Manuals+ — User Manuals Simplified.

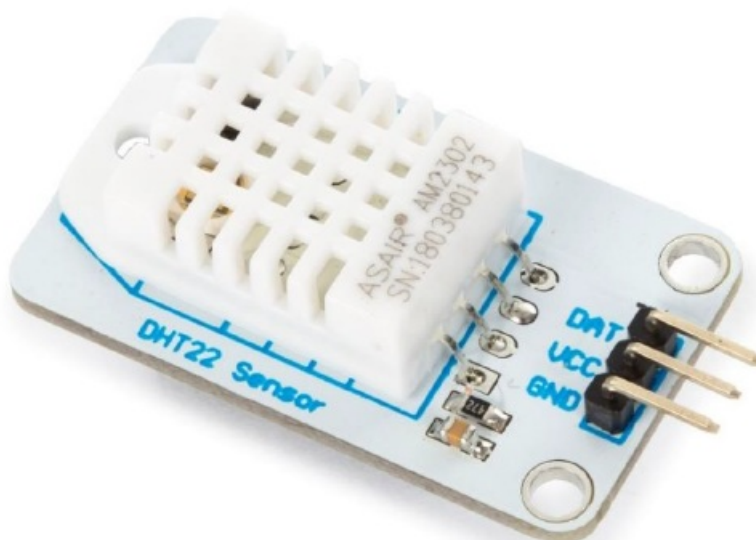# WHADDA WPSE345 CM2302-DHT22 Temperature and Humidity Sensor Module User Manual

Contents

WHADDA WPSE345 CM2302-DHT22 Temperature and Humidity Sensor Module

Introduction

To all residents of the European Union

Important environmental information about this product This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local environmental rules. If in doubt, contact your local waste disposal authorities. Thank you for choosing Whadda! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, do not install or use it and contact your dealer.

Safety Instructions

Read and understand this manual and all safety signs before using this appliance. For indoor use only.

- This device can be used by children aged 8 years and above, and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the device in a safe way and understand the hazards involved. Children shall not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

General Guidelines

- Refer to the Velleman® Service and Quality Warranty on the last pages of this manual.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorized way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Nor Velleman Group nv nor its dealers can be held responsible for any damage (extraordinary, incidental or indirect) – of any nature (financial, physical…) arising from the possession, use or failure of this product.
- Keep this manual for future reference.

What is Arduino®

Arduino® is an open-source prototyping platform based on easy-to-use hardware and software. Arduino® boards are able to read inputs – light-on sensor, a finger on a button or a Twitter message – and turn it into an output – activating of a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so, you use the Arduino programming language (based on Wiring) and the Arduino® software IDE (based on Processing). Additional shields/modules/components are required for reading a twitter message or publishing online. Surf to www.arduino.cc for more information.

Product Overview

General

CM2302 is a temperature and humidity composite sensor. It uses dedicated digital module acquisition technology and temperature and humidity sensing technology to ensure high reliability and excellent long-term stability. The sensor includes a capacitive wet sensor and a high-precision NTC temperature sensor connected to a high-performance 8-bit microcontroller, ensuring the product's excellent quality, fast response, anti-interference ability and cost efficiency. Each sensor is being calibrated in a highly accurate humidity calibration room. Compared to

the DHT11, this sensor is more precise, more accurate and works in a bigger range of temperature/humidity, but its larger and more expensive.

Applications

HVAC, dehumidifiers, testing and testing equipment, consumer products, automotive, automatic control, data loggers, home appliances, humidity regulators, weather stations, and other related humidity detection control.

Specifications

- typical accuracy RH: +/- 2 % RH
- operating range RH: 0 to 99.9 % RH
- humidity response time: 5 sec
- typical accuracy temperature: +/- 0.5 °C
- operating range temperature: -40 to 80 °C
- interface: 1 wire
- supply voltage: 3.3-5.5 VDC
- supply current: max 1.5 mA

Features

- ultra-low power consumption
- long transmission distance
- standard digital single-bus output
- excellent long-term stability
- high-precision NTC

Connection

- WPB100/Arduino® UNO
- WPSE345 5 V
- VCC GND
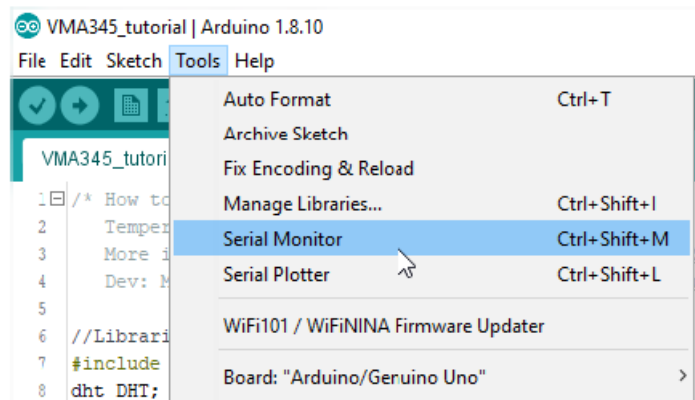- GND pin 2 (or another one)DAT

Test Example

1. Download the VMA345_tutorial.zip and DHT_Library.zip from our website and unzip the VMA345_tutorial.zip into an INO sketch.
2. Open the Arduino IDE and load the VMA345_tutorial.ino.
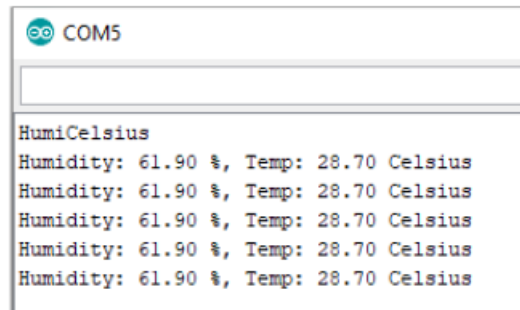3.
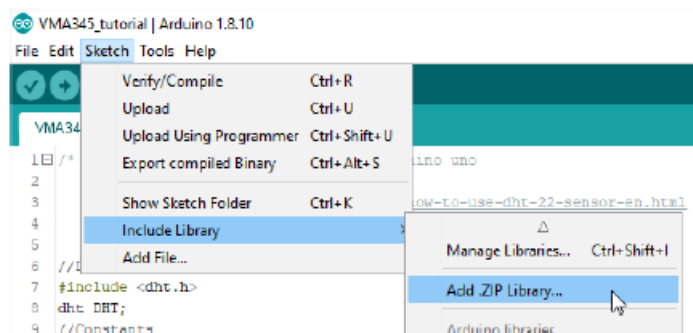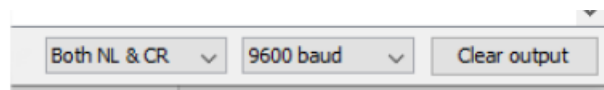
Add the DHT_library to the IDE.

4. Now, compile and upload the sketch.

5. Open the serial monitor.

6. This would be the result.

7. Make sure the selected baud rate is the same as used in the sketch!

Sample Sketch

- How to use the DHT-22 sensor with Arduino Uno
- Temperature and humidity sensor
- More info: **http://www.ardumotive.com/**how-to-use-dht-22-**sensor-en.html Dev**: Michalis **Vasilakis // Date: 1/7/2015 // www.ardumotive.com */**
- int chk = DHT.read22(DHT22_PIN);
- Read data and store it to variables hum and temp hum = DHT.humidity; temp= DHT.temperature;
- Print temp and humidity values to serial monitor Serial.print("Humidity: ");
- Serial.print(hum);

- Serial.print(" %, Temp: ");
- Serial.print(temp);
- Serial.rintln(" Celsius");
- dlay(1000); //Delay 1 sec.

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Documents / Resources

	WHADDA WPSE345 CM2302-DHT22 Temperature and Humidity Sensor Module [pdf] User Manual WPSE345 CM2302-DHT22 Temperature and Humidity Sensor Module, WPSE345, CM2302-DHT22 Temperature and Humidity Sensor Module, Temperature and Humidity Sensor Module, Humidity Sensor Module, Sensor Module, Module

References

- **Whadda - Exciting Electronics**
- **Arduino - Home**
- **Arduino - Home**