

BodySense™

BodySense™ is a capacitive sensing system supporting airbag suppression for child restraint systems in vehicles. Infant-only suppression, in combination with low-risk airbag deployment technology, is the most widely accepted safety strategy to fulfill the advanced airbag requirements of the FMVSS 208* regulation issued by the National Highway Traffic Safety Administration (NHTSA) in the U.S.

Two-class occupant classification

BodySense™ is able to distinguish between child restraint systems (class 1) and passengers in the front seat (class 2), suppressing airbag deployment in the first situation in case of a collision. The system also supports the seat belt reminder function and can generate an “airbag off” sign.

Easy integration and calibration

BodySense™ can be easily integrated into the A-surface of the car seat, above the seat heater, between foam and trim. The electronics can be integrated into several locations within the seat foam or underneath the seat (i.e. plugged ECU). Subsequently, the frame will not need to be altered. The manufacturer integrating BodySense™ does not need to calibrate or zero the sensing system. BodySense™ is available in both a foil-based design and conductive textile.

Long-term reliability

The classification performance of BodySense™ is not influenced by aging or relaxation effects of trim and foam material. Moreover, BodySense™ offers reliable classification regardless of seat belt tension, occupant position, weight or height.



BodySense™

Seat heater

*Federal Motor Vehicle Safety Standard 208 on occupant crash protection

Key Features

- Plugged electronics allow for underseat mounting
- High-speed CAN, LIN and K-bus communication interface available
- Performs independent of changing climate and temperature conditions
- Integrated Seat Belt Reminder function



Capacitive Sensing Technology

BodySense™ monitors a car seat for occupancy and classifies the occupant by using a sensor in the passenger seat. By measuring the change in electrical field between an electrode and the vehicle body, BodySense™ is able to provide a robust classification between passengers and child restraint systems.

The Next Generation of BodySense™



BodySense™ including seat heater function



In line with current trends focusing on increased interior quality and passenger comfort, IEE is taking its capacitive sensing solution to the next level by using the seat heater as an electrode for its capacitive system. This new generation of BodySense™ combines heating and sensing functionality, and offers significant costs savings generated by the synergy of both technologies. The solution is FMVSS 208 compliant, and allows the OEM to offer heated seats as a standard comfort feature on all vehicles of a particular model, for limited additional costs.

About Us

IEE is a worldwide pioneer in passenger presence detection and one of the leading suppliers of advanced automotive interior sensing solutions. Founded in 1989 and headquartered in Luxembourg, it has operations in Europe, America and Asia. The innovation driven company has a long history in developing and manufacturing cutting-edge sensing systems for automotive industry, building management and eHealth. IEE employs 4,100 people worldwide and more than 10% of the company's workforce is engaged in Research & Development.

For more information, please visit www.iee.lu