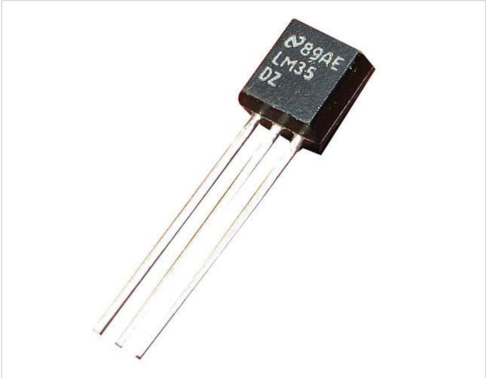
TEMPERATURE SENSOR

LM35 Temperature Sensor (TO-92)

The LM35 is a precision analog temperature sensor. Its output voltage rises by exactly 10 mV for every °C, so converting the reading to temperature is simple. It needs no calibration, which makes it perfect for learning analog sensing.



Key Features

- Linear 10 mV/°C output
- No calibration needed
- ±0.5 °C accuracy at 25 °C
- Very low self-heating
- TO-92 package

Technical Specifications

Supply	4–30 V
Output scale	10 mV/°C
Range	−55 to +150 °C (2–150 °C in basic wiring)
Accuracy	±0.5 °C at 25 °C
Supply current	< 60 µA
Package	TO-92

Pinout / Connections

Pin 1 (left)	+Vs (5 V)
Pin 2 (middle)	Vout → analog pin
Pin 3 (right)	GND
Orientation	Flat face toward you, legs down

Typical Applications

- Digital thermometers
- Temperature-controlled fans
- Weather stations
- Overheat alarms

Usage Notes & Safety

! On an Uno: temperature °C = analogRead(pin) × 500 ÷ 1023.

! Wiring it backwards makes it very hot, very fast. Double-check the pin order.