TELAIRE

Application Spotlight

Automotive CO_2 In-Cabin Sensing for Energy Reduction

Overview

The increasing use of batteries in vehicles has heightened the need to preserve energy to improve range and fuel consumption.

As a major consumer of energy, a vehicle's air conditioning (A/C) system can contribute to range reduction, so if the vehicle can automatically reduce the use of its A/C system, range will be extended.

Like any ventilation system, the A/C system uses outside air to maintain internal air quality, and it's the introduction of outside air that draws a largest amount of energy. So, by monitoring the requirement for outside air, we can reduce the amount of air brought into the vehicle; hence, reducing energy consumption. This is easily achieved with a Carbon Dioxide (CO_2) Sensor.

Carbon Dioxide (CO_2) as a Tracer Gas

Carbon Dioxide (CO_2) is an excellent tracer gas for human occupation. This is well-known in the building industry where CO_2 monitoring has been a widely-used technique for the last 30 years. Telaire has been at the forefront of this from the start, offering a wide range of CO_2 sensors, transmitters and handheld meters, specifically for use in HVAC and building automation applications.

Based on its expertise in Carbon Dioxide (CO_2) sensing technologies, in 2018, Telaire introduced its Automotive CO_2 Sensor, which is fully auto-qualified and meeting all the needs of Demand Controlled Ventilation (DCV). This sensor also offers options to monitor parked vehicles and alarm if human or pet occupation is detected.

Features

- Linbus communication
- VDE standard and generic outputs
- Lifetime calibration
- Low power consumption

Applications

- Demand-Based Ventilation
- Occupation in Park
- High Limit Alarm

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AAS-930-234A - 03/2018