Soil Moisture sensor

Technical Manual Rev 1r0

Our new e-Gizmo Soil Moisture sensor with sturdy stainless steel probe for measuring the amount of water in the soil. It has a presettable one bit digital output -for simple and quick application that only need a wet or dry binary equivalent sensing, and an analog output that gives out an analog voltage corresponding to a measured (uncalibrated) moisture content. Compatible with your gizDuino, Arduino, any MCU in general.

GENERAL SPECIFICATION:

- **Supply Input:** +5V DC
- **ICs:** LM358
- **PCB Dimension:** 35 mm x 17 mm

FEATURES:
- With Analog Reading Output connection.
- With Digital Ouput connection

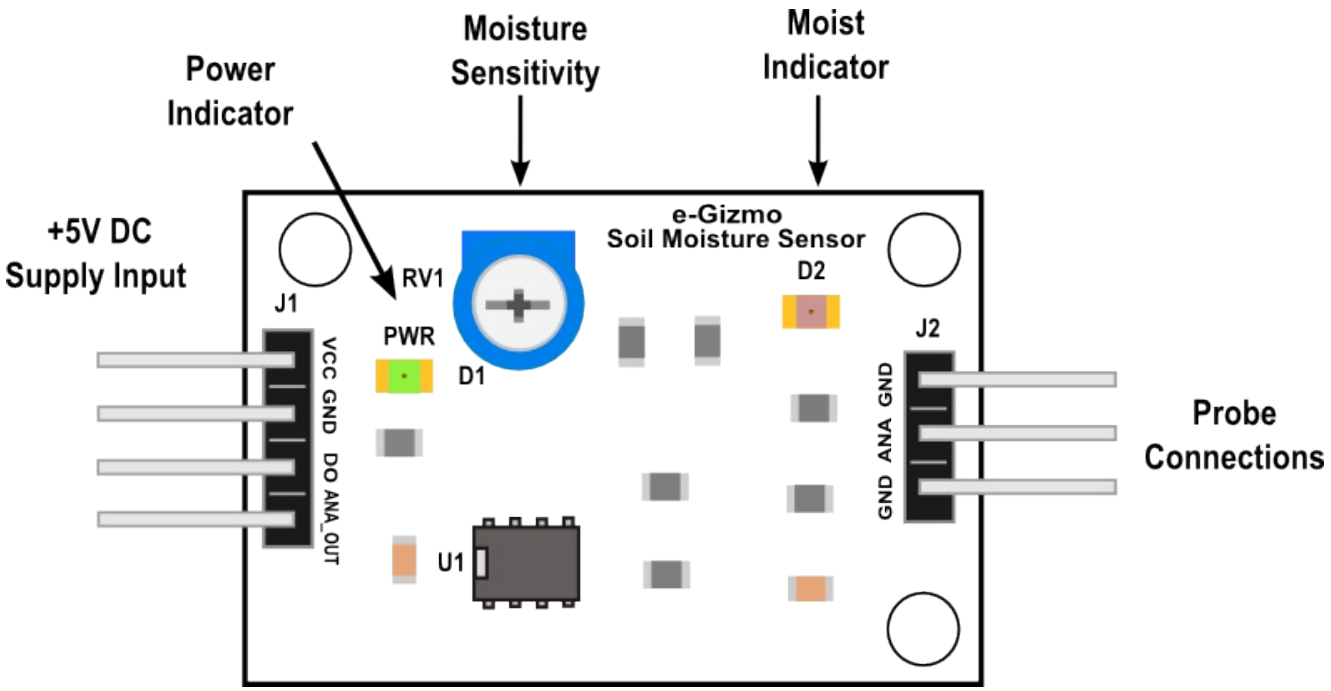

Figure 1. Major parts presentation of e-Gizmo Soil Moisture sensor.

PIN I.D and Descriptions

Table 1. ***J1*** connections and descriptions

PIN Name	Descriptions
VCC	Sensor Input Connections
GND	Input Power Supply Connection
DO	Sensor Output Connection
ANA_OUT	Sensor Output Connection

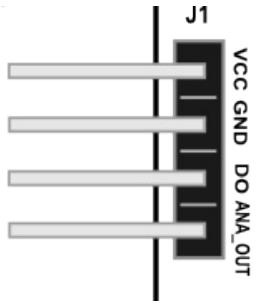

Figure 2. *J1 Illustration*

Table 2. ***J2*** connections and descriptions

Pin Name	Descriptions
ANA	Analog Input
GND	Ground

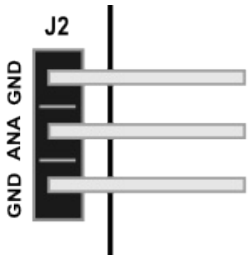

Figure 3. *J2 Illustration*

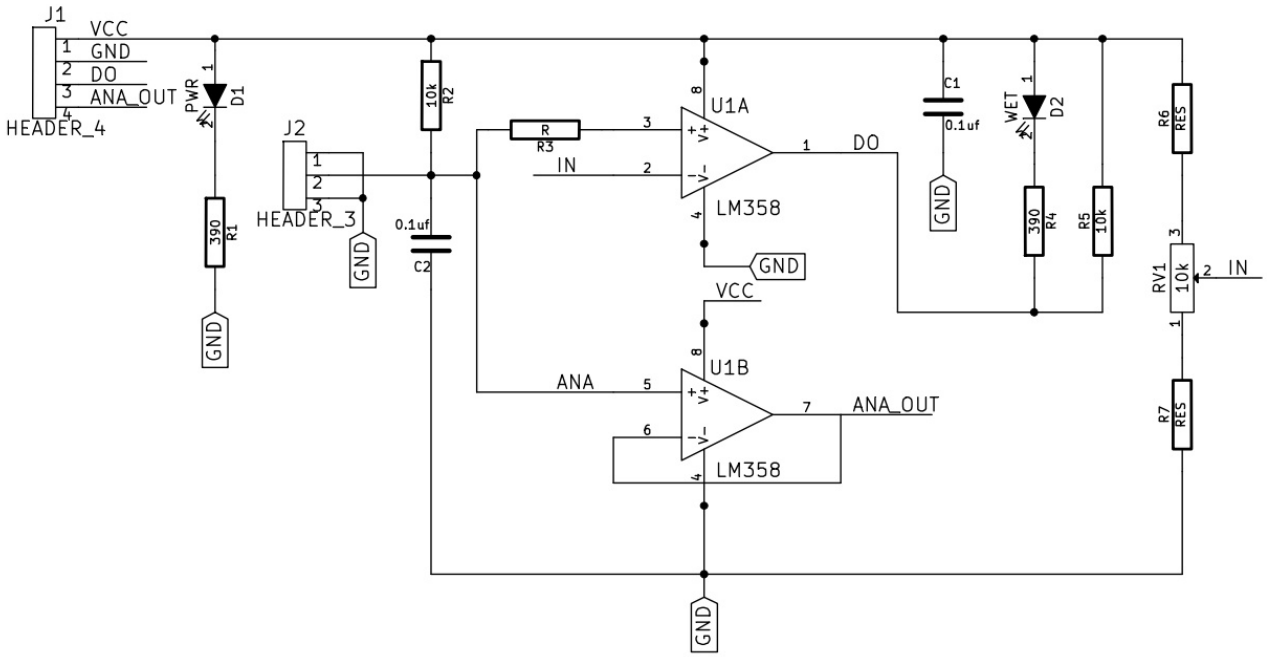

Figure 4. *Schematic Diagram of e-Gizmo Soil Moisture sensor*

Parts placements and PCB Layouts

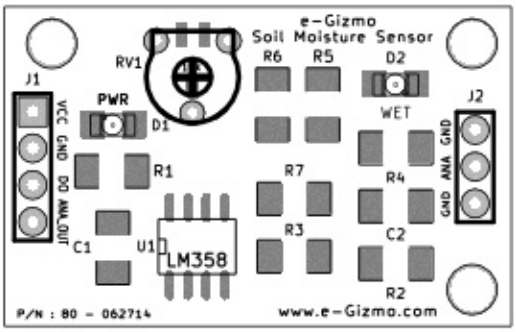

Figure 5. *Parts Placement*

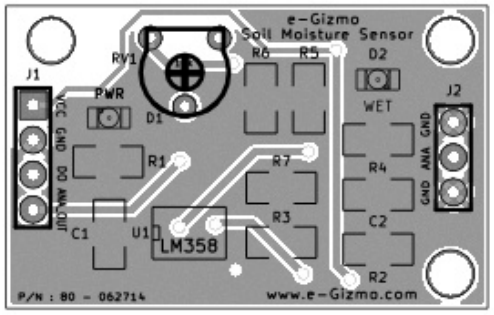

Figure 6. *BottomPCBGuide*

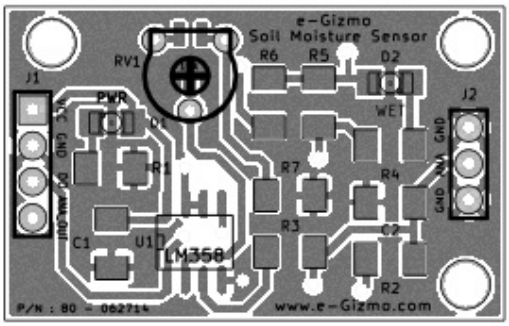

Figure 7. *TopPCBGuide*

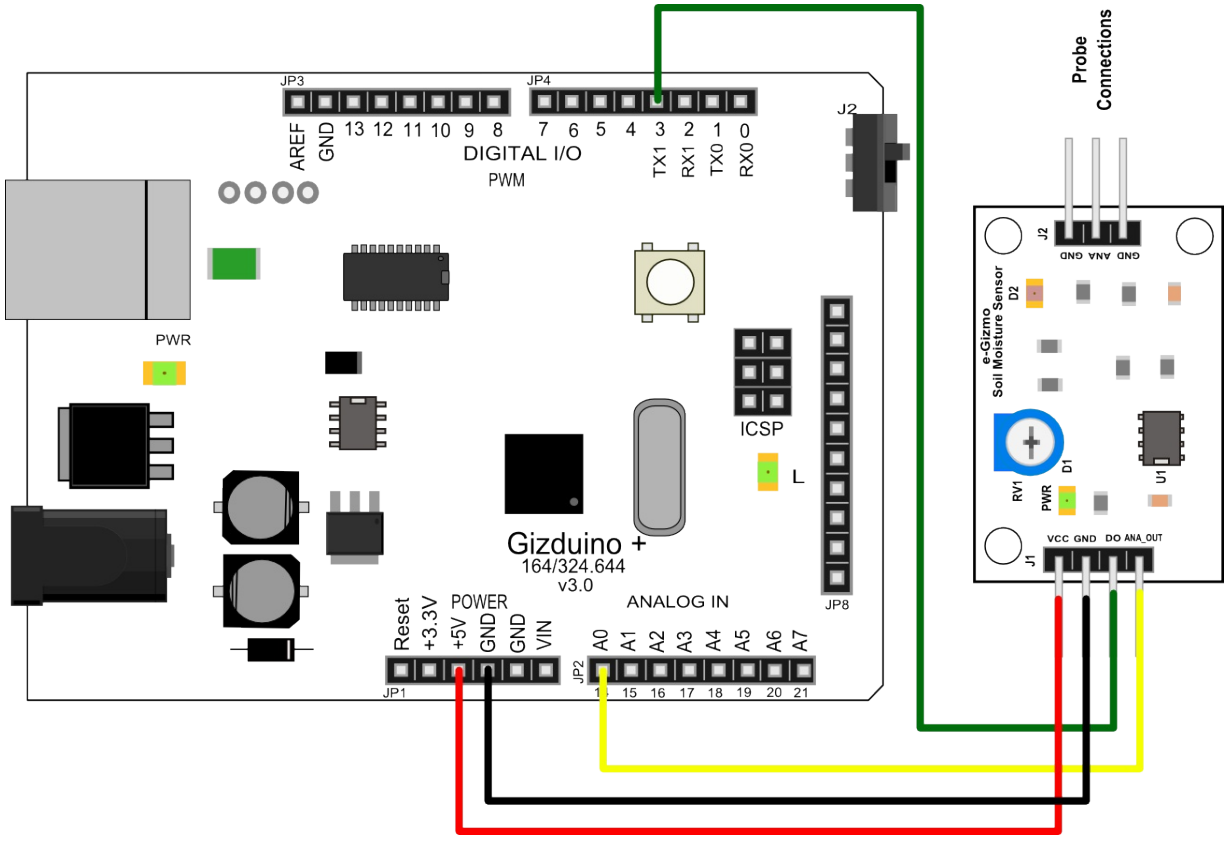

Figure 10. *Sample Application of e-Gizmo Soil Moisture sensor with gizDuino + 644/P*

Sample codes

```
/*
  e-Gizmo Soil Moisture sensor Sample codes

  Reads an analog input on pin 0, digital output on pin 3
  and prints the result to the serial monitor.

   This example code is in the public domain.

  codes by:
  e-Gizmo Mechatronix Central
  http://www.e-gizmo.com
  August 26, 2014
 */

// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
}

// the loop routine runs over and over again forever:
void loop() {
    // read the input on analog pin 0 and digital output pin 3
  int AnaVal = analogRead(A0);
  int DigVal = digitalRead(3);

  // print out the value you read:
  Serial.print("ANA= "); Serial.print(AnaVal);
            Serial.print("  DIGITAL  = ");Serial.println(DigVal);

}
```