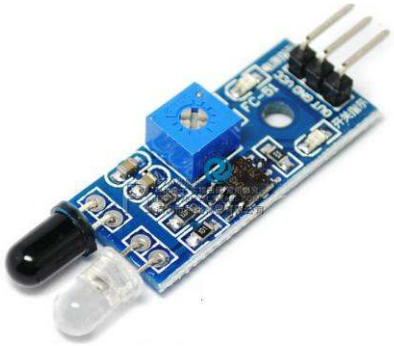
Arduino IR Infrared Obstacle Avoidance Sensor Module



The sensor module adaptable to ambient light, having a pair of infrared emitting and receiving tubes, transmitting tubes emit infrared certain frequency, when the direction of an obstacle is detected (reflection surface), the infrared reflected is received by the reception tube, After a comparator circuit processing, the green light is on, but the signal output interface output digital signal (a low-level signal), you can adjust the detection distance knob potentiometer, the effective distance range of 2 ~ 30cm, the working voltage of 3.3V- 5V. Detection range of the sensor can be obtained by adjusting potentiometer, with little interference, easy to assemble, easy to use features, can be widely used in robot obstacle avoidance, avoidance car, line count, and black and white line tracking and many other occasions.

Specification

1. When the module detects an obstacle in front of the signal, the green indicator lights on the board level, while the OUT port sustained low signal output, the module detects the distance 2 ~ 30cm, detection angle 35 °, the distance can detect potential is adjusted clockwise adjustment potentiometer, detects the distance increases; counter clockwise adjustment potentiometer, reducing detection distance.

2. The sensor active infrared reflection detection, target reflectivity and therefore the shape is critical detection distance. Where the minimum detection distance black, white, maximum; small objects away from a small area, a large area from the Grand.

3. The sensor module output port OUT port can be directly connected to the microcontroller IO can also be directly drive a 5V relay; Connection: VCC-VCC; GND-GND; OUT-IO

4. Comparators LM393, stable;

5. The module can be 3-5V DC power supply. When the power is turned on, the red power indicator lights;
6. With the screw holes 3mm, easy fixed installation;
7. Board size: 3.2CM * 1.4CM
8. Each module has been shipped threshold comparator voltage adjusted by potentiometer good, non-special case, do not adjustable potentiometer.

Module Interface Description

1. VCC : 3.3V-5V external voltage (can be directly connected to 5v and 3.3v MCU)
2. GND : GND External
3. OUT : small board digital output interface (0 and 1)