Phi Robotics

Product Manual

Flame Sensor

Version 1.0

Phi Robotics Research Pvt. Ltd.

www.phi-robotics.com

Table of Contents

1   Introduction

The flame sensor is used to detect the presence of fire or other infrared source (Flame or a light source of a wavelength in the range of 760 nm to 1100 nm can be detected). It can be used in fire fighting robot or heat seeking robot.

2   Features

- Small and compact in size
- Adjustable threshold value
- 2 state binary output (logic high and low)
- Easy mounting with a screw hole.

3   Specifications

- Input operating voltage: 5V
- Logic high level: supply voltage (5V)
- Logic low level: 0V

4   Hardware Connections

The module has simple 3 pin male berg connector having Vcc, ground and output pin. The potentiometer is provided to adjust the threshold level. To read sensor status D0 pin should be connected to a GPIO pin. Figure 1 below shows the pin layout for flame sensor.

Figure 1 - Flame sensor pin layout

5   Pseudo Code

```
boolean flameGetStatus(void)
{
      // read D0 pin status
      if(gpioReadPin(D0) == 1)
            return true;              // flame detected
      else
            return false;             // no flame detected
}
```

6   Reference

http://www.ti.com/lit/ds/symlink/lm393-n.pdf