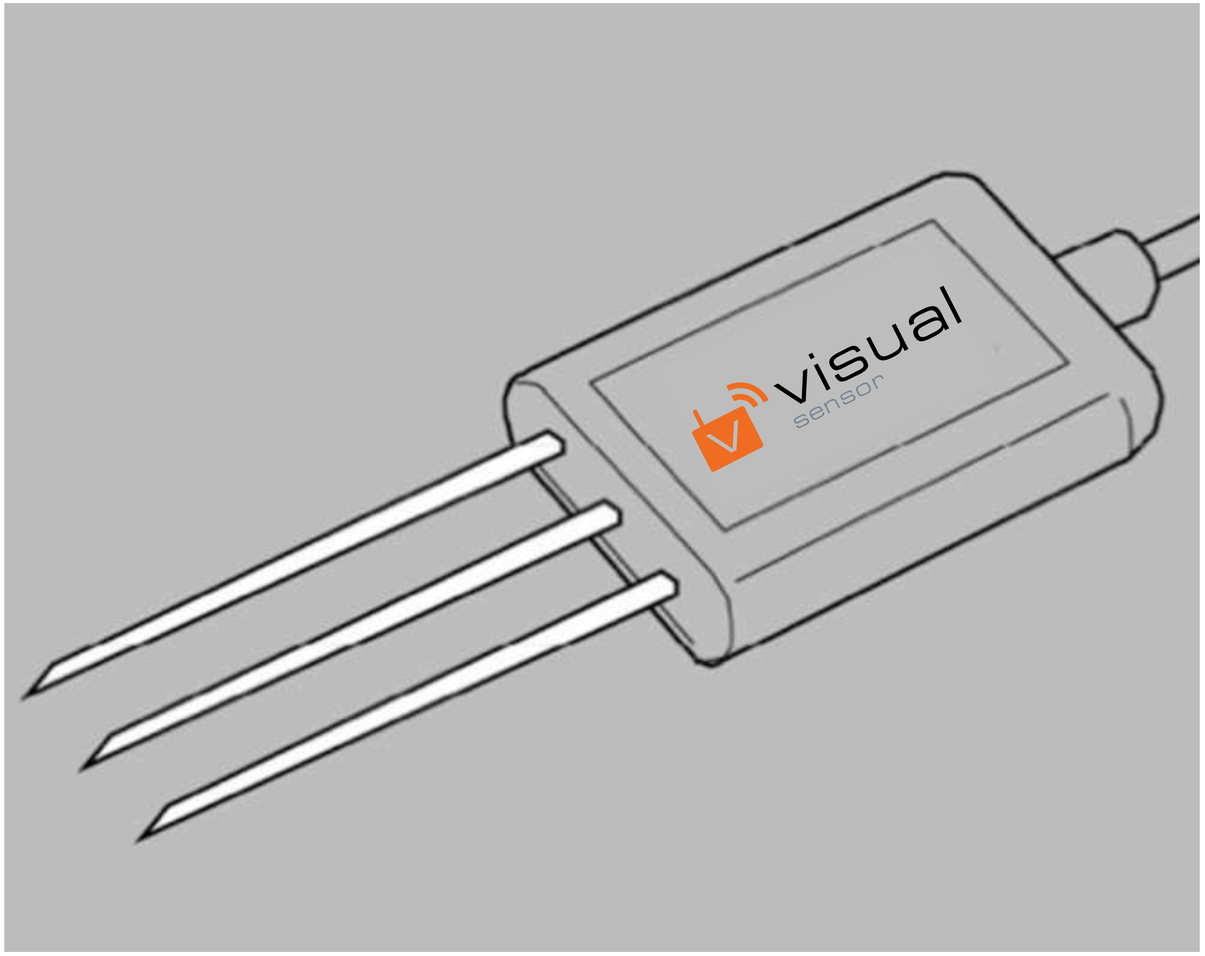
visual sensor

SOIL SENSOR QUICK GUIDE



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What is a soil sensor?

The soil sensor is an instrument for measuring the most important soil parameters. This industrial quality device is designed to withstand the harsh conditions of the field: agricultural work, inclement weather and physical-chemical and biological wear. Its rods are made of stainless steel and the electronics are covered by a very resistant and inert polyurethane sheath.

Water only when necessary. The sensor monitors water stress and / or volumetric water content in the soil.

The measured values are the most demanded by agricultural professionals: volumetric water content (humidity), electrical conductivity (salinity) and soil temperature.

Using FDR technology, the sensor sends an injection of current to the ground and measures the dialectical permissiveness of a volume of land around the sensor itself. This allows obtaining information in orders of accuracy much higher than the rest of agricultural sensors.

Technical characteristics

Measurements:
Volumetric water content (%) or (m3 / m3) (Range 0-100% and resolution 0.03%)
Electrical conductivity (dS / m) or (ms / cm) (Range 0-20 dS / m and resolution 0.01 dS / m)
Temperature (ºC) (Range -40 / 80ºC and resolution 0.1 ºC)

Cable length: 2m
Connection: Push-Pull (waterproof)
Communication: RS485
Polyurethane resin and stainless steel rods
Dimensions: 45x15x145 mm. (70 mm. Electrodes)

Installation:
Drill a hole in the ground to the desired depth and insert the sensor into the ground. Refill with the extracted earth while compacting avoiding air pockets and stones.
Connect the sensor to the link.

Measurement

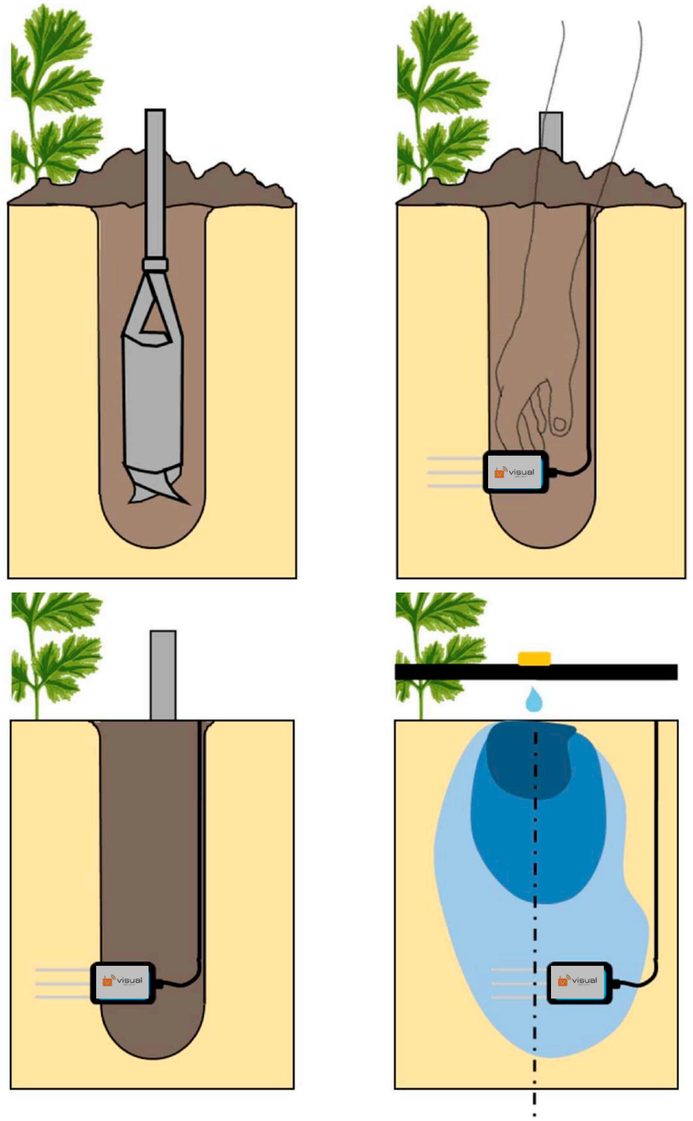
A good installation of the soil sensors is the most critical part if you want to obtain rigorous data and the best reference on your risks. Here's how to best install your soil probes.

Choose a representative soil ratio for your crop. Try to avoid sector margins as much as possible. Make a hole with a feat or auger.

2. Nail the sensor preferably horizontally as shown in the picture. If you notice that the sensor hits a stone, remove the sensor and try again.

3. Return the removed soil by gently compacting around the sensor to avoid air pockets.

4. The sensor should be just below the dropper to measure the center of the wet bulb. Use fixatives to prevent dripper point drift relative to sensor.



If you choose to install the sensor at another point that does not coincide with the vertical of the dripper, it is recommended to ALWAYS use that reference when performing a new installation.
Check that the dropper IS NOT CLOGGED.

Care and maintenance

Take care of the sensor rods. Do not try to push the rods through rocks or extremely hard earth. (When in doubt, use an insertion tool to make pilot holes before inserting the sensor.)

Do not remove the sensor from the ground by pulling the cable.

The sensor is completely sealed and can be safely submerged in water, but the connectors are not sealed and although they have resistance to ambient water, they should preferably be kept dry.

Clean the sensor after use. To clean it, you can use water with or without detergent and rub with a brush or plastic or cloth scouring pad.
Avoid using and storing in areas subject to extreme temperatures.

Take precautions to protect the sensor from physical damage from the rods and from handling damage. When the sensor is not in use, it is advisable to store it clean, with the rods inserted in foam and to use the packing materials provided.

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.

- If you have any questions, contact us.

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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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