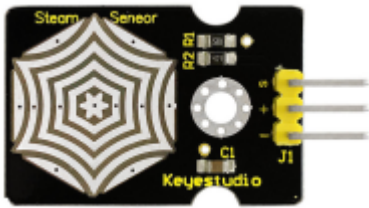# Project 09 Steam Sensor

1. Description

The steam sensor can be used as a rain detector and a liquid level switch. When the humidity of the sensor surface increases, the output voltage and the analog value we read will increase.

Working principle: It detects the amount of water through the exposed printed parallel lines on the circuit board. The more water there is, the more wires will be connected.
As the contact area of the conductor increases, the output voltage of the V-pin and the analog value of S detected at the signal will gradually rise.
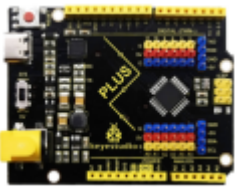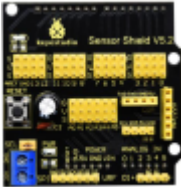
In addition to measuring the amount of water, it can also detect water vapor in the air.

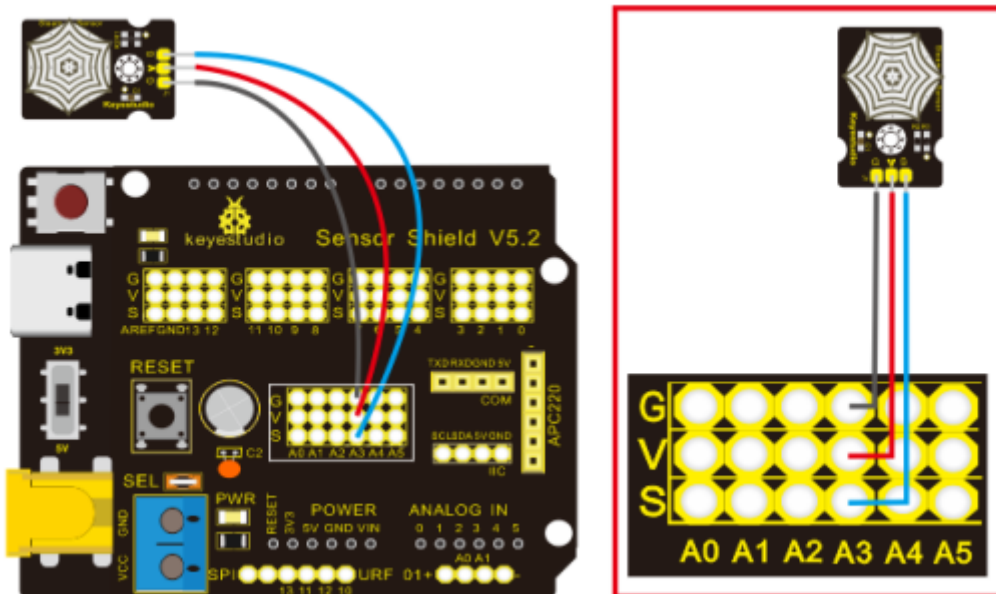Note: the connection part is not waterproof, please don't immerse it in the water!

2. Parameters

- Working voltage: DC 3.3-5V
- Working current: <20mA
- Operating temperature range: -10℃~ + 70℃
- Control signal: Analog signal output
- Interface: 3pin interface with 2.54mm in pitch
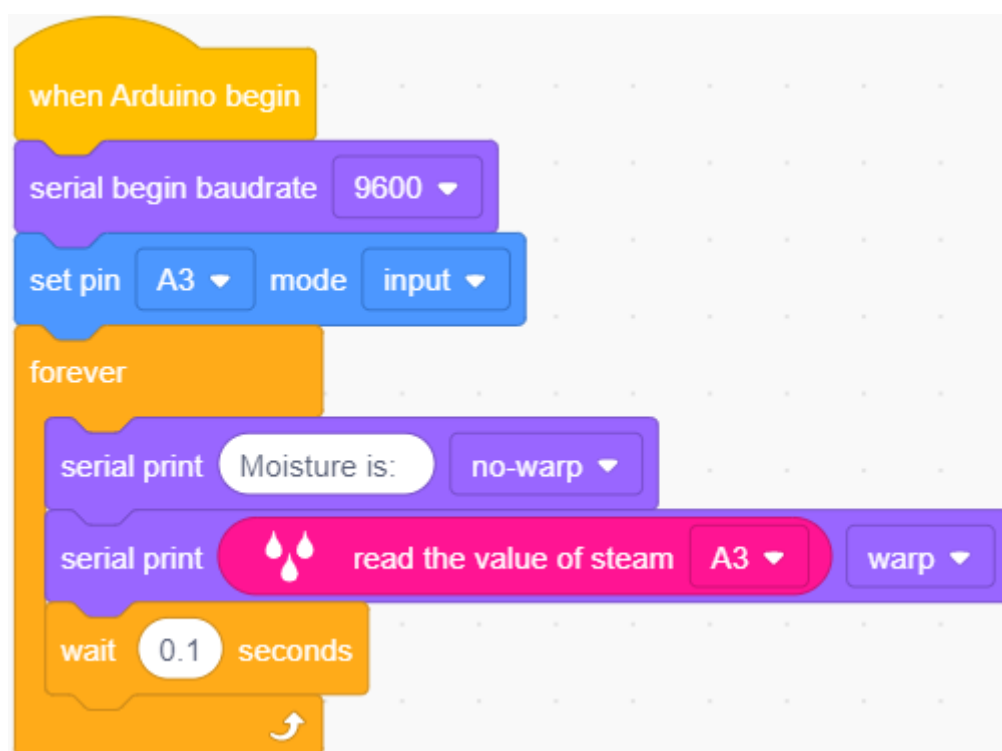
3. Needed Components

PLUS control board*1	Expansion board*1	Steam sensor*1	USB canble*1	3Pin F-F Dupont wire*1

4. Wiring Diagram

Note: On the expansion board, the pins G，V and S of steam sensor are connected to G, V and A3.

5. Test Code

6. Test Result

After uploading code, wire components up and power the board on. Click 🔧 on the serial port to set the baud rate to 9600.

When detecting different humidity, the sensor will output different current value, as shown below.

Place a drop of water at the detecting area of the sensor, and the analog value will be displayed on

serial monitor of Arduino.