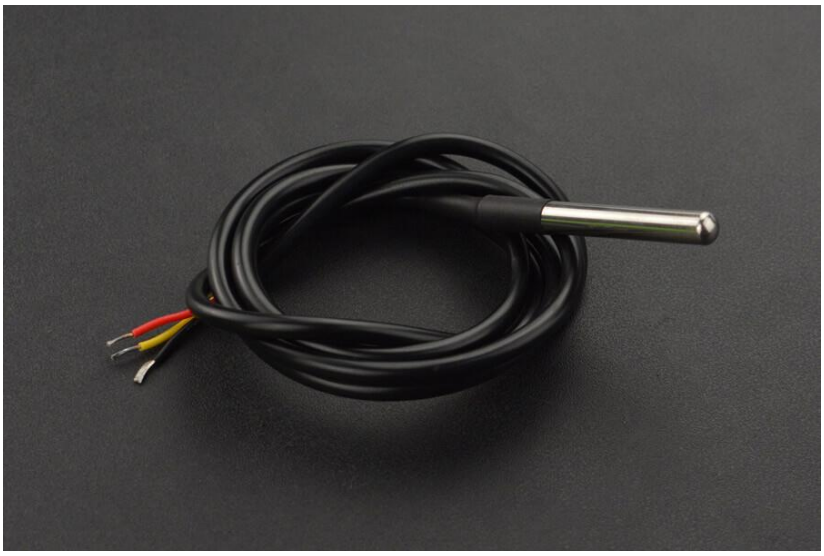

Waterproof DS18B20 Digital Temperature Sensor for Arduino

SKU:DFR0198

INTRODUCTION

This is a waterproofed version of the DS18B20 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.

With our plugable terminal, there is no soldering required to connect to our IO Expansion Shield.

SPECIFICATION

- Usable with 3.0V to 5.5V power/data
- ±0.5°C Accuracy from -10°C to +85°C
- Usable temperature range: -55 to 125°C (-67°F to +257°F)
- 9 to 12 bit selectable resolution
- Uses 1-Wire interface- requires only one digital pin for communication
- Unique 64 bit ID burned into the chip
- Multiple sensors can share one pin
- Temperature-limit alarm system
- Query time is less than 750ms
- 3 wires interface:
    - Type A
        - Red wire - VCC
        - Black wire - GND
        - Yellow wire - DATA
    - Type B (Recently there's a series of sensors using this pin mapping. Sorry for the inconvenience.)
        - Red wire - VCC
        - Yellow wire - GND
        - Green wire - DATA
- Stainless steel tube 6mm diameter by 35mm long
- Cable diameter: 4mm (0.16)
- Length: 95cm (37.4")

PROJECTS

Project 1. DFRobot AutoEco System takes care of your garden.
By following this project it will help to grow a vegetable garden, and automate some other processes in our house along the way.
List of basic hardware to setup an AutoEco Sys:

- 1. Romeo
- 2. X-Board
- 3. Light Sensor
- 4.Gas Sensor
- 5.Motion Sensor
- 6. Tempreture&Humidity Sensor
- 7. Waterproof temperature sensor

DOCUMENTS

- Wiki
- Document
- Sample code for Arduino 1.0
- Sample code for IDE under 1.0
- One Wire library
- How it works- DS18B20 and Arduino
- Zip file with all of the above

SHIPPING LIST

- Waterproof DS18B20 Digital temperature sensor x1