Water Level Detection Sensor Module

Overview

In this lesson, you will learn how to use a water level detection sensor module. This module can perceive the depth of water and the core component is an amplifying circuit which is made up of a transistor and several pectinate PCB routings. When put into the water, these routings will present a resistor that can change along with the change of the water's depth. Then, the signal of water's depth is converted into the electrical signal, and we can know the change of water's depth through the ADC function of MEGA2560 R3.

Component Required:

1 x Mega2560 R3

3 x F-M wires (Female to Male DuPont wires)

1 x Water lever detection sensor module

Component Introduction

Water sensor:

A water sensor brick is designed for water detection, which can be widely used in sensing the rainfall, water level, even the liquate leakage. The brick is mainly composed of three parts: an electronic brick connector, a 1 M 惟 resistor, and several lines of bare conducting wires.

This sensor works by having a series of exposed traces connected to ground.

Interlaced between the grounded traces are the sense traces.

The sensor traces have a weak pull-up resistor of 1 M 惟. The resistor will pull the sensor trace value high until a drop of water shorts the sensor trace to the grounded trace. Believe it or not this circuit will work with the digital I/O pins of your MEGA2560 R3 board or you can use it with the analog pins to detect the amount of water induced contact between the grounded and sensor traces.

This item can judge the water level through with a series of exposed parallel wires stitch to measure the water droplet/water size. It can easily change the water size to analog signal, and output analog value can directly be used in the program function, then to achieve the function of water level alarm.

It has low power consumption, and high sensitivity.

Features:

Working voltage: 5V

Working Current:<20ma3 、 Interface: Analog

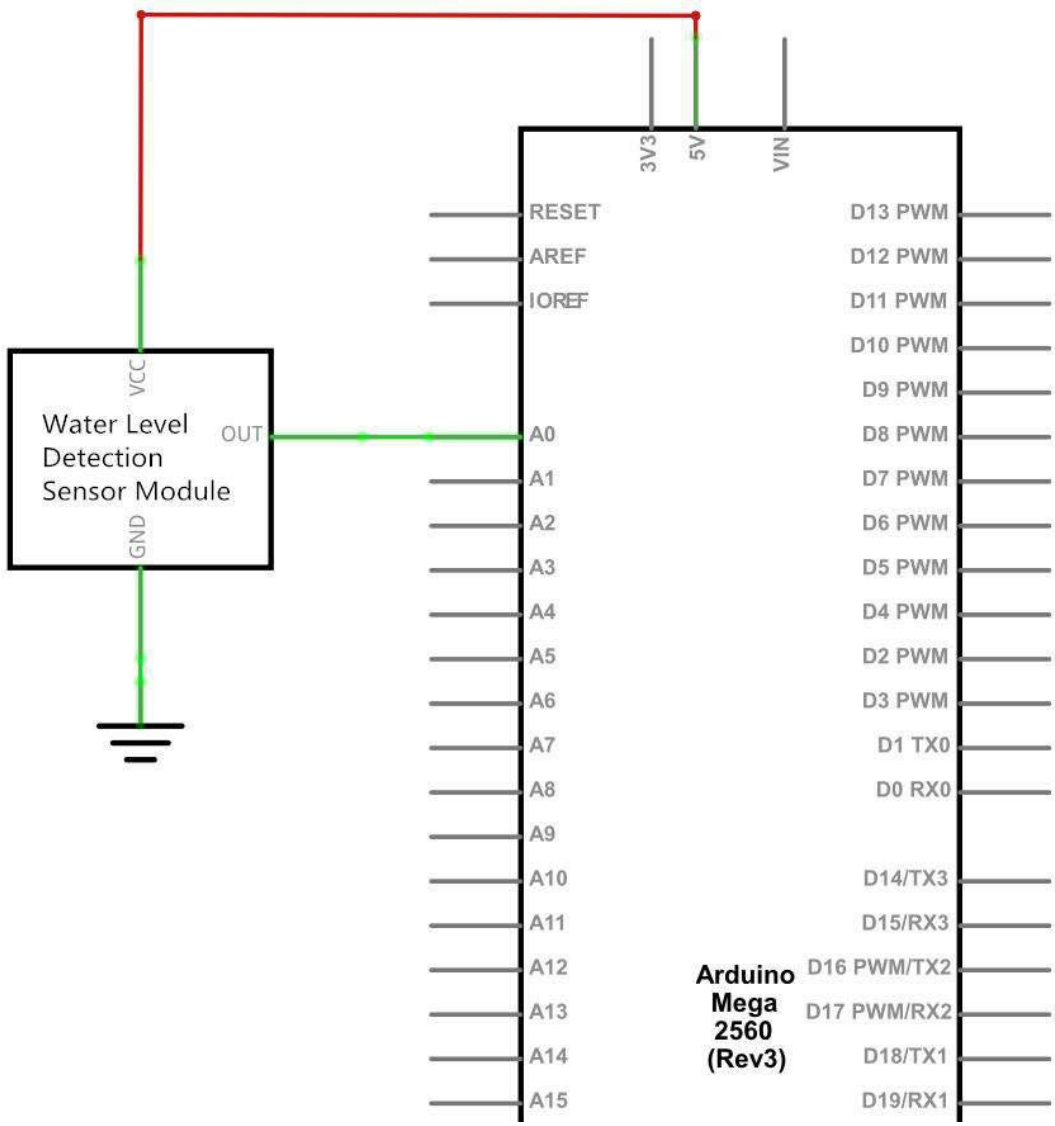
Width of detection: 40mm×16mm

Working Temperature: 10℃~30℃

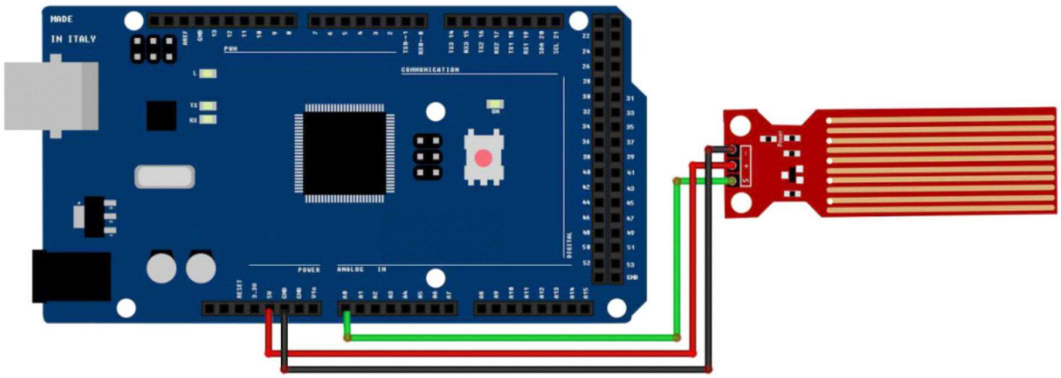
Output voltage signal: 0~4.2V

Connection

Schematic



Wiring diagram



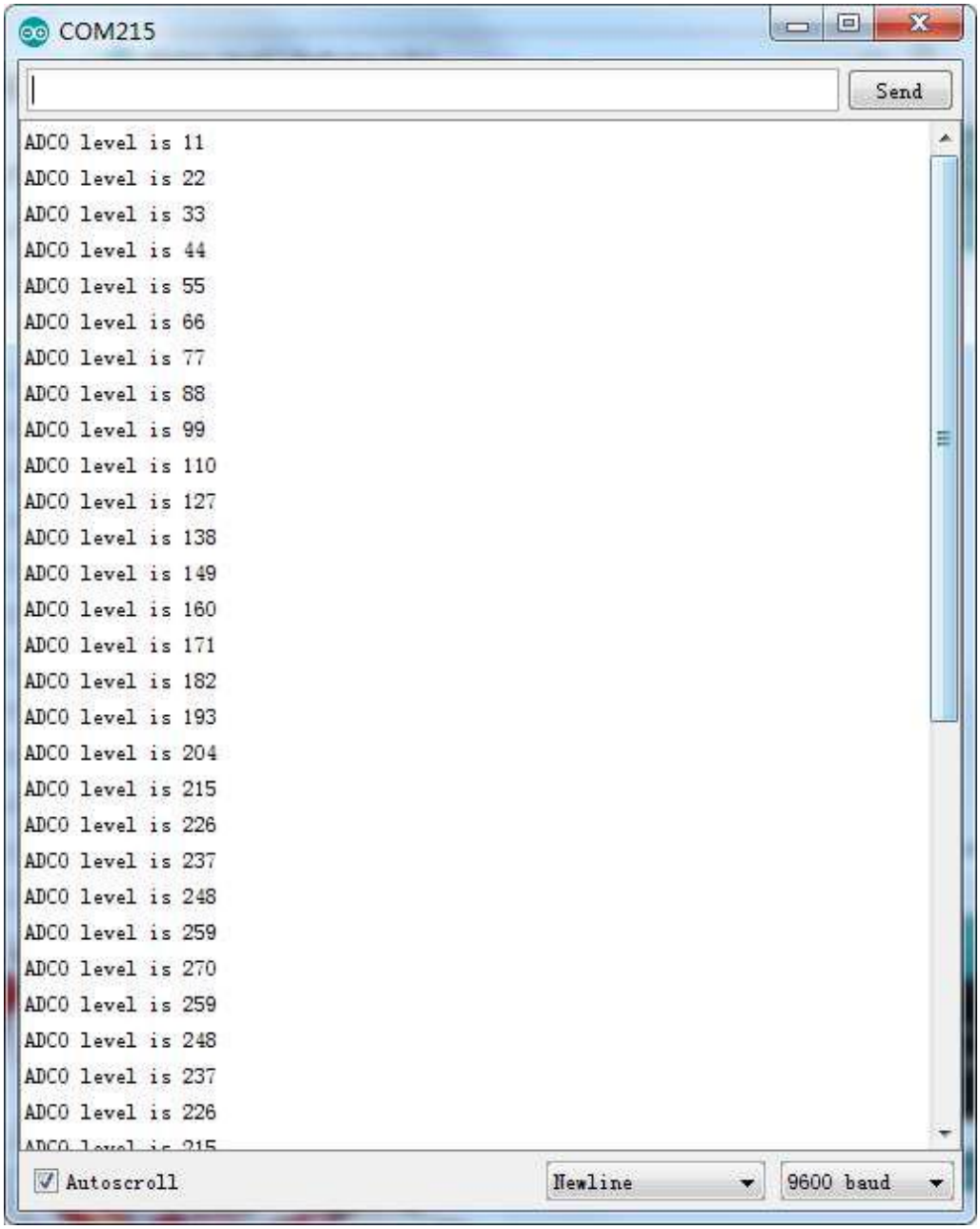
Wiring tips: Power supply (+) is connected to 5V of MEGA2560 R3 board, ground electrode (-) is connected to GND. Signal output (S) is connected to the ports (A0- A5) which have function of inputting analog signal in MEGA2560 R3 board, random one is OK, but it should define the same demo code as the routine.

Code

After wiring, please open the program in the code folder- "Water Level Detection Sensor Module" and click UPLOAD to upload the program. See "Blink" for details about program uploading if there are any errors.

Open the monitor then you can see the data as below:

Click the Serial Monitor button to turn on the serial monitor. The basics about the serial monitor are introduced in details in "Arduino IDE useful manual.pdf".


COM215
Send
ADC0 level is 11
ADC0 level is 22
ADC0 level is 33
ADC0 level is 44
ADC0 level is 55
ADC0 level is 66
ADC0 level is 77
ADC0 level is 88
ADC0 level is 99
ADC0 level is 110
ADC0 level is 127
ADC0 level is 138
ADC0 level is 149
ADC0 level is 160
ADC0 level is 171
ADC0 level is 182
ADC0 level is 193
ADC0 level is 204
ADC0 level is 215
ADC0 level is 226
ADC0 level is 237
ADC0 level is 248
ADC0 level is 259
ADC0 level is 270
ADC0 level is 259
ADC0 level is 248
ADC0 level is 237
ADC0 level is 226
Autoscroll
Newline
9600 baud