

Automobile Security Systems



Automobile theft is an ever-increasing problem worldwide. In the United States alone, a reported 1.3 million vehicles were stolen in 2002, according to FBI statistics. To combat this trend, automobile manufacturers and after-market suppliers have developed sophisticated anti-theft systems.

When first introduced, these systems consisted of mostly electro-mechanical 'deterrents', many of which were easily bypassed or disabled. As technology advanced, they evolved into fully integrated microprocessor based systems, using multiple electronic sensors for event detection. These sensors range from ultrasonic intrusion (glass breakage), to motion detectors (internal and external), to tilt sensors. The tilt sensor is used to detect whether the vehicle is either being jacked up, towed, or somehow disturbed.



A tilt sensor, which will be successful in supplying this type application, must meet specific performance and 'other' criteria. In terms of performance, it must be dual axis, have a measurement range of +/-30 degrees minimum, an operating temperature range of -40 to +85 degC, and have a relatively stable output when in a static state.

Spectron can supply this market with the *SP Series Dual Axis Electrolytic Tilt Sensor*. The *SP* sensor meets all the normal application/specification requirements, and is extremely cost competitive. The fact that the sensor is hermetically sealed eliminates any fluid leakage concerns, which is of prime importance to manufacturers. The 5 pin interface facilitates easy mounting/soldering to the host circuit board, while the viscosity of the fluid inside the sensor can be altered to eliminate false alarms due to passing trucks, thunder, and other benign disturbances.