ESP8266 nodeMCU V2 + SCD4x co2 sensor case and screwbase

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VIEW IN BROWSER

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Summary

Found this ESP8266 nodeMCU case and added a screw base for wallmounting and a sensor housing for SCD40/41 co2 sensor.

Hobby & Makers > Electronics

Tags: case air sensor esp8266 co2 nodemcu monitoring amica co2sensor scd41 scd4x scd40

Found this ESP8266 nodeMCU case and wanted to use it for my co2 level monitoring system at home.

I added a build in housing for a SCD40 (same format as SCD41) co2/temperature/humidity sensor and a screwbase for easy wall mounting using 3.5/4mm screws.
(yes on the photo it's mounted with a rubberband. I still need to find a permanent location for it :P).
All wires and dupont connectors are within the case and secured with the screwbase.

I also added a second usb slot to the nodeMCU case, so it can be mounted in two ways.

I made 2 versions. One with the sensor directly next to the nodeMCU.
I found that the heat of the nodeMCU's wifimodule was affecting the temperature reading of the sensor, so I also made a version with 4cm between the two to avoid this.
At a location with more airflow/outside, the first version may fine aswell.

Printing and assembly

Print “bottom” and “bottom_long” with supports to get a nice finish on the inside aswell and make sure you remove all the supports after. The screwbase may not completely close otherwise.

Print the other files with the outer faces on the printbed and without supports.

Use M2x10 screws for assembly and use 3.5/4mm screws for mounting it to any surface.

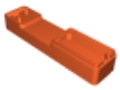
First, mount the “base”, then mount the nodeMCU and sensor to “bottom” and connect all the wires. Make sure the sensor works.
Then, mount “bottom” to “base” using M2x10 screws.
Lastly, mount “sensor_top” to the “base” and click “top” on the nodeMCU.

This remix is based on

ESP8266 nodeMCU V2 Case

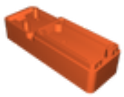
by F14V

Model files



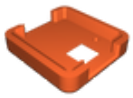
bottom-long.stl

Original "bottom" file with SCD4x sensor and second usb slot + extra distance esp and SCD4x



bottom.stl

Original "bottom" file with added SCD40 sensor housing



sensor-top.stl

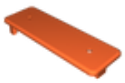
Cover for SCD4x Co2 sensor

top.stl

Original "Top" file with added usb slot

base-long.stl

Screwbase for long sensor housing



base.stl

Screwbase for sensor housing

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