

Arduino KY-032 Obstacle avoidance sensor module

From

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Infrared obstacle avoidance sensors

Infrared obstacle avoidance sensor is designed for the design of a wheeled robot obstacle avoidance sensor distance adjustable. This ambient light sensor Adaptable, high precision, having a pair of infrared transmitter and receiver, transmitter tubes emit a certain frequency of infrared, When detecting the direction of an obstacle (reflector), the infrared receiver tube receiver is reflected back, when the indicator is lit, Through the circuit, the signal output interface output digital signal that can be detected by means of potentiometer knob to adjust the distance, the effective distance From 2 ~ 40cm, working voltage of 3.3V-5V, operating voltage range as broad, relatively large fluctuations in the power supply voltage of the situation Stable condition and still work for a variety of microcontrollers, Arduino controller, BS2 controller, attached to the robot that

Can sense changes in their surroundings.

Specifications

- Working voltage: DC 3.3V-5V
- Working current: $\geq 20\text{mA}$
- Operating temperature: $-10\text{ }^{\circ}\text{C} - +50\text{ }^{\circ}\text{C}$
- detection distance :2-40cm
- IO Interface: 4-wire interfaces (- / + / S / EN)
- Output signal: TTL level (low level there is an obstacle, no obstacle high)
- Adjustment: adjust multi-turn resistance
- Effective angle: 35°
- Size: $28\text{mm} \times 23\text{mm}$
- Weight Size: 9g

Here we use the obstacle avoidance module and a digital interface, built-in 13 LED build a simple circuit, making avoidance warning lamp, the obstacle avoidance Sensor Access Digital 3 interface, when obstacle avoidance sensor senses a signal, LED light, and vice versa off.

Example code

```
int Led = 13 ;// define LED Interface
int buttonpin = 3; // define the obstacle avoidance sensor interface
int val ;// define numeric variables val
```

```
void setup ()
{
  pinMode (Led, OUTPUT) ;// define LED as output interface
  pinMode (buttonpin, INPUT) ;// define the obstacle avoidance sensor output interface
}
void loop ()
{
  val = digitalRead (buttonpin) ;// digital interface will be assigned a value of 3 to r
  if (val == HIGH) // When the obstacle avoidance sensor detects a signal, LED flashes
  {
    digitalWrite (Led, HIGH);
  }
  else
  {
    digitalWrite (Led, LOW);
  }
}
```

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