  
KY-028 IR Temperature Sensor Documentation

### Contactless Temperature Monitor

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## Summary

This documentation’s purpose is to guide you through the setup and testing process of the KY-028 Sensor.

## Equipment

* Arduino Uno
* Laptop loaded with Arduino IDE
* 4 x medium wires
* Small Breadboard
* KY-028 IR Temperature Sensor

## Method

1. Connect both the KY028 IR Temperature Sensor and Arduino Uno together using the breadboard and the wires.

### Wiring Diagram

### Wiring Table

|  |  |
| --- | --- |
| **KY-028** | **Arduino Uno** |
| A0 | A0 |
| G | GND |
| + | 5V |
| D0 | 2 |

1. Load the following code onto the Arduino Uno

|  |
| --- |
| int led = 13; *// define the LED pin* int digitalPin = 2; *// KY-028 digital interface* int analogPin = A0; *// KY-028 analog interface* int digitalVal; *// digital readings* int analogVal; *//analog readings*  void setup() {  pinMode(led, OUTPUT);  pinMode(digitalPin, INPUT);  *//pinMode(analogPin, OUTPUT);*  Serial.begin(9600); }  void loop() {  *// Read the digital interface*  digitalVal = digitalRead(digitalPin);   if(digitalVal == HIGH) *// if temperature threshold reached*  {  digitalWrite(led, HIGH); *// turn ON Arduino's LED*  }  else  {  digitalWrite(led, LOW); *// turn OFF Arduino's LED*  }   *// Read the analog interface*  analogVal = analogRead(analogPin);   Serial.println(analogVal); *// print analog value to serial*   delay(100); } |

1. Start the program on the Arduino Uno and open the serial monitor and begin the testing steps.

## Testing

1. Firstly modify the sensitivity of the sensor by adjusting the potentiometer. There is no marking or replicable setting so this will have to be gauged by trial and error.
2. Test the variability of the data presented in the serial monitor by putting a hand directly over the sensor. The data should change slightly. If not the potentiometer may need further adjusting.

## Conclusion

It is clear the KY-028 IR sensor is not suited for this project. The data it produced was sporadic and had no pattern or rhythm to it. Even with adjustments to the potensiometer it is nearly impossible to find it’s temperature range, its focus length, its variability and its accuracy.