Good CO2 Meters

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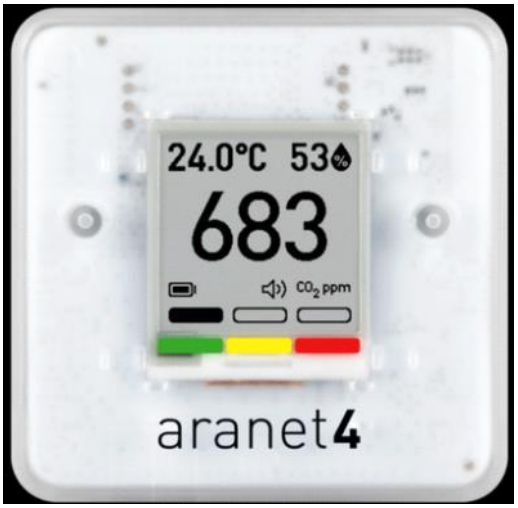
Intro

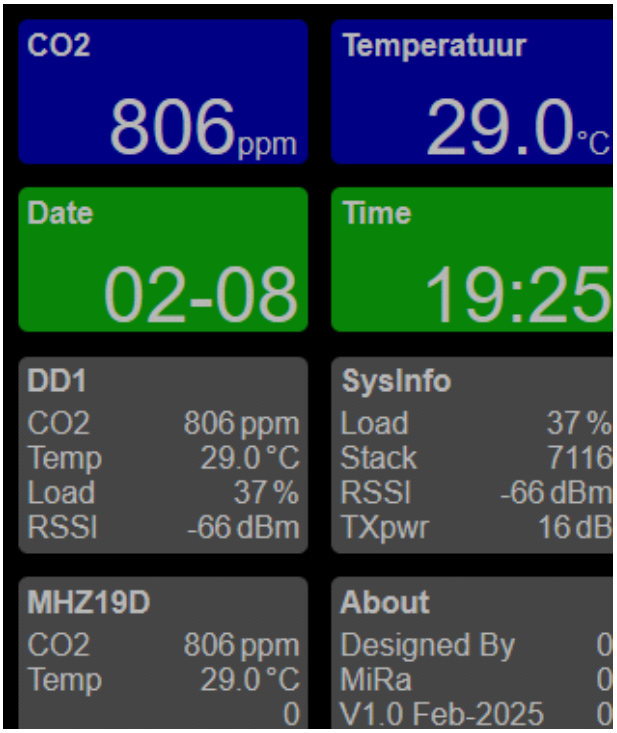
Good CO2 meters are hard to find and above all they are quite expensive.
The only good and attractive CO2 meter, is the Aranet 4, which has a good readability, battery can last for one year and auto calibrate can be switched off.
This device costs about 200 Euro.

We have build two good alternative CO2 meters at an affordable price.

Why is auto calibrate so bad?
Suppose you're in a room where the CO2 is 1200 ppm when you go to bed. The room is very good isolated (or in other words very badly ventilated), so in the morning the CO2 is still at a level of 700 ppm. When the CO2 meter is in auto calibrate mode, the lowest value it has seen in last 24 hours will be 700 ppm. Performing auto calibrate assumes this 700 ppm equals the outside CO2 level and thus the device will subtract 300 ppm from every future measurement and therefor everyone SEEMS to be happy.



Modifying an existing Tuya CO2 meter, based on the MHZ19D CO2 sensor. Total costs about 45 Euro ESPEasy CO2-Tuya-detector.pdf	Hacking a very bad power supply adapter, and mounting a SCD40 CO2 sensor. Total costs less than 25 Euro ESPEasy CO2-Node.pdf
	
Good CO2 sensor, (NDIR) No auto calibration (unless explicitly set) Can only be calibrated at 400 ppm Power consumption, about 2.3 Watt Runs ESPEasy (freeware) met P2P, (and Tuya/SmartLife) Suited for any home automation system Needs an external power supply.	Good CO2 sensor, (photoacoustic NDIR) No auto calibration (unless explicitly set) Can be calibrated at any CO2 value Low power consumption, less than 1 Watt Runs ESPEasy (freeware) with P2P Suited for any home automation system Is directly inserted in a mains powersocket.



Simply The Best:

If this device would also have a red-orange-green LED it would be perfect:

- The best CO2 sensor
- The lowest Energy Consumption
- No live connection to China
- Clear readout
- Suited for Home automation
- No external power supply / wires

This file: Good CO2 Meters.pdf
Feb 2025, Stef Mientki