



Chassis Acceleration Sensor

Active Damping Sensing

The chassis acceleration sensor from CTS Corporation is a three-axis accelerometer technology designed for use in vehicle active damping systems. Measuring the dynamic motion of the vehicle, the chassis acceleration sensor accurately converts the motion into an electrical signal. Using a PSI5 protocol, the sensor transfers the data to the vehicle’s electronic control unit (ECU), allowing it to adjust its active damping and suspension systems, thereby enabling a safer and smoother driving experience.



Safer and Smoother Driving

The chassis acceleration sensor enables a range of ride-enhancing and safety-boosting features such as active damping and suspension, reduced body roll and improved stability, better adaptation to changing weight distribution / regenerative braking forces and enhanced cornering.



Accurate and Reliable Performances

With single and multi-axis measurement capability, high bandwidth and two programmable active sensing ranges, the chassis acceleration sensor is the ideal accelerometer solution for broad range of vehicle types, offering full EMC compliance, high sealing ratings and a wide temperature range for harsh environment resilience.



Flexible and Well-Proven Design

The chassis acceleration sensor is built using well-proven automotive technologies, and its flexible and affordable design allows for easy installation and adaptation to accommodate unique system architectures and various automotive applications.



CTS Chassis Acceleration Sensor: Features & Benefits

- Measures acceleration motion in up to three axes and transmits data to the vehicle ECU.
- Enables high-precision active damping for ride comfort and premium handling.
- Critical for adapting to different weight distributions and regenerative braking forces.
- Reduces body roll and improves stability - especially on uneven terrain.
- High-bandwidth, multi-axis sensing for improved cornering and suspension response.
- Flexible design that allows for easy adaptation to unique customer requirements.
- IP6K9K electronics sealing rating and wide operating temperature range for harsh environment operation.



Technical Specifications Table:

Parameter	Data
Active Sensing Range	$\pm 1.6g$, $\pm 16g$
Bandwidth	12.5 - 1500 Hz
Supply Voltage	8V ± 3
Base Current	4 - 6 mA
Current Draw	11 - 19 mA
Operating Temperature	-40°C to 125°C
Output	PSI5 (alternative outputs can be accommodated)
Sealing	IP6K9K

Years Of Automotive Experience

CTS Corporation first entered the automotive market in the early 1970s. Today, we are a leading provider of automotive sensing solutions, smart actuators and pedals.

The CTS chassis acceleration sensor is part of our **Adaptive Driving Sensor Suite**, a growing portfolio of precision sensors engineered to deliver real-time feedback for dynamic ride and chassis control in vehicles of all kinds.

Together with CTS' proven **Ride Height Sensors (RHS)**, our suite provides OEMs and Tier 1s with a modular, scalable foundation for advanced vehicle suspension and body dynamics. From electric vehicles to high-performance platforms, our portfolio empowers manufacturers to deliver safer, smoother and more personalized driving experiences.

Contact Information

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