Providing input for Automatic Driver Assistance Systems (ADAS)

IEE’s Hands Off Detection provides input for Adaptive Cruise Control (ACC) and other ADAS, notifying them within half a second when the driver doesn’t have one hand on the wheel. This input allows the ADAS to alert the driver and remind them to take control of the steering wheel again. This is important as, under the Vienna Convention, a driver must remain in control of the vehicle at all times.

In addition, HOD also has the potential to support the following:

• Automatic parking - if it recognizes that the driver has placed a hand on the steering wheel, it can alert the automatic parking system, allowing it to deactivate
• Additional driver assistance systems requiring the evaluation of driver activity at higher speeds

Electric Field Technology

Based on capacitive (electric field) sensing technology, HOD consists of a highly flexible sensor mat built into the outer ring of the steering wheel, with a miniaturized electronic and the connecting cabling installed in the steering wheel’s centre hub.

By having their hand on the steering wheel, the driver changes the electrical field between the electrode in the sensor mat and the car’s electrical ground. HOD measures this change and, when it no longer registers it, notifies the ADAS that the driver is no longer in control of the vehicle.

* IEE’s HOD won the 2018 Automotive News PACE Awards. This prestigious award recognizes automotive suppliers for superior innovation, technological advancement and business performance.

Key Benefits

• Robust technology: the sensor is not impacted by water, humidity or sweat coming in contact with the steering wheel.
• Flexibility: the sensor’s flexible design allows it to be integrated into any type of steering wheel without compromising aesthetics.
• Experience: IEE has gathered unparalleled experience in electrical field sensing technology, with our safety devices in serial production at major car manufacturers around the world.
• Optional comfort: HOD can also be fitted with a steering wheel heater for additional comfort.

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