

μSMART SERIES

Leaf Wetness/Moisture Sensor

Model LW2 (Artificial Leaf) Model RD1 (Rain/Spray Sensor)

This sensor replicates the effect of moisture on leaf or artificial surfaces and can be used for a variety of situations such as leaf wetness, rain event or other application where over-spray events need to be monitored or controlled. The sensor offers a linear output graduated between 0-100% with 0% being the “Dry” end of the scale and 100% being saturated or “Wet” end of the scale.

A standard “percentage” threshold should be used to define whether the leaf is “dry” or “wet” and this threshold number can be adjusted by users for specific environments. The steep drying characteristics of the artificial leaf mean very little error results from the use of a standard threshold. This sensor may also be used to monitor surface moisture in a variety of non-plant situations such as road surfaces and condensation in buildings.

The gold plated, printed circuit board sensor is connected to a μSmart series electronics package, which provides the intelligence for the sensor. This provides a number of features making the sensor also suitable for a range of control applications when used as a rain event or spray sensor. The control/alarm outputs available as standard in the “Gold Line” series sensors can monitor and control applications where aerosol droplets need to be detected to stop an over-spray condition such as found in fountains or irrigation systems subjected to high wind.

Features

Differentiates “Wetness”
Interchangeable Sensor
Two adjustable thresholds.
Excellent Sensitivity
Repeatable Measurement
No Polarisation Effect
Low Power Consumption

Quality Assurance

Applications

Fungal Warnings
Crop Studies
Surface Moisture Monitoring
Plant Breeding
Irrigation Scheduling/control
Building Research
Crop Over-spray
Fountain Control
First Flush System control

Monitor Sensors Products are manufactured under a third party accredited ISO9002 System.

Specifications

Measurement Units: % between 0% (Dry) and 100% (Wet)

Temperature Range: +1°C to +50°C

Humidity Range: 0-100%

Sensor Type: Gold plated printed circuit grid.

Data Output: Serial data ASCII format (Modbus). Plus, either

Voltage 0-1 volt, 0-2.5 volts or

Frequency +5 volt pulse 2-10 Hz

Options: Open collector transistor switch (ON: wet): no charge

Relay 24VDC 500mA add \$80+GST approx.

4-20 ma Output add \$110+GST

RS232 can be obtained by using an SI8 Converter

Power Supply: 5-28 v DC unregulated

Current Drain: <1.5 ma

Weight (unpacked): 185 grams including cable.

Dimensions: 70 mm x 37 mm x 11 mm

Water Resistance: Sensor is manufactured to withstand normal Meteorological conditions, but not immersion in water.

Mounting: Normally fixed in position at angle similar to that of the object being Monitored. Typically horizontal for plant applications.

Cable Details: Standard product has 4 metres of cable. Longer cable lengths may be ordered. Allow \$2.50/m for additional cable.

Related Products:

TL1 Leaf Temperature Sensor

HU1 Relative Humidity Sensor

TA2 Wet and Dry Bulb Sensor

SM1 Soil Moisture Sensor

AWS1 & AWS2 Automatic Weather Station