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Evaluation of SKYEN by Sund Forluft (Hoo Ge IVS)

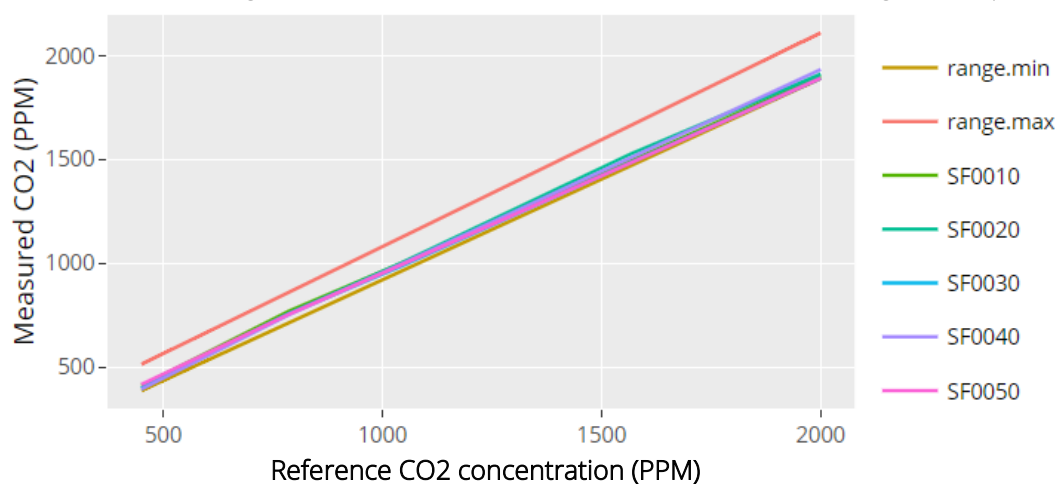
The aim of the evaluation of the product SKYEN by Sund Forluft was to quantify the precision of the CO₂ sensor within the product.

The Tests

5 identical SKYEN have been modified to output the CO₂ concentration in ppm for the validation measurements. The tests involved exposures of multiple CO₂ calibration gas concentrations, power-up test, autocalibration validation, and stability test in office environment. A calibrated Lumasense Innova 1512 was used as reference equipment.

The Results

All sensors were exposed to 5 different CO₂ concentrations (451, 786, 1044, 1566 and 2000 ppm) and results are shown below together with the minimal and maximal values according to the specifications.



The auto-calibration routine of the sensors assumes a background concentration of 400 ppm but the concentration at the test location was 410-430 ppm. This has led to a systematic underestimation of the measured value by 10-30 ppm. This can also be seen to influence the measured CO₂ value which is in the lower part of the range in the graph.

The 5 days stability test in an office environment showed all measured values within specifications. Power-up tests at CO₂ concentrations of 400ppm and 1800ppm showed no problems with accuracy after powering off the devices 9-15 minutes at low or high CO₂ concentrations.

The Conclusion

The 5 SKYEN passed the performed tests and were all within the specified accuracy of +/-50 ppm +/-3% of reading.

Test performed and validated by

Jonas Andersen and Casper Laur Byg

Bioengineering and Environmental Technology

M: +45 72 20 19 29