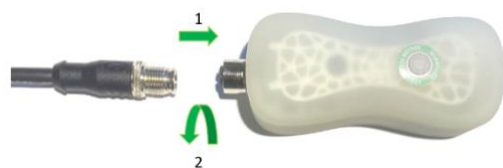
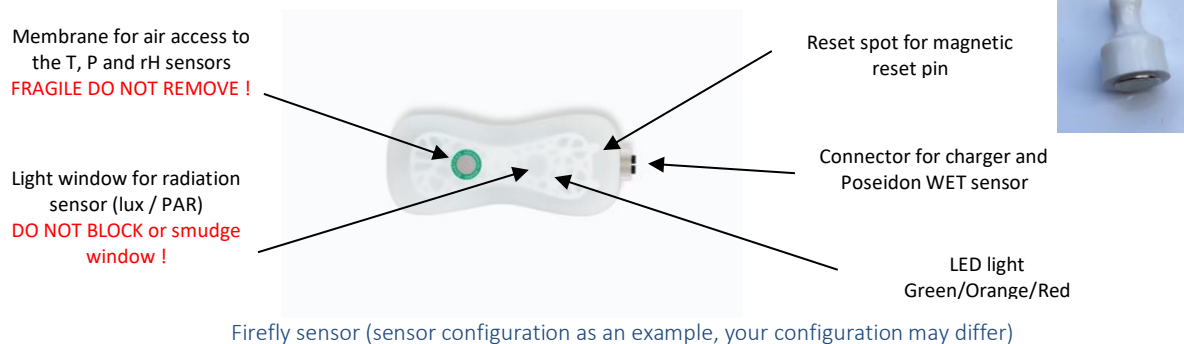


Installation manual for Poseidon WET sensor

Congratulations with your purchase, thank you for choosing Quantified!

1 Connect to the Firefly platform sensor



Connect Poseidon WET sensor to the Firefly

The Firefly platform sensor is shipped in “safe mode” to preserve battery life and prevent transmission during airfreight. First charge the battery to 100%. Connect the Poseidon external WET sensor to the Firefly by using the connector and firmly screw the parts together (hand tight).

If your Firefly is equipped with GPS it is important that the Firefly is placed facing upward without obstructions to the sky. Now reset by swiping the Quantified reset magnet over the indicated spot just above the connector and leave the Firefly untouched for 2 minutes. The GPS will now generate the location coordinates.

The LED-indicator will flash, once you see a single green LED-flash, Firefly is online!

2 Installing Poseidon WET Sensor

The Poseidon measures **permittivity**, **EC (electro conductivity)** and **temperature** of the medium it is inserted in.

PLEASE NOTE:

Permittivity is a measure for water content (100% water equals a permittivity measurement of 82). Permittivity can be used to compare water content when comparing measurements between **identical media/substrates**. In case it is needed to compare water content between different media a conversion to Volumetric Water Content (VWC) is advised. Permittivity (and VWC) measurements are temperature dependent.

For your information: Quantified offers a calibration service for the conversion of permittivity to VWC for specific substrates. The substrate sample can be send by mail. For more information please contact us at info@quantified.eu

EC measurements are **temperature dependent**, so measurements can only be compared when measured at the same temperature (correlation is +/- 2% per degree Celsius).

The Poseidon EC-sensor measures “bulk” EC in non-fluid media (like substrates/soils). The “pore water-EC” needs to be calculated based on a calibrated formula depending on the specific medium used. The EC of different media **cannot** be compared. As an example: liquid media (f.i. fertigation/irrigation water) **cannot** be compared with EC measurements of substrate/soil media. The specific medium influences the EC measurement and can only be compared to EC measurements taken in the same medium.

For your information: Quantified offers a calibration service for the conversion of Bulk EC to pore water EC for specific substrates. The substrate sample can be send by mail. For more information please contact us at info@quantified.eu

Installation

- Only insert the pins once on a specific spot, the measurement is optimal when the pins are firmly touching the medium.
- Make sure the position of the pins is not disturbed over time (if possible: bury the head and or fix cables to prevent disturbances / movement)
- The full length of the pins is used for measurements; therefore the 3 pins should be fully inserted in the medium
- The medium should be at least 2 centimeters thick around the pins for good measurements. The pins should never touch the bottom or sides of containers / substrate slabs / rock / plastic, etc...
- The more uniform the medium is, the better the measurement.
- The finer the medium particles are, the better the measurement. Particles > 5-7mm should preferably not be used.
- For installation in **substrate mats**:
 - o When comparing measurements, always be sure to use the same insert height in the side of the slab for the different sensors.
 - o For an average measurement insert the pins diagonally from a top edge to the center of the slab (make sure the pins do not touch the bottom)
- For installation in **pots/containers**:
 - o When comparing measurements, always be sure to use the same place and fashion of insertion in the pot for the different sensors.
 - o For an average measurement insert the pins from a top to bottom. (make sure the pins do not touch the bottom). If possible, also bury the head of the sensor to minimize movement of the pins during measuring.