# WILTRONICS

## ARD 2 — Arduino Compatibles
### Controllers, Shields, Modules & Sensors

## Soil Moisture Sensor                    ARD2-3030

- **Sense whether soil is wet or dry**
- **Applications in gardening, automatic watering machines**

### Description

This soil moisture sensor can be used to detect moisture. When the soil is dry, the sensor's output analog value will decrease, while moist soil will result in an increased analog value output. A key application for this sensor is for an automatic watering device. The sensor can sense whether your plant is thirsty or not, preventing over- or under-watering.

The sensor's surface is made from metal to extend its life. Insert it into the soil, then read it using an AD converter.

**Note:** Factors such as supply voltage and humidity can affect the output voltage.

### Specifications

| | |
|---|---|
| **Operating Voltage** | 3.3–5.0V |
| **Operating Current** | Less than 20mA |
| **Output Voltage** | 0–2.3V (2.3V is completely immersed in water) |
| **Sensor Type** | Analog Output |
| **Dimensions** | 20mm x 60mm |

### Pinout

| Module | Arduino | Function |
|---|---|---|
| S | A0 | Sensor Output |
| + | 5V | Power Supply |
| – | GND | Ground Connection |

### Test Code

```
/ *
   # The sensor value description
   # 0 ~ 300 dry soil
   # 300 ~ 700 humid soil
   # 700 ~ 950 in water
* /

void setup () {
   Serial.begin (57600);
}

void loop () {
   Serial.print ("Moisture Sensor Value:");
   Serial.println (analogRead (0));
   delay (100);
}
```