Summary

MULTI - Optimal Watering and the Right Nutrient Balance

Similar to the moisture sensor, the multi-sensor also measures soil moisture. In addition, it measures soil temperature and the salt content (EC) of the soil. The combination of moisture percentage and EC provides an indication of whether there are sufficient nutrients in the soil. Based on this data, it becomes clear whether nutrient supplementation is necessary. For example, short-term supplementation can be achieved by adding organic liquid fertilizers, while long-term supplementation can be achieved by adding compost varieties in combination with rock dust varieties. This stimulates soil life.

Excess EC in the soil, caused by the presence of salt (NaCl), is harmful to trees, plants, and all soil life. A high NaCl content disrupts osmotic processes, making it difficult for trees, plants, and soil life to absorb sufficient moisture. By monitoring the salt content (EC) in the soil, problems with moisture uptake can be predicted. This provides the opportunity to buffer salts in the soil with humic and fulvic acids, a simple and cost-effective measure. This helps prevent salt damage.

Take timely action when the salt content (EC) is too low or too high!

Connectivity

Cellular LTE-M / NB-IoT	Modem works on all major global LTE-M and NB-IoT brands.
SIM card size	Internal Micro 3FF SIM card

Maintenance

Rechargeable battery	3500mAh LiPo
Battery life	~ 1 year

Casing

Dimensions	75mm in diameter and 160 mm in length
Weight (including sensor and battery)	~ 726 grams
Material	Polyvinyl chloride
IP-code	IP68
Temperature	-30 °C to +60 °C
Installation	Above ground level with solar panel or for public area's just below ground level MULTI_S_M above ground solar ready MULTI_R_M for below ground level

Location

Manual	Using software
GPS antennal	Internal

Security

Data security	Military-level AES-256 Encryption from device to Device Manager to protect the integrity and confidentiality of telematics data. Data forwarded to third-party systems is sent via HTTPS for end-to-end security.

Sensors

Electrical conductivity (EC)
Soil moisture (Volumetric Water Content)
Soil temperature

Electrical conductivity (EC), soil moisture and soil temperature probe

Dimensions	9.4 cm x 2.4 cm x 7.5 cm (L x W x H)
Needle length	5,5 cm
Cable length	440 cm Please contact us if a non-standard cable length is required..
Temperature	-40 tot 60 °C
Lifespan	> 3 years

Electrical conductivity (EC)

Range	0 to 20 dS/m
Resolution	0,001 dS/m
Accuracy	± 5% + 0.01 dS/m from 0 to 10 dS/m ± 8% from 10 to 20 dS/m

Soil moisture - Volumetric Water Content (VWC)

Range	Mineral soil calibration: 0.00–0.70 m^3/m^3 Calibration of soilless media: 0.0–1.0 m^3/m^3 Permittivity (ε): 1 (air) to 80 (water)
Resolution	0,001 m^3/m^3
Accuracy	General calibration: ± 0.03 m^3/m^3 (± 3.00% VWC) typical in mineral soils with a solution EC <8 dS/m. Medium specific calibration: ± 0.01 – 0.02 m^3/m^3 (± 1-2% VWC) in any porous medium. Permittivity (ε): ± 1 ε from 1 to 40 15% of the reading from 40 to 80

Soil temperature

Range	-40 tot 60 °C
Resolution	0,1 °C
Accuracy	± 0.5 °C from -40 to 0 °C ± 0.3 °C from 0 to 60 °C

Guarantee

Factory guarantee	1 year if it can be demonstrated that it concerns a manufacturing defect. In case of improper use, repair costs will be charged.

Contact

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