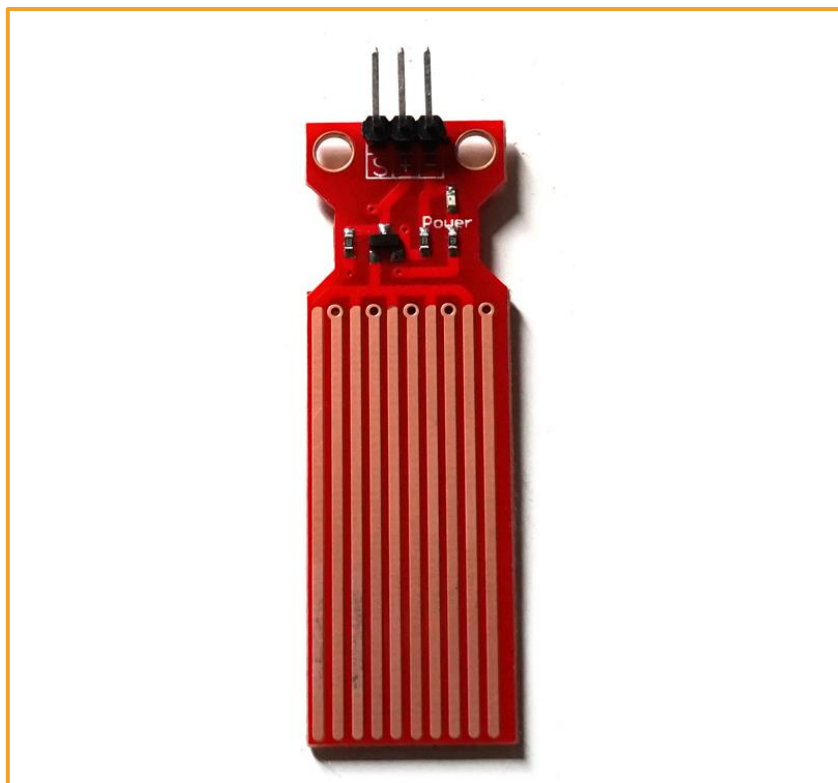


High Sensitivity Water Sensor

High Sensitivity Water Sensor

Water depth sensor is specially designed for water quality testing, which can be widely used in induction of rainfall, water level, even liquid leakage module mainly consists of three parts: electronic connectors, 1 m Ω resistor and a few bare wire working principle of the sensor is exposed a series of lines connected to the ground, and walked on the grounding line between crisscross, namely induction line sensor walk line with 1 m Ω weak pull-up resistor sensor trace value up, until a drop of water make the sensor wire short circuit to ground walk line, believe it or not, this circuit can with Arduino digital I/O pins, also it can be used with analog pin, to detect grounding and Sensor line contact between the Water quantity Water level Sensor (Water) Sensor is a simple and easy to use small and light high cost performance of Water/Water identification detection Sensor, low power consumption, high sensitivity is the another big characteristic is exposed through a series of parallel wire line mark to measure the Water droplets/size to determine Water easy to complete the Water to the conversion of the analog signal, the output of simulation value can directly be used in program function, cooperate with the ArduinoThe controller can be directly plugged into the sensor extension board for application, and the effect is more obvious



Physical diagram of water depth sensor module

PIN define

- "S": Representative signal input
- "+": Representative VCC
- "-" : Representative GND

Characteristic

- Working voltage :5V
- working current :<20mA
- interface:analog
- detection width :40mm 16mm deepest can only measure 4cm
- working temperature :10 ~30
- weight :3 g
- size :65mm 20mm 8mm
- arduino-compatible interface power consumption low sensitivity high
- output voltage signal :0~ 4.2v

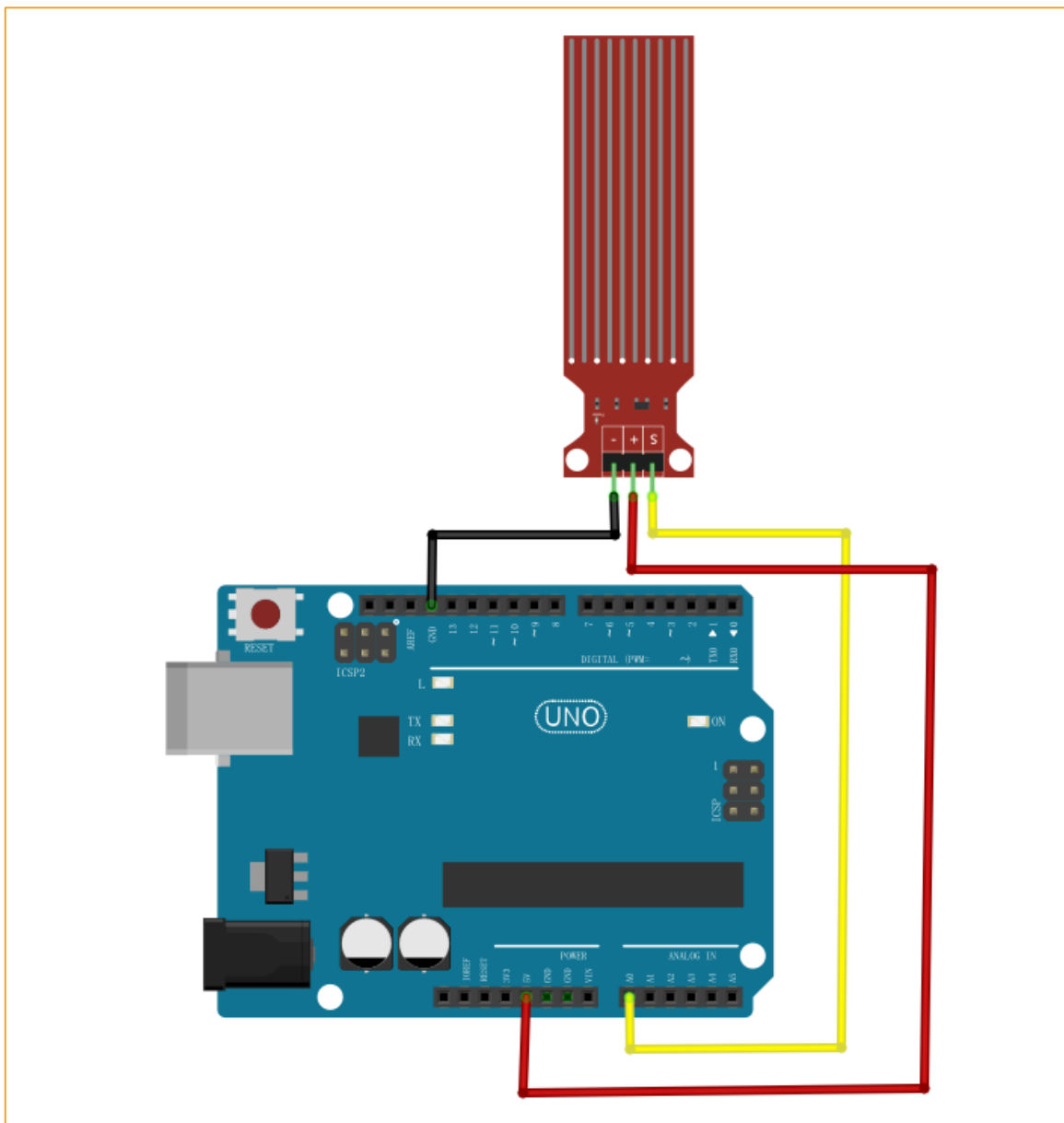
The experiment purpose

- Understand the working principle of water depth sensor module
- Use the Arduino UNO plate to get the depth value of water level measured by the water depth sensor and print it out.

Component list

- Keywish Arduino UNO R3 mainboard
- breadboard
- USB data cable
- water depth sensor module * 1
- cup of water
- several jumper cables

connection wiring



Arduino IDE programming procedure

Depth sensor module not inserted into the water, the output value is 0, along with the gradually submerged water level sensor, analog pin value is more and more big, when fully submerged, the output value 670 or so and then gradually draw water level sensor, maximum value of analog pin is less fully drawn after but when the water level sensor, the output value is 0, personally think that is the surface of the water level sensor and water at this moment, can affect the output value of analog pin with dry paper towel after the surface of the water level sensor, analog output value of the pin to 0

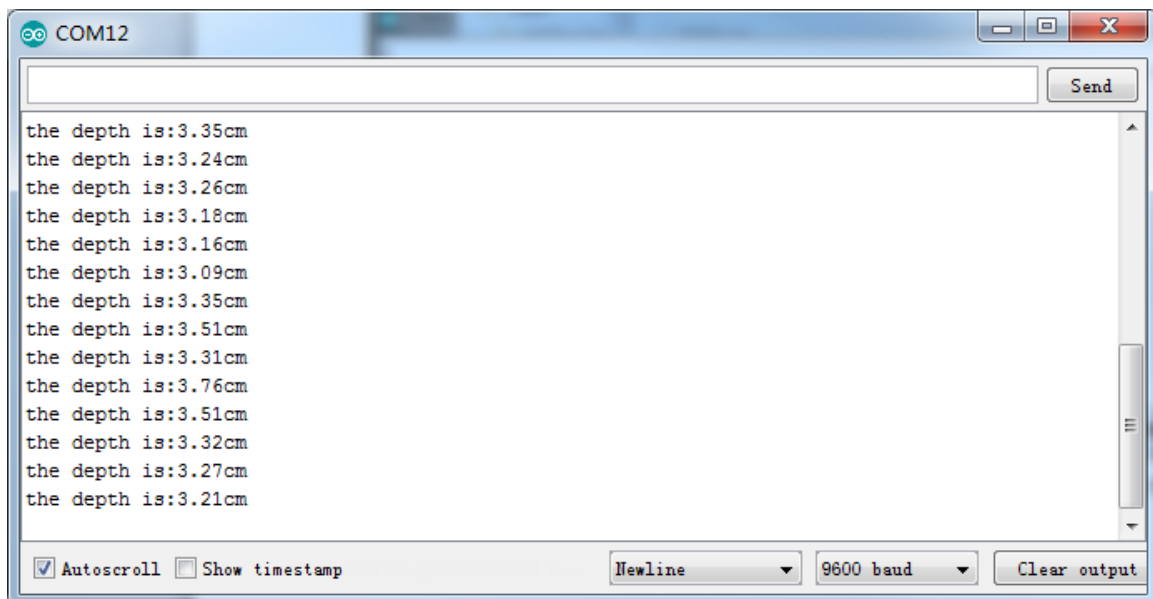
```
int analogPin=A0;

double temp , data;

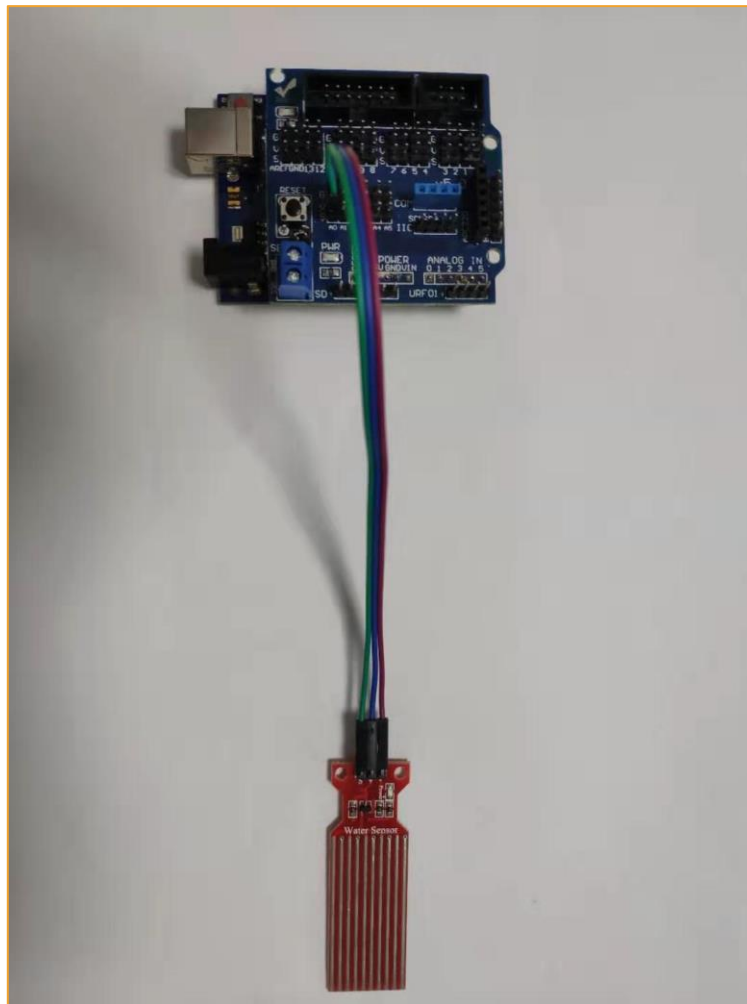
void setup() {
    pinMode(analogPin,INPUT);
    Serial.begin(9600);
}

void loop() {
    // put your main code here, to run repeatedly:
    temp=(long)analogRead(analogPin);
    data=(temp/670)*4;
    Serial.print("the depth is:");
    Serial.print(data);
    Serial.println("cm");
    delay(1000);
}
```

Experimental result



If there is a Sensor V5.0 expansion board in the kit, you can connect the Sensor according to the following wiring method, which is more convenient

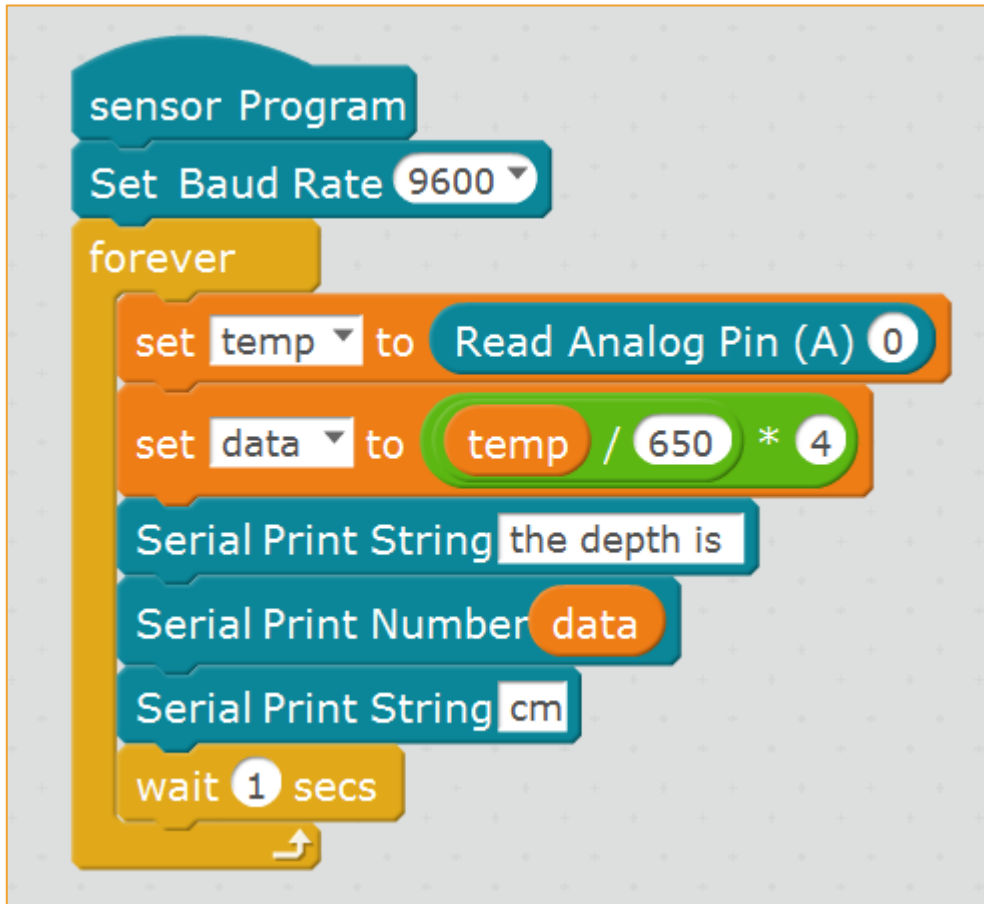


mBlock Graphical programming program

The main building blocks used in mBlock programming are:

- **Set Baud Rate** 9600 Set the serial port baud rate
- **Read Analog Pin (A)** 0 read the analog value

MBlock wrote the water depth sensor program as shown in the figure below:



You can also use mBlock to directly open a written program file, which is a .Sb2 file

