant (FO4)**

**Bleed valve (PO1)** is always selected.

➢ **Press « SAVE » button to validate your configuration.**

The following window appears asking you if you really want to clear the current configuration.

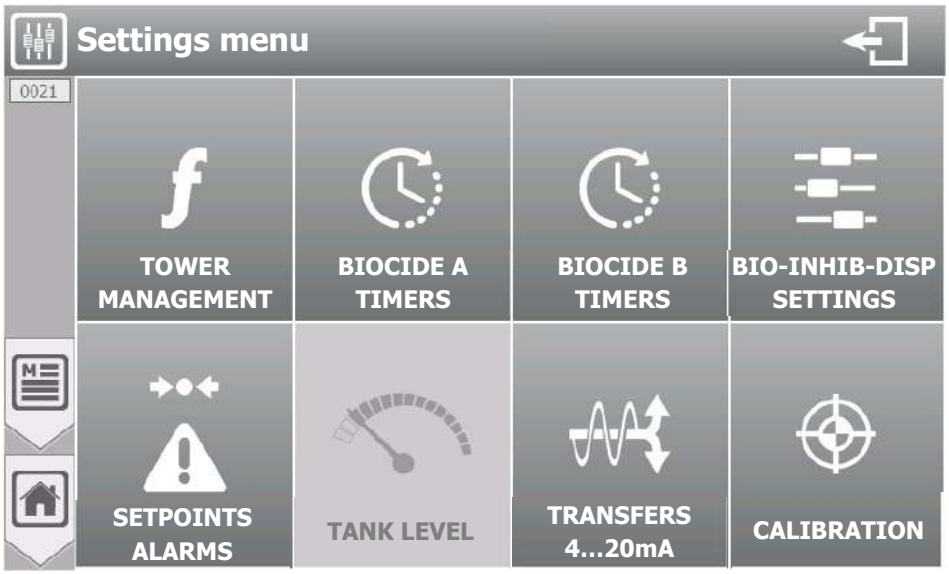

- You may or may not reset the "User" or "Communication" configurations in addition to the "Setup and Configuration" section

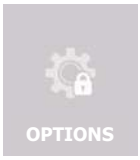

It's also possible, if technical support is needed or requested, to reset only the communication or user part by checking only the box concerned.

## VI. Programming screen « SETTINGS » [0021]


« SETTINGS » menu will allow you to access the settings of your configuration, you must have finished the "INSTALLATION" part before making the "SETTINGS".
Press to open the following screen.

**« Settings » menu**



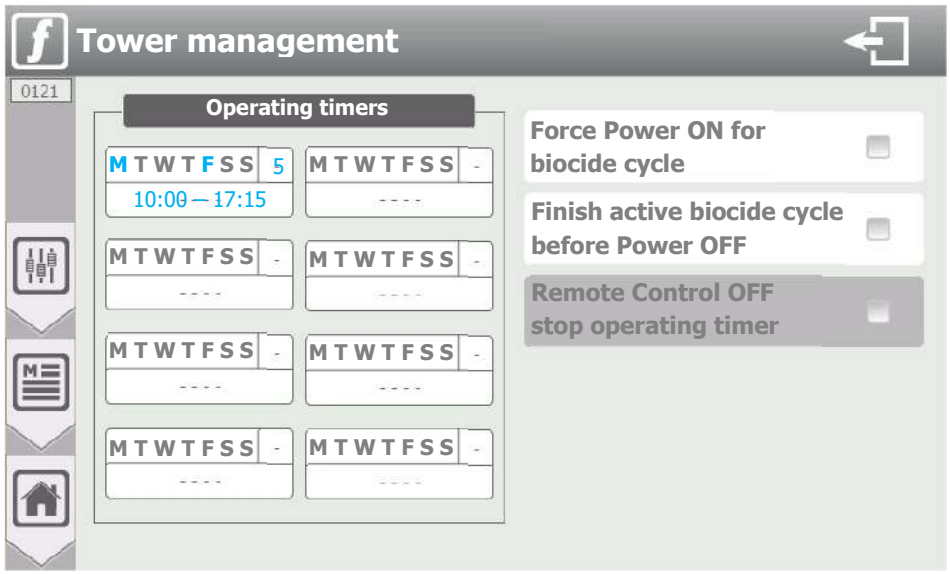




« Options » menu of the « Settings » menu can be locked by the installer.

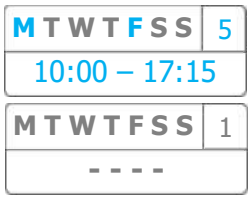
### 1) Menu « Settings » - « TOWER MANAGEMENT » [0121]


« TOWER MANAGEMENT » menu will allow you to access the options available in the setting part.

Press to open the following screen.



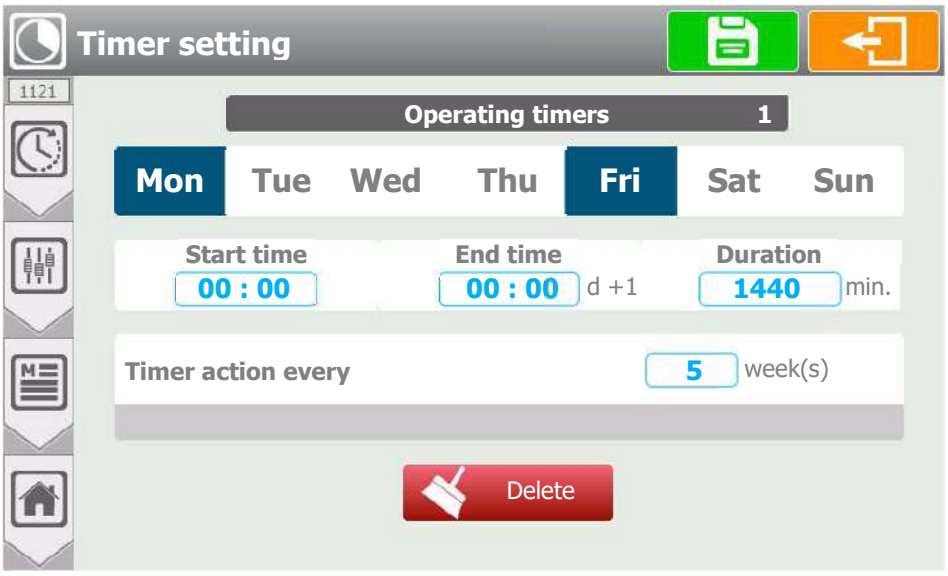
The screen shows the timers that are already configured and those not used. You can by pressing an already configured clock, changing its configuration, or pressing an unused clock, configure its installation.




Timer already set.
Press to edit configuration

Timer not used.
Press to edit configuration

- **Force Power ON for biocide cycle**
  - If this case is selected, the controller will activate the relay when it need to inject biocide event if it's out of "normal" running cycle of the tower, and keep it activate during all the biocide cycle.
- **Finish active biocide cycle before Power OFF**
  - If this case is selected, when the operating timer arrive to the end of the active timer, if a biocide cycle is in process, the controller keep the relay active until the end of the biocide cycle
- **Remote Control OFF stop operating timer**
  - If this case is selected, when the tower management remote control is remove during an operating timer slot, the relay is disable event is the timer cycle is not finish.




- **Monday – Tuesday – Wednesday – Thursday – Friday – Saturday – Sunday**
  - Selection of the day(s) of the week timer will be active. Type of "multiple" selection, press desired days to select/deselect. Here **Monday – Wednesday – Friday** are selected.
- **Start time 08:00 – End time 18:00 – Duration 405** min.
  - You have 2 possibilities:
    - Select Start time then End time and Duration will be automatically calculated.
    - Select Start time then the Duration you want, and the End time will be automatically calculated.

    Press Start time and/or End time or Duration one after the other to open the numeric keyboard and enter the desired value.
- **Time action every 5** week(s)
  - Weeks recurrence selection. Here the value entered is (**1**), timer active every week. Type 2 for 1 week/2, 3 for 1 week/3 etc. Adjustment possible from **1 to 52**

To save the timer press 

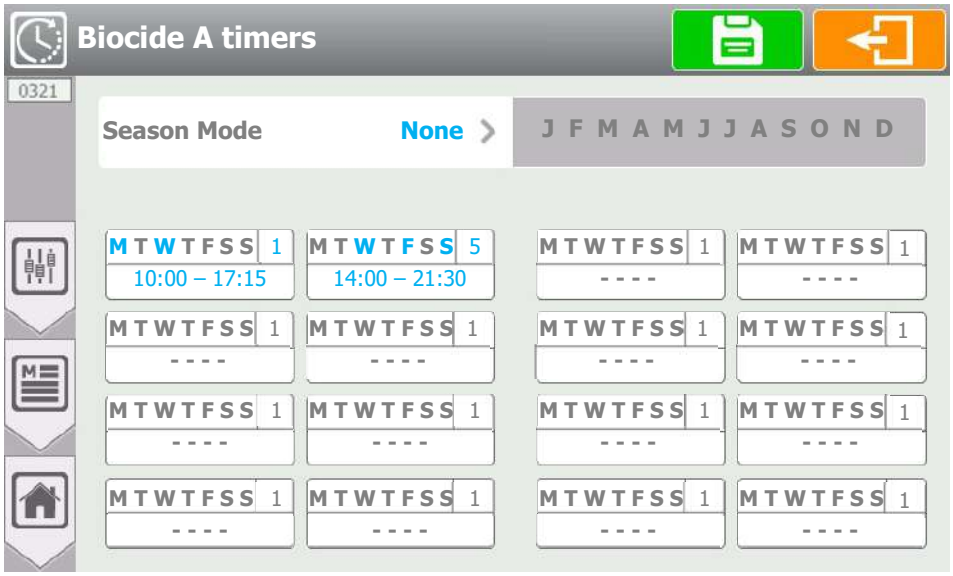
To Delete a timer, enter in the timer, press  and 

2) Menu « Settings » - « BIOCIDE A TIMERS » [0221]


« Biocide A timers » menu will allow you to adjust the timers of the dosage of the Biocide A.

Press to open the following screen.

**"None" season mode case**



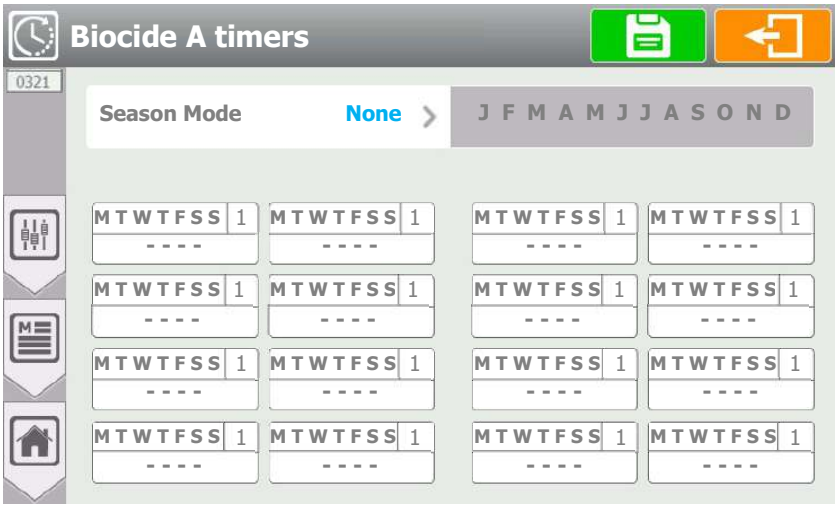

The screen shows the timers that are already configured and those not used. You can by pressing an already configured clock, changing its configuration, or pressing an unused clock, configure its installation.

- **Season mode None**
  - Selection of the season mode you want to use for your Biocide timers. You have 4 possibilities **None, Summer, Winter, Summer/Winter**. Press on it to change it.


Timer already set.
Press to edit configuration

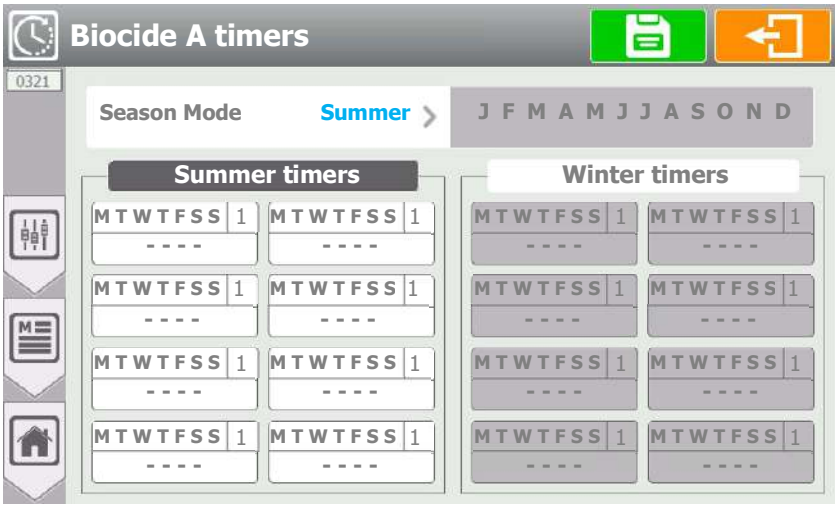

Timer not used.
Press to edit configuration

**"None" season mode case**




- You have 16 timers at your disposal
- All the timers are valid throughout the year (From January to December)

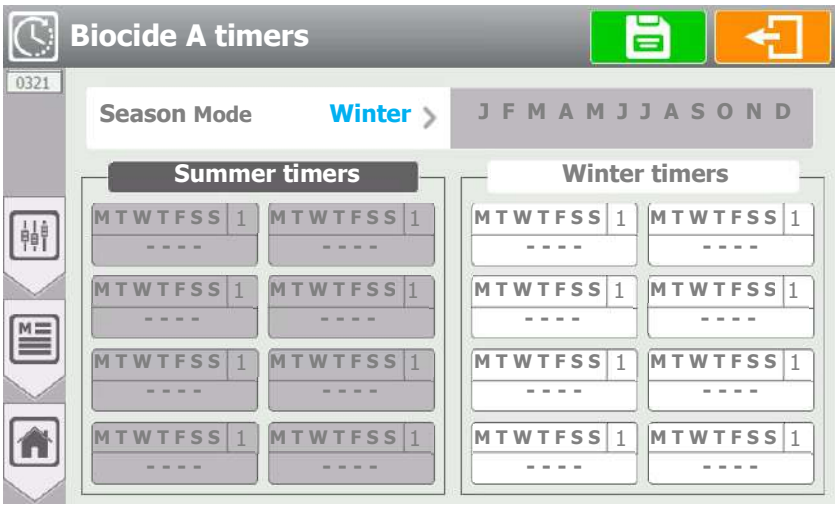
**"Summer" season mode case**




➢ You have 8 timers (in white in the "Summer" part) at your disposal

➢ These timers are valid throughout the year (From January to December)

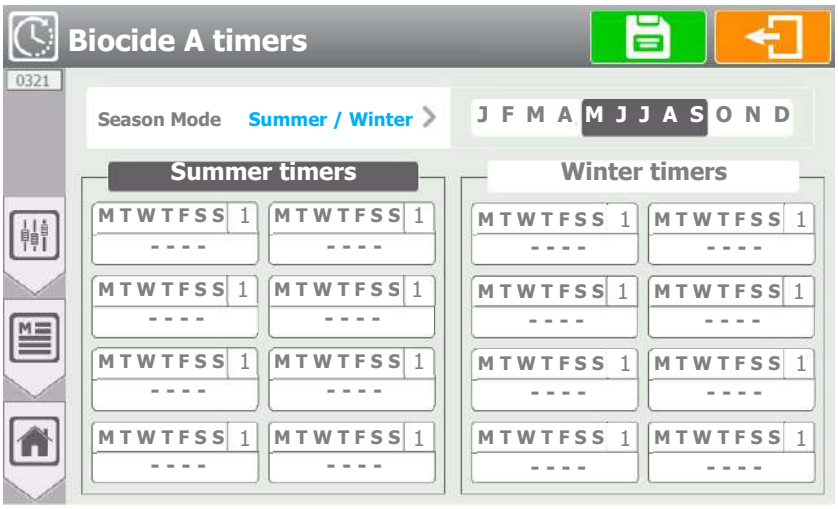
**"Winter" season mode case**




➢ You have 8 timers (in white in the "Winter" part) at your disposal

➢ These timers are valid throughout the year (From January to December)

**"Summer / Winter" season mode case**




➢ You have 16 timers at your disposal

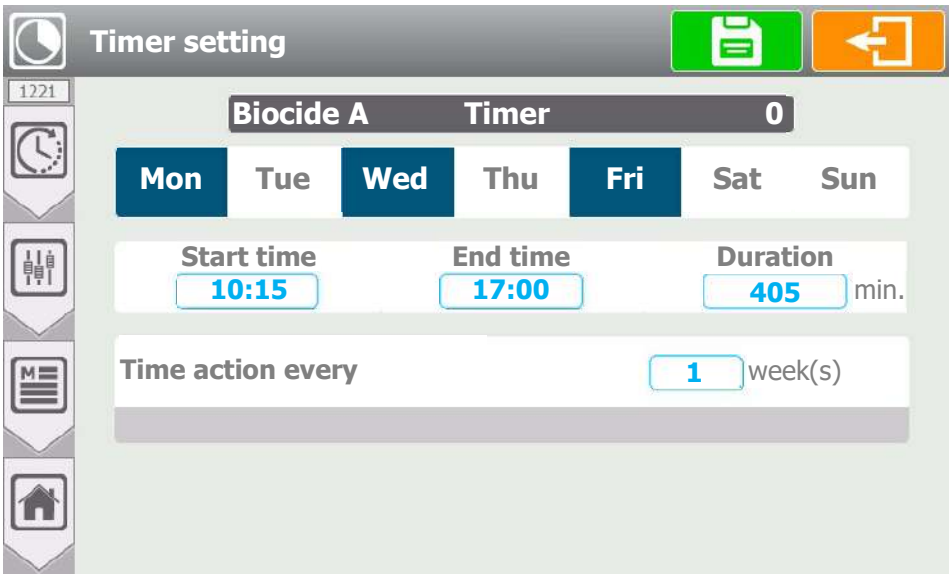
➢ The 8 timers of the "Summer" part will be active for the months of May, June, July, August and September (In grey part)

➢ The 8 timers of the "Winter" part will be active for the months of January, February, March, April, October, November and December (In white part)


Click on it to open the next pop-up.


Move the sliders to set the seasons you want.


Press to open the following screen.




- **Monday – Tuesday – Wednesday – Thursday – Friday – Saturday – Sunday**
  - Selection of the day(s) of the week timer will be active. Type of "multiple" selection, press desired days to select/deselect. Here **Monday – Wednesday – Friday** are selected.
- **Start time 08:00 – End time 18:00 – Duration 405** min.
  - You have 2 possibilities:
    - Select Start time then End time and Duration will be automatically calculated.
    - Select Start time then the Duration you want, and the End time will be automatically calculated.

  Press Start time and/or End time or Duration one after the other to open the numeric keyboard and enter the desired value.
- **Time action every 1** week(s)
  - Weeks recurrence selection. Here the value entered is (**1**), timer active every week. Type 2 for 1 week/2, 3 for 1 week/3 etc. Adjustment possible from **1 to 52**

To save the timer press 

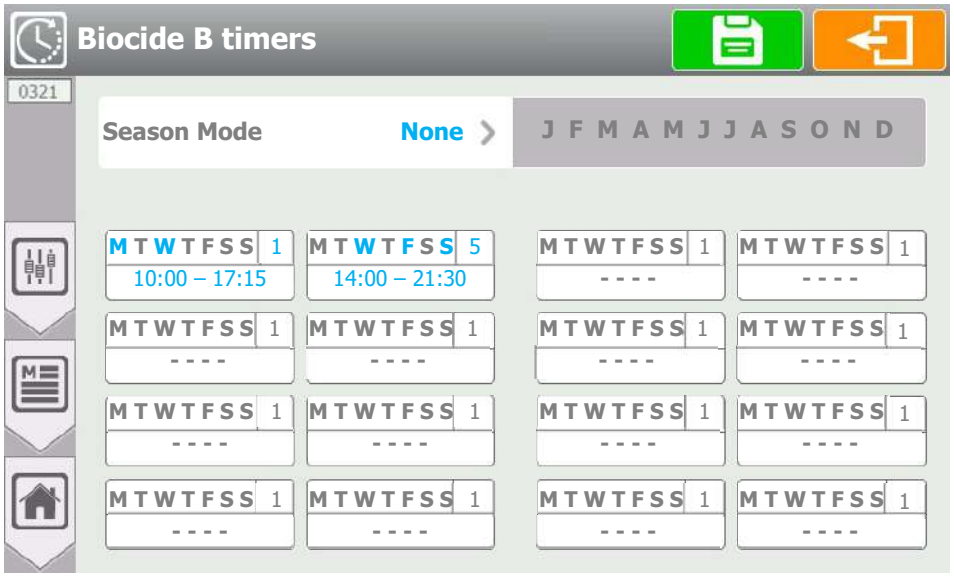
To Delete a timer, enter in the timer, press 

and 

3) Menu « Settings » - « BIOCIDE B TIMERS » [0321]


« Biocide B timers » menu will allow you to adjust the timers of the dosage of the Biocide A.

Press to open the following screen.

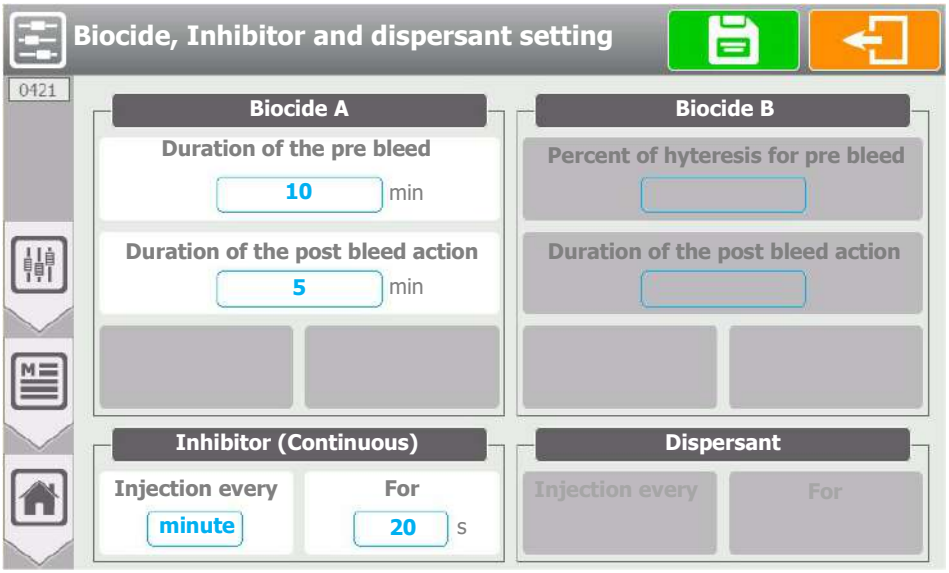



See paragraph above.

4) Menu « Settings » - « BIO-INHIB-DISP SETTINGS » [0421]


« BIO-INHIB-DISP SETTINGS » menu will allow you to adjust the settings of the parameters of the Biocides, inhibitor and dispersant.

Press to open following screen.




The screen presents the settings that are configured. You can by pressing an active parameter change its configuration. If it's greyed out it means that the corresponding output is not enabled.


Parameter enables.
Press to edit


Parameter disables.

d) Biocide:

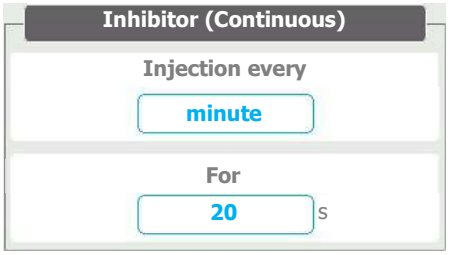
- **Pre bleed**
  - There are 2 possibilities for Pre bleed. The duration or the percent of hysteresis. It depends on the pre bleed mode you have chosen in the "Outputs setting".
  - In the Duration case, press to open the numeric keyboard and enter the desired value. Possible adjustment from **0 to 1440** min.
  - In the Percent case, press to open the numeric keyboard and enter the desired value. Possible adjustment from **0 to 100** %.

- **Duration of the post bleed action**
  - Enter the duration of the post bleed action value. Here the value is (**5**) min. Press to open the numeric keyboard and enter the desired value. Possible adjustment from **0 to 1440** min.

c) Inhibitor - Dispersant:

➢ **Injection**

- There are 3 possibilities that depend on the setting of the output.




**Continuous**

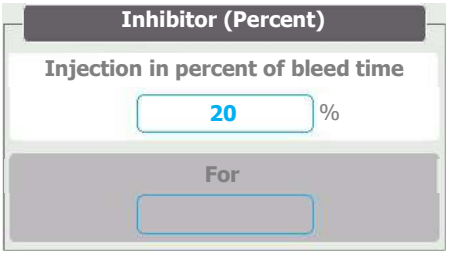
➢ **Injection every minute**

Inhibitor or dispersant is dosed at periodic intervals. During the purge period, operation is suspended. Press to toggle the mode from minute to hour.

➢ **For 20 s**

Enter the desired inhibitor or dispersant time value. Press to open the numeric keyboard and enter the desired value.

Possible adjustment in "Minute" mode from **0 to 59** s and in "Hour" mode from **0 to 3600** s



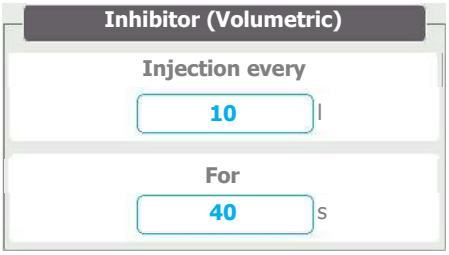

**Percent**

➢ **Injection in percent of bleed time 20 %**

Inhibitor or dispersant are dosed after desalination in proportion to the opening time of the valve.

Determination of the % ratio between the time of desalination and the time of dosing inhibitor or dispersant. Press to open the numeric keyboard and enter the desired value.

Possible adjustment from **0 to 100** %




**Volumetric**

➢ **Injection every 10 l**

Inhibitor or dispersant are dosed after counting a predefined volume. Press to open the numeric keyboard and enter the desired value.

Possible adjustment from **0 to 10000** l.

➢ **For 40 s**

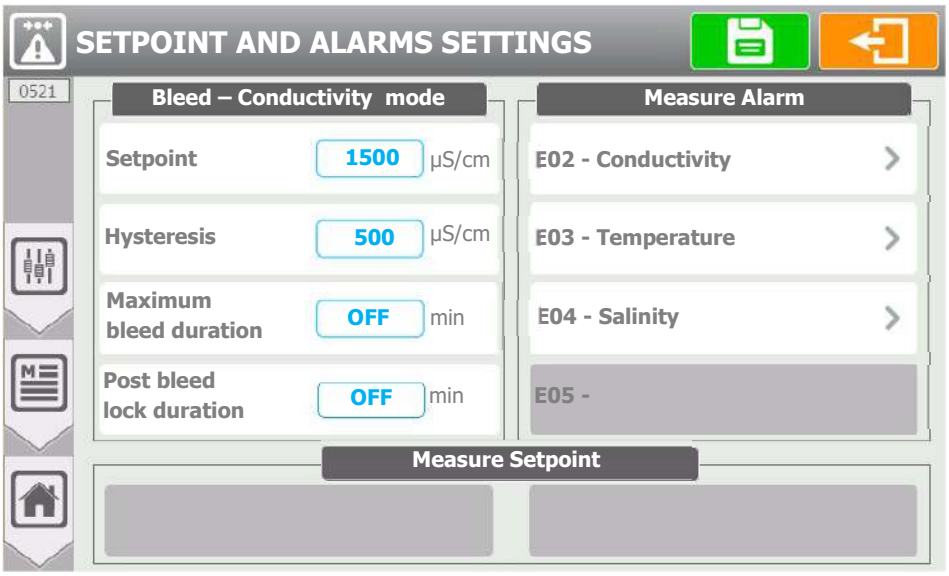
At the end of the predefined counting, inhibitor or dispersant are dosed for a programmed time.

Enter the desired injection time value. Press to open the numeric keyboard and enter the desired value. Possible from **0 to 3600** s

5) Menu « Settings » - « SETPOINTS ALARMS » [0521]


« SETPOINTS ALARMS » menu will allow you to adjust the settings of the parameters of the Biocides, inhibitor and dispersant.

Press to open following screen.





Parameter enables.
Press to edit


Measure Alarm or Setpoint with possible setting.
Press to open calibration screen.

Measure Alarm or Setpoint not configured

a) Bleed – Conductivity mode

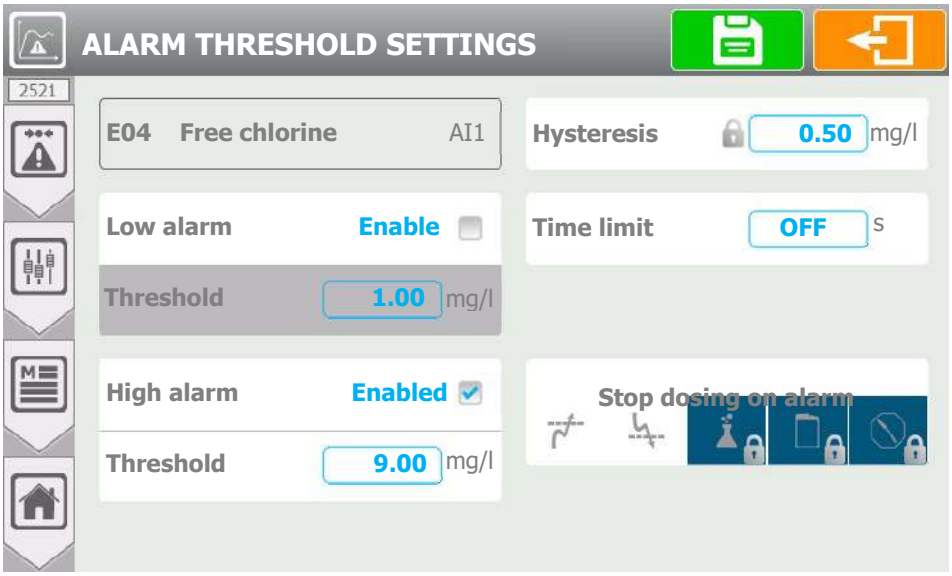
➢ **Setpoint 1500 µS/cm**
- Enter the conductivity setpoint value. Here the value is (**1500**).
  Press to open the numeric keyboard and enter the desired value.
  Possible adjustment from **0 to 20000** µS/cm

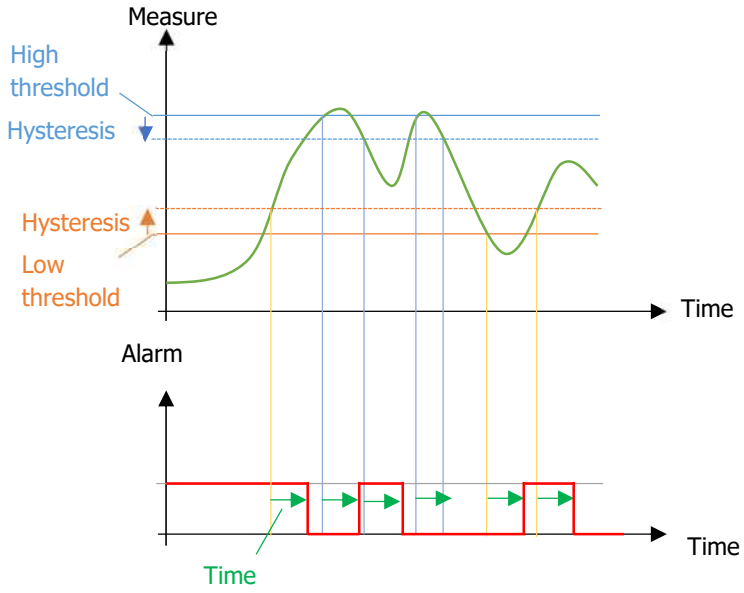
➢ **Hysteresis 500 µS/cm**
- Enter the conductivity hysteresis value. Here the value is (**500**).
  Press to open the numeric keyboard and enter the desired value.
  Possible adjustment from **0 to 20000** µS/cm

➢ **Maximum bleed duration**
- Security for bleed duration on conductivity bleed. You can setup here a maximum time duration for conductivity reach the hysteresis point.
  Possible adjustment from **0(OFF) to 1400** min

➢ **Post bleed lock duration**
  After each bleed, the system will lock each request of each organ during this time.
  Possible adjustment from **0(OFF) to 1400** min

d) Measure Alarm




- **E04 Free chlorine** AI1
  - Parameter identification, includes information on parameter number (**E04**), type (**Free chlorine**) and associated main sensor input (AI1)
- **Low alarm Enable**
  - You must check this option to enable low alarm threshold management. Here the management is unchecked.
- **Threshold 1.00** mg/l
  - Enter the low alarm threshold value. Here the current value is (**1.00**).
    Press to open the numeric keyboard and enter the desired value.
- **High alarm Enabled**
  - You must check this option to enable high alarm threshold management. Here the management is checked.
- **Threshold 9.00** mg/l
  - Enter the high alarm threshold value. Here the current value is (**9.00**).
    Press to open the numeric keyboard and enter the desired value.

- **Hysteresis 0.50** mg/l
  - Enter the hysteresis value of the alarm threshold. Here the current value is (**0.50**).
    Press to open the numeric keyboard and enter the desired value.

This setting is only available if the unlock option is enabled in the setting options.

This value sets a value delta in which the alarm remains active. This allow for stable alarms when the measurement value oscillates around the value of an alarm threshold.

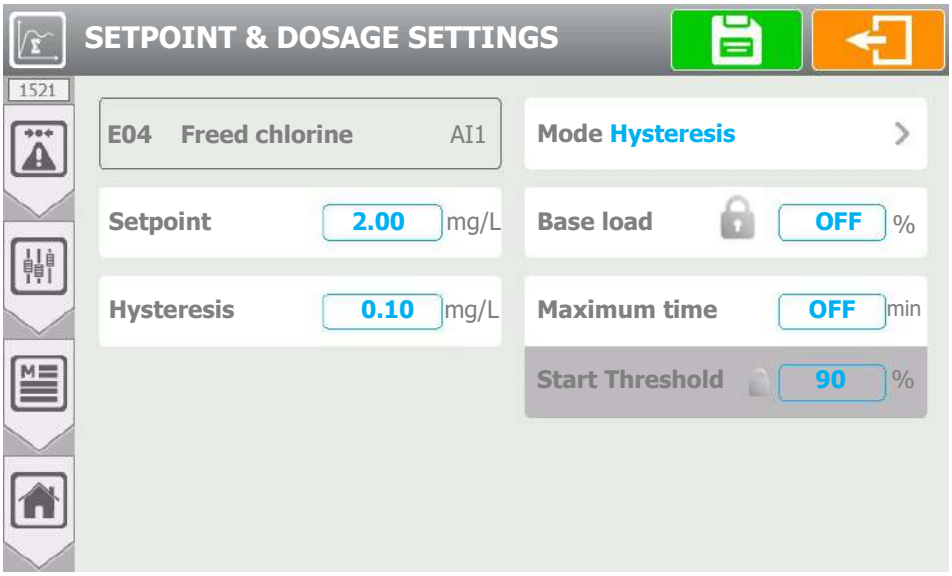
- **Time limit OFF**
  - Enter the value of the time limit to take into account an alarm. Here the time limit is disabled, current value is (**OFF**).
    Press to open the numeric keyboard and enter the desired value.

- **Stop dosing on alarm**
  - Selection of alarm(s) to be taken into account, for stopping the dosage. Multiple selection type, press the alarms you want to associate.

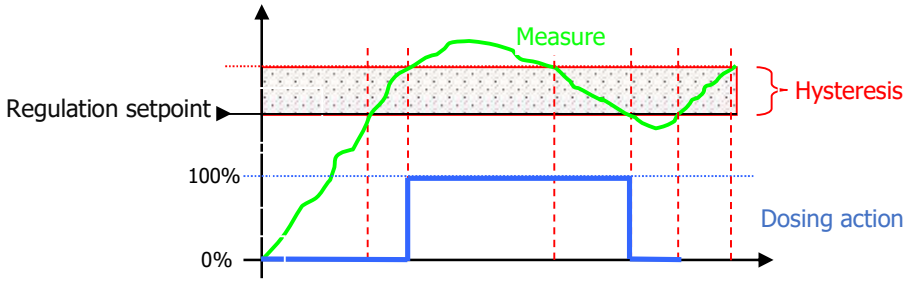
This setting is only available if the unlock option is enabled in the setting options.

**Save:**
When a change is made, the "SAVE" button appears (floppy icon), you must save your configuration by pressing it.

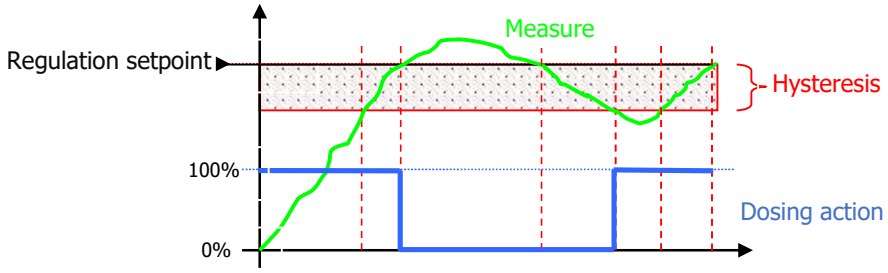
e) Measure Setpoint




**When the dosing direction of the channel is configured in downstream mode,** as soon as the error (measurement – setpoint) is greater than the hysteresis value, the regulation requirement is 100%.




**When the dosing direction of the channel is configured in upstream mode,** as soon as the error (setpoint – measurement) is greater than the hysteresis value, the regulation requirement is 100%.




- **E04 Conductivity AI1**
  - Parameter identification, includes information on parameter number (**E04**), type (**Conductivity**) and associated main sensor input (**AI1**)
- **Mode Hysteresis**
  - Dosage mode selection, on this selection button we find the selected mode information (**Hysteresis**). Press to modify it.
- **Setpoint 2.00** mg/L
  - Enter the setpoint value. Here the value is (**2.00**).
    Press to open the numeric keyboard and enter the desired value.
- **Hysteresis 0.10** mg/L
  - Enter the hysteresis value. Here the value is (**0.10**).
    Press to open the numeric keyboard and enter the desired value.

- **Basic load OFF %**
  - Enter the base load value. Here the current value is (**OFF**).
    Press to open the numeric keyboard and enter the desired value.

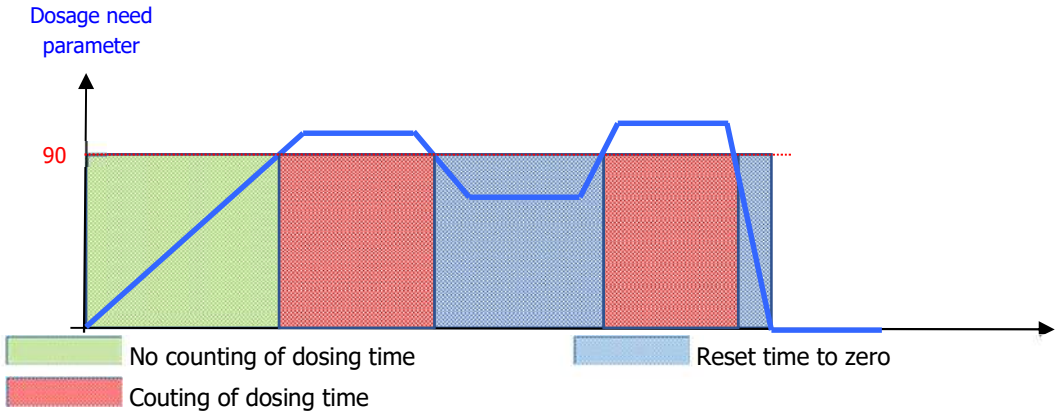
This setting is only available if the unlock option is enabled in the setting options.

**Be careful, the basic load is a permanent dosage power regardless of the dosage need. This function is to be used with great care to avoid overdosage.**

- **Maximum time OFF** min
  - Enter the maximum dosage time value. Here it's disabled, current value is (**OFF**).
    Press to open the numeric keyboard and enter the desired value.

- **Activation threshold 90 %**
  - Enter the dosage power from which the dosage time is counted. Here it's set automatically according to the dosage mode at (**90**). Press to open the numeric keyboard and enter the desired value.

This setting is only available if the unlock option is enabled in the setting options.

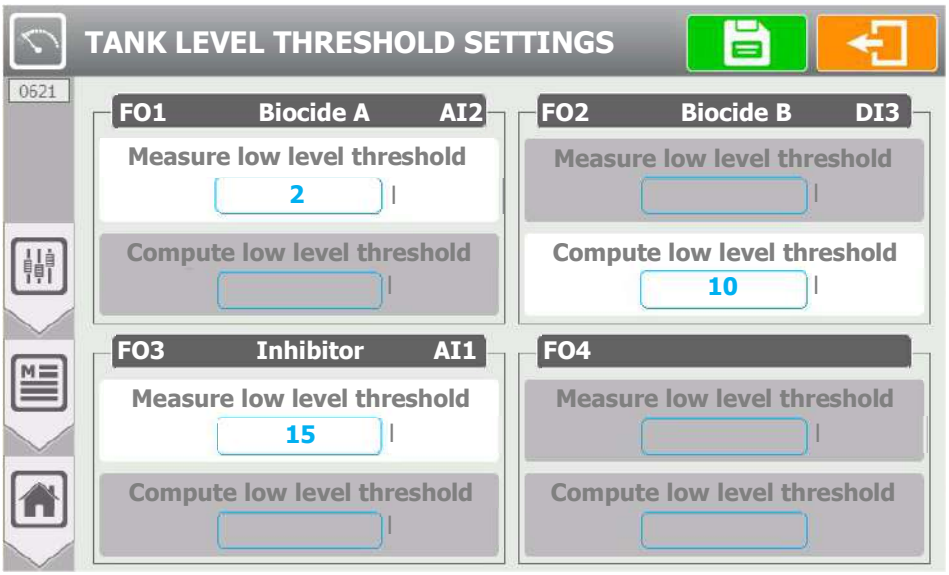



**Save:**
When a change is made, the "SAVE" button appears (floppy icon), you must save your configuration by pressing it

6) Menu « Settings » - « TANK LEVEL » [0621]


« TANK LEVEL » menu will allow you to adjust threshold settings of the Tank level.

Press to open following screen.




Tank level menu will be accessible if an analog inputs in mode volume is set [4231] or active and set a "compute enabled" in a relay setting [2531].

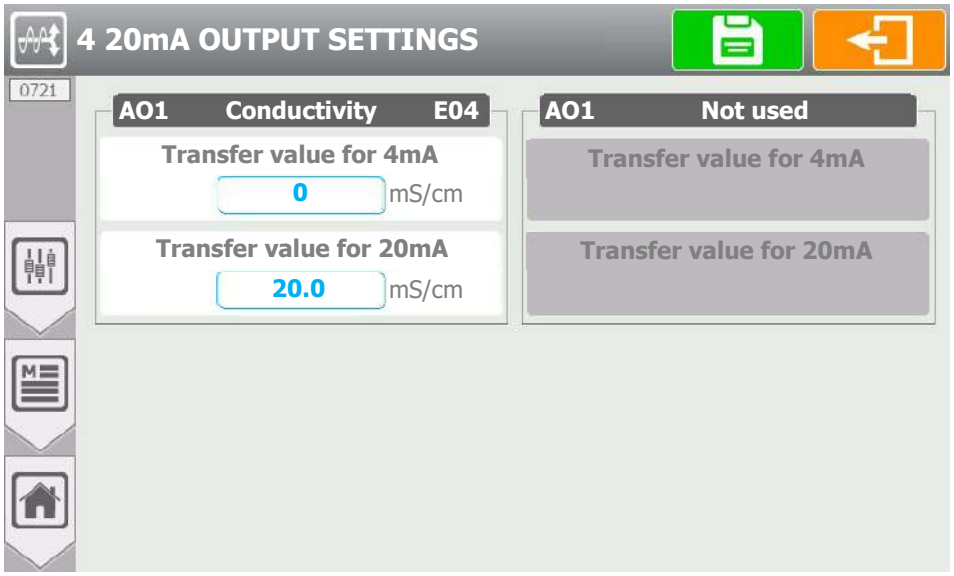
- **Measure low level threshold 2 l**
  - Enter the low level threshold value. Here the value is (**2**).
    Press to open the numeric keyboard and enter the desired value

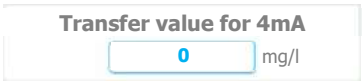
- **Compute low level threshold 10 l**
  - Enter the low level threshold value. Here the value is (**10**).
    Press to open the numeric keyboard and enter the desired value

7) Menu « Settings » - « Outputs 4…20mA » [0721]

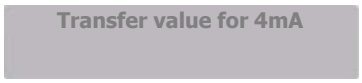

« TRANFERTS 4…20mA » menu will allow you to adjust the threshold settings of the parameters.

Press to open following screen




4…20mA transfer threshold with possible setting.
Press to open calibration screen




4…20mA transfer threshold not configurated.

- **A01 Conductivity E04**
  - Parameter identification, we find the parameter number identification (**A01**); type (**Conductivity**) and associated sensor input (**E04**).
- **Transfer value for 4mA 0** mS/cm
  - Enter the corresponding pH value for 4mA at transfer output. Here the value is (**0**).
    Press to open the numeric keyboard and enter the desired value.
- **Transfer value for 20mA 20.00** mS/cm
  - Enter the corresponding pH value for 20mA at transfer output. Here the value is (**20.00**).
    Press to open the numeric keyboard and enter the desired value.

**Save:**

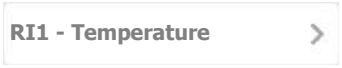
- When a change is made, the "SAVE" button appears (floppy icon), you must save your configuration by pressing it.

8) Menu « Settings » - « CALIBRATION » [0821]


« CALIBRATION » menu will allow you to adjust the threshold settings of the parameters.

Press to open following screen

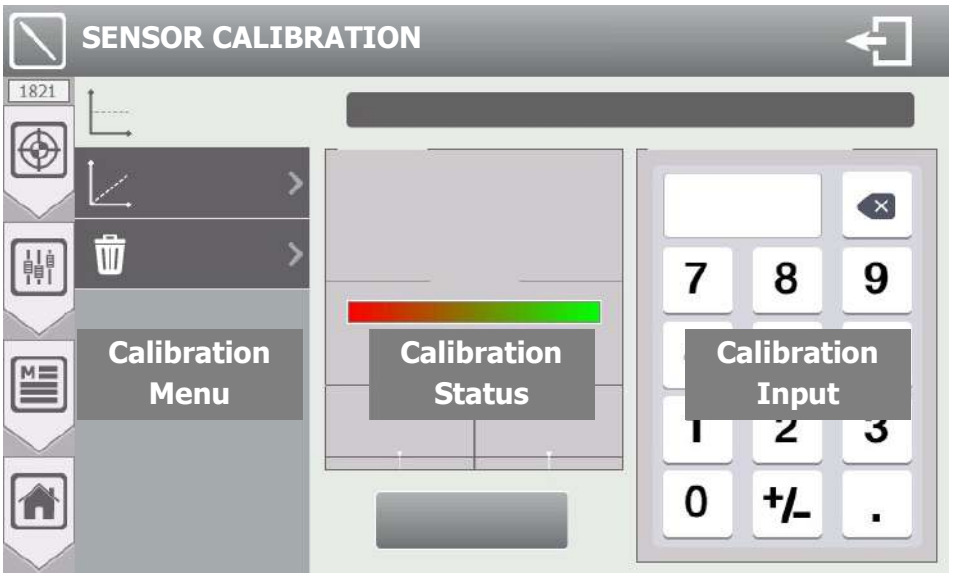

The screen shows the sensors that are configured. Press an active sensor to open the calibration screen.




Parameter with possible setting.
Press to open calibration screen.

Parameter not configured

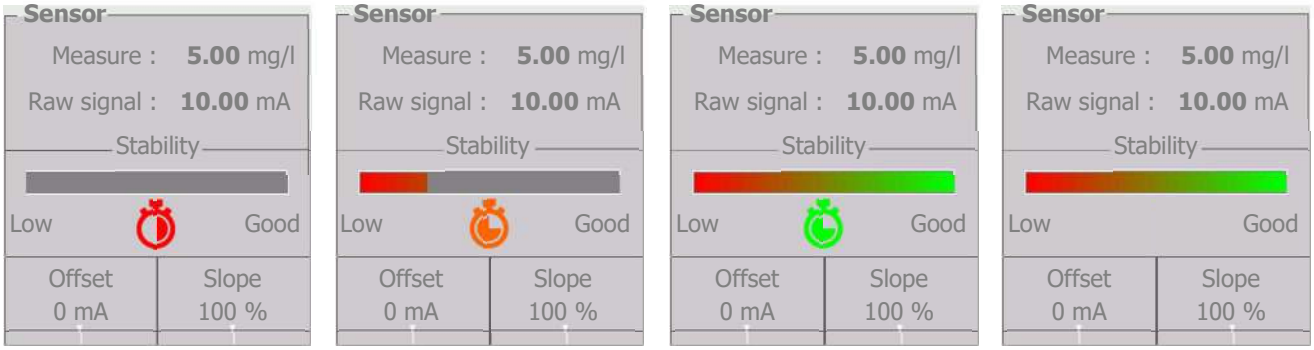
a) Calibration screen presentation



b) Calibration status

- Depending on the stability and measurement value of the sensor, the status screen may change as below. It's necessary that the measurement value is stable and in a "correct" range to validate the calibration.

**Status 1** **Status 2** **Status 3** **Status 4**




- Status 1
  - ⇨ Very unstable sensor (Measurement value changes rapidly)
  - ⇨ Sensor disconnected or Out of order (Measurement and Raw signal displays "- - -")

- Status 2
  - ⇨ Sensor being stabilized

- Status 3
  - ⇨ Stabilized sensor

- Status 4
  - ⇨ Authorized calibration

c) Offset calibration

- ➢ **Wait for the sensor stabilization**
- ➢ **Enter the calibration value**
- ➢ **Press "SAVE"**

f) Slope calibration

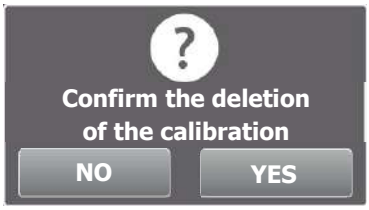
- ➢ **Wait for the stabilization**
- ➢ **Enter the calibration value**
- ➢ **Press "Save"**

g) Erase calibration

- ➢ **Press "Clear"**

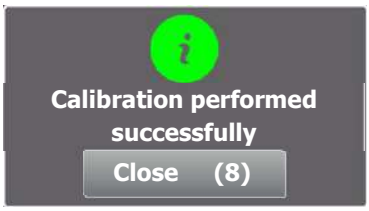
A confirmation request will be displayed.
There is no « analysis » of measurement value, erasure can be performed even if the sensor is unstable or absent.

h) Calibration validation messages




Confirmation message:

⇨ When erasing a confirmation message is displayed before performing the procedure.




Valid calibration messages:

⇨ Calibration cleared successfully.

Or

⇨ Calibration performed successfully


Incorrect calibration messages:

⇨ Incorrect offset value.
(Offset overflow allowed for sensor)

Or

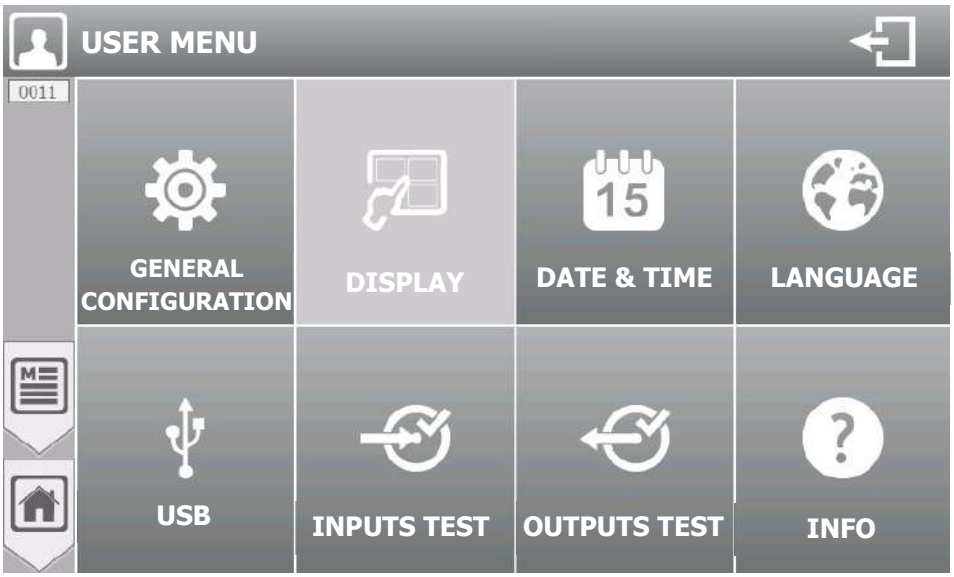
⇨ Incorrect slope value
(Exceeding the allowed slope for the sensor)

## VII. Programming screen « USER » [0011]


« USER » menu will allow you to access the settings of the graphical interface.

Press to open the following screen.

**Menu « User »**

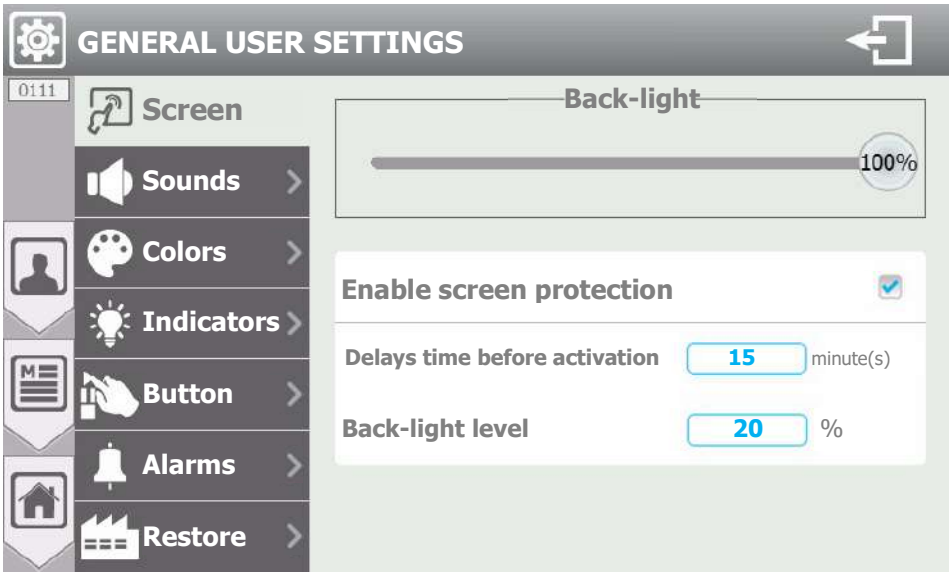



1) Menu « User » - « GENERAL CONFIGURATION » [0111]


« GENERAL CONFIGURATION » menu will allow you to access the audio and visual configuration of the graphical interface.

Press to open following screen.

a) Menu « General configuration » - « SCREEN » [0111]



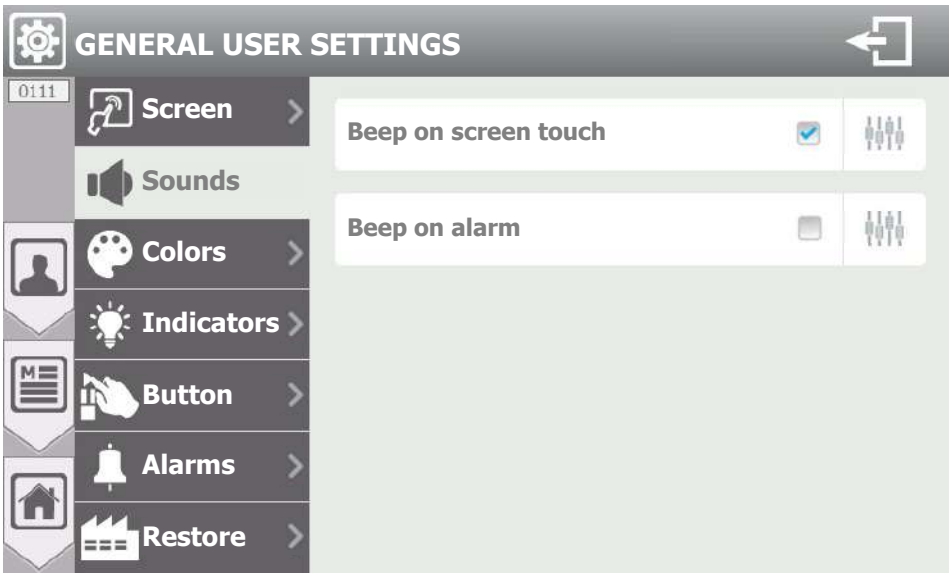

- **Back-light**
  - Use cursor to adjust the back-light level as desired.

- **Enable screen protection**
  - You must check this option to enable screen protection management. Without pressing the screen during the time entered, the back-light level will decrease to the set value. Here the management is (**Active**).

- **Delays time before activation 15** minute(s)
  - Enter the delay value before screen protection activation. Here the delay is (**15**) minutes.
    Press to open the numeric keyboard and enter the desired value.

- **Back-light level**
  - Enter back-light value during screen protection. Here the value is (**20**) %.
    Press to open the numeric keyboard and enter the desired value.

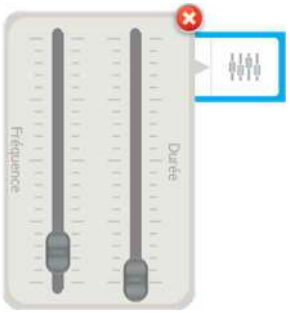
b) Menu « General configuration » - « SOUNDS » [0111]




- **Beep on screen touch**
  - You must check this option to enable beep management et each valid tap on the screen. Here the option is (**Active**).

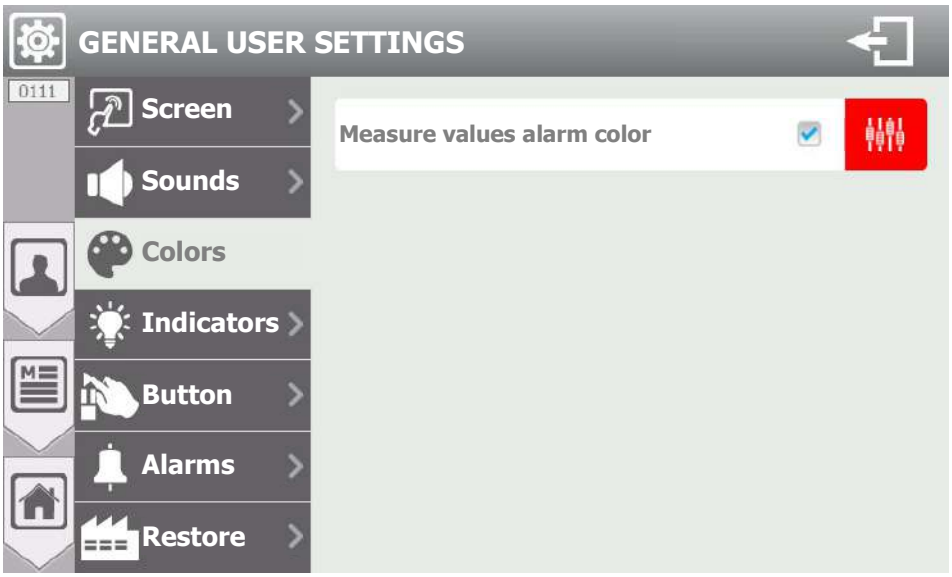
- **Beep on alarm**
  - You must check this option to enable the management of a beep every second in case of a "general" alarm. Here the option is (**Disabled**).

- **Sound adjustment**
  - You can change the sound rendering of each beep. By pressing the beep setting icon, you can change the beep frequency and its duration.




Move the cursors by remaining pressed to change the frequency and duration values.

c) Menu « General configuration » - « COLORS » [0111]

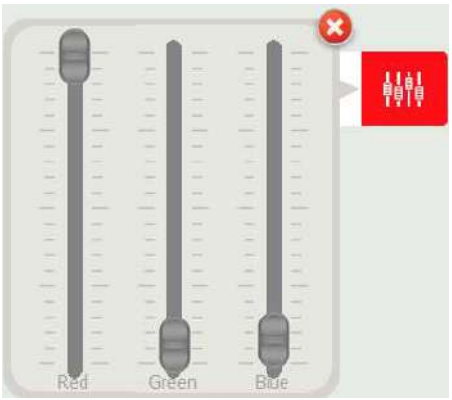



➢ **Measure values alarm color**

- Measurement value of each parameter displayed on the main screen thumbnails may be displayed in a different color if the parameter is on alarm. To do this you must check this option. Here the option is (**Disabled**).

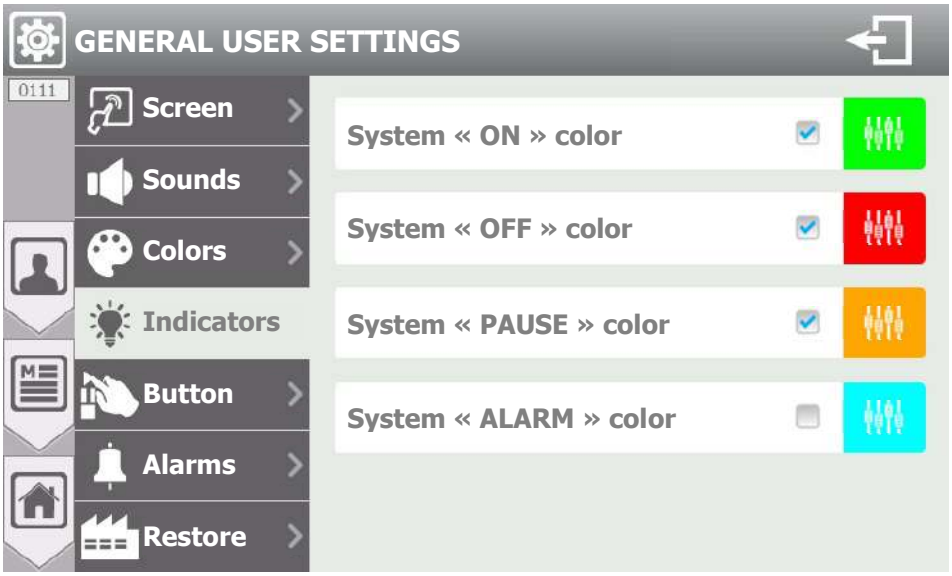
➢ **Color adjustment**

- You can change the color by varying its components (RED – GREEN – BLUE). By pressing the color adjustment icon, you can change the setting according to your wishes.



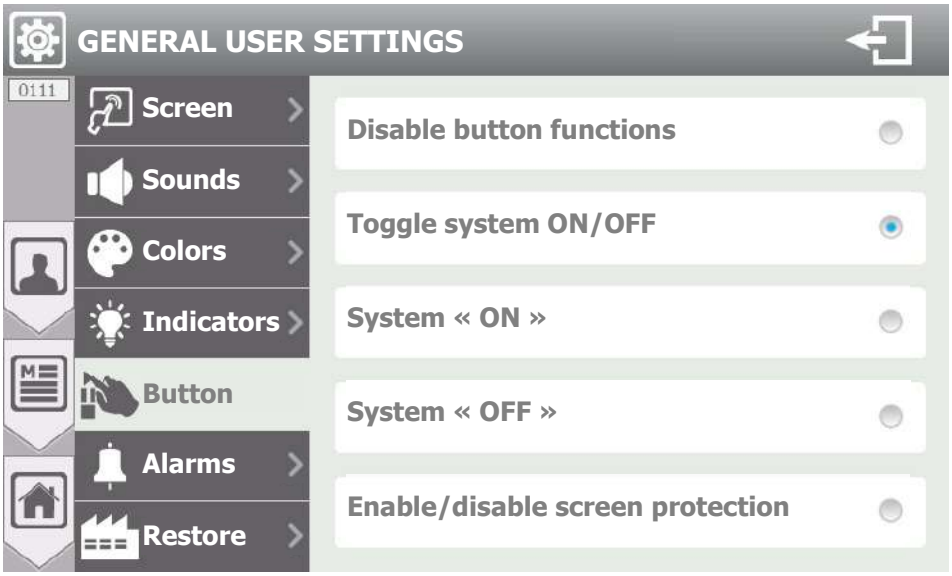

Move the cursors by remaining pressed to change the basics Red / Green / Blue.

d) Menu « General configuration » - « INDICATORS » [0111]




- **System "ON" color**
  - To activate the LED when the regulator is in use you must check this option. Here the option is (**Activated**).
- **System "OFF" color**
  - To activate the LED when the regulator is stopped you must check this option. Here the option is (**Activated**).
- **System "PAUSE" color**
  - To activate the LED when the regulator is in pause you must check this option. Here the option is (**Activated**).
- **System "ALARM" color**
  - To activate the flashing light when the regulator is in alarm you must check this option. Here the option is (**Disabled**).
- **Color adjustment**
  - For each state, the color is customizable, see « Color adjustment » previous page.

e) Menu « General configuration » - « BUTTON » [0111]




- **Disable button functions**
  - Disables external touch button functions

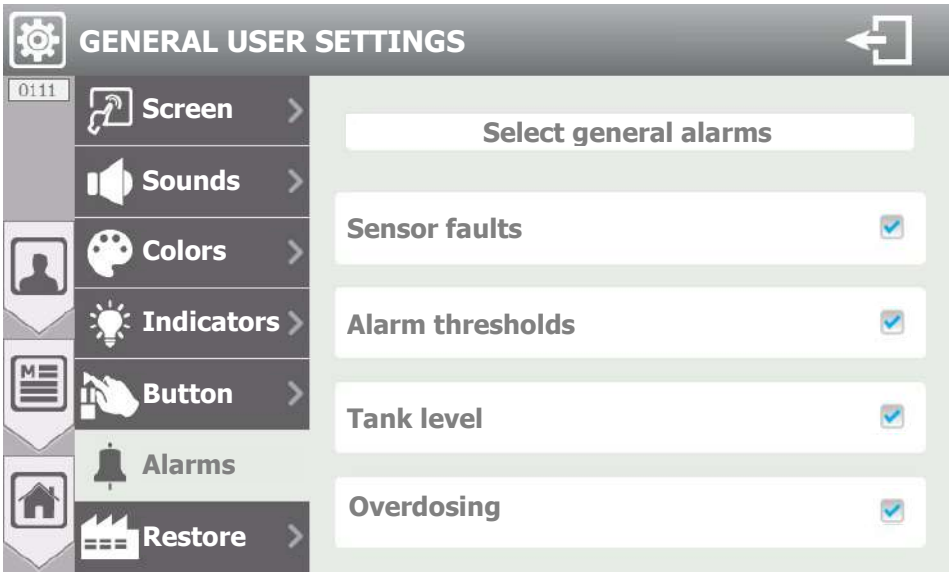
- **Toggle system ON/OFF**
  - External touch button toggles the status of the regulator, On/Off at each pressure. This operation option is (**Selected**).

- **System "ON"**
  - External touch button only turns the regulator ON at each pressure. If it's already ON, no action.

- **System "OFF"**
  - External touch button only turns the regulator OFF at each pressure. If it's already OFF, no action.

- **Enable / disable screen protection**
  - External touch button, toggles screen protection status On/Off at each pressure.

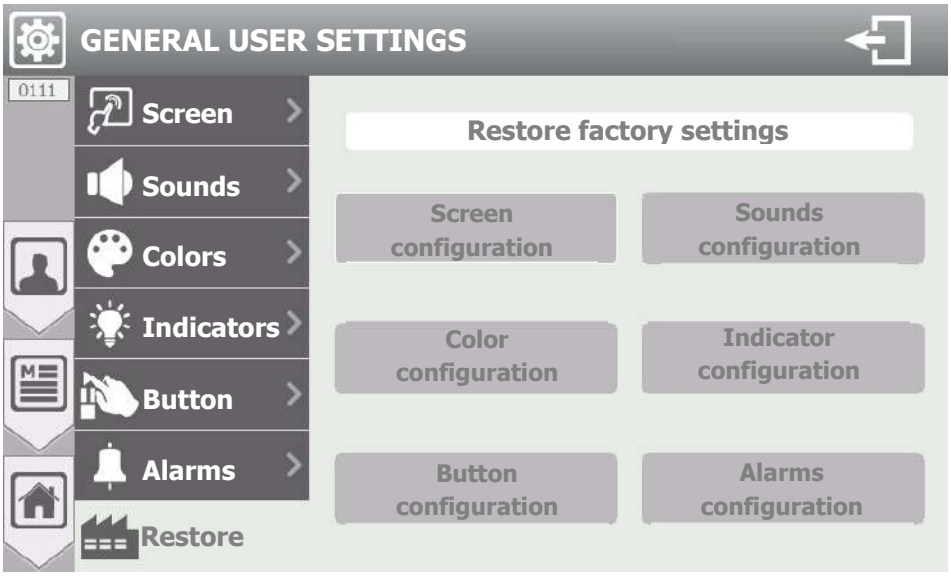
f) Menu « General configuration » - « ALARMS » [0111]




This alarm selection is used to activate the "Alarm beep" and to activate the alarm color of the LED. The system regroups the alarms of all activate parameters before selecting the ones checked below.

- **Sensor faults**
  - Selects sensor faults (Unstable & Out of order sensors). Here this option is (**Active**).
- **Alarm thresholds**
  - Selects parameter alarm thresholds (Low Alarm &High Alarm). Here this option is (**Active**).
- **Tank level**
  - Selects tank level(s) parameters. Here this option is (**Active**).
- **Overdosing**
  - Selects parameters overdosage alarms. Here this option is (**Active**).

g) Menu « General configuration » - « RESTORE » [0111]




Buttons are only activated if factory configurations have been changed.

- **Screen configuration**
  - Restore configuration options from Screen section to factory configuration.
- **Sounds configuration**
  - Restore configuration options from Sounds section to factory configuration.
- **Color configuration**
  - Restore configuration options from Color section to factory configuration.
- **Indicator configuration**
  - Restore configuration options from Indicator section to factory configuration.
- **Button configuration**
  - Restore configuration options from Button section to factory configuration.
- **Alarms configuration**
  - Restore configuration options from Alarms section to factory configuration.

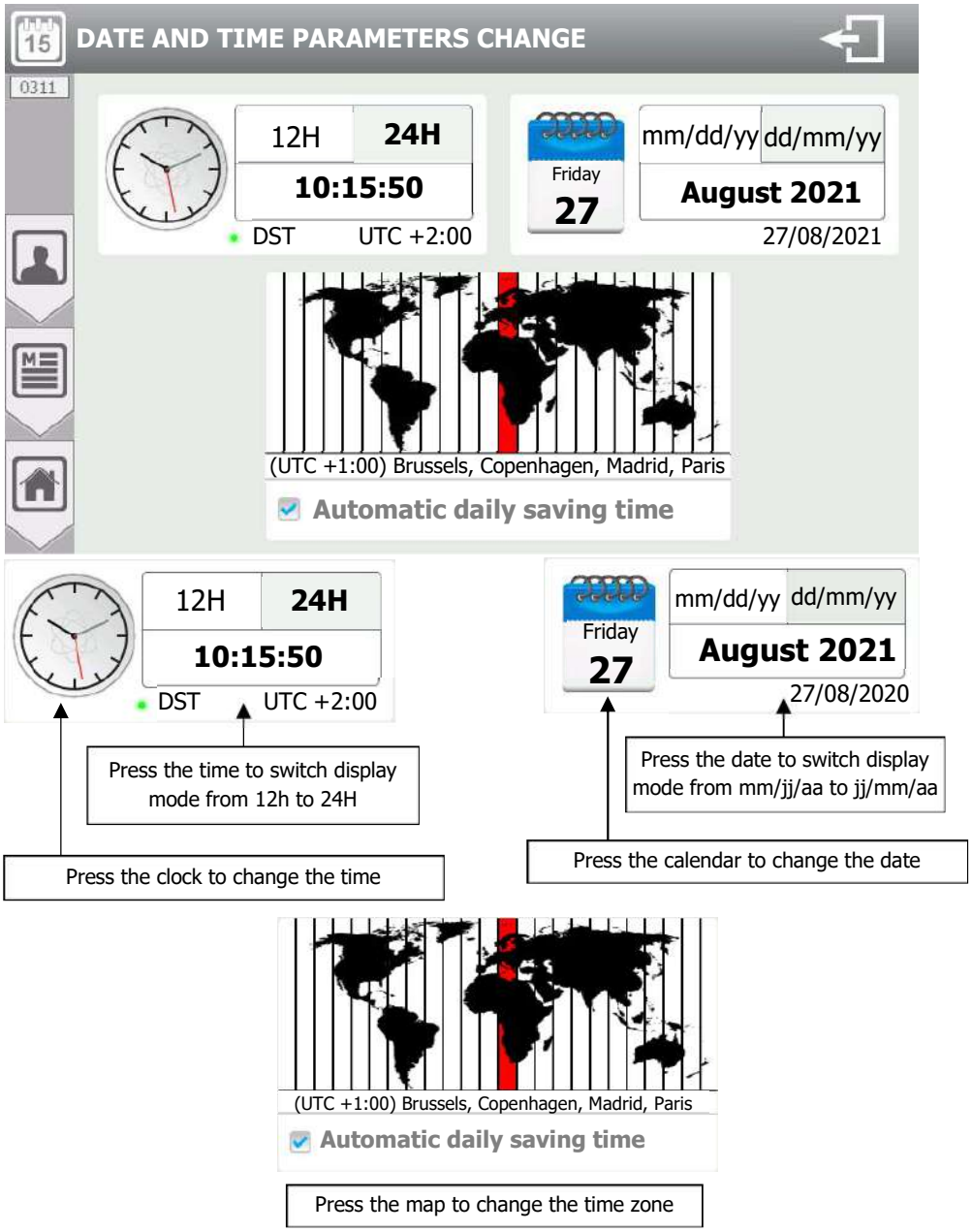
2) Menu « User » - « DISPLAY » [0211]


« DISPLAY » menu will allow you to access the settings display configuration.
Press to open following screen.

3) Menu « User » - « DATE & TIME » [0311]


« DATE & TIME » menu will allow you to access the time settings configuration.

Press to open following screen.




- **Automatic time change**
  - If the selected time zone has Summer Time / Winter Time, your dispatcher will automatically change time. You can cancel this automatic time change by unchecking this box.

- **Automatic time change**
  - Press the time zone map
  - Scroll the list up or down, remaining pressed until the desired time zone is on the centre part of the selection.
  - Wait for automatically shutdown to account for new time zone.

4) Menu « User » - « LANGUAGE » [0411]


« LANGUAGE » menu will allow you to access the regulator language configuration.

Press to open following screen.

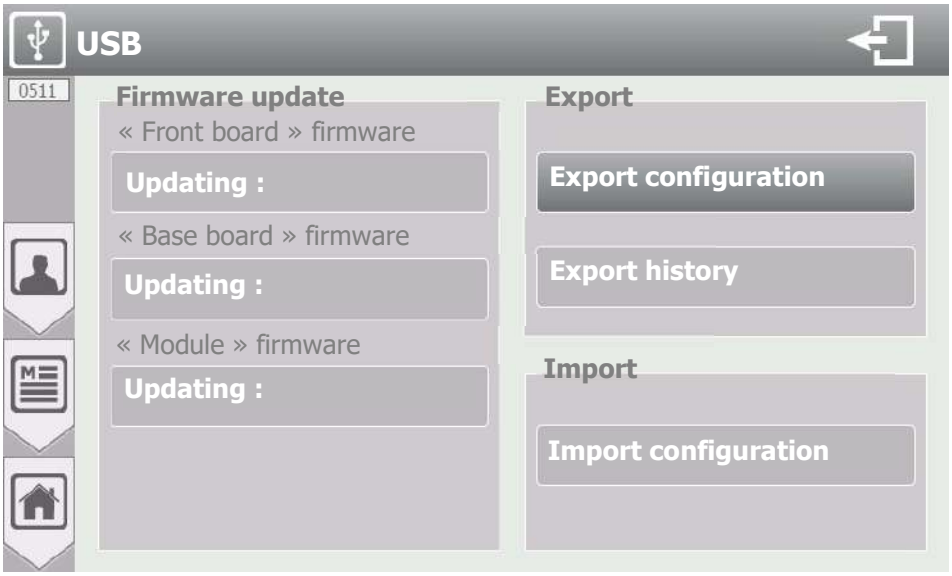

➢ **Language change**

- Press the desired language to select it.

5) Menu « User » - « USB » [0511]


« USB » menu will allow you to update firmware, export or import configuration.

Press to open following screen.

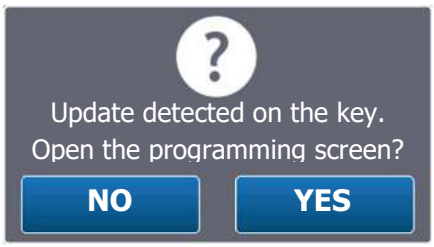



**To access this menu, you need to insert a USB key.**

**The USB key must be formatted to FAT32.**

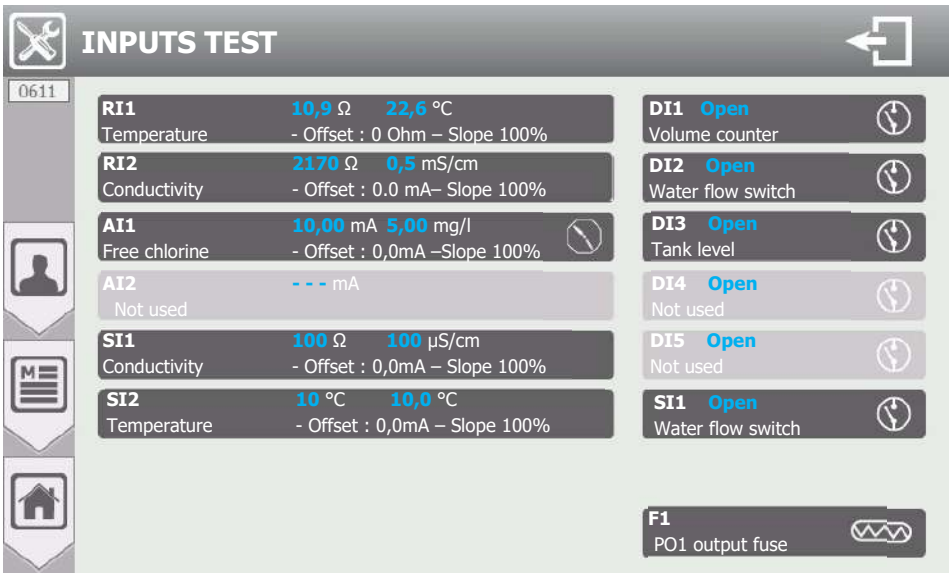
- **Front board firmware**
  - When a firmware for the front face is available on the key, the corresponding update button activates. To perform the update, press the button.
- **Base board firmware**
  - When a firmware for the lower card is available on the key, the corresponding update button activates. To perform the update, press the button.
- **Module firmware**
  - When a firmware for the module is available on the key, the corresponding update button activates. To perform the update, press the button.
- **Export configuration**
  - Export the complete machine configuration to a binary file on the USB key. To export press the button.
- **Export history**
  - Not available.
- **Import configuration**
  - When a configuration file is available on the key the button activates. Press the "Import configuration" button, it's then possible to import or not the "User" and "Communication" configuration in addition to the "Installation & Settings" part.


**When you are on the main screen and you insert a USB key with an update, the window below will open automatically asking you if you want to open the programming screen.**

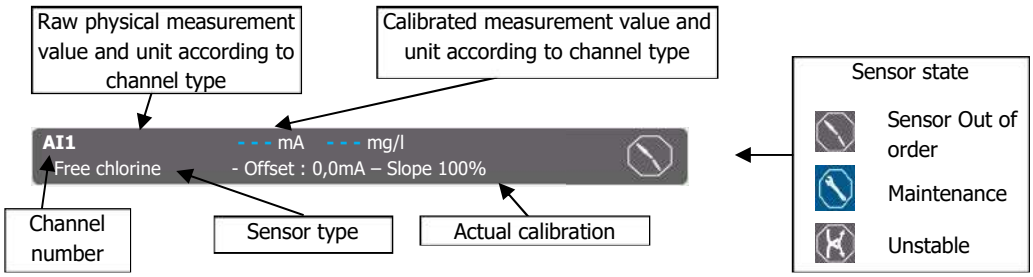


6) Menu « User » - « INPUTS TEST » [0611]

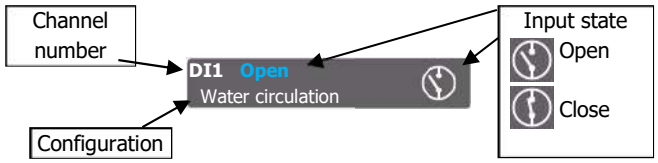

« INPUTS TEST » menu will allow you to view raw values and measurement values of all selected inputs.
Press to open following screen.



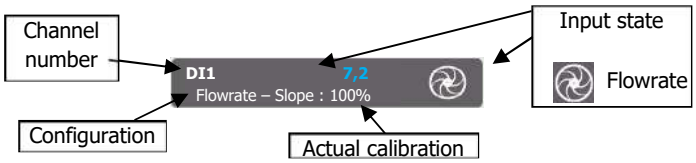

- **Analog sensor inputs**



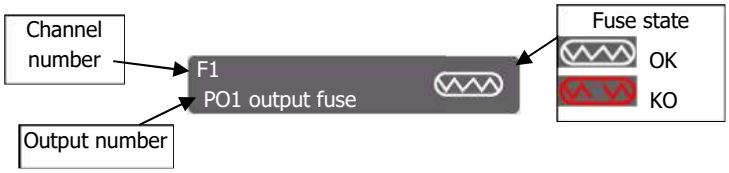

- **Contact inputs**



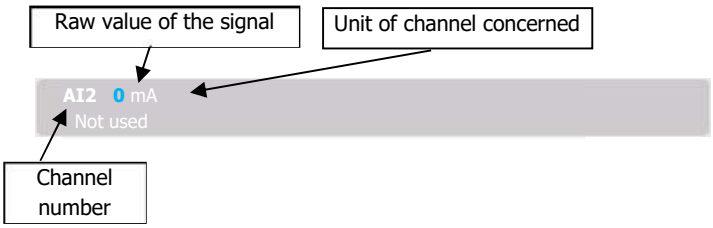

- **Flowrate input**




- **Fuses state**



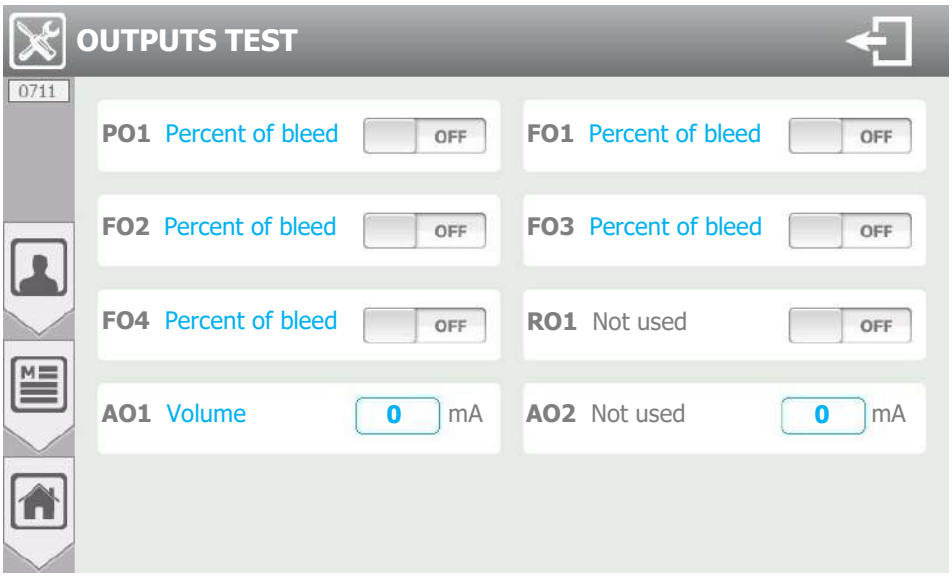
➢ **Not used inputs**




7) Menu « User » - « OUTPUTS TEST » [0711]


« OUTPUTS TEST » menu will allow you to control relays or 4…20mA outputs to set pumps.

Press to open following screen.




➢ **PO1** Percent of bleed

- Output name and function affected, press to toggle ON/OFF the relay.
  Each press reverses the state.


Relay output is inactive


Relay output is active

➢ **AO1** Volume

- Output name and function affected, press to open the numeric keyboard and enter the desired value

Even unaffected outputs can be tested.

8) Menu « User » - « INFO » [0811]


« INFO » menu will allow you to view the various versions of the installed modules as well as the serial number of the device.
Press to open following screen.


➢ **Software versions**

- **ODI TOUCH** is composed of several firmware, it's possible on this screen to see the installed module and their versions.

➢ **Serial number**

- Your device serial number (Unique).

If an element is greyed out this means that the function isn't available.

## VIII. Service / Maintenance

1) Entretien

The device is maintenance-free.

The device must be cleaned with a clean and dry cloth.

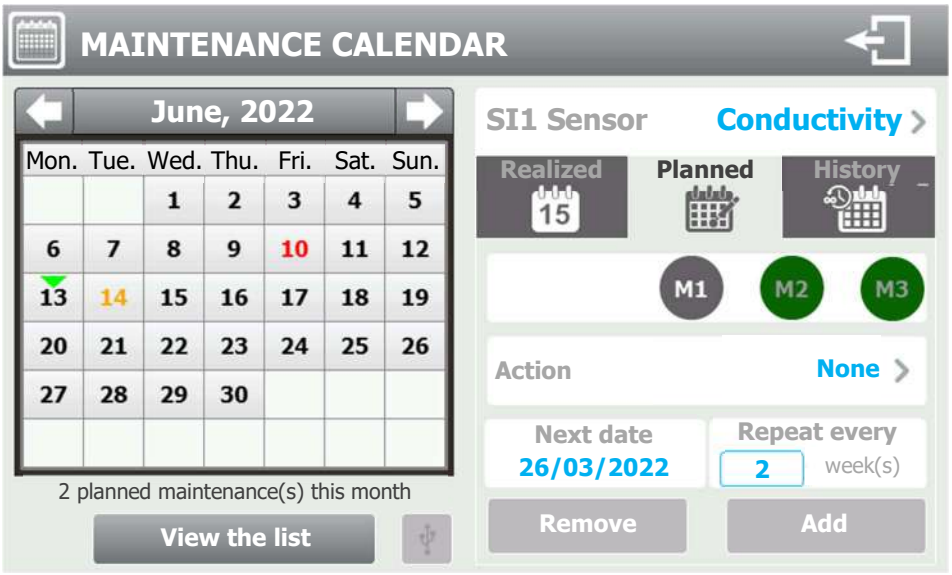
Repairs can only be carried out by qualified technicians and must be carried out in our SAUVAGNON factory.

Verify that the device is in a safe state after repairing it.

For any problem on your device or for treatment advice, do not hesitate to contact our after sales services.

2) Maintenance

The "Maintenance Calendar" menu will allow you to view the different maintenance that are planned or that have been carried out.
Press to display the next screen.




When an orange bubble with a question mark appears on the calendar icon, it means that a maintenance operation is scheduled in the coming week.

When a red bubble with a question mark appears on the calendar icon, it means that the date of a scheduled maintenance operation is exceeded.

Calendar indicating planned or overdue maintenance operations.


When the date appears in orange it means that a maintenance operation scheduled on that date.

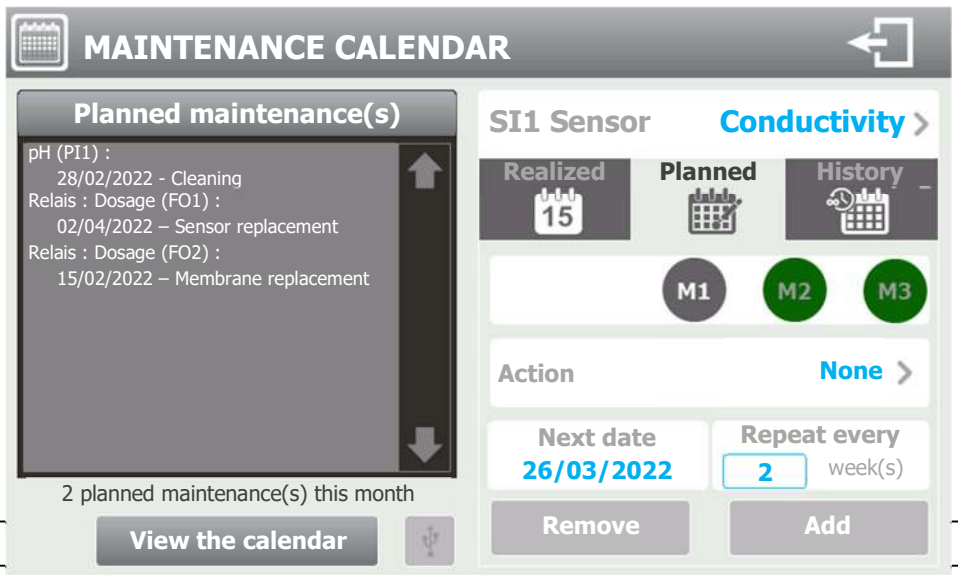

When the date appears in red it means that a maintenance operation was planned on that date but that it was either not carried out or indicated as carried out.

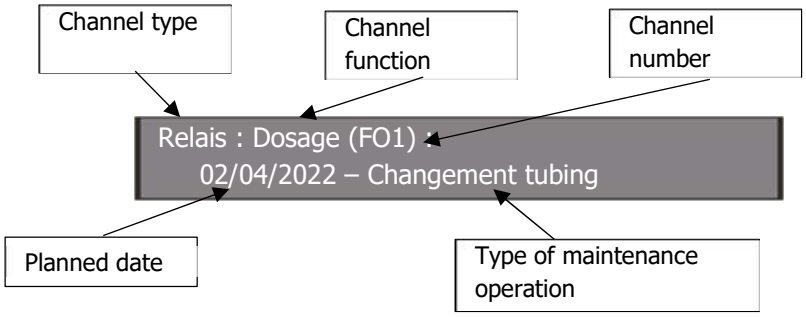

Green arrow indicates current day.

- **2 planned maintenance(s) this month**
  - Indicates the number of planned maintenance (performed or not) in the month displayed on the calendar.
    Here 2 maintenances are planned for the month of February.

- **View the list**
  - Displays a list of all planned maintenance (not just the current month).

Click on it to display the next window.







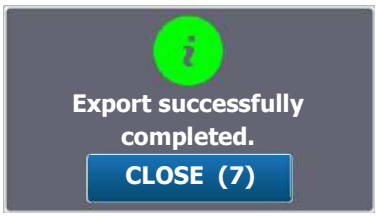
Click on "View the calendar" to return to the Maintenance Calendar.

- **Historical export**

For this you need to insert a USB key in the USB port. The logo  will sober up.

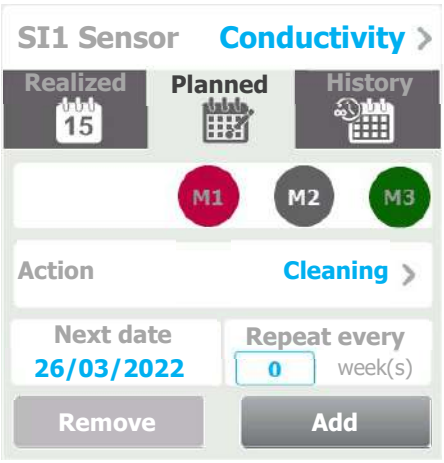
Click on the USB logo to export all the action history of a USB key in text file.

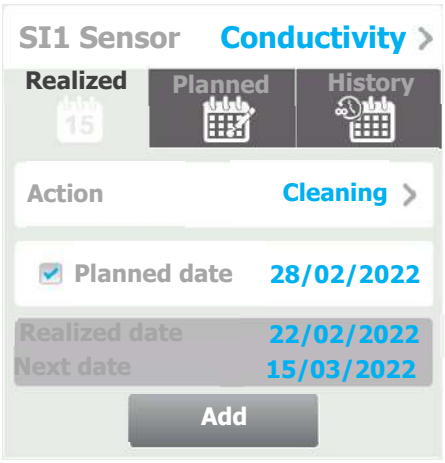
The following window will open to confirm the export of the history.




- **SI1 Sensor Conductivity**
  - Element selection, on this selection button you will find the information of the selected element (**SI1 Sensor Conductivity**). Tap it to change it.

Example with SI1 Conductivity Sensor:

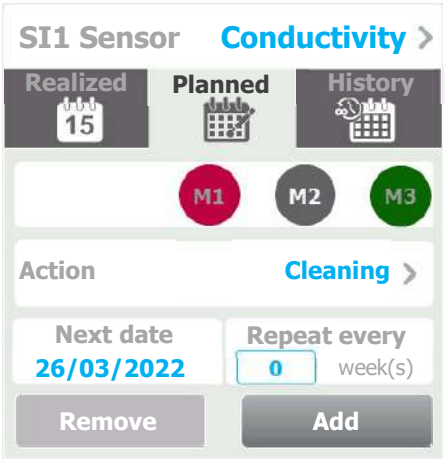

Menu « History » open.


Other than "History" open. Click to open.

History :


- **SI1 Sensor Conductivity**
  - Element selection, on this selection button you will find the information of the selected element (**SI1 Sensor Conductivity**). Tap it to change it.
  - List of maintenance operations already performed. With date and type of transaction.

Planned :




M1 Planned event.

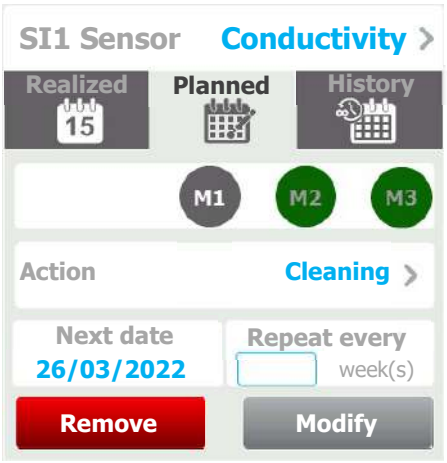
M2 Event being planned or modified

M3 Unplanned event

Click on one of the events to create or modify the event.

- **Action Cleaning**
  - Selection of the action, this selection button contains the information of the selected action (**Cleaning**). Tap it to change it.
- **Next date 26/03/2022**
  - Selection of the date on which we want to plan the action. Press the date to open the numeric keyboard and enter the desired date.
- **Repeat every 2** week(s)
  - Select the desired recurrence for the planned action Press it to open the numeric keyboard and enter the desired value.


Click add to save and schedule the action.



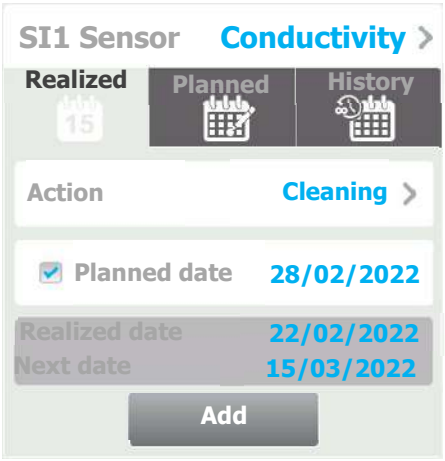

If you want to change an action, go to the desired event, make the desired change (Action, date, recurrence).

After the first modification, the "Modify" button will appear instead of the "Add" button.

Once all changes have been made, click on "Modify".

If you want to delete an action, go to the event you want to delete, then click "Delete".

Realized :




- **Action Cleaning**
  - Selection of the action you want to appear as performed, on this selection button we find the information of the selected action (**Cleaning**). Tap it to change it.

- **Planned date 28/02/2022**
  - Check the box if you want an action that was planned to appear as performed. Otherwise uncheck the box and the action will be added to the list of the history of the actions carried out without impacting the one planned.
    This date cannot be modified.

- **Realized date 22/02/2022**
  - Date of the day and to which will be indicated the action that you will appear as carried out.
    This date cannot be modified.

- **Next date 15/03/2022**
  - If you have checked "Planned Date" and you have put a recurrence to the action in question then it will be indicated the next date on which the planned action.
    This date cannot be modified.

It is possible to select on the calendar an action that is planned. In this case all the information (Element, action, scheduled date, etc.) will be filled in automatically.

Add Click on "Add" to validate.

Once you have added a new action, it will appear in the "History" window.

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