



Keyes BH1750FVI Digital Light Sensor Module



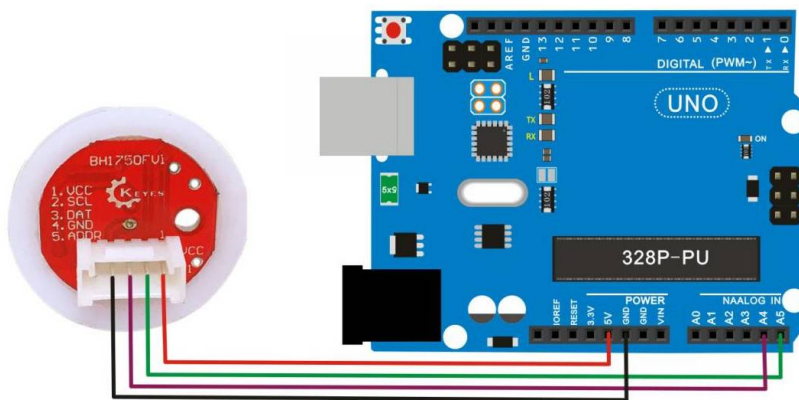
Description

Keyes BH1750FVI Digital Light Sensor Module is a digital light intensity sensor integrated circuit using a dual line serial bus interface. The brightness of LCD and keyboard backlight can be adjusted with light intensity data collected by module. Moreover, the resolution of module can detect a wide range of light intensity changes.

Specification:

1. Outer diameter 26mm, large edge diameter 28.5mm, height 26MM (plus light ball)
2. Working voltage: DC 5V
3. Communication interface: I2C
4. Input light range: 1-65535lx
5. Spectral sensitivity characteristics: Typical value of peak sensitivity wavelength: 560nm
6. Weak light source dependence: incandescent lamp, fluorescent lamp, halogen lamp, white LED, fluorescent lamp

Connection Diagram





Test Code

```
/*      Measurement of illuminance using the BH1750FVI sensor module
Module      UNO
VCC  <----->  5V
GND  <----->  GND
SCL  <----->  A5
SDA  <----->  A4
ADD  <----->  NC
*/

#include <Wire.h>
#define ADDRESS_BH1750FVI 0x23    //ADDR="L" for this module
#define ONE_TIME_H_RESOLUTION_MODE 0x20
//One Time H-Resolution Mode:
//Resolution = 1 lux
//Measurement time (max.) = 180ms
//Power down after each measurement
byte highByte = 0;
byte lowByte = 0;
unsigned int sensorOut = 0;
unsigned int illuminance = 0;
void setup()
{
    Wire.begin();
    Serial.begin(115200);
}
void loop()
{
    Wire.beginTransmission(ADDRESS_BH1750FVI); // "notify" the matching device
    Wire.write(ONE_TIME_H_RESOLUTION_MODE);    //set operation mode
    Wire.endTransmission();
    delay(180);
    Wire.requestFrom(ADDRESS_BH1750FVI, 2); //ask Arduino to read back 2 bytes from the sensor
    highByte = Wire.read(); // get the high byte
    lowByte = Wire.read(); // get the low byte
    sensorOut = (highByte<<8)|lowByte;
    illuminance = sensorOut/1.2;
    Serial.print(illuminance);    Serial.println(" lux");

    delay(1000);
}
```



Test Result

The value will vary with the light intensity, if the light intensity is strong, the value will be large; otherwise it will be small. Open the serial monitor and set baud rate to 115200, as shown in the figure below.

