Datasheet
Release: 24.5.2023
Version: 1.0

senzemo

Senstick Leaf Wetness SLW10

Senstick Leaf Wetness is a LoRaWAN sensor, made to accurately measure leaf wetness. It is designed to operate autonomously for several years. It is suitable for wide variety of applications where accurate data readings are needed.

Key features

- Accurate readings
- Manipulation alert
- No maintenance
- Easy installation

Applications

- Leaf wetness detection
- Crops disease prevention

Technical specification

Enclosure	
Weight	200g
Dimensions	Φ165 x 255mm + Probe 120 x 58mm
Materials	ABS Plastic (White)

Configuration	
Sending Interval	15 min (Configurable with NFC or Downlink)

Operating conditions	
Temperature	-20°C to +60°C
Humidity	0 to 100% RH
IP Rating	IP67

Power supply	
Power Supply type	AA Battery standard industrial grade
Expected operation	Up to 10 years

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Sensors

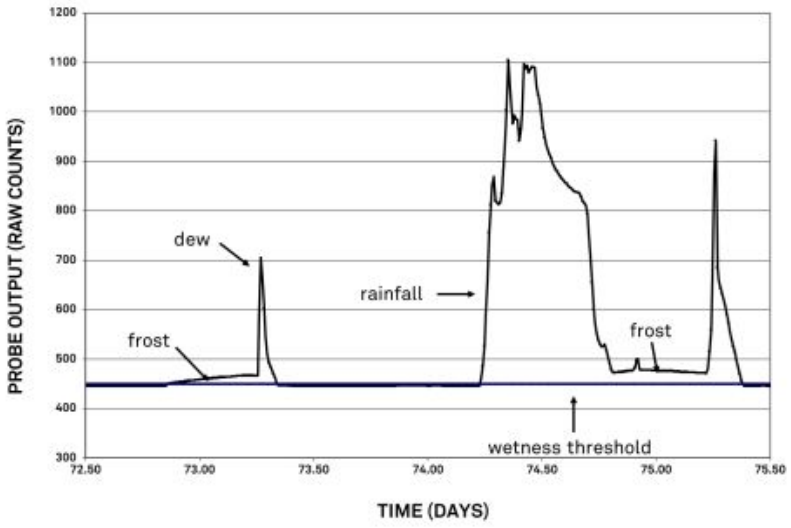
Leaf Wetness metering (METER Phytos 31)	
Output	Accurate leaf wetness percentage

Connectivity LoRaWAN	
Wireless Technology	LoRaWAN® 1.0.3
Wireless Security	LoRaWAN® End-to-End encryption (AES-CTR), Data Integrity Protection (AES-CMAC)
LoRaWAN Device Type	Class A - End-device
Supported Regions	US902–928, EU863–870, AS920-923, AU915–928
Link Budget	137dB (SF7) to 151dB (SF12)
RF Transmit Power	14dBm (Region specific)

Data interpretation

Most leaf wetness applications (disease forecasting, etc.) only require knowledge if there is any water on the surface of the leaf, not knowledge of the amount of water. To make this determination, a sensor output threshold corresponding to the minimum wet state must be identified.
A dry PHYTOS 31 outputs approximately 435 raw counts when read with METER data loggers. When the sensor is totally wet, as in a heavy rain, the signal can range up to around 1,100 counts. Varying amounts of water on the surface of the sensor cause a sensor output proportional to the amount of water on the sensor's surface. Ice has a much lower dielectric constant than that of liquid water, so the sensor output from frost is much lower than that from a similar amount of rain or dew (Source: METER Phytos 31 Datasheet)

For more please visit THIS link on page 6.



Source: METER Phytos 31 Datasheet

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