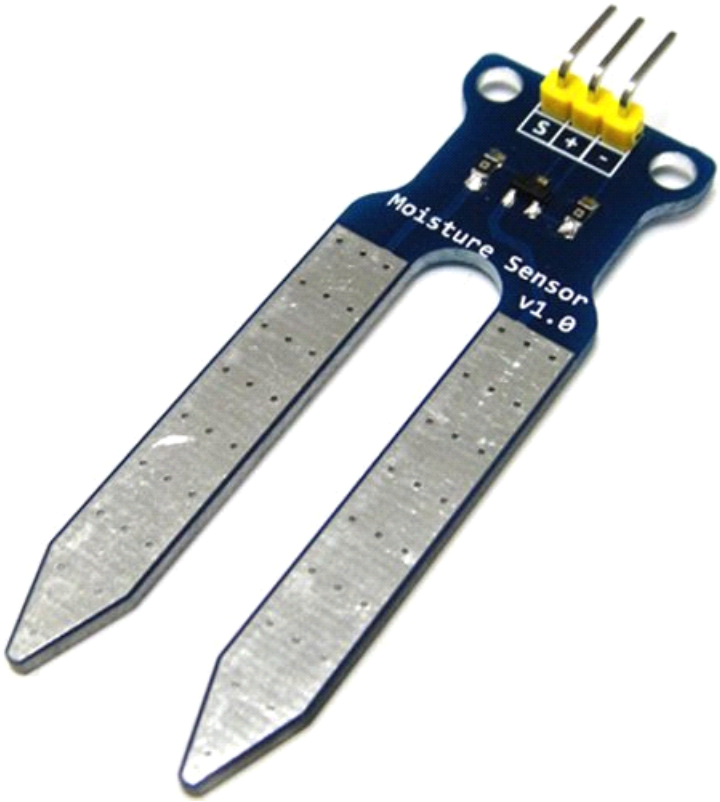
High Sensitivity Moisture Sensor



Description:

This Moisture Sensor uses Immersion Gold which protects the nickel from oxidation. Electroless nickel immersion gold (ENIG) has several advantages over more conventional (and cheaper) surface platings such as HASL (solder), including excellent surface planarity (particularly helpful for PCB's with large BGA packages), good oxidation resistance, and usability for untreated contact surfaces such as membrane switches and contact points.

This Moisture Sensor can read the amount of moisture present in the soil surrounding it. It's a low tech sensor, but ideal for monitoring an urban garden, or your pet plant's water level. This is a must have tool for a connected garden!

This Moisture Sensor can be used to detect the moisture of soil or judge if there is water around the sensor, let the plants in your garden reach out for human help. They can be very to use, just insert it into the soil and then read it. With help of this sensor, it will be realizable to make the plant remind you: Hey, I am thirsty now, please give me some water.

This Moisture Sensor uses the two probes to pass current through the soil, and then it reads that resistance to get the moisture level. More water makes the soil conduct electricity more easily (less resistance), while dry soil conducts electricity poorly (more resistance).

It will be helpful to remind you to water your indoor plants or to monitor the soil moisture in your garden. The IO Expansion Shield is the perfect shield to connect this senor to Arduino.

This item have low power consumption, and high sensitivity, which are

the biggest characteristics of this mdoule.

This item can be compatible with Arduino UNO、 Arduino mega2560、 Arduino ADK etc.

Features:

1、Working voltage: 5V

2、Working Current: <20ma

3、Interface: Analog

4、Depth of detection: 37mm

5、Working Temperature: 10℃~30℃

6、Weight: 3g

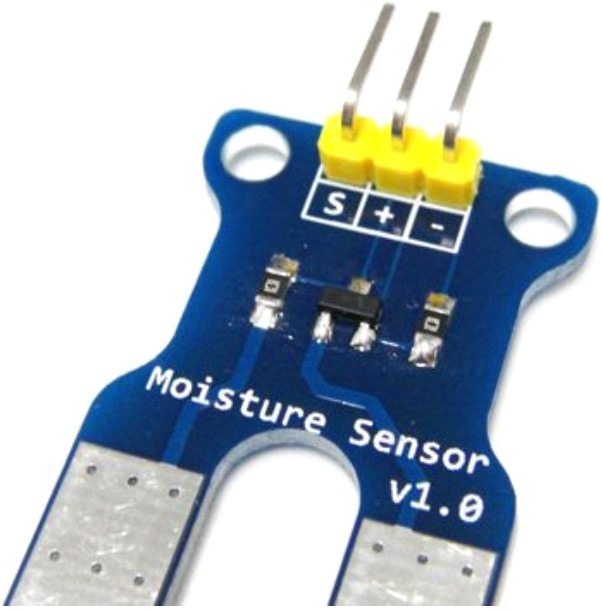
7、Size: 63×20×8mm

8、Arduino compatible interface

9、Low power consumption

10、High sensitivity

11、Output voltage signal: 0~4.2V



Pin definition:

"S" stand for signal input

"+" stand for power supply

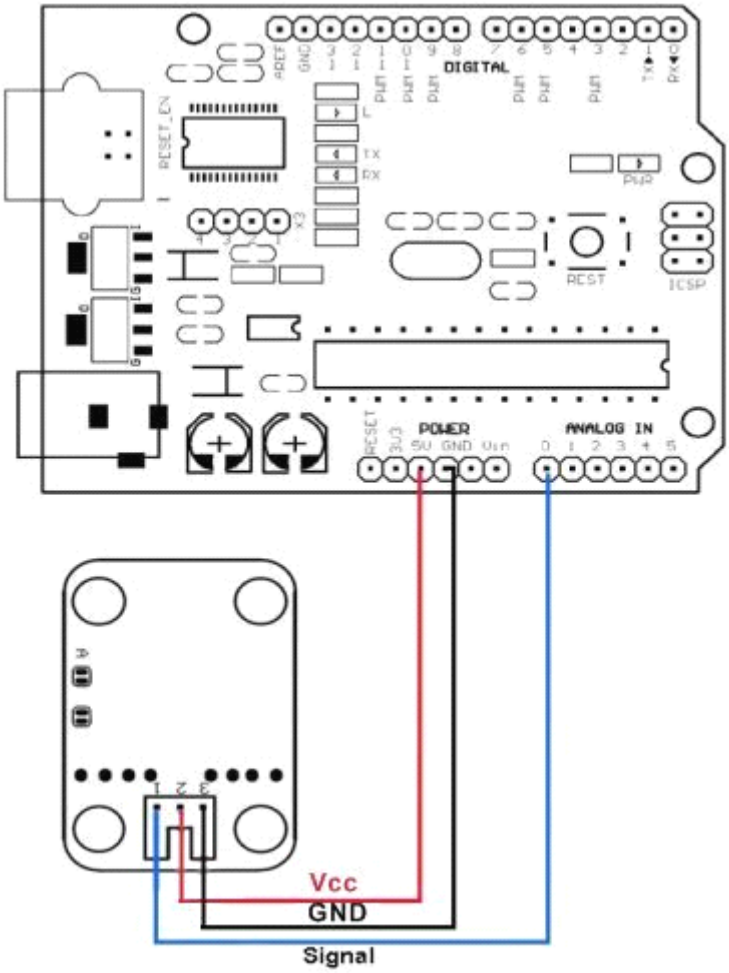
"-" stand for GND

Applications :

1、Botanical gardening

2、Water sensor

Connecting Diagram:



This sensor module come with 3 Pin Dual-female Jumper Wire length 300mm as below:

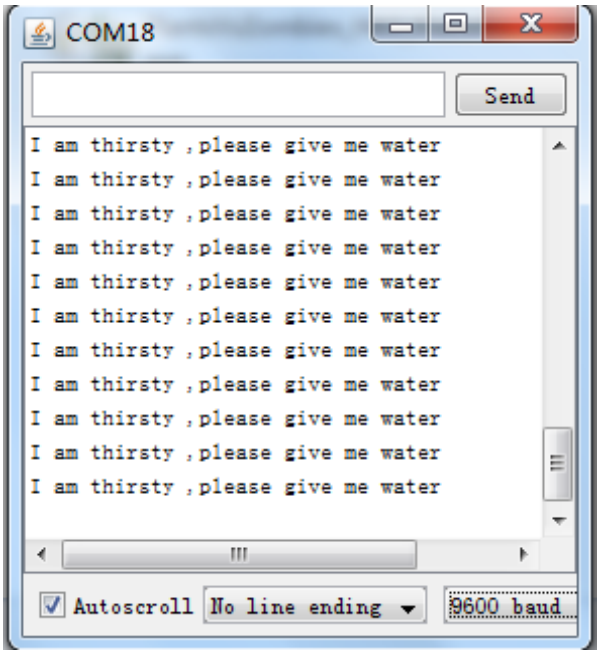
Example:

Please use the cable to connect the Moisture Sensor with A5 interface of Arduino Sensor shied.

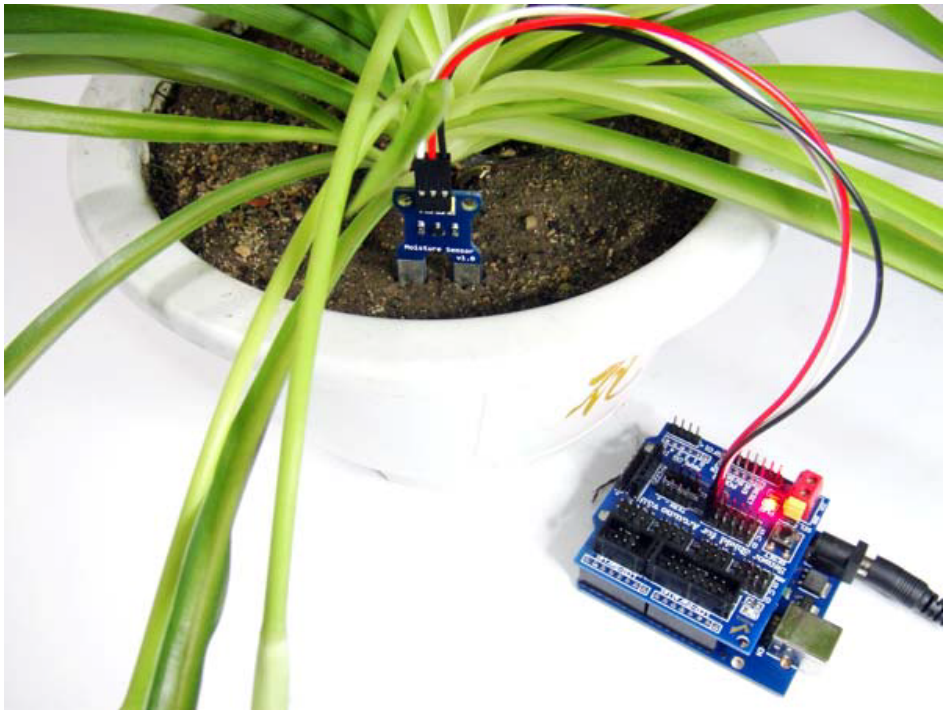
After hardware connection, please download the test code to Arduino after being compiled code, and the Arduino test code such as below:

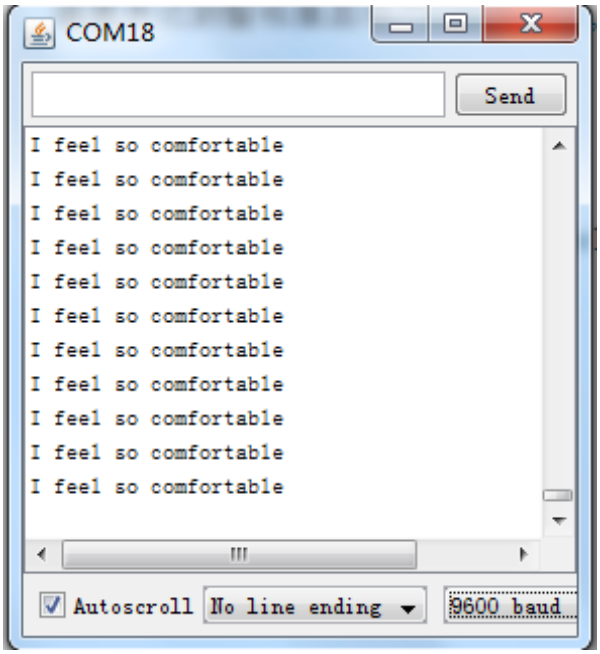
```
void setup(){
Serial.begin(9600);
}
void loop(){
if(analogRead(5) < 300){
Serial.println("I am thirsty ,please give me water");
}
if(analogRead(5) > 300 && analogRead(5) < 700){
Serial.println("I feel so comfortable");
}
if(analogRead(5) > 700){
Serial.println("Too much water, I might get hurt");
}
delay(200);
}
```

Then come out the test result as below:

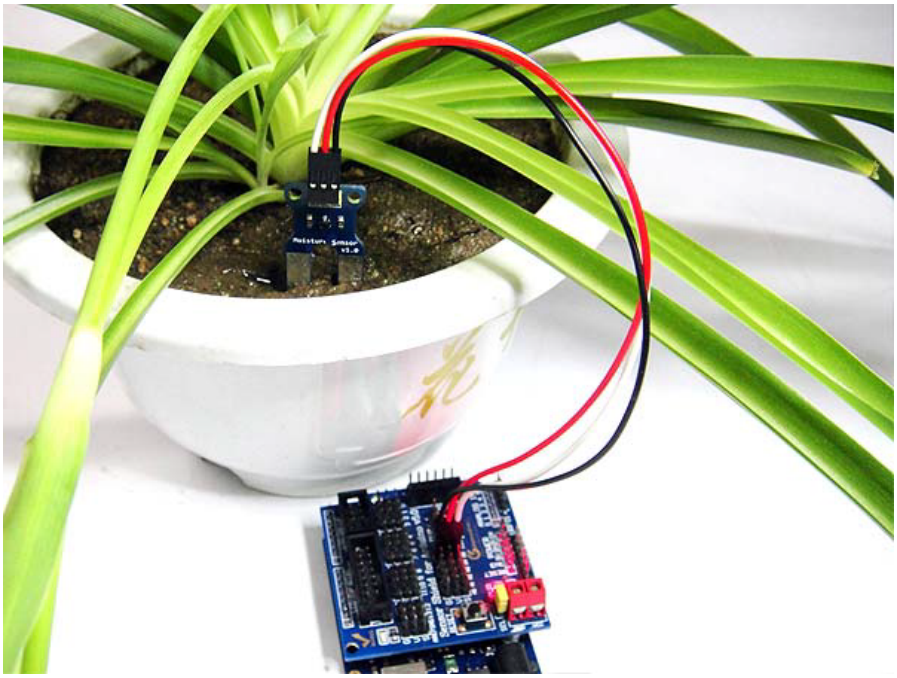


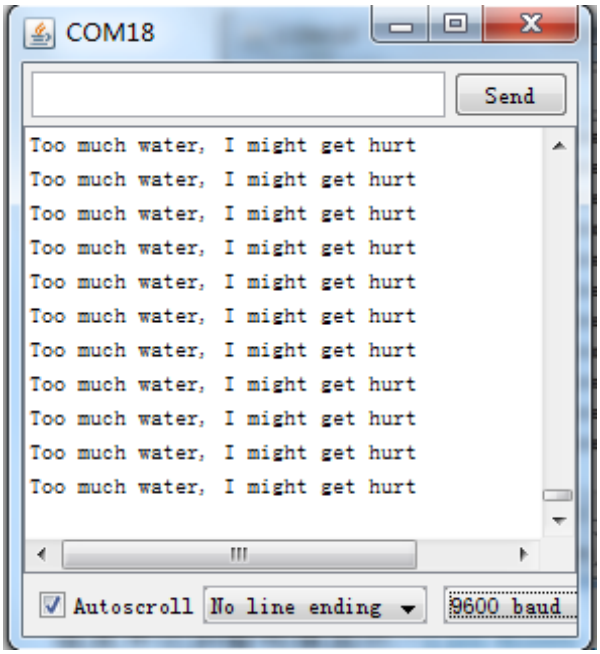
It shows that “I am thirsty, please give me water” .





It shows that “I feel so comfortable”.





It shows that “Too much water, I might get hurt”.