

SPECIFICATIONS

Measurement time:

10 milliseconds

Power:

2.5VDC @ 2mA to 5VDC @ 7mA

Output:

250 to 1500 mV

Operating Environment:

-10°C to 60°C

Expected Lifetime:

2+ years continuous use

Probe Dimensions:

11.2cm x 5.8cm x 0.075cm

Cable Length:

5m standard

Connector type:

3.5mm plug

Datalogger Compatibility:

Decagon Em50 and Em50R

Leaf Wetness Sensor

INNOVATIVE and easy-to-use, the new Dielectric Leaf Wetness Sensor enables accurate and affordable leaf wetness monitoring. Many fungal and bacterial diseases affect plants only when moisture is present on the leaf surface. The Leaf Wetness Sensor determines the presence and duration of wetness on a leaf's surface, enabling researchers and producers to forecast disease and protect plant canopies.



Applications:

- Forecast plant disease
- Modeling for blight
- Canopy treatment scheduling
- Ecological and Agricultural Research

Benefits:

- Requires no painting or user calibration
- High resolution detects trace amounts of water or ice on the sensor surface
- No calibration necessary; factory calibration set at standard wetness threshold
- Imitates characteristics of a real leaf
- Low power requirements enable long-term leaf wetness monitoring

How It Works

The Leaf Wetness Sensor approximates the thermal mass and radiative properties of leaves to closely mimic the wetness state of a real leaf. The way it works is simple: if the canopy is wet, the sensor is wet; if the canopy is dry, the sensor is dry. The Leaf Wetness Sensor measures the dielectric constant of the top of the sensor. The dielectric constants of water (80) and ice (5) are higher than air (1), so the sensor can determine the presence or absence of wetness using this method. Measurements can be logged at user-defined intervals to determine the duration of wetness on the canopy.



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