

How to connect the light sensor module to the sensor



Overview

Arduino Learn how a LDR light sensor module works, how to connect the LDR light sensor module to Arduino, how to program Arduino to Arduino You will learn.

Key Takeaways

To connect a light sensor module, wire the VCC and GND pins to power, then connect the analog (AO) or digital (DO) output to a microcontroller input pin, depending on whether you want continuous light measurement or threshold-based detection. Connecting to Arduino

- Identify the pins: Most LDR or LM393 modules have four pins: VCC, GND, AO (analog output), and DO (digital output) .
- Power connections: Connect VCC to 3.3V-5V and GND to ground on the Arduino .
- Output connections:
- AO (Analog Output): Connect to an analog input pin (e.g., A0) to read continuous light levels. The voltage decreases as light increases .
- DO (Digital Output): Connect to a digital input pin to detect light above or below a threshold. The threshold can be adjusted using the onboard potentiometer .
- Optional LED indicators: Some modules have LEDs that indicate light detection or power status .
- Sample code:

```
int sensorPin = A0; // AO pin
int sensorValue = 0;
void setup() {
  Serial.begin(9600);
}
void loop() {
  sensorValue = analogRead(sensorPin);
  Serial.println(sensorValue);
  delay(500);
}
```

This code reads the analog value and prints it to the Serial Monitor, allowing you to monitor light intensity .

Connecting to Raspberry Pi

- Analog-to-digital conversion: Raspberry Pi lacks built-in ADC, so use an external ADC module like ADS1115 .

- Wiring:
- Connect the light sensor to the ADC analog input.
- Connect the ADC to the Raspberry Pi via I2C (SDA, SCL, VCC, GND) .

- Reading values: Use Python libraries (e.g., Adafruit_ADS1x15) to read the ADC value and determine light levels .

Tips

- Digital vs Analog: Use DO for simple light/dark detection and AO for precise light measurement .
- Threshold adjustment: Turn the potentiometer on LM393 modules to set the light level at which the digital output switches .
- Resistor for raw LDR: If using a bare photoresistor, connect it in series with a resistor between 5V and GND, and read the voltage at the junction with an analog pin . By following these steps, you can successfully connect a light sensor module to your microcontroller and start reading or responding to ambient light levels.

Article Content

Arduino Nano

Learn how a LDR light sensor module works, how to connect the LDR light sensor module to Arduino Nano, how to program Arduino

ESP32 MicroPython LDR Module | ESP32 MicroPython Tutorial

Learn how to use a ESP32 with an LDR light sensor module using MicroPython, How to write MicroPython code for the ESP32 to

How to Use Light Sensor: Examples, Pinouts, and Specs

The Light Sensor module is an electronic component designed to detect the presence and intensity of light in the surrounding

How to Use LDR Module 3 pin: Examples, Pinouts, and Specs

The Charan Light Dependent Resistor (LDR) Module is an electronic sensor that detects the intensity of light. As the ambient light

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: <https://coetzerinvestments.co.za>

Technical inquiry: <https://coetzerinvestments.co.za/contact.html>

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

