

ATLAS X

INSTALLATION GUIDE



APP

FARM



SPHERAG

Before getting started

It is very important to **follow the steps** shown below to avoid possible operational incidents in the future.



In addition, it is necessary **to ensure that water isn't running** while devices, meters, valves, and sensors are being registered.

Support

If you need to **contact** our support team:

+34 976 96 69 94
support@spherag.com



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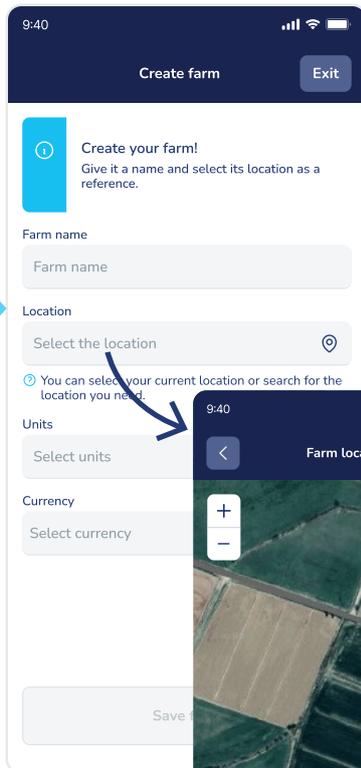
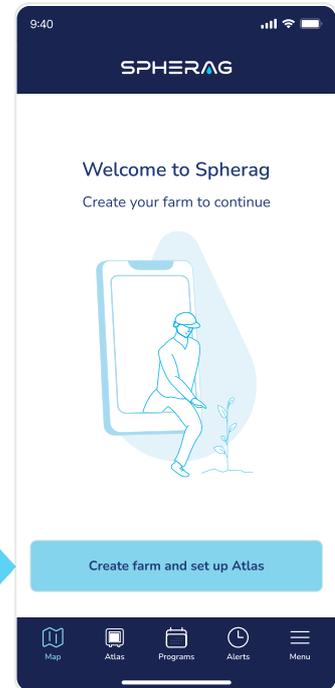
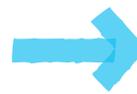
1 First steps

CREATE FARM

A **farm** represents the physical location of a group of irrigation sectors and elements.

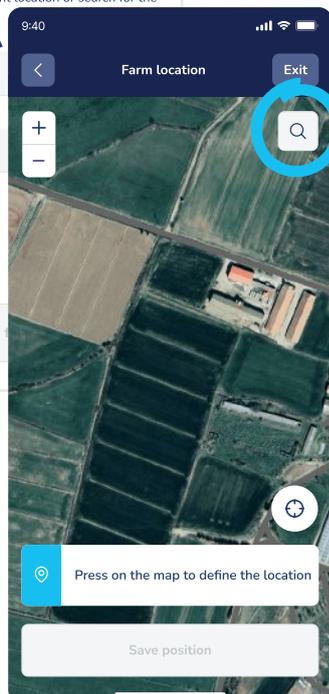
If this is your **first time accessing the app**, this is the only action you can take. If you already have a farm and want to create another one, you can access the list of farms that we will see in "My Farms" from "Menu".

--- Click on the "Create farm" button.



Assign a **name** to your farm.

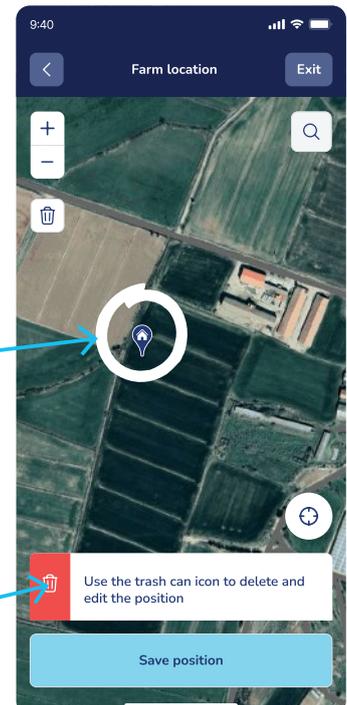
Enter your **location** on the map. Clicking on the location field will display a map showing your current geolocation (you must approve geolocation permissions on your mobile phone). Ideally, this location should be the centre of the farm.



You can also search for the location of the farm using the search engine at the top right.

Tap on the point on the map where you want to locate your farm.

When the pin appears on the map, you can save the location. If you want to change it, you must delete it by clicking on the bin and repeat the process.



9:40

Create farm Exit

Create your farm!
Give it a name and select its location as a reference.

Farm name
Nordfarm

Location
Elvia Etviaveien 1, 1234 Oslo

You can select your current location or search for the location you need.

Units
Metric System: cm², bar, L, °C

Currency
€ Euro (EUR)

Save farm

Select the **system of units** you wish to work with and view the data on your farm.

Select the **currency** in which you would like to view your data.

Save changes

Once the farm has been created, if it is your first one, the application will prompt you **to scan the QR code on your first Atlas.**

EDIT FARM

You can **modify your farm details** at any time from the "Menu".

1. Go to the "My farms" section.
2. Select the farm you wish to edit from the list of farms.
3. Modify any of the fields that appear as needed.
4. Save the changes for them to take effect.

DELETE FARM

If you no longer manage a farm, you can delete it from your account, but first you will need to delete all the items and features created in it.

1. In the list of farms, find the one you want to delete.
2. Tap on it and scroll down to the bottom of the screen where you will see the "Delete" option.
3. Confirm the action.

Warning! This action is irreversible and all data associated with it will be deleted.

2 Register an ATLAS X device

REGISTER YOUR ATLAS

9:40

Register your Atlas

IMEI
65648060448933

Atlas Name
Identification Name

Location (optional)
Select the location

You can select your current location or search for the location you need.

Device Status
Real Time
Eco Mode

The Atlas in eco mode turns on between 6:00 AM and 10:00 PM, remaining asleep during the other hours, running programs and logging events.

Save

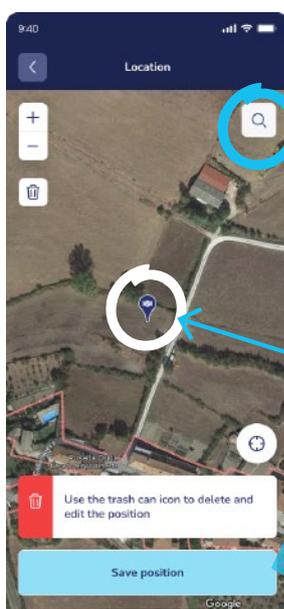
Each Atlas represents one of the physical devices installed in the field.

Within the selected farm, go to the Atlas section and click on the "Create Atlas" icon.



Fill in the device IMEI field or tap the QR icon to scan the code that appears on a label on the side of the device or on the Atlas box.

Fill in the name field to identify your Atlas.



Enter your **location on the map**. Clicking on the location field will display a map showing your current geolocation. You can also search for the Atlas location using the search engine at the top right.

Tap on the point on the map where you want to locate your Atlas. When the pin appears on the map, you can save the location.

Tap on **"Save Atlas"** to save the settings.

9:40

Register your Atlas

IMEI
865648060448933

Atlas Name
Nordfarm-Atlas-01

Location
Elvia Elviaveien 1, 1234 Oslo

You can select your current location or search for the location you need.

Device Status
Real-time
Eco mode

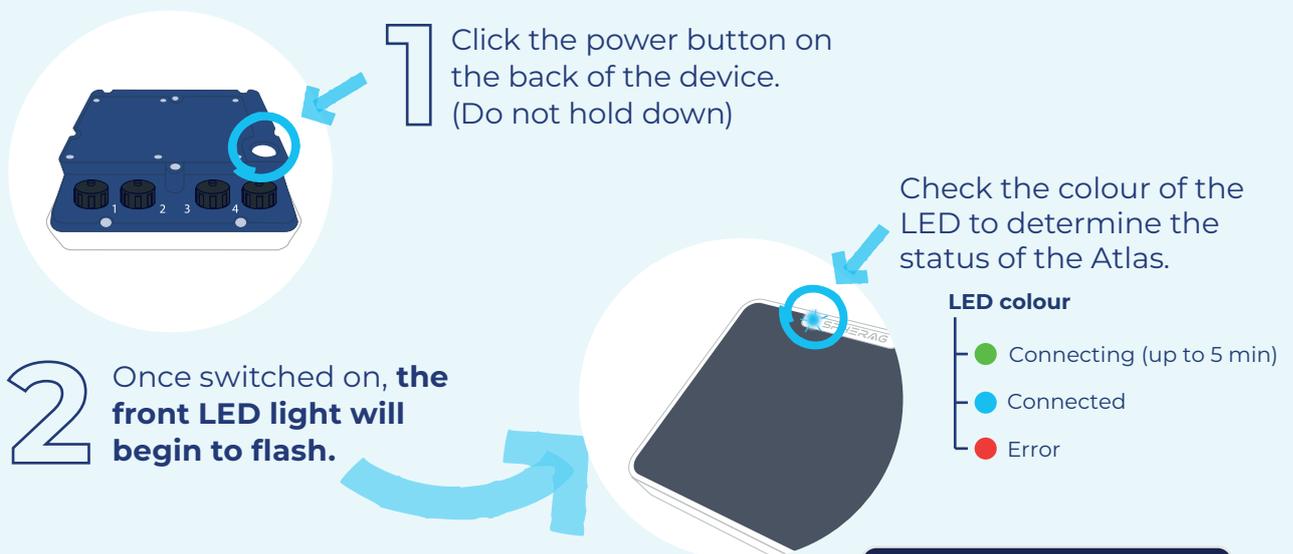
The Atlas in eco mode turns on between 6:00 AM and 10:00 PM, remaining asleep during the other hours, running programs and logging events.

Save

3 ATLAS X device installation

1 TURN ON YOUR ATLAS

We recommend switching on the ATLAS upon arrival at the installation, as it takes a few minutes to establish communication.



1 Click the power button on the back of the device. (Do not hold down)

2 Once switched on, the front LED light will begin to flash.

Check the colour of the LED to determine the status of the Atlas.

LED colour

- Connecting (up to 5 min)
- Connected
- Error

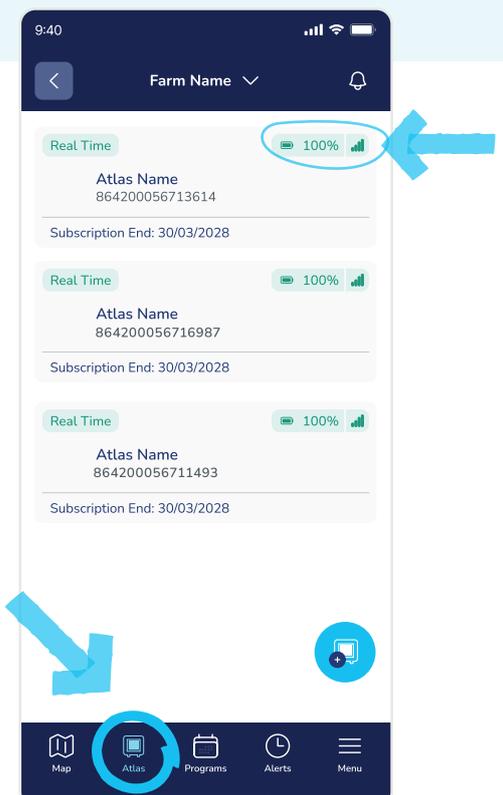
2 BATTERY AND COVERAGE

To confirm that the device has enough battery power and coverage, you can check this in the Atlas section. By clicking on the "Atlas" icon, you will see a list of the devices you have registered and their battery and coverage levels.

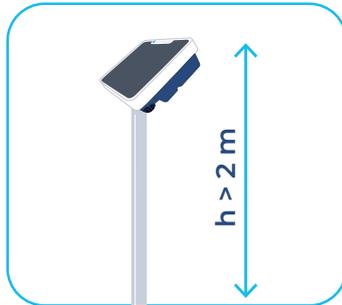
A battery level **below 20%** may cause connection problems.

It is important to ensure that the coverage displayed has **at least two bars**.

If you do not reach the expected level, please refer to the appendix: Bluetooth app manual. Insufficient coverage

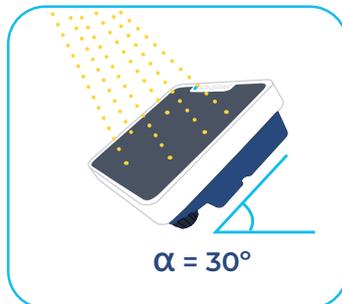


3 FIXING



HEIGHT

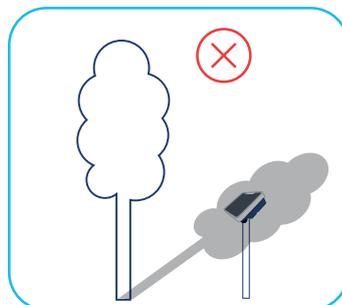
Place the device 2 metres above the ground. You can install the device using a pole or on the **wall** above the bracket. Both options are explained on the following page.



ANGLE

For optimum performance, orient the device towards the sun in the direction of the equator and place it at a 30° angle.

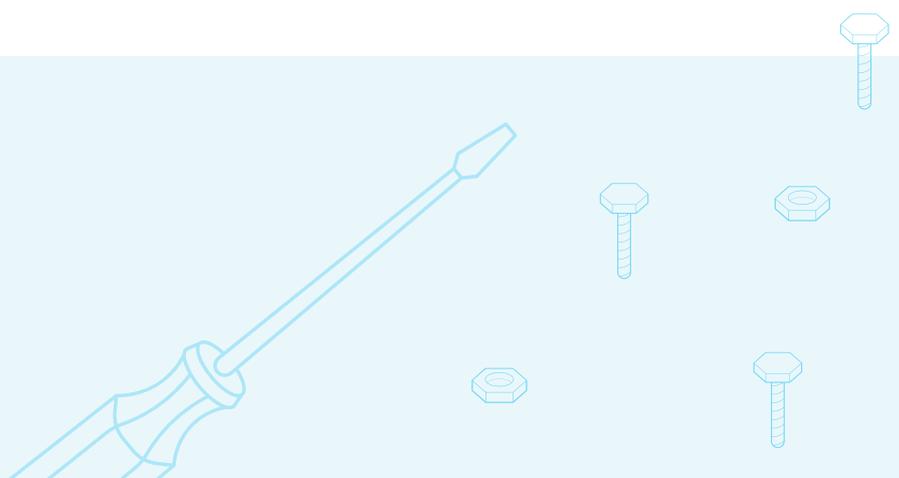
The pole or wall on which the bracket is installed must be perfectly vertical.



SHADOWS AND OBSTACLES

The solar panel must be **free of shadows and obstacles** that interfere with sunlight during all daylight hours. The sun must shine directly on the solar panel: it cannot be placed behind glass or plastic.

The equipment must not be placed in locations where it is likely to be obstructed, for example, by parked vehicles, opening doors or covers, vegetation or any other moving objects.



Installation kit

It is recommended to use the SPHERAG installation kit to ensure correct fixing of the device. If a customised installation accessory is required for a specific application, the elements used must comply with the minimum specifications indicated below:



SPHERAG bracket
+ M4x10 screws

BRACKET

| | |
|-----------|-----------------|
| Material | Stainless steel |
| Thickness | 2 mm (min.) |
| Width | 20 mm (min.) |
| Atlas X | 2 x 5 mm holes |
| Pole | 2 x 5 mm holes |
| Angle | 30° |

Screws

| | |
|-----------|-----------------|
| Material | Stainless steel |
| Dimension | M4 x 10 mm |
| Quantity | 2 |

40 mm Pole
+ M4x50 screws
+ M4 nuts



POLE

| | |
|-----------|------------------|
| Material | Galvanised steel |
| Thickness | 1 mm (min.) |
| Diameter | 40 mm (min.) |

Screws

| | |
|-----------|-----------------|
| Material | Stainless steel |
| Dimension | M4 x 50 mm |
| Quantity | 2 |

Nuts

| | |
|-----------|-----------------|
| Material | Stainless steel |
| Dimension | M4 |
| Quantity | 2 |

Clamp
40mm



CLAMP

| | |
|-----------|------------------|
| Material | Galvanised steel |
| Thickness | 1 mm (min.) |
| Diameter | 40 mm (min.) |

Spherag installation kit

Using the Spherag installation kit (bracket, pole, clamp, etc.), you can ensure installation with the correct angle of inclination, integrated directly into the bracket.

There are two installation options using our bracket: on a pole or on a wall.



POLE

Installation of Atlas on a **pole** on the support.

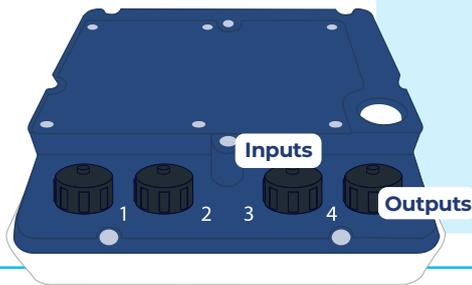
WALL

Installation of Atlas on the **wall** above the bracket.



4 CONNECTIONS

Atlas X includes one connector with eight outputs to act on latching solenoids or latching relays, one connector with eight inputs for reading digital signals or pulse-based water meters, one connector for connecting up to four I2C/SDI-12 sensors, and one connector for connecting an external 5-24 Vdc power supply.



| Conector | Function |
|----------|-------------|
| 1 | Power Suply |
| 2 | Sensors |
| 3 | Inputs |
| 4 | Outputs |

| Wire color | IN | OUT |
|------------|------|-------|
| Red | In 1 | Out 1 |
| Green | In 2 | Out 2 |
| Purple | In 3 | Out 3 |
| Yellow | In 4 | Out 4 |
| Blue | In 5 | Out 5 |
| Orange | In 6 | Out 6 |
| Grey | In 7 | Out 7 |
| Brown | In 8 | Out 8 |
| Black | COM | COM |



Ensure that you **align the white dots** on all connectors.



All **unused cables** must be terminated with an **individual waterproof plug** or protected inside a connection box.



All **connectors** on the equipment that are **not in use** must be **covered** with their respective caps.



Outputs: max. 20 m
Inputs max. 1.5 m

Please note! The warranty does not cover misuse or failure to follow this guide, such as not using waterproof connectors or opening the equipment.

4

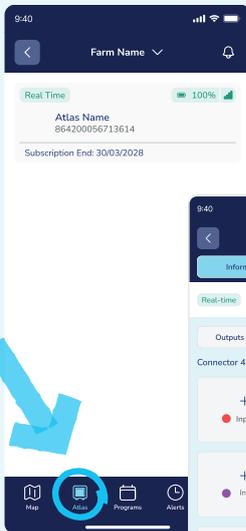
Features: Registration and verification.

Next, we will activate the following features: **Flowmeters, valves, and sensors.**

1 FLOWMETER

1.

Go to your ATLAS X



2.

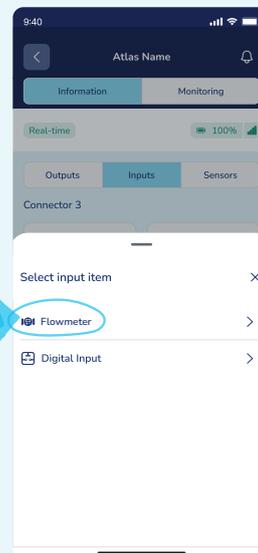
Select the type of element to be created: inputs, outputs or sensors.



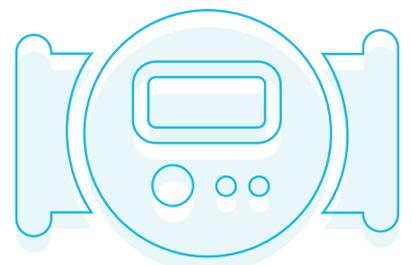
The colours of the cards represent the colours of the cables.

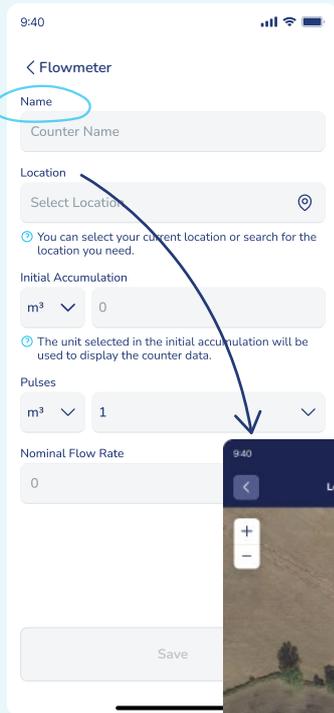
3.

To create a flowmeter, we need to select the "Inputs" tab.



When you click on that section, you will have to choose from the menu between flowmeter and digital input.





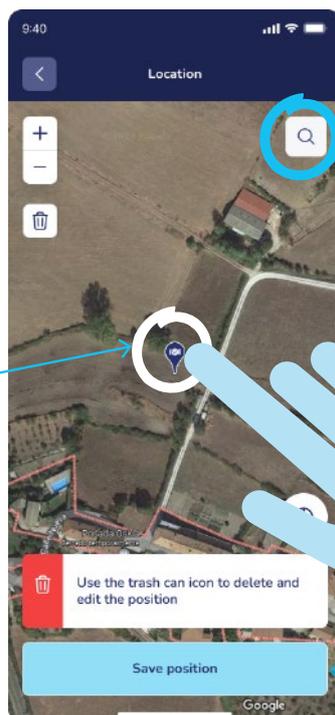
When you select **flowmeter**, a new screen will open where you must enter the following information: Name, location, initial total, pulses, and nominal flow rate.

Name the flowmeter.



Enter your **location on the map**.

When you click on the location field, a map will appear showing your current geolocation.



You can also search for the location of the Atlas using the search engine at the top right.

Tap on the point on the map where you want to locate your flowmeter. When the pin appears on the map, you can save the location.

Tap on "**Save Position**" to save the configuration.

Record the initial total (the figure shown on the counter dial). If the flowmeter is new, you can enter a total of 0.

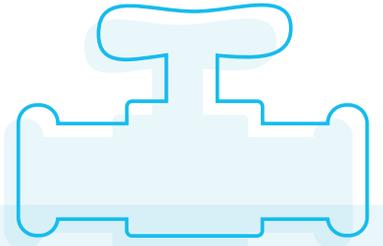
The unit selected in the initial total will be the one used to view the counter data.

To continue with the configuration, define the **pulse unit and the nominal flow rate** (normal working flow).

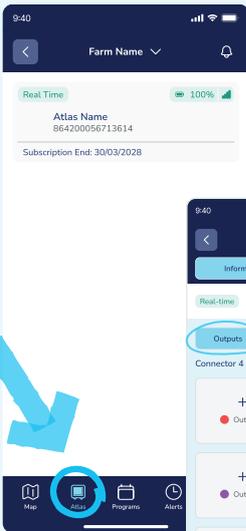
Click on **"Save"** to save the settings.

The flowmeter has been created correctly.

2 VALVE



1. Go to your ATLAS X

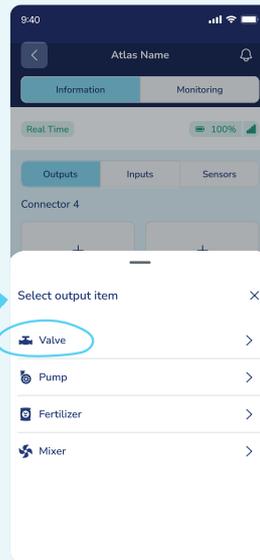


2. Select the type of element to be created: inputs, outputs or sensors.



The colours of the cards represent the colours of the cables.

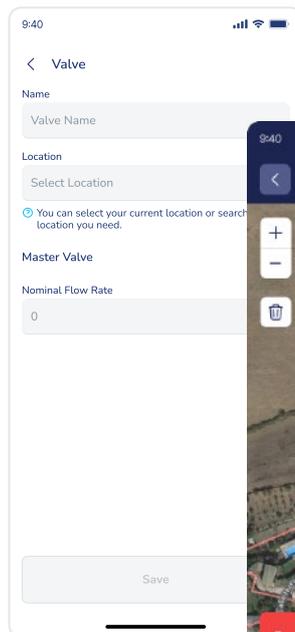
3. To create a valve, we must select the "Outputs" tab.



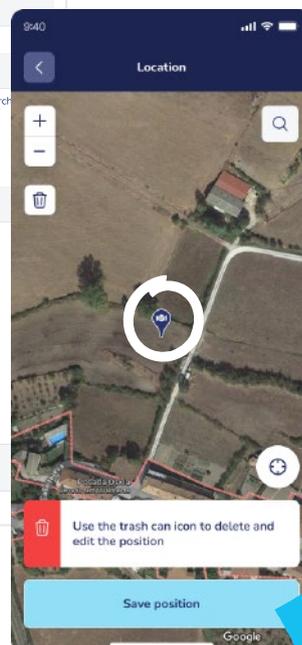
When you click on that section, you will have to choose from the menu between **valve**, pump, fertilizer, and mixer.

When you select **valve**, a new screen will open where you must enter the following information: Name, location, whether it is a master valve, and nominal flow rate.

Start by **naming the valve**.



Enter your **location on the map**.



Clicking on the location field will display a map showing your current geolocation.

Tap on the point on the map where you want to locate your valve. When the pin appears on the map, you can save the location.

Tap on "Save Position" to save the settings.

9:40

< Valve

Name
Valve 01

Location
Elvia Elviaveien 1, 1234 Oslo

You can select your current location or search for the location you need.

Master valve

Nominal flow rate
30 m³/h

Save

Here you can select whether it is a **master valve*** and define the **nominal flow rate**. If unknown, it can be = 0.

*Main valve: located at the start of the main irrigation pipe, between the water source and the zone valves.

9:40

< Atlas Name

Information Monitoring

Real-time 100%

Outputs Inputs Sensors

Connector 4

Valve
Manual Open

Output 2

Output 3

Output 4

Output 5

Output 6

The valve has been created correctly.

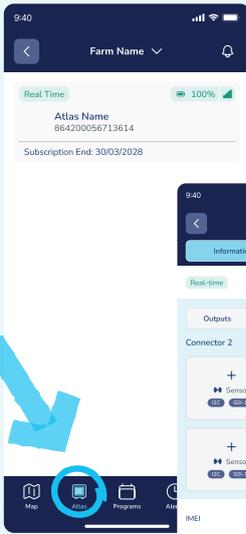
You can change its status to see the correct installation.

Status: open/closed
Mode: manual/automatic

Return to the counter **to see if pulses have been detected** by refreshing the data.

3 SENSOR

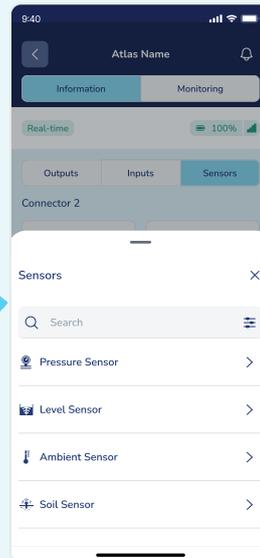
1. Go to your ATLAS X



2. Select the type of element to be created: inputs, outputs or sensors.

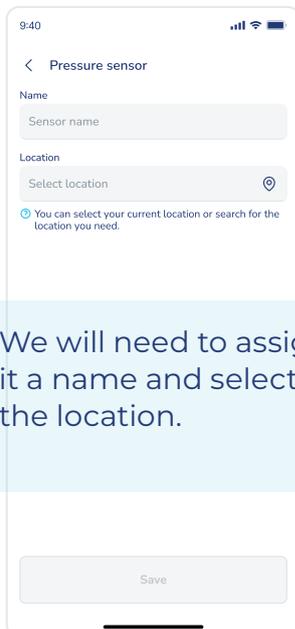


3. To create a sensor, we need to select the "Sensors" tab.



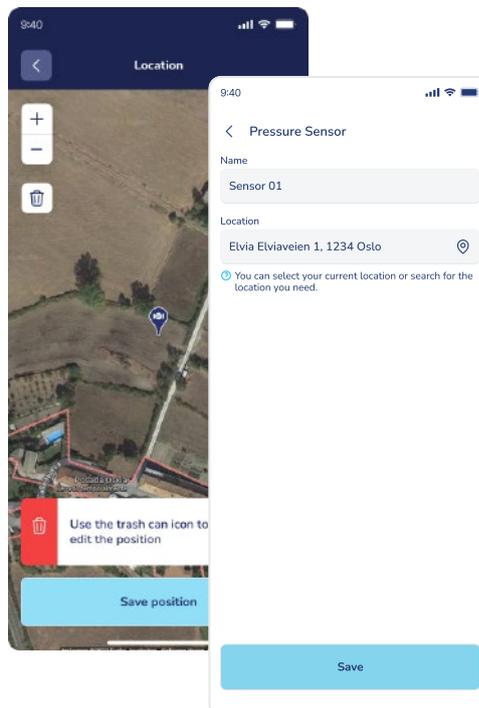
When you click on that section, you will have to choose the type of sensor from the drop-down menu: pressure, level, environment, or soil.

In this case, a **pressure sensor**.



We will need to assign it a name and select the location.

Enter your **location on the map** and **save** the position.



The sensor has been created correctly.



SPHERAG

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