

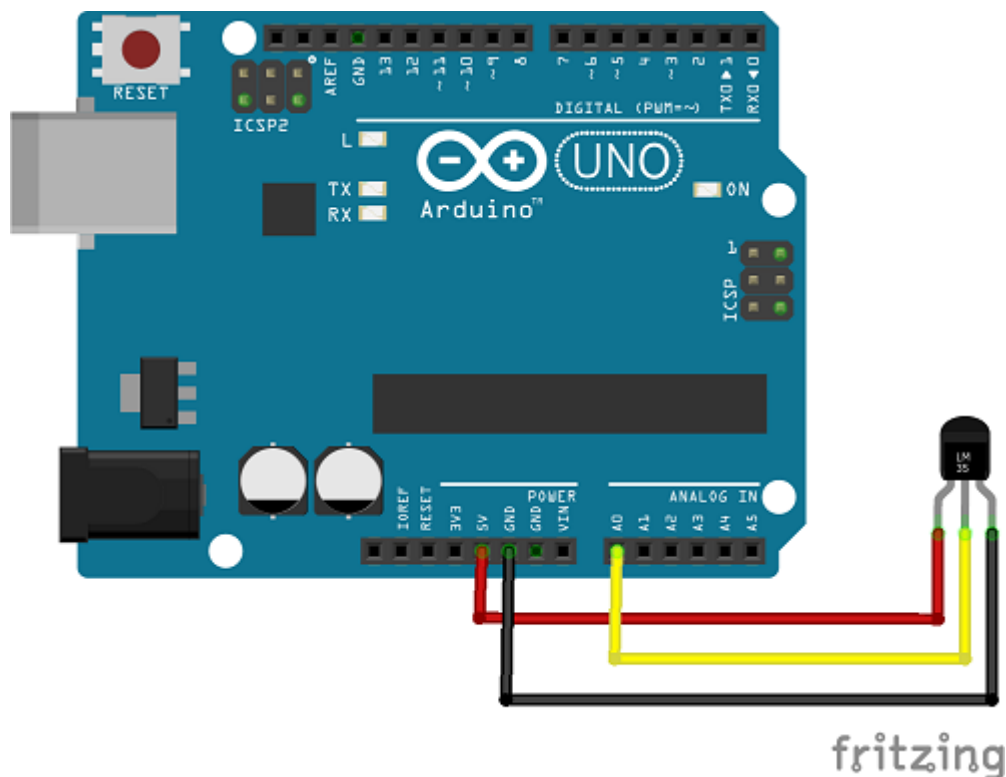
LM35 temperature sensor library for Arduino

This is an accurate LM35 analog temperature sensor library for Arduino with noise cancellation.

Library features

- Synchronous 10-bit unsigned temperature read
- Temperature range: 0.0 .. 110.0 degree Celsius
- Accuracy: 0.1 degree Celsius
- Noise cancellation
- Small footprint

Hardware



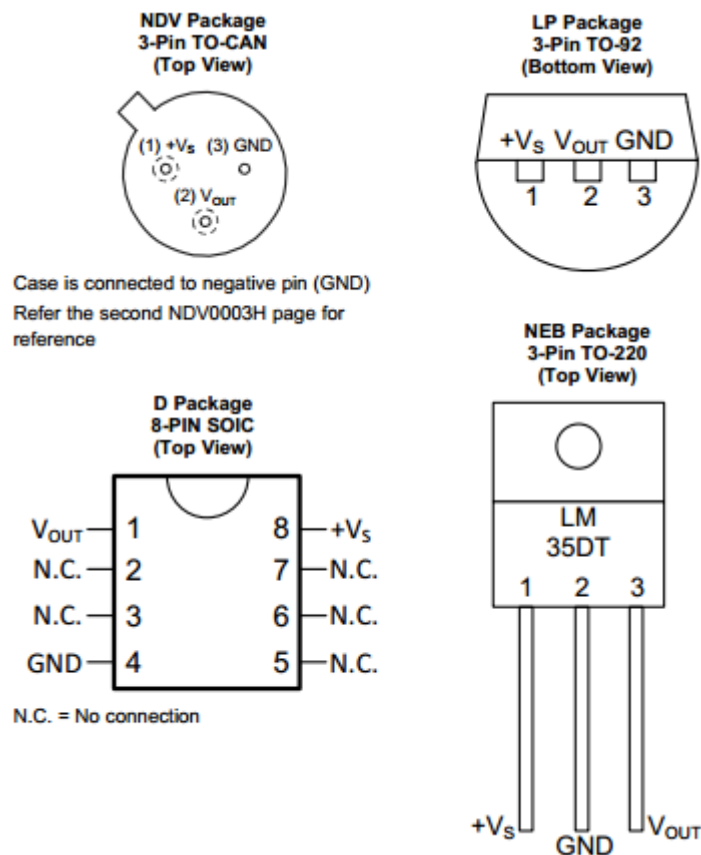
Connection LM35 - Arduino UNO

LM35	Arduino UNO
GND	GND
Vs	5V (or 3.3V)
Vout	A0 (ANALOG pin)

Notes:

- Keep wires short to prevent noise.
- This library has been tested on the Arduino UNO only which supports internal 1.1V ADC reference voltage. This may not be available with other MCU's.

LM35 pins



Documentation

[DHT35 datasheet](#)

LM35 specifications

- Supply voltage: 3.3V .. 30V
- Low power: Around 65uA
- Analog voltage interface

Examples

Examples | ErriezLM35:

- [Example](#)

Usage

Initialization

```
1 #include <LM35.h>
2
3 // Connect LM35 data pin to Arduino DIGITAL pin
4 #define LM35_PIN  A0
5
6 LM35 lm35 = LM35(LM35_PIN);
```

Read temperature and humidity

```
1 void loop()
2 {
3     // Read unsigned temperature from sensor
4     uint16_t lm35_temp = lm35.readTemperature();
5
6     // Print temperature
7     Serial.print(F("LM35: "));
8     Serial.print(lm35_temp / 10);
9     Serial.print(F("."));
10    Serial.print(lm35_temp % 10);
11    Serial.println(F(" *C"));
12
13    // Wait some time
14    delay(2000);
15 }
```

Serial output

```
1 Analog LM35 temperature sensor example
2
3 LM35: 18.1 *C
4 LM35: 18.2 *C
5 LM35: 18.2 *C
6
7 ...
```