DYNAMIC SOLUTIONS

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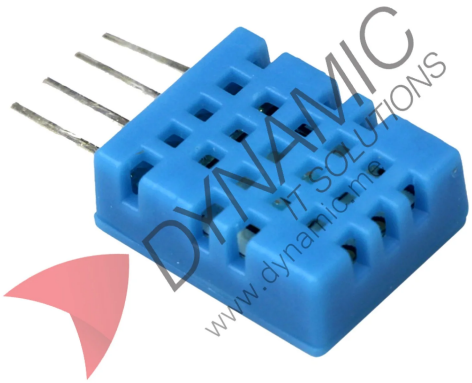
Temperature and Humidity Sensor DHT11



Feature

The DHT11 is a low-cost digital sensor that measures temperature and humidity. It combines a resistive humidity sensor and an NTC thermistor with an 8-bit microcontroller, delivering calibrated digital output via a single-wire serial interface. Its simple design, compact form, and decent accuracy make it suitable for basic environmental monitoring applications.

Specifications	
Model	DHT11
Humidity Measurement Range	20% – 90% RH (0–50°C)
Humidity Accuracy	±5% RH
Humidity Resolution	1% RH
Humidity Repeatability	±1% RH
Humidity Response Time	6 – 15 s (1/e, 25°C, 1m/s)
Humidity Long-Term Stability	±1% RH/year
Temperature Measurement Range	0°C – 50°C
Temperature Accuracy	±2°C
Temperature Resolution	1°C
Temperature Repeatability	±1°C
Temperature Response Time	6 – 30 s (1/e)
Communication Interface	Single-wire digital serial (40-bit data)
Operating Voltage	3.0 V – 5.5 V
Average Current Consumption	<2.5 mA (sampling interval dependent)
Sensor Package Type	4-pin single-row
Use Cases	Home automation, weather stations, HVAC monitoring, agriculture sensors

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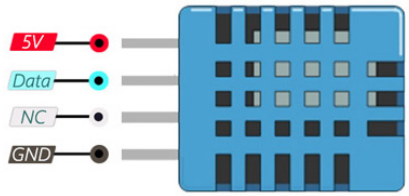
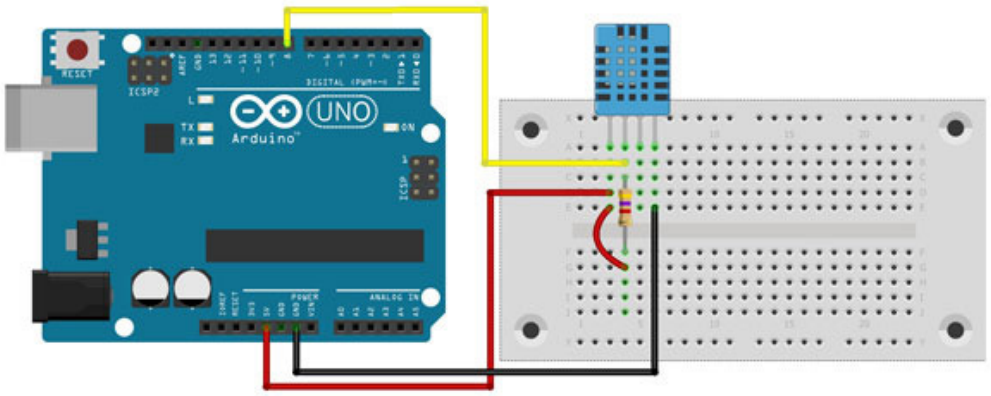
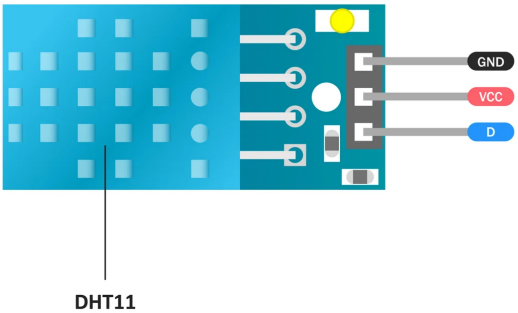
Pinouts:

Pin Name	Type	Description
VCC	Power Input	Supply voltage (3.0 – 5.5 V)
DATA	Digital I/O	Single-wire data interface (bi-directional)
NC	Not Connected	Unused (can be left floating or removed)
GND	Power Ground	Common ground





Humidity and Temperature Sensor - DHT11 with PCB



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Product Pictures: