Water & Liquid Level Sensor Module for Arduino

Introduction

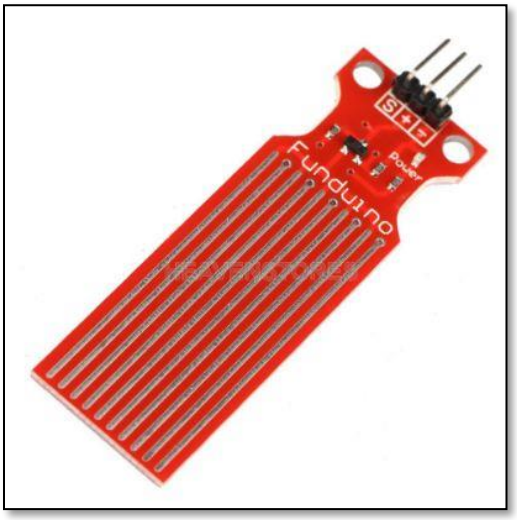
Water level sensor is used to measure water level in water tank or in any other equipment. In our daily life we need to detect the level of water like in water tank at the top of roof which is not directly accessible and in laboratories where specific level of any liquid is required to be monitored. In such applications water level sensor is very useful. In today's tutorial we will see how to interface water level sensor with Arduino and how to monitor specific water level using this assembly.

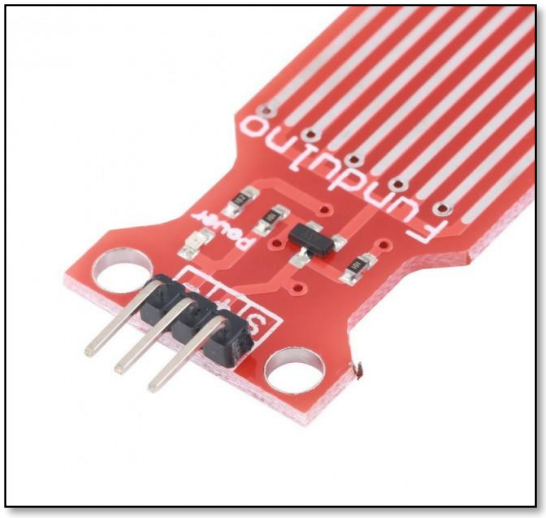
Water level sensor gives output int the form of voltage.So before using water level sensor, you should know, how to meausre analog voltage using Arduino and if you are new to arduino programming I recommend you to check this arduino programming in c tutorial first**.**

Specification

- Operating Voltage: DC5V
- Working current: less than 20mA
- Sensor Type: Analog
- Detection area :40mm x16mm

Images





Packing List

- Water level sensor module

Requirements

It can be interface with any microcontroller such as PIC, SK40C, SK28A, SKds40A, Arduino series.

Necessary hardware to follow this guide:

- Arduino Uno
- Water / Liquid level Sensor module
- Male-Female/Female-Female jumper wire

Pin Assignment

Water level sensor is provided with three output terminals.

- + stands for +5V
- – stands for GND
- S stands for signal

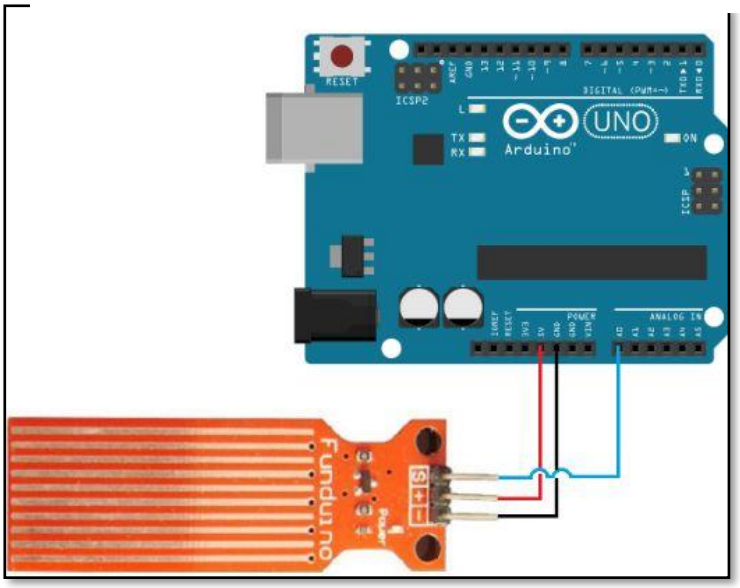
Applications

- Aquaponics
- Hydroponics systems
- Automatic outdoor plant care

Hardware Interface/Setup

Testing the Circuit:

1. After hardware connection, insert the sample sketch into the Arduino IDE.
2. Using a USB cable, connect the ports from the Arduino to the computer.
3. Upload the program.
4. See the results in the serial monitor



Connections

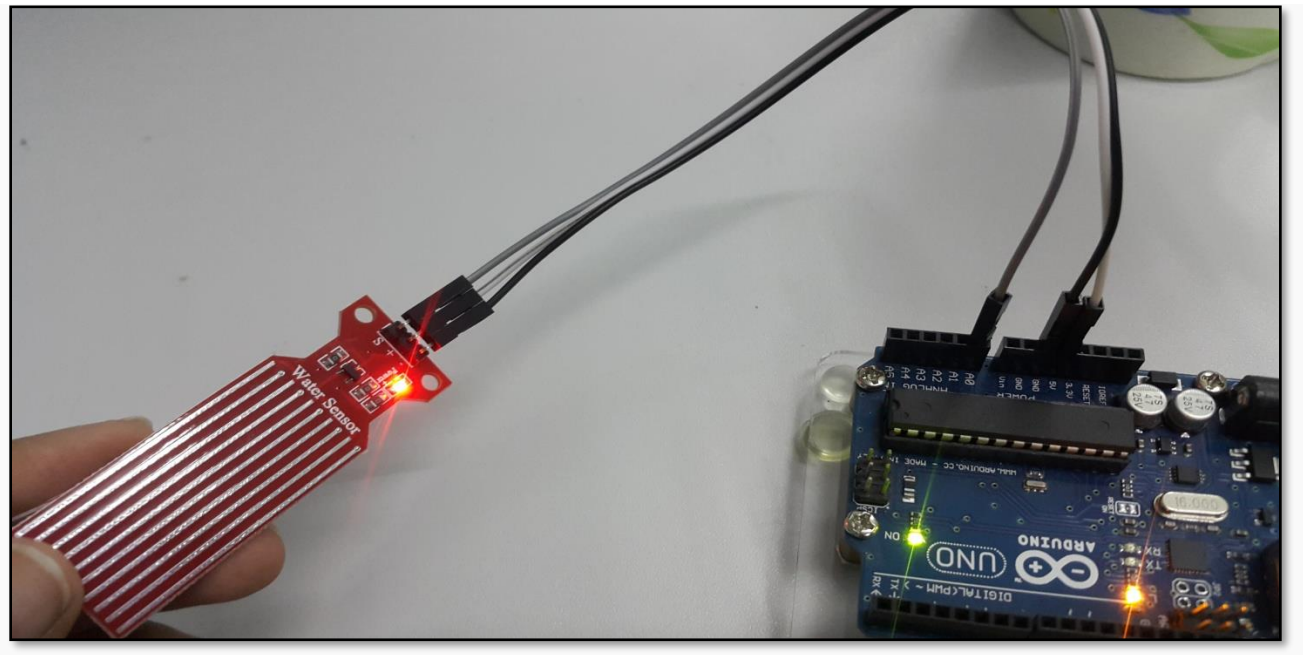
Sensor S pin	Arduino Analog pin A0
Sensor + pin	Arduino 5V
Sensor – pin	Arduino GND

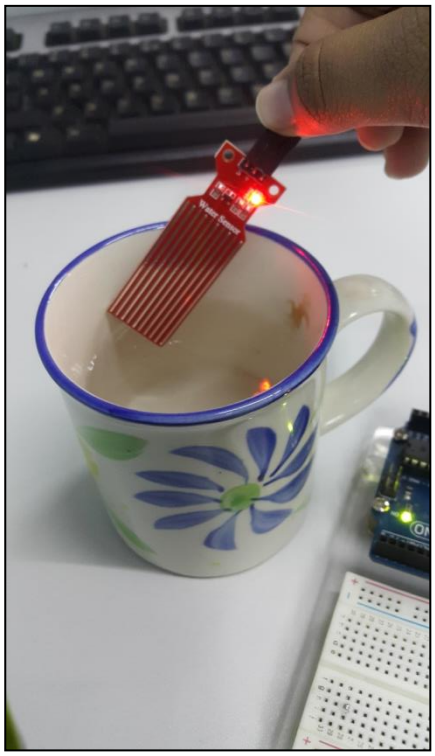
Example Code

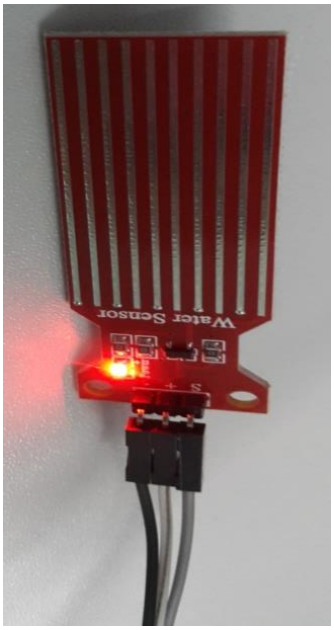
This is example code for moisture sensor module. The full code can be download at http://microcontrollerslab.com/water-level-sensor-interfacing-arduino/

```
void setup()

{

  Serial.begin(9600);

}

void loop()

{

  int val = analogRead(A0); // read input value

  Serial.print("Pin Value    ");

  Serial.println(val);

  delay(2000);

}
```

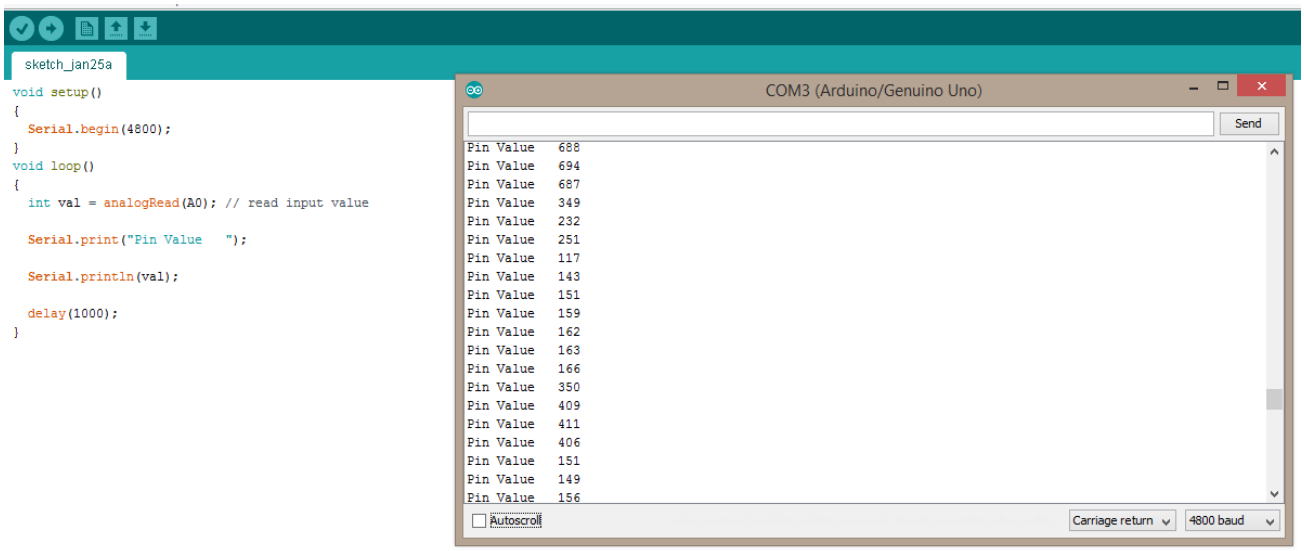
CONNECTION

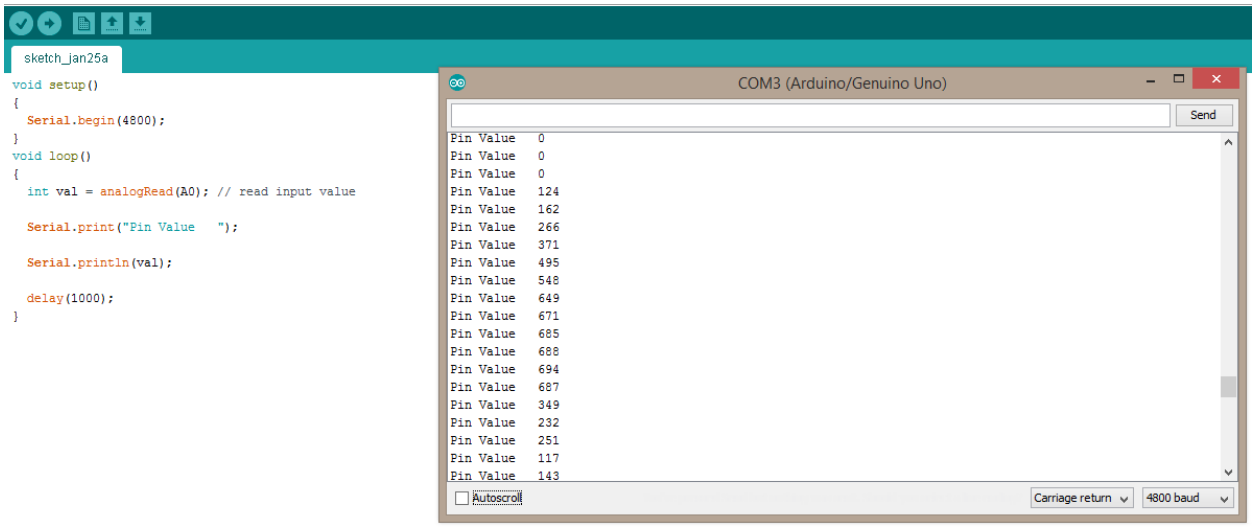






RESULTS


sketch_jan25a
void setup()
{
Serial.begin(4800);
}
void loop()
{
int val = analogRead(A0); // read input value
Serial.print("Pin Value ");
Serial.println(val);
delay(1000);
}
COM3 (Arduino/Genuino Uno)
Send
Pin Value 688
Pin Value 694
Pin Value 687
Pin Value 349
Pin Value 232
Pin Value 251
Pin Value 117
Pin Value 143
Pin Value 151
Pin Value 159
Pin Value 162
Pin Value 163
Pin Value 166
Pin Value 350
Pin Value 409
Pin Value 411
Pin Value 406
Pin Value 151
Pin Value 149
Pin Value 156
Autoscroll
Carriage return
4800 baud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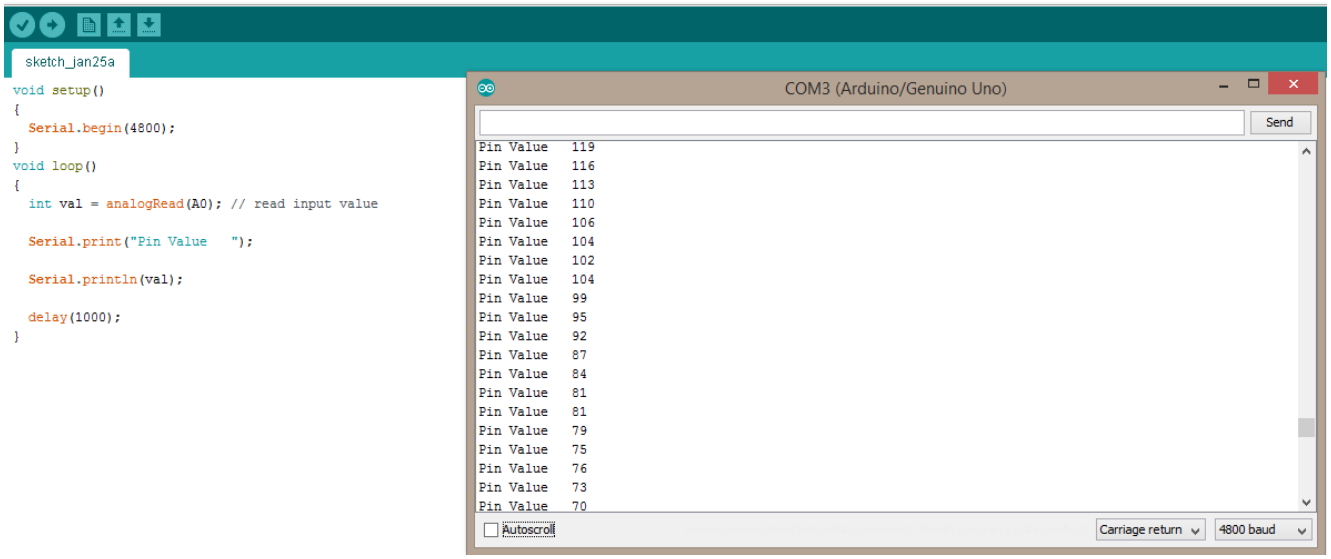
}
void loop()
{
int val = analogRead(A0); // read input value
Serial.print("Pin Value ");
Serial.println(val);
delay(1000);
}
COM3 (Arduino/Genuino Uno)
Send
Pin Value 0
Pin Value 0
Pin Value 0
Pin Value 124
Pin Value 162
Pin Value 266
Pin Value 371
Pin Value 495
Pin Value 548
Pin Value 649
Pin Value 671
Pin Value 685
Pin Value 688
Pin Value 694
Pin Value 687
Pin Value 349
Pin Value 232
Pin Value 251
Pin Value 117
Pin Value 143
Autoscroll
Carriage return
4800 baud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void setup()
{
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}
void loop()
{
int val = analogRead(A0); // read input value
Serial.print("Pin Value ");
Serial.println(val);
delay(1000);
}
COM3 (Arduino/Genuino Uno)
Send
Pin Value 119
Pin Value 116
Pin Value 113
Pin Value 110
Pin Value 106
Pin Value 104
Pin Value 102
Pin Value 104
Pin Value 99
Pin Value 95
Pin Value 92
Pin Value 87
Pin Value 84
Pin Value 81
Pin Value 81
Pin Value 79
Pin Value 75
Pin Value 76
Pin Value 73
Pin Value 70
Autoscroll
Carriage return
4800 baud