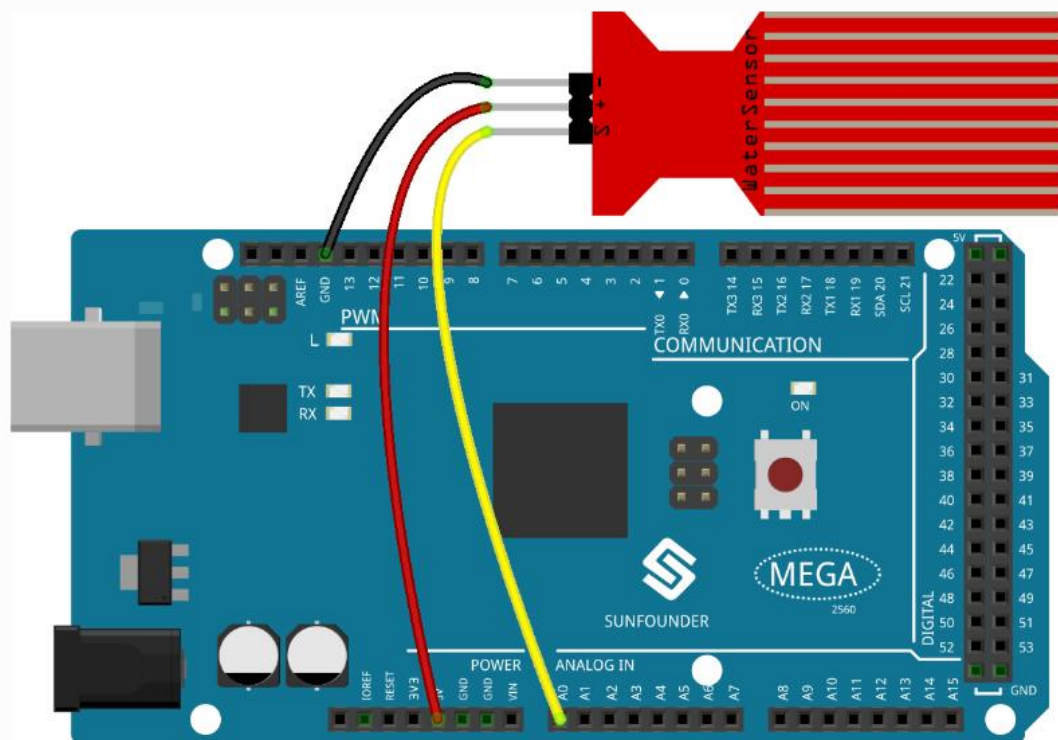
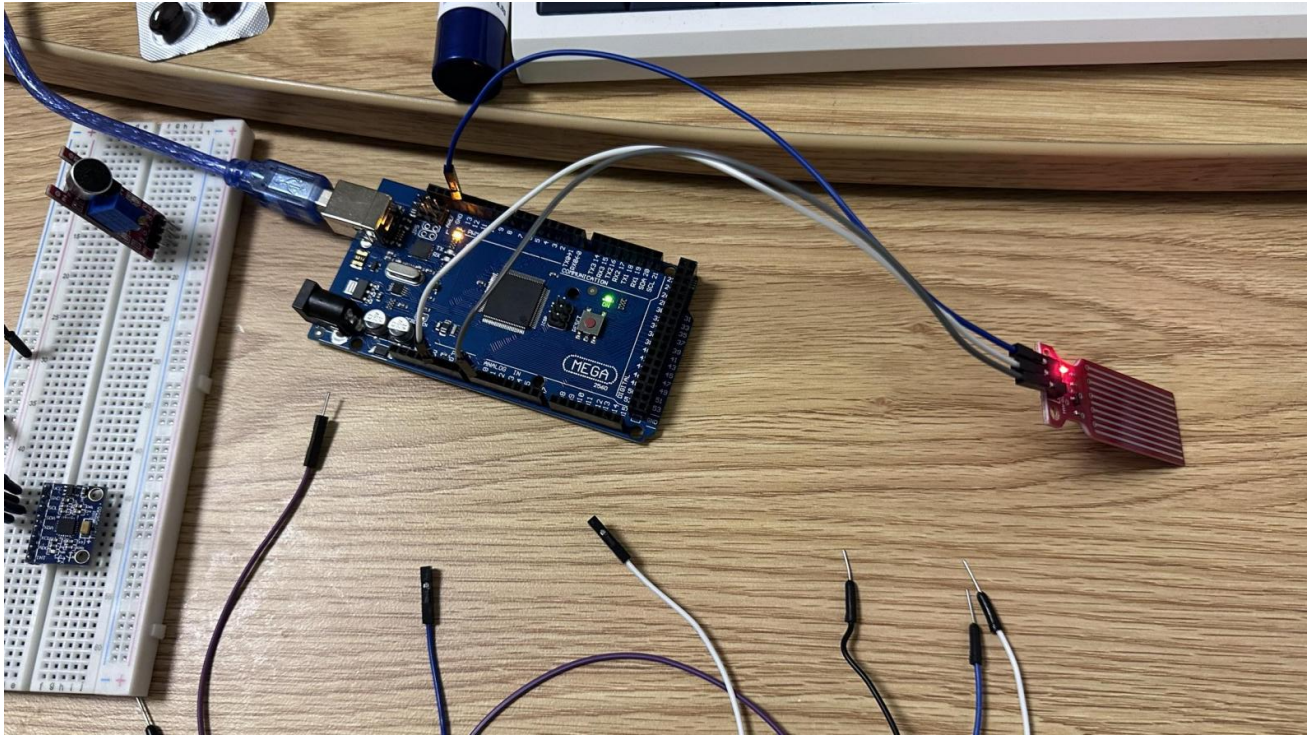


## Water sensor module

**Connect the sensor to Arduino:**



**Range:**

The water level sensor can only measure the corresponding water level change, and the actual data is smaller than the theoretical value. The minimum value is 0. Fix the sensor on the inner wall of the cup and keep adding water until the value is maximum and does not change, and the maximum measurement value and range are obtained.

### **Sensitivity:**

Control the conditions, so that the temperature, pressure and horizontal position remain unchanged during each measurement, gradually increase the amount of water, and record the volume of water added each time with the measuring cylinder to record the output change of the sensor. The sensitivity of the water sensor is then calculated by dividing the output change by the input change.

### **Resolution:**

Add a certain amount of water each time and slowly inject it close to the inner wall of the cup. When the sensor output value changes, stop adding water. After recording the current data, reduce the amount of water injected and inject slowly again. Repeat the operation until the sensor output data remains unchanged. Record the minimum amount of change the sensor begins to respond. This minimum change is the resolution of the sensor. Use a measuring cylinder to record the amount of water added each time.

### **Accuracy:**

After filling the water, the value output by the sensor is regarded as the height of the water level. Theoretically speaking, the output value has a certain proportional relationship with the water level. Therefore, first measure a set of data to obtain the

relationship between the output value and the water level, and then pour out the water.

According to the first data The measured relationship is used to calculate a second volume of water, which is compared with the actual volume of water. Compare the measured results with the actual values. Expressed as percentage of error.