

Waterproof DS18B20 Digital Temperature Sensor (SKU:DFR0198)

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Introduction

This is a waterproofed version of the [DS18B20 Arduino Temperature sensor](#). Handy for when you need to measure something far away, or in wet conditions. While the sensor is good up to 125°C the cable is jacketed in PVC so we suggest keeping it under 100°C. Because they are digital, you don't get any signal degradation even over long distances! The DS18B20 provides 9 to 12-bit (configurable) temperature readings over a 1-Wire interface, so that only one wire (and ground) needs to be connected from a central microprocessor. Usable with 3.0-5.5V systems. Because each DS18B20 contains a unique silicon serial number, multiple DS18B20s can exist on the same 1-Wire bus. This allows for placing temperature sensors in many different places. Applications where this feature is useful include HVAC environmental controls, sensing temperatures inside buildings, equipment or machinery, and process monitoring and control.

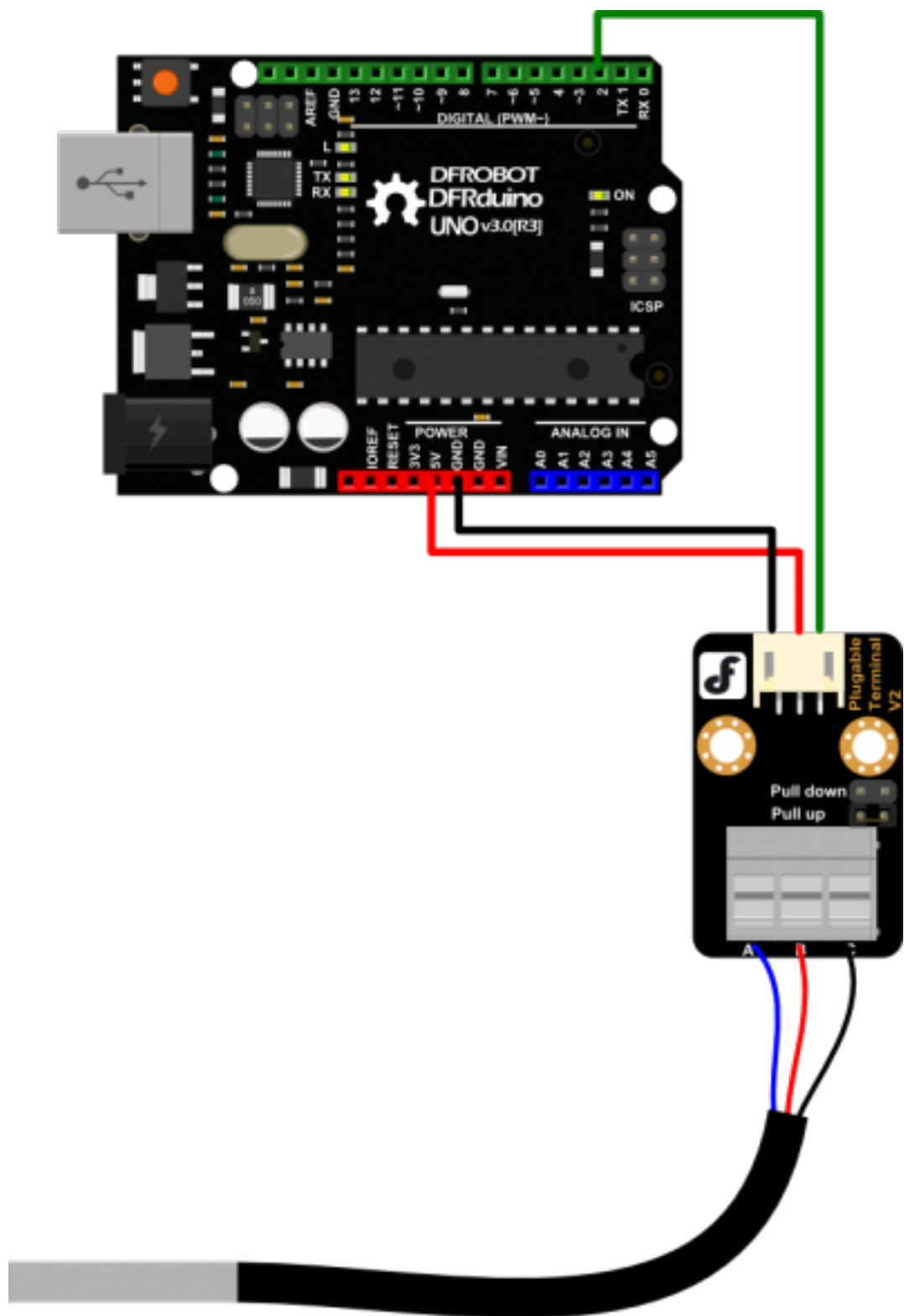
Specification

- Usable with 3.0V to 5.5V power/data
- $\pm 0.5^{\circ}\text{C}$ Accuracy from -10°C to $+85^{\circ}\text{C}$
- Usable temperature range: -55 to 125°C (-67°F to $+257^{\circ}\text{F}$)
- 9 to 12 bit selectable resolution
- Uses 1-Wire interface- requires only one digital pin for communication
- Unique 64 bit ID burned into chip
- Multiple sensors can share one pin
- Temperature-limit alarm system
- Query time is less than 750ms
- 3 wires interface:
 - Red wire - VCC
 - Black wire - GND
 - Yellow wire - DATA
- Stainless steel tube 6mm diameter by 35mm long

- Cable diameter: 4mm
- Length: 90cm

Sensor Connection

This sensor requires a 4.7K Ohm resistor between the voltage and Signal pin. as seen in the picture below. Optionally you can use a [Plugable Terminal sensor adapter](#) to help in making this connection secure.



Sample Code

The sample code can be found at: <https://github.com/TexasStateDrifter/driftersoftware> in the “Sensor Sample Code” folder.