

Up and running

in two steps

Poseidon WET sensor

The Poseidon measures permittivity, EC and temperature of the medium it is inserted in. It uses the transmission module and battery of the FireFly, so install the FireFly first.



FOLLOW THIS ORDER

1**Connect to the FireFly**

Charge, screw the connector, reset with the magnet

2**Insert the pins in the medium**

Full pin length, fixed position, at least 2 cm of medium around

1 Connect to the FireFly platform sensor

Membrane for air access to the T, p and rH sensors

FRAGILE — DO NOT REMOVE!

Light window for the radiation sensor (lux / PAR)

DO NOT BLOCK OR SMUDGE

LED light (Green / Orange / Red)



Reset spot for the magnetic reset pin, just above the connector



Connector for the charger and the Poseidon WET sensor

FireFly sensor — sensor configuration shown as an example, your configuration may differ.

1 Charge the battery to 100% first. FireFly sensor nodes are shipped in “safe mode” to preserve battery life and prevent transmission during air freight.

2 Connect the Poseidon to the FireFly. Push the connector on in the one position it fits (1), then screw the parts firmly together — hand tight only (2).

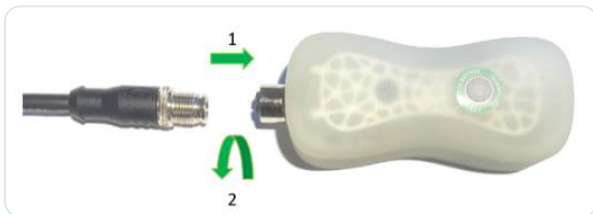


Figure 1. Connect the Poseidon WET sensor to the FireFly: (1) push on, (2) tighten the ring by hand

3 Reset with the magnet. Swipe the Quantified reset magnet over the indicated spot just above the connector. The LED indicator flashes; as soon as you see a single green flash, the FireFly is online.

Please note — FireFly with GPS: place the FireFly facing upward with a clear view of the sky, and leave it untouched for 2 minutes after the reset. The GPS then generates the location coordinates.

2 Installing the Poseidon WET sensor

READING THE MEASUREMENTS · GOOD TO KNOW

Permittivity

water content

A measure of water content — 100% water equals a permittivity of 82. Use it to compare water content between **identical** media. To compare different media, convert to Volumetric Water Content (VWC).

Temperature

dependency

Permittivity, VWC and EC are all temperature dependent. Only compare EC values measured at the same temperature — the correlation is roughly 2% per degree Celsius.

Bulk EC vs. pore water EC

The Poseidon measures “bulk” EC in non-fluid media such as substrates and soils. Pore water EC has to be calculated with a formula calibrated for your specific medium. EC of different media cannot be compared — irrigation water, for example, cannot be compared with substrate or soil.

INSTALLATION · GENERAL RULES

- ✓ Insert the pins **once** on a specific spot — the measurement is optimal when the pins firmly touch the medium.
- ✓ Insert the **full length** of all three pins; the whole pin length is used for the measurement.
- ✓ Keep the position undisturbed over time — bury the head and/or fix the cable to prevent movement.
- ✓ Keep at least **2 cm of medium** around the pins. They should never touch the bottom or sides of containers, slabs, rock or plastic.
- ✓ The more uniform and the finer the medium, the better the measurement. Particles larger than 5–7 mm are best avoided.

IN SUBSTRATE SLABS

Comparing sensors: always use the same insert height in the side of the slab for every sensor.

Average measurement: insert the pins diagonally from a top edge towards the centre of the slab — without touching the bottom.

IN POTS & CONTAINERS

Comparing sensors: always use the same place and the same way of inserting in the pot.

Average measurement: insert the pins from top to bottom, without touching the bottom. Where possible, bury the head as well to minimise pin movement.

Go to www.quantified.eu for manuals and the product catalogue with specifications.