

Gravity: SHT31-F Temperature & Humidity Sensor

Product Overview

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For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

DFRobot Gravity: SHT31-F Temperature and Humidity Sensor is based on Sensirion SHT31 sensor IC that features CMOSens® technology. This digital sensor offers high reliability and long-term stability with low power consumption, fast response, and strong anti-interference ability. The SHT31-F sensor features highly integrated capacitive humidity sensing components and band-gap temperature sensing components. This sensor supports I²C communication and is compatible with 3.3V/5V controllers like Arduino, micro:bit, and ESP32.



The SHT31-F sensor provides humidity accuracy of $\pm 2\%$ RH at 0%RH to 100%RH (at 25°C) and typical temperature accuracy of $\pm 0.2^\circ\text{C}$ at 0°C to 90°C. The SHT31-F sensor features IP67 rating that protects the sensor opening from liquids and dust. This sensor is ideal for use in urban environment monitoring, intelligent buildings, industrial automation, smart home, and other Internet of Things (IoT) applications.

Features

- High precise, internal auto-calibrated, and digital output
- Low power consumption, fast response, and strong anti-interference
- IP67 dust-proof protective film
- Compatible with 3.3V/5V controllers

Kit Contents

- 3.3V to 5.5V operating voltage range
- <1.5mA operating current
- 0%RH to 100%RH humidity detection range
- $\pm 2\%$ RH @ 10%RH to 90%RH (at 25°C) humidity accuracy
- -40°C to 125°C temperature detection range
- $\pm 0.2^\circ\text{C}$ @ 0°C to 90°C (typical) temperature accuracy
- I²C communication
- 32mm x 22mm outline dimensions
- 3mm mounting hole size
- 15mm mounting hole pitch



Applications

- Urban environmental monitoring
- Intelligent building and smart home
- Grain storage
- Plant and animal breeding system

Mouser Part Number

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To learn more, visit

<https://www.mouser.com/new/dfrobot/dfrobot-gravity-sht31-f-temp-humidity-sensor/>