



## VISUAL BOX QUICK GUIDE





# What is a VISUAL Box?

VISUAL Box is a transmission module that allows the sending of data obtained from the sensors to the VISUAL SENSOR application (in the cloud).

Thanks to the latest technology in IoT (internet of things), VISUAL Box sends all the information directly to the internet without the need for any kind of intermediary device. This makes it possible to deploy a network of sensors with total independence from a concentrate, being able to control as many farms as necessary.

It is a totally autonomous system, it does not need an electrical connection, a programmer or maintenance.

The VISUAL Box module has no buttons, as it starts working when it detects a connected sensor and hibernates when it is removed.

The protocol consists of taking a measurement of each of the sensors and sending a shipment on an hourly basis (or every 20 minutes). So your battery can last up to 3 years using just 4 AA batteries, which can be easily replaced. The VISUAL Box performs periodic measurements every hour and transmits the information to the cloud, where it will be available in real time and on any device that has an internet connection.

# Technical characteristics



## Properties:

Protection: IP67 (waterproof) and anti UV.

Connection: Push-Pull (waterproof)

Data sending frequency: 1 hour or 20 minutes

Ability to connect up to 3 sensors

Autonomy: Up to 3 years

Battery: 4AA

Coverage throughout the national territory.

# VISUAL Box Instalation

Fix the VISUAL Box to any fixed area using cable ties (included) and connect the sensor or sensors using the push-pull connection. The transmitter only sends when a sensor is connected.

-Anchor the transmitter to a fixed and stable surface (stake, pole, wall, wall, etc.)

Preferably use flanged housing brackets.

If necessary, bury the cables that are flush with the ground and / or knot the excess cable. You can also use PVC cable covers.

Avoid covering or obscuring the transmitter. Using the equipment in enclosed or covered spaces may affect coverage.

The transmitter must always be in a vertical position, according to the texts on the front, with the connectors facing downwards. Don't put him to bed.

For best coverage, install the transmitter as high as possible.

If your device has an outdoor antenna, screw the antenna tightly onto the thread on the top.

Make sure the sensor is properly connected. You should go all the way and hear a "click". On new teams it can be a bit rough.

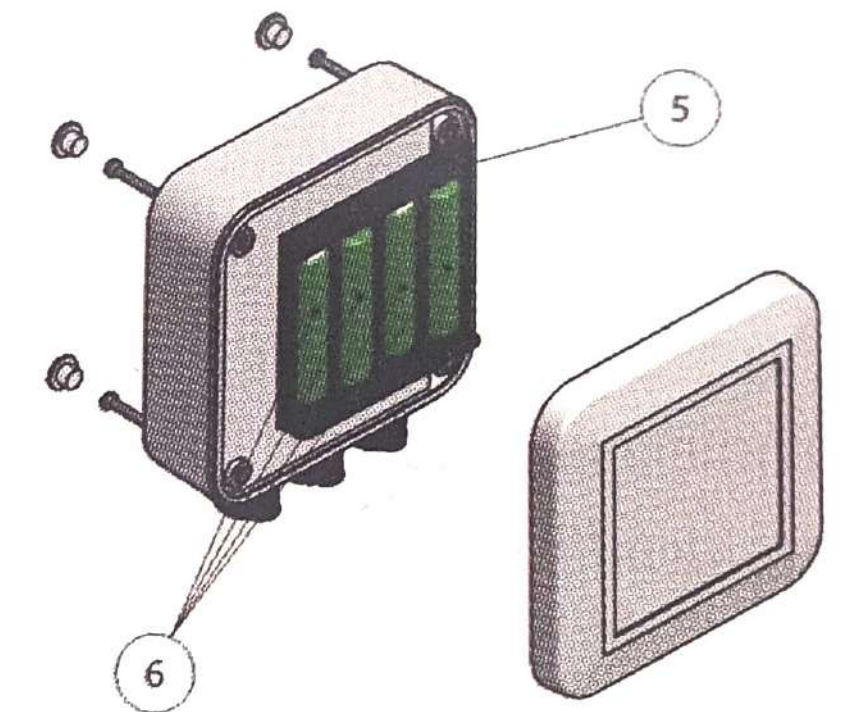
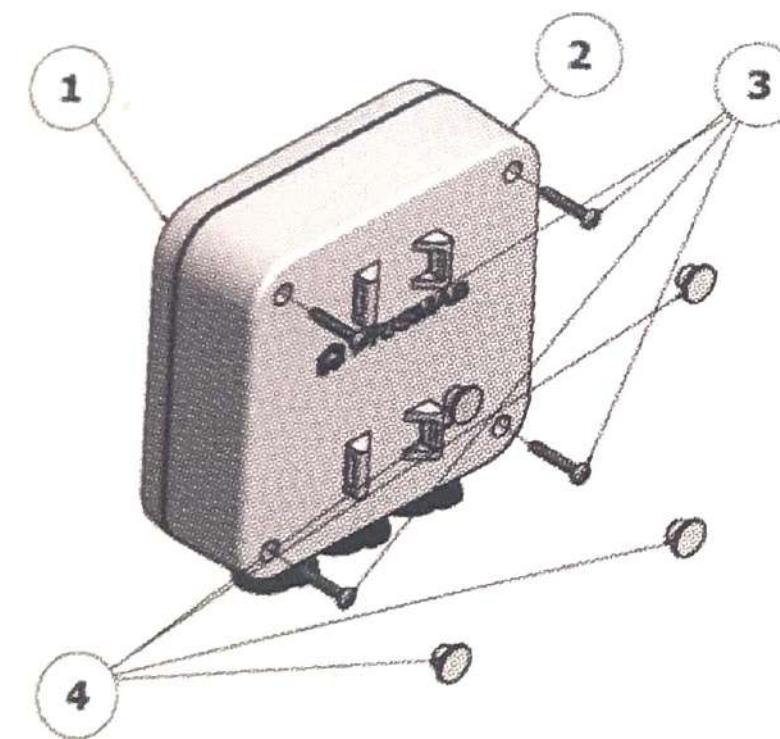
Make a note of the GPS position of the VISUAL Box.

# Battery change

The device works with four AA batteries (1.5 v) already included. If the sensor has stopped sending information and there are no readings on its part, it is a sign of low battery power, although it can also be low coverage.

## Replacing batteries

1. Remove the four plugs from the rear.
2. Remove the screws that are hidden under the caps (you will need a Phillips screwdriver not included).
3. Remove the main cover.
4. Replace dead batteries with new ones. Make sure the batteries are fully charged and are of the same brand. Attach the battery holder correctly if necessary.
5. Close the cover and screw, then check if the device is hermetically sealed.
6. Put the plugs back on.



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|-------------------|--------------|----------------|
| 1. Front cover.   | 2. Plugging. | 3. Back cover. |
| 4. Battery holder | 5. Screws.   | 6. Batteries   |





## Care and maintenance

- Even if the unit is operating normally, change the batteries at least once every three years. A dead battery can leak electrolyte, causing damage and malfunction of the unit. Do not leave a dead battery in the link unit.
- The batteries that come with this unit discharge slightly during transportation and storage. Because of this, it may require a replacement earlier than the estimate for the first service.
- Low battery power can cause the link unit to not send a signal and results may be lost or corrupted.
- Avoid using and storing in areas subject to extreme temperatures. Very low temperatures can cause slow signal response, ka sela fakki titán and / or shortened battery life. Also avoid leaving the unit in direct sunlight, near a heater, or anywhere that may be exposed to very high temperatures. Heat can cause discoloration or deformation of the unit case and damage to the internal circuit.
- Do not drop it or subject it to strong impacts.
- Do not try to disassemble the link unit. Accessing the electronic components voids the warranty.
- If the unit becomes dirty, clean it with a cloth moistened with a dilute solution of water and a mild neutral detergent. Do not use solvents, gasoline, or other volatile agents to clean the unit. Doing so can remove the printed markings and damage the case.



# Security information

## **BATTERIES:**

After removing the batteries from the VISUAL Box, put them in a safe place where there is no danger of it reaching the hands of smaller children and being accidentally digested. If they are digested, see a doctor immediately.

Do not charge the batteries, try to take them apart, or allow the batteries to become short-circuited. Do not expose batteries to direct heat or dispose of by burning them.

Misuse of batteries can cause electrolyte to leak causing damage to nearby items, and can create the risk of fire and personal injury.

Always make sure that the positive and negative device ends of the battery are oriented correctly when you place them in the mechanical pencil of the VISUAL Box.

## **RADIO FREQUENCY EXPOSURE:**

The equipment contains a transmitter and a receiver. When it is on, it emits radio frequency radiation. The device complies with the EN50385 standard.

## **PRODUCT MANAGEMENT:**

The user is responsible for how to use this equipment and the consequences of its use.

## **ELECTRICAL SAFETY:**

Use only approved accessories and do not connect the equipment to non-compatible products or accessories.

Only qualified personnel may carry out maintenance or repair activities on the equipment or its accessories.

## **INTERFERENCES:**

Take precautionary measures when using the equipment in the vicinity of personal medical devices, such as pacemakers and hearing aids.



## Usage warnings

- Make a note of the sensor location, with references if necessary. You can also mark its position on the spot. Once installed and over time, it can be difficult to locate.
- Identify numerically the sensors of the same VISUAL BOX, according to its connector, associating it with its position or depth.
- Check that the cable is not placed in such a way that someone can trip over it or that it does not interfere with the normal tasks of your cultivation or the passage of machinery.
- Do not try to remove the sensor by pulling on the cable, you could damage it.
- Do not bury the VISUAL BOX module.
- The incorrect installation of the sensor in the ground can give incorrect measurements and even break it.
- Sensor measurements depend on many soil factors and should be used as a guide. To validate them, they must be contrasted with analysis in certified laboratories or with duly calibrated devices, and if necessary, apply a conversion factor.
- Use caution with the sharpness of the sensor rods. Keep it away from children.
- Use of the equipment for sexual purposes is not recommended.
- If you have any questions, contact us.





**Support - Do you have any questions or concerns?**

We test, install, calibrate and repair each sensor where you need it. Our technicians use the instruments every day. No matter what the question is, there is always someone available.

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