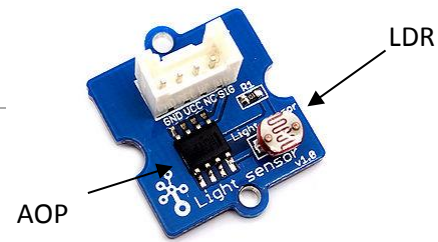


Module Grove - Light Sensor SEN11302P

Introduction

The light sensor, also known as the light dependent resistor (LDR). Typically, the resistance of the light sensor will decrease when the ambient light intensity increases.



Specifications

- Voltage: 3-5V
- Supply Current: 0.5-3mA
- Light resistance: 20K Ω
- Dark resistance: 1M Ω
- Reponse time: 20-30S
- Peak Wavelength: 540nm
- Ambient temperature: -30~70 °C

Schéma

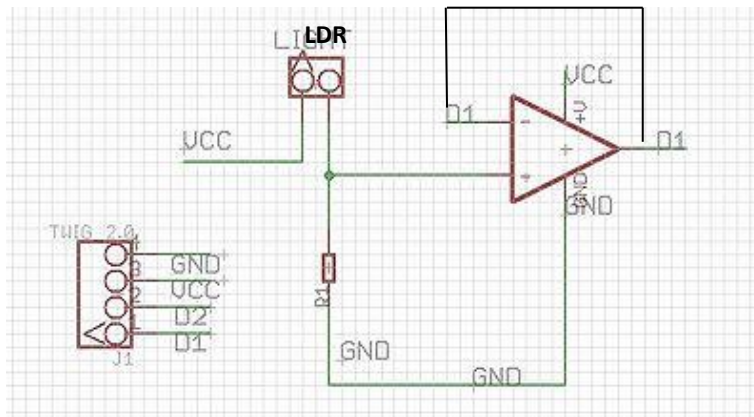
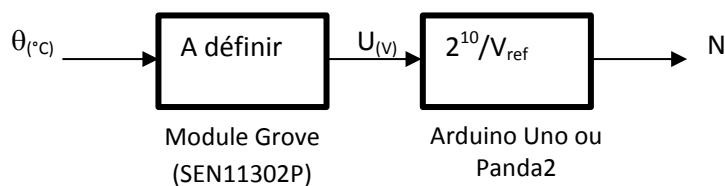


Schéma-blocs de la fonction « Acquérir »



Pour une Arduino Uno :

- $V_{ref}=5V$ ou $V_{ref}=1,1V$
- Exemple de programme : Project Seven – Temperature (A vérifier !)

Pour la carte Panda2 :

- $V_{ref} = 3,3V$
- Exemple de programme : Non

Ressources documentaires :

Les capteurs en instrumentation industrielle Georges Asch Dunod (**disponible au CDI**)

Informations sur les LDR

Module Grove SEN11302P (CTN) :

[http://www.seeedstudio.com/wiki/Grove - Light Sensor](http://www.seeedstudio.com/wiki/Grove_-_Light_Sensor)

Exemple de programme pour une carte Arduino.

```
/*
/* Grove - Light Sensor demo v1.0
*
* signal wire to A0.
* By: http://www.seeedstudio.com
*/
#include <math.h>
const int ledPin=12;           //Connect the LED Grove module to Pin12, Digital
12
const int thresholdvalue=10;   //The treshold for which the LED should turn on.
float Rsensor; //Resistance of sensor in K
void setup() {
    Serial.begin(9600);         //Start the Serial connection
    pinMode(ledPin,OUTPUT);     //Set the LED on Digital 12 as an OUTPUT
}
void loop() {
    int sensorValue = analogRead(0);
    Rsensor=(float) (1023-sensorValue)*10/sensorValue;
    if(Rsensor>thresholdvalue)
    {
        digitalWrite(ledPin,HIGH);
    }
    else
    {
        digitalWrite(ledPin,LOW);
    }
    Serial.println("the analog read data is ");
    Serial.println(sensorValue);
    Serial.println("the sensor resistance is ");
    Serial.println(Rsensor,DEC); //show the lighth intensity on the serial monitor;
    delay(1000);
}
```