

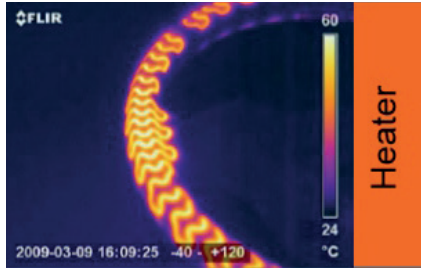


## STEERING WHEEL HAND DETECTION SYSTEM

cod. 690190431 - 1118

## FUNCTIONS

Integrated heater and touch sense



## TECHNOLOGY AND BACKGROUND

ZI's Hands On Detection (HOD) is a capacitive sensing system to detect the presence of driver's hands on the vehicle's steering wheel.

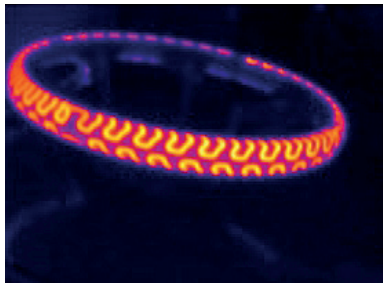
HOD is a key component of automated driving functions that address the requirements of UN Regulation No. 79 to provide a means of detecting that the driver is holding the steering control when the Automatically Commanded Steering Function of the vehicle is active.

The sensing system is built into the vehicle's steering wheel and consists of a highly flexible sensor and a compact ECU connected with ADAS system. The flexible sensor can integrate a dual heating function when required by the application.

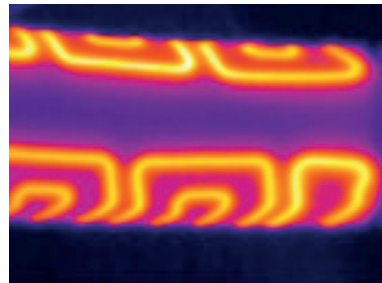
The operating principle is based on the measure of parasitic capacitance introduced by the human body between the steering wheel touch point and the vehicle's ground. The HoD system offer a higher sensitivity than torque sensors and is designed to work across the entire range of temperature and humidity specified by OEMs

## HEATING PERFORMANCES

Steering Wheel outer area



Steering Wheel inner area

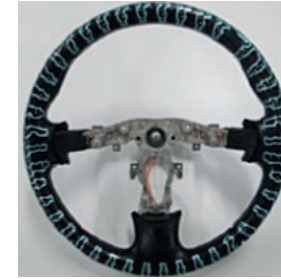


## FLEX FOIL ASSEMBLING ON STEERING WHEEL

STW Body PU



Flex foil wrapping



Leather wrapping



## KEY BENEFITS

- Integrated Heater & Sensor function into same flexible element
- Single compact ECU for heating and sensing
- Single chip ECU compliant to ISO26262 ASIL B Requirements
- Touch Signal Immunity to Ambient Temperature and Humidity changes
- High uniformity heat pattern across Steering Wheel surface
- Possibility to create separated heating and sensing areas on the STW

## ABOUT ZOPPAS INDUSTRIES

Zoppas Industries Heating Element Technologies boast an experience of over 50 years in design and production of heating elements and systems, even completed with thermal controls for domestic and industrial applications.

Zoppas Industries Group has many years' experience in designing and manufacturing products for heating and temperature maintenance in applications for cars, caravans, motor caravans, trucks and special vehicles as well as car service equipment.

Remaining at the development forefront in the industry we are able to offer a large range of heating elements and systems in a wide choice of materials to customers' technical and commercial requirements.

