

DATASHEET

Soil moisture, soil temperature and EC sensor

Feldfühler Bodo



feldfühler

Professional sensors for agriculture!

Overview:

Bodo is a LoRaWAN soil moisture, soil temperature and EC sensor for professional agriculture. It can be used to accurately measure soil moisture, soil temperature and soil conductivity and to send the information to the Feldfühler app via the wireless LoRaWAN protocol.

Using the FDR method with temperature and EC compensation, Bodo calculates the soil moisture as well as the electrical conductivity of the soil. Soil moisture is a volumetric measurement that indicates the water content or availability in the soil in %. Soil conductivity is the equivalent of the salt content and can therefore be used for soil fertilisation. The soil temperature is measured using the RTD method.

Bodo is powered by an 8500-mAh-Li-SOCI2 battery, which is ideally suited to the harsh conditions in agriculture and is designed for long-term use of up to 7 years. (Battery life depends on the usage environment and the update interval).

Features:

- Extremely low power consumption
- Replaceable battery
- 3 metre cable
- Moisture alarm
- 30 minute interval
- Waterproof enclosure to IP66
- Sensor protection class to IP67
- Maintenance-free for approx. 5 years

Sensor specification:

Soil temperature:

- Range: -40°C - 85°C
- Accuracy: 0,3°C @ -10 °C -50 °C±
- Resolution: 0,1°C

Soil moisture:

- Range: 0 – 100%
- Accuracy:
 - ± 3% (0 – 53%),
 - ± 5% (54% – 100%)
- Resolution: 0.01 %

Soil conductivity (EC):

- Range: 0 – 20000 $\mu\text{S}/\text{cm}$
- Accuracy: 2% FS
- Resolution: 1 $\mu\text{S}/\text{cm}$



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Netscrapers UG & Co. KG
Kortscher Str. 97,
39028 Schlanders
Italy

+39 0473 711108
support@feldfühler.app
<https://feldfühler.app>