Why is the CO2 (carbon dioxide) value of the MultiSensor-TI less accurate than that of a CO2 measuring device?

The integrated sensor is primarily a sensor that monitors ambient air quality and measures various environmental parameters, including temperature, humidity, air pressure, and volatile organic compounds (VOCs). However, it does not directly measure the carbon dioxide (CO2) content in the air.

However, the integrated sensor can indirectly indicate changes in CO2 levels by measuring VOCs. When the CO2 content in the air changes, this often has an impact on the concentration of VOCs, since human activities and processes that release CO2 usually also emit VOCs. By measuring VOCs, the measurement can indicate the overall quality of the ambient air, as elevated VOC concentrations can indicate poorer air quality.

It is important to note that the MultiSensor does not perform precise CO2 measurements like specialized CO2 sensors, but only a calculation or estimate of the value. If you need accurate CO2 measurements, you should use a dedicated CO2 sensor designed specifically for this task.

In summary, the MultiSensor does not measure the CO2 content directly, but indicates changes in the air quality that could indirectly indicate changes in the CO2 content in the environment.

Further information on the air quality index can be found in the MultiSensor-TI operating instructions.

Limit ranges and typical CO2 values

Environment – Description	CO2 values (ppm)
Normal value of the outside air	350 – 500
Normal value indoors	< 1.000
Elevated values indoors	1.000 – 2.000
Problematic value	> 2.000