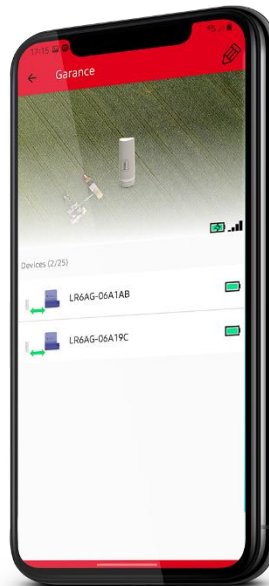




MyTORO TEMPUS APP USER MANUAL 2021



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I – CONNECTION TO YOUR ACCOUNT

A) CREATE YOUR ACCOUNT

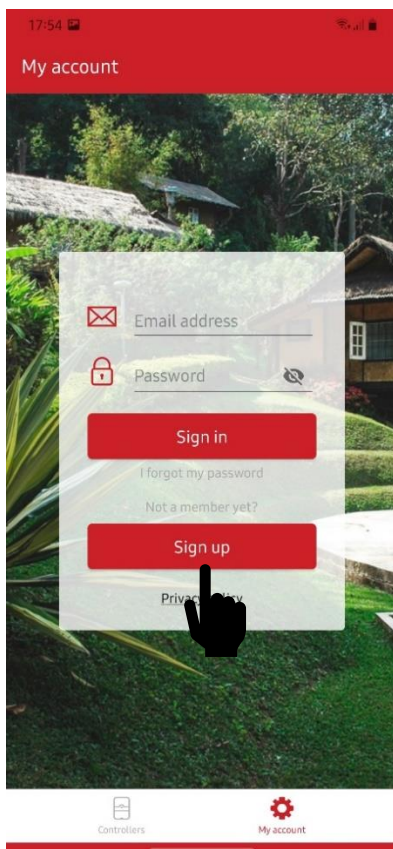
Your MyTOROTEMPUS account will allow you to:

- Automatically save your devices with their associated programs, in the app and the platform which guarantee you to always have access to your data in case of problems with your phone (loss, robbery, crash, etc...).
- The possibility to delegate the programming management to someone you trust.
- For professionals, you will be able to extend your services by offering a site management contract.
- The possibility to activate the anti-theft function when you associate your device via the app, in Bluetooth.



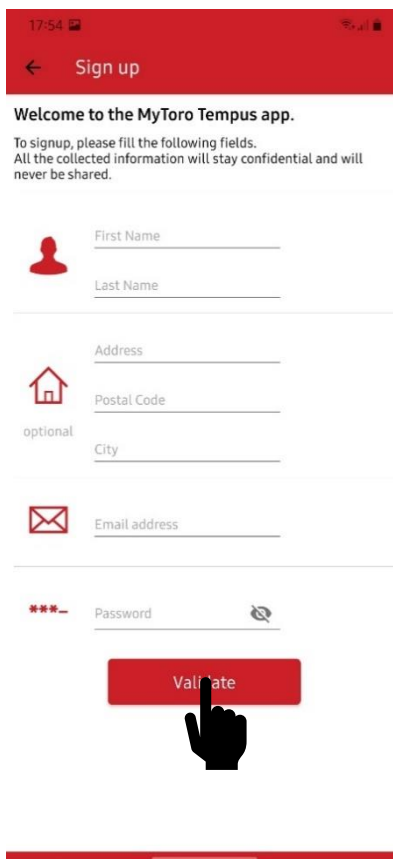
Download the app MyTOROTEMPUS via the Play Store for Android or the App Store for IOS

Select on the main screen "My Account".



Create your new account by selecting “Sign Up”.

If you already have an account but you forgot your password, you can select “I forgot my password”, in grey. You will receive a password reset email in your mailbox, this can take few minutes (If you haven't received an email at all, please check your spam box as well).

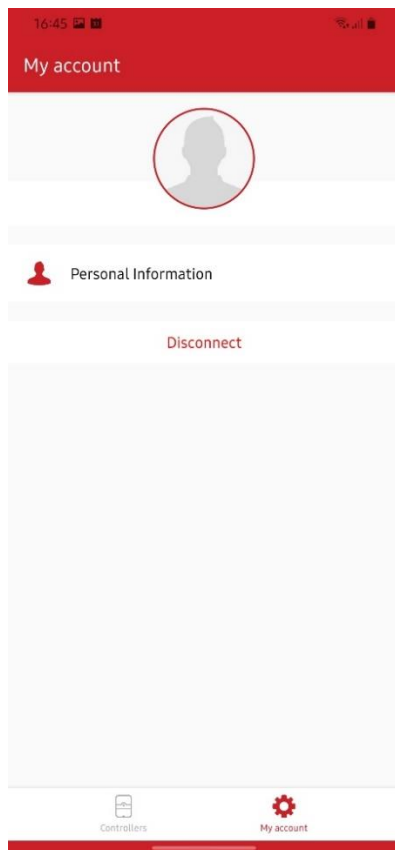


i When you have selected “Sign up”, you will reach this screen and it is now possible for you to fill in all your personal information and validate.

In order to create a strong and correct password, you need:

- Minimum of 8 characters length.
- At least one digit (0-9).
- At least one uppercase letter (A-Z).
- At least one special character (@, #, %, & !, \$, etc...).

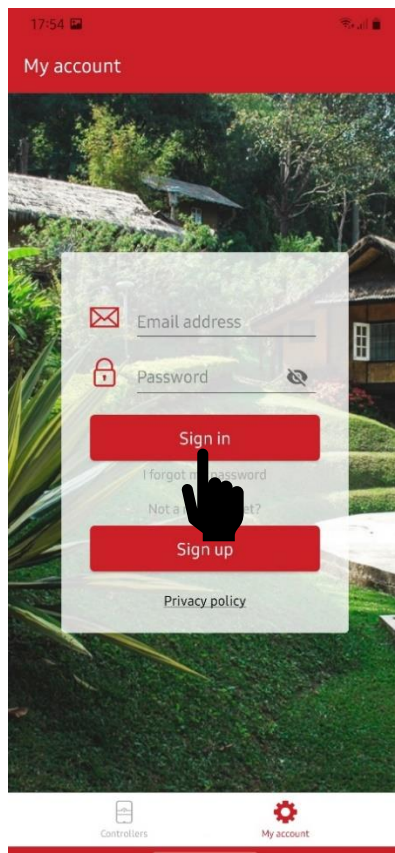
B) CHANGE YOUR PERSONAL DATA



① Once your account is created, you will be automatically connected in your app and you will see this screen. You can select “Personal information” if you need to change something or you can disconnect from here.

This is also on this screen that you can be sure you are connected to your account as you can see “Disconnect” in red.

C) LOGIN TO YOUR MYTOROTEMPUS ACCOUNT



Enter the email address and the password you have used when creating your MyTOROTEMPUS account.

D) CHANGE YOUR PASSWORD WHEN YOU ARE CONNECTED

17:54

← Sign up

Welcome to the MyToro Tempus app.

To signup, please fill the following fields.
All the collected information will stay confidential and will never be shared.

First Name _____

Last Name _____

Address _____

Postal Code _____

optional City _____

Email address _____

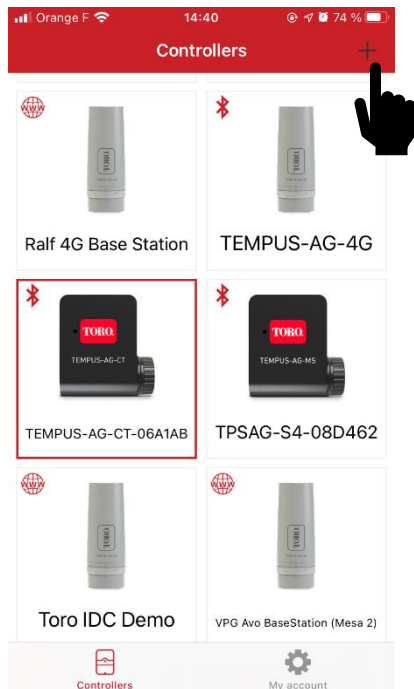
*** Password _____

Validate

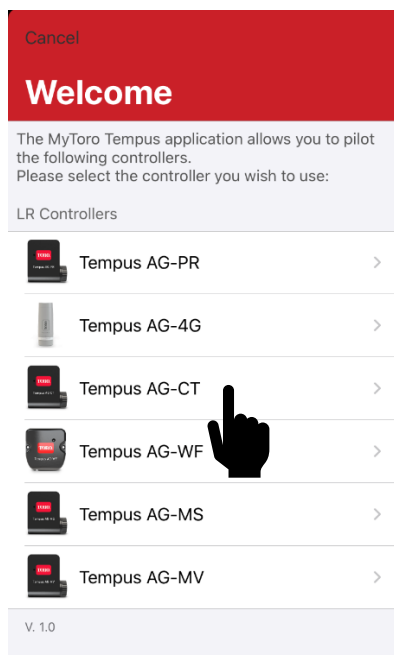
If you want to change your password, make sure you are already connected to your account. Then, enter your new password in the designated area.

II – ASSOCIATION OF A LoRa DEVICE

A) BLUETOOTH ASSOCIATION



Once you get inside the App, select the “+ icon (or “add a device” the first time).



You can now choose the type of product you want to install:

TEMPUS AG-CT: 9V battery operated device.

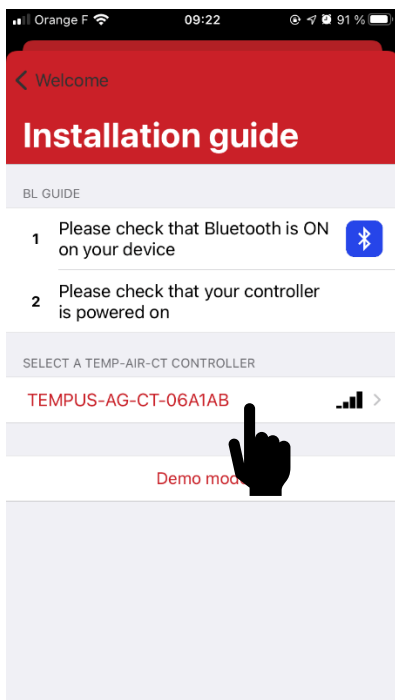
TEMPUS AG-MS: 9V multi-sensor device.

TEMPUS AG-PR: 9V Pressure monitoring device.

TEMPUS AG-MV: 9V Master Valve device.

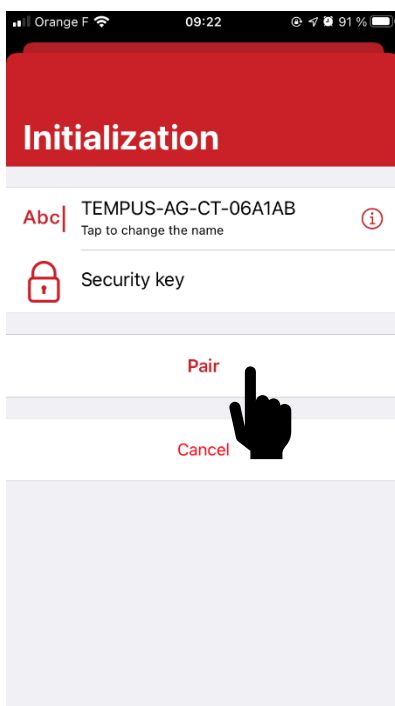
TEMPUS-AG-4G: 3G/4G Base Station.

TEMPUS AG-WF: Wi-Fi Base Station.



i You will see the list of the devices which are near your phone in a Bluetooth range.

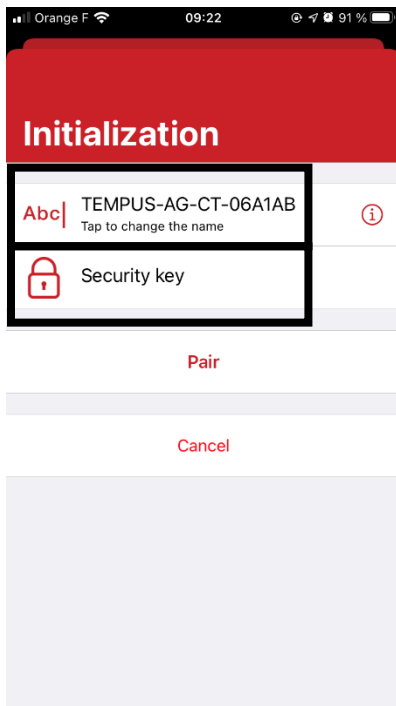
Select your product with its default name which will be displayed in red if it is installed for the first time (You can also find it on the label on the back of the product).



i The app will request if you want to activate the anti-theft function after your module pairing. An account is necessary in order to get this function. This functionality will allow to disable your stolen devices directly on the platform or on the app or reactivate it if you find it back.

NB: This anti-theft feature can be activated afterwards.

Select "pair" in order to associate your device.



i On this screen, you can also change the name of your product for a better identification or internal organization.

You can also define a Bluetooth security code (Can be 7 digits maximum). Only users who know the security key will be able to manage the device.



i Once you have paired your device and waited for the connection to be established, you will see it appear on your main screen.

You can also see how your device is connected thanks to the logo on top left of the picture of your product.



You are connected via the Internet.



You are connected via Bluetooth.



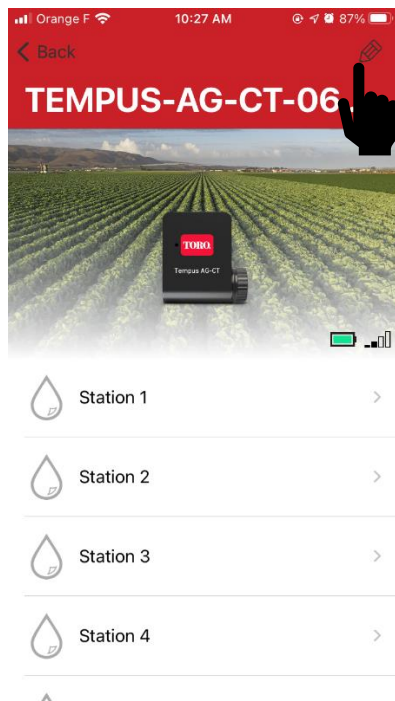
You are connected via Bluetooth and you have entered a Bluetooth security key into the device.

B) LORA ASSOCIATION WITH A GATEWAY

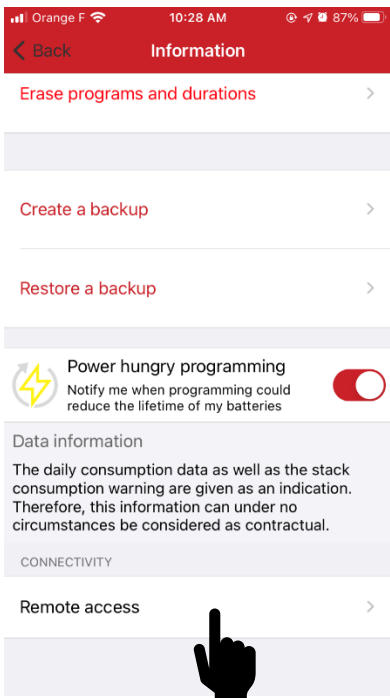
Follow the procedure from II.A in order to associate in Bluetooth your gateway TEMPUS AG-WF / TEMPUS AG 4G and LoRa devices.



Select the device you want to pair with your gateway.

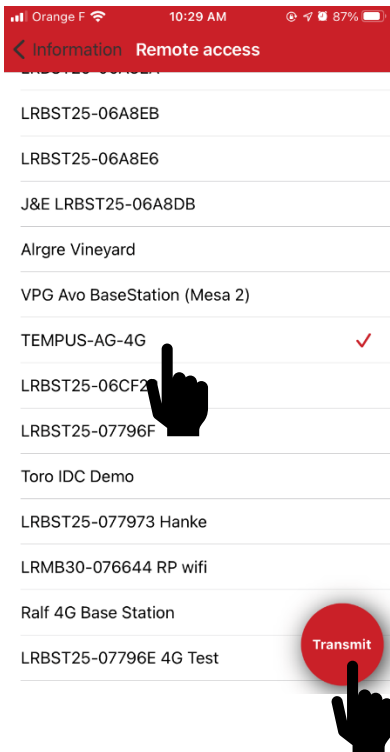


Once inside the device, choose the pen logo on top right of the screen to activate the edit function.



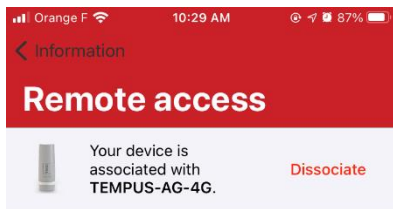
i You will now be in the information part of your device. This screen summarizes all information related to your product, such as: The default name, the possibility to change security key, the location address, the software version and the possibility to erase all of your programs or create / restore a backup.

Scroll down this page and enter in Remote Access.

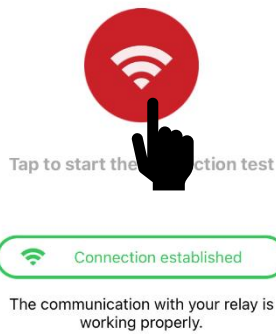


Select your gateway.

Send the association command with the red arrow / transmit option at the bottom right of your screen. You will hear the sound notification if the command is properly sent.



i As those products are working with a LoRa radio communication, the maximum distance between your gateway and LoRa devices is approximately 800m.



Tap on the red icon to launch the connectivity check.

Wait until the connection test is completed.

If the connection is established, the following information will be displayed.:

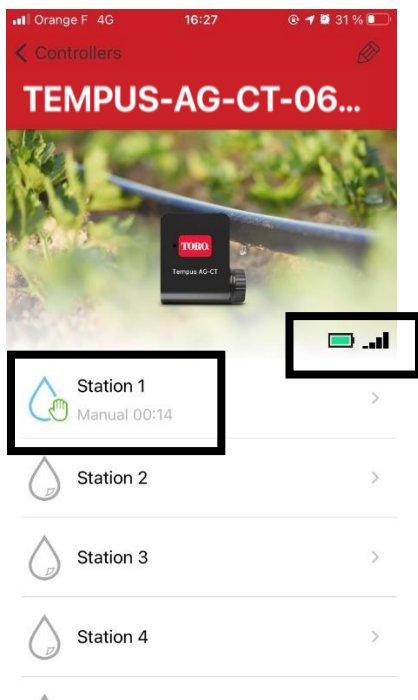


If the connection has failed, the following one will be displayed.



III – PROGRAMMING OF A TORO TEMPUS AG-CT

A) DEVICE INFORMATION AVAILABILITY



i When you enter in the device you can already see if some stations are watering at the moment and the time remaining.

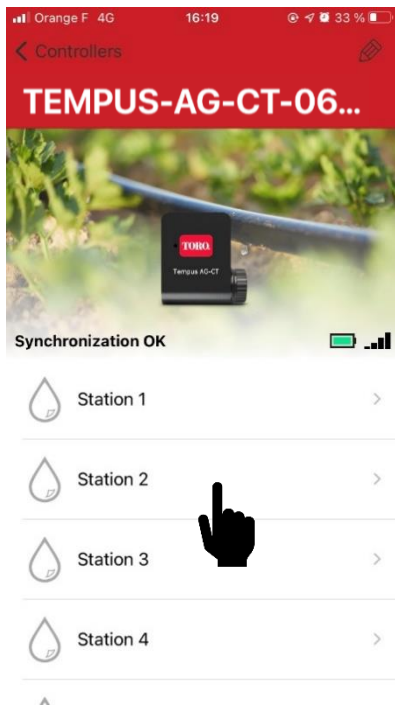
You also have information regarding the battery level and the connectivity signal.

B) WATERING PROGRAM

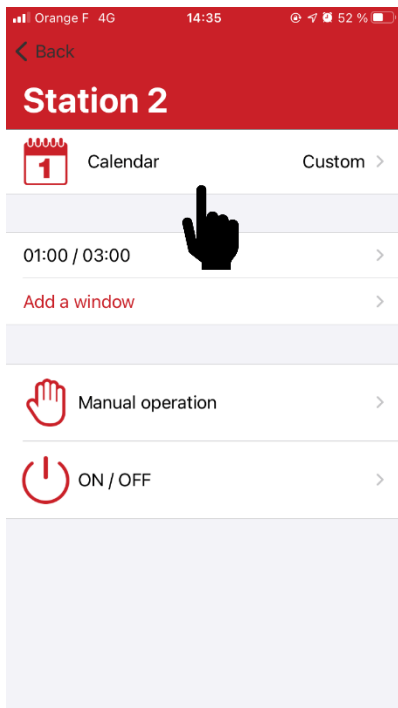
1) CYCLIC IRRIGATION



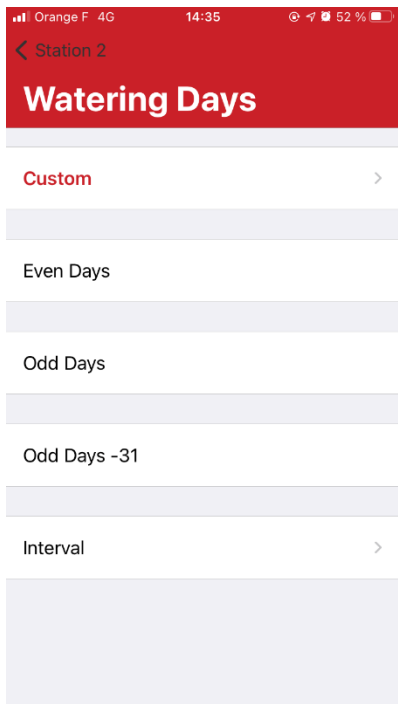
To create a program, select the device you want to parameter.



Select the station you want to parameter.

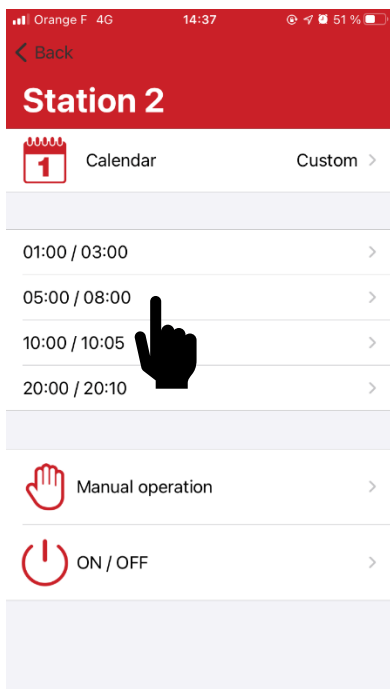


First, you need to define your watering periodicity by selecting the calendar.



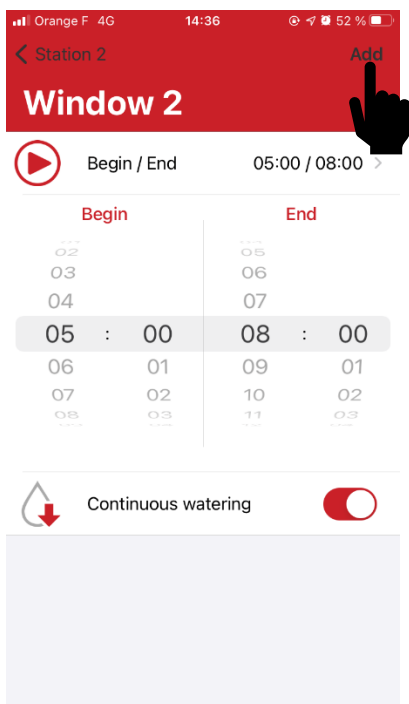
i Regarding the calendar, you have 5 possibilities, select the one adapted to your need:

- Custom if you want to select specific days.
- Even days (the 2nd, the 4th, the 6th...).
- Odd days (the 1st, the 3rd, the 5th...).
- Odd days minus 31. You can have a month finishing by the 31st, so with this function, it will not irrigate 2 days in a row (Only the 1st of the next month will irrigate).
- Interval (examples)
 - Every day.
 - Every 2 days
 - Every 3 days.
 - Up to every 31 days



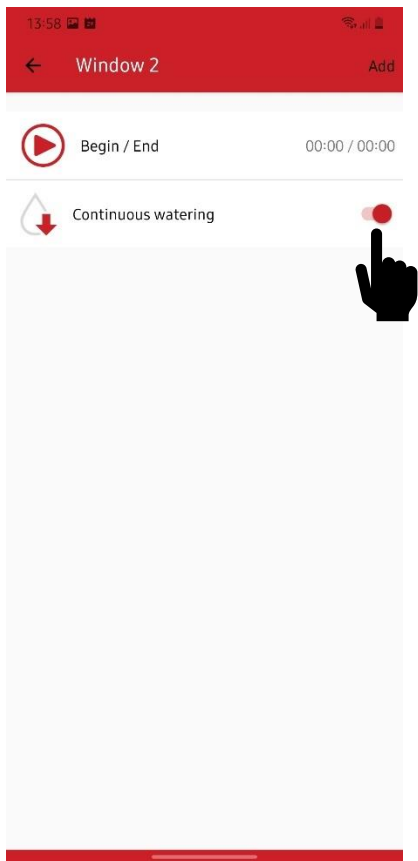
i Each station is independent and can get a different periodicity or irrigation cycle regarding the others. Each station can get up to maximum 4 watering windows.

Select the window you want to modify.

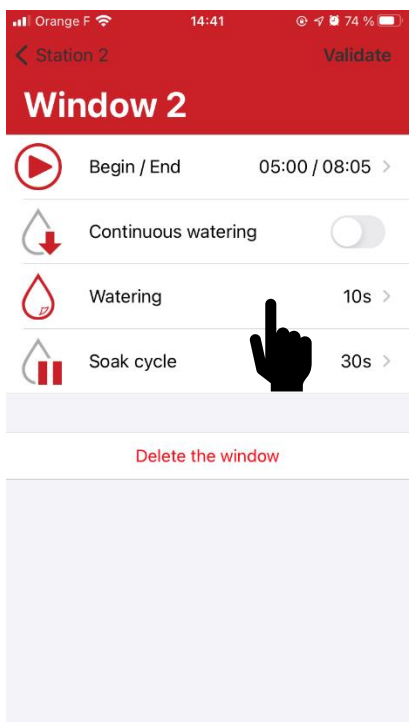


When selecting “Add a window” you can now define a starting and ending time for watering duration.

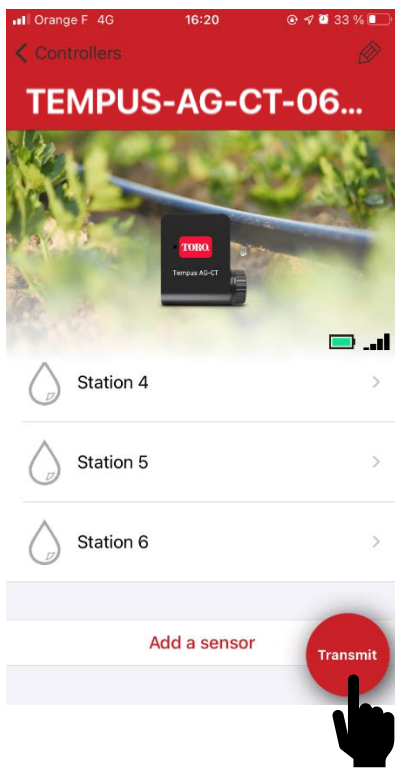
Then, you need to select “Add” on top right of your screen in order to confirm.



You have the possibility to select continuous watering.



You also have the option to select the duration of watering and soak.



Repeat the same procedure for the other stations.

! When your program is complete, don't forget to send it to the device thanks to the arrow / transmit option on the bottom right of your screen.



While waiting for the synchronization, your program will be pending.

A red 1 icon will be displayed on the top right corner of the device image in order to inform the user the program is waiting to be sent.

2) VOLUMETRIC AND RAINFALL PROGRAMMING



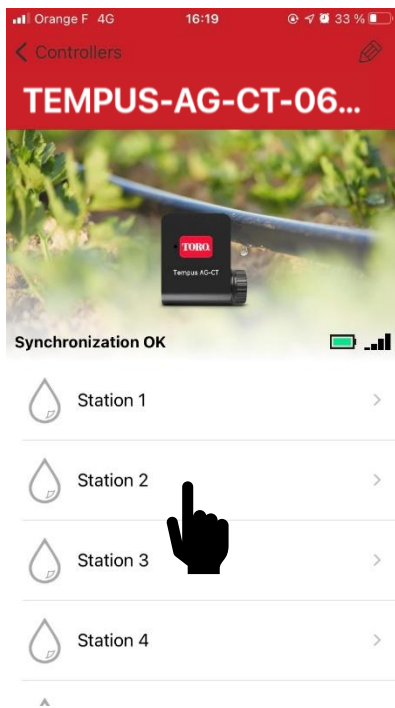
The cyclic irrigation by volume or by rainfall can be managed only via the platform.

Please refer to the MyTOROTEMPUS Platform User Manual.

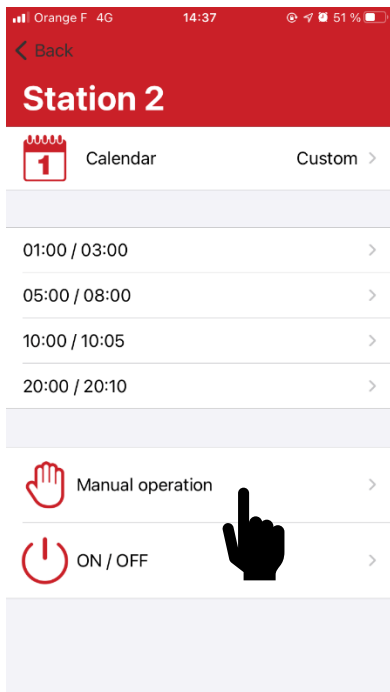
C) START A MANUAL PROGRAM



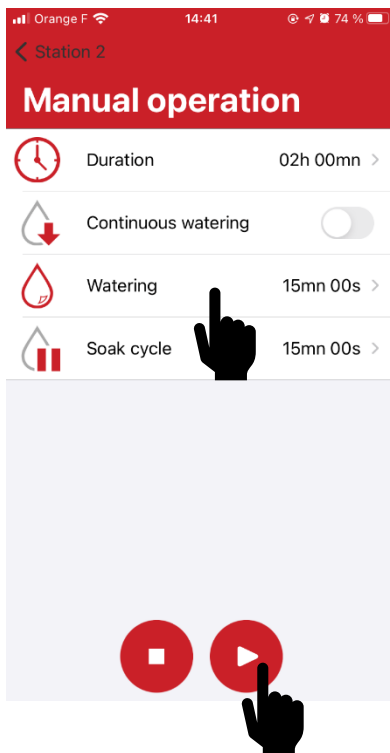
Select the device supposed to start.



Select the station you want to activate.



Selection the manual operation function.



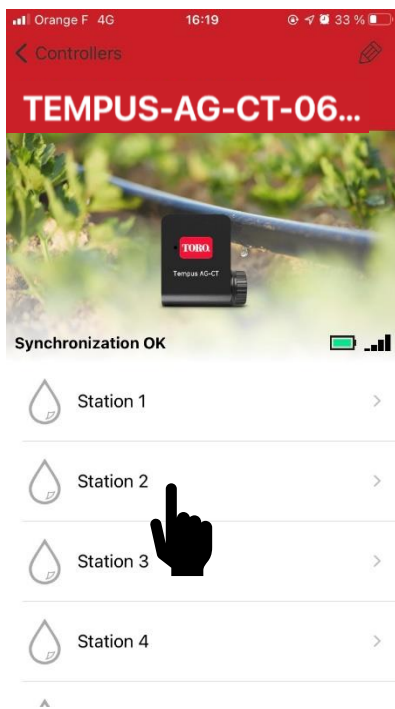
i If your device is associated with a gateway and you want to open the station remotely, please consider a 3min LoRa synchronization delay. If you send the command to your product directly in Bluetooth, the manual command will start immediately.

Select the duration and if you want a continuous watering or watering and soak values. Then send the command as per the example.

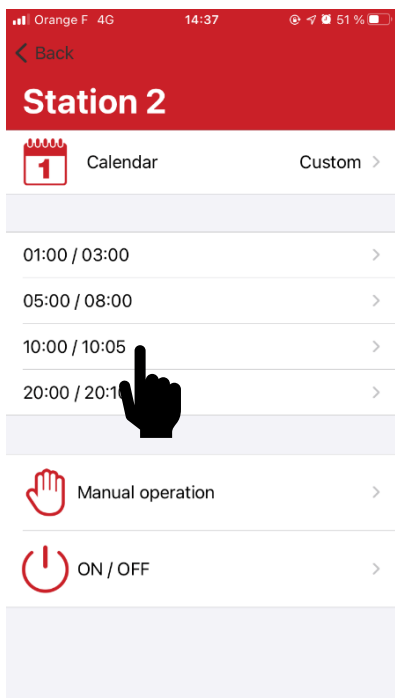
D) MODIFY YOUR PROGRAM



Select the concerned device.

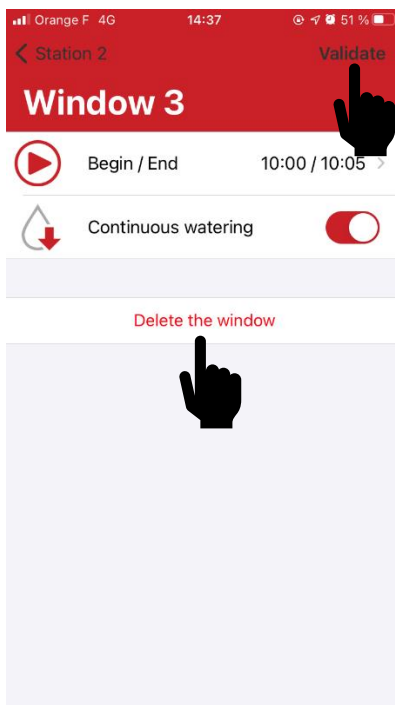


Select the station you want to modify.



i You can also visualize your existing programs on this screen.

In order to modify your program, you enter in the existing window and you can change all the data. For example, begin and end of the windows or water cycle etc...).

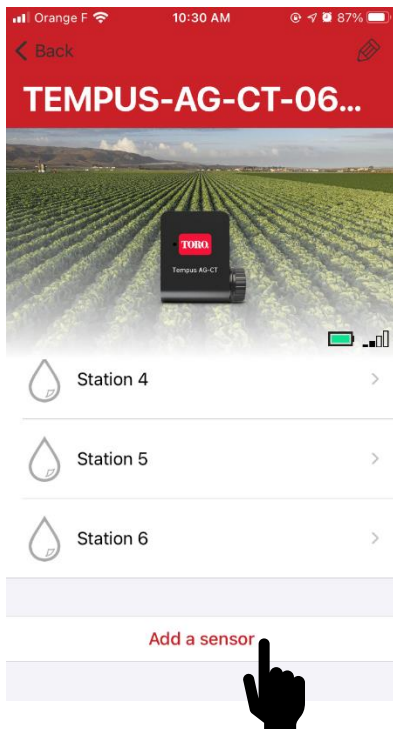


When you have selected the window, you can either change the duration as per III.B.1 or you can delete the existing window thanks to the option displayed in red "Delete the window".

Don't forget to validate your changes with the option on top right of the screen.

E) ADD SENSORS ON THE TEMPUS AG CT

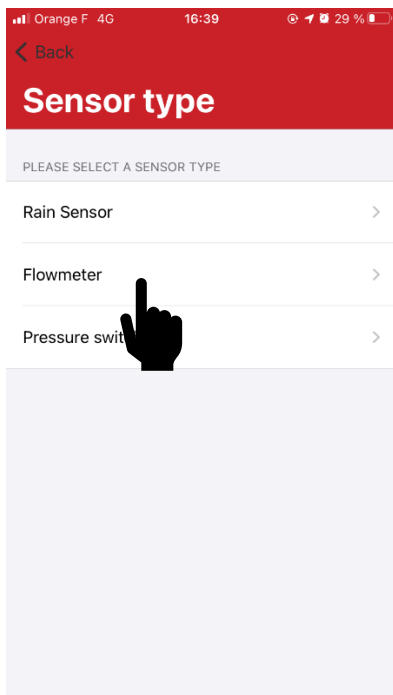
1) FLOWMETER



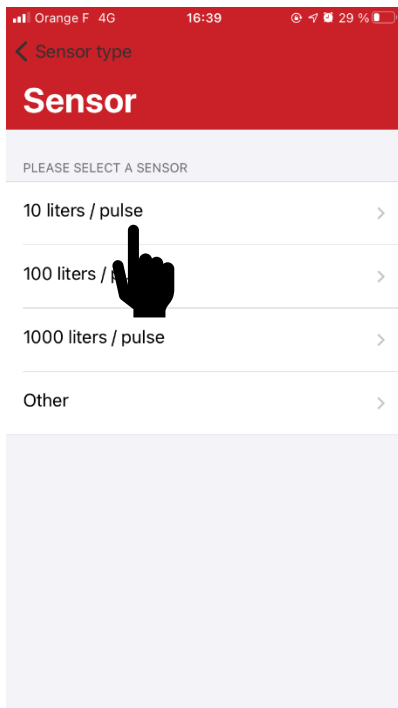
Your TEMPUS-AG-CT can be connected with a sensor (Either a flowmeter, a rain sensor or a pressure switch).

Select "Add a sensor".

1.1) Sensor Settings



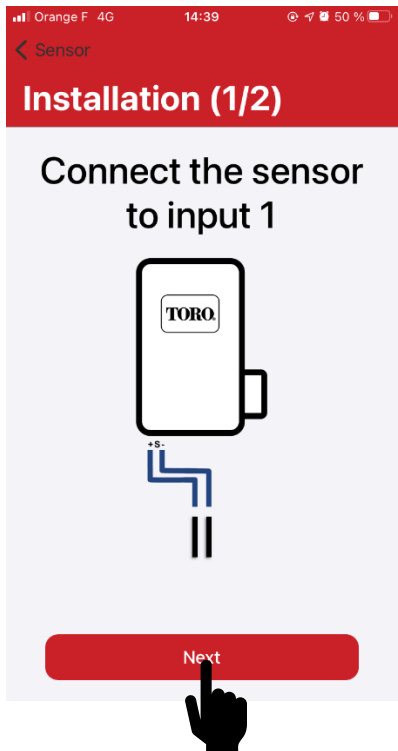
Select the flowmeter.



Select the K Factor to set up your flowmeter.



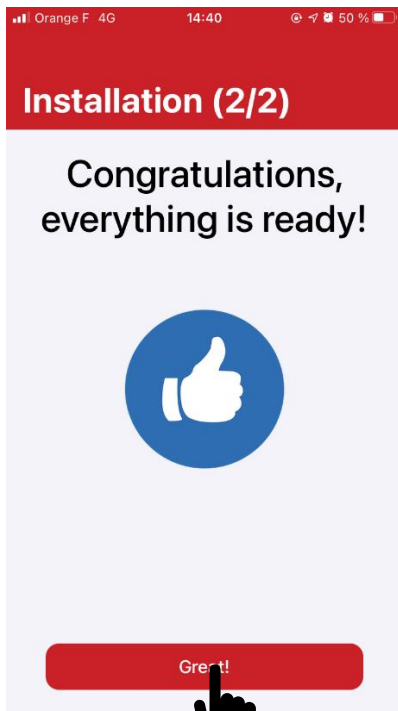
The K factor is provided by the flow meter manufacturer.



Cut the blue wire of your device.

Connect both blue wires according to the polarities of the pulse contactor of the flowmeter.

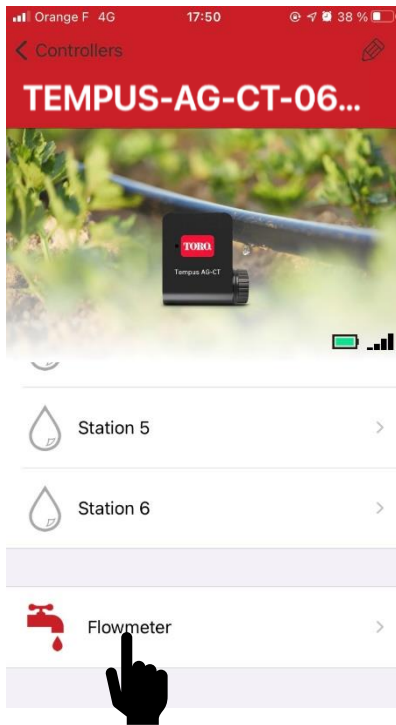
Select "Next" option to access the following step.



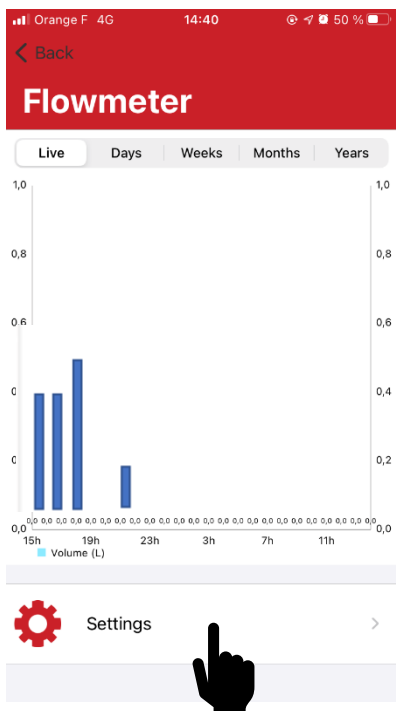
i There is no automatic check on the wiring connection.

Select "Great!" you can now access your sensor settings.

1.2) Water consumption visualization



Select the new icon “Flowmeter” on your device which is displayed at the bottom of the screen.



You can visualize the water volume consumption by checking data per live (last 24 hours), days, weeks, months or years.

Select “settings” in order to define your thresholds.

1.3) Sensors Threshold settings

DAILY THRESHOLDS

High threshold 40 L/day

Low threshold 10 L/day

LEAK ALERT VOLUME 10 L

STATIONS' FLOW

Station 1 10 L/mn

i On the settings, you can define values for high or low threshold. You can also activate the leak alert, the station flow and settling time.

HIGH THRESHOLD (Daily volume): Maximum water consumption (in Liters) you don't want to exceed on a 24-hour period of time. In case of exceeded objective, you will be immediately informed (per e-mail and smartphone and/ or tablet notification).

LOW THRESHOLD (Daily volume): Minimum water consumption (in Liters) you want to reach in a 24-hour period of time. In case of non-reached objective, you will be informed the next day, at 7am (per e-mail and smartphone and/ or tablet notification).

LEAK ALERT VOLUME: Water volume threshold outside irrigation period of time (in Liters) from which you want to be alerted.

STATION FLOW: For each station, enter the theoretical or real flow rate.

If you do not know this value, you can calculate it thanks to the immediate value function.

HOW TO CALCULATE YOUR STATION FLOW:

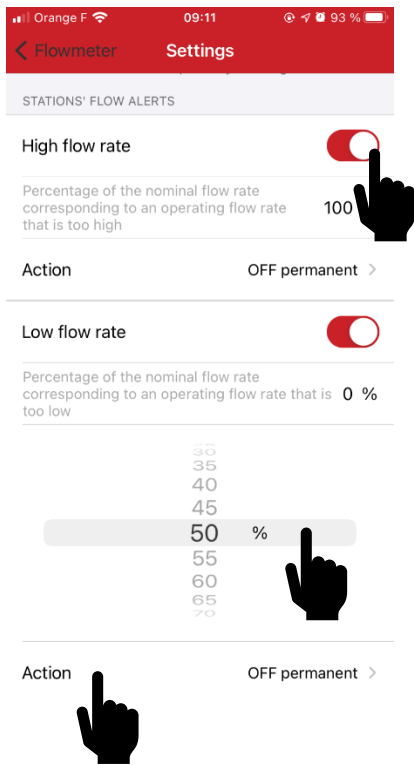
Step 1: Do and register an Immediate value (Val.1).

Step 2: Launch a manual command of your chosen station during 5 minutes.

Step 3: After 5 minutes, when the irrigation is stopped, do and register an immediate value (Val.2).

Step 4: Calculate your flow rate: $(\text{Val.2} - \text{Val.1}) / 5 = \text{Flow rate in liter per minute}$.

Step 5: Enter this value in the chosen station flow.



i **HIGH FLOW RATE:** Maximum percentage of stations flow rates you don't want to exceed.

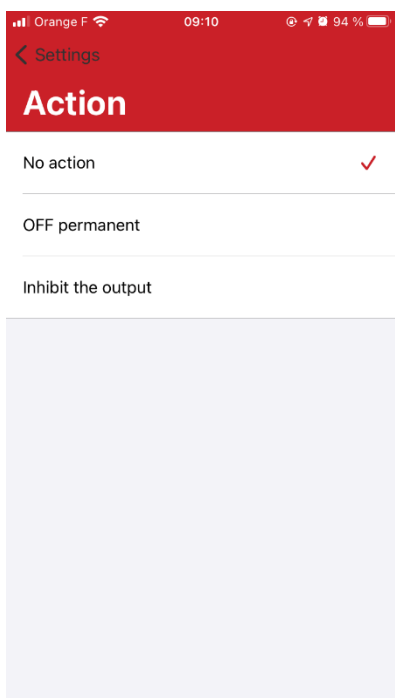
LOW FLOW RATE: Minimum percentage of stations flow rates you don't reach.

The alert for "High flow rate" or "Low flow rate" is sent immediately.

Activate the high and low flow rate options.

Enter the percentage of the high and low nominal flow rate.

Define the related action.



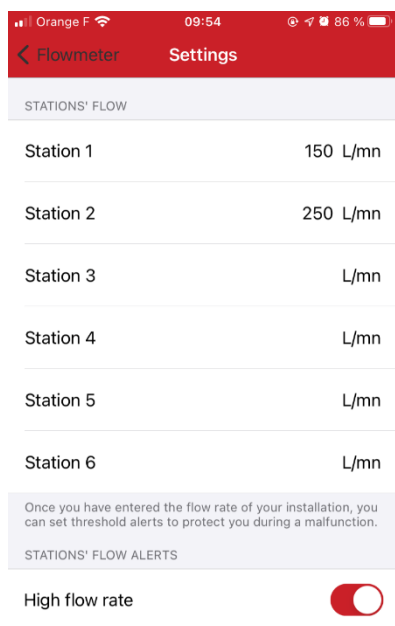
i For each station flow rate alert, you can define a linked action:

No action: The watering continues.

Permanent OFF: The watering will completely stop and will require a "ON" manual command in order to start again (In the app for the concerned device). This will be applied for all stations.

Inhibit the output: Only the concerned station will be stopped.

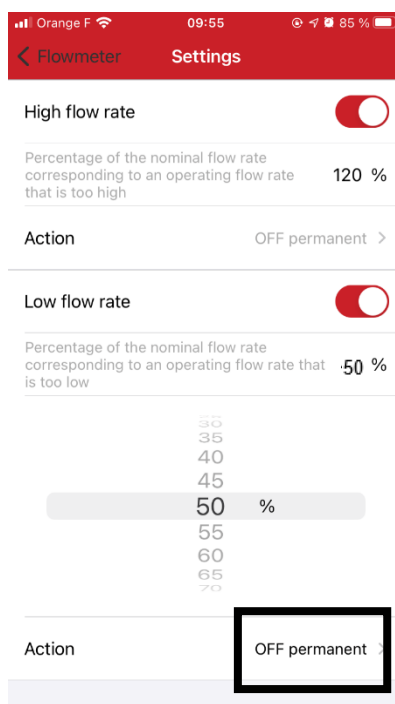
The representation of this functionality can be displayed as per the two following graph examples:



For those two examples, we will enter the following nominal station flow rates:

Station 1: 150 L/mn

Station 2: 250 L/mn



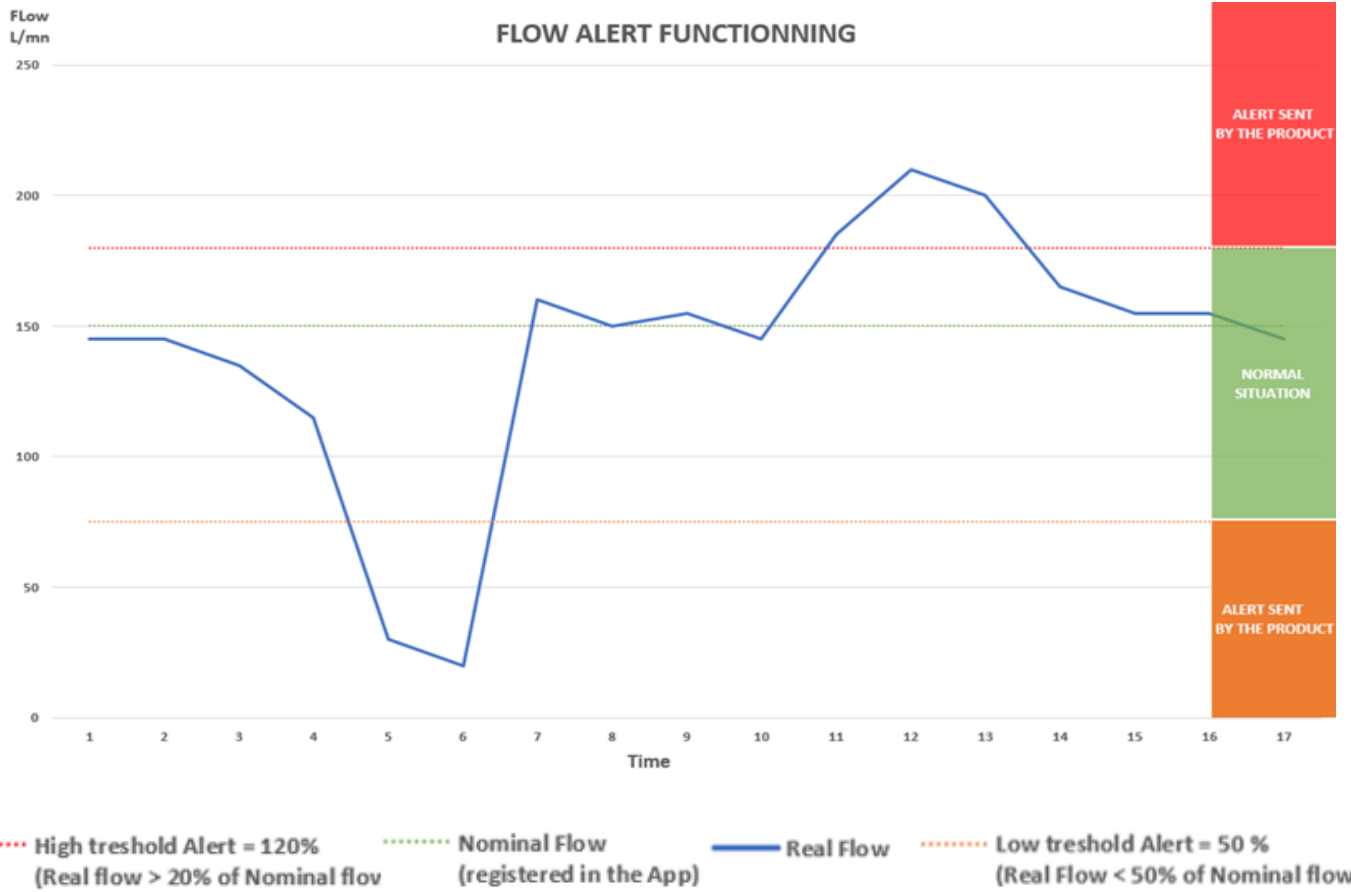
We enter now the values in percentage of the high and low flow rates:

High flow rate: 120%

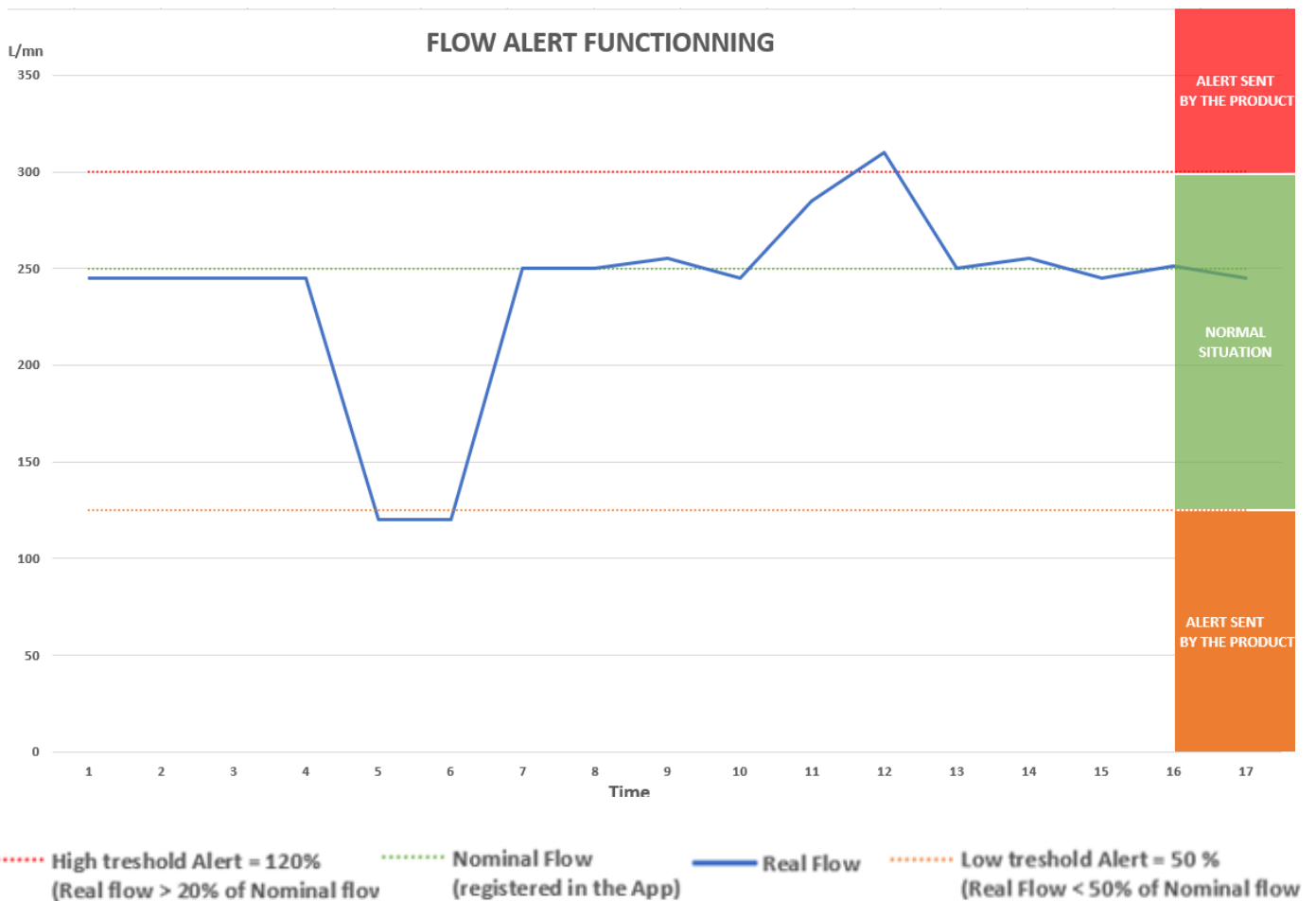
Low flow rate: 50%

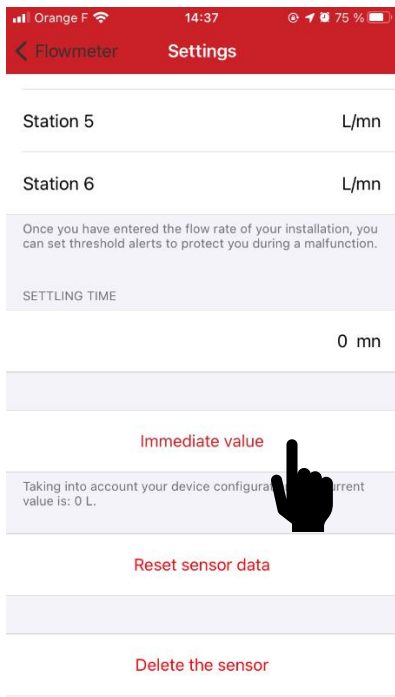
Regarding the Action, if the high or low threshold are reached, this will have for consequence a permanent OFF of the module in our case.

EXAMPLE STATION 1 (NOMINAL FLOW: 150 L/MN)



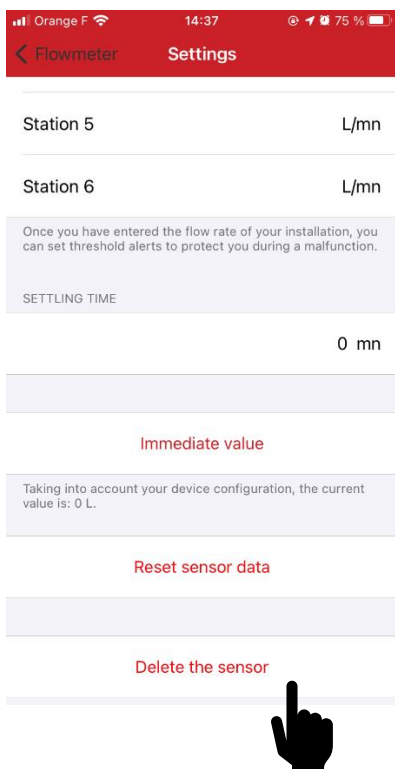
EXAMPLE STATION 2 (NOMINAL FLOW: 250 L/MN)





i **IMMEDIATE VALUE:** This feature displays the water consumption instant value in liters and is available only via Bluetooth.

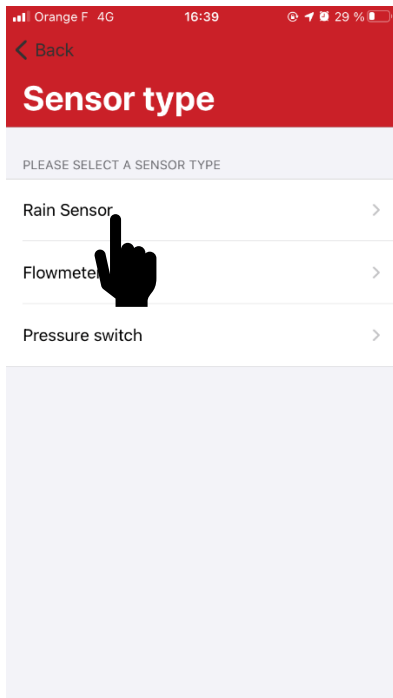
It will enable you also to check the K factor in order to guarantee a good measurement level. If this K factor is not correctly adjusted, please refer to step III.E.1.1 SENSOR SETTINGS.



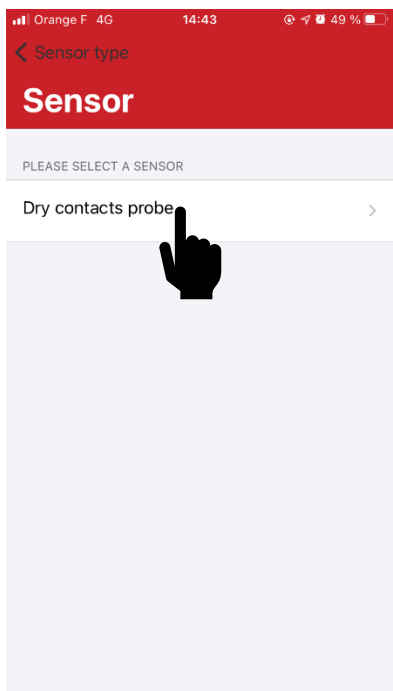
i You can also delete your sensor on this page with “Delete the sensor” if you want to remove it or parameter another one. This will be the same procedure for the other sensors (Rain Sensor and Pressure Switch).

2) RAIN SENSOR

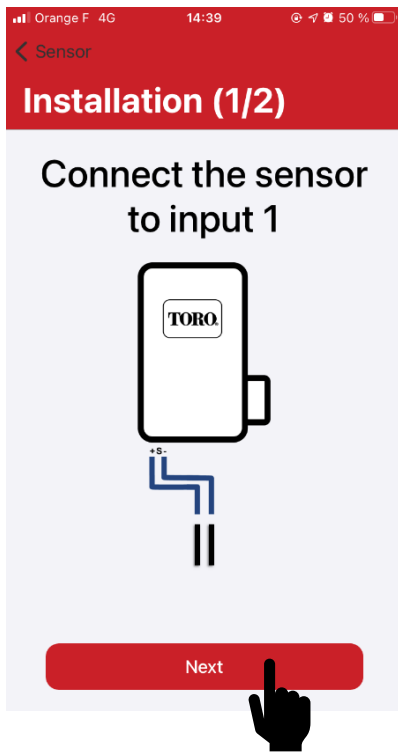
2.1) Sensor Settings



Select the Rain Sensor (Dry contact).



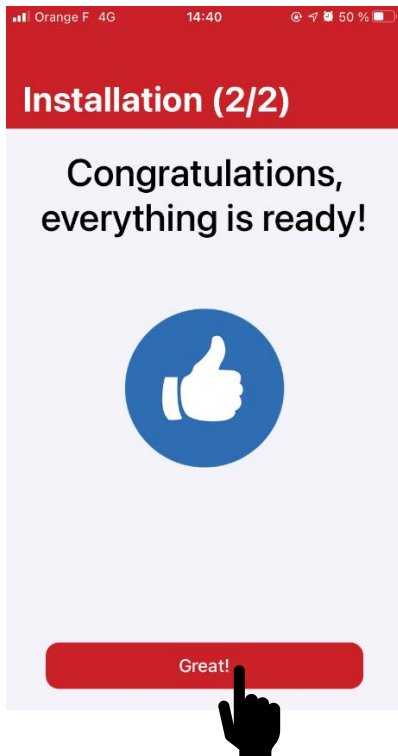
Select "Dry contacts probe". Only those sensors or equivalent can be connected to the device.



Cut the blue wire of your device.

Connect both blue wires according to the polarities of the ones of the rain sensor.

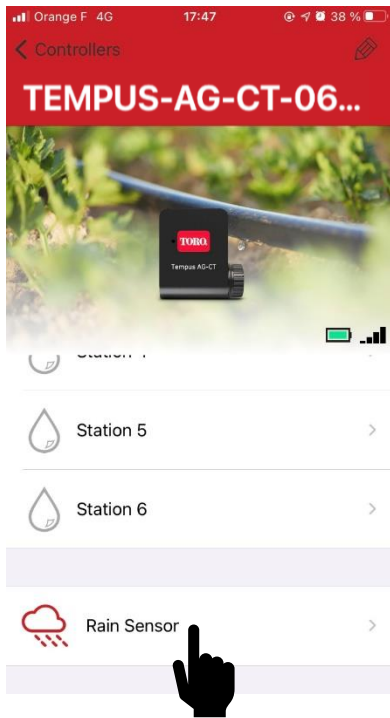
Select "Next" option to access the following step.



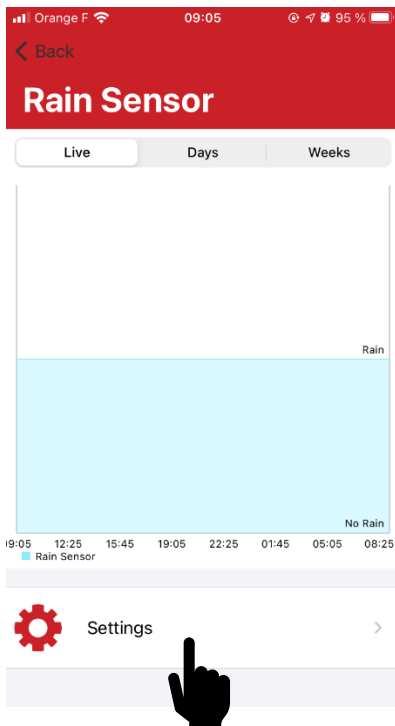
i There is no automatic check on the wiring connection.

Select "Great!" you can now access your sensor settings.

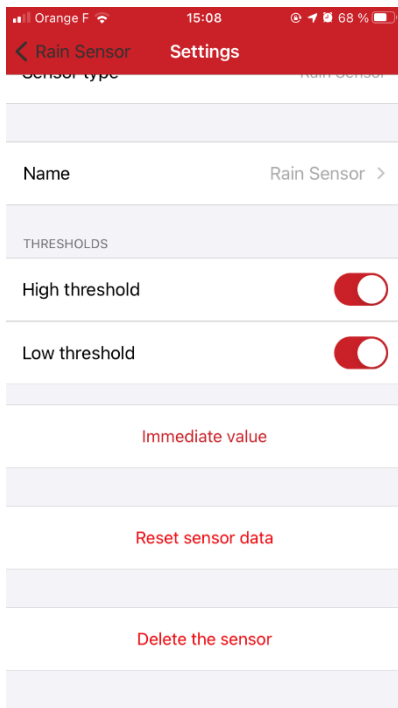
2.2) Sensors Threshold settings



Select the new icon “Rain Sensor” on your device which is displayed at the bottom of the screen



i You can visualize the rain level by checking data per live (last 24 hours), days, weeks.
Select “settings” in order to define your thresholds.



i High threshold means it is raining (the rain sensor is wet).

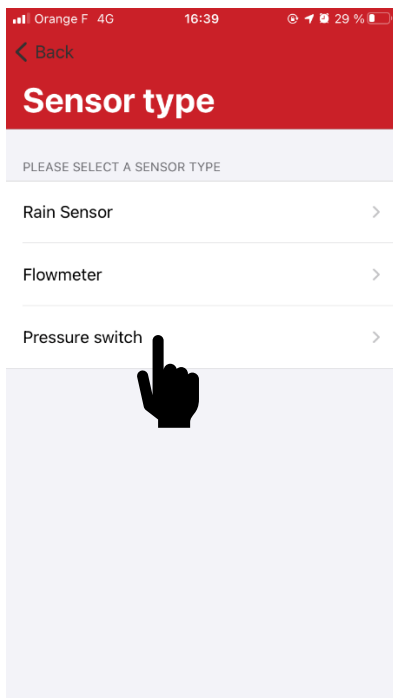
Low threshold means raining has stopped (the rain sensor is dry).

You can activate or deactivate the low and high threshold.

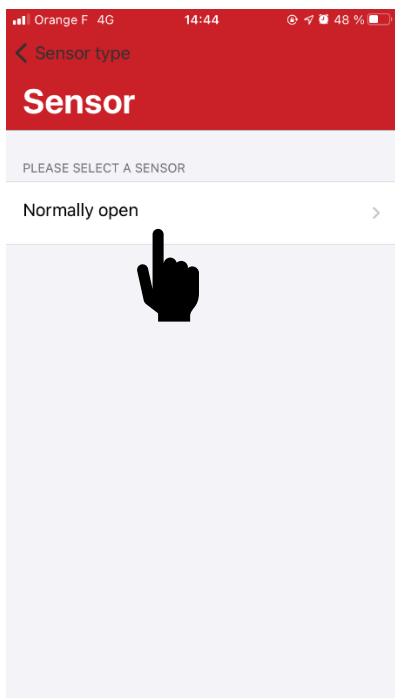
i **IMMEDIATE VALUE:** Select this option if you want to know if the rain sensor is dry (0) or wet (1).

3) PRESSURE SWITCH

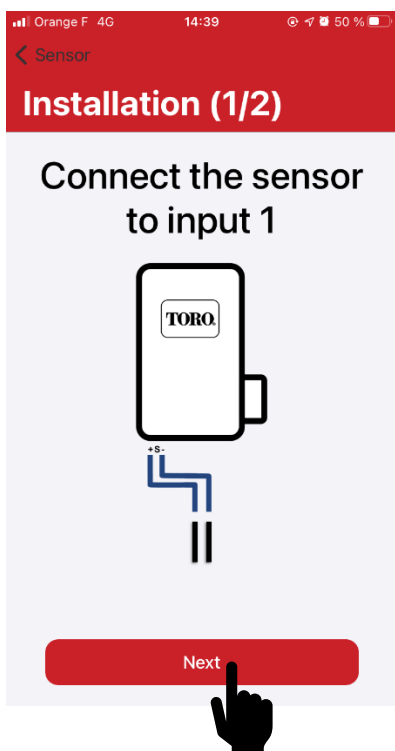
3.1) Sensor settings



Select the Pressure Switch.



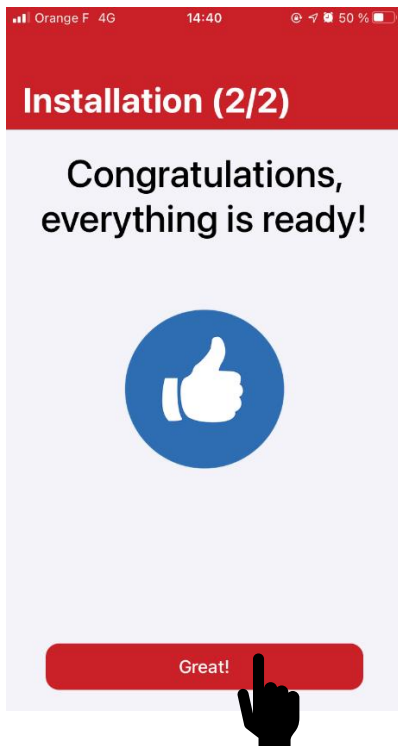
Select "Normally open" (Dry contact).



Cut the blue wire of your device.

Connect both blue wires to the ones of the pressure switch.

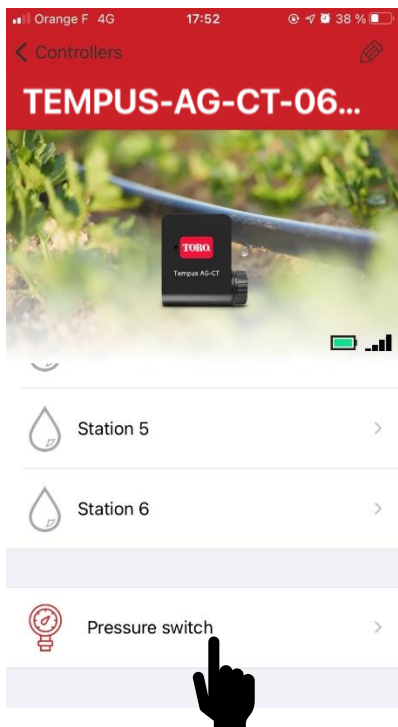
Select "Next" option to access the following step.



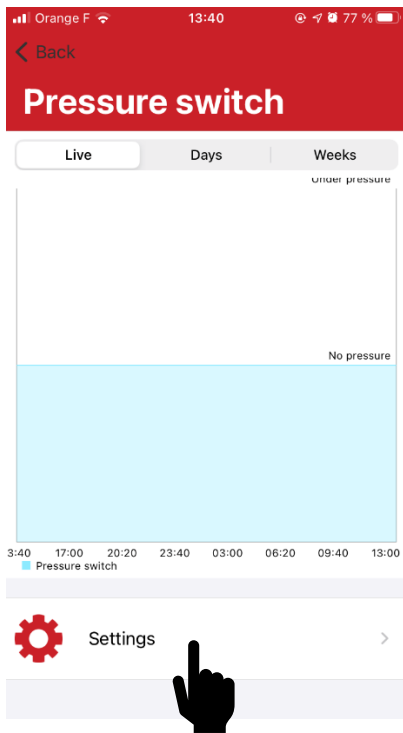
i There is no automatic check on the wiring connection.

Select "Great!" you can now access your sensor settings.

3.2) Sensors Threshold settings



Select the new icon "Pressure Switch" on your device which is displayed at the bottom of the screen.

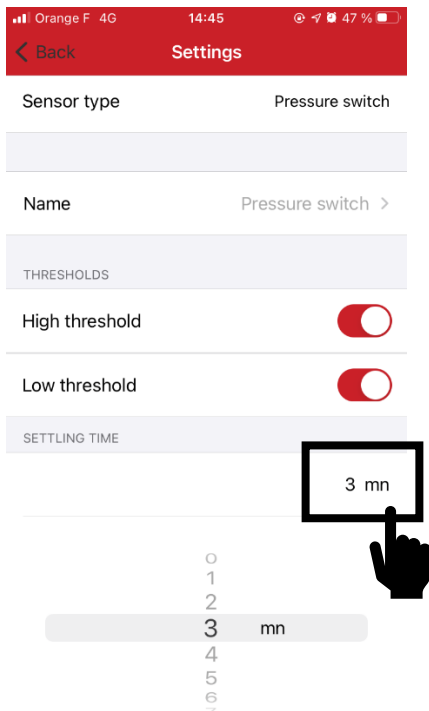


i You can visualize if the pressure has been reached or not by checking data per live (last 24 hours), days, weeks. If value = 1, the pressure tuned has been reached. If value = 0, the pressure tuned has not been reached.

Select "settings" in order to define your thresholds.

If your pressure switch is connected on the valve, you can activate the high and low threshold:

The settling time avoid to measure the pressure during the stabilization period (3min in this example).



i How to set up manually your pressure switch on the pipe.

i How to set up manually your pressure switch on the pipe.

- 1- The contact of the pressure switch is normally closed.
- 2- Put the pressure switch on the pipe.
- 3- Remove the cap on the head of the pressure switch.
- 4- Check that the value is 0 using the instant value connected in bluetooth with the App.
- 5- Open the irrigation and check if the value is 1.
- 6- To set it up precisely. During irrigation Screw the screw of the pressure switch until the instant value go to 0.
- 7- Then always during the irrigation, unscrew slowly a little bit more the screw in order to get again the 1.

Note that you can also use a multimeter instead of the using the instant value.

IV- PROGRAMMING OF A TORO AG-MS

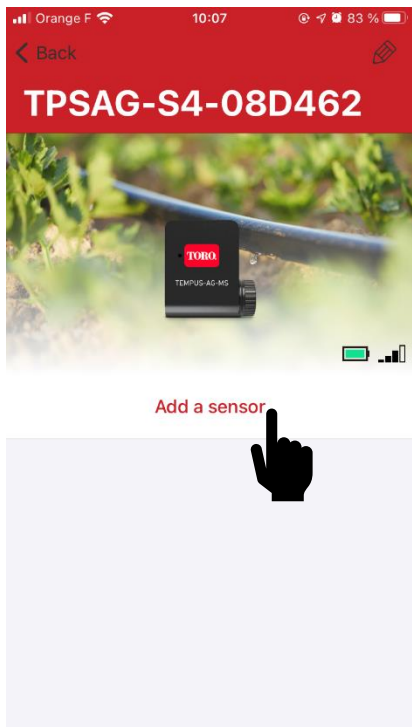
The TEMPUS-AG-MS is a Bluetooth® / LoRa connected battery operated sensor device that allows the data acquisition of temperature, moisture, flow rate, wind speed, rainfall. If linked to a LoRa gateway (TEMPUS-AG-4G or TEMPUS-AG-WF), it allows to visualize collected data in your MYTORO TEMPUS account (in the app or the platform). You can define actions on your other TEMPUS device according to the thresholds you would have set up for each sensor.

To pair your TEMPUS-AG-MS, please follow the procedure from section II. A of this user manual.

To associate your TEMPUS-AG-MS to your gateway TEMPUS-AG-4G / TEMPUS-AG-WF, please follow the procedure from section II.B.



Select your TEMPUS-AG-MS product among the rest of your devices.



i Your TEMPUS-AG-MS is a data acquisition product and can either be a 1 or a 4 inputs device.

TEMPUS-AG-MS 1 input: You can choose which sensor you want to connect to your device (moisture, anemometer, flow meter, pluviometer and rain sensor).

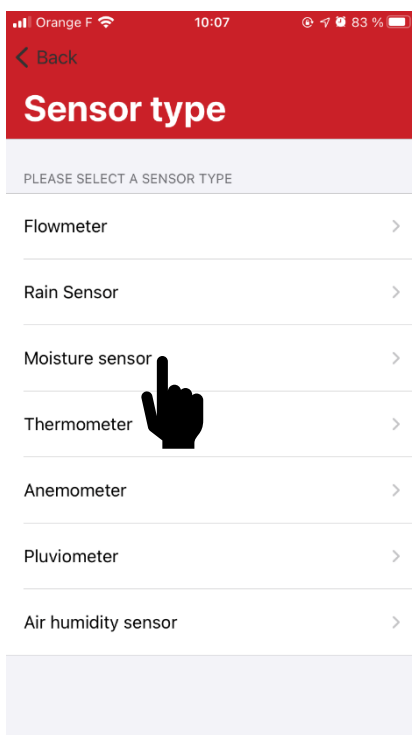
! This TEMPUS-AG-MS 1 input is not compatible with the temperature sensor.

TEMPUS-AG-MS 4 inputs: One input is already dedicated to the temperature sensor (PT100), the three other inputs are free and you can connect either a moisture sensor, or an anemometer, flow meter, pluviometer, rain sensor.

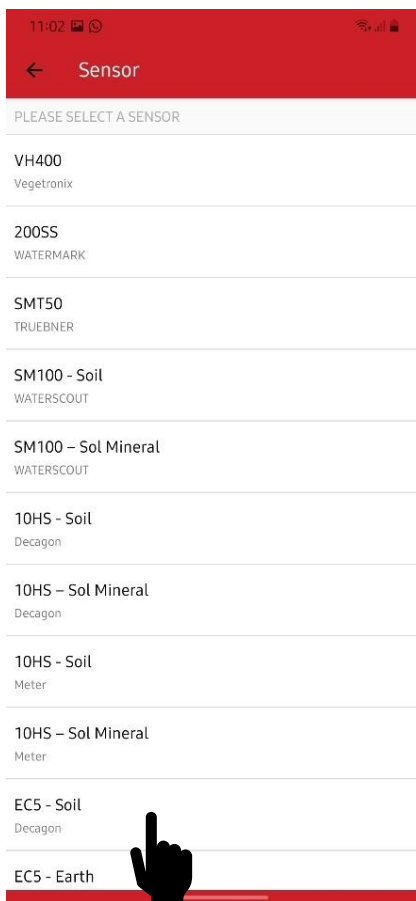
For example, we will connect 4 sensors: moisture, anemometer, pluviometer and a temperature sensor

Select "Add a sensor".

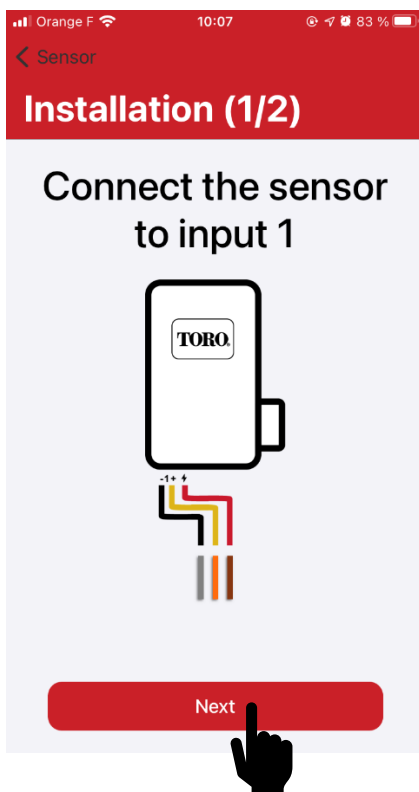
1) Moisture sensor



Select the moisture sensor.

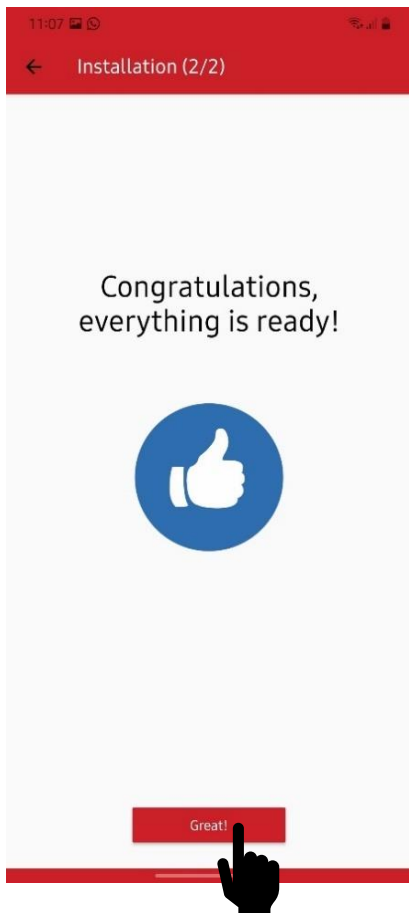


Select the type of moisture sensor you want to install.



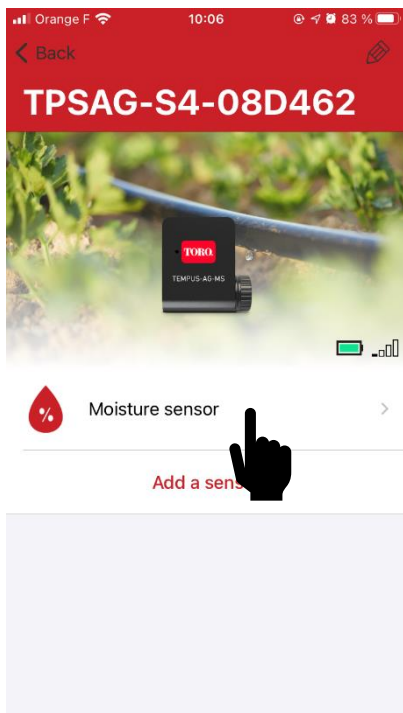
Follow the wiring scheme of the type EC5-SOIL moisture sensor displayed on your app in order to connect it and then select "Next".

The wiring scheme depends on the type of sensor you have selected.

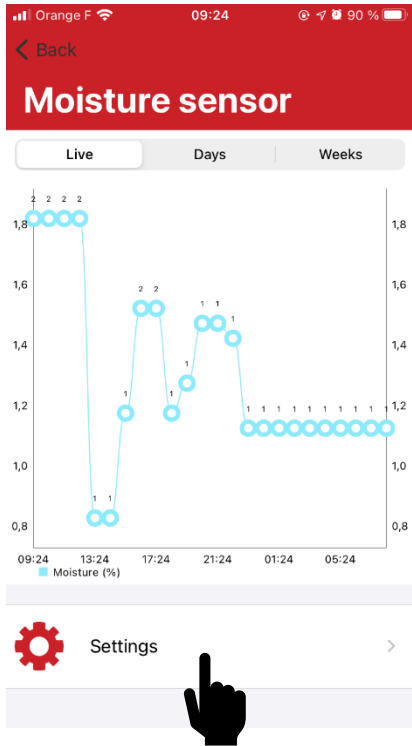


i There is no automatic check on the wiring connection.

Select "Great" as you can now access your sensor settings.

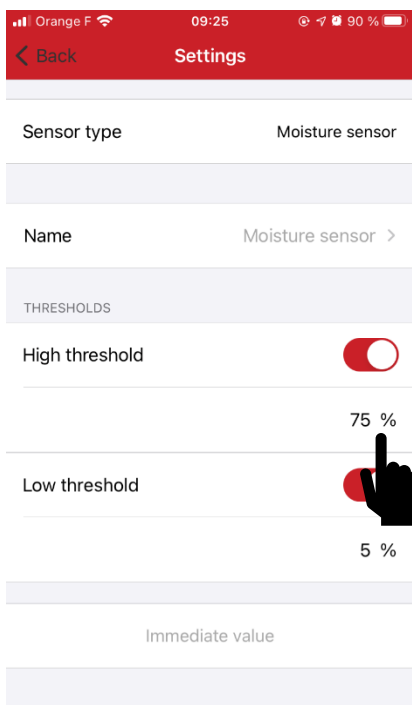


You can now see the Moisture sensor logo linked to your device. Select it.



You can visualize the moisture level by checking data per live (last 24 hours), days, weeks.

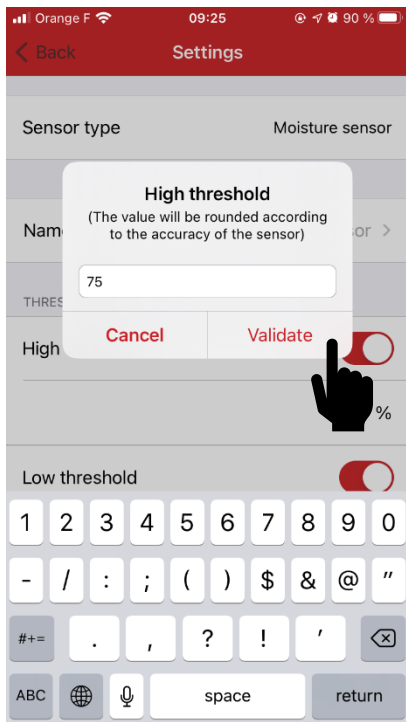
Select "settings" in order to define your thresholds.



i In the settings area, you can define the high and low thresholds for which you want to receive an alert.

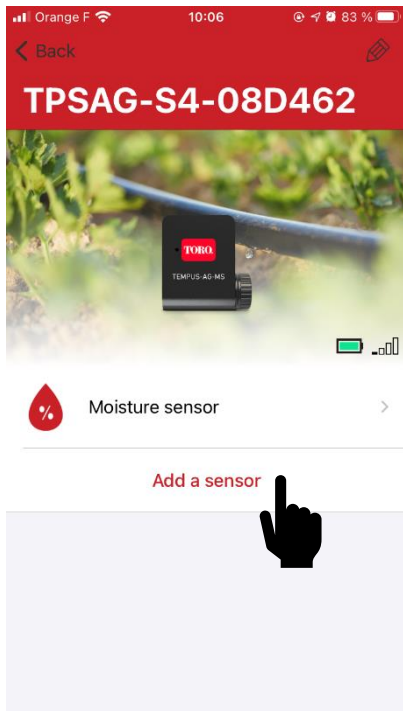
You can link an action to your device in case of threshold exceeded only on MYTOROTEMPUS platform.

Select the percentage section you want to add and/or modify.

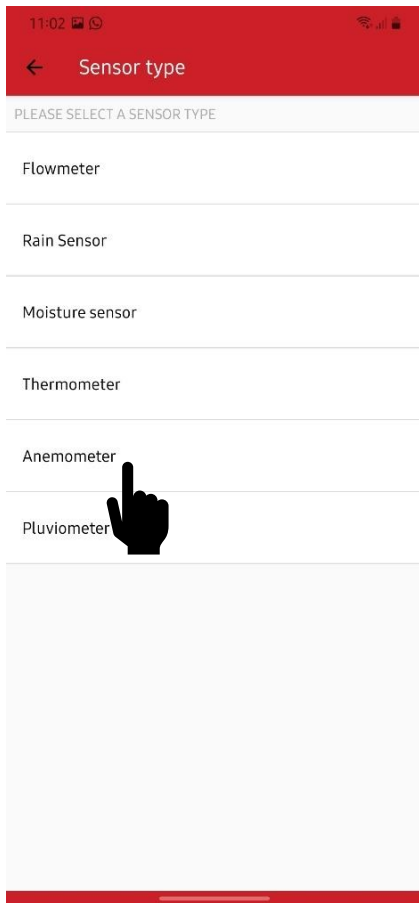


Change the value and validate.

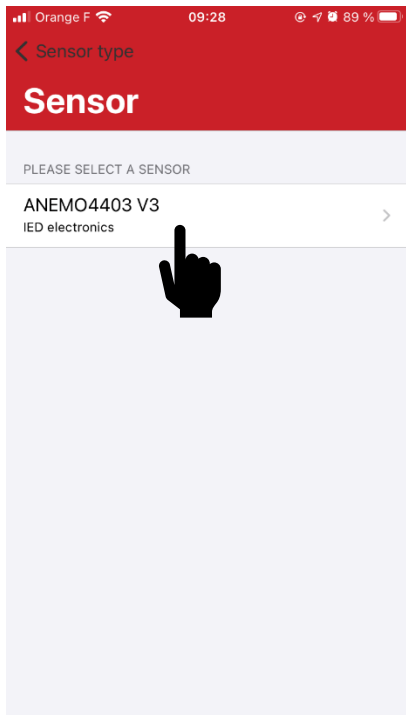
2) Anemometer



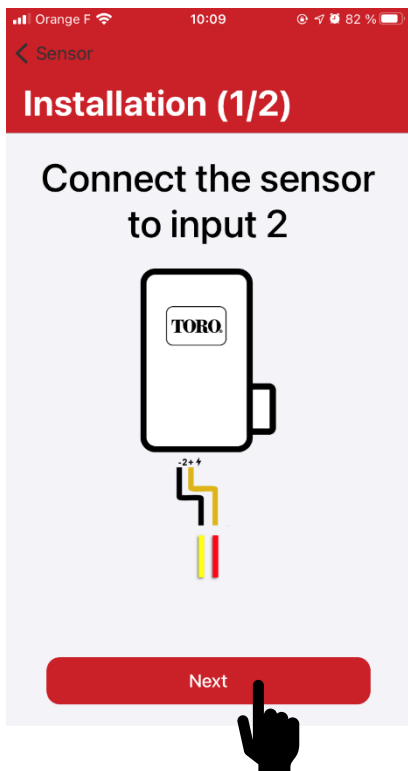
Select "Add a sensor".



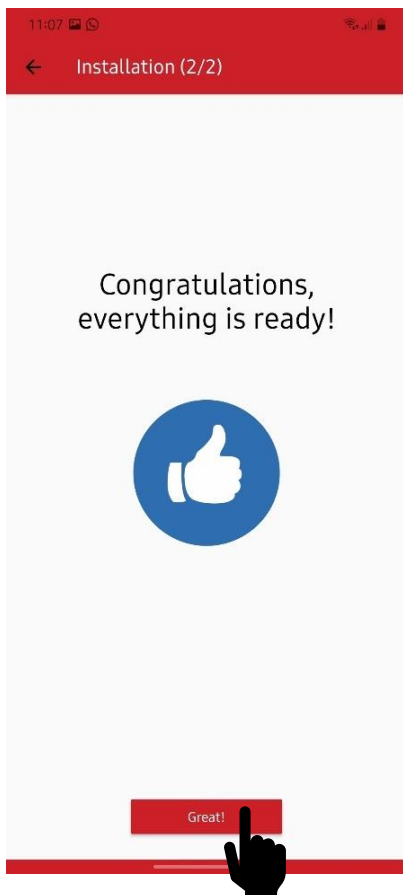
Select the anemometer.



Select the anemometer type.

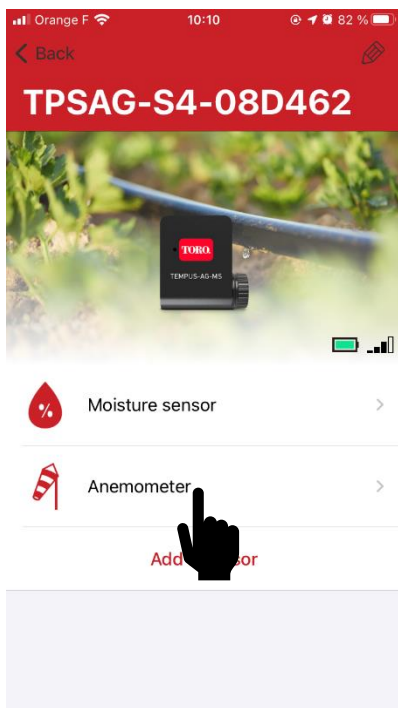


Follow the wiring scheme displayed on your app and select “Next”.

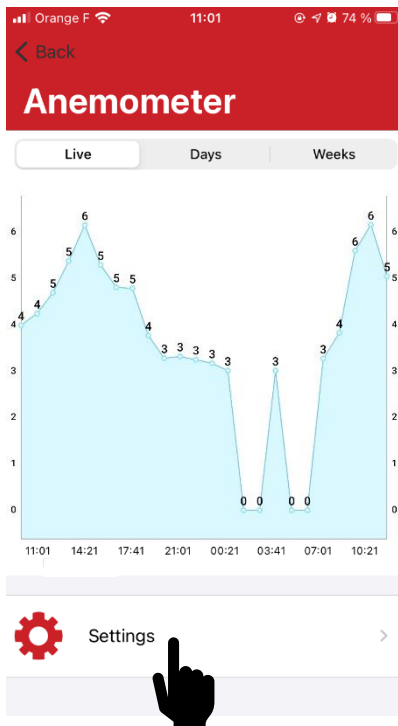


i There is no automatic check on the wiring connection.

Select “Great” as you can now access to your sensor settings.

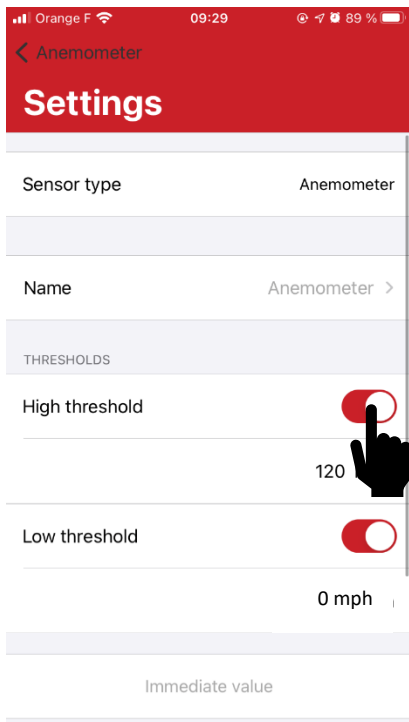


Select “anemometer” among the list of your connected sensors.



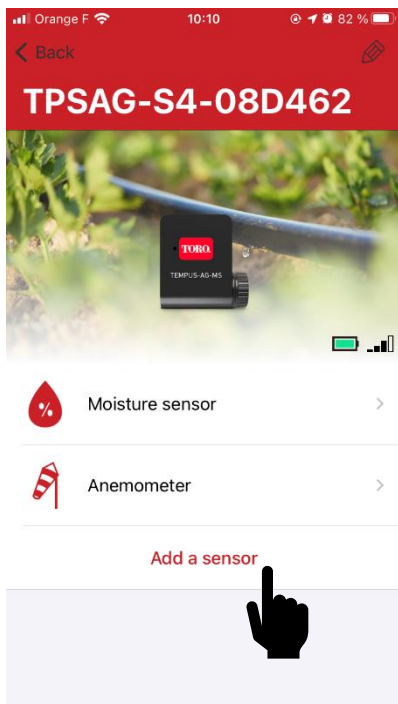
i On this screen, you can visualize your anemometer sensor data in a graph.

Select “settings”.

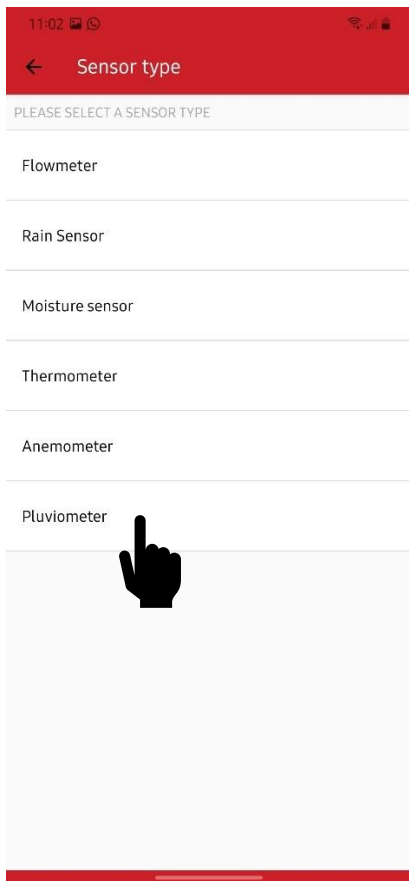


Select the high and low threshold in order to define their value in mph.

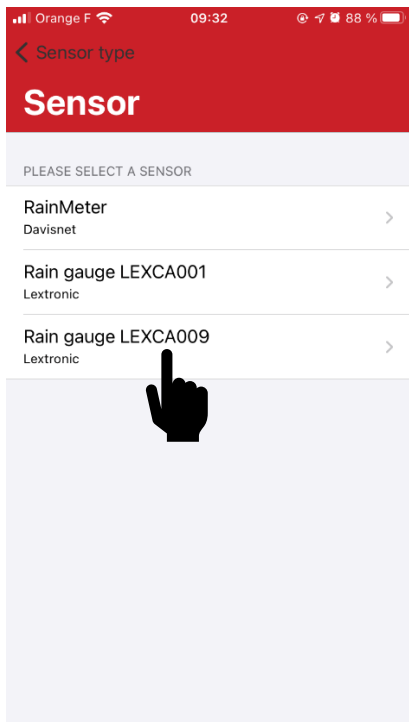
3) Pluviometer



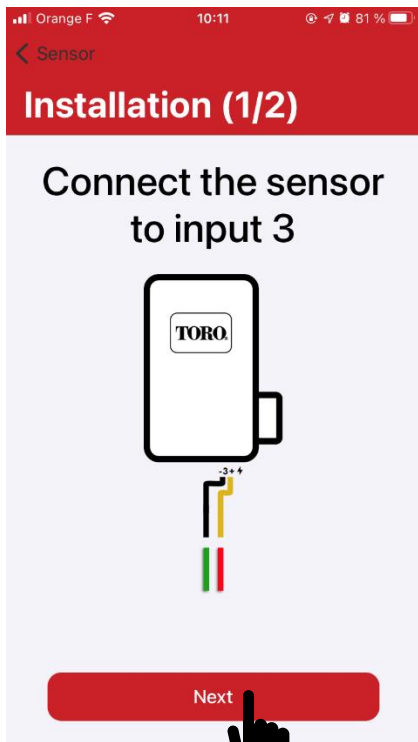
Select "Add a sensor".



Select the pluviometer.

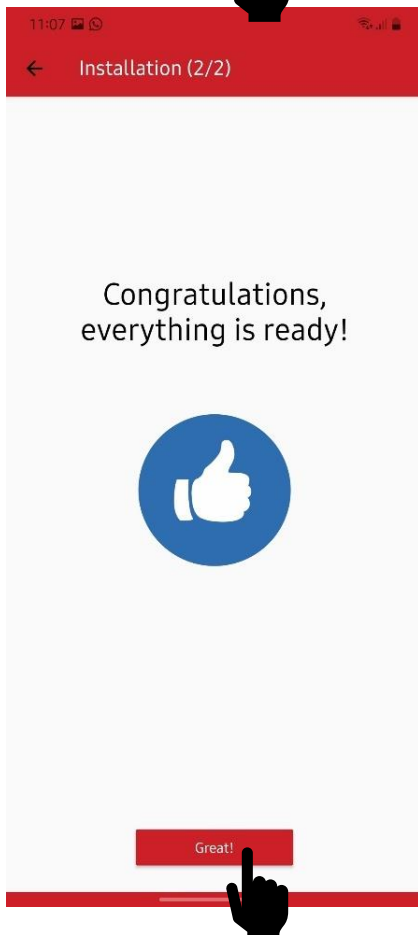


Select the type of the sensor you have.



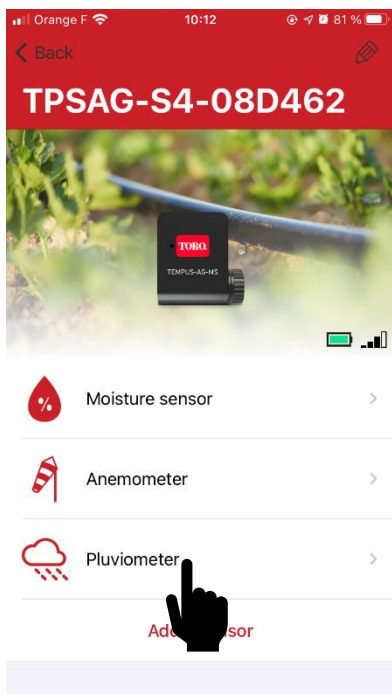
Follow the wiring scheme of the type RAIN GAUGE LEXCA009 pluviometer sensor displayed on your app in order to connect it and then select “Next”.

The wiring scheme depends on the type of sensor you have selected.

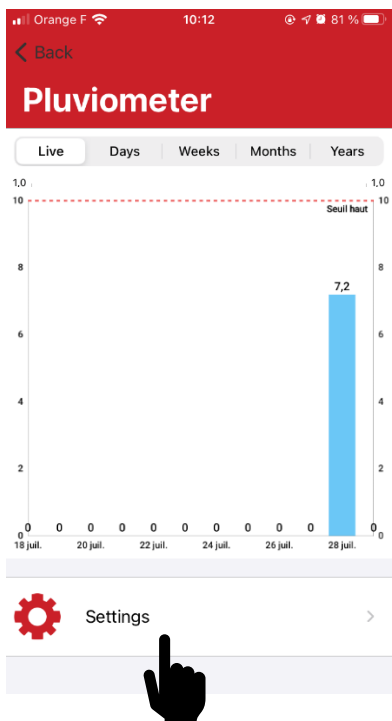


i There is no automatic check on the wiring connection.

Select “Great” as you can now access to your sensor settings.

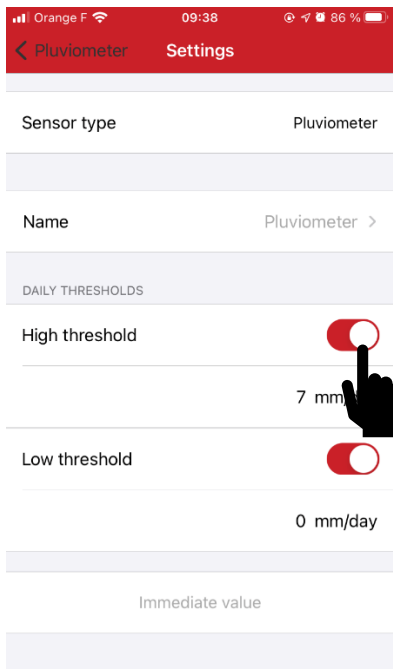


Select the pluviometer among the list of your connected sensors.



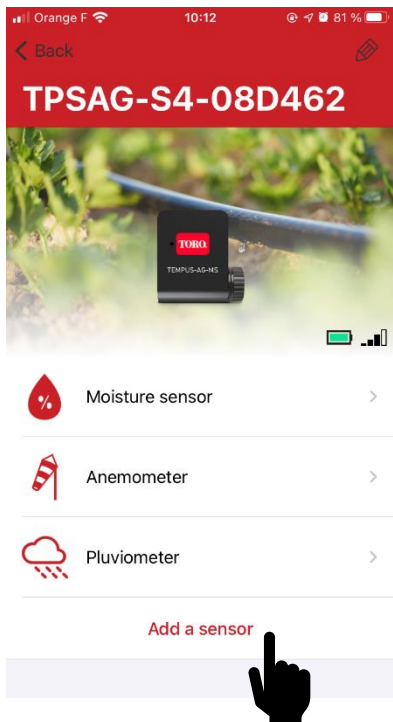
On this screen, you can visualize your pluviometer sensor data in a graph.

Select "settings".

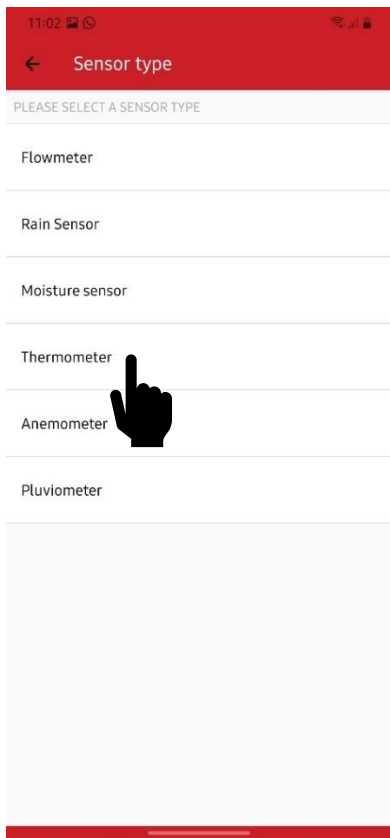


Select the high and low threshold and define their values in mm/day.

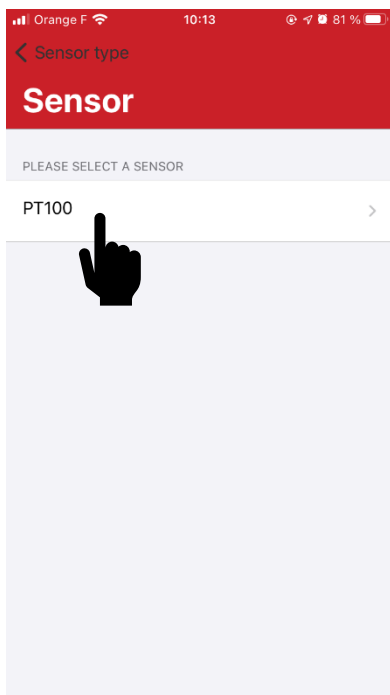
4) Thermometer



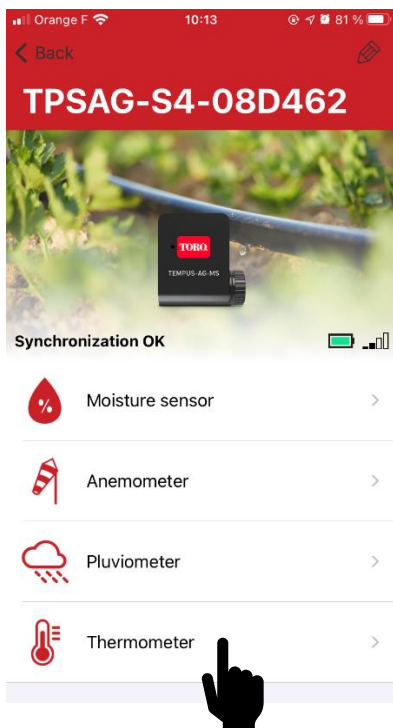
Select "Add a sensor".



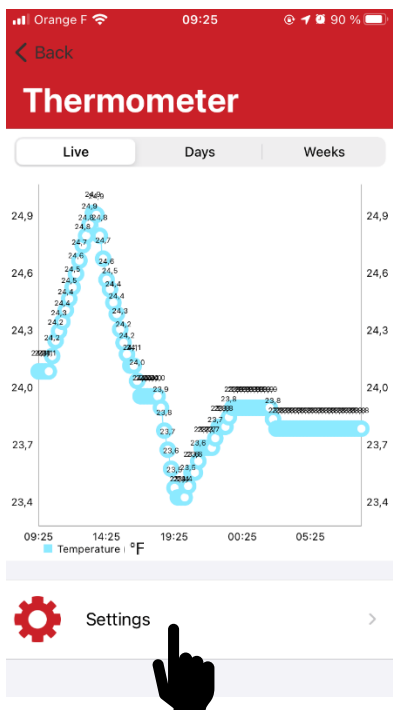
Select the thermometer.



Select the thermometer type.

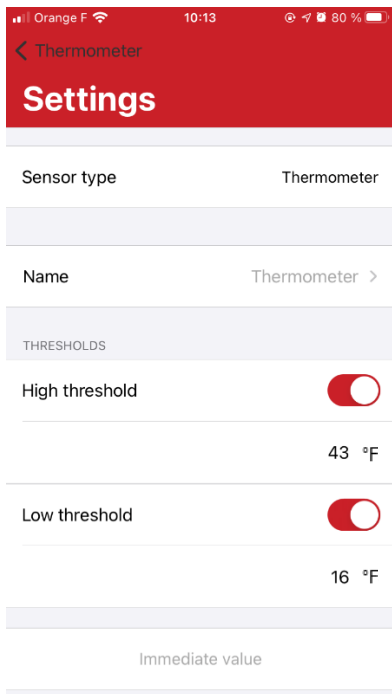


Select the thermometer among the list of connected sensors you have.



On this screen, you can visualize your thermometer sensor data in a graph.

Select "settings".



Select the high and low threshold and define the values in °F.