



## Occupancy Restraint Sensors Passenger Safety

Seat belt sensors are crucial components in modern automotive safety systems, designed to enhance the protection of vehicle occupants. These sensors detect whether the seat belt is fastened and can trigger a series of safety mechanisms, such as warning alerts or automatic locking of the belt during a collision. By providing real-time feedback to the vehicle's safety system, seat belt sensors ensure that drivers and passengers are properly restrained.



### Compatible with Numerous Safety Systems

Our sensors seamlessly integrate with various safety systems, including occupant detection systems that manage airbag deployment for child seats. These sensors can be customized to send signals to additional safety inputs as needed, enhancing overall vehicle safety.



### Maximize Design Flexibility with Modular Sensing Solutions

Our seat belt sensors feature interchangeable modular parts, ensuring effortless integration into various vehicle designs. Additionally, our designs offer customizable options, including adaptable harnesses, to meet specific requirements and enhance compatibility.



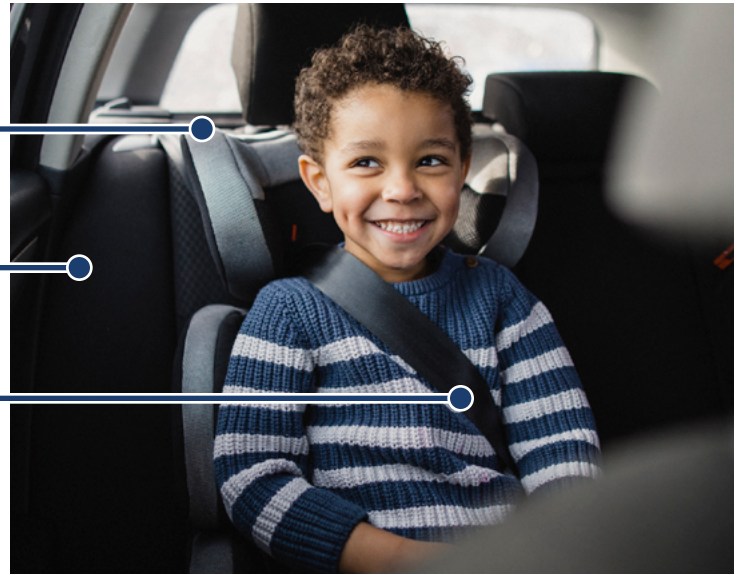
### Non-Contacting Technology

We design our sensors using non-contacting technology to give OEMs reliability in a wide range of applications. However, we can custom design and develop technologies that fit perfectly within application parameters.

Our sensor design has the ability to integrate with numerous different safety systems

Modular design allows for easy integration into most OEM designs with little to no cost

Designed to last long term use without the need to replace the sensor



## Example Technical Specifications:

### Seat Belt Tension Sensor

Parameter	Unit
Supply voltage	5.0±0.25VDC
Sensor Output	1.0-4.0VDC (0-30lbs)
Operating Temperature	-40°C to +85°C
Thermal	1000 Thermal Shock cycles
Humidity	1000hrs HTHE (+85°C / 90%RH)
Vibration & shock	18hrs/axis, 1 meter Drop Test
Seal	24h salt fog
Electromechanical Durability	167,000 cycles over temperature extremes

### Seat Belt Buckle Switches

Parameter	Unit
Supply voltage	4-16VDC
Switch Output	5.0-6.9mA (low), 12-17mA (high)
Operating Temperature	-40°C to +85°C
Thermal	100 Thermal Shock cycles
Humidity	240hrs HTHE (+85°C / 90%RH)
Vibration & shock	20hrs/axis, 1 meter Drop Test
Seal	24h salt fog
Electromechanical Durability	30,000 cycles with temperature cycling = 1X Life; 12.5mm magnet stroke

## Years Of Automotive Experience

CTS Corporation began expanding into the automotive market in the early 1970's, when the U.S. government first issued requirements for controlling automotive emissions.

Today, we are a leading provider of sensing solutions, smart actuators, and pedals, with a history of delivering sensing solutions for over five decades. With over 100 million automotive sensors in the field, we have the engineering expertise and production capabilities to support a wide array of applications.

## Contact Information

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