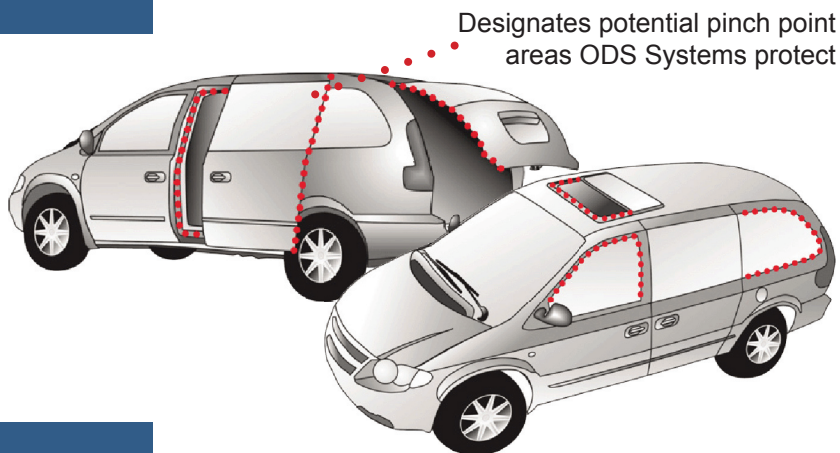


Obstacle Detection Sensors

Overview

Non-Crash Related Occupant Injuries have generated enough public concern that the US Legislature recently approved a law that will require increased power window/door safety standards through reductions in window/door pinching reversal forces.

Cooper-Standard Automotive has developed an extruded sensor that will reverse windows/doors if an animate or inanimate object passes/obstructs the sensing field during window/door closing.



Features & Benefits

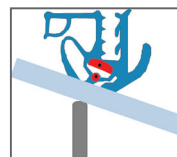
Proximity Obstacle Detection Sensors (P-ODS): provide power window/door reversal signals in the event that an animate object comes within 3mm of the extruded sensor during power window/door closure. These sensors can be strategically positioned at potential pinch regions of the window/door for optimal vehicle occupant safety. P-ODS sensors will even detect animate objects through gloves and clothing!

Tactile Obstacle Detection Sensor (T-ODS): features are built into a single sensor and provide redundant protection to P-ODS sensors for animate objects as well as protection for inanimate objects in the path of window/door closure.

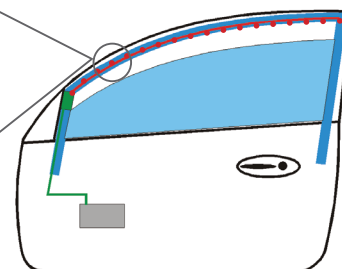
Both CSA sensors work in virtually all environmental temperature and moisture extremes. Sensors can be coextruded into specific sealing components or can be attached to a molded or stamped retainer and interior trim on vehicle surfaces.



P-ODS protection for animate objects, i.e. humans and pets.



T-ODS protection for inanimate objects.



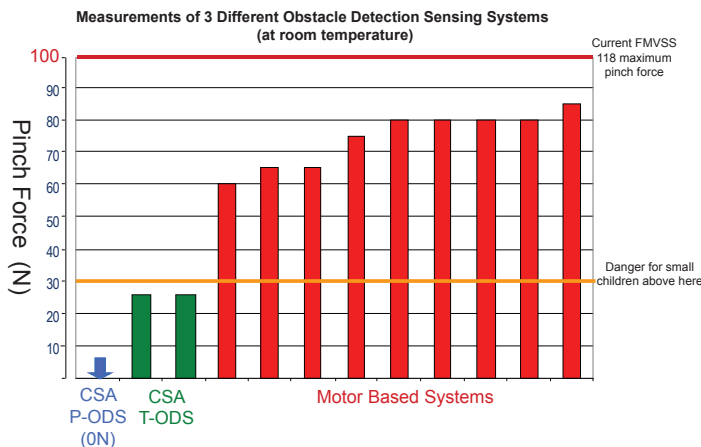
Two methods of protection provided by a single CSA ODS sensor strip.

Product Portfolio

Cooper-Standard Automotive has expertise in sealing and obstacle detection and can design and manufacture a system to meet new governmental regulations and OEM requirements.

Sensors can be provided to protect the following areas:

- Power Windows
 - Integral to Glass Run Channel
 - Taped on the Door
 - Attached to Inner Garnish
- Sun Roofs
- Liftgates
- Deck lids
- Sliding Doors



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