Proximity Sensor/Switch E18-D80NK



Description

A very cheap, easy to assemble, easy to use Infrared sensor with a long detection distance and has less interference by visible light. The implementations of modulated IR signal immune the sensor to the interferences caused by the normal light of a light bulb or the sun light. This sensor has a screwdriver adjustment to set the appropriate detected distance to make it useful in many applications, and then gives a digital output when it senses something within that



range. This sensor does not measure a distance value. It can be used for collision avoidance robot and machine automation. The sensor provides a non-contact detection.

Specifications

- Input voltage : +5V DC
- Current consumption : > 25mA (min) ~ 100mA (max)
- Dimension : 1.7cm (diameter) x 4.5cm (length)
- Cable length : 45cm
- Detection of objects : transparent or opaque
- Diffuse reflective type
- Sensing range : 3cm to 80cm (depends on obstacle surface)
- NPN output (normally high)
- Environment temperature : -25 °C ~ 55 °C

Pin Configuration

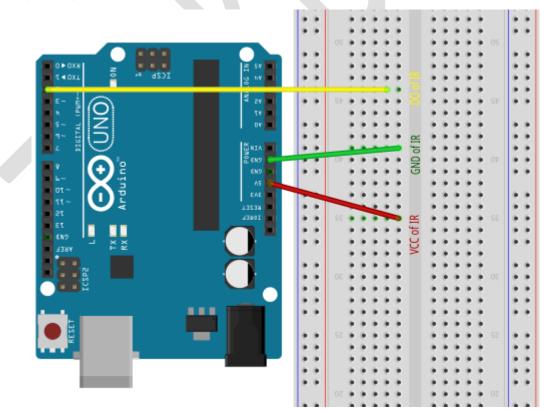
- Red wire : +5V
- Green wire : GND
- Yellow wire : DIGITAL OUTPUT



Sample Program

```
void setup()
{
    // initialize serial communication at 9600 bits per second:
    Serial.begin(9600);
    // make the pin 2 as an input:
    pinMode(2,INPUT);
}
void loop()
{
    // read the input pin:
    int irread = digitalRead(2);
    // print out the reading of IR:
    Serial.println(irread);
    delay(1); // delay in between reads for stability
}
```

Wiring Diagram





Testing

- 1. Please check all the connections from the given wiring diagram.
- 2. Type the sample program in your Arduino sketch then upload.
- 3. Open the serial monitor in the upper right corner.
- 4. When there is no object in front of the proximity sensor, the output must be 1.

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5. Try to put an object in front of the proximity sensor, the proximity sensor will light and the output will become 0.

Note:

* If there is no change in the output of proximity sensor, try to move the object closer.

* Adjust the screw in the proximity sensor to change the range of detection.

