



GAS SENSOR



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OVERVIEW

GAS SENSOR

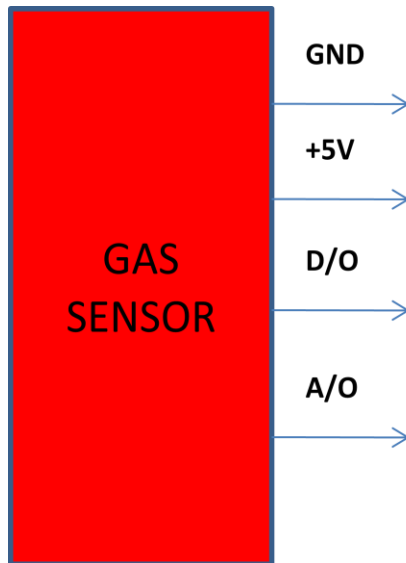


The liquefied Petroleum Gas (LPG) sensor is suitable for sensing LPG (composed of mostly propane and butane) concentration in the air. This can be used in Gas Leakage Detection equipment for detecting the ISO-butane, Propane, LNG combustible Gases. If output goes above the preset range, indication will be shown as high otherwise it will remain in idle condition.

FEATURES

- ❖ High sensitivity to LPG, natural gas .
- ❖ Fast response.
- ❖ Stable and long life .
- ❖ Simple drive circuit.
- ❖ Small sensitivity to alcohol and smoke.

BLOCK DIAGRAM



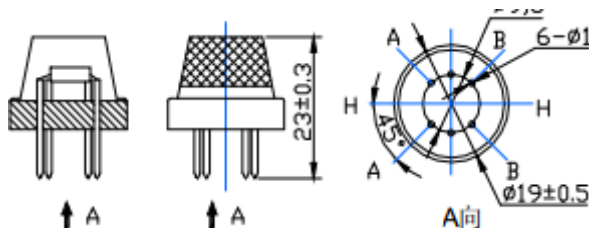
A/O- Analog output

D/O-Digital output

APPLICATIONS

- ❖ Used in gas leakage detecting equipments in family and industry.
- ❖ Suitable for detecting of LPG, iso-butane, propane, LNG.
- ❖ Avoid the noise of alcohol and cooking fumes and cigarette smoke.

STRUCTURE AND CONFIGURATION OF GAS SENSOR(MQ2)



The Gas sensor composed by micro Al_2O_3 ceramic tube, Tin Dioxide (SnO_2) sensitive layer, measuring electrode and heater are fixed into a crust made by plastic and stainless steel net. The heater provides necessary work conditions for work of sensitive components. The enveloped MQ-2 have 6 pin, 4 of them are used to fetch signals, and other 2 are used for providing heating current.

PARAMETER	VALUES
Operating voltage	+5v DC regulated
Gas Detection	Indicated by LED

CONNECTION DIAGRAM

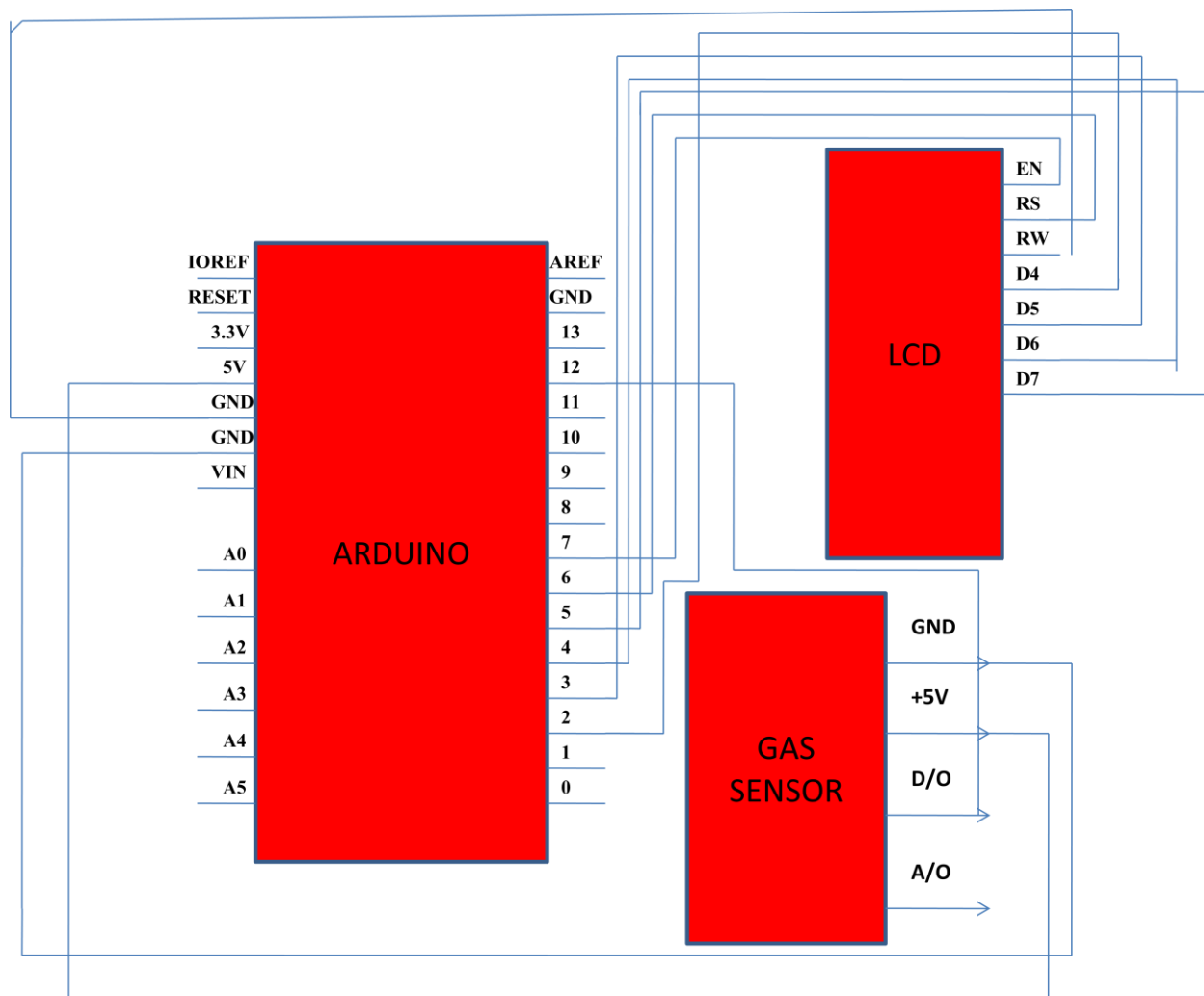


Fig1



ARDUINO CODE

```
#include <LiquidCrystal.h>

LiquidCrystal lcd(6, 7, 2, 3, 4, 5);

/*
 * LCD RS pin to digital pin 6
 * LCD Enable pin to digital pin 7
 * LCD D4 pin to digital pin 2
 * LCD D5 pin to digital pin 3
 * LCD D6 pin to digital pin 4
 * LCD D7 pin to digital pin 5
 * LCD R/W pin to ground */

const int gasPin = 12;
int gasState = 0;

void setup()
{
  pinMode(gasPin, INPUT);          // initialize the GAS sensor pin as an input

  lcd.begin(16, 2);                // set up the LCD's number of columns and rows
}

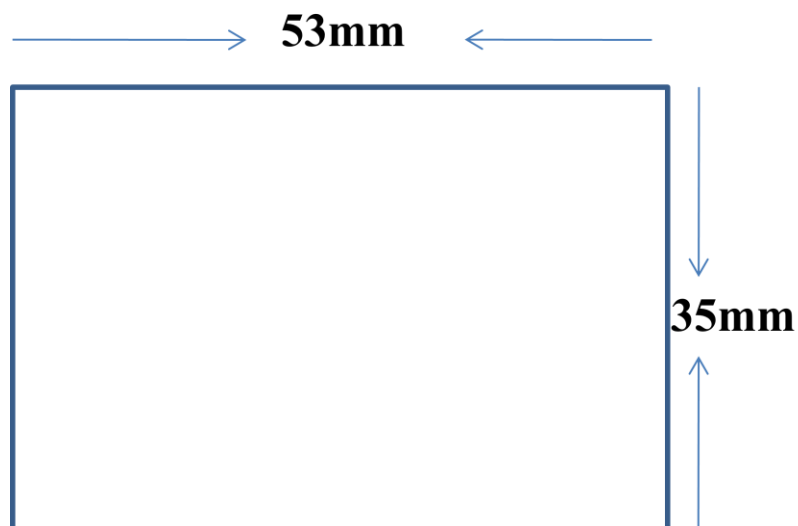
void loop()
{
  gasState = digitalRead(gasPin);

                                     // if it is, the GAS sensor is HIGH

  if(gasState == LOW)
  {
    lcd.setCursor(0,1);
    lcd.print("gas detected");      // Print a message to the LCD.
  }

  else
  {
    lcd.setCursor(0,1);
    lcd.print("no gas detected");
  }
}
```

NOTE: For connections refer fig1

BOARD DIMENSIONS

To buy this product click the below link

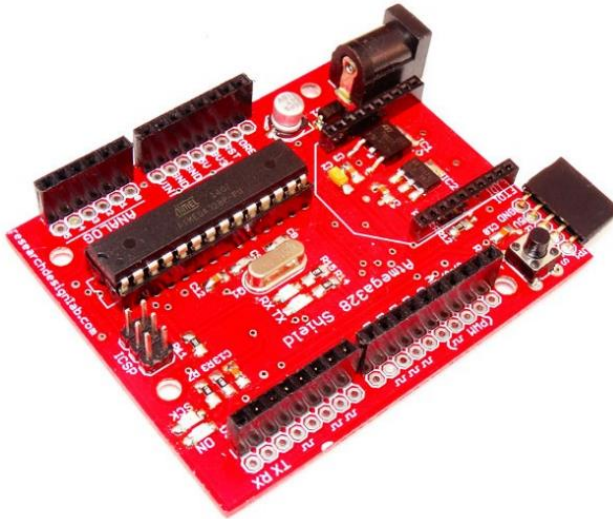
<http://researchdesignlab.com/index.php/sensors/gas-sensor.html>



RELATED PRODUCTS

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[MQ2 GAS SENSOR](#)



[PIC PROJECT BOARD](#)

