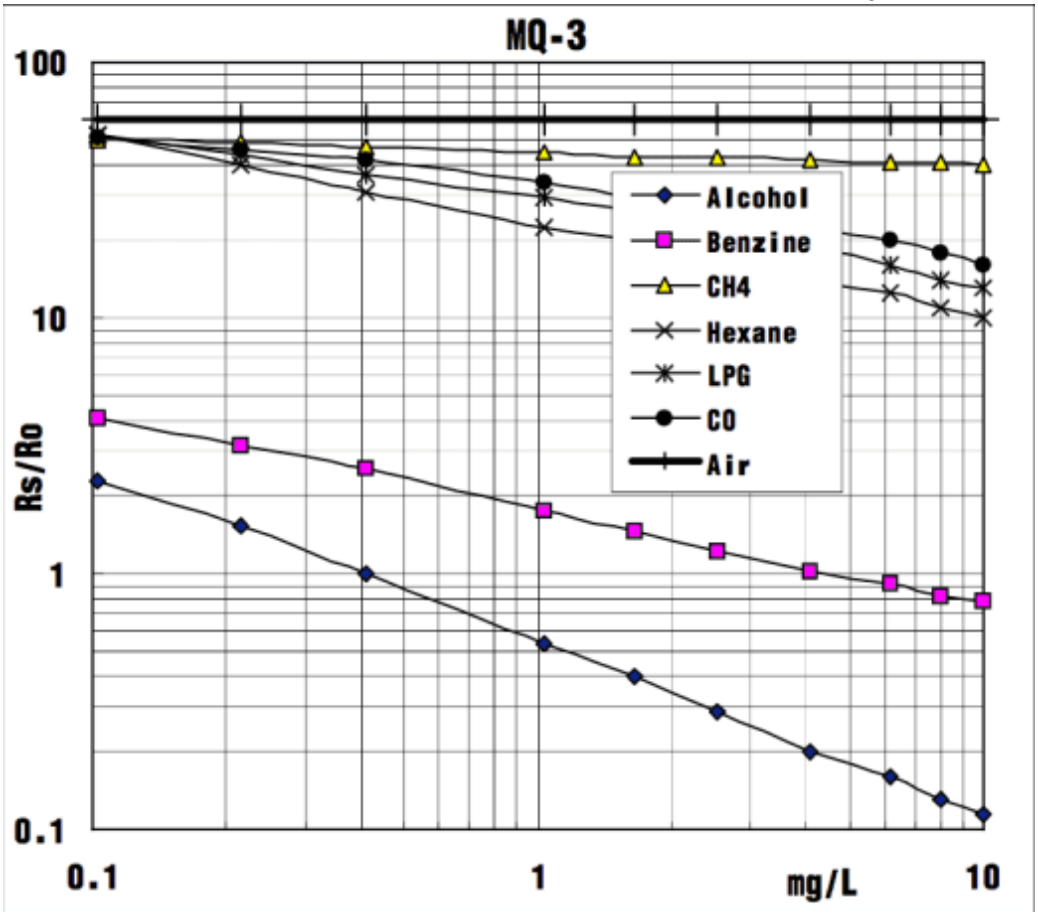
MQ-3 WITH RASPBERRY PI

(CONVERTING RAW VALUES INTO mg/L)

INTRODUCTION:

As we follow the datasheet of the MQ-3 sensor, we can that as the concentration of any gas/substance changes MQ-3 Sensor changes its $\frac{Rs}{R0}$ ratio.



R_s = Resistance of Sensor towards the target Gas (Alcohol in our case)
(Changes when gas is present)

R_o = Resistance of Sensor when 0.04mg/L Alcohol is present
(Remains constant)

Moreover, the value of $\frac{Rs}{R0}$ **for clean gas** is;

$$\frac{Rs}{R0} = 60$$

CALCULATIONS:

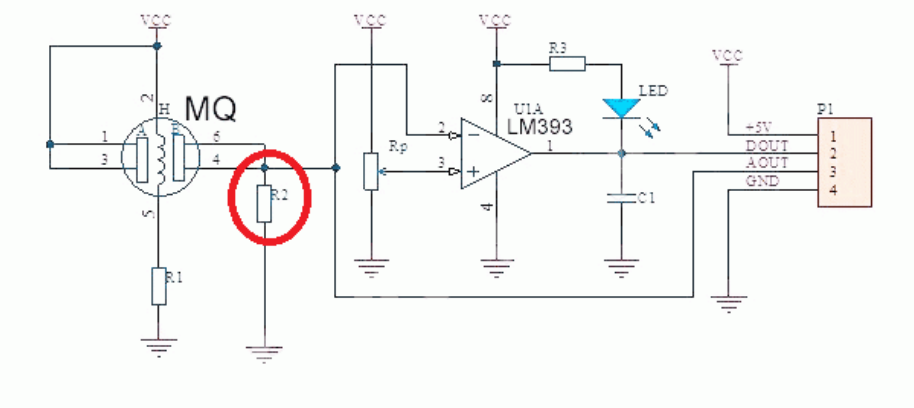
To convert raw analogue values to meaningful units, we have to find these values.

We will find the values in the following order:

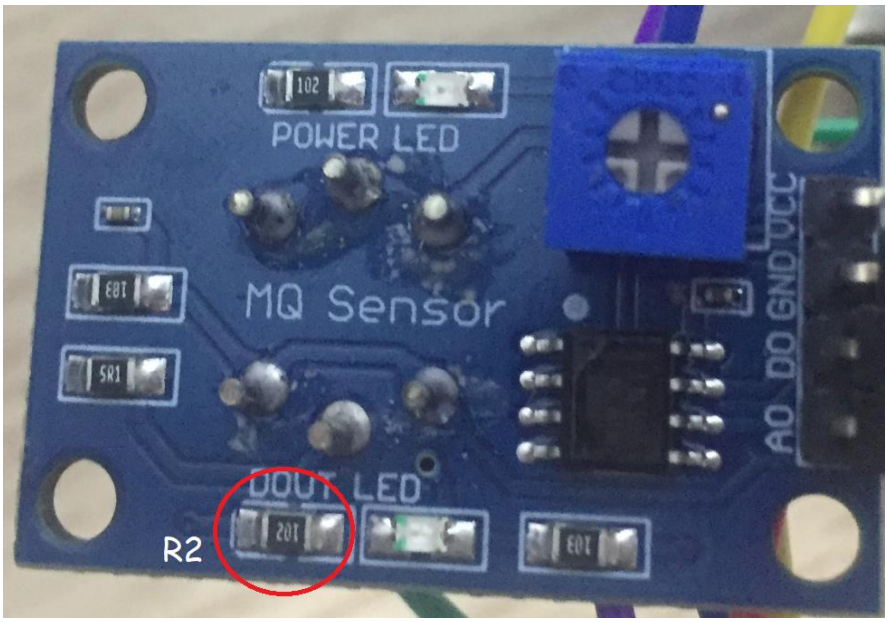
- **R_2**
- **R_0**
- **Concentration in mg/L**

Finding R_2:

R_2 is used in the MQ-3 module as a voltage divider



Find this resistance with Multimeter and note it down



R_2 = _____ Ohms

Finding R_0:

Use the below code for finding R_0 and note it down

For Finding R0.py

R_0 = _____ Ohms

Finding Concentration in mg/L:

Use the below code for finding Concentration in mg/L and we are done

```
R2 =        #"Enter R2 value"
R0 =        #"Enter R0 value"
```

First, enter these values then execute the code

For Getting concentration.py