

BRAKE AND SAFETY SENSOR PORTFOLIO

DESIGNED FOR THE FUTURE OF VEHICLE SAFETY AND EFFICIENCY.

At TE Connectivity (TE), we understand the critical responsibility that comes with designing brake and safety systems—not just as components, but as essential technologies that help prevent accidents and protect lives. We are committed to engineering robust and reliable sensors that meet our customers technical specifications and help improve or enhance the operation of their vehicle systems. TE offers a wide variety of custom and platform technologies, including pressure, speed, and position sensors, and continues to drive innovation with emerging technologies.



Optimized System Performance

Utilizing industry-leading sensing technology, TE provides sensor development platforms with advanced failure detection and sensor redundancy features tailored to meet customer specifications and enable unrestricted system interaction.



Harsh Environment and Electromagnetic Noise

Adapting to the automotive industry's shift towards electrification and its electromagnetic challenges, TE is committed to engineering resilient design solutions. Our sensors, with a legacy of reliability in harsh automotive settings, utilize various technologies to manage EMI, providing consistent and dependable functionality.



Production and Quality

TE champions quality through its automated assembly processes in clean environments and a continuous improvement program that extends throughout the product lifecycle, aiming to achieve a ZERO PPM experience for customers and enhance overall product quality.



Worldwide Excellence in Service and Design

With a strong global footprint, TE harnesses core competencies from around the world to deliver industry leading technical skills and localized expert support.






Safety Through Rigorous Standards

TE's robust redundancy solutions, conforming to Functional Safety per ISO26262 up to ASIL D functional safety requirements, integrate exhaustive Failure Mode and Effects Analysis (FMEA) alongside total test-to-failure strategies, providing superior design integrity and reliability to meet critical safety targets.

FEATURED BRAKE AND SAFETY SENSORS

Explore TE's list of featured products designed to address industry challenges head-on with solutions that are not only precision-engineered for responsiveness and durability but also designed to enhance the safety and efficiency of every braking system. Leveraging high-performance materials and innovative designs, TE helps provide engineers the necessary components to overcome the rigors of modern brake and safety system demands.

Sensor	Application	Key Product Features	Benefits
Pressure Pneumatic Brake sensor 	<ul style="list-style-type: none"> Pneumatic brake system in trucks and trailers Pneumatic suspension system Vacuum boost 	<ul style="list-style-type: none"> Functional Safety ASIL B (D) Wide operating temperature range High burst pressure resistance Outstanding EMC resistance Board mounted pressure Sensor Highly automated production Meets IATF 16949 & ISO16750 	<ul style="list-style-type: none"> Provides accurate pressure readings for improved braking response and sensor reliability Vetted by rough pressure and temperature conditions Flexible board mount integration design supports a range of vehicle systems and ease of integration
Speed High Resolution Wheel Speed Sensor 	<ul style="list-style-type: none"> ABS / ESC / TCS Motion path planning Autonomous valet and parallel parking Autonomous emergency braking Indirect TPMS Enhanced hill assist, traffic jam assist and lane keep 	<ul style="list-style-type: none"> x4 higher resolution accuracy compared to TE's standard wheel speed sensor Extremely robust packaging design Flexible sensing position High EMI/EMC immunity Long lifetime and high reliability ASIL B (D) 	<ul style="list-style-type: none"> Helps enable more precise motion path planning for complex maneuvers in tight environments Provides large air gap ranges, flexible encoder diameters, and reduced signal uncertainty Designed to remain highly resistant to stray magnetic fields and durable against thermal and mechanical stress
Speed Wheel Speed Sensor 	<ul style="list-style-type: none"> Anti-lock braking system Traction control systems Electronic stability control 	<ul style="list-style-type: none"> Hall Effect or xMR Technology Zero PPM record through fully automated manufacturing process Zero speed and direction PWM & AK-protocol ASIL B 	<ul style="list-style-type: none"> Dynamic speed sensitivity enables precise ABS engagement and refined traction control across various driving conditions Available with cable, integrated connector and in-bearing options High dependability and performance demonstrated through exceptional quality record

FEATURED BRAKE AND SAFETY SENSORS

Sensor	Application	Key Product Features	Benefits
Position Pedal Travel Sensor 	<ul style="list-style-type: none"> • Brake pedal • Electro-hydraulic Braking (EHB) • Electro-mechanical Braking (EMB) 	<ul style="list-style-type: none"> • 3D hall technology • High linear accuracy • Robust packaging design • Rapid response time • Precise travel measurement • Reliable performance • Integrated diagnostics • ASIL B (D) • Meets IP6K9K 	<ul style="list-style-type: none"> • Provides high-precision pedal position data for improved driving feedback • High magnetic sensitivity and is highly immune to electromagnetic interference (EMI/EMC) • Dependable waterproof and dustproof design with integrated diagnostics for system-level safety assurance
Position Motor Position Sensor 	<ul style="list-style-type: none"> • Brake motor • Electro-hydraulic Braking • Electro-mechanical Braking 	<ul style="list-style-type: none"> • Highly accurate angle measurement • Versatile output options • Robustness against external interference • Integrated diagnostics • ASIL B (D) 	<ul style="list-style-type: none"> • Accurate angle measurements for better braking and stability control • Flexible design supports a range of vehicle systems and ease of integration • High immunity to electromagnetic interference (EMI/EMC) and resistance to magnetic stray fields, providing consistent and accurate performance
Position Seat Position Sensor 	<ul style="list-style-type: none"> • Advanced dual stage air bag deployment 	<ul style="list-style-type: none"> • Hall based technology • Wide operating temperature range • Fast response time • ASIL A (B) • Excellent long-term stability and reliability • Excellent track record in the field 	<ul style="list-style-type: none"> • Reliable contactless hall based technology • Robust and customizable mechanical packaging design to adapt different seat track designs and mounting options • Cost effective design with excellent track in the field at several OEMs
Position Brake Light Switch Sensor 	<ul style="list-style-type: none"> • Brake light switch 	<ul style="list-style-type: none"> • Contactless detection • High accuracy • Low consumption • Easy assembly • Functional safety level ASIL B 	<ul style="list-style-type: none"> • Enhanced durability and reliability with contactless hall technology • Wide switching range • Cost effective and simple design • Easy adjustment to brake pedal
Position Steering Sensor 	<ul style="list-style-type: none"> • Rear axle steering • X-By-Wire front axle steering 	<ul style="list-style-type: none"> • Support motor position calibration with high accuracy zero position • Confirm or measure absolute position over the entire stroke length 	<ul style="list-style-type: none"> • Contact-less technology • Multi-Segmented output across entire measurement range • Improved accuracy around 0 to support e-motor calibration

Have a unique challenge? We've got you covered.

At TE, we understand the critical role of precise, high-quality sensors in automotive engineering. Our solutions, developed through advanced engineering capabilities and industry application knowledge, are tailored to meet the most demanding technical requirements. Around the world, we provide responsive service and seamless integration into your new and existing systems. If you're looking for sensors that deliver both performance and reliability, let's connect. Our team is ready to discuss how we can contribute to the success of your next project with our customized sensor solutions.

CONNECT WITH AN EXPERT ▶

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